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THE BOMBAY PRESIDENCY
THE UNITED PROVINCES
THE PUNJAB, ETC.

THE BOMBAY PRESIDENCY
THE UNITED PROVINCES
THE PUNJAB, ETC.

Their History, People, Commerce, and Natural Resources

COMPILED BY

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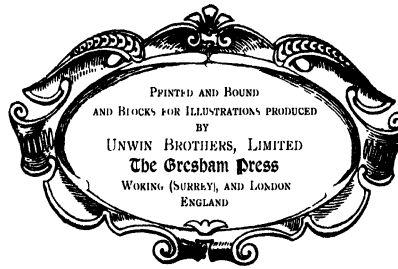
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PREFACE

THIS work, long delayed in publication by the exigencies of the Great War, is the outcome of a scheme designed to provide an exhaustive description of the principal portions of the British Empire in all their varied aspects. Originating in a volume on British East Africa this Imperial literary survey, as it may, perhaps, be not inaptly termed, has already embraced works on Cape Colony, the Orange River State, New Zealand, Southern India, and Bengal, Behar, and Orissa and Assam. The common features distinguishing all these publications are an exhaustive history written largely from original materials, a complete account of the administration and of the political and social features, and a full description of the commercial and industrial interests of the area dealt with. While no pains have been spared to make the books in all their features an accurate and adequate presentation of the facts, and, therefore, valuable for purposes of reference, it is in the pictures they give of material progress that their greatest interest and value will be found. Nowhere else is there collected such a mass of information dealing with trade and industry in these regions; from no other source is it possible to derive a more graphic impression of the manifold activities of these distant communities, or of the character of the men who are chiefly concerned in directing their destinies. Such enlightenment as may be derived from these pages will be sought in vain in official publications—excellent and comprehensive as they are; and it cannot even be obtained from local directories and guides or ordinary works of travel purporting to give a picture of life in the localities visited by their authors. In these circumstances it does not appear to be necessary to make any apology for what may be termed the commercial aspects of these books. Such are to be justified not only on the ground of their indispensability in a survey which has any pretensions to completeness, but they are in perfect harmony with modern tendencies. The old notion that there was something improper or at least lacking in taste in publicity was killed by the war. No one now is so blinded or prejudiced as not to see that in these strenuous days when competition is brought to the highest point, whether between nations or individuals, you cannot dispense with advertisement in the varied relations of our complex civilization. So, while we find Government departments competing with each other in the volume of the literary efforts of their publicity staffs to attract public attention, and State administrations filling London shop windows with the products of the territories under their charge with the same design, we hope it will be considered that this series of Empire publications is distinctly on the right lines.

In reference to the work to which this preface more particularly relates a few sentences of explanation and apology are due for the very extended delay which has occurred in publication. When the work of compilation was first commenced in 1917, though the conditions were far more onerous than in the pre-war period, there seemed no particular reason why the book should not be issued in about the usual time, which may be said to be eighteen months from the starting of work on the production. But as the months slipped by and the war situation deepened in gravity it became increasingly apparent that publication must be

indefinitely postponed. The difficulties, it may be explained, were of a cumulative character. The calling up of the men to the colours at the outset hindered the printers and blockmakers. It was not merely the proportion of employees who were taken—though that was considerable—but the fact that many of them were experts in their own line whose duties could not be discharged by substitutes however willing, while others from their familiarity with this highly specialized description of work were almost equally indispensable. But this was not by any means the whole of the trouble. As time went on material—paper, copper for blockmaking, and skins for binding—became difficult and even impossible to procure. Nor did the conclusion of the war bring any immediately appreciable relief. Men were demobilized slowly and from the standpoint of the trade irregularly. Material continued scarce, and even when available was greatly delayed in delivery by transport difficulties. Having regard to all these circumstances it is hoped and believed that all those who have been disappointed by the delay in the publication of this book will accept in the spirit in which they are tendered the very sincere regrets of the compiler and his staff for their inability to produce the volume earlier, a production which has even now only been possible at very considerable extra expense.

Regrettable as the delay is, it has not been without its advantages. It has made possible for one thing the inclusion in the trade articles of an account of the remarkable part played by industrial firms in providing necessary material equipment for the armies in the field. This side of India's activities in the Great War is imperfectly appreciated in Great Britain and the facts given will help to a fuller understanding of the immense debt which is due to the great Eastern Empire of the Crown for its noble service to the cause of civilization in the greatest crisis in the world's history. Another point in this connection which should not be overlooked is the light thrown by the commercial sections of the book on the remarkable industrial development which is proceeding in India. The picture here given of successful exploitation of for India—new lines of industry, and the scientific enlargement of older ones affords a significant indication of the power and capacity inherent in the New India of progressing on Western lines of development to a position which will entitle India to rank amongst the greatest manufacturing countries of the world.

In another page ample acknowledgment has been made of the valuable services rendered by individuals in the work of compilation, and it is only necessary here to say generally how highly appreciated that help has been and how deeply grateful the compiler and the members of his staff are for the many acts of hospitality and service rendered them in the course of their extended journeyings through the vast historic region covered by the work. As far as the Editor is personally concerned he has again to acknowledge the ready assistance given to him and his helpers by Dr. F. W. Thomas, the Librarian of the India Office, and his staff in the photographic reproduction for purposes of illustration of selections from the invaluable collection of Indian prints and drawings in Whitehall. These pictures of Early British India are in some cases of unique interest, and their appearance in the pages of this work will doubtless be welcomed by all who are interested in India's past.

A. W.

July, 1920.

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BOMBAY, THE UNITED PROVINCES, PUNJAB, KASHMIR, SIND, RAJPUTANA AND CENTRAL INDIA

THEIR HISTORY, PEOPLE, COMMERCE, AND INDUSTRIAL RESOURCES

BOMBAY

EARLY HISTORY

By ARNOLD WRIGHT

CHAPTER I

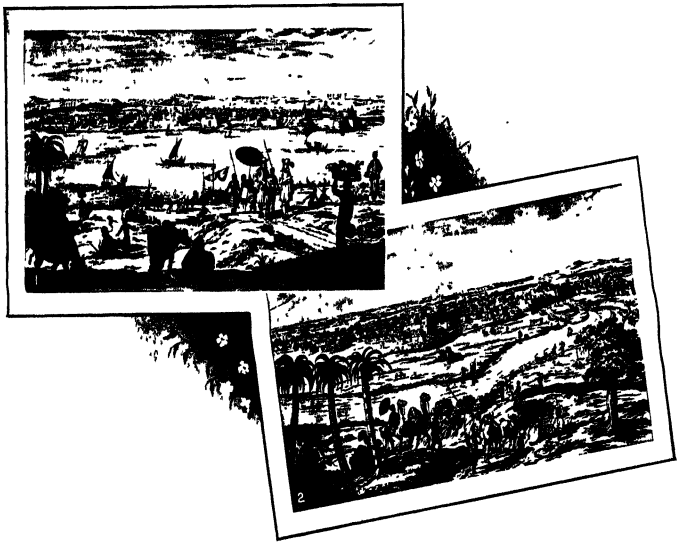
The earliest Bombay contrasted with the Bombay Presidency of to-day—Great historical interest of the Presidency The first English shipments to Surat—English factory established at Su at—Importance of the Surat trade Suggested acquisition of Bombay island by the Surat Council—Bombay part of the dower of Charles II's Queen, Catherine of Braganza The Earl of Marlborough's expedition to take over the island from the Portuguese The Viceroy of Goa declines to make surrender—English occupation of Bombay by force under Humphrey Cooke—Sir Gervase Lucas deposes Cooke for irregularities in his Government—Lucas's death—Captain Henry Gary becomes Deputy-Governor—His eccentric character —An aggressive secularist as Deputy-Governor—Transfer of the island to the East India Company.

BOMBAY, in an administrative sense, vastly differs to-day from the Bombay of the earliest days of English rule. Then the territory was solely comprised in the little island, eight miles long and three wide at the broadest point: to-day the Presidency of Bombay extends from the banks of the Indus in the north, through fourteen degrees of latitude, to a point in the south beyond the Portuguese settlement of Goa, and from the Indian Ocean to the plains of Central India, while it also includes for Governmental purposes the great Imperial stronghold of Aden on the confines of Arabia at the entrance of the Red Sea. The few square miles of the earlier insular area, with their population numbered by the thousand, have grown to the 188,745 square miles of the Bombay Presidency of to-day, inhabited by varied races numbering in the aggregate 25,468,209 souls. The development of this noble heritage is a part of the growth of Imperial India. Advancing with the rise of British India as a whole, it has shared in the vicissitudes and glories of its impressive history, until at the present time it forms the second most important area into which it is divided.

Regarded historically from a purely British standpoint, the Bombay Presidency yields the palm in interest to no other administrative section of India. It was at Surat on the West Coast of India, in what to-day is, perhaps, the most fertile and representative part of the Bombay Presidency, that the first pioneers of British rule landed, and it was at Surat, a good many years before a stable foothold was gained by Englishmen in other parts of India, that the English representatives of the East India Company kept the flag flying amid conditions of heartbreaking discouragement and personal peril. The story of the doings of these early traders and adventurers is full of thrilling interest and even romance. It is part of the epic of their race, and constitutes the prologue of the great drama which has been gradually unfolded in the three centuries which have elapsed since the first English ship dropped anchor off the coast of Western India.

To Surat, then, rather than to the island which has given the Bombay Presidency its name, we must look for the first traces of the movement which has resulted in the creation of the stately edifice of British rule in Western India. It was in August 1608 that the dawn of this new era in India was heralded by the appearance off Surat of the East India Company's ship, the *Hector*, carrying as its principal passenger

William Hawkins, the bearer of a letter from James I to the Great Mogul Hawkins succeeded indifferently well in his mission He gained the personal favour of the Emperor Jehangir, and secured for his masters concessions which enabled them to establish their agents at Surat The years which followed were troubled ones for the Company's representatives Mogul favour was an uncertain thing, and the English traders led with Bengal In those days Surat was a highly important centre of political and commercial influence The chief port in Western India, it was the point of embarkation for pilgrims to Mecca In the wake of that traffic followed a trade with ramifications which extended as far westward as Zanzibar, as far south and east as the Malay Archipelago and China, and as far north as the head of the Persian Gulf and the Gulf of Suez Between the office of governor was never otherwise than formidable They longed for some refuge to which they could withdraw and carry on their trade free from the humiliations and losses inseparable from their life at Surat Close acquaintance with the western coast inevitably suggested Bombay as the most desirable centre for an English settlement The Portuguese had been in occupation of the island for a good many years—since 1534 in fact—



1 SURAT—VIEW OF THE CITY IN THE SEVENTEENTH CENTURY.

From Nauwkeurige Beschrijving der Indische Kust en Middellandsche Zeevaart, by Philip Baldæus Amsterdam, 1672

2 AMANABATH (AHMEDABAD)—VIEW OF THE CITY IN THE SEVENTEENTH CENTURY

a chequered existence, the victims of a rapacious officialdom and the objects of the jealous hatred of the Portuguese who resented their intrusion upon a domain in which hitherto they had been supreme But in the end the Englishmen made good their position triumphing over all obstacles whether in the shape of Mogul obstruction and extortion or of open Portuguese hostility The Surat factory became a flourishing centre of trade growing from small beginnings to an important establishment, the headquarters of the East India Company's organization in the East From it radiated the enterprises which led ultimately to the founding of Madras and the opening up of a trade coast and Agra, the then capital, a constant intercourse was maintained lines of communication opening out to commercial centres in the remotest parts of India In fact in that period no single city in India held greater possibilities for the European trader than Surat But the port suffered under the marked disadvantage that it was under the tyrannical and capricious Mogul rule The English traders never knew from day to day whether they would be permitted to carry on their operations with a reasonable assurance of peace, or whether they would be harried and bullied by a corrupt officialdom, whose capacity for extortion, though it varied with the holder of the but they had done nothing to make the place the first-class port it was eminently fitted to be Their interests in the middle of the seventeenth century were chiefly represented there by a few fishermen and toddy drawers, and an ecclesiastical establishment of rather imposing dimensions in keeping with the importance given by the Portuguese to religious propaganda The predominating religious influence was reflected in the land system of the island, under which the territory was parcelled out into a number of fiefs granted under the Crown of Portugal, largely, though not entirely, to the religious corporations This *aforamento* system, as it was known, was in later years a great stumbling-block

BOMBAY—EARLY HISTORY

to the first English administrators. More than anything else, probably, it interfered with the free development of English institutions and influence.

Realizing the possibilities of the island, the Surat Council in 1654 made a definite proposal to the directors that it should be acquired by purchase from the Portuguese. Owing to various causes, mainly in consequence of the outbreak of war between England and Holland, nothing came of the suggestion at the time. But 1656, after a protracted siege, the Hollanders captured Colombo, and two years later the conquest of the entire territory of the Portuguese in Ceylon was made effective by a successful assault upon Jaffnapatam. These successes led up to an extension of the campaign to India, where ultimately the important towns of Cochin and Cannanore fell into Dutch hands. A feeling of despair was engendered in Portuguese circles by these misfortunes. The Portuguese Viceroy, it effect. To James Ley, Earl of Marlborough, was entrusted the task of taking over Bombay from the Portuguese. At the close of 1661 he sailed for India with a royal fleet of five vessels under the command of Sir Abraham Shipman. On arriving at Goa about the middle of 1662, the English envoy found the Portuguese disinclined to surrender the island. The Viceroy of Goa questioned the validity of Marlborough's credentials, and when convincing proof had been furnished of their

1. CHARLES II. 2. QUEEN CATHERINE OF BRAGANZA.

it was probably borne in mind when a few years later the marriage was projected between Charles II and Catherine of Braganza. Then as a bridal dower, Bombay, together with Tangier, the important Moroccan port, passed into English possession. Passed, however, is a misnomer, for there was no real occupation for several years owing to circumstances which must be explained.

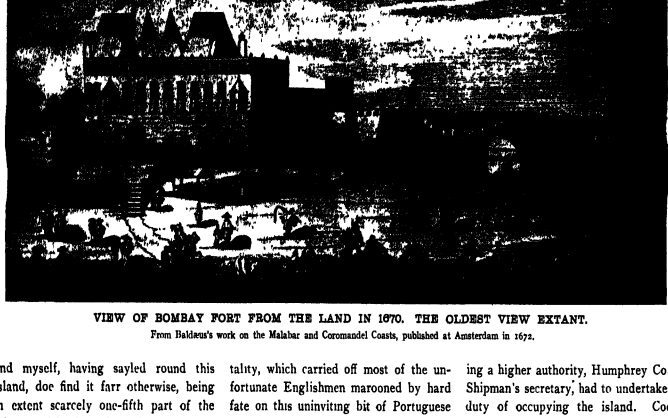
The conditions under which the marriage was brought about were peculiar. For years prior to this period the Portuguese had been fighting for their colonial empire with their remorseless foes the Dutch. One by one their strongholds had fallen into the hands of the enemy. In writing home about this period, expressed lively fears that the whole edifice of Portuguese power in the East might be brought to the ground. In reply to this or some similar missive, the Queen of Portugal buoyed up the depressed official with the prospect of an alliance between the daughter of Cromwell and her son, Don Alfonso. The union, if ever seriously contemplated, as we know, never came off. But the underlying idea of an alliance through a dynastic union was revived in the case of Charles II and put into execution in the earliest period of the Restoration.

As soon as the marriage treaty was signed elaborate steps were taken to give authenticity and sufficiency, raised fresh difficulties. "All the art and contest I could use, could not persuade the surrender of this paltry island," wrote Marlborough in October 1662. What gave an additional touch of dissatisfaction to the feelings of the Englishmen was the manifest disposition early displayed by the Portuguese to limit the cession when they were compelled to make it to the smallest possible dimensions. Gerald Aungier, afterwards Bombay's most famous governor, who accompanied the expedition as representative of the Company, writing somewhat earlier, stated that what gave him the greatest disturbance "is that the place does not answer our king's expec-

tation by four-fifths of what was represented to him, for by the draught which was delivered to His Majestie, Bombay, Salsette, and Tanna were included all in one island, and all under the name and royalty of Bombay, but Captain Browne and myself, having sayled round this island, doe find it farr otherwise, being in extent scarcely one-fifth part of the other two islands, and this is all the Portugalls intend to surrender." Here we have the first indication of a piece of Portuguese chicanery which was powerfully to influence the early history of the English occupation of Bombay. Bombay to-day is no mean city; the island of Bombay is no inconsiderable territory. But in 1662 "the paltry island" was paltry indeed without the adjacent islands which were so essential to its economic and political sovereignty.

The position of the English expedition became a most embarrassing one when it was made clear that the Portuguese did not intend to fulfil the terms of the treaty. Its return to England with its mission unaccomplished was out of the question; it was equally impossible for the large body of men to remain grilling on board the ships through the weary months which must elapse before the authority of the home Government was brought to bear on the recalcitrant Viceroy. In the circumstances it was deemed advisable to adopt the middle course of landing the military part of the expedition and dispatching the ships home. Unhappily, the only place available for the temporary sojourn of the men was the island of Angediva, a pestilential spot devoid of any proper convenience for the sojourn of a force of raw Europeans, unfamiliar with tropical life and its dangers for the thoughtless and the dissolute. The inevitable result followed in a terrible mortality, which carried off most of the unfortunate Englishmen marooned by hard fate on this uninviting bit of Portuguese territory. Meanwhile, diplomats at home were fighting out the issue which had been raised in the East by Portuguese obstruction. A minute which has come down to us amongst the archives of that day shows how the matter was viewed in England. It is to the following effect: "His Majesty insists very earnestly that not only justice be done upon the Vice King in the Indies who hath so falsely and unworthily failed in the surrender of the island promised to His Majesty there, but that reparation be made for the loss he hath sustained in sending ships and men to take possession of it. The charges whereof are valued by the officers of His Majesty's Navy to amount unto at least £100,000, and that likewise more effectual orders be reiterated thither for the surrender of the said island to the full extent exhibited formerly to His Majesty in the map containing not only Bombain but Salzete and Taan and so promised to His Majesty." Big words these, but the performance was not equal to their promise. It was not until the middle of 1664 that the island was actually surrendered, and then the cession was in the rigidly restricted form which the earliest negotiations had so plainly foreshadowed as being the Portuguese conception of the terms of the treaty.

In the two years that the negotiations had been proceeding, Sir Abraham Shipman and every officer who had been sent out with the expedition had died. Failing a higher authority, Humphrey Cooke, Shipman's secretary, had to undertake the duty of occupying the island. Cooke, however, showed himself to be a man of resource. As soon as he and his little band of Englishmen had landed, he set about fortifying the position as best he could. It was a very necessary precaution in the circumstances of the time, which made the English occupation of Bombay an object of jealous dissatisfaction to the Dutch, the French, and the Moguls, to say nothing of the hostility of the local Portuguese, who took their eviction with the worst possible grace. But the anticipated blow never fell. The Englishmen were left to their own devices, and these were sufficiently deadly in their character to make by themselves the question of a permanent occupation problematical. Cooke himself appears to have degenerated badly under the influences of the local situation. Suddenly entrusted with autocratic—even despotic—powers, he used them for evil ends. Extortion was practised as a fine art. Within a short period he is said to have extorted from the local inhabitants 12,000 xeraphins—a very large sum, having regard to the paucity of the population. Sir Gervase Lucas, who arrived in Bombay in March 1667 charged with the duty of establishing Government on a sound foundation, when he discovered Cooke's de-



VIEW OF BOMBAY FORT FROM THE LAND IN 1670. THE OLDEST VIEW EXTANT.
From Baldæus's work on the Malabar and Coromandel Coasts, published at Amsterdam in 1672.

linquencies, declined to confirm him in the position of governor as he was authorized to do. Cooke took his fall from power very badly. He declined to yield up the insignia of office, and withdrew to Portuguese protection in the Jesuits' College at Bandora. Consequent upon this a proclamation was issued by Lucas, backed by the Surat Council, denouncing him as a rebel and a traitor. Thereafter he fades out of the picture; probably he withdrew to England to enjoy his ill-gotten gains.

Sir Gervase Lucas conceived a very favourable opinion of Bombay. Instead of "the paltry island" which Marlborough's distorted vision saw, he found a place which for its magnitude was "one of the most pleasurable and profitable islands in India." His description of the settlement showed a shrewd appreciation of the possibilities of the situation, and it is a matter for regret that death put an end to his career in May 1667 before he had an opportunity of showing his undoubted capacity. Lucas's place was taken temporarily by a certain Captain Henry Gary, a soldier of Irish extraction, who before his Indian career had lived in the Levant. Gary filled a very considerable place in the history of Bombay during the next four years. He is remembered, not so much for his deputy-governorship, which did not last very long, but for his association with judicial office in early Bombay. It is a curious reflection to those who are acquainted with his history, and who also know something of the exalted dignity which attaches to the Indian judiciary in these days, that he was the first Chief Justice of Bombay. Like many —probably most—of his fellows, he was addicted to the worship of Bacchus, and some really weird stories are told in Bombay annals of his vagaries owing to this weakness. One of the best-authenticated stories is that he summoned a man to appear before his Court on Friday although he had been executed according to the judge's own sentence on the previous Tuesday.

A vivid glimpse of Gary in the rôle of Deputy-Governor is furnished in the following extract of a letter of his, dated December 12, 1667, to the Earl of Clarendon, the then State Secretary: "I have been forced," wrote Gary, "to some acts of severity here, through the great wickedness of the offenders, two blacks having been executed for stealing: one Robert Whistler, a privat centinel, being shott to death, whom I found sleeping upon his guard, the watch being sett, whom yett I might have favoured had there not been three in the same offence at the same time. Another, a very incorrigible fellow, Thomas More, that had been twice condemned, there being no hope of amendment, for many great offences to terrify at once and satisfy the soldiery was hanged."

A fit colleague of the bibulous Gary was another deputy-governor of the period named Young, who appears to have been an aggressive secularist. Not content with holding his atheistic views, he arranged open burlesques of divine service at the time that the ordinary church services were proceeding on Sundays. For his scandalous conduct he was ordered to be shipped off to England. These and other episodes, in which officials figured unfavourably, gave the earliest years of the English occupation of Bombay an unsavoury reputation and probably powerfully influenced Charles II in his action in transferring the island to the East India Company in 1667. However that may have been, there was at the time little but expense in the possession of the place. Something like £100,000 had been disbursed on the original expedition, and subsequent liabilities probably accounted for as much more. Therefore, the shifting of this uneasy burden from Royal shoulders to those of the greatest trading organization of the day was not a difficult matter. No one could then foresee that "the paltry little island" would one day be, acre for acre, one of the richest ports of Asia. At best it was a mere picturesque appanage of the Crown, like a royal park or castle, which it were well to get rid of if the cost of upkeep was excessive.

CHAPTER II

Sir George Oxenden appointed Governor of Bombay—His death—Directors' quaint ideas as to the development of Bombay—Attempts to colonize Bombay with English men and women—Failure of the plan—Rules for the establishment of a Militia—Gerald Aungier becomes Governor—He proceeds from Surat to the island—Unsatisfactory state of affairs—Aungier adopts strong measures to restore order—His plans for the building of the settlement and its fortification—Threatened Dutch attack—Insolence of the Portuguese—Dutch enter harbour, but leave without attempting a landing owing to Aungier's strong dispositions—Aungier's exasperation against disloyal Portuguese—Resettlement of the island—Population plead with Aungier to remain in Bombay—He agrees to do so though ordered to Surat—Aungier's mild and beneficial rule—He is censured by the directors for extravagance—His memorable defence—Aungier's death.

If the Restoration courtiers were ignorant of the value of Bombay, the directors of the East India Company of the day were fully alive to its extreme importance to them as a means of consolidating their trade position. Somewhat earlier, in 1639, they had acquired the territorial rights in an area along the Coromandel Coast, on which afterwards was built the City of Madras, and they were anxious to supplement this possession by the establishment of a *point d'appui* which would serve for the western coast of India the same purpose that Madras discharged for the eastern coast. With alacrity, therefore, they accepted the king's offer, and promptly took measures to give it full effect by appointing to the office of Governor of Bombay, Sir George Oxenden, one of their ablest and most experienced servants. Oxenden had been chief at Surat and had distinguished himself in 1663 by taking active steps to defend the city from the hosts of Sivaji, the famous Mahratta leader, who was then in the early tide of his wonderful career. In consideration of this important service to the cause of established authority, the Emperor Aurunzebe had granted the East India Company important new privileges, and had issued an edict exempting all English goods from taxation for a twelvemonth. Possessing such credentials, Oxenden was eminently fitted to undertake the important task of organizing the Company's rule in the new settlement. If he had lived we cannot doubt that he would have left as strong a mark on Bombay history as he has done on that of Surat. But unfortunately, within a few months of his appointment he died (on July 14, 1669) at Surat. He is buried there in the English cemetery, where his imposing tomb with its felicitous inscription forms one of the most curious and conspicuous objects of this best-known "God's acre" in the outer marches of the Empire.

The directors had very decided ideas as to the lines on which the development of Bombay should proceed. Very quaint their conceptions are, viewed in the light of experience. For example, in a letter of instructions to Oxenden, in which directions were given for the construction of a fort and the laying out of a town on regular lines, we have the following curious references to colonization with English people: "Wee now alsoe send you soldiers and their wives as also artificers as per list, and for such single women or maides as shall now come unto you, wee order that if they desire it and doe not otherwise dispose of themselves by marriage to Englishmen, that then for one yeare after their arrivall they shall have

victuals at our charge, with one suit of wearing apparell such as shall be convenient, according to the fashion of the country, during which time they are to be imployed in our service as you shall order and think fitt, but not to be imployed in planting, and wee doe not consent that the said English women or maides bee permitted to marry any other people but those of our own nation or such others as are Protestants and upon their marriage to be free.

"We have acquainted you in a preceding clause that for the better planting of Bombay and making it an English Collony wee doe not onely send you Mary George and Mrs. Susanna George and their maides, with divers soldiers and their wives and other single women." [1]

It is difficult to understand how the Court of Directors could have been so misguided as to imagine that there was any possibility of establishing an English Colony in Bombay by the methods it favoured. Climate, social conditions, policy—all were against it. The scheme was doomed to failure from the outset, and to failure of a very bad kind. Yet the directors were so blind to their folly that they persisted for some years in sending out poor creatures to die a miserable death on this distant island. Frequent protests ing the former, possibly with a remembrance of Young's delinquencies, the directors enjoined:

"Let noe man presume to blaspheme the Holy Trinity, God the Father, God the Sonne, and God the Holy Ghost, nor the knowne articles of the Christian faith, upon paine of having his tongue boared with a redd hot iron."

As to the secular duties, the principal obligation was embodied in the following:

"All and every officer, etc., that shall any treasonable or reproachfull speeches use against His Majesty's sacred person or authority shall dye without mercy."

Acting upon the instructions given them

VIEW OF BOMBAY FORT FROM THE HARBOUR IN 1670. THE OLDEST VIEW EXTANT.
From "Naauw-Keurige Beschrijvinge der Indische Kusten Malabar ende Coromandel," by Philip Baldaus, Amsterdam, 1672.

English soldiers and their wives, but also single women that may become wives to our soldiers and others there, and the entertaining of a person of the quallitie above a soldier whoe intended to proceed with his wife, hath also encouraged some gentlewomen whoe though wee did not invite thereto, yet being engaged therein wee doe recommend them unto you, that they may be there civilly treated, and have that respect from you, as their virtues shall deserve."

Later on in the letter is the following on the same subject: "And wee also intending to make that an English collony have sent over on the *Humphrey* and *Elizabeth*, Mr. John Broadnax, Mrs. Ann Lloyd, Mrs. Mary Waller, Mrs. Bridget Billinjoley, and their maides on the *Sampson*, Mrs. Susanna Eley, and Mrs. Priscilla Eley, and their maides, and on the *Bombay Merchant*, Mrs. Christian Hutchinson, Mrs. Elizabeth Prince, Mrs. were made by the officials on the spot against the system. Here is one significant reference to the earliest shipment: "We entreat you hereafter to be very circumspect whom you send out, either men or women, that they be of sober and Christian conversation and of good report, for the scandal of one particular person here is pestilential and reflects on the honour of the nation." Not until the absolute futility as well as the inhumanity of the colonizing idea had been demonstrated in unmistakable fashion did the wiseacres of Leadenhall Street change their policy.

In providing for the military needs of Bombay the directors showed a better appreciation of the realities of the situation. But the instructions they sent out read very curiously to-day. They were divided into two parts—"Our duties to God" and "Our duties to His Majesty." Concern-

[1] "Home Series Misc." vol. 49.

the Bombay authorities created a militia, and so laid the foundations of a military system which played no small part in the history of the Bombay Presidency.

Oxenden's successor in the Bombay Government was Gerald Aungier, the functionary who participated in the original expedition under the Earl of Marlborough. Aungier came of the Irish family which contributed the Earls of Longford to the peerage. He was exceptionally fitted by training and temperament for the work in hand. Of mild, equitable disposition, shrewd in his judgments, and tolerant of all but ineptitude and dishonesty, he was of the type of successful administrator with which the more recent period of British rule has made us familiar. In some respects he was the greatest man who figures in the pages of the early annals of the English in India. Strangely enough you will look in vain in the modern Bombay for any

VIEWS ON THE WESTERN COAST OF INDIA IN THE SEVENTEENTH CENTURY.

1. Surat. 2 Anjengo. 3 Goa Harbour. 4 The City of Goa.

From Forbes's 'Oriental Memoirs.'

outward recognition of his work. Statues and institutions there are in plenty to departed worth, but not so much as a tablet is to be seen commemorating the man who was in a real sense the founder of the city.

Aungier was prevented for some time from taking up the charge of the work in Bombay, though the directors were very anxious that he should expedite matters there. The chief obstacle to his leaving Surat was Mogul obstruction. The local Mahommedan Governor was loth to part with one he regarded as an eligible pigeon for plucking. He feared that if he once allowed Aungier to go, Surat would see neither him nor the English any more. There was some amount of justification for the view in the fact that Aungier had written home advocating a complete transfer of the Company's interests from Surat to Bombay. But the time was not yet when the Company could afford to withdraw from the one great centre of trade in Western India. So Aungier had to temporize and restrain his natural ardour, which under other conditions would have hurried him to the work which was so congenial to his nature and for which he was amply prepared by his earlier experience.

It was not until June 1672 that Aungier landed in Bombay. His journey thither, made at the height of the monsoon season, was a perilous one. The vessel in which he travelled was, according to the account he wrote of the voyage, carried out to sea and encountered a violent storm which "maimed all the sayles and staved both our boates and forced us to lye a hull for 24 hours in which time we were driven back to the norward of Damaun and fell amongst those dangerous sands from which by God's mercy alone we were preserved." He had thoughts of landing at Damaun, but a change in wind enabled him to proceed, and after the lapse of seven days he arrived at Bassein. Having refitted there, he resumed the voyage, arriving safely at Bombay on June 7th, "to his great comfort and the satisfaction of all your servants and subjects in the island."

The position which Aungier found in Bombay was a highly unsatisfactory one. Gyffard, the Deputy-Governor, and Captain Shagton, in command of the military, were both ill from "the prevalent sickness," and the whole settlement was in a condition of demoralization. Politically the outlook was discouraging. A Dutch squadron under Rycklof van Goens was hovering about the coast in a menacing way. The Portuguese, so far from fulfilling the terms of the treaty, were doing their best to ruin the English interest by imposing customs duties on goods landed on Salsette and impeding the transit of supplies from that and other localities. Aungier acted with promptitude in dealing with the situation. First he took strong measures against the foes of his own household, dismissing one officer for mutinous conduct and inflicting severe penalties upon humbler offenders. These measures, in his words, cast such a dread upon the malcontents that they were in a short time reduced to order. The larger evils due to the absence of a strong directing policy he sought to correct by the issue of a proclamation establishing English law in the settlement and annulling "all Portuguese rites and customs of law." Effectively to carry out the anglicization of the legal system he created a Court of Judicature with Mr. George Wilcox, a trained servant of the Company, to act as President. The change was carried through with the great goodwill of the inhabitants, "even the Portugalls themselves being weary of their own laws."

Next Aungier turned his attention to the laying out of the town. After due consideration and with the advice of "the most able and judicious persons of the island," Aungier and his Council "with a universall consent, pitched upon that parcell of ground that lyeth over against the present fort." Active measures were at once taken in conjunction with the Surveyor-General to mark out the streets and erect buildings, and Aungier assured the Council that when the work was finished Bombay would not only be "fortified against the most potent enemy we feare but also be the most pleasant spot of ground in all India for the extent of the place."

"The most potent enemy we feare" no doubt was the redoubtable Sivajee, who was always lurking in the background ready to take advantage of any opening for the exercise of his peculiar tactics. Aungier wrote of him that he suffered not his neighbours to rest "even in this dead time of the rains," and gave a vivid account of his depredations on the continent. He continued: "What success and advantage your island Bombay will receive lying free and out of all danger in the midst of these disturbances your Honours will understand in a year or two more, and if there was no other reason than this for to persuade us to strengthen your island by land and sea in such a time of common danger for the security as well of those who are your present subjects as those strangers who shall be persuaded to come through the care which they perceive we take of their protection, we assure ourselves that in your wisdomes you will conclude such charge well bestowed, and also hold us justified and to be commended in our proceedings, whereby the fame of your island is already so much increased that it is esteemed the only asylum of all these parts; even at the writing hereof a Rajah, our neighbour on the maine, offering himself to become your subject and to desire your protection, with whom we are cautious how far we engage lest we provoke too much our potent neighbour, Sevajee."

As the year proceeded the menace of a Dutch attack became more serious. Aungier, with restless energy, devoted himself to the work of preparing for the crisis which he feared must come. He pushed forward the work on the fortifications, accumulated ammunition and stores, and after raising a militia of the natives, strengthened the outposts. It was a poor means of defence that was organized, seeing that the English garrison was a mere handful and the native elements were raw and untried men-at-arms, most of whom had never previously fired a gun. But Aungier's spirit of serene confidence was contagious, and in spite of the danger that threatened, people continued to flock to Bombay. If the truth were known, Aungier at the time was much more concerned about the Portuguese than he was either the Dutch or the Mahrattas. He recorded in October 1672 that they daily became more insolent, "and cease not to offer affronts daily on your subjects as well English as others in the passage of Tannah and Carinjah, as also in Goa, Bassein, &c." "They will not yet be persuaded," the writer proceeded, "but that they have a right of dominion over the Portugalls and other subjects of your island, and that they have as much right to the Bay as your Honours have, upon which score their armadoes, we mean their little brigantines, are bold to pass with their colours flying and their flags aloft in the face of your fort to your apparent dishonour, which ought not to be suffered; nor would we endure it had we your order to require us to the contrary. In fine, we humbly declare it to your Honours that you must expect noe faire or friendly correspondence with the Portuguese but what you must maintain by your sword: Every

considerable Fidalgo casting scornfull expressions of your Honours and your Government as only mercantile, and still in their pride calling themselves Lords of India "

Still, the Dutch had to be reckoned with, and this Aungier found early in the year 1673, when news reached him that Van Goens, with a fleet of twenty-two ships, was advancing to attack Bombay The prospect was one which carried dismay to the faint hearts who were especially numerous in the Portuguese and Banian communities "To raise and cheer up their spirits' Aungier arranged "a public show,' ostensibly as part of a jubilation for the victory gained at home over the Dutch in the previous year, but actually to inspire the people with confidence He gives in his letter home an inspiriting picture of how the two companies of garrison soldiers, with two companies of militia "with colours flying, drums and trumpets (for by good fortune wee have mett with two German trumpeters which ran away from the Portuguese and are now entertained in your service) marched through the towne . the Portuguese, Moors, Banyans, and Gentues, and others crying out as we passed, 'God save the King and the Honourable Company'" Somewhat apprehensively Aungier submitted his bill for this little *tumasha*—to give it an Indian name The liabilities included "about 30 rupees flung among the poor in pice and bugrooks (tin coins), 2 butts arrack given to the militia and soldiers, and some great gunnes fired together with a bonfire and some fireworks" Aungier modestly expressed the hope that their Honours had a more favourable esteem of them than to think that these displays were arranged "out of vaine glory or idle expense Our end herein" he assured them, 'is to strengthen the hearts of your people, gaine you reputation with your neighbours, and discourage your enemys"

Momentarily Aungier was successful in arresting the panic which threatened on news of the Dutch designs against Bombay reaching the island But matters did not improve when one of the Company's servants, who had been on a mission to Goa, arrived early in February bringing the news that he had met the Dutch fleet on the way up and that it had on board a large force of soldiers taken out of the garrisons at Ceylon and Cochin Aungier as a precaution had all the Englishwomen in the place sent for safety to Bassein, and meanwhile, caused work to be done at high pressure on the fortifications, he himself taking a hand in the operations to encourage the other. At the same time he arranged that the Company's ships in harbour, together with some French ships which had arrived a few weeks previously and were content to assist in this early demonstration of the existence of an *entente cordiale*, should be moored in a line under the protection of the guns of the fort, while he organized a force composed of "Moors" and "Rashpoots," and hardy Bundarees, or toddy drawers, for service on outlying parts of the island where the Dutch were likely to attempt a landing Having done this he awaited results On February 20th, seven of the Dutch ships entered the harbour and dropped anchor out of range of the guns of the fort The next day they weighed anchor and stood out to sea, but returned again and "came to an anchor soe neare as they could possibly ride to the point of the Colles (Colaba) commonly called Old Woman's Island' To meet this threat Aungier dispatched a force of the garrison soldiers "unto the sandy Western Bay (Back Bay to attend the enemy's motion there in case they should attempt to land,' and at the same time detailed a force of militia to Mahim to frustrate any enemy action that might be attempted there After further manœuvring the Dutch ships, finding that all feasible landing places were strongly guarded, departed for Surat The main part of the Dutch fleet, under Ryckloff van Goens himself, however, had still to be reckoned with, and Aungier was greatly disturbed to learn that the Dutch had pro-

CONCLUSION OF A CHEETAH HUNT AT CAMBAY IN THE EIGHTEENTH CENTURY.

From Forbes's 'Oriental Memoirs."

posed an alliance with Sivaji on the basis of an understanding that the Mahrattas helped the Dutch to capture Bombay, while the Dutch assisted Sivajee to take Danda Rajapore in the campaign against which the Mahrattas had already lost fifteen thousand men and expended a vast treasure. In haste Aungier sent a messenger to Sivaji, pointing out how dangerous a neighbour the Dutch would be to him, and offering his good offices in the arrangement of a peace with the Sidi, the Mogul admiral, who held Danda Rajapore. Whether moved by Aungier's arguments or because he had good grounds of his own for rejecting the Dutch offer, Sivaji inclined to the view that it was not good policy for him to interfere with the English. Van Goens, upon this turn of affairs, decided that the risk of an unsupported attack was too great for him to undertake, and sailed away with his fleet, not again to disturb the peace of the infant settlement. Thus ended what was probably the greatest danger that ever threatened Bombay of the island passing out of English into foreign hands.

When Aungier came to survey the position after the crisis had passed, mingled with his not unnatural satisfaction at the successful outcome of his plans—or "bluff," if a colloquial phrase may be permitted—was a feeling of a very different kind for the Portuguese, who played throughout a dastardly part towards the sorely pressed Englishmen. One of the consequences of the approach of the Dutch fleet was the occurrence of a panic among the population. Aungier in his dispatch home, describing the episode, said that instead of using their good offices to allay the popular ferment, the Portuguese "used tyrannicall practises to the poor people, casting out dishonourable expressions against His Majesty, your Honours, and the English nation." The Bombay Portuguese were very little better. "Their timorousness and disloyalty to the English Government was much apparent, some saying they could not, others they would not, fight for us, and one Fidalgo called Siegneur Alvaro Perez, Lord of the Manor of Mazagon, who we had made captain of the militia of Mazagon, the day before the enemy appeared in sight, disloyally and cowardly fledd away, for which we think good to make him a publique example."[1]

In a short time streams of refugees were pouring back to the island, bringing "a general complaint of Portugall crudity." Aungier took care to smooth the path for them, and soon the settlement was humming with the busy life of a contented and prosperous community. As matters had so far improved, the President thought that he might safely return to Surat to deal with the pressing affairs that awaited him there. But no sooner was his intention known than consternation seized the Indian community. Eventually a deputation, representing all the leading castes in the island, waited on Aungier to represent the popular view. They were received affably, and "joyntly and severally intreated him with earnest importunity not to leave them in this time of war and danger." In reply to this Aungier pointed out the urgency of the call which drew him to Surat, and promised to return almost immediately. "Yet the people would not be satisfied but declared that his departure would be of very evill consequence, that there was great reason to feare that the Dutch fleet would come up against the island, that the people were already disheartened, especially the newcomers, who would certainly convey themselves away if he went to Surat; that it did not consort with the nation's, the Honorable Company's, or his own honour, nor with the good of the island, to leave it. . . . These arguments were urged so home and so importunately by the people "that the President thought it best to yield. He consequently sent for the leaders of the castes and intimated to them "that for their sakes and at their desire he would stay," adding a hope that they would not desert him again, "at which," says the record naively, "they seemed much contented and with a modest blush promised alsoe that they would not leave the island though the enemy should appear."

Nothing could more happily illustrate the relations which existed between Aungier and the inhabitants of the island than this delightful episode. Just, upright, and sincere, as well as brave and resourceful, he inspired confidence. He seemed to know by instinct what was expected of him by the people, and was ever prompt in his action. One of his measures was the establishment of a system of caste representation by which chosen delegates of the various racial elements of the population dealt directly with him in all matters affecting their sectional interests. Here he anticipated the principles of self-expression and regulation on which the subsequent rule of Britain in India was based. In the arrangement we have an indication of the broad-minded, high-souled disposition of the man—the feature in his character which appealed most strikingly to the polyglot population over which he was called to rule, and which made possible the astonishing success he achieved in establishing the settlement. But Aungier was not only an able administrator: he was also a brilliant designer and constructor. Gifted to a rare degree with the quality of imagination, he foresaw the great future that there was for Bombay under a stable and progressive Government, and he laid his plans accordingly. His work on the fortifications was as thoroughgoing as was possible with the limited resources at his disposal. Employing as his chief engineer a German colonist named Herman Bake, he laid out the fort, not, perhaps, without some errors of alignment, but with a general effectiveness which stood the test of hard experience in the perilous after times that were to come. Public buildings were erected, including a warehouse for the Company's goods, the lines of a town were laid out and building was encouraged, and arrangements were made for the anchorage of ships in the harbour and for their refitment. Aungier also worked energetically for the erection of a church on a site provided in the fort identical with that now occupied by the Cathedral Church of St. Thomas. But he died without seeing this part of his programme realized, and though he left in his will a large sum as a contribution towards the cost of the edifice, many years passed after his disappearance from the scene before the building was actually erected. Though before all things an intensely religious man, Aungier was no bigot. When instructed by the directors to undertake measures to proselytise the Indians, he demurred in memorable language. The conversion of the natives, he said, was "a work which required time, patience, and assistance from heaven, for till God moves the hearts of these poore ignorant people our labour will be fruitless." "The cruelty and covetousness which the Romish priests have used, the vicious and most scandalous lives of those who call themselves Christians, as well Protestants and Romanists, hath," he proceeded, "cast an odium and dislike of our sacred profession; for to the shame of many Christians in India be it declared that Mahomedans and Gentues (Hindoos) live more strict and vertuous in their con-

[1] The cowardly Fidalgo was deprived of his estates

versation then they. Wee must first reform ourselves before wee hope to convert others to our belief. Wee are most serious and resolved in our endeavours to suppresse profanenesse and licentiousnesse, and wee bless God the greatest part of your people are much reduced to a sober and Christian conversation, but among the meaner sort there are some so besotted that noe exhortation, noe reproofe, noe punishment, how rigorous soever, will reclaim them." It would be difficult to overpraise the justness of these sentiments. They embody a lesson in toleration which is not out of date even in these days, two and a half centuries later.

princes who have great rule and government and have nothing else to doe but to mainteyn themselves . . . whereas our business is to advantage ourselves by trade . . . and our grandeur must be in a considerable trade, dealing fairly and performing punctually with all persons, and where our government is to doe it with justice and righteousness."

A crueller and more unworthy blow than this ungracious and carping criticism could not have been levelled at a servant who had dared and won in a difficult situation. When Aungier received it, the hand of mortal illness was upon him. In September 1675 he had departed for Surat, by fond humour, self-seeking, or exotic zeal, but by the necessity and contingency of your affairs, wherein he hath observed the rule of time, measure and place to the best of his judgment; in the management whereof he hath by God's blessing much improved your interest and served his Majestie, the nation's and your right in the island, during the warr to the hazard of his life and fortunes. Nor can he accuse himself to have wronged you in your estate or broke your orders by vaine expense, or used more grandure than his predecessors on this side, or equalls on the other side of India."

Aungier went on to say that if he had

LANDING STAGE AT SURAT A CENTURY AGO.

From Postan's "Panoramic View of Surat," published in 1830.

Memorable as were Aungier's services to the cause of his country, conspicuous as was his fidelity to the interests of his employers, he did not escape the fate which was the lot of so many who in that day and afterwards worked disinterestedly for the Company. When the bill of costs, necessarily a large one, was presented to the directors they were aghast and indignant at the extravagance, as they deemed it, of equipping Bombay with such powerful protection. "We cannot but blame you," they wrote, "that having so often given you directions for the government of our island Bombay and management of our affairs there with frugality that yet soe great sums should be therein expended, and though we have and doe take notice of many good services that our President Aungier hath done us in the main of our business, yet we cannot but in particular blame him for this extraordinary expense, whom we find by his advices to us (as well as by our great expense) to be too apt to be led into a way of grandeur, answerable to those worn out with the anxieties and exertions of a period of exceptional activity and responsibility. Protracted fever had reduced him to a skeleton, and it was with difficulty that he was able to transact the duties of his position. But with all his bodily weakness his mental powers were as vigorous as ever. This is plain from the reply which he framed on his sick bed to the censure of the directors. "There is," he said in dignified language, "a time and season for all things under the sunn: a time to plant, to build, to fortifye, to defend in war, to show the solemnity of Government, to give God thanks for mercys received and for their contrarys: and as there is a time soe there are proper means to be used according to number, weight, measure and place, the due application or misapplication whereof are the surest marks (if anything can be sure) to judge of human actions by. Their President during his three and a half years' service in Bombay hath by an unforseen Providence been exercised in most of those facultys, not drawne thereto erred through lack of experience it was no wonder, "when it was considered that his calling is a merchant, that he never proposed himself a soldier, lawyer, philosopher, statesman, and much less a Governor. The times he acted in were perillous, subject to frequent chargeable overtures, which nothing you nor he could see or prevent: and, therefore, he doth more cheerfully expect your more candid aspect upon his labours when you are pleased to take a due cognisance of the whole affair. That as it becomes your wisdomes to think the worst of, and keep a jealous eye over a servant whom few of you doe know, and on actions which you did not expect, soe it will not misbecome your name now written on his forehead to make his case in some respect your owne, and consider how far ill-grounded information or misprison ought to prevail against him; under which notion he hopes that accusations of grandure will fail, when you have fully examined his manner of life, for (however now oddly represented) he trusts in God to appeare

no such inconsiderate Sanca Panca as to play with that dangerous serpent, vanity, at your charge, since he knows well besides his accounts with God he must answer conscientiously to you also for what moneys shall be found so vainly expended. To conclude, we doe in all meekness entreat your Honours to entertain a more favourable construction of our services, that wee may for once rejoice in your benignity and serve God and you in our several stations with comfortable apprehension of your good eye towards us."

Such was Aungier's defence—an unanswerable one judged in the light of history. After sending it home the writer became more and more an invalid. His work, in fact, was really done when he left Bombay, though he survived until June 30, 1677. In transmitting the news of his death from Surat his colleagues spoke feelingly of his long sufferings and of the sorrow which his demise had caused to all who knew him. "His wisdom, eminent perfections, and care of your affairs will better commend his worth than wee can tell how to describe him," wrote the Council. It was a seemly epitaph though a simple one, and it has the distinction that it was the only official appreciation of Aungier's qualities recorded. But history will do the founder of Bombay justice, if his narrow-minded employers were remiss in rendering it,

CHAPTER III

Aungier's Bombay "no mean city"—Description of the island and its population—The redoubtable Sivaji a menace to the settlement—Henry Oxenden in charge after Aungier's death — His views of Sivaji — Mahratta occupation of Kenery—Lieutenant Thorpe killed at Kenery by the Mahrattas—English force under Keigwin defeat Mahrattas in an engagement off Kenery — Directors' contradictory orders concerning Kenery—Sir John Child appointed to the chief position in Western India—His shortsighted policy:—Mutiny in Bombay led by Keigwin—The rebels seize the Government and "hold the island for the King"—Child's abortive attempts to get the rebels to surrender—Royal expedition under Sir John Grantham recovers possession of the island—Keigwin and his fellow-conspirators escape punishment — Keigwin more a patriot than a rebel.

IT was Aungier's ambition to make Bombay "no mean city." He realized his wish before he died in a fashion which perhaps exceeded his most sanguine expectations. In the place of the beggarly Portuguese township of a few thousand inhabitants, mostly fishermen and toddy drawers, he left a thriving population of 60,000 of the best racial elements, including a number of craftsmen who pursued under his paternal supervision the characteristic Indian callings, not the least important of which in that day was cotton weaving. A very vivid and interesting account of what this early Bombay was like has come down to us in a careful description of the settlement, prepared either by Aungier or under his direction, and dated December 15, 1673. In this, following an account of the geographical features of the island and its division "for better order's sake" into two small shires —Bombay and Mahim—we have a careful enumeration of the various features of the population. The main elements were "Christians, Moors (Mahomedans) and Gentues (Hindoos)." "Under the Christian name," the record states, "are contemed Catholics of the English Church and Catholics of the Roman Church, the former in the true light, free use and enjoyment of the evangelicall blessing, if their lives were answerable thereunto. Of these there are few insomuch that their number is even despicable. . . . The latter though very numerous yet most of them blacks, unhappy in the blindness wherewith their priests enchant them, poor yet controuled in their way. The English are employed in trade and the militia:

BOMBAY SCENERY OF A CENTURY SINCE.

VIEW OF THE BREACH FROM LOVEGROVE.
From Wale-'s "Views of Bombay."

the other Christians are occupied chiefly in planting of the ground, some few in trade and too many of them as souldiers in your garrison." The Moors were not very numerous. "Most are employed in trade supplying the island with provisions, going to the sea in ships and other vessels as lascars or marines, haberdashers of small wares, weavers, tailors, bakers, smiths, and other handycrafts, very useful and indispensably necessary to the island. . . . Under the name of Gentues are severall casts—to wit Banyans, Brahmanes, Purvoos, Sinays, Bandareens, Corumbeens, Coolys, &c. . . . Of these the Brahmanes are employed in the offices of the Gentue idolatry and some in trade. The Purvoos are farmers of lands and receivers of rents." Amongst the others "the Ban-

OLD INDIAN CHARACTER SKETCHES.

1 An Arab Sea Captain
From the Postan Collection of Drawings at the India Office

2 A Jain Priest.

3 Bombay Parsees.
From Forbes's 'Oriental Memoirs."

dareens are occupied about the toddy trees selling toddy, distilling arrack called Phoole Rack which yields the Company considerable revenue. They are also good soldiers, stout, faithfull, and lovers of the English. The Coolys are the general fishermen of the island, yielding a good revenue to the Company and other usefull and indispensable services. These are as it were the Company's slaves, hardy, unwearied labourers and lovers of the English." Then follows an interesting reference "to another cast of people called Percees (Parsees) which are those who, fleeing the cruelty of their first promoters the Mahometan religion in Persia, settle themselves in India where they enjoy their old rights and customs unmolested. . . . They are an industrious people and ingenious in trade, wherein they totally employ themselves. There are at present but few of them, but we expect a greater number, haveing gratified them in their desire to build a bureing place for their dead on the island."

Such was the community which Aungier got together and ruled over with so much wisdom and tact. In its broad outlines it resembles the population of upwards of a million which now crowds the "paltry little island" of the Earl of Marlborough's time. On such a firm foundation as that which Aungier laid a prosperous settlement of a permanent character might immediately have been reared if the conditions had been favourable. But unfortunately there were serious obstacles to progress in the then state of Western India. The redoubtable Sivaji, the Mahratta leader, was then at the height of his career of conquest. He had already made great inroads upon the Mogul Empire, and had reduced to anarchy some of its fairest provinces in the west. The struggle was continuing with varied results, but with a general tendency towards the disruption and disintegration of the Mahomedan rule. In the vicinity of Bombay the Mahratta hosts were particularly active, raiding from their strongholds in the Ghauts and conducting a persistent campaign along the coasts against the Sidi, the Mogul Admiral. At Surat the East India Company's representatives were being harried and oppressed by the corrupt Mogul officials, and trade was being conducted under conditions of increasing difficulty. In every direction dark clouds were looming on the political horizon, the situation calling for the highest qualities of direction on the part of the leading English representative.

After Aungier's death the Bombay administration was in the charge of Henry Oxenden, an official of some experience, who, a few years earlier, had conducted a somewhat important mission to Sivaji at his stronghold at Raigurh, where he witnessed the crowning of the great leader and the curious ceremony of weighing the newly crowned monarch against gold, a procedure which the Mahratta chief had borrowed from Mogul practice. Oxenden knew the Mahratta power too well not to fear it, and his letters home convey a vivid impression of the deep sense of anxiety which he and his colleagues laboured under. "What wee lament is," he wrote, "that we cannot foresee any termination of his [Sivaji's] Government, for he still continues victorious even to a miracle, waging war with the potent King of Hindostan and Duccan [the Deccan], against which he hath hitherto proved successful and wee are fearful will continue soe." The fight between Sivaji and the Mogul forces as the days went by came very near to Bombay. In September 1678 there were anxious moments when the Mahrattas made attempts to burn the Mahomedan ships in Bombay harbour. The design was frustrated, but it was becoming increasingly evident to the English representatives in Bombay that sooner or later they must become involved in the fray.

A crisis was at length precipitated by the Mahratta occupation of Kenery, the larger of two islands named Henery-Kenery lying at the entrance of the harbour and practically commanding it. An aggression so flagrant could not be overlooked, and Oxenden sent out a small force under Lieutenant Thorpe to survey the position with a view to subsequent action. Thorpe was the worst kind of agent who could have been chosen for so delicate a business. According to a report afterwards drawn up, he was under the influence of drink when he started on his mission. However that may have been, he perpetrated the incredible folly of landing with his insignificant party on the island, and so offering a distinct challenge to the Mahrattas. He had hardly set foot ashore than he and his little band were attacked by a large force of Sivaji's men, with the result that Thorpe and several of his followers were slain, while the remainder of the force were taken prisoners. When the news of the untoward incident reached Bombay, measures were taken to avenge the insult offered to the English power. The Company's ship, the *Revenge*, then in harbour, was hastily fitted out, and with two galleys and six other small craft, sallied out to teach the Mahrattas a lesson. With the ships went Captain Richard Keigwin, the military commander, in command of two hundred European soldiers of the garrison. At daybreak on the morning of October 28th the little English flotilla, while at anchor off Kenery, was suddenly attacked by the enemy. The odds were heavily against the Englishmen, and for a time things looked black, but the tables were ultimately turned on the Mahrattas, and they withdrew their fleet after the loss of six of their finest galleys with a very large number of men. Keigwin was anxious to follow up the advantage by attacking the Mahrattas in their stronghold on the coast, but the Bombay Council were too apprehensive of Sivaji's resentment to sanction any further hostilities. The Mahrattas were left in undisturbed possession of the islet in the amiable hope, subsequently falsified, that the absence of water in the place would necessitate its surrender in a few days. The Council thought fit, as they said in a letter home, "to palliate things in view of their weakness," but they warned the Court of the seriousness of the position which would be created if the occupation was made effective and Sivaji, by his possession of the island, was able to command the entrance to the harbour. The directors on their part were not slow to realize the importance of the issue involved in the episode. But they sent out contradictory orders, at one time urging the adoption of strong measures, at another referring in a depreciatory way to the mercantile character of their enterprises and to the importance of maintaining good relations with their powerful neighbours.

At this critical juncture in its affairs, the Company, early in 1680, appointed to the supreme control of their interests in Western India Sir John Child, an official not to be confused with Sir Josiah Child, the well-known President of the East India Company at the end of the seventeenth century. Sir John Child had at the time a good record of service in the Company's settlements in the West, but as was said of him by a well-known writer of the period, he "was a general but no soldier; and better skilled with his pen than his sword, and more expert at casting an account than in martialling and conducting an army." He was chosen, there can be no doubt, with the special object of effecting economies in the administration,

an object upon which the directors had set their heart, as they had expended something like £300,000 on the Bombay fortifications, and were alarmed at the prospect of further heavy calls upon their exchequer Child responded readily to the demands of the directors, although if he had had proper discernment he would have seen how impossible it was to retrench in the important matter of the island's defences, owing to the ominous same time heavily reduced the establishment The inevitable result was to promote a dangerous spirit of discontent in the all too small garrison Keigwin, the hero of the gallant Kenery fight, still held the military command He had gone home somewhat under a cloud after the affair at Kenery, but his services were too valuable to allow of his being long overlooked, and the directors had reinstated him with a manifestation of cordiality for to relieve the guard, which was no sooner done but the Fort gates were lockt up, and immediately there came Lieutenant Fletcher and Ensign Thorborne, and the two companies wheeled into a ring, and Ensign Thorborne made a spee h to this effect, though not in these words

"Gentlemen, and fellow soulders, wee have a long time suffered under the oppressions of the East India Company, and being no longer able to endure it are

VIEW OF BOMBAY IN 1773

From Forbes's "Oriental Memoirs"

outlook at the period For not only were the Mahrattas by this time firmly seated in Kenery, but the opposing Mahomedan forces under the Sidi had occupied the sister island Henery, and were interfering with the Company's shipping, upon which tolls were levied where they could be exacted English prestige had sunk very low owing to these untoward incidents, and there was a real danger of the loss of Bombay In such circumstances Child's manifest duty was to strengthen the military forces, but in practice he did precisely the reverse Pursuing a policy of economy, which he knew would recommend him to the good offices of his employers, wherever he could he cut down the allowances of the officers and at the which they were probably sorry afterwards At all events Keigwin in the end proved one of the sharpest thorns they had ever had in their sides

We come now to the amazing episode of Keigwin's mutiny and assumption of all the powers of government The strange eventful history of this affair begins at the end of December 1683, while Child was absent in Surat Let John Church, the minister of the time, relate what happened

"On St John's Day last, being the 27th day of December, 1683, according to the usual custom, about 7 of the clock *in the morning, I went to the Fort to* prayers, and being muster day I waited some time till the other company came in resolved to fly to His Majesty of England for succour, and desired them to stand by them (the chief conspirators), to which they all consented and cryed out 'God save the King' and then fell into their ranks and files again

"Then two files were drawn out, led by Lieutenant Fletcher and Ensign John Thorborne, who came up through the long gallery (where I then was) with their swords drawn and their muskets cockt, some of the soldiers crying all the way, 'Damme, let's fire, till they came to the Deputy-Governor's chamber, where they surprised him, either in his bed or just *out of it* There they staid about half an hour, sending some souldiers to secure the gentlemen of the Council, after which

they came out with the Deputy-Governor, who, when he came to make a small stop, telling me he was taken prisoner but upon what account he knew not. He being hurried away and I being surprized at the news could make him no answer. When they came downstairs, they made a small stop, which Captain Keigwin seeing, said: 'What do you stay for? Why don't you carry him away?' Which they did and returned presently to the souldiers and read to them a long paper of their pretended grievances. After which they proposed to them the choice of another Governor, whereupon they all called out 'A Keigwin! a Keigwin!' which he accepted, and told them, since they had accepted him their Governor, he expected they should be under his command, and that he would govern them according to the known laws of England till he heard His Majesty's further pleasure. Then he came up to dinner, at which he was accompanied by all the officers. . . . The remaining part of the day was spent in swearing in souldiers."

Following this came the next day the issue of a proclamation by Keigwin, declaring "that the intollerable extortions, oppressions, and unjust impositions that hath been for these five years passed most rigorously enacted and continually more and more increased by the English East India Company and their servants here with other sordid actions as not maintening the honour due to His Majesty's Crown and dignity, and their despicably contemning and maliciously ruining His Majesty's subjects, obstructing and rejecting all complaints, making His Majesty's laws mercenary and subject to their own depraved wills, all which hath occasioned God's just judgments to overtake them in the full carreire of their pride and malice, avarice and injustice, and all the inhabitants and souldiers to revolt from their unjust government and fly to the refuge and protection of our most gracious Soveraign," they therefore "strictly charged and ordered in His Majesty's name" that thenceforth "no inhabitants or indwellers should own the East India Company or the Governor, John Child, or the Deputy-Governor, Charles Ward, or their servants, as rulers or governors of the island." No shops were to open in the Fort "without His Majesty's pass," and "all rents and revenue were to be paid into His Majesty's Treasury." As to the world in general it was provided "that all English or other His Majesty's subjects, however distressed or wheresoever dispersed, shall have His Majesty's fort and island for their sanctuary, and all the English East India Company or their servants in general or particular, not excepted during their due obedience to His Majesty's Government shall have free egress and ingress, and shall have peaceable and free liberty of commerce and friendly converse with His Majesty's most loyall subjects in this His Majesty's fort and island, Bombay."

In order that the proclamation might lose nothing in impressiveness, it was issued at a full parade in the Fort. We have a lively picture of the scene from the pen of Minister Francis: "First of all went the trumpeters and country music. Then came Ensign Thorborne, Captain Alderton, and Mr. Cully, on horseback. After them a company of English souldiers with colours flying and drums beating. Then a company of the Militia which waited for them at the smith's shop. There [they] were mett by two companys more of the Militia who accompanied them to the Bazar, where they read the proclamation to the best of my intelligence in English and Portuguese, and immediately fired 3 volleys in token of joy, which were seconded by 7 or 9 great gunnes from the Fort; and then returned in great triumph to the Fort, where they spent the remayning part of that day and the day following. Thus," concluded the worthy Francis, "were the Honourable Company in two or three days deprived of all their concerns in Bombay by the interest of two or three discontented persons, the most active of whom was that little false Scot Thorborne." The occupation of the Fort, however, was not the complete tale of the rebels' activities. On December 29th an armed force boarded the Company's frigate *Return*, then lying in harbour, loaded ready for departure to the Malabar Coast, and having made prisoners of the crew seized and removed from her Rs. 40,000 in specie which was on board.

When the news of the rebels' *coup d'état* reached Surat on January 5th through the medium of a hastily penned missive secretly dispatched by Ward, there was great consternation in the official camp. At the earliest moment an expedition, consisting of three ships, was dispatched to Bombay under the charge of Charles Zinyan, who had associated with him for purposes of negotiation, Francis Day and George Gosfright. On the way down the coast the expedition on January 13th met the ship *Ruparell* from Bombay carrying a number of loyal officials and their families, who had been ejected by the rebels. This was not a hopeful omen for conciliation, but Zinyan, nevertheless, at the earliest moment got into touch with the rebels, calling upon them to surrender the island, and offering pardon to them in the event of their compliance with the demand. Keigwin's reply was an emphatic refusal. He told Zinyan and his colleagues that they wasted their time in hanging about the coast and that they had better speedily depart, "unless any of you are desirous to come on shore and congratulate His Majesty's Government and visit friends," in which event they would be welcome. To this "a smart answer" was sent warning Keigwin of the consequences of his action, but the rebel leader remained obdurate. He stated that no private quarrel or self-interest had made him Governor, but he had been chosen by the unanimous consent of all the people. He knew that His Majesty would not suffer his honour to be trampled upon, or his subjects to be murdered without satisfaction. "Nature obliges us to preserve ourselves, especially when wee are plainly exposed to the fury of an enemy. In these troublesome times," he proceeded, "the enemy threatens us every minute, and wee are resolved to sell our lives as deare as wee can." Keigwin here was referring to the Mahrattas, who, having subjugated Salsette and Elephanta, were gathered in menacing force in the immediate vicinity of Bombay.

Child, finding that his agents could accomplish nothing, now tried his own hand at conciliation. In a letter dated February 1st he pleaded with the rebels to return to their allegiance. It is a curious compound of cant and wheedling. "Oh! oh! Johnny Thorborne," he wrote, "thy ingratitude is of a deeper dye, but the God of heaven and earth forgive thee and pardon you all and put into your hearts to return to your obedience. Come one, two, or three and looke on your Governor. I am the same that lived amongst you not long ago and then had wars with Sombajee Rajah (Sivaji's son and successor) and great disturbance from the Portuguese, and yet preserved you all with God's blessing. . . . My friends, for God's sake, for your own sakes, for your King and country's sakes, for my sake—for I cannot think but in your hearts you have some love for mee, be not led longer by the Divell, nor let noe wicked counsel prevail with you to continue longer in that very great wickednesse you are in,

but show yourselves men of reason and let mee have your advice and assistance to preserve the island, or otherwise it must in all appearances be lost to our King and country and you the sole cause Observe, pray God Almighty's mercy towards us that in this unhappy mutiny not a drop of blood spilt that I can freely forgive you all " Keigwin's reply to this lachrymose appeal was a bold assertion of his intention to hold the island and defend it against all comers, Child included After further vain attempts to bring the rebels to reason, Child resigned himself as best he could to the situation, the Great Seal was issued to Child to secure the execution of the Royal edict Finally, an expedition consisting of six ships was sent out under the command of Sir John Grantham to supply the necessary power to enforce the decree

After a call at Surat, the Royal fleet arrived off Bombay in the early days of December, 1684 On the 9th of that month Grantham landed and had an interview with Keigwin, which resulted in the issue the next day of a general pardon After this Keigwin handed over to Grantham the gold seized in the *Return* and the keys of the Fort Everything Keigwin and some others, who foresaw the danger more than they, to draw up proposals and send to me and invited me ashore, which they did, and on the 19th I got possession again and reduced them to their obedience "

The surrender of the island was made the occasion of a formal ceremony, at which Grantham read his commission and afterwards addressed the people in a speech which he genially concluded by inviting all the leading Portuguese and English inhabitants to a public dinner, which he had thoughtfully provided for in advance " at the Marshall's house neare

VIEW FROM THE ISLAND OF ELEPHANTA.
From Wales s "Views of Bombay "

confident that when the facts were known at home measures would be taken to restore his government

It was not until the month of August, 1684, that the story of the amazing series of events in Bombay reached England Immediately it arrived the East India Company petitioned the Crown for assistance to recover the island, representing that the rebell on was the work of interlopers, and notably of John Pettit and George Bowcher, two of their old servants, who were seeking to establish an interloping factory at Surat in opposition to the Company's settlement there On August 23rd, a week after the presentation of the petition, a Royal Proclamation was issued calling upon the rebels to surrender within twenty-four hours on pain of being treated as traitors and punished " to the utmost demerit of their guilt," and two days later a Commission under now seemed to have been satisfactorily arranged, but Grantham found to his dismay the next day, when he attended to receive the surrender of the garrison, that the men were out of hand They gathered about him in a threatening way, shouting that if Keigwin would not be their Governor they would appoint some one else One fellow, bolder than the rest, actually levelled his pistol at the King s representative and would have taken his life if an officer standing by had not in the nick of time prevented him from firing Disappointed and disillusioned, Grantham returned to his ship, where he remained until Wednesday, December 19th, " but still by the fishing boats (by night) kept correspondence with Keigwin and kept the stone rolling till it fell into its right center," as he put it in his letter home " In the interim the soldiers," he proceeded, " were wrought upon by to the Fort " At this feast Grantham presided " I began," he wrote, " with His Majesty s health with 31 gunns from the Fort, the Queen's with 19, the Duke of York's with 17, Prince George's with 15, they being all satisfied and in peace, which God grant may continue," he concluded fervently

Much to Child's disgust Keigwin and his fellow-conspirators proceeded to England on Grantham's ship as honoured passengers rather than as culprits meriting dire punishment In one of Child's letters to the directors describing the events accompanying the surrender of the island, we have a lively picture of Keigwin, " that notorious naughty rascal on board of *Charles the 2nd* [Grantham's ship] as impudent as hell, glorying in his roguery " After his return to England Keigwin joined an expedition which was dispatched

to counter French designs in the West Indies, and fell while gallantly leading his company in an attack on Basterre in the island of St. Christopher's (St. Kitt's).

It is an arguable point that Keigwin was more of the patriot than the rebel in the violent action he took. In Child's feeble hands Bombay was gradually slipping away from English control. The Mahrattas were immediately without, knocking at its gates, and they were only waiting for some favourable opportunity of overrunning it as they had ravaged the adjacent Portuguese territory. At this juncture determined leadership was above all things necessary, and while this was the last service that Child could contribute, Keigwin was before all things a bold and resolute commander, precisely the type of man to inspire a wholesome fear in the counsels of an enemy of the type of the Mahrattas, who rarely took unnecessary risks. During his irregular government he showed the spirit that was in him to such good purposes that Sombajee gladly entered into an understanding with him so fruitful of good that the Company's representatives were only too glad afterwards to confirm it. On the whole, posterity has reason to think kindly of Keigwin. He probably saved Bombay from alienation: he certainly by his action brought forcibly home to the East India Company some of the leading principles of successful rule on the soil of India.

CHAPTER IV

Change in the policy of the East India Company—Sir Josiah Child in control of the Company's affairs—A robust Imperialist—His racy dispatches—Insists on the importance of Bombay—"The Key of India — The island "a jewel" to be stoutly defended—Measures for the improvement of the settlement—Suggested Assurance system—A Postal scheme—The Company's policy adopted too late—The Company makes war on the Mogul Sir Josiah Child proceeds to Surat to demand redress for injuries—Abortive negotiations He raids Indian shipping on the coast as a measure of reprisal The Sidi, the Mogul Admiral, invades Bombay—A desperate defence—A humiliating peace made with the Mogul—The Sidi's forces quit Bombay, but leave it a wreck.

KEIGWIN'S rebellion in Bombay was followed by an important change in the policy of the East India Company—a change which, though not directly caused by it, was precipitated by the occurrence of the events narrated in the previous chapter. In the days of Aungier's government, and for some years afterwards, the Company had been mainly influenced by a desire to avoid complications with the rival powers then at deadly grips in India. Their aspirations were to trade under peaceful conditions and to pursue the even tenor of their way as inexpensively as circumstances would permit. If the ordering of events had been under their control the policy might have succeeded, but unhappily for them neither of the protagonists in the great struggle would permit the English in their midst to hold aloof. Mogul officials oppressed and robbed the Company's representatives at the factories in the East and, in the West, and the Mahrattas were a perpetual menace to Bombay. A further complication was introduced by the interloping interests which, as the seventeenth century waned, waxed ever bolder in their assaults on the Company's monopoly. In the circumstances the old non-intervention rôle became an impossible one, and even before Keigwin made his audacious bid for power the directors had decided to follow entirely new principles in their dealings with the Indian powers.

The supreme direction of the Company's affairs at the period was in the hands of Sir Josiah Child, a leading figure in the mercantile life of England at the close of the seventeenth century. Sir Josiah Child was a sturdy patriot of Whig proclivities, who to his robust political faith added a keen instinct for the development of trade on what in these days would be regarded as Imperial lines. When the incidents of Keigwin's rebellion had brought home to him the dangers which attended the old methods in which a rage for economy was the predominant feature, he addressed himself to the task of enforcing upon the Company's representatives in India a new line of action as vigorous and adventurous as the old policy had been feeble and hesitating. His dispatches are a racy reflection of a mind obsessed with the idea that the Company was to play a great part in India. It was no longer the organization in which "trade not grandeur" was the chief desideratum, but the great dominating force which was to teach the arrogant Moors and the treacherous Mahrattas the wholesome lesson that English interests were not to be their sport.

In one of his earlier dispatches, written towards the close of 1685, Sir Josiah Child wrote, "Wee will not interpose in any of their quarrels with the natives by taking a side against them when they are engaged in a warr as now with ye Persians, nor concern ourselves in ye justice or injustice of the quarrel, but wee will follow our trade as is provided by the articles of Peace to any place or people in India, notwithstanding any quarrel, warr or pretence of warr they may have, and if while you do peaceably follow our trade they make any warr upon you we would [have] you not only to resist force by force but to take all the advantages you can to gain satisfaction from them there that we be not exposed any more to a tedious course of complaining here, as wee have been too often for above fourscore yeares past. . . . And that you must be always in a posture hereafter to vindicate our just rights against the Moors and all other people, we would have our General keep his constant residence upon our island of Bombay, and that all our Suratt ships for ye future shall be loaden from thence for Europe, that being ye place we resolve to make our great magazin of all Europe and India goods. . . . And we heartily wish wee had resolved this many years past, which if wee had done Bombay had been in a stronger and more flourishing condition than now it is." The directors did not mean that their representatives should totally desert Surat and Swally or should make any breach with the Mogul if they could maintain fair terms with him. "But," they said, "we will take no abuse from his ministers or servants or be obliged to keep any more of our business in his country than wee think convenient and consistent with ye growth of the English Government and Colony at Bombay, which is the best seat of war in all India. And whilst we are in peace we must (as all wise nations doe) provide for warr, which is the surest way to preserve our peace."

In a further dispatch about a year later the directors reinforced their views of Indian policy by another strong injunction to make Bombay the headquarters of the Company's interests in Western India. "Wee long to heare," they wrote, "of our Generall's safe removal to Bombay that the chief persons in our employment, the best of our estates, our strength and our treasure may abide upon our own land under the protection of our own laws and our guns, and that our own subjects under his Majesty may be enriched by the ingress or regress of our shipping. Till wee can arrive at this, our station is but precarious, and we build but with untempered mortar in comparison with those wise master builders the Dutch, who are the mirrour of the East India policy and the only pattern to be imitated by any that would lay secure foundations for a lasting East India trade."

Again, in September 1686, the directors referred to the importance of making Bombay the chief centre of their influence

BOMBAY SCENERY A HUNDRED YEARS AGO.

1. Sion Fort. 2 View from Sion Fort 3 View from Belmont 4. View of the Breach Causeway 5 View from Belmont
From Wales's "Views of Bombay."

and trade Bombay, they said, must be made as strong as art and money could make it, For wee look upon that place as the Key of India, not doubting, with God's blessing, if we can preserve that and Madras to vindicate the honour of this nation against any enemy we have, or can have, in India, European or native "

A last extract may be made from this illuminating series of dispatches which so strongly illustrate the course of the early history of Bombay It is taken from a communication from the Court of Directors to the Council at Bombay under date April 11, 1688 The dispatch states that the island ' now it is put in a posture of defence is a jewel that we will always endeavour to make as strong and secure as money and art can provide, and will alwaes use it in the same manner as the Dutch do Batavia,' " and if you do your parts," the communication proceeds, " we hope it may in a few years be of much more value to England than Batavia is to the seaven provinces " A note follows on the general policy to be pursued " If any nation falls upon you,' or violence to any in amity with us We would not wrong a worm Just and Stout is the motto we hope to merit and wear

Besides laying down the general lines of the strong policy they intended to pursue, the directors carefully indicated the measures that they deemed to be necessary to add to the strength and usefulness of Bombay First they were anxious that the system of trading should be as free as possible The Dutch ' found their hopes of being great in India by barring all but the Company from trading wherever they have power ' The Company designed the same end " by contrary the directors wrote, " we would have you take the first and last opportunity you can to right us and yourselves on them without expecting further orders from England, for (God be praised) we are now in such a posture in India that we need [not] to sneak or put up [with] palpable injuries from any nation whatsoever in India, and with God's assistance we hope alwaes to keep ourselves in such a formidable posture of defence But we would have you do no manner of wrong and gentler means, viz by giving full freedom of trade in India to all persons whatsoever, paying us only our customs and other duties which our servants and countrymen pay " Next there must be a strong militia, not too many of one caste in it, and officered entirely by Englishmen A dock for constructing and repairing ships, and a mint were indispensable, and no time or money was to be lost in making Bombay " as strong and defensible as possible ' There is also a reference to a hospital and to the fact that thirteen ' hospital boys had been sent out " as apprentices to serve 7 years ' Then we hear of the importance of reclamation and " the draining of drowned lands, a forerunner of the movement which later gave so much additional land to the island by excluding the sea by closing the various " breaches " about the coast A curious proposal relates to the establishment of a system of assurance Such a system, it was opined, might be of " great advantage to all free merchants," and they had thoughts of " sending out a knowing person acquainted with such affairs to erect such an office at your

1 DUTCH TOMBS, SURAT
From an early photograph by Mr A A Imam C I.

2 SURAT—ENGLISH BURIAL GROUND
From an early photograph

place and to be Register of Assurances." More remarkable still, perhaps, were the ideas of the directors as to the desirability of setting up a postal system. By imposing suitable fees for the delivery of letters the Court thought that their Bombay representatives might create such conditions "as may in a few years bring in insensibly a vast revenue to the Company." The system would be even more profitable if their Council arranged for boats to go off and return at certain days and proper stages by land to Surat and other places to convey letters with great security and speed." But their Council must make it "highly criminall to send letters to any place where you have established a post office by any other conveyance than by the office erected for that purpose." As to the population the directors were very insistent that everything should be done to attract substantial traders. They deemed it certain that when the Company settled its headquarters there the Banians would flock to the island "as crows resort to carrion," and they also indicated the Armenians as people whom it was desirable to encourage.

In many ways the Company's new policy was wise and far-seeing, but it laboured under the fatal defect that it was embarked upon too late. When the later of Sir Josiah's Child's resounding dispatches reached Bombay, the Council there were battling with difficulties and dangers in circumstances which gave an element of grim comedy to the ambitious designs of the Leadenhall Street magnates. The crisis in a sense was of the Company's own seeking. They had been impelled by the repeated extortions and oppressions practised upon their servants in Bengal as well as in Western India to make war on the Mogul. In the East a substantial naval force under Captain Heath was sent to avenge the wrongs inflicted on Job Charnock and his fellow-officials in the opening stage of the hostilities which led directly up to the founding of Calcutta. In the West, Sir John Child, with the title of "General and Director-in-Chief of all the Company's factories in India," was entrusted with the duty of exacting satisfaction from the Mogul authorities there, who in the years immediately preceding had shown themselves active in harrying and imprisoning the Company's representatives. The Eastern phase of the operations does not concern this narrative. Suffice it to say that Heath proved a very incompetent commander, and that only Charnock's shrewd statesmanship saved the Company's affairs in that quarter from disaster.

Turning to the development of affairs in Western India, the interest commences in October 1688, when Sir John Child drew up a list of grievances and appeared off Surat with a strong fleet to enforce redress. He found the Governor by no means disposed to listen to his demands, and after abortive negotiations returned to Bombay. On his way down the coast he seized everything in the nature of "Moor shipping" that he could lay his hands on. A very considerable flotilla, many of the vessels being laden with valuable cargoes, was thus shepherded into Bombay harbour. It seemed at the time a brilliant stroke. But Child had not long to wait before he discovered that he had perpetrated a huge blunder by his inopportune masterfulness. The special trouble was that he had provoked the Mogul Admiral, the Sidi, to violent action by the annexation of some boats which belonged to his henchmen. After an ominous interval, during which Child sought to propitiate the Sidi by smooth words, the sable warrior cast his legions upon the island. They overran it with ease, and soon the little band of Englishmen who composed the garrison were besieged in the fort, fighting desperately for their lives. They valiantly resisted all attacks, but while their numbers were gradually thinned by death, wounds, and disease, the strength of the enemy was every day augmented. What made the position of the besieged the more perilous was the action of deserters in instructing the enemy in military tactics and so adding to the seriousness of the attack.

In the desperate circumstances in which he was placed Child was driven to seek peace as an alternative to surrender or annihilation. For this purpose he dispatched a mission to the Emperor Aurungzebe with a humble petition for the cessation of hostilities. The Emperor, for reasons of his own, was inclined to welcome these overtures, and eventually a compact was drawn up which, though highly dishonouring to the English in some of its provisions, did bring in its train the peace which was so sorely needed.

Bombay was freed from the invader as a result of the negotiations, but the settlement was left a perfect wreck. Ovington, who landed in Bombay in 1690, gives a terrible picture of the state of the place. Only seventy men of the garrison were left free for duty, and a condition of demoralization existed almost past belief. To make matters worse for the Company this collapse in Bombay coincided with the Revolution in England and the outbreak of war with France. It seemed that the island must be lost, and, indeed, the Company's enemies in Surat gave out that it had "certainly gone," but the defenders had done better than they knew in the fight they had maintained against the Sidi. By their stubbornness and bravery they had created an impression that the island defences were exceptionally strong, and that with such a garrison as that maintained in the Fort the position was practically impregnable. So there was every disposition to leave the Company's representatives severely alone in these days of heartbreaking anxiety and misery. In the meantime Sir John Child had died, it was said by Ovington of a broken heart caused by remorse for his neglect adequately to fortify Bombay. He was a commonplace man, utterly unfitted to cope with a crisis such as that by which he was faced in Western India. The strange thing is that he had the confidence of the directors to the last, and when news of his death reached them they paid a warm tribute to his zealous and faithful service. Besides thus dying in the odour of official sanctity, he left behind him a handsome fortune estimated at £100,000, a very large sum having regard to the difference in the value of money between that day and this.

CHAPTER V

English prestige at a low ebb - English pirates ravage the Indian shipping—Terrible condition of Bombay—Sir John Goldsborough and Sir John Gayer sent out to India to re-establish the Company's position—Sir John Gayer takes up his duties in Bombay—Mogul authorities imprison Samuel Annesley and his colleagues in the Surat factory because of English piracy—Gayer's vigorous protests—Renewed acts of piracy and a fresh crisis—Annesley gives security bonds—Is dismissed the Company's service for financial irregularities—English interlopers in Surat fan the fires of native resentment against the Company's representatives—The new East India Company created—Its representatives appear at Surat—Sir William Norris proceeds on a mission from the King to Aurungzebe—Failure of the Mission—Gayer arrested by the Governor of Surat and detained a prisoner off and on for years—Treachery of Sir Nicholas Waite, the new Company's chief representative—Waite assumes the government of Bombay—He is placed under arrest by his Council and sent to England—Disgrace and death of Gayer—Slow progress of Bombay—English authority established at Surat by Henry Lowther.

In the closing years of the seventeenth century English prestige in Western India sank to its lowest ebb. Bombay was a derelict settlement with a small band of depressed officials striving to maintain an existence on an exiguous trade. At Surat the Company's representatives were

BOMBAY A HUNDRED YEARS AGO

1 and 2 The Harbour.

3. View from Belmont.
From Wale's "Views of Bombay"

4 View from Malabar Hill.

BOMBAY—EARLY HISTORY

increasingly oppressed, and when not in actual captivity were subjected to degrading treatment at the hands of the local Mogul authorities. The English reputation was lowered by the presence in the Indian Ocean of a number of English pirates, including the notorious Kidd and the scarcely less redoubtable Evory and Chivers, who ravaged the Indian shipping and created a dangerous feeling of animosity towards Englishmen amongst the native trading community in Western India. Another factor which tended to reduce English influence was the appearance in the field of a new trading organization whose representatives, as the narrative will disclose, spared no trouble being but 3 of your covenant servants and very few officers and English soldiers. Certainly, Bombay never was in soe low a condition since its possession by the English, and if suitable care is not taken for recruits and refreshments, wee deale plainly with your Honours, wee cannot tell what will become of the place. 'Tis the admiracion of the world wee should lye in a manner forsaken all this while and more then enough to discourage any, and wee are forct to give faire words and all the encouragements wee can to those that are here for few or none cares willingly to stay."

Early in 1693, the directors, to re-establish their influence, sent out to retaliation the Mogul authorities had occupied the English factory and placed under detention Samuel Annesley, the chief of the Council, together with the whole of the English staff. While the ferment arising out of this episode was at its height, fuel was added to the flames of Mahomedan fanaticism by the capture by the same English pirate—Evory—of a great pilgrim ship named the *Gunjsawaee*, owned by the Emperor and in a sense a holy ship.

Gayer protested vigorously against the notion that the English were involved in these outrages, but with the accumulating proofs of the character of the pirate vessels and the composition of their crews, the Mogul authorities not unnaturally

VIEW OF SURAT FROM THE RIVER IN 1630.
From Postan's "Panoramic View of Surat."

or expense in the effort to blacken the reputation of their rivals. It was emphatically the dark age of the English in Western India. Weakness could not have gone farther without the entire dissolution of the connection which had existed for nearly a century.

Bombay, as has been stated, was in these years in a terrible condition of decay and demoralization. In February 1691 we read in the records that there were "only 35 well Englishmen in all" in the settlement. At that time the French were hovering about the coast, and there was imminent danger of attack. The crisis passed, but we can imagine what the feelings of the thirty-five "well Englishmen" were when they took stock of their position. Bad as their situation was, the conditions some months later were even worse. Writing on January 28, 1692, the Bombay Council thus gloomily described the state of affairs: "We are now reduced to a small number here, India two specially chosen representatives. One, Sir John Goldsborough, was made "Generall in India," with his residence at Fort St. George, and the other, Sir John Gayer, was given the title of "Lieut.-Generall Governor of Bombay and Chief of all our affairs and factorys upon the north of India." Gayer was of good Devonian stock, a man of discernment and courage, and though he had his weaknesses they were not those of Child and his contemporaries. When he landed in Bombay he must have been appalled by the prospect which confronted him of reigning over this desolate kingdom. So poverty stricken was the island, it is said, that there was not a horse available for his service. His troubles, however, were not so much with Bombay as with Surat. At that centre an acute crisis had developed which called for his immediate and urgent attention. English pirates had seized a fine ship belonging to a Surat merchant named Abdul Guffore, and in declined to accept this view unreservedly. The position they took up was that the damage being done mainly by Englishmen, it was the English who must provide the funds necessary to repair the mischief, and also supply guarantees against the recurrence of such events in future. Eventually, through the powerful influence of Asad Khan, Aurungzebe's Prime Minister, an arrangement was made by which the European nations trading at Surat, French and Dutch, as well as English, should supply ships for the protection of trade in the Indian Ocean, and provide compensation for the ravages of the pirates. After considerable delay Annesley and his colleagues were released from their confinement, but their liberty was short-lived. The continuance of the piratical outrages, principally by Kidd, who impudently displayed the King's Commission as his authority for his nefarious acts, brought about a new crisis. For a time the Englishmen escaped actual attack, thanks

mainly to the friendliness of the Mogul Governor. But the death of this functionary left them at the mercy of his successor, a corrupt, tyrannical official, and when in 1698 a fresh act of piracy was committed in the seizure of a great ship worth £150,000 belonging to a Surat merchant named Hassan Ahmedan, Annesley and his brother officials were again imprisoned in the Company's factory. They were subjected there to every humiliation that the malign ingenuity of the Oriental mind could suggest. At length, after a series of threats of violence, Annesley was induced to sign a bond agreeing to give the Indian shipping security from the attacks of the pirates, and to provide compensation for past offences. Gayer, who had gone up from Bombay to Surat during the later stages of the negotiations, was furious when he heard of the concession which Annesley had made, and it was with grim satisfaction that he was afterwards able to give effect to a dispatch from the directors dismissing Annesley from their service for irregularities of which they believed him to be guilty.

Mogul tyranny was stimulated, if it was not actually suggested, by the machinations of a number of Englishmen in Surat who originally represented interloping interests, but who now were, for the most part, enrolled in the service of the New East India Company, the establishment of which in 1698 was a direct outcome of the movement long promoted for destroying the monopoly of the original Company. These men went about denouncing the servants of the old Company as pirates and the confederates of pirates, and so successful was their propaganda that Colt, Annesley's successor, was constrained in the anguish of his soul to say that the English had become "as despicable to them (the Moguls) as the Portuguese and as odious as the Jews are in Spain and Portugal."

In the closing weeks of 1699 two of the new Company's representatives, named Mewse and Brooks, made their appearance at Surat. They were followed quickly by Sir Nicholas Waite, who came out to take charge of the Company's interests with the title of "His Majesty's Consul and Minister." Waite had served the old Company as Chief at Bantam in Java, and was, as far as experience went, well qualified for the task of establishing the New Company's interests. But his personal character was objectionable. He was a bully of a mean type and a libertine, whose irregular methods of life were subsequently a byword to his countrymen. In coming up the coast he had called at Bombay and been very coldly received by Sir John Gayer. This had exasperated him to such an extent that he was prepared on landing at Surat to go to any lengths to discredit the representatives of the old Company. The prolonged and bitter fight which was the outcome of this resolve lies somewhat beyond our province. It must suffice to give merely a few of the leading facts which have a special bearing upon the course of Bombay history.

In order more effectively to establish the New Company, the promoters of the organization induced King William to send out a special mission to the Mogul Emperor under the charge of Sir William Norris, a well-known Lancashire public man of that period. Norris arrived off Surat in December 1700 and made a formal landing, attended by all the pomp and circumstance that he could command. Later he proceeded by easy stages to Aurungzebe's camp at Birmapoori on the Bhima. He had an audience of the Emperor, but the results were very unsatisfactory. Aurungzebe had been led by Waite to expect that the New Company would guarantee the protection of Indian shipping from pirates, and when he discovered that they had no thought of doing so, he coldly told Norris that "he knew the same way back to England that he came." Beyond doubt the Emperor's mind had been influenced against the New Company by the intrigues of Gayer and the functionaries of the old Company, who spent enormous sums in bribing Asad Khan and his brother officials to secure the defeat of the objects of the mission. Out of funds and out of temper, Norris, after a sharp encounter with the Mogul officials who wished to detain him, made his way to the coast. Here he had a violent quarrel with Waite, and it was only with great difficulty that he was able to secure a passage to England. He died on the way home at Mauritius, largely of the effects of the disappointments and worries to which he had been subjected.

In the meantime Gayer also was in adversity. In the early part of 1701 he had gone up to Surat to endeavour to secure the release of some of the Company's servants who had been seized and ill-treated by the orders of the Governor. His mission was never a very promising one, and it was completely nullified by Gayer's rashness in staying ashore instead of on board his ship in the roadstead. One day, while enjoying the sea breezes at the Company's marine establishment at Swally, he was arrested by the Governor's orders and taken to the Palace. Here he and the other English officials of the Company were kept close prisoners for about a fortnight, at the end of which time they were removed to the factory, which for many of them, Gayer included, was to be their prison for years.

The Governor's *coup d'état* was largely the result of Sir Nicholas Waite's treachery. Waite had been at the Governor's elbow at every stage in the affair, bribing and prompting him. He hated Gayer and he coveted his office. Circumstances prevented him at the time from profiting by his rival's misfortunes, but in 1704, after Gayer had for years been either a prisoner or under close surveillance, Waite managed to carry out his ambitious designs. The opportunity was furnished by an instruction of the directors that if Gayer was in prison at the expiration of three months from the date of the receipt of instructions Waite was to fill his office. Waite, by bribing the Governor, brought about Gayer's reimprisonment, and in spite of the latter's vigorous protests he proceeded to Bombay to take up the chief position there.

At Bombay Waite found himself in the presence of difficulties which dulled any enthusiasm he might have for autocratic rule. His disappointment is clearly revealed in his earliest letters written after reaching Bombay, in which he refers contemptuously to "this beggarly but fertile island." An uneasy throne his was to the end. His colleagues hated him, and he returned the compliment by coolly ignoring them in the government. At length matters reached such a pass in 1708 that Aislabie, the Deputy-Governor, being, as he says, convinced that Waite designed to seize the island and take violent action against his Council, decided "for the safety of the island, the Honourable Company's estate and their own lives," to place him under arrest. A warrant was issued for this purpose on November 18, 1708, and executed the following morning. When Waite was searched there was found in his possession a parcel of diamonds, the property of the Company. He was made to disgorge his spoil, and after being subjected to much indignity, was shipped off to England. There he raised a great outcry against his treatment, and at first the directors were disposed to censure Aislabie and the members of his Council. But when the

1 SCENE IN BOMBAY 2. NORTH-WEST VIEW OF FORT OF BOMBAY 3 FISHING BOATS IN THE MONSOON.
Drawn in 1811. From "Scenery, Costumes, and Architecture chiefly on the Western Side of India, by Captain R M Grindlay, London, 1826.

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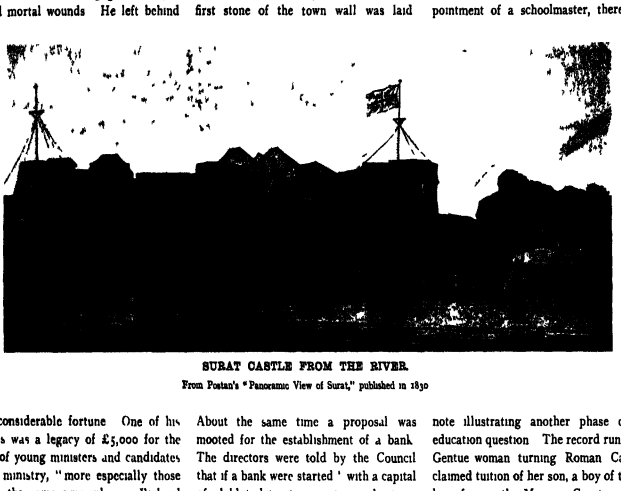
true state of affairs was revealed they confirmed Aislabie in the office of Governor and left Waite to his own devices Meanwhile poor Gayer, released from his long imprisonment, had fallen into disfavour. He was accused of financial irregularities, and though he defended himself with some show of good faith, the directors declined to entertain him further in their service He embarked for England at the beginning of 1711, but fate was against him to the bitter end When off Cape Comorin the vessel in which he was travelling was attacked by a French fleet of four vessels, and in the course of the engagement Gayer received mortal wounds He left behind him a considerable fortune One of his bequests was a legacy of £5,000 for the benefit of young ministers and candidates for the ministry, "more especially those holding the same principles as Richard Baxter"

The union of the rival East India Companies under an award delivered by the Earl of Godolphin, Lord High Treasurer, on September 29, 1708, ended the reprehensible feud which had so tarnished the English name in India in the eventful years at the end of the seventeenth and the commencement of the eighteenth century Thereafter for some years the course of history in Bombay was uneventful, or at least was marked by no violent changes What troubles there were, either were relics of the past or grew out of the general demoralization of Indian life consequent upon the break up of the Mogul Empire. Occasionally a lively interlude was provided by the appearance of pirates off the coast, and in 1720 we read of the capture of one of the Company's ships and of the landing by the pirate of a hundred and fifty men and women taken in her on Malabar Hill The defences of Bombay were still a frequent subject of discussion between the Bombay Council and the directors In 1716 the Council urged the importance of building a wall round the town to induce settlers to resort there If such a wall were built, the Council said, "in some years this settlement might be made both populous and rich, we won't say it would exceed, but we may hope it would not fall short of Madras" The hint was taken On June 30, 1717, the first stone of the town wall was laid About the same time a proposal was mooted for the establishment of a bank The directors were told by the Council that if a bank were started 'with a capital of a lakh to let out money to merchants on approved security at 9 per cent it would be a great convenience'

The unhealthiness of the island was still a great drawback to its progress In 1715 the Council referred to the prevalence of "fevours and fluxes, the epidemicall distempers of this country," which, they stated, in the last two months "have swept away many of your soldiers, and the country people have been affected too" "We are in hopes," they proceeded, "that in a little time the kind enlivening sunbeams will disperse the pestilential vapours and thick foggy weather which the strong easterly winds have brought down on us for this month past" The next year witnessed a change in the status of the Company's chief representative in Western India The time-honoured title of general was laid aside, and the then head of the executive, Charles Boone, signed himself "President and Governor of and for all your affairs at Bombay, Surat, Persia, and Coast of Malabar."

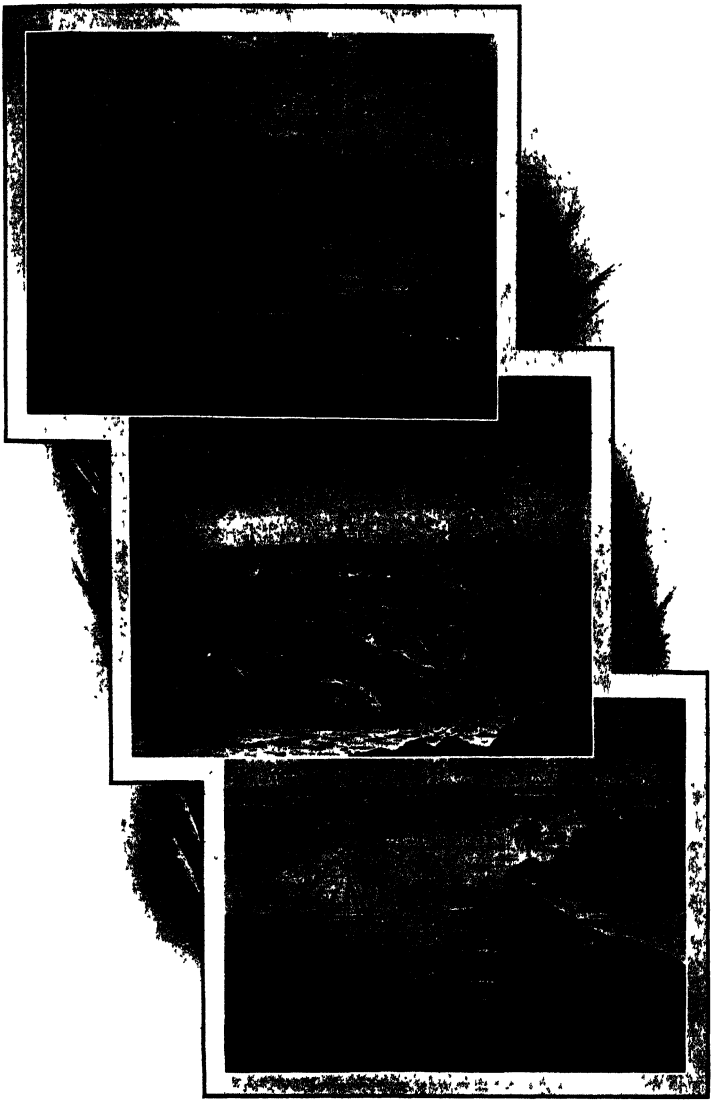
Coming to a later period, the year 1729, we have a curious reference to the lack of educational facilities in Bombay The Council state that "they have often endeavoured to appoint a schoolmaster to instruct the youth without success for want of a person qualified". If the Company thought it proper to send one, they believed 'he may be beneficial" In close association with this proposal for the appointment of a schoolmaster, there is a note illustrating another phase of the education question The record runs 'A Gentue woman turning Roman Catholic claimed tuition of her son, a boy of twelve, he refusing, the Mayor's Court ordering him to be obedient to her This alarmed the several casts upon the island, and [they] complained to the President, on which [he] wrote to the Mayor's Court not to medle with disputes about casts In this dispute Edward Page, Secretary, and then Mayor, treated the President with disrespect, saying he would go to England and appeal to the King So [we] thought it proper to remove him and made John Maynard Secretary"

Progress was painfully slow in these early years of the eighteenth century At Surat trade was still at the mercy of a line of corrupt and oppressive Governors, and in Bombay there was little scope for advancement outside the *entrepôt* trade, which suffered from the depredations of pirates on the one side, from local ruffians



SURAT CASTLE FROM THE RIVER.

From Postan's "Panoramic View of Surat," published in 1830



VIEWS OF GHERIAH FORT.

The Great Stronghold of the Angria Pirate Dynasty, captured by the British in 1756.
From Ives's "Voyage to India," published 1770.

under Angria, and from Arab rovers from the Persian Gulf known as Muscateers, on the other. As the years go by, however, there are signs that things are moving. In 1732, for example, we find the Bombay Council reporting that land on Malabar Hill was let for three years at Rs. 20 per annum advance on the former rent. The augmentation is a ridiculously small one in the light of modern conditions, but two centuries ago Malabar Hill was a mere waste, and the fact that any one thought the land sufficiently good to rent at an improved value showed that the old order of poverty and depression was really passing.

By far the most important development in the political history of the British settlements in Western India in the earlier half of the eighteenth century was a change which made the British the practical arbiters of the destinies of Surat. How the new policy was made possible constitutes an interesting story. Up to 1732 the system of harassing traders—"the good old rule, the simple plan" of Mogul rule—had existed without interruption. Some governors were less avaricious than others, but in the main it was a case of "all these men have their price." With the dawn of 1732, however, a spirit of revolt against the traditional brigandage began to assert itself. What made the movement the more formidable was that it originated amongst the native trading community. The Governor of the time, Sohrab Khan, was an exceptionally bad specimen of his class. He squeezed so remorselessly that the whole city cried out in indignation against him, and eventually a conspiracy was hatched to depose him in favour of another nobleman, Tedje Beg Khan, who it was believed, without much reason, would be less grasping than the reigning Nawab.

Prominent in the ranks of the conspirators was Moolnas, who as grandson of Abdul Guffore, the merchant prince previously mentioned in the narrative as owner of a ship captured by the English pirates, had inherited the great wealth of his kinsman. On June 22, 1732, the malcontents gathered at Moolnas's house to form plans for the overthrow of the Governor. To this conclave the chief British representative at Surat, Mr. Henry Lowther, was invited. As a result of the deliberations at the meeting, hostilities were almost immediately commenced against the constituted authority.

Lowther entered with zest into the conflict in which the British had so important a stake. First, he put the factory in a state of defence by constructing breastworks and enrolling additional men to supply the garrison from amongst the Rajpoots who swarmed at Surat. Afterwards, as the fight waxed warm, he sent his men out to the general assistance of "the rebels." One of the city's bastions was manned by the Company's troops, and this detachment had some rather stiff fighting, with the result that an Englishman and three Indian soldiers were killed. For several days the struggle continued inconclusively. Thinking he had backed the wrong horse, Moolnas withdrew his support. Matters would now have been very serious for the revolting party if Lowther had not thrown himself with ardour into the fight. The British representative, however, realized that everything depended upon the dethronement of the Governor, and that the whole weight that he could command must be cast into the scale against him. His first move was to supply the adherents of Tedje Beg Khan with artillery and ammunition. The assistance thus rendered was invaluable; it probably saved the situation. On the 26th, when the Governor's forces made an attack all along the line, they were repulsed with great loss to themselves.

Sohrab Khan now sought an accommodation, but was curtly told by Lowther "that the merchants had already concerted measures to secure their liberty and estates which they were resolved to put in execution." For a day or two after this there was a lull in the fighting, a breathing time which was availed of by Lowther to strengthen the forces of the allies by supplying them with skilled artillerymen. When the struggle was resumed it was soon clear that these new arrangements were effective. The enemy's entire line was harassed, and on the night of the 28th some shots were actually dropped in the Governor's palace. Nevertheless the fight still continued. On July 2nd Lowther by invitation visited Tedje Beg Khan's camp and received from him warm thanks for the assistance the British had rendered to his cause. Before leaving Lowther by invitation discussed with the Nawab the military situation and finally drew up a plan of campaign, the principal feature of which was a centre attack by a strong force with other forces to deliver flank attacks. Almost immediately the plan was put into execution, with triumphant results. Three lines of entrenchments were carried, and by the end of the day the Governor's Palace was closely invested. There was, however, still a good deal of fight left in Sohrab Khan. He not only held his own, but even essayed an attack on the Dutch factory which would have been dangerous if Lowther had not sent assistance. In the meantime a serious financial situation had developed which threatened to shipwreck the whole movement. Again, Lowther came to the rescue. He opened the Company's treasure chest to the extent of Rs. 30,000, and by his influence induced Indian merchants to advance Rs. 20,000 more. This happy stroke was decisive of the issue; Sohrab Khan fled from the field, leaving the governorship in the hands of his rival, who was duly acclaimed by the British and presented with the usual *muzzur* of seven mohurs in recognition of his claims to their allegiance.

As I have written in another work [1] "the victory thus gained almost entirely by British aid sounded the death-knell of the reign of tyranny under which the European traders in Surat had so long suffered. Never again were Englishmen to be put in irons and led captives through the Surat streets, the sport of an enraged populace; no future Annesley or Gayer was to languish for years in irksome confinement as hostage for the satisfaction of extortionate demands. The British now held their heads high and commanded where before they had alternately humbly pleaded and impotently threatened. The line of independent Governors of Surat which was established by Tedje Beg Khan existed on British sufferance, and when the time came, as it did before the century was more than half gone, when those self-appointed rulers had made themselves impossible by their oppression and misgovernment, they were thrust on one side by the strong British hand to make way for the ordered administration which has ever since swayed the destinies of the fertile lands of Guzerat, of which Surat for many generations was the chief trade centre."

CHAPTER VI

Boone's memorable government—The pirate Angria—Unsuccessful attack on his stronghold by Commodore Matthews—Defection of the Portuguese—Alliance with the Mahrattas to crush Angria—Commodore James storms Sivandroog—Combined expedition under Admiral Watson, Commodore James, and Clive—Gheria captured and Angria taken prisoner—Progress of Bombay—Important extension of political authority in Guzerat—Occupation of Salsette—Treaty of Purandhur—Mahratta difficulties—Napoleon's descent on Egypt menaces India—Jonathan Duncan appointed Governor of Bombay—Duncan's measures to meet the French threat of invasion—Indian Army for

[1] "Annesley of Surat and his Times" (Melrose), p. 342.

BOMBAY—EARLY HISTORY

Egypt—Expeditionary forces in the Napoleonic era—Occupation of Perim—British force retires to Aden—Offer of Aden to the British—The offer refused—Death of Duncan.

CHARLES BOONE'S government, which commenced in 1715, was a memorable one. Since Aungier the island had had no more enlightened and enterprising ruler. He infused new life into an almost moribund body politic, and by his measures gave a much-needed stimulus to trade. One of his first measures was to make the island secure against attack. This it had never been up to that time, and the result of Sidi's invasion was to leave it more helpless than ever. The steps he took included the building of a wall round the town and the strengthening of the fortifications by the construction of strong batteries at various important points. Civilly, his administration is memorable for the erection of the Cathedral Church, dedicated to St. Thomas, which was opened with considerable pomp on Christmas Day, 1718. Boone's government lasted until January 1722, when he departed for his native country full of honours and with the goodwill of the population.

In one particular Boone was less successful than his good wishers could have desired. This was in dealing with the rampant piracy along the coast. As the years had sped by, this had grown more troublesome and inimical to British trade. The chief freebooter was a certain Kanhojee Angria, already mentioned, an adventurer with a peculiar history. One account of his origin asserts that he was the descendant of an Arab slave "who served the English in Bombay as a lacquey and afterwards as a pune [peon] whose office it is to bear arms before their masters and walk with their sword laid on their shoulder and their target flung at their backs," and who, flying from Bombay, found favour with the Sidi, who made him a present of the island of Kenery, together with several small war-boats known as gallivats. Another account alleges that he was born in Bombay of a Portuguese slave and an Hindu woman, and that he subsequently escaped to the island of Kenery, and there collected men and ships sufficient to render him the master of the western coast line. Whatever his origin, he was a serious obstacle to the peace of Bombay and the progress of British trade. When Boone arrived at Bombay he found Angria extremely powerful, and one of the earliest representations made to the new governor was a petition from the inhabitants, who "complained of the heavy oppressions and injuries they have received from Angria, the pirate, who was then at Golabey [Kolaba] and had also the island of Kenery, with the strong castle of Gerey [Gheria], the channel of whose harbour is very difficult to find out." In 1721, in response to urgent representations sent home, the Government dispatched a fleet under the command of Commodore Matthews to suppress the pirates. The expedition was prejudiced at the outset of its arrival in India by a squabble between Boone and Matthews as to precedence. Downing, who accompanied Boone to Bombay and subsequently wrote a book on the history of Bombay in that period, in his account of the affair, says: "The Commodore much resented the President's not saluting him on his arrival in the harbour. The President of Bombay knew the length of his own Commission, and as he was President for the King and a Governor for the Company, he imagined, as all other great men in such stations would, that he was something superior to the Commodore of a squadron. . . . After many messages to and fro, disputing who should fire first, the President in Council complied to salute him, and then the Commodore thought fit to go on shore. The island of Bombay was now thronged with the Navy officers, who looked as much superior to us as the greatness of their ambition could possibly lead them. There were daily duels fought by one or other of them, and challenges perpetually sent round the island by the gentlemen of the Navy. Having such a great number of heroes we were in great hopes of totally demolishing Angria."

Unfortunately the hopes to which the writer of the foregoing extract refers were not realized. In order to make the demonstration against Angria more effective, the British formed an alliance with the Portuguese for the occasion. The Portuguese made a great show of energy, and even put forward their Viceroy as Commandant of their troops. But when the crisis was reached they failed miserably to support Matthews's attack, and the discomfited expedition returned home. This failure naturally gave Angria greater power than ever. His raids became more daring, and he even had the impudence to hold to ransom on Kenery English ladies who had been captured on their way from coast stations to Bombay. One episode which excited a great deal of attention at the time was an attack made on the East India Company's ship the *Derby*, on the 26th or 27th of December, 1735. After a brisk engagement this fine vessel, with five small boats accompanying it, fell into Angria's hands, together with several English ladies and their maids, "who had come out to promote their fortunes."

Other humiliating incidents of this character finally led the home authorities to take strong measures to suppress the piracy on the coast of Western India. In 1755 a coalition was formed with the Mahrattas, with the object of bringing Angria to reason. Sivandroog, a hill fortress occupied by the pirate, was captured by Commodore James, the chief officer of the Indian Marine, but Angria managed to escape with the bulk of his force to Gheria (Vijayadroog), an inaccessible stronghold built upon a craggy eminence overlooking the sea and almost surrounded by it. By heavily manning the place and withdrawing his ships under the shelter of the walls he hoped to defend himself successfully. But he now had to meet a very different combination from the one which had previously faced him. Now his destinies were in the hands on land of the great Clive, who, with the laurels of his earlier successes in Madras fresh upon him, was the best possible leader for troops engaged in such an enterprise as that against Angria. At sea the odds against the pirate were still more formidable. A powerful squadron of the King's ships, under Admiral Watson, was made available for the expedition. The flotilla which ultimately sailed down the coast to the attack consisted of twelve men-of-war (six of the Royal fleet and six of the Company's under James), five bomb vessels, four Mahratta Grabs, and fifty gallivats. On board the ships, to co-operate in the attack, were a force of eight hundred Europeans, a company of King's artillery, and six hundred native troops.

Sailing from Bombay on February 7th, 1756, the imposing squadron appeared off Gheria four days later, and found a Mahratta force besieging it from the land side. Angria, alarmed at the strength of the British fleet, fled at an early stage to the Mahratta camp, leaving his brother in charge. The Mahratta general sought to procure a stay of operations on a promise that he would bring Angria to the British headquarters the next morning to arrange a peaceful surrender. The British agreed to this, but when the next morning came and no Angria appeared, the Admiral

gave the signal for the attack. The operations were not of protracted duration. On the evening of February 13th Angria's people struck their flag, and before the night closed a British guard were doing duty in the fort and the British flag was flying from its battlements. On February 14th, Clive marched in from the land side at the head of his forces. It was, on the whole, an easy success, but that fact does not detract from the credit of the leaders of the expedition, who planned wisely and well, and so ensured a triumph where before there had been failure. Both Admiral Watson and Clive profited greatly from this brilliant *coup*. The prize-money was considerable, and apart from that the adventure had a profitable sequel for two of the principals in that Commodore James subsequently became chairman of the Company, and Clive went from Gheria to the high military command in Bengal, which led him to the victory of Plassey. Gheria or Vijayadroog was handed over to the Mahrattas, in accordance with the terms arranged with them, but as a set-off the British received Bankote and several villages in its vicinity, together with a definite assurance that the Mahratta Government "would never permit the Dutch to settle or come into their dominions, but would on the contrary issue express orders to prevent their carrying on any trade therein." As for Angria he subsided into the position of a land-owner with a pension from the Company.

Bombay's progress in the first half of the eighteenth century is well illustrated by the facts relative to the population. In 1718 the number of people upon the island did not exceed 16,000; by 1744 the population had increased to 60,000; and twenty years later the numbers had further increased to nearly 80,000. Side by side with the growth of the place went a social development equally striking. In the earliest days of the century people lived in the confined spaces of the Fort, taking their pleasures quietly if not sadly. The second half of the eighteenth century had not far advanced before the leading members of the community established themselves in villas at Mazagon and other outlying localities "in the country," as it then was, whither they retired in the evening after the labours of the day. At the same time a note of ostentation crept into the hitherto simple hospitality of the island. Dinner parties became more pretentious, and the unassuming dances of early days took to themselves qualities which gave them greater dignity at the expense of an engaging unconventionality. Forbes, the erudite author of the famous "Oriental Memoirs," in his pages notes with regret these changes. He was no mean judge, and we may accept his adverse verdict as expressing the general view of the situation.

It is no doubt not a mere coincidence that the social changes just noted synchronized with a notable enlargement of the political responsibilities of the Bombay Government. This was due to the break-up of the Mogul Empire and the developments which ensued upon it calling for British intervention. At the important centre of Surat the influence created by Lowther was extended until in 1759 the Castle was occupied and the entire control of affairs passed into British hands, together with the administration of the Broach district. In other directions significant changes were meanwhile occurring owing to the relations, mostly hostile, existing between the British and the Mahrattas. The latter, as the eighteenth century had advanced, had established an absolute ascendancy in Western India. They parcelled out Guzerat amongst a number of petty chiefs, from whom they levied the accustomed *chouth*—a form of tribute not widely removed from blackmail. The British regarded their proceedings with uneasiness, but there was no actual collision until 1774, when upon civil war breaking out between Raghuba, the famous Mahratta chief, and the ministry which governed in the name of the child Peshwa Mahda Rao II, the Portuguese organized an expedition for the recovery of Salsette, which had been taken from them by the Mahrattas some years previously. The Bombay Government, hearing of this move, decided to anticipate it. From the very earliest days of the occupation of Bombay Salsette had been regarded as a part of the dowry of Catherine of Braganza which had been illegitimately withheld by the Portuguese, and the new juncture of affairs was considered to supply a convenient opportunity of righting the wrong. Consequently a force was sent to occupy the island, and an agreement was come to with Raghuba to aid him in return for the formal cession of Salsette, together with certain districts in Guzerat. Before this compact was completely ratified, the Governor-General had concluded with the Poona Ministry in 1776 the treaty of Purandhar, by which Raghuba was to be pensioned off and Salsette and Broach were to be left in the hands of the British. Further complications ensued owing to disputes concerning the wording of this treaty, and the Bombay Government being then apprehensive of a French invasion, decided to reinstate Raghuba and support him against the Peshwa's Government. The move was a disastrous one. Raghuba, badly defeated at Wadgaon, was compelled to surrender with all his troops to Sindhia and Nana Furnavis, the two leading members of the Peshwa's Government. Matters might now have gone badly for the British in Western India, had not at an opportune moment a Bengal army appeared in the theatre of war in the west and won considerable successes in Guzerat, culminating in the capture of Bassein in 1780. The completion of a formidable alliance between the Peshwa, the Nizam, and Hyder Ali led to a change of plans on the British part, and to the transfer of the centre of conflict from Western India to Malwa. Eventually terms were made, first with Sindhia in 1781, and next with Nana Furnavis in the following year, when was ratified the treaty of Salbai under the terms of which Salsette was confirmed to the British, while Broach was handed back to Sindhia, much to the grief of the inhabitants, who dreaded the rapacious Mahratta regime which they knew would be theirs. Another important episode in the year 1782 was the acceptance by the Gaekwar of Baroda of British protection. Henceforward British influence predominated in Western India, though a good many years were yet to elapse before there was active intervention in the administration outside the Surat district.

The closing years of the eighteenth century were a period of intense anxiety to the rulers of India. While the local horizon was dark owing to the scarcely veiled hostility of the Mahrattas on one side and Tipoo Sultan of Mysore on the other, there was the ever-present menace of a French attack. In the campaigns in Southern India the French arms had in the earlier years of the century been soundly beaten, but French influence was still powerful, notably at Seringapatam, and after the Revolution in France the Government there entered into relations with Tipoo Sultan with the definite object of overthrowing British power. What gave an especially sinister aspect to the situation was the knowledge that the aggressive designs of Napoleon Buonaparte were centred on India, and that he hoped there to play the part of a second Alexander.

The Bombay territory, lying as it does

1. THE RAJAH OF CUTCH WITH HIS VASSALS
2. THE SACRED TOWN AND TEMPLE OF DWARKA
3. VIEW OF SASSOR IN THE DECCAN. Sketched in 1813
4 SCENE IN KATHIAWAR—TRAVELLERS AND ESCORT

From "Scenery, Costumes, and Architecture, chiefly on the Western Side of India," by Captain R M Grindlay, London, 1826.

nearest to Europe amongst the presidencies of British India, and well within reach of Tipoo Sultan's activities, was most directly affected by the developments which grew out of this European situation. It is fortunate that at the time the Bombay Government was in the hands of a very capable Anglo-Indian official in the person of Jonathan Duncan. Duncan before taking up the governorship of Bombay in 1795 had served successfully in Bengal, where his capacity had won for him the favour of the then Governor-General, Sir John Shore. He filled the chief official position in Western India for nearly sixteen years a longer period than any other occupant of the office, either before or since his time. But the change from Eastern to Western India was undertaken in circumstances which at the outset made him bitterly regret the transfer. Writing in 1797 to Sir David Scott, he said: "I should leave Bombay with more joy than ever I could go to anywhere but to Heaven, but I fear to throw up because his lordship [the Governor-General] and Mr. Dundas [the then chairman of the East India Company] and you too might think it a dastardly and unbecoming act." Trouble had arisen over the administration of the Malabar districts transferred to the British under the treaty of Seringapatam in 1792. In the first instance the administration of this territory had been assigned to Bombay, and owing probably to the difficulty of effectively controlling the officials from so distant a centre as Bombay irregularities had arisen in the Government which had led to considerable scandal. In the circumstances the supreme Government at Calcutta decided to dispense with the services of the Bombay officials and transfer the control from Bombay to Madras. Duncan deeply resented this change, and though he stuck to his post in Bombay it was with the feeling that he had been dealt with very hardly by his superiors. But there were soon more momentous events to engage his attention than the maladministration of a remote district.

In June 1798 the directors had forwarded to India overland via Basra, information as to the destination of the Toulon fleet. This reached Bombay on the 24th of September following, with accompanying dispatches from British agents in Persia, which left no room for doubt that Buonaparte was in possession of Alexandria and Cairo. Duncan, on receipt of the dispatches, acted with promptitude. His first move was to pass the news on to the British Admiral on the station with a suggestion that he should take his ships to the vicinity of the Red Sea to oppose any possible move from that quarter. At the same time, at Duncan's suggestion, the Bombay Government dispatched Captain Wilson, an experienced officer, on a mission to the Red Sea, endowing him with full powers to negotiate with the native chiefs on either shore. Meanwhile, early in 1799 Duncan set on foot a movement in Bombay for organizing two local battalions of native infantry to be officered by Europeans and supported by voluntary contributions. This was the beginning of a volunteer movement destined to fill a considerable place in the life of Bombay in the subsequent years down to and including the Great War just closed.

The French threat, as we know from history, never materialized. Nelson's destruction of the French fleet in Aboukir Bay put a definite limit to the great Corsican's designs. He was now more concerned with getting safely out of Egypt to Europe than with conducting his great adventure eastward. In fact, almost as soon as his formidable power was casting its shadow eastward it faded out of the Indian picture. But India had still her part to play in the great crisis. It rested with her to organize an expedition to assist in the work of expelling the French Army from Egypt. This she did with a thoroughness which was the surprise and admiration of Europe when the facts became known.

In the season of 1802 there embarked at Indian ports, and mainly at Bombay, a compact little army consisting of 3,600 British and 2,800 Indian troops, with artillery and transport complete—the first of a long series of expeditions organized in India for work overseas. Duncan took an active part in the work of equipping and dispatching the transports, and it was with a pardonable pride that he was able to report that on April 15th in the year named the expedition had started "in as perfect a state of equipment as could be desired." Its subsequent progress was hampered by the monsoon and the dangerous navigation of the then little-known waters of the Red Sea. But in due course the troops landed at Koseir, marched across the desert to the Nile, and thence were forwarded down the river to take a decisive part in the operations which culminated in the surrender of the French army and its expulsion from Egypt. The expedition was one of a series which in the course of the Napoleonic wars were sent from India to destroy French power in various parts of the East. In all these movements Bombay had a leading share, due to its geographical position and its splendid conveniences for equipment and embarkation. Writing in February 1811 of his own share in the work, Duncan said: "If experience makes perfect, I have had enough of this line since I came here, the present [the expedition to the Dutch Indies] being the sixth or seventh service which I have thus fitted out."

In conjunction with the military aid thus rendered, the Bombay Government took a prominent share in the diplomatic measures which the then position of affairs called for. Allusion has already been made to the mission which Duncan dispatched to the Red Sea. This was the prelude to a more ambitious scheme sanctioned by the Marquess Wellesley, the then Governor-General, for concluding a permanent treaty with the Sheriff of Mecca and the other Arab chiefs on the Arabian coast of the Red Sea. Nothing much came of the negotiations because of the strong objections of Turkey, with whom Great Britain was at the time in alliance, but there were some highly interesting developments of the situation as it affected the Red Sea. At the outset of the trouble created by the French descent on Egypt, a British expedition had occupied Perim with the object of keeping a watch on possible movements by the French in the Red Sea. The expedition, after remaining on the island from early in 1799 until September in the same year, was obliged to evacuate the position for lack of drinking water. Lieut.-Colonel Murray, of H.M.'s 84th Regiment, who was in charge of the occupying force, took his troops with him to Aden, where he received a warm welcome from the local Sultan. "The friendship and attention of the Sultan," wrote Murray, in a dispatch to the Calcutta Government, "exceed my most sanguine anticipations, and the goodwill and quiet behaviour of the inhabitants is in every respect equal to their sovereign's wish and orders. The soldiers and natives are on as good and friendly a footing as I have ever seen them in any part of India. In my conversation with the Sultan he seemed to me to wish to enter into a much more strict connection with the British Government than I was authorized to form. As it was translated to me he was desirous to hold his country as the Nabob of Arcot holds the Carnatic. If not accepted on those terms he re-

peatedly offered to furnish a number of men your Honourable Government might wish to employ in any part of the world." Murray went on to dilate on the importance of the port. "To me," he said, "the place appears to be of the greatest importance—infinitely more so than was supposed. The fleet can be supplied here with everything that is requisite. The road [anchorage] is from all accounts preferable to that of Mocha, and there is a bay which runs within a mile and half of the walls, completely land-locked, where ships may ride at all seasons of the year and go in and out without the smallest difficulty in either monsoon. The water is excellent and in profusion. . . . The place is nearly impregnable either from the land or the sea."

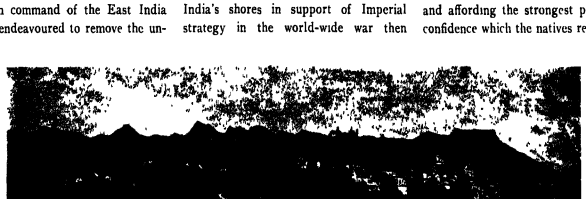
Later Murray forwarded to his superiors a formal document in which the Sultan agreed to place himself entirely at the disposal of the Government of India. "The ports of Aden and Bombay are as one, the English Sircar and the Abadil Sircar are united," he declared in this interesting rescript. At this time, therefore, the British might have had Aden for less than the asking. Incredible though it may appear, the Indian Government declined the offer. Its decision was based on a report from Admiral Blankett, the Commodore of the East India squadron, who declared "after the fullest deliberation that no officer of common prudence would consider it was a proper station for a cruizing squadron!" Subsequently Admiral Rainier, who succeeded Admiral Blankett in command of the East India squadron, endeavoured to remove the unfavourable impression created by the extraordinary verdict of his predecessor. But by that time the Government had made up its mind to decline the Sultan's offer, and another generation was to elapse before under different and more onerous conditions the great stronghold became a British possession.

Duncan's governorship closed with his death in 1811. Sir James Mackintosh, who was head of the Bombay judiciary at the period, speaks of Duncan as "Brahminized," and no doubt towards the end of his career he did show a lack of decision and occasionally of judgment. But in the main he was a good ruler of Bombay at a critical period of its history.

CHAPTER VII

War expeditions dispatched from Bombay—General Wellesley's views of the Bombay Army—General Wellesley's visit to Bombay—Powerful effect of Wellesley's victories against the Mahrattas—Bajee Rao's intrigues at Poona—Murder of the Gackwar's agent at Poona—Mountstuart Elphinstone demands satisfaction—Sir T. Hislop takes over the direction of affairs at Poona—His incautious action encourages Mahrattas—Attack on the British at Kirkee—Defeat of the Mahratta Army—Flight of Peshwa—Action at Koreygaum Bajee Rao surrenders to Sir J. Malcolm—He adopts the infamous Nana Sahib—Important political results of Mahratta Campaign—Mountstuart Elphinstone's memorable Governorship of Bombay.

ALMOST all the time that the British were engaged in defeating the plans of Eastern conquest of Napoleon, the Indian authorities were waging war on their own soil against formidable foes. The campaign against Tipoo Sultan, terminating in the storming of Seringapatam and the death of its intrepid ruler in the earliest period of the crisis, filled a very large place in the popular imagination in the whole of Asia. The signal victory won added enormously to British prestige, and smoothed the way for the equipment of the successive expeditions which were launched from India's shores in support of Imperial strategy in the world-wide war then raging. Bombay had no inconsiderable share in the credit of this triumph. An important contingent of her army under General Sir John Stuart marched up the Ghauts to the support of the grand army under General Harris, which advanced from Madras. The column, numbering nearly 10,000 men, of whom 2,000 were Europeans, fought a brilliant fight with the flower of Tipoo's troops at Sedashue, where the attempt was made to prevent the junction of the two armies. Later, in the final assault on the stronghold, the Bombay troops again distinguished themselves. Writing to Duncan in praise of the efforts made from the Bombay side, the Governor-General, the Marquess Wellesley, said: "The distinguished part which the settlement of Bombay has borne during the late crisis in the labours and honours of the common cause, has repeatedly claimed my warm approbation, and will ever be remembered by me with gratitude and respect." In the Mahratta campaign of 1803, the Bombay Army attracted a very different tribute from the Governor-General's illustrious brother, the General Wellesley who was afterwards to win undying fame on the European battlefields and die as the Duke of Wellington. General Wellesley complained of the serious indiscipline and inefficiency of the native regiments, and referred especially to the enormous number of desertions from them. Of the value of Bombay itself, however, he entertained an extremely high opinion. In April 1804 he refers to the fact that "This island has now become the only place of security in this part of India for property, and for those who are the objects of the Peshwa's enmity and vengeance, a circumstance equally honourable to the character of the British nation and advantageous to their interests, and affording the strongest proof of the confidence which the natives repose in the justice and wisdom of our policy and our laws." Bombay, in its turn, was not slow to reciprocate the feelings of regard displayed by its eminent eulogist. When he visited Bombay in March 1804, after his remarkable campaign in the Deccan



VIEW ON THE SUNGUM, POONA.

From the Postan Collection of Drawings at the India Office.

which resulted in the memorable victories of Assaye, Argaum, and Laswaree, he was the recipient of an address from the inhabitants in which he was congratulated on "the happy termination of one of the most decisive, brilliant, and rapid campaigns ever known in the annals of British India." Later the same day a brilliant fête in honour of the victorious commander was given at the Bombay Theatre, which stood on the old Bombay Green on what is now the site of the Elphinstone Circle. Not without reason was there this keen appreciation of the work accomplished by General Wellesley. His campaign, with the one which followed it in 1804–5, established British supremacy in Northern India on an unassailable basis. From that time forward—at all events, to the days of the Mutiny—there was no serious challenge to British authority.

As far as the Mahrattas were concerned, the blows delivered against their power though formidable, were not decisive. There was to be one further trial of strength ere the British sway was accepted in the Deccan. The new trouble arose out of the invincible love of intrigue which is so characteristic a Mahratta trait. At Poona, the Peshwa, Bajee Rao, was on the throne, seated there by British power and supported by British bayonets. His position was a secure one, or it would have been if he had followed a straightforward policy in harmony with the interests of his patrons. But Bajee Rao, like many another in the same position, chafed under the obligations which he owed to his rescuers. Happily for British interests, the British Resident at the time was Mr. Mountstuart Elphinstone, a distinguished young official who had won the favourable notice of General Wellesley during the Deccan campaign, in which he participated, and who had had valuable political experience as resident at the Court of the Bhonsla of Nagpur. The crisis found him thoroughly prepared. It arose out of an episode very typical of Mahratta life and history. Under the treaty of Bassein the British Government was made the arbiter between the Peshwa and the Gaekwar on all questions in dispute between the two. In 1815 a quarrel arose over some questions which had long been at issue, and, with the guarantee of the British Government, an agent of the Gaekwar travelled to Poona. He had not been long in the city before he was assassinated by Trimbuckjee Danglia, the infamous minister and tool of the Peshwa. On hearing of the occurrence Elphinstone promptly demanded that the assassin should be brought to justice. Very reluctantly Bajee Rao delivered up his favourite, and Trimburkjee was interned at Tanna under the custody of a European guard. But after a short imprisonment he managed to escape and rejoin his master. Meanwhile, Elphinstone, acting under instructions from Calcutta, had extorted a new treaty from the Peshwa, whose authority was more rigidly circumscribed. At this critical juncture in affairs the Government of India thought fit to vest the direction of affairs in Poona in Sir T. Hislop, the general commanding the army then preparing in Central India. Fresh to the situation, Hislop did not perceive the importance of keeping the Peshwa under strong surveillance, and not only ordered the subsidiary force maintained at Poona by the British to take part in the general campaign against the Pindarees, but even went so far as to permit Bajee Rao considerably to enlarge his own military forces, ostensibly to assist the British in their operations. Elphinstone took note of the weakness of this policy, and uttered a warning as to its probable consequences in a letter to one of Hislop's brigadiers. His communication had barely reached its destination when the Peshwa threw off the mask. First he began to surround the British encampment with troops. These movements went on for some days, and then Elphinstone, realizing the untenability of his position just outside the city, on November 5th quietly withdrew his force to Kirkee, a few miles away, where the ground was more favourable for defence. Here Elphinstone made the best dispositions he could for an attack which he knew would not be long delayed. The struggle opened with some preliminary negotiations designed to throw the British off their guard. Elphinstone, however, was too well informed to be deceived, and posted his tiny force in a strong position near the village of Kirkee in a bend formed by the river Moola. An immense Mahratta host in the meantime had gathered in the plain, eager for what they believed would be the easy task of annihilating the presumptuous British. The British, on their part, entered the fray with confidence begotten of a long series of victories gained over the Mahrattas. For a brief space the view was entertained that it would be best to act on the defensive. But fortunately Elphinstone's strong personal conviction that the offensive against the Mahrattas was the surest road to success, prevailed, and the battle was joined by Lieut.-Colonel Burr, the British commandant, marching his small force out of camp and throwing back the enemy's line of skirmishers.

Upon the pusillanimous Peshwa the sturdy front presented by the British produced a feeling not far removed from panic. In haste he sent to the commander of his troops, Gokla, an order "to be sure not to fire the first gun." Gokla had his own views of the needs of the situation, and before the Peshwa's messenger could reach him had opened the attack by unmasking his guns and pushing out his cavalry on both flanks of the British. The swift movements of the Mahratta horse soon brought them well into the British rear. The situation was critical, and with a different foe it would have been hopeless. But once again was demonstrated on an Indian field that Mahratta guile and dexterity were no match for British brains. Posting his small force of native infantry in the best position that the locality afforded, Lieut.-Colonel Burr awaited the onset of the enemy. The British troops were not given much breathing space. Soon they saw bearing down upon them a dense cloud of six thousand horse—the pick of the Peshwa's troops. There was a momentary wavering on a part of the line, but Lieut-Colonel Burr's example in posting himself with the colours of his regiment (the 7th) restored confidence. The attack was met by a murderous fire from the British infantry. The enemy fell into almost immediate confusion, and when the British line advanced he broke and fled. The battle was now virtually ended. In haste Gokla withdrew his guns for fear of their falling into the hands of the British, and soon the entire Mahratta army was in retreat. It was thought possible by Elphinstone that the fight would be renewed on the morrow, but this was not to be. The Peshwa, who had watched the battle from the lofty height of the sacred hill of Parbuttee in the vicinity of Poona, had quite made up his mind that all was lost. He withdrew to a safe distance, and meanwhile permitted his subjects to wreak a miserable vengeance on the hated British by murdering a few isolated officials and destroying the British Residency with all its contents. Elphinstone was too weak to do anything beyond ensuring the safety of his tiny force. But aid was at hand, and on the 15th a division of British troops under General Smith, originally intended for operations in Central India, marched into Poona to

re-hoist the British flag under conditions which ensured that it should not afterwards be lowered. Later General Smith occupied Sattara, and other British columns won distinction against Mahratta forces in the Southern Koncan and other localities where the enemy made a stand. The most famous episode of this stormy period was the action of Korygaum on January 1, 1818, in which a small number of British troops—the 1st Regiment Bombay Native Infantry—and twenty-four European artillerymen under a lieutenant and sergeant, together with a detachment of irregular cavalry—successfully repelled the attack of a Mahratta army of 25,000 horse and 2,000 infantry. In the fight 175 men on the British side, including 20 out of the 24 artillerymen, were either killed or wounded, and of the eight European officers engaged three were killed and two wounded. "The Mahrattas," according to Grant Duff's "History of the Mahrattas," "lost five or six hundred men, and have the generosity on all occasions to do justice to the heroic defenders of Korygaum."

Bajee Rao, after turning and twisting in his tracks in the pursuit maintained against him by the British, eventually surrendered to Sir John Malcolm, with whom he was on friendly terms. By his conduct he had sacrificed his kingdom, but he was generously dealt with by the Government, who guaranteed to him the splendid pension of £80,000 a year. On this handsome income he lived in semi-state at Bithoor on the Ganges, and before his death, in accordance with Hindoo usage in such cases as his, where there was no male descendant to carry on the family traditions, he adopted a son in the person of a boy born in the village of Narel, about forty miles from Bombay. This child was none other than Nana Sahib, the evil genius of the Mutiny. So was Bajee Rao after death avenged on the hated instruments of his downfall.

The political arrangements which flowed from the Mahratta campaign were for Bombay more important than any that had ever been carried through since the British first planted their foot on Western India. In effect they gave the British full and undisputed sovereignty over an immense tract of country hitherto under Mahratta rule, and at the same time enabled them to exercise a stricter control over districts in which the native administration still existed. One exception made to the list of conquests embodied in the annexation decree issued by the then Governor-General, the Marquess of Hastings, was the State of Sattara. This was left outside the account, with the idea that it "might serve as a counterpoise to the remaining influence of the Brahmins, conciliate the Mahratta nation, and leave an opening for the employment of many persons in their own way, whom it would have been expensive to subsist, and who could not maintain a livelihood under the English administration." The State of Sattara, it may be added, had a rather short-lived existence. In 1839 the restored Raja, Pertaub Singh, fell into disgrace owing to seditious conduct and was deposed. His brother was elevated to the throne in his place and ruled until 1848, when, dying without an heir, the State lapsed to the British Government. It is generally considered that this annexation of Sattara, based on the doctrine of lapse, was one of the potent inspiring motives of the Indian Mutiny.

Happier in its history, the Southern Mahratta State of Kolhapore escaped the red colouring which now stained so much of the Mahratta dominions. The Raja of the State, Aba Saheb, had lent his full support to the British in the recent struggle, and in consideration of this his territory was confirmed to him, while some additional territory was added as a mark of the British Government's appreciation of his services. At a later period the State, owing to misgovernment, fell under a cloud, and its government was taken over by the British. But the Raja of the State at the time of the Mutiny showed such a keen sense of loyalty under trying conditions that his full rights were restored to him, including the much-cherished liberty of adopting a son and successor.

It was in this eventful first quarter of the nineteenth century that the Bombay Presidency as we now know it took definite shape. Also it was in this period that the principles of administration as they flourish to-day were introduced. In this respect the Presidency was fortunate in having as its ruler a man of the breadth of mind and the keen imagination of Mountstuart Elphinstone. This eminent pro-consul, attaining to office in 1819, and occupying the position for nearly eight years, infused a new spirit into the Government. Hitherto the traditions of the old trading regime had been powerful if not predominant. Now he was to show that there were responsibilities to the governed to be discharged which the Government could not evade if it would. Especially was he strong in support of education. He felt that it was useless to look for qualities which would enable Indians to rule themselves until they had undergone the proper training in youth. Believing this, he threw himself heart and soul into the work of education, producing in time results which have left an indelible mark on the educational institutions of Bombay. Bishop Heber, who met Elphinstone in the course of his visit to Western India in 1825, wrote in very high terms of the zeal and liberality of Elphinstone's government. "His policy, so far as India is concerned," he wrote, "appeared to me peculiarly wise and liberal, and he is evidently attached to and thinks well of, the country and its inhabitants. His public measures in their general tendency evince a steady wish to improve their present condition. No Government in India pays so much attention to schools and public institutions for education. In none are the taxes lighter and in the administration of justice to the natives in their own languages, in the establishment of *punchayets*, in the degree in which he employs the natives in official situations, and the countenance and familiarity he extends to all the natives of rank who approach him, he seems to have reduced to practice almost all the reforms which had struck me as most required in the system of government pursued in those provinces of our Eastern Empire which I had previously visited." Heber was no mean judge, and his verdict has been endorsed by posterity. Indeed, there is no British name which is held in higher regard by the inhabitants of Western India than that of this most estimable Governor.

Apart from Elphinstone's great services to education, he left a brilliant record as a general administrator. The land settlement of the Presidency was carried to completion in his governorship under conditions which reconciled the natives to British rule; Courts of Justice were organized and laws codified, and generally the spirit of enlightened progress and tender solicitude for the interests of the governed which are the attributes of the best type of British rule were the guiding principles of his policy. It is not too much to say that his influence on life and thought in Western India was farther reaching than in the case of any who have since filled the office of Governor. Others have done more for the material advancement of the Presidency, but none have excelled him in services rendered to the cause of intellectual development.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

CHAPTER VIII

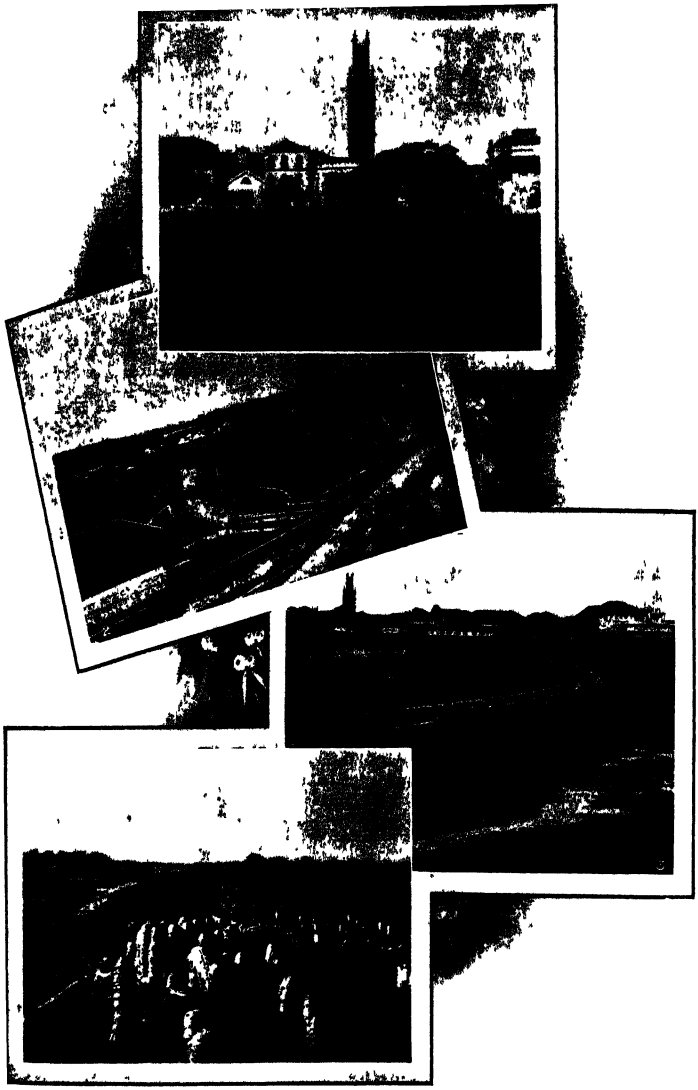
Sir J. Malcolm's administration—Completion of Bhore Ghaut Road—Great additions to Bombay territory—Sind, Aden, and Sattara annexed—Communications with England—The Overland Route established—The P. & O. commences operations—Railways commenced—Mutiny troubles in Bombay—Mr. Charles Forjett and Lord Elphinstone—Industrial progress—Cotton Mills established—The share mania period.

THE note of progress sounded in such definite tones by Mountstuart Elphinstone was re-echoed in much fainter strains by his successor, Sir John Malcolm. But if there were no big administrative achievements to Malcolm's account, he may be credited with some extremely useful services to the Presidency. One of his titles to remembrance is that he carried through the final stage of the construction of the road up the Bhore Ghaut. In days when the traveller passes up the Western Ghaut in a comfortable saloon carriage, from the windows of which he surveys the lovely scenery at his leisure, the importance of the route is obscured. A century ago, however, no one proceeded from the low ground of the Konean to the Deccan, two thousand feet or more above, without being painfully aware of the difficulties and even dangers of the road. Where the journey from Bombay to Poona now takes hours it formerly took days. In the then disturbed condition of the country it was an adventure not to be lightly undertaken without the most elaborate preparations. Malcolm's service was to complete a carriage road which before had been carried only partially up the Ghaut. By this means traffic facilities, whether for passengers or goods, were enormously facilitated. Malcolm himself, in recording the opening of the road on November 10, 1830, spoke of it as "a splendid work which may be said to break down the wall between the Konean and the Deccan." "It will," he added, "give facility to commerce, be the greatest of conveniences to troops and travellers, and lessen the expense of European and other articles to all who reside in the Deccan." This enthusiastic appreciation of the merits of the new work was abundantly justified by events. The road was of inestimable value until superseded by the railway three decades later.

In these years succeeding Elphinstone's administration, the progress made was more of a political than a material character. Great additions were made to the area of the Presidency and the responsibilities of its rulers by acquisitions of territory due to a variety of causes, but primarily to the irresistible tendency to pursue annexation as the shortest cut to the solution of difficult problems of government. The doctrine of lapse, as has been mentioned, added Sattara to the list of British States. For a time Kolhapore came under British rule as a result of a serious rising in 1842. The Sawunt Waree State, a possession of the famous Bhonslay family, had been annexed four years earlier in consequence of the reigning chief's misrule, and in 1841 the Colaba territory, associated with the pirate dynasty of Angria, lapsed to the British Government as a consequence of the failure of direct heirs. But by far the most important changes affecting the Bombay Presidency in this period were those brought about at a great distance from the seat of government. The first of these in point of sequence was the annexation of Aden. We have already seen how a British Admiral dismissed this incomparable stronghold as a place of no account, and how a weak Government of India acquiesced in the verdict. That particular manifestation of short-sighted folly was not long in bringing its revenges. Because we did not occupy Aden we speedily found that our hold on the navigation at the entrance to the Red Sea and along the Arabian Coast was a feeble one. The fact was brought home to the authorities in India with special force in 1837 when, following upon a long series of "regrettable incidents," the Arabs plundered a shipwrecked crew which had been cast upon their inhospitable coast. The Government demand for satisfaction having been ignored, an expedition was sent from India to secure reparation for the outrage. The expedition resulted, as was expected and intended, in the capture of Aden. Hostilities continued intermittently for some time with the local Sultan, but eventually in 1843 an agreement was drawn up and afterwards renewed in 1849 in the form of a treaty of peace, friendship, and commerce. Since that day British influence has been paramount on the Arabian Coast.

Simultaneously with this conquest of Aden, the Bombay Presidency added to its area by taking in the enormous expanse—"mostly light land"—of Sind. How this great province fell under special rule is a story which must be related elsewhere. Suffice it here to say that after a brilliant campaign under the direction of Sir Charles Napier the territory was completely subdued and incorporated with Bombay in 1843.

By these various accretions the Bombay Presidency had become a great unwieldy mass of territory without form and void, and innocent of any real connecting link. The thing needed to make the union of this "fortuitous concourse of atoms" effective was an improved system of communication. The public had not long to wait for this. It was the age of advance in all that concerned transport. As early as 1830 a scheme had been propounded by Sir John Malcolm for establishing regular communication with England by means of a line of steamers navigating the Red Sea and the Mediterranean. It was, however, not until 1838 that "the overland route" was made possible for general use by the establishment of a monthly line of steamers of the Indian Marine carrying the mails to Suez, to be transmitted from thence across the desert to Alexandria for re-shipment through the Mediterranean to England. Lieutenant Waghorn's part in securing the adoption of this route for the transport of the Indian mails is historic. But it is an error to suppose that he was the creator of the system of transmitting mail matter from India "overland." From the very earliest times of the English in India the East India Company's officials were accustomed to send their communications to England either by way of Basra in the Persian Gulf to Aleppo, and thence through the Mediterranean, or up the Red Sea and via "Grand Cairo," as the Egyptian capital was then termed. What Lieutenant Waghorn did was the useful work of popularizing the route by the Red Sea, and by his persistent advocacy securing the adoption of a permanent system. It needed the driving force which his energy supplied to make the scheme of communication effective, for the service maintained by the Indian Marine steamers was unreliable and otherwise unsatisfactory, and the transport measures in Egypt were primitive. So indifferent were the arrangements that the Government for the seasons from 1838 to 1840 were induced to send the monsoon mails up the Persian Gulf and thence via the Euphrates to the Mediterranean. In 1855 the P. & O. Company, who by this time were running steamers to Calcutta, were given a contract for the carriage of mails between Bombay and Aden twice a month. For some years Bombay had to be contented with this curious service, but a strong agitation led ultimately in 1868 to the selection of the port as the point of arrival and departure of all the Indian mails. The opening of the Suez Canal in 1870



BOMBAY IN TRANSITION.

1. The Green from the Town Hall. 2. Bird's-eye View of Churchgate and Esplanade from the Bank of Bombay.
3 Panoramic View of the Fort from Colaba. 4. Scene from the Bombay and Baroda Railway in course of construction.

From early Photographs in the Indian Amateur Photographic Album.

confirmed and consolidated the position of Bombay as a great Imperial port. Henceforward its development was rapid, until it reached the position it occupies to-day of being one of the four greatest and best-equipped shipping centres in Asia.

Almost simultaneously with the inauguration of Lesseps's great work, which made possible the passage of a ship from Bombay to England by way of the Red Sea and the Mediterranean, a great trunk line of railway had been completed across the Indian continent, linking Bombay and Calcutta. Railways were rather late in making progress in India. It was not until 1850 that Mr. Willoughby at Bombay turned the first sod of the line from that city to Tanna, which was the pioneer undertaking of the intricate network of lines which now intersects India like some vast spider's web. But once a start was fairly made, splendid work was done. The formidable inclines up the Bhor and Thull Ghauts– as magnificent examples of engineering skill as the railway world even now supplies– were completed, the former in 1863 and the latter in 1865, and through railway communication was established with Calcutta in 1870 and with Madras in the following year. It is unnecessary here to follow the subsequent course of railway development in the Bombay Presidency, as the subject is dealt with in special articles. But it may be said by way of general comment that as Bombay was the first amongst the Provinces of India to favour railway enterprise, so throughout it has been a consistent supporter of railway extension.

Bombay was touched but lightly by the fever of the Mutiny. This immunity was largely due to the skilful direction of affairs by Lord Elphinstone, the then Governor, and those in authority under him. A crisis actually arose in Bombay, which, if it had not been promptly nipped in the bud, might have produced in Western India the same disastrous consequences which flowed from mismanagement in Northern India. The trouble developed in the autumn of the fateful year 1857. At the time when the rising was at its height in the north, information was brought to Mr. Charles Forjett, the Commissioner of Police, by a Wahabee acquaintance, of an intended rising of the native regiment (the Marine Battalion) then in garrison. Forjett was a man of exceptional experience and personal qualities. Of mixed descent, he was thoroughly conversant with the vernacular, and was able from that fact and from his complete understanding of native habits to pass as an Indian. In this instance he excelled himself in his clever impersonations. His first action on learning of the conspiracy was to get under his control a certain Ganga Prasad, at whose house in Sonapore, in the native city, the plotters met. Then he installed himself in the house in a convenient hiding-place adjacent to the room in which the mutineers were in the habit of meeting. What he learned there soon placed in his hands the threads of the conspiracy. His difficulty now was to convince the military authorities that the plot was a serious one. The officers of the regiment, like others at that time, were convinced of the fidelity of their men. They could not believe that the virus which had undermined the loyalty of the Sepoys in Bengal had extended its evil influence to Western India. Forjett adopted a very direct and effective way to drive the truth home. He took one of the principal officers of the regiment with him to the conspirators' headquarters in Sonapore, and there placed him in a position to hear with his own ears the deliberations of the mutinous junta. In due course the principal conspirators were arrested and tried, with the result that two of them were blown from the guns on the Esplanade. This salutory punishment had its due effect. There was no further serious trouble in Bombay City, and though later there were local risings in Guzerat among the Bheels and in the Southern Mahratta country, and though the Presidency was the scene of a good many of the exploits of the redoubtable Tantia Topee, the rebel of the jungles, Bombay territory as a whole was singularly free from the disturbing influences which were in these years so sorely testing British power in other parts of India.

Lord Elphinstone's calm courage in this crisis was a moral asset of exceptional value. A well-authenticated story which is one of the classic tales of the Mutiny well illustrates his character and also throws a vivid light on the professional qualities of Forjett. It is said that one day in the early stage of the Mutiny, Forjett on visiting Elphinstone, who was then residing at Government House, Parel, an isolated position some miles away from the military quarter, asked him if he was not afraid to sleep in such a situation. The Governor replied that he was well content with his position, resting assured that no harm could come to him, seeing how well he was guarded. Forjett demurred to the effectiveness of the safeguards. He told Elphinstone that however his body-guard might be disposed he (Forjett) would penetrate it and visit him at his bedside at six the following morning. Elphinstone laughingly accepted the challenge which was thrown down, and awaited developments. Forjett was as good as his word. The next morning he presented himself in Elphinstone's bedroom in the guise of a sweeper—one of the degraded class which daily does the work of removing refuse and slops from an Indian household.

Commercially Bombay, both the Presidency and the island, benefited enormously by the new era of transport which the developments of sea and land communications already described ushered in. It is from this period that is to be dated the foundation of the modern industrial position of Bombay. The first cotton mill established in 1854 as an experiment in the immediately succeeding period was followed by other ventures, until in a few years the local mills were exporting substantial quantities of goods of a class which before they had exclusively imported. Before the century was out an immense industry had been created which more than justified the appellation "the Manchester of India," bestowed upon Bombay by enthusiastic friends. In the train of the cotton mills came a variety of other manufacturing undertakings—iron-works, flour mills, chemical works and the rest. The old order survived in many interesting indigenous enterprises. But definitely Bombay in these eventful years made its bid for a position—and a prominent one too—in the ranks of modern industrial centres.

There was a notable interruption in the course of Bombay's progress in the later sixties, when the City and Presidency underwent a financial crisis of an exceptionally disastrous character. Memories still survive of this "share mania" period with its whirl of speculation, its recklessness and extravagance and its general madness. The scenes of the South Sea Bubble were re-enacted in this Eastern environment. The Bombay population from highest to lowest indulged in a frenzy of speculation, with the inevitable result which follows such lapses from sanity. The story of this remarkable episode in Bombay history may be briefly told. Owing to the Civil War in America the price of raw cotton in the years from 1861 to 1865 enormously appreciated. Such were the profits derivable from their crops

that Guzerat cultivators shod their cattle with silver and adorned their women folk with costly jewels. It is calculated that in the five years mentioned the cotton exports were in value eighty-one million pounds more than they would have been if there had been no war to produce a shortage of supplies. Money became so plentiful that speculative enterprise was almost inevitable. It would have been harmless and even beneficial if there had been wise direction and the public had kept their heads. But, as often happens in periods of monetary inflation, the judgment of highly placed personages was obscured by a misconception of the duties of a government in such an emergency. The administration of Sir Bartle Frere, who was then Governor, instead of holding aloof from the scramble, took an active part in it, stimulating by their action the rage for speculation which had grown up out of the situation created in 1864 by the stubborn defence of the Confederate Army and the apparent probable prolongation of the struggle. They associated themselves with a project for the reclamation of land in Back Bay—a good enough sheme in itself, but tainted with financial origins which made it a highly dubious enterprise to be given official associations. Owing to the strong objections of the Government of India to the connection, the partnership was severed and the officially acquired shares were thrown upon the market. But this action, instead of damping the ardour of the speculators, gave a new strength to their madness. The Government shares when put up for auction were sold at something like 600 per cent. premium—that is to say, Rs. 25,000 was paid for a share on which Rs. 4,000 had been paid up. The transactions had an electric effect on the highly strung nerves of the community. Speculative ventures of every description were floated upon the excited market. Some of them were reasonably sound, or would have been in normal times when cool views were taken and values were not inflated. But the great mass of them were land ventures too heavily capitalized ever to be a success. The public eagerly swallowed them all—good, bad, and indifferent. They were so voracious that they even digested a questionable scheme for establishing a new port for Calcutta, to be known as Port Canning. The inevitable crash came in the early months of 1865, when Bombay learned that the Civil War in America had ended. Prices then fell as rapidly as they had risen. Scrip which a few weeks before had been eagerly purchased now had no value. All round was uncertainty and gloomy apprehension. The failure of one of the leading Indian firms of the city for three millions sterling produced universal consternation; the whole financial edifice now appeared to be tottering. A rise in the price of cotton produced a temporary rally, but the relief was only temporary, and soon the situation was blacker than ever. In quick succession the elaborate financial schemes which had filled so large a place in the thoughts and hopes of the Bombay people toppled over. In the crash there came down with them the Bank of Bombay and a number of other less important banking institutions. When the storm had spent itself Bombay financially was left practically a derelict. The Government did what it could to encourage the revival of credit, and the good sense and enterprise of the commercial community were conspicuously displayed in the readjustments necessitated by the crisis. In the result Bombay slowly but surely recovered from the effects of its spell of financial madness. Long before the century was out the industrial outlook was brighter than ever it had been. *Urbs prima in Indes* had a new and deeper significance.

CHAPTER IX

The dawn of the modern era in Bombay—Sir Bartle Frere's administration reviewed—Political Governors—Sir Richard Temple's notable administration—Famine in Bombay—The Plague visitation—No popular Plague measures—Murder of officials at Poona—Serious effect of the Plague on Bombay prosperity—Conclusion.

SIR BARTLE FRERE'S Government, which extended from 1862 to 1867, may be said to mark the beginning of the history of modern Bombay. In those years the city broke through its walls and flowed out into the breezy expanses of the Esplanade, taking to itself, in the succession of noble public buildings which rapidly sprang up in this new locality, a highly dignified and impressive appearance. Simultaneously, in the Presidency, following upon the prosperity of the great cotton era, came many developments, railways, roads, hospitals, which greatly added to the amenities of life. Frere did not escape criticism, in spite of an almost too powerful striving after popularity. Indeed, few Governors before or since have been subjected to so bitter and sustained a volume of unfavourable comments on their administration as he had to endure. But history, while taking notice of his failings, cannot but concede that it was his intelligent initiative which started Bombay on that era of splendid achievement which has borne already such abundant fruits. His administration stands out with the greater prominence because it was succeeded by periods of government by men of a very different calibre. There was then a notion which, perhaps, has not even yet entirely died out, that Indian Governorships were a suitable haven of refuge for political failures at home. In consequence Bombay, in common with other Presidencies, had to submit to the rule of men of very mediocre capacity, whose principal qualification for the office to which they were appointed was that they had claims upon their party at home.

A welcome departure from this system of patronage was made in 1879 when the Imperial Government appointed to the chief executive office in Bombay a Bengal Civil Servant in the person of Sir Richard Temple. With nearly forty years of active Indian service behind him, and an experience gained in some of the highest administrative offices, notably that of Famine Commissioner, Temple took to Bombay a reputation which inspired confidence. It is true that some of the features of his famine policy were fiercely assailed by critics of the extreme school, but even this class recognized that in the new Governor was a man who at least understood his work and might be relied on not to commit glaring blunders. Sir Richard Temple soon showed the type of administrator he was. Consumed with a restless energy which knew no fatigue, he infused new life into the body politic grown torpid with easy-going government. He rode tremendous distances, completely wearing out the members of his staff. From early morning to dewy eve he was engaged on the active discharge of his public duties. He prided himself on his versatility. He appeared to be equally at home in painting a drop scene for the new theatre erected on the Esplanade, delivering a long and abstruse address at the University Convocation, or attending a meet of the Bombay Hunt. There was a little too obvious a desire on his part to pose as an Admirable Crichton, but this personal foible was simply a mask for very thoroughgoing qualities, which were manifested in every department of the Government. Under his energetic direction distinct progress was made, both in administration and in commercial life. Though his critics would not allow it at the time, he gave a much-needed impetus in both directions to machinery which had

grown rusty by insufficient use. He left Bombay in 1884 to take part in the General Election. After a frantic journey home, which he characteristically accomplished in record time, he secured his election for the Worcestershire division in which his country house was located. Thenceforward, for a good many years, he was a familiar figure at St. Stephen's. Day in, day out, he paced the lobbies with the same assiduity that he had displayed in his Bombay tours. He made records in divisions, was never absent from a Committee of which he was a member, and distinguished himself as the favourite guide of ladies visiting the Houses of Parliament. At last even his indomitable energy failed him. One day he fell asleep in the House, and was oblivious to a duty which he was most anxious to perform. He thought that the time had come for him to retire from public life, and so he dropped out of the running, spending the few remaining years of his life in happy retirement at his Worcestershire home, where he died in 1902. Sir Richard Temple cannot, perhaps, be placed amongst the greatest of Indian administrators, but he certainly deserves to rank high amongst those who have had an exceptionally useful career.

When Sir Richard Temple took office, the Bombay Presidency still lay under the shadow of the famine which had decimated Central India and the Deccan in the seasons of 1876, 1877, and 1878. The measures of alleviation and improvement adopted by his administration, more especially the extension of railways, the construction of irrigation works and the extension of afforestation, proved of great value in the later and more severe visitation which clouded the closing years of the last, and the opening years of the present century. But science and statesmanship alike were at a loss in the tremendous crisis of which this memorable famine was only a part. While scarcity was desolating Guzerat and the Northern and Western Deccan, cholera was claiming its victims by the thousand from the underfed population, and plague was rearing its sinister head in a fashion which boded ill for the future health of the Presidency. Though the fact, perhaps, was not fully realized at the time, it was the plague which was the greatest danger to the community. Famine with all its awful consequences yet was a passing phenomenon. But plague, as events were to show, when once firmly rooted, had a tendency to become endemic. The disease first made its appearance in Bombay in August 1896. It spread rapidly throughout the city, and extended to the districts beyond. The Government, keenly alive to the importance of circumscribing the visitation, put in force a drastic series of regulations. Intimately touching as these did the lives and homes of the people, they exerted a widespread feeling of discontent and were violently opposed. Extremist agitators, for their own purposes, made use of the inevitable incidents of the sanitary campaign to inflame the popular passions, with the consequence that a deliberate movement was set on foot to withhold the payment of revenue. Actual disturbances broke out in the Tanna district, but it was left to a knot of Brahmin malignants at Poona to supply the most startling episode in this attack on authority. In June 1897, Lieutenant Rand, who had charge of the plague operations in Poona, was foully murdered with another officer who had made himself obnoxious to the people by his zealous discharge of unpleasant duties. Justice was afterwards meted out to the murderers, but it was long before the painful impression created by the incident wore off. Meanwhile, it became apparent that the strenuous measures adopted to deal with the plague were doing very little good. A change of policy was, therefore, made in October 1898, when greater use was made of volunteer agency, and the more irksome of the restrictions on personal liberty were removed. A Commission appointed by the Government to inquire into the whole question of plague procedure reported in 1899 in harmony with these concessions. The Government thereupon sanctioned still further relaxations of the regulations. Experience by this time had undoubtedly shown that the disease was not amenable to control on the lines that had been followed. In its onward march it had defied regulations and ignored boundaries, and mere ruthlessness of official action had only served to hasten its spread by causing people to conceal what otherwise might have been revealed. The ravages of the disease have been terrible. Up to 1904 the deaths were officially estimated at four millions in the Bombay Presidency alone. Since then a vast additional number of plague victims have been claimed.

Bombay trade suffered very considerably from the effects of the plague visitation. The population of the capital diminished largely, and industry was hampered at every turn by lack of labour. In later years there has been a marked revival, but it is doubtful whether even yet the city has recovered from the dire injuries which have followed in the train of the disease.

In these eventful years Bombay was fortunate in having a succession of governors of exceptional quality. Sir James Fergusson, who succeeded Sir Richard Temple, brought to his task in Western India a close acquaintance with public life in England supplemented by an experience as Governor of South Australia. Urbane and dignified, he made a distinctly good impression upon the rather exacting public opinion of Bombay. Perhaps he was best liked because his administration lacked the fireworks which had illuminated the *régime* immediately preceding it. A memorable incident of a personal character, which left a deep impression on the popular mind of the time, was the death of Lady Fergusson, at Government House, Parel, under particularly painful conditions. Lady Fergusson, a very beautiful woman, succumbed to an attack of cholera while her husband was absent on tour. The peculiarly distressing part of the affair was that the Governor's whereabouts at the time were not exactly known, in consequence of his tour taking him into an isolated part of the Presidency. In his absence it was decided to bury the body in the cathedral, and a grave was actually prepared in the north aisle. There were murmurs at this very insanitary decision. Cholera, it was represented, was too serious a menace to be thus lightly disregarded. Happily an end was put to the controversy by the arrival of Sir James Fergusson, who immediately decided in favour of internment at Sewree, where the remains were ultimately carried amid extraordinary demonstrations of popular sympathy.

After Sir James Fergusson came Lord Reay, a *protégé* of Mr. Gladstone, and a governor of the progressive type. His administration was chiefly remarkable for educational progress and political development. Of the same school of thought as Lord Ripon, Lord Reay showed the same desire to promote the advancement of Indians along the road of self-government. He has his reward in the affectionate remembrance of Indians. The present Lord Sydenham, a later Governor, had more difficult problems to meet in the revolutionary ferment associated with the plague administration. He

did his duty well as the upholder of the sacred principles of law and order. He was, however, too much of the autocrat to find favour with a community growing every year more politically self-conscious.

Now we approach the last stage of all of this strange eventful history—the years which followed Lord Sydenham's resignation. We are within the shadow of the Great War, but the world, and least of all India, is not conscious of it. In succession to Lord Sydenham, Mr. Asquith sent out to Bombay a rising young publicist in the person of Mr. Freeman Thomas, a gentleman who had married the youngest daughter of the late Earl Brassey. Mr. Freeman Thomas—or, to give him the title afterwards bestowed upon him in recognition of his successful administration, Lord Willingdon—addressed himself to the not too easy task of governing the Western Presidency on lines which would reconcile the demands of Indians for increased powers with the due maintenance of the over-ruling authority. His frank method of directly consulting all the Indian political leaders created an immediately favourable impression, which was strengthened as the years went by by his broad and sympathetic policy in all matters which touched the rights of the people. When the war broke out in the fateful August of 1914, Lord Willingdon's hold on the popular sympathies was of infinite value. The calls he made upon the community, whether for funds for the sick and for help for the prosecution of war work, or for men to take their place in the fighting line, were responded to with alacrity and enthusiasm. Bombay became a veritable hive of industry, with a spirit of devotion and self-sacrifice prevailing which was above all praise. Never in the Presidency's history had there been such an outpouring of wealth at the dictates of a patriotic public spirit. To the first war loan Bombay contributed 11 crores of rupees, and to the second $13\frac{3}{4}$ crores, while it raised 90 lakhs of rupees in connection with the Bombay branch of the Imperial Relief Fund, as well as other large amounts for miscellaneous war purposes. It is a record which does remarkable credit to the generous instincts of the people of Bombay; and it is one which speaks eloquently for the leadership which was given them in these critical days. In point of fact, Lord and Lady Willingdon were so completely the heart and soul of every war movement that history will always associate their names with Bombay's noble action in the Great War. Concerning Lord Willingdon's general administration, we may accept the opinion expressed by a notable Parsee journalist in a review of his Governorship, that he had "upheld in India the best tradition of English public life, and had striven to the best of his power to improve the moral and spiritual tone and to promote the social, political, and material well-being of the people entrusted to his care."

Sir George Ambrose Lloyd, D.S.O., the successor in the purple of Lord Willingdon, has been too short a time in office to justify any lengthened reference in a survey such as this, which is concerned most with the past and the remoter past. But it is only right before concluding to make a passing reference to the action taken by the new Governor when, on the threshold of his Indian career, he was confronted with one of the ugliest industrial and political upheavals in the whole history of India. His skilful and tactful conduct in the crisis was a factor of enormous importance in ameliorating the evils which arose out of this ebullition, and it will always be to his credit as evidencing real statesmanship that he so cleverly grasped the essentials of a peculiarly perplexing situation so soon after landing in Bombay.

Here a halt must be called. Our story of the two and a half centuries of Bombay's existence as a British possession necessarily ends at an interesting point. If we could lift the curtain and peep into the future, what would be disclosed? Bold, indeed, would he be who would prophesy. The most that may be safely permitted to the chronicler is the expression of a personal conviction based on a rational interpretation of the lessons of the past. That conviction is that the various tendencies, material and spiritual, which have brought Bombay to the present pinnacle of greatness, are not yet destined to lose force, but that under changed conditions the city and Presidency will reach out to yet higher things.

BOMBAY SCENERY OF A CENTURY SINCE.
VIEW FROM MALABAR HILL.
From Wales's "Views of Bombay."

HAITHSINGH TEMPLE, AHMEDABAD.

Photo by B.B. & C.I. Rly. Co.

THE BOMBAY PRESIDENCY

THE Bombay Presidency, on the western coast of India, is bounded on the north-west, north, and north-east by Baluchistan, the British Province of the Punjab, and the native states of Rajputana; on the east by the native states of the Central India Agency, the Central Provinces, Berar, and the Dominions of the Nizam of Hyderabad; on the south by the Presidency of Madras; and on the west by the Arabian Sea. The geographical area of the British territory, excluding the Province of Sind, comprises about 70,000 square miles, with a population of some 20,000,000 inhabitants; native states, 65,761 square miles in extent, with about 7,000,000 inhabitants; the native state of Baroda, under the Government of India, with an area of 8,182 square miles; and the outlying settlement of Aden, under the jurisdiction of the Bombay Government, of 80 square miles in extent. In addition to the above, there are the Portuguese possessions of Goa, Daman, and Diu, with an aggregate area of 14,770 square miles.

The first twenty or thirty years of the nineteenth century witnessed the formation of the framework upon which the Presidency, as it is known to-day, has been built. The earliest settlement of the boundaries was made by the Hon. Mountstuart Elphinstone, Governor of Bombay, in 1819–27, although the operations were carried out upon the best native lines. This policy of refraining from introducing radical changes was most successful. Enormous wealth poured into the Presidency during the American Civil War (1862–3) owing to the unprecedented demand for Indian cotton for Lancashire mills, and this period of prosperity was marked by a very great extension of railways, roads, and other means of communication.

The harbour authorities were alive to their responsibilities, and from that date the port has held priority of place in the British Empire in the East.

A striking feature of the Presidency is the great diversity of physical aspects, climate, and people. The northern districts on the borders of Sind exhibit light sandy soil; to the south are the fertile tracts cultivated for cotton; and then there are the rich plains of Gujarat, watered by the Nerbudda, Tapti, and other rivers, which are usually spoken of as "the Garden of India."

The Deccan districts, lying on the eastern side of the Western *Ghats*, may be described as a level plateau sloping to the more productive fields of Berar and Hyderabad, while on the western slopes are the rice-growing tracts of the Konkan.

The variations of climate result from the difference in altitudes and rainfall, and the failure of the monsoon rains has on several occasions caused disastrous famines, which have extended throughout the whole province. The south-west monsoon, which usually breaks in the early days of June, strikes with great force upon the full extent of the western coast, the Konkan districts receiving a fall of from 100 to 150 inches, but in the

Deccan the quantity does not, as a rule, exceed 30 inches. The following particulars in connection with this subject may be of interest. The average annual rainfall at Poona, in the Deccan, is 27·62 inches, and at Karwar, in the extreme south, the figures are 123·55 inches. The average mean temperature is: Poona, 1,840 feet above the level of the sea, January, 70·4 degrees; May, 85·6; and July, 76·7; and Karwar, 44 feet elevation, January, 76·1; May, 84·8, and July, 77·5.

In the south of the Presidency are the Western *Ghats*, or Sahyadri mountains, which run parallel with, but at an average distance of 40 miles from the sea, and are about 1,800 feet in height, although individual peaks reach an altitude of nearly 4,000 feet, while the Satpura and Satmala ranges are situated at right angles to the *Ghats*.

The sources of the principal rivers, which flow through various portions of the [illegible] are found in other territories

miles of land, and, flowing in a westwardly direction, widens into a noble estuary as it discharges itself into the Gulf of Cambay. It is navigable for country boats at all seasons of the year for a distance of 100 miles from the coast, but during the rainy seasons vessels of 100 tons burden can find sufficient depths of water. The Tapti, rising in the district of Betul, in the Central Provinces, crosses the uplands of the district of Khandesh (in Bombay), where it receives the waters of several small tributaries, and, after winding through its high banks through Surat, it enters the sea at the Gulf of Cambay.

The Western *Ghats* give birth to a considerable number of streams, and many of them, increasing in volume during their descent, would be more correctly described as mountain torrents. One of these, the Sharavati, or "arrow-born" (that is, formed by a stroke of Rama's arrow), in the district of North Kanara, having formed a breadth of about 250

It is not unlikely that, owing to the geographical position of Bombay, with its lengthy littoral open to invasions in early days, the Presidency contains a large number of tribes and castes unequalled in variety by any other of the chief divisions of India. The principal castes and tribes are rather more than 500 in number, but these include several minor divisions of an endogamous character. First in numerical importance are the Mahrattas, then in succession come the Kunbis (agriculturists), Kolis, Lingayats (religious devotees), Brahmans, and others employed as shepherds, herdsmen, artisans, low castes, and menials.

The principal industry is agriculture, nearly three-quarters of the total population in the Presidency depending upon it as a means of support. The soil is exceedingly variable in character, dark, deep soils return excellent crops of wheat, *gram*, and Broach cotton, the finest in India, while other land yields rice, spices, sugar-cane, coarser kinds of grain, and

1. ON THE WAY TO GOKAK.

2. GOKAK FALLS

A BOUDDHIST TEMPLE IN THE RIVER BEEMA AT PANDHARPUR.

The Nerbudda, which is only second t the Ganges as a sacred river, passe through a small portion only of the Presi dency, but it drains some 36,100 square

yards, rushes over a cliff, more than 90 feet in height, in four separate falls, th principal one having an unbroken colum 830 feet in height.

garden produce. There is no generall recognized system of cultivation, occu piers being content to apply their method according to the nature of the soil.

For example, the Deccan fields are only ploughed when the land becomes foul, seed being usually sown on well-harrowed surfaces, which have been carefully weeded. Rice is cultivated on terraces prepared in such a manner that sufficient water may be retained during the monsoon period. It is a common practice to sow seed somewhat closely in a small area, termed the "nursery," and seedlings are transplanted to the fields when they have attained size and strength. The district of Kanara gives valuable crops of cardamoms, betul, and pepper, but many occupiers still persist in that baneful practice known as *jhum* cultivation, which consists merely in burning a quantity of trees on forest land and of sowing the seed in holes among the ashes without digging or harrowing. This land is abandoned after two or three seasons, and the operation is repeated elsewhere.

In connection with manufactures and industries, attention must be given first to the spinning and weaving of cotton. India is regarded as the home of the cotton industry, and the Bombay Presidency is the chief producing centre in this vast country. Hand-weaving has from time immemorial been constantly practised in almost every village, but the products are now almost entirely confined to *saris*, turbans, coarse grey cloth, and other similar goods. Some of the most skilful weavers in India are found in the districts of Ahmedabad and Surat, and although the hand-looms have greatly decreased in number since the importation of machine-made goods, and the erection of mills in India, there is still a fair demand for articles made by the old-fashioned method.

The exports of cotton from India was established as an industry when sea routes were opened to traders, but it was not until the outbreak of the American Civil War in 1862 that it received a substantial impetus.

The first mill was opened in Bombay in 1817, and sixty years later there were approximately eighty in that city, and a very large number in other parts of the Presidency. There were also forty-two cotton presses throughout the whole province, seven of which were in the capital city. The principal articles manufactured are yarns, of counts up to 40's, *dhutis*, shirtings, *chadars*, teacloths, sheetings, and coloured and fancy goods. There is an excellent trade locally for the output of the mills, but the value of the annual exports have risen to a very considerable amount.

Both yarn and cloth are dyed, the favourite colours being red, blue, green, and yellow, but two or more of these are frequently blended with pleasing effects. A demand, which has been more pronounced in recent years, for bleached goods has caused owners of many factories to establish a separate department for the purpose of meeting this want.

The manufacture of silk, once a flourishing industry in India, whose products were well known in the principal cities of the civilized world, has undergone a distinct revival during the past ten or fifteen years, and while a considerable quantity of raw material is imported from foreign countries, improved conditions have resulted in greater local supplies being available. Other handicrafts, carried on in various portions of the Presidency, include embroidery on silk and cotton cloth in gold, silver, and silk threads; artistic gold and silver work, brass and copper ware, carving in ivory and wood, and the making of cutlery and agricultural implements, while the famous spear-heads, swords, chain armour, and other similar articles have earned a high reputation beyond the boundaries of India. Country carts are made in the principal towns, native boats are built at several seaports, all kinds of leather goods for military equipment, trunks, bags, saddles, harness, boots, and shoes are made, and oil is extracted from various kinds of seeds in factories in every district, while flour and other mills are continually being erected.

The entire discontinuance of the exportation from Europe of certain goods owing to the Great War has thrown India —as well as other countries—more and more upon its own resources, and vigorous attempts are being made to supply deficiencies by local efforts. Factories for the manufacture of sheet and other kinds of glass have been started, and many drugs are now prepared in Bombay from indigenous raw materials which a few years ago were exported to Europe for that particular purpose.

The mineral resources of the province are not of great importance, but those most in evidence are Porbandar building stone, salt extracted from the sea, and manganese.

The chief imports of foreign maritime trade are cotton piece-goods, metals, machinery, oils, sugar, and manufactured woollen goods, while the principal oversea exports include raw cotton, twist, and yarn, grain, pulses, seeds, hides, opium, and wool.

The leading railways having main and branch-line stations are: the Great India Peninsula, the Bombay-Baroda and Central India, the Madras and Southern Mahrattas, and the North-Western, while light railways, inaugurated in 1897, have proved of the utmost service for transport purposes in various parts of the Presidency.

Prior to August 1914 vessels belonging to practically all of the principal shipping companies of the world, called at Bombay, and remarkably busy scenes were continually witnessed in Bombay and Karachi harbours, where large consignments of cotton, wheat, seeds, and other produce were being shipped to foreign countries. Normal conditions are now quickly reasserting themselves, and the stagnation of the past five years has been followed by a great revival in the general export trade. An increasing coasting trade is carried on between Broach, Surat, Bulsar, and other places with Persian Gulf ports, Arabia, and other places, the chief commodities consisting of cotton, rice, timber, piece-goods, salt, and sundry other merchandise.

Famine, that terrible scourge of India, has not always been produced by intense drought, as ravages by locusts or rats, overwhelming floods, and the horrors of war have also been producing agents.

One of the most appalling periods of starvation in modern times occurred in 1802–3, owing to the depredations of the armies of Holkar and the Pindaris, who laid waste the whole of the country and reduced the condition of the peasantry to such extremities that they were driven to eat the flesh of human beings. Ten years later there appeared swarms of locusts, which entirely devoured the crops of the northern districts, and that plague was immediately followed by a total failure of rain. Similar occurrences followed in 1819–20, 1832–33, 1854, 1876–7, and in subsequent years, but it is satisfactory to learn that the extension of railways has very greatly increased the facilities for conveying food grains to the inhabitants of affected districts. The awful nature of these calamities may be inferred from an estimate made by the Provincial Superintendent of the Census of 1901, "That between the years 1896 and 1901 the Presidency lost three millions of its population owing

to the ravages of famine and plague, the former, however, claiming the majority of the victims."

Forests cover an area of about 15,000 square miles, and among the principal trees may be mentioned the following: teak, blackwood, ebony, *babul*, ironwood, tamarisk, sandalwood, mango, jack, and several varieties of palms. Nearly all kinds of vegetables and fruit-trees usually met with throughout India are found in abundance in the Presidency.

Wild animals include tiger (found in the thickest jungles), leopards, sloth bear, bison, sambhur, nilghai, and other species of deer; while small game, such as quail, partridge, wild duck, and snipe, is plentiful in all parts.

Education in the Presidency is imparted partly through direct Government Agency and partly through the medium of grants in aid. The earliest steps taken to assume definite control over this important subject was in the year 1840, when a board of education was appointed, which made a special feature of the teaching of the English language in high schools in the hope that the value of this subject might in course of time be appreciated, by force of example, by those in junior classes. The Educational Department of the Government is administered by a Director, with an Inspector in each division, and a Deputy Inspector and Assistants in each district. Public primary schools, formerly established by local boards under the guidance of the Government were, in 1884, transferred to municipalities. A Government regulation reads thus: "The Government grant in aid for any year is fixed at one-third of the total expenditure of the school in the previous year, and may in no case exceed one-half of the local assets of the school." The grant is reducible to one-fourth or one-third of the expenditure, according to the efficiency of the school. The secondary schools prescribe a course of seven standards, and in all of these grades (with the exception of the first three), English is the medium of instruction. Scholars subsequently pass to the school final examination or to the University matriculation.

The Bombay University was established in 1857, and the executive government is vested in the Chancellor (the Governor of the Presidency), the Vice-Chancellor, the Director of Public Instruction, and 110 Fellows, of whom ten are *ex-officio*, 10 are elected by the Graduates, 10 by the Faculties, and 80 are nominated by the Chancellor. The Government Arts colleges are: the Elphinstone College, Bombay; the Deccan College, Poona; and the Gujarat College, Ahmedabad; and other special colleges include the Grant Medical College, Bombay; the College of Science, Poona; the Agricultural College, Poona; the College of Science, Ahmedabad; the Veterinary College and the Bacteriological Laboratory, Bombay; the Victoria Technical Institute, Bombay; and the Sir J. J. School of Art, Bombay.

KANKARIA GARDEN, AHMEDABAD.
Photo by B.B. & C.I. Rly. Co.

Other important educational institutions are the following Arts colleges: St. Xavier's, Bombay; the Wilson College, Bombay; the Ferguson College, Poona; and the Baroda College, Baroda State.

Considerable progress has been made during the past twenty years, and at the present time there are in the Presidency nearly 13,000 primary schools, 53 secondary schools, 15 Arts colleges, 90 schools for special instruction, 3,100 private institutions, which are attended by some 950,000 scholars.

The Presidency is administered by a Governor-in-Council, who is assisted by three members, two of whom belong to the Indian Civil Service. All of these are appointed by the crown, and their normal tenure of office is five years.

All matters of public business are primarily addressed to the Secretariat, through whose offices they are submitted to the departments directly concerned. The Secretariat is divided into five main departments, namely: (*a*) Revenue and Financial; (*b*) Political, Special, and Judicial; (*c*) Legal, and Remembrancer of Legal Affairs; (*d*) General, Educational, Marine, and Ecclesiastical; and (*e*) Public Works, and Chief Engineer, with branches relating to railways, irrigation, roads, and buildings. Under the Governor-in-Council there are three Under Commissioners, namely, the Northern division, with headquarters at Ahmedabad; the Central division, at Poona; and Southern division at Belgaum.

There are also seven Collectorates in the Northern division, namely, Ahmedabad, Bombay Island, Broach, Kaira, Panch Mahals, Surat, and Thana. The Central division has seven Collectorates: Poona, Ahmednagar, Khandesh East, Khandesh West, Nasik, Satara, and Sholapur; while in the Southern division there are six Collectorates: Belgaum, Bijapur, Dharwar, Kanara, Kolaba, and Ratnagiri.

A Collectorate contains an average of about eight to twelve *talugs*, each comprising from 100 to 200 villages, whose total revenues belong to the State. There are several officials subordinate to the Collector, whose duties consist in collecting revenue, inspection of village accounts and boundary marks, controlling administration of local funds, and various other matters.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

Land in the Presidency is almost entirely held on the *ryotwari* system, that is, a settlement with the *ryots* or cultivators of small holdings, whose revenue payments are fixed after careful measurement and classification of their holding. The assessment of rent is therefore fixed upon the amount which the occupant is likely to derive from his land, and although the *ryot* enjoys security of tenure for a period of thirty years from the time of entry, in addition to power of alienation, this method has its disadvantages, as droughts, floods, or the indifference of the cultivator drive him into the clutches of money-lenders to raise the whole or any portion of his rent, and he then degenerates into the position of a serf. Other sources of revenue include opium, salt, excise, stamps, income-tax, customs, and other items.

Local control over certain branches of administration is granted to district boards and municipalities, whose members are either nominated by the Government or are elected by the people. The first of these authorities has power to delegate minor functions to *talug* boards —the unit of self-government -and to expend revenue upon education, public works, the construction and repair of local roads, and upon the cost of famine relief measures to the extent of their ability.

Municipal government was granted by Act of Parliament in 1850 to towns whose residents desired the privilege, expenditure being restricted to payments for public streets, drainage, the building of tanks, and the prevention of nuisances. Subsequent legislation, enacted at various times, enables municipalities to spend money on dispensaries, schools, hospitals, the recovery of taxes, the construction of new buildings, outbreaks of epidemics, the watering of roads, and upon other matters of a similar nature for the benefit of the community.

The Bombay Presidency Government exercises control, through political agents, over more than one-half of the total number of native states and principalities in the whole of India. Some of these officials take an active part in administration, while others merely exercise supervision.

The states are more than 350 in number, with an area of 65,761 square miles, and are divided for administrative purposes into the following political agencies: Bijapur, with two states; Cutch, one state; Dharwar, one state; Kaira, one state; Kathiawar, 187 states; Kolaba, one state; Kolhapur, with nine states; Mahi Kantha, 51 states; Nasik, one state; Palanpur, 17 states; Poona, one state; Rewa Kantha, 62 states; Satara, two states; Savantvadi, one state; Sholapur, one state; Surat, 17 states; Thana, one state, and in addition there is the Settlement of Aden, also politically subject to the Bombay Government.

Reference need only be made to a few of the principal states in these agencies, as many of them consist almost entirely of small villages.

CUTCH.—This state, almost an island, being practically surrounded on three sides by the Great and Little Runn, and by the Arabian Sea on the western side, is under the political superintendence of the Bombay Government. It has an area of 7,616 square miles, and as the soil is of a light sandy character, the crops which are cultivated return small yields of a somewhat inferior character. There are references in the works of Greek writers to territory of which Cutch formed a part, but its modern history dates from the fourteenth century, when the Samma tribe of Rajputs entered into possession of the State. Shortly after that date Khengar, who belonged to the Jadeja family of the Samma Rajputs, found favour with Mahomedan rulers of the Deccan, and they eventually assisted him in conquering neighbouring chiefs, from whom he obtained extensive areas of land. The title of Rao was also conferred upon him.

Early in the nineteenth century the British were invited to lend aid in suppressing lawlessness, and a treaty was signed under which the British undertook to prevent other invaders from entering the state. This, however, did not put an end to internal disorders, and it became necessary to despatch armed forces into the state. The present ruler, His Highness the Maharao Shri Mirza Raja Sawai Sir Khengarji Bahadur II, G.C.I.E., succeeded to the *gadi* on the death of his father in 1876, and from the time of his being invested with full ruling powers, he has effected vast improvements in the state, notably in the construction of new roads and buildings, and he has further gained the esteem and confidence of his subjects, who, at the census of 1911, were 513,429 in number. A large number of persons in the state are employed in making very beautiful embroidery and silver work, while Bhuj, the chief city, is famous for its fine archæological monuments.

NAVANAGAR.—It is not everyone who will readily connect the ruler of this state with the "Ranji" who made a world-wide reputation for himself as a cricketer in England in the nineties of last century. The Jams—or rulers—of Navanagar belong to the Jadeja clan of Rajputs, and the list of those who have occupied the *gadi* since the foundation of the state contains the names of illustrious men who have toiled incessantly for the improvement of the state and the welfare of its subjects. The chief, His Highness Sir Shri Veebhaji Ramnalji, K.C.S.I., was regarded as one of the most powerful rulers in Kathiawar, and his successor, His Highness Major the Maharaja Jam Shri Ranjitsinghji Bahadur, is following closely in the footsteps of his predecessor.

The state has an extensive border on the Gulf of Cutch, and the Darbar maintains a fleet of nearly 300 vessels for the purpose of facilitating commercial undertakings. It has a total area of 3,781 square miles and a population of about 350,000 inhabitants.

JUNAGADH, a first-class state in the Kathiawar political agency, is 3,284 square miles in extent, and its inhabitants are about 434,000 in number.

Junagadh was originally a Rajput state, and it remained so until 1472, when Sultan Mahmud Begra, of Ahmedabad, conquered it. The Moghul Viceroy of Gujarat subsequently controlled the state, but he was displaced by Sher Khan Babi, who refused to recognize Moghul control. Sher Khan's descendants have from that period occupied the *gadi*. The present ruler, His Highness the Nawab Mahomed Mohabat Khan, was born in the year 1900. The state is famous for the group of hills of Girnar, crowned with ancient shrines and temples of great historic interest, and at the base of the hills is a granite boulder, upon which are inscribed fourteen of Asoka's edicts.

KOLHAPUR is a state with an area of 3,165 square miles in extent, lying within the political agency of Kolhapur. It consists of a series of hills (1,790) and dales, dotted with numerous hill forts, some of which are situated at an elevation of more than 2,500 feet. Agricultural pursuits are carried on with profit owing to the fertility of the soil, the principal crops being rice, *jowar*, *bajri*, sugar-cane, tobacco, and cotton. The present ruler, His Highness Sir Shahu Chhatrapati

Maharaj Maharaja, G.C.S.I., G.C.V.O., G.C.I.E., is a descendant of Shivaji, who was the moving spirit in the ascendancy of the Mahratta power. The tradition that Kolhapur was an important district at the commencement of the Christian era is verified by the discovery of old coins and other relics, but historical records clearly prove that for several succeeding centuries the state changed hands continually, until in the fourteenth century it was united to the Kingdom of Bijapur.

interesting relics, one of which is a casket bearing on its lid an inscription in Asoka characters of the third century B.C.

Kolhapur town is 189 miles distant from Poona by the Madras and Southern Mahrattas Railway system.

BHAVNAGAR, a tributary state in the Kathiawar agency, is at the head, and on the western side of the Gulf of Cambay.

It appears that the ancestors of the present ruler, who were Gohel Rajputs, took up their residence in Kathiawar about the middle of the thirteenth

sea-board, but it also has a number of industrial enterprises, which show the business capabilities of the people. Cloth, brass and copper vessels, and cloth goods are manufactured; cotton and all kinds of cereals are grown extensively; and there are now several cotton-pressing factories and a spinning mill.

The chief town and seaport of Bhavnagar carried on a large trade in the shipping of cotton and other merchandise to Bombay and other large cities, and the internal means of communication are

SUKUNTOLLAH PALACE, BARODA.

Photo by B.B. & C.I. Rly. Co.

A treaty was concluded with the British in 1812, and its provisions included the cession by the State of the harbour of Malvan, as well as certain districts, while on the other hand the Raja was given a guarantee of protection from external foes.

The inhabitants of the state, who are about 833,500 in number, are composed chiefly of Mahrattas (90 per cent.), Mohammedans, and Christians. The principal goods manufactured by the people are cotton and woollen cloth, hardware, pottery, glass, and other ornaments, and pottery. The chief town, Kolhapur, is famous for the antiquity of its sacred shrines, and for the discovery of most

century. The capital of the state was originally at Sihor, but during conflicts which ensued with the Mahrattas, Raja Bhavsinghji removed his headquarters in 1783 to Bhavnagar, which offered greater security. The state passed into the hands of the British as a result of a treaty signed in 1807. His Highness the Maharaja Sir Rawal Shri Bhavsinghji Takhatsinghji, K.C.S.I., succeeded to the *gadi* in 1896, and he rules over about 442,000 people, the area of the state being 2,860 square miles in extent.

Bhavnagar ranks high from a commercial point of view, it possessing exceptional advantages in its numerous places of safe anchorage along its lengthy

well represented by good roads and by the Bhavnagar State Railway, which is more than 200 miles in length.

PALANPUR.—This state, and that of Radhanpur, forms the Palanpur political agency in the north-western portion of Gujarat.

The state is 1,750 square miles in extent, and it has a population of about 220,000 persons, about 85 per cent. of whom are Hindus. The greater portion of the soil is of a light and sandy character, but the northern part is mountainous and rich in dense forests. The principal products of the soil are all kinds of grain, and a large trade is carried on in cotton cloth, sugar, rice, and grain.

The present ruler, His Highness Nawab Sir Sher Mahomed Khanji Zorawar Khan, G.C.I.E., is descended from the Lohani tribe of Afghans, who were in strong force in Gujarat during the fourteenth century. The murder of the ruling Nawab by nobles in 1809 caused the British to interfere, and they selected Fateh Khan, an infant son of the deceased chief, as his successor, and also placed the state under the control of a political superintendent.

Many great improvements have been effected during the present *régime*, and His Highness has given special attention to schemes of irrigation and to fostering the cause of education.

RAJPIPLA, a first-class state in the Rewa-Kantha political agency, is about 1,517 square miles in extent, and its inhabitants are 161,000 in number. The territory, which stretches along the southern bank of the River Nerbudda, is very largely of a mountainous character, and the Rajpipla Hills, rising in peaks to nearly 3,000 feet in height, are a continuation of the Satpura range.

The rulers of Rajpipla trace their genealogy to Chkarana, son of Saidawat, King of Ujjain, whose grandson seems to have been the first chief. The Mahrattas, and, at a later date, the Moghuls of Delhi, exercised power over the state, and it was the encroachments of the former which caused the British to espouse the cause of Rajpipla, and in 1821 the supreme power was called upon to decide upon the right of succession between two claimants. Even this interposition did not prevent a certain amount of mismanagement, but a different state of affairs has existed since that date. His Highness Maharana Shri Vijaysinghji, a Gohel Rajput, succeeded to the *gadi*, with full ruling powers, on December 10, 1915.

DHRANGADHRA, a first-class state in the Kathiawar political agency, is ruled by His Highness the Maharana Shri Ghansyamsinghji, who is the head of the Jhala tribe of Rajputs. An early ancestor of renown extended his jurisdiction into Kathiawar, and several members of his family established themselves as rulers of small principalities, but at the close of the eighteenth century the ruler of Dhrangadhra was Raisinghji, who founded his capital and built a fort at the town of Dhrangadhra. Not long after this time British authority became recognised in Kathiawar, and Dhrangadhra, in common with other states, benefited very considerably. The rulers in the nineteenth century were men of great efficiency in administration, and each of them considerably developed the industrial possibilities of the state. The capital town is 75 miles distant from Ahmedabad.

IDAR, a first-class state in the Mahi Kantha political agency, is invested with a unique historical record, as the real ruler has been on two occasions called upon by the Government of India to undertake administrative duties as regent of the important State of Jodhpur, in Rajputana. This chief, Major-General His Highness the Maharaja Sir Pertab Singh Bahadur, G.C.S.I., G.C.V.O., K.C.B., LL.D., has gained a world-wide reputation as an exceedingly able administrator, a statesman in every sense of the word, a man of chivalry and gallantry and yet withal of so charming a personality that he has won unbounded respect from all who come in contact with him. Maharaja Kesri Singh, a wise ruler of Idar, died in 1902, and as there was no heir to succeed him, the Government of India selected Maharaja Pertab Singh to occupy the *gadi*.

It would require volumes to give even the barest particulars of the magnificent military services rendered to the British by Sir Pertab, but let it suffice by saying that he received special recognition at the hands of Her Majesty the late Queen Victoria, His Majesty the late King Edward, and His present Majesty the King-Emperor of India. In March 1911 Sir Pertab was for the second time requested by the Government of India to assist the Jodhpur state by becoming Regent, and he placed the administration of Idar in the hands of his adopted son, His Highness Maharaja Dhiraj Maharajaji Shree Dowlat Singhji Sahib Bahadur. The state is 1,669 square miles in extent, and it is one of the most picturesque principalities in the Presidency.

AHMEDABAD is the chief city in the Province of Gujarat, in the Northern division of the Presidency, and is a junction station of the Bombay-Baroda and Central India, the Rajputana-Malwa, the Great Indian Peninsula, and the Ahmedabad-Prantij Railways. It was built by Ahmed Shah on the site of Ashanal in the year 1413, and in the sixteenth and seventeenth centuries it was a thriving place of business, with a population of nearly a million persons. It is justly regarded as a typically picturesque Indian town, in which are displayed mosques and tombs rich in architectural and decorative work, and no fewer than 120 Jain temples, which are scarcely less interesting. The most notable sights of the city are Rani Sipri's mosques, known as the "Gem of Ahmedabad," and said to be one of the most beautiful works of art of its kind in the world; the Jama Masjid, situated near to the "Three Gates"; and Haibat Khan's mosque, which presents an attractive combination of Hindu and Mohammedan architecture. The group of buildings, comprising a mosque, tomb, and assembly hall, collectively known as Shah Alam, cannot fail to arrest the attention of visitors.

Ahmedabad is 310 miles distant from Bombay, and has a population of about 215,000 persons.

POONA, the chief city of the Deccan, with about 159,000 inhabitants, is the headquarters of the Bombay Presidency Government during the monsoon months. It is situated on the right bank of the River Muhta, near to its confluence with the Moola, and its elevation of about 1,850 feet above the level of the sea, and an average annual rainfall of only 29 inches, cause it to be favoured with remarkably temperate climate. The city is the junction station on the western system of the Great Indian Peninsula Railway with the western section of the Madras and Southern Mahrattas Railway, and it is 657 miles distant from Madras and 119 miles in a south-easterly direction from Bombay. Its chief buildings are substantial and imposing structures, and they include Government House and offices, the Council Hall, College of Engineering, the Deccan College, Fergusson College, the Poona Native Institute, the David Sassoon General Hospital, Byramjee Jejeebhoy's Medical School, and the post office. A visit should also be paid to the peak of Parvati, with its celebrated Hindu temple, the public garden called Hirabag below it, the Botanical Gardens at Ganesh Khind, the large military station at Kirkee (four miles from the city), and the gunpowder works and ammunition factory.

Poona is a city of some commercial importance, and Poona brocades, silk cloth, metal wares, and clay figures are well-known to art connoisseurs.

AHMEDNAGAR, a large civil and military station in the Central Division, and about 257 miles distant by rail from Bombay. The city, founded in 1494 by Ahmed Nizam Shah, is about three miles distant from the station, on the Great Indian Peninsula Railway, and it contains many fine buildings, such as the public offices of the judges of the district, the

collector of revenue, and other officials, together with several churches and schools, while there are numerous places of interest in the immediate vicinity. The fort, which was built by the Mohammedan kings of Nagar, is surrounded by a deep ditch crossed by a drawbridge, and in an hour's ride may be seen Salabar Khan's tomb, now used as a sanitarium.

Ahmednagar was used during the Great War as a camp, in which a very large number of aliens were interned.

SURAT.—This city, which is the headquarters of the district of the same name, on the western coast of India, has played an important part in connection with the settlement of Europeans in this country. It was the "prime mart" of India during the reign of the Emperor Akbar (1556–1605), and of at least two of his successors; by treaty it was opened to trade in 1612, and it was the seat of a Presidency under the East India Company.

During the years just mentioned it was the chief commercial city in India, and although the development of Bombay has naturally caused a considerable diminution in trade, it is still a place of importance. It is believed that Surat was built about the middle of the sixteenth century by a Turkish soldier in the employ of the kings of Gujarat, and a sound trade was established with ports in the Persian Gulf and elsewhere. The boom in the cotton trade in India, which took place on the outbreak of the American Civil War, caused a large amount of money to flow into the district of Surat, and once again its administrative headquarters became a wealthy city. The chief exports at the present day are agricultural produce, principally cotton. Mills for spinning and weaving cotton have been erected, but it is interesting to note that a large number of the inhabitants are still employed in manufacturing cloth by means of a hand-loom.

The principal archæological features in the city are several very fine mosques, in which may be seen excellent workmanship in ornamental carving, one of the most noted of these buildings being the Mirza Sami, constructed about the year 1540. Parsis, who are numerous in the neighbourhood, have two fire temples, while Hindus are represented by many handsome temples.

BROACH, the chief city and headquarters of the district of the same name in Gujarat, occupies a most charming position on a high mound on the right bank of the Nerbudda, and it has a population of more than 43,000 persons. It was known in the first century of the Christian era as Barugaza, and at least 1,800 years ago it was the chief seaport in India for trading with the Persian Gulf. It was twice plundered by the Portuguese and subsequently by the Marathas, and it was not until the year 1803 that it passed finally into the hands of the British. The city wall, facing the river and about 30 feet above its level, extends for about a mile, and is maintained in good condition in order to prevent possible damage arising from flood in the Nerbudda, from whose mouth the city is 30 miles distant.

About two and a half centuries ago Broach was celebrated for its manufacture of cloth, but since the advent of machinery the hand-weaving industry has rapidly declined. Spinning and weaving mills have now been erected which give employment to a considerable number of persons. The exports of cotton to China and other places were largely reduced in quantity as the development of Bombay proceeded, and at the present time shipping is almost entirely confined to ports on the western coast of India. Trade is carried on chiefly in wheat, cotton, grain, seeds, coal, iron, tiles, firewood, molasses, rice, provisions, and stone.

The majority of the buildings in the city are of an unprepossessing character, although there are still several substantial private residences which were constructed more than a hundred years ago. About ten miles from Broach, on the Nerbudda, is Sakaltirth, or "purifying spot," where a large fair is held annually, and near it is a huge banian-tree said to be able to cover 10,000 persons with its branches and foliage.

Broach is a place of great attraction for Hindus, who gather there in large numbers on festival occasions.

BIJAPUR, or the "City of Victory," was, about the close of the fifteenth century, the headquarters of the Mussulman kingdom of Bijapur, it having been founded by Yusuf Adil Shah, son of the Osmanli Sultan, Murad II. His prosperous reign terminated with his death in 1510, and he and his successors, Ibrahim Adil Shah II, and Mahomed Adil Shah, were, it is said, responsible for the construction of most beautiful buildings, and for executing vast improvements in the general appearance of the city. Bijapur ceased to exist as an independent state when the whole of that district passed into the hands of the British. Mahomed Adil Shah built the Asar Mahal, the only surviving one of several royal palaces, and its immunity from destruction by the Emperor Shah Jehan was due to the fact that it is the resting-place of a box which contains two hairs of the beard of the prophet Mahomet. His tomb, the mag-

TANK OF GODHRA.

Photo by B.B. & C.I. Rly. Co.

nificent "Boli Gumbaz" (Dome of Speech), contains a perfect whispering gallery, and its dome, 195 feet in height, is believed to be the second largest in size in the world.

Near to the Sherzi Burj, or Lion Bastion, are some very large pieces of ordnance, one of which, named the "Malid-i-Maidan," or Lord of the Field, was cast in bronze by a Turkish officer in the year 1549. The muzzle of this gun is so large that a man can sit comfortably inside it. The building of the Jama Masjid, the largest mosque in the Deccan, was commenced in 1537 by Adil Shah I, and, although additions to it were made by the Emperor Aurangzeb and others, it has never been completed.

The "Ark-Killah," or Sun Fort, is the citadel, and the ruins of Hindu temples at this place indicate that Bijapur was an important Hindu town in pre-Mohammedan times. Other interesting relics are the Ibrahim Rauza, the tomb and mosque of Ibrahim Adil Shah II, the Anand Mahal, the Sat Mazli, the Torvi aqueduct, and the Begam lake, about three miles distant from the city, were constructed by Mahomed Adil Shah in 1653, for the purpose of supplying water to Bijapur in the days of its greatness.

A large trade is carried on in grain, oilseeds, and cotton; cotton carpets and country shoes are manufactured; and cotton-ginning factories have been added to the other industries of the town.

Bijapur is a station on the Madras and Southern Mahratta Railway, and it is 350 miles distant from Bombay in a southwardly direction. Its inhabitants are about 28,000 in number.

JALGAON, 260 miles distant from Bombay, is the principal commercial town in the district of Khandesh, it being the centre from which a very large quantity of agricultural and other produce is distributed, and it also possesses several cotton-ginning and pressing factories, as well as a number of spinning and weaving mills. Not far from Jalgaon is the village of Ajanta, famous for its temples or caves hewn out of the solid rock.

These are decorated internally with fresco paintings, illustrative of the various stages of Buddhist art from about 200 B.C. to 600 A.D.

Copies of these paintings have been made by students of the School of Art of Bombay, and they are now deposited at the Indian Museum at South Kensington.

SHOLAPUR, a prosperous commercial town in the Sholapur Collectorate of Bombay, has a number of spinning and weaving mills, but it is justly famous for its manufacture of silk and cotton cloth, while very large quantities of grain, articles of brass, copper, and glass, and other merchandise are disposed of in its busy mart. Probably the chief attraction for visitors will be the strongly-built fort constructed in the fourteenth century by the founder of the Bahmani dynasty. It is enclosed by a double line of rough stone walls surrounded by a moat, and it is situated in a commanding position near the south-western side of the town. Other objects worthy of notice are the Municipal Gardens, and the Hiparge lake, which has a circumference of about seven miles. Sholapur is 283 miles distant from Bombay on the Great Indian Peninsula Railway.

BASSEIN, 28 miles distant in a northerly direction from the city of Bombay, was an island which attracted the attention of the Portuguese at the time of their settlement when they arrived on the western coast of India. It was ceded to the King of Portugal in 1534, when an era of great prosperity ensued; its merchants became wealthy; and a large amount of money was expended in the construction of cathedrals, convents, and public and private buildings; and it was held by that nation for a period of about 200 years. The town has decreased considerably in importance since those days, but it possesses such a large number of well-preserved ruins of the structures erected by its early settlers, that a large number of visitors make the journey from Bombay with the object of viewing them.

MANDVI is an old seaport on the shores of the Gulf of Kutch, on the western coast, and until about the year 1835 a brisk trade was carried on in slaves brought from Zanzibar. It is a port of call for steamers belonging to the British India Steam Navigation Company, and is still the place of export of a considerable quantity of general merchandise. The town is noted for its manufacture of silk and cotton goods, as well as of silver ware and embroidery.

SALSETTE.—This is a large island, connected with the city of Bombay by a fine bridge and causeway. It is also a *taluq* of the district of Thana, and has an area of about 240 square miles. The island is very beautiful, with its range of hills running from north to south with peaks attaining an altitude of more than 1,200 feet, its extensive fertile fields of rice, its jungles, its coco-nut groves and palms, and its picturesque ruins of Portuguese convents and churches. It is also rich in rock-temples, the most important being the 109 Buddhist caves of Kanheri, cut out of rocks which rise to a height of 1,550 feet.

KAIRA, a very ancient town, surrounded by a brick wall, is about 20 miles distant in a southerly direction from Ahmedabad and 6 miles from Mohmudabad, an old pleasure capital of Mohammedan rulers of Gujarat.

Recent discoveries have brought to light several copper plates, upon which are inscribed several grants of land made about the beginning of the fifth century, but there are many other interesting relics of almost equal antiquity.

DWARKA, or the "City of the Gates," is a small seaport at the western extremity of the Kathiawar peninsula, but it is known chiefly as a favoured spot for Hindu pilgrimages. In the sacred Puranas it is said that Krishna built and fortified the city, and that on the day of his death the ocean submerged every structure with the exception of the temple in which the god Kesava is kept. Apart from the shrine, there is a spacious five-storied hall, whose roof is supported by sixty pillars. This temple is annually visited by about 10,000 pilgrims.

GIRNAR is one of the most sacred Jain hills in India, being situated at an altitude of about 3,500 feet in Kathiawar, about ten miles to the east of the town of Junagadh. Several temples have been erected about 600 feet from the summit, and the oldest of them bears inscriptions of the year 1278. This building, known as Neminath, has a court-yard 195 feet in length and 130 feet in width, and around it are smaller structures, which contain figures of the Tirthankar Neminath. There are many other objects of archæological interest in and around Girnar, which is about 560 miles distant from Bombay.

NASIK is frequently referred to as the "Benares of Western India," Hindus regarding it with reverence owing to the sanctity of the Godavari river, on the right bank of which the major portion is built. The fine Victoria bridge (costing Rs. 2,50,000) spans the river near Nasik, and a number of fine dwellinghouses and other buildings have been erected on the left bank of the river, the principal residences being the property of Brahmans. There are numerous shrines dotted about almost everywhere but visitors are

advised to pay a visit to the seventeen caves of Buddhist origin, which may be seen near the Bombay road within an hour's walk from Nasik. They are evidently of the same origin as those at Kanheri, which date from the first century B.C. to the fifth or sixth century A.D.

In the caves will be found numerous inscriptions of value, as they give many historical facts relating to districts, cities, mountains, and other geographical and physical features of Western India. Nasik is about four miles distant from Nasik Road station, on the Great Indian Peninsula Railway system, and 107 miles from Bombay.

KARWAR, in the district of North Kanara, is the only harbour on the west coast of India between Bombay and Cochin in which vessels can anchor with safety at all periods of the year. In 1660 the East India Company had a factory there, and some of the finest muslins were exported to Europe. The bay is remarkable for its fine scenery, with numerous islets, one of which is crowned by a lighthouse, while a beautiful grove of Casuarina-trees stretches along a beach of the whitest sand.

Karwar is 295 miles distant in a south-easterly direction from Bombay.

DHOLKA.—The antiquity of this town, in the district of Ahmedabad, is so great that some writers have asserted that the Pandavas visited the place during the fourteenth century B.C., but it seems perfectly clear that in the thirteenth century A.D. it was under the sway of the founder of the Voghila dynasty.

The presence of a large number of ruins of Mohammedan palaces, mosques, and tombs proves that the town was for a considerable time under the rule of Delhi; it was in the possession of the Mahrattas in 1735, the Gaekwar of Baroda held it twenty years later, and in 1804 it passed into the hands of the British.

DAKOR, one of the most celebrated places of Krishnavite pilgrims in the Presidency, is about 289 miles distant from Bombay, and is a railway station on the Bombay-Baroda and Central India Railway. The temple in which the image of Krishna is placed is said to have cost Rs. 1,00,000, and the wooden throne of the idol is exquisitely carved. All classes of Hindus, from the highest to the lowest, assemble for worship, but those belonging to inferior castes are compelled to offer their devotions at a considerable distance from the shrine, while others are allowed within the precincts. The chief festivals attract from fifty to a hundred thousand people, many of whom are from distant parts of the Deccan.

Not far from Dakor is the walled town of Kapadwanj, where leather, soap, *ghee*, and other goods are manufactured, but visitors will be more interested in a Jain temple, beautifully inlaid and decorated with marble, and also with the ruins of several mosques and tombs.

Dakor is in the Kaira district of the Northern division of the Presidency.

PARDHURPUR.—On the south bank of the Bhima river, in the district of Sholapur, in the Bombay Presidency, is a sacred place of pilgrimage for Brahmans, as it possesses a temple dedicated to Vithoba, an incarnation of Vishnu. The finest view of the town is obtained from the river, which winds in and out among well-wooded shady banks, upon which there are numerous temples and tombs, all of which are a source of attraction to worshippers.

THE GODAVERY RIVER AT NASIK.

Photo by G.I.P. Rly. Co.

DHARWAR, the headquarters of the district of Dharwar, in the Bombay Presidency, is constructed on the last spurs of the Sahyadri range, and is noted chiefly for its fine old fort, which is almost entirely concealed from view by surrounding hills. About one mile and a half on the southern side of the town is the hill of Mailarling, upon the summit of which is a stone temple in which there is an inscription in the Persian language, to the effect that in 1680 the building was converted into a mosque by a deputy of the Sultan of Bijapur, of whose kingdom Dharwar was a portion. The town enjoys a thriving trade in hardware, clothing, piece-goods, indigo, and metals.

ADEN

The acquisition of this important place was one of those opportune political strokes, unexpected as it was, which have helped so markedly to give security to British possessions scattered all over the world. This was the first new territory added to the Empire, in 1839, shortly after the accession of Her Majesty the late Queen Victoria, and its occupation was the result of an attack by the local Fadhli chief upon the passengers and crew of a British buggalow, which was wrecked in the neighbourhood.

A brief reference, however, to the early history of Aden seems to be necessary. It was an important commercial city long before the commencement of the Christian era, when it formed part of Yemen, in Southern Arabia. It fell into the hands of the Abyssinians early in the sixth century; a hundred years later it was ruled by Persia; and then for a very long period it was continually being taken and re-taken by rival powers in Arabia. The Portuguese attacked the town early in the sixteenth century and ransacked it, and it was subsequently acquired by the Sultan of Turkey as a base of operations, but the inhabitants raised a rebellion and invited the Portuguese to occupy it.

In 1609 and 1610, the East India Company sent missions for the purpose of developing trade, but each advance made by the visitors was met with a curt refusal and the plundering of the anchored vessels. For fully two hundred years Aden was then bandied about between Portuguese, Dutch, and French, and, after repeated insults to British prospective traders, the Bombay Government arranged for transfer of the settlement to the British Government. Before the document was signed, however, various acts of treachery were committed, and in 1839 Her Majesty's vessels, *Volage* and *Cruiser*, conquered and annexed the place, which was then little better than a piratical outpost.

Since that date Aden—with its additions—has been subject politically to the Government of Bombay, but it is administered by a Resident, who is also military commandant.

Aden proper is an extinct volcano, and additions have been made to it by purchase of the island of Perim, in the Straits of Bab el Mandab, Sokotra Island, and the five small Kuria Muria islands, the whole comprising an area of about eighty square miles.

As a fortified town with good harbour accommodation, Aden is of the utmost importance, as a strategical base, to the British Empire in the East, and its practically impregnable fortress commands the entrance to the Red Sea.

In 1850 the Government of India declared Aden to be a free port, and since then it has attracted extensive trading, with commercial centres in Arabia and Africa.

The harbour extends for a distance of eight miles from east to west, and at "Steamer Point" the principal hotels, consulate offices, and places of business are situated.

There are several hospitals and dispensaries in both Aden and Perim, in addition to others constructed entirely for military purposes. Aden is a very healthy station, being exceptionally free from infectious diseases and epidemics, but the summer months are very oppressive, and are calculated to undermine even strong constitutions.

The inhabitants of the settlement are about 46,000 in number.

THE AHMEDABAD COTTON MANUFACTURING COMPANY, LTD.

This company was formed in the year 1894 by Mr. Amratlal Damodardas, with a paid-up capital of Rs. 5,00,000 divided into five hundred shares each of Rs. 1,000. When the mill was started in 1896 it had an equipment of 12,000 spindles, to which 138 looms were added within twelve months, while to-day (1917) it contains 25,200 spindles and 608 looms.

The buildings were originally erected with the view of installing 16,000 spindles and about 300 looms, but increasing trade compelled the directors to enlarge the premises and provide additional machinery, which now consists of two vertical triple-expansion steam engines of 550 and 400 i.h.p. respectively.

The annual consumption of raw cotton is about 20,700 cwt., and practically the whole of the yarn which is spun is manufactured in the mill into cloth, which is specially made with the object of meeting Indian bazaar trade. The major portion of the output is sold locally, although a considerable quantity is disposed of at Delhi, Agra, Cawnpore, Calcutta, and in Southern India, while some is exported to Dar-es-Salam.

Cloth from the mill has gained distinction at several exhibitions, including a silver medal at the Baroda Exhibition in 1906, and a bronze medal at the Industrial and Agricultural Exhibition of the Punjab, the North-West Frontier Provinces, and Kashmir, held at Lahore in 1909–10.

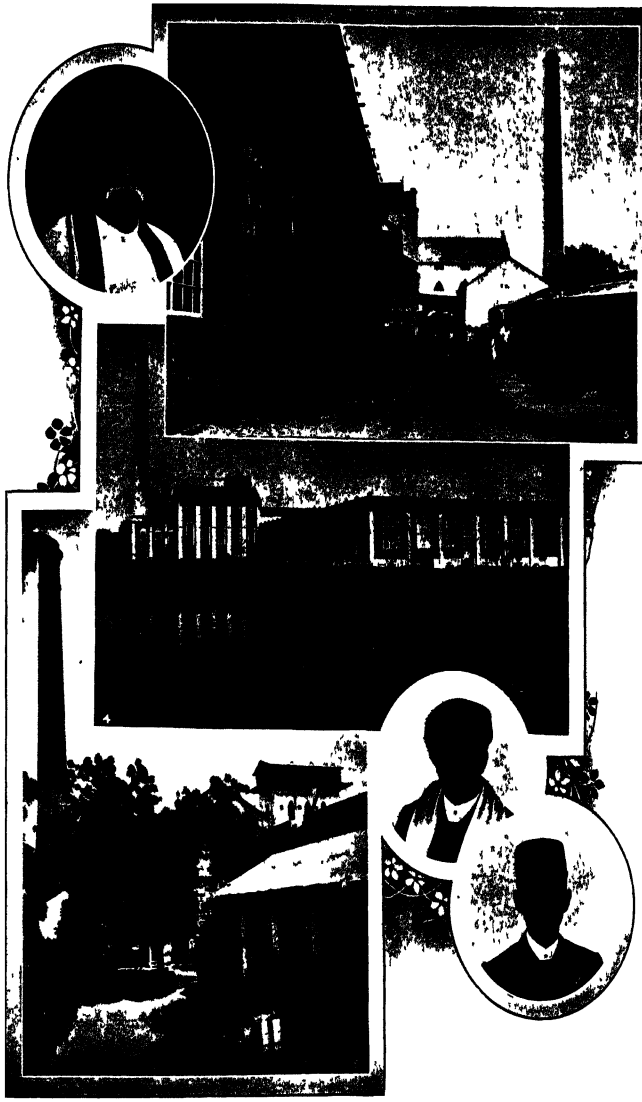
The mill premises, which are outside of the Sarangpur Gate, in Ahmedabad, cover an area of 18½ *bighas*; they are connected by a private siding with the broad-gauge system of the Bombay-Baroda and Central India Railway; and are lighted throughout by electricity generated by the company's own dynamos.

The financial position of the company is in a most satisfactory state, seeing that the annual dividends paid since working was commenced have averaged Rs. 144-10-8 per share, while reserve funds established by the directors showed the following amounts at credit at the close of the year 1916, namely: depreciation of machinery and buildings account, Rs. 5,99,251; equalization of dividend fund, Rs. 79,000; and reserve fund, Rs. 4,86,859. The actual dividend for the year 1916 was declared at the rate of Rs. 211 per share.

The directors of the company are Seth Amratlal Damodardas, Seth Motilal Heerabhai, Seth Gopaldas Manilal, Seth Balabhai Damodardas, and Desai Girdharlal Amratlal, while the managing agents are Messrs. Amratlal Damodardas & Co.

THE AHMEDABAD NEW COTTON MILLS COMPANY, LTD.

The working of these mills, which are situated in Kankaria Road, outside Raipur Gate, in Ahmedabad, was not commenced until the year 1906, but such progress has been made that the directors have been able to pay dividends which have averaged Rs. 72 per share per annum, while the amount for 1916 was



AMBATLAL DAMODARDAS.

1. Sheth Ambatlal Damodardas 2 Girdharlal and Ranchhodlal (Sons of Sheth Ambatlal). 3. The Ahmedabad New Cotton Mills Company, Ltd.
4 The Ahmedabad Laxmi Cotton Mills Company, Ltd. 5 The Ahmedabad Cotton Manufacturing Company, Ltd

THE AHMEDABAD SWADESHI SPINNING AND MANUFACTURING COMPANY, LTD.

1. Front View, Asarwa Mills Company, Ltd. 2. Another View of the Asarwa Mills Company, L
3. Ahmedabad Swadeshi Spinning and Manufacturing Company, Ltd., Spinning Department (Front View).
4. Front View, Weaving Department, Ahmedabad Swadeshi Spinning and Manufacturing Company, Ltd.

at the rate of Rs. 146, thus showing a substantial improvement in the company's financial state.

The company was formed in the year 1905 by Mr. Amratlal Damodardas, and the fully paid capital consists of Rs. 5,00,000, made up of five hundred shares, each of Rs. 1,000. The mills were primarily equipped with 12,000 spindles, but additions have been made from time to time as the necessity arose, and the plant now comprises 575 looms and 28,000 spindles.

Nearly all of the yarn obtained from an annual supply of 24,240 cwt. of raw cotton is manufactured into cloth, which is either sold locally or is sent to bazaar traders in various towns throughout the Bombay, Bengal, and Madras Presidencies, the United Provinces, and the Punjab. Consignments for these outlying districts are sent from Ahmedabad railway station, which is about half a mile distant from the mills.

The machinery is driven by steam power derived from one 850 h.p. engine (by Hicks, Hargreaves & Co.), two boilers by the same makers, and two others made by Messrs. Daniel Adamson & Co., and Messrs. Yates and Thom respectively.

Every possible precaution against damage by fire has been taken, including a liberal provision of sprinklers, and the company have their own dynamos for the electric lighting of the buildings.

The amount standing to the credit of the depreciation of buildings and machinery account is Rs. 3,32,252; to the reserve fund, Rs. 1,40,600; to the dividend reserve fund, Rs. 15,000; and to the mills improvement fund, Rs. 40,000.

THE AHMEDABAD LAXMI COTTON MILLS COMPANY, LTD.

The mills belonging to this company in Kankaria Road, outside the Raipur Gate, in Ahmedabad, have been constructed according to the most advanced architectural and hygienic principles, and are not only the newest, but also the most up-to-date, buildings of their kind in Ahmedabad. The prospects of the company are undoubtedly good, as although the mills did not commence working until the middle of August 1916, a dividend of Rs. 41 per share was paid for the four and a half months to the end of the year.

The company was formed by Mr. Amratlal Damodardas in the year 1913 with a capital of Rs. 9,00,000, made up of nine hundred shares of Rs. 1,000, and the amount paid up is Rs. 5,00,000.

The plant consists of 14,520 spindles, driven by an 1,150 h.p. Yates and Thom steam engine, but it is the intention of the agents to provide accommodation and equipment for weaving as soon as the mills as at present constituted become a really profitable concern. As the land connected with the company's premises is about eight acres in extent there is ample room for carrying out the proposed extension.

The yarn now being spun in the mills is sold in Ahmedabad and in various up-country stations.

The managing agents are Messrs. Ranchhodlal Amratlal & Co., and they employ about four hundred hands.

THE AHMEDABAD SWADESHI SPINNING AND MANUFACTURING COMPANY, LTD.

Erected upon a plot of land, 12 acres in extent, situated in Naroda Road, and immediately opposite the Asarva railway station, in the city of Ahmedabad, are the spinning and weaving mills belonging to the Ahmedabad Swadeshi Spinning and Manufacturing Company, Ltd., which was formed by Manilal Magganlal in the year 1906. The mills were erected and commenced working in the same year, having been equipped with 10,000 spindles and 250 looms, which were driven by a 458 nominal h.p. engine with three boilers. The cost of construction and equipment absorbed the whole of the capital of Rs. 6,00,000, which was fully subscribed. Additions to the plant were made in the years 1908, 1909, 1911, and 1913, and it now comprises 21,504 spindles and 628 looms, but it is intended to increase these numbers at an early date.

India, with its millions of cotton-clad inhabitants, is a practically inexhaustible market for the products of spinning and weaving mills, and annual Government statistics referring to the thousands upon thousands of bales of raw cotton consumed, of yarn spun, and cloth woven, give abundant evidence of the extent and value of the cotton industry.

The company now under notice require a yearly supply of at least 60,000 *maunds* of cotton, which is spun into yarn, of counts of 10's to 20's, 24's, and 30's, and is subsequently manufactured into sheetings, *dhoties*, tea and long cloths, and shirtings, all of which are purchased by merchants who have markets for them in the chief business centres of India.

A reference to the company's balance sheets shows that its financial position is remarkably sound, and that capitalists have abundant reasons for being satisfied with their investments. The average annual dividend paid since the opening of the mills has been at the rate of Rs. 63-6-0 on each share of Rs. 1,000, the highest amount being declared in 1911, when the shareholders received Rs. 105. In the statement of accounts for the year 1916 it is seen that the credit balance of the reserve fund was Rs. 67,888; depreciation of buildings and machinery account, Rs. 3,61,966; and the machinery reserve fund, Rs. 41,000; the first and last of these sums having been taken from net profits.

The manager of the mills is Mr. Abdool Saifan; Mr. Richard Vaz is engineer; and the managing agents are Messrs. Manilal Magganlal and Brothers.

Employment for nearly a thousand hands is found in the various departments.

THE ASARVA MILLS COMPANY, LTD.

The inaugurator of this company, Mr. Naginlal Magganlal, had no easy task before him when he set out to find capitalists to support his scheme, and it could only have been the personality of the man, and public confidence in his business qualifications, that enabled him to secure the end he had in view. He had to refer to the Hitwardak Cotton Mills Company, Ltd., which, under the managing agency of Mr. Dinshaw Sorabjee Karaka, had gone into liquidation in the year 1901; he had to admit a succession of losses; and he had but the relics of a mill to offer as the basis of his new project. The property, which is situated in Asarva Road, Ahmedabad, was in a deplorable condition in 1913 when Mr. Naginlal Magganlal purchased it, but he formed the Asarva Cotton Mills Company, and work was at once commenced in rebuilding the mills, and in overhauling or renewing practically every piece of machinery.

The plant originally consisted of 7,200 spindles, but in 1914-15 it was increased to 19,000 spindles and 400 looms, which is the present equipment, and the machinery is driven by a 55 h.p. (nominal) steam engine with Lancashire and Babcock-Wilcox boilers.

The chief products of the mill, comprising long cloth, shirtings, *dhoties*, and *chaddars*, are manufactured from yarn spun from an annual supply of 30,250 cwt.

of raw cotton, and all of these goods are sold to local merchants for distribution in other parts of India.

Messrs. Nanalal Magganlal and Brothers took up the managing agency of the company upon reconstruction, and progress made from that time enabled the directors to pay dividends at the rate of Rs. 32 and Rs. 55 respectively upon each Rs. 1,000 share in the years 1915 and 1916. The capital consists of Rs. 5,00,000, all of which has been fully paid.

The company have their own dynamo for the electric lighting of the buildings, which cover 7,403 square yards, out of a total area of 13,720 square yards.

About seven hundred hands are employed by Mr. Mahomedsab Shaiksab, the manager.

THE WHITTLE SPINNING AND MANUFACTURING COMPANY, LTD.

In the year 1872 Messrs. Greaves, Cotton & Co., merchants, of Bombay, erected a small spinning mill at Broach, in the Northern division of the Bombay Presidency, and work was commenced under the style of the Alfred Mills Company, Ltd. About five years later the buildings were extended and looms were installed, but the company went into liquidation shortly afterwards, reappearing, however, as the Alfred Manufacturing Co., Ltd., and remaining under the managing agency of the original promoters. That firm in 1882 formed another company under the name of the Albert-Edward Mills Company, Ltd., and erected a spinning mill on land adjoining the Alfred Company's property. The affairs of these two mills were placed in liquidation in 1893, and the whole of the premises were sold to a company formed by the late Mr. A. F. Whittle, in conjunction with Jeebhai Kevaldas and the late Magganlal Jeychand, under the style of Jeebhai Magganlal & Co., the capital consisting of Rs. 8,00,000, divided into 1,600 shares of Rs. 500, all fully subscribed.

The name of the new company was the Whittle Spinning and Manufacturing Company, Ltd., and the mills were known as No. 1 and No. 2. The original Alfred Mills at that time were equipped with 150 looms and about 20,000 spindles, together with necessary preparatory machinery, while the plant in the Albert-Edward Mill comprised 22,000 spindles, with necessary preparatory machinery.

The new company continued to work the two mills in the same manner as heretofore, but all the old machinery was in course of time replaced by more modern types.

A third mill was built in 1895, and it was fitted with 400 looms (including 150 removed from the Alfred Mills) and a quantity of preparatory machinery, the idea of the company being to use this mill entirely for weaving the yarn spun in the two other mills. At a subsequent date the preparatory machinery in No. 3 mill was transferred to No. 2 in order that the former might be able to accommodate a greater number of looms, which have now reached a total of 712.

The present equipment of the Alfred Mill (now Whittle No. 2) is 21,744 spindles, of which 6,208 are "ring," and of the Albert-Edward Mill (now Whittle No. 1) is 24,012 spindles, of which 19,008 are "ring."

All three mills are worked as one concern under the management of Mr. R. B. Thornely.

The annual consumption of cotton is about 12,000 bales (each of 400 lb.), and the major portion of the yarn is woven into cloth in Mill No. 3, the remainder being sold locally. During normal times a large quantity of cloth is specially made for export to Zanzibar in order to meet the East African trade, while the remaining portion is distributed throughout the whole of India, chiefly for sale in bazaars.

A most satisfactory state of financial affairs has been maintained since the present company was formed, and original shares of Rs. 500 are now in demand "on 'Change" at fully Rs. 1,500. Dividends have been declared at an average annual rate of 12 per cent., but in an exceptionally good year no less a sum than Rs. 110 has been handed to shareholders. If further proof were needed of the stability of the company it is found in the fact that the directors have placed the sum of Rs. 95,050 to a reserve fund; Rs. 36,904 to a dividend reserve fund; Rs. 7,65,271 to a machinery renewal fund; and Rs. 3,42,560 to a machinery extension fund; while the assets of the company shown in the balance sheet for the year ending on December 31, 1916, included the sum of Rs. 3,55,184 and Rs. 8,52,798 respectively standing to the credit of the building and machinery accounts.

About sixteen hundred hands are employed in the three mills, for which the managing agents are Messrs. Jeebhai Magganlal & Co. The registered offices of the company are outside the Golwadi Gate in Viramgam, near Ahmedabad.

Before this sketch is closed, reference should be made to the splendid work accomplished in connection with the manufacture, in Whittle Mill No. 2, of munitions of war. Mr. D. M. Thakur, the engineer in charge, personally designed chucks and mandrels of tested strength, and although lathes which had been in use for about twenty years were employed in the making of shells, this gentleman achieved such success that his weekly output of forty shells in April 1916 had, by September in the same year, grown to three hundred in number.

The Collector of the district paid a visit to the workshops during these operations, and was so pleased with Mr. Thakur's efforts that, in open Durbar held on October 17, 1916, he presented to that gentleman a certificate of merit.

THE VIRAMGAM SPINNING AND MANUFACTURING COMPANY, LTD.

This company was formed in September 1883 by Mr. A. T. Whittle and Mr. Magganlal Jeychand, the mill being situated near the railway station at Viramgam in the Collectorate of Ahmedabad in the Bombay Presidency.

The capital of the company was originally Rs. 4,00,000, divided into 800 shares of Rs. 500, but in the year 1888 it was enlarged to Rs. 6,00,000, the increase being paid out of the profits made by the company.

When the mill was started it had an equipment of 10,000 mule spindles and 140 looms, but an addition of 107 was made to the latter item in 1888. In the year 1903 the majority of the mule spindles were replaced by ring frames, and revolving flat cards superseded the older type of roller clearers. The greatly increased turnover of the mill soon made it necessary for the directors to provide further accommodation, and in 1906 a new building was erected in close proximity to the old premises, and it was fitted with 8,112 ring spindles and 320 looms. Everything now augured well for the prospects of the company, but in the following year a disastrous fire broke out which destroyed the whole block of the carding and spinning departments in the original mill. A new building, designed according to modern architectural ideas and rendered practically fireproof, was forthwith erected, and an entirely up-to-date plant was installed.

The total equipment at the present time

THE WHITTLE SPINNING AND MANUFACTURING COMPANY, LTD

Interior Ring Spinning Room No 1 Mill 2. Reeling Room, No. 2 Mill. 3 Interior, Weaving Shed, No. 3 Mill.

THE VIRAMGAM SPINNING AND MANUFACTURING COMPANY.

1. Engine House and Boilers. 2. General View of the Mills. 3. The Weaving Department. 4. View showing the Spinning Department.

THE VIRAMGAM ALFRED MILLS COMPANY, LTD

1 View Showing the Spinning Department 2 Weaving Department 3 Maggamlal Jevchand High School
4 Pursonbai Waterworks (Fountain)

consists of 25,446 spindles (including 2,934 of the ring type) and 567 looms. Power is derived from two steam engines, namely, one of 500 h.p. in the rebuilt block, and one of 300 h.p. in the new extension. The average annual quantity of raw cotton consumed in the mill is 7,000 bales, each of 400 lb., and the bulk of the yarn is manufactured into long cloth, *dhoties*, shirtings, and printers, although a small quantity is sold locally. The whole of the produce is sold in Cawnpore or in the district of Gujerat and in the Punjab.

This excellent business undertaking has been carried on with unvarying success, and the average annual dividend for the past ten years has been paid at the rate of Rs. 61½ per share, equivalent to about 12 per cent. on capital.

The total area of the company's land is 25 acres in extent, six acres of which are occupied by the spinning and weaving departments, bungalows, labourers' *chawls*, and other buildings, and the average daily number of hands employed is about eleven hundred.

Messrs. Whittle & Co. were appointed managing agents on the formation of the company, but on the death of Mr. Magganlal Jeychand in 1912, and of Mr. A. T. Whittle in the following year, the agency was transferred to Messrs. Herbert Cheetham, Naginlal Magganlal, Manilal Magganlal, and Nanalal Magganlal. The manager of the mills is Mr. D. W. Thornely.

The thirty-fourth ordinary general meeting of the shareholders of the company was held on April 22, 1917, and the following particulars have been extracted from the report of the directors and the statement of accounts presented on that occasion. The gross profit for the year ended on December 31, 1916, was Rs. 1,51,296, and after the deduction of certain sums for depreciation, agents' commission, and charity fund, a balance of Rs. 81,167 was left. After allowing for Rs. 26,312 withdrawn for an *ad interim* dividend, the directors recommended that payments of Rs. 40 and Rs. 20 respectively on old and new shares should be paid (making a total of Rs. 93 per share for the year), that Rs. 2,968 be written off against "bad and doubtful debts account"; that Rs. 4,046 be placed to the credit of "equalization of dividend reserve fund account"; and that the sum of Rs. 7,015 be carried forward.

The funds created out of net profits are as follows: machinery depreciation account, Rs. 127,263; building depreciation account, Rs. 10,130; reserve fund account, Rs. 133,959; dividend equalization account, Rs. 22,488; machinery renewal fund account, Rs. 62,804; and new extension fund account, Rs. 447,078; these making a total of Rs. 803,275.

The directors of the company are Mr. Herbert Cheetham (chairman), and Messrs. Naginlal Magganlal, Chimanbhai Lalbhai, Kalidas Harjivandas, Lalbhai Hirachand, and Kamlashanker Gopalshanker.

THE VIRAMGAM ALFRED MILLS COMPANY, LTD.

The mill buildings, godowns, and *chawls* for employees, together with open fields, cover an area of 20 acres of land, and are situated outside the Bharwadi Gate, on the road to Fulwadi (flower garden), at Viramgam.

The whole concern was purchased in October 1912 by Mr. Naginlal Magganlal from the liquidators of the Viramgam New Spinning and Manufacturing Company, Ltd., for the sum of Rs. 5,50,000, and the managing agency was entrusted to Messrs. Naginlal Magganlal and Brothers.

The mill at that time contained 300 looms and 15,000 spindles, but a couple of years later 3,000 obsolete spindles were replaced by 8,000 new ones, and 160 up-to-date looms were added, thus bringing the total equipment to 20,000 spindles and 440 looms. Leather pickers for the latter are made on the premises.

Raw cotton is received at the mill in bales of 400 lb., and this is manufactured into yarn and cloth. Yarn for the market is manufactured into various counts, principally 20's to 22's, into 6½'s to 13½'s for selling in the market, and 20's to 30's for cloth, such as long-cloth, shirtings, *chaddars*, and printers, all of which are consigned to Cawnpore, Delhi, and the district of Gujerat.

Sizing ingredients are so scarce and expensive owing to the war that the company have now arranged for the manufacture of tallow, zinco (a zinc substitute), and magnesium chloride.

An engine of 525 indicated h.p. is used for driving the machinery in the mill, while power for an electric lighting plant now being installed will be generated by the company's own dynamos.

About a thousand hands are employed under the supervision of the mill manager, Mr. Ganjanan Gaurishankar.

The capital of the company consists of Rs. 5,50,000, made up of 1,100 shares of Rs. 500, and the whole amount has been called up.

The gross profit for the year 1916 was Rs. 1,31,395, but the directors unfortunately had to deduct Rs. 45,832, the amount of loss upon working during 1915, which left a balance of Rs. 85,562 to be dealt with. The sum of Rs. 39,005 was then written off for depreciation on machinery and buildings, and Rs. 21,533 was paid for agents' commission, the reduced balance of Rs. 25,023, plus Rs. 9,090, the profit of the year 1914, making up a sum of Rs. 34,114 for disposal at the fifth ordinary general meeting of shareholders held on April 15, 1917. It was proposed to declare a dividend of Rs. 30 per share, absorbing Rs. 33,000, and to carry forward the surplus of Rs. 1,194. The dividends paid since the opening of the mill have averaged Rs. 25, or 5 per cent., upon each share.

The machinery depreciation account now stands at Rs. 87,247, the building depreciation account at Rs. 15,087, and the reserve fund account at Rs. 9,312.

THE AHMEDABAD FINE SPINNING AND WEAVING COMPANY, LTD.

It is understood that the inaugurator in Gujarat of the process of manufacturing fine cloth from yarn imported from England was Mr. Sorabjee D. Karaka, a man of wide experience in spinning and weaving, and one who was possessed of that pertinacity of will which refuses to submit to formidable difficulties.

In the year 1898 Mr. Karaka founded the Ahmedabad Fine Spinning and Weaving Company, Ltd., opening a mill on Gomtipur Road, in Ahmedabad, in the manufacture of fine cloth, and for a few years he grappled successfully with those untoward incidents which are common to all new ventures. The severe loss experienced by the company upon his untimely death was manifested by the stoppage of the working, until in 1914 the management of the mill was transferred to Messrs. Hirabhai Ishwerbhai & Co., of Ahmedabad, as secretaries, treasurers, and agents. Since that date the controlling power has been Mr. Goverdhan Ishwerbhai Patel, B.A., an intelligent young man with good business experience obtained in England, America, China, and Japan, as well as in India. The working of the mill has during the past two or three years

been attended with good success, but unforeseen difficulties have arisen owing to war conditions causing the stoppage of exportation of yarn from England, and also the failure of many local spinning and weaving mills to fulfil their contracts to supply that material simply because rates have increased to a considerable extent after making the said contracts Mr Patel carries on his duties according to Western ideas of the honourable nature of contracts, and he points to mill-owners in Manchester, and in Bombay, too, as examples which might, with profit, be copied by Ahmedabad manufacturers for their sound future amelioration

THE AHMEDABAD SARANGPUR MILLS COMPANY, LTD.

Not quite twenty years have elapsed since the mills belonging to this company were opened, but the history of the concern as revealed in the annual balance sheets is a record of steady yet rapid growth As a result of the first year s working, that is, 1898, a dividend was declared at the rate of Rs 60 upon each share of Rs 1,000, a similar sum was paid during the succeeding three or four years, after which gradual increases raised the amount to Rs 100, for the nine years up to December 1915 payments averaged Rs 200, and in December 1916 the shareholders received Rs 200, plus a bonus of Rs 50 per share The nominal capital is Rs 6,00,000, but only 325 of the total of 600 shares were issued and fully paid thus making a working capital of Rs 3,25,000 Further than this, the directors have established a reserve fund of Rs 3,33,000, a depreciation of buildings and machinery fund of Rs 4 52,238, and a dividend reserve fund of Rs 1,00,000

The property, which is outside the Raipur Gate in Ahmedabad, is about 16½ acres in extent, and the mills and other buildings practically adjoin Kankaria station on the Bombay-Baroda and Central India Railway Company's system

The mills were originally equipped with 14,000 spindles, but 10,800 others were added between the years 1898 and 1902, the cost of the increased number being paid for out of profits earned About 60,000 *maunds* of cotton are annually spun into various counts of yarns, from 19's to 40's, almost the whole of which is sold locally for consignment to up-country markets All machinery is driven by steam. Electricity is used for lighting purposes, the power being obtained from the company's own dynamo

The managing agents of the mills are Messrs Himatlal Motilal & Co , and the manager is Mr S Tonge, who employs about 750 hands

THE AHMEDABAD KAISAR-I-HIND MILLS COMPANY, LTD.

The mills and other premises belonging to the Ahmedabad Kaisar-i-Hind Mills Company, Ltd , were originally the property of the Ahmedabad Merchants Spinning and Weaving Mills Company, Ltd , which was formed by Mr Bapalal Motilal, who sold the whole concern to Vaikuntrai Ambalal Desai in the year 1901 The latter began to work the mill under the name of the company, but after several years had elapsed, he went into liquidation, and the trustee under the proceedings sold the land and buildings in August 1914 to Sheth Narsinhlal Lalloobhai, who formed a new company which was registered under the name of Ramanlal Kanaiyalal & Co — a designation afterwards changed to the Ahmedabad Kaisar-i-Hind Mills Company, Ltd The nominal capital is Rs 6,00,000, made up of 600 shares, each of Rs 1,000, but only 500 of these were issued, thereby giving a working capital of Rs 5,00,000

Three years ago the mill was in an exceedingly neglected condition, and portions of several buildings had to be entirely reconstructed, additions were necessary, and a considerable quantity of old machinery was removed in favour of new plant The equipment originally consisted of 17,600 spindles and 302 looms, but several of the former had to be discarded on account of their old age, and the present plant consists of 17,036 spindles and 360 looms, all of which are driven by two steam engines, each of 300 h p , and two boilers About 13,400 cwt of raw cotton are annually spun into yarn of various counts, which is manufactured into *dhoties*, *saris*, calenders, and bleached Bangalore *pattys* The last-named goods have gained a reputation in the markets of Southern India, and the *dhoties* and *saris* are favoured in the Calcutta cloth trade, therefore the managing agents are now making special endeavours to push the sale of these articles in other important centres throughout India

The directors did not deem it advisable to declare a dividend from 1914–15 on account of the Great War and the heavy expenditure incurred in repairs to buildings and in the purchase of new machinery, but for the year 1916 they repaid Rs 60 upon each share At the same time they placed Rs 15,000 to a dividend reserve fund, and Rs 32,900 to a depreciation of buildings and machinery fund

The managing agents are Messrs Ramanlal Kanaiyalal & Co , and the

AHMEDABAD FINE SPINNING AND WEAVING COMPANY, LTD

1 The Ahmedabad Fine Spinning and Weaving Company Ltd 2 Hirabhai Ishwarbhai

THE AHMEDABAD SARANGPUR MILLS COMPANY, LTD., AND THE AHMEDABAD KAISER-I-HIND MILLS COMPANY, LTD.

1. Exterior, Ahmedabad Sarangpur Mills Company, Ltd.
2. Office Building and Staff, Ahmedabad Sarangpur Mills Company, Ltd.
3. The Ahmedabad Kaiser-I-Hind Mills Company, Ltd.
4. Office Building and Staff, Ahmedabad Kaiser-I-Hind Mills Company, Ltd.

manager of the mill is Mr. Thomas Marsden.

THE ALEMBIC CHEMICAL WORKS COMPANY, LTD.

The development of purely Indian industrial undertakings on a large scale with machinery has been a remarkably slow process owing to the fact that India has ever been a country of home industries. The skill of the individual manufacturer was supposed to be, and really is, superior to mechanical means in bringing out manufactured products, especially with regard to their finish and durability. Naturally, therefore, any new undertaking according to Western ideas was regarded with suspicion, until it proved to be a success by sheer reduction in labour charges.

Prominent scientists and others courageously placed proposals before the community, but there were many years of struggle with opposition and prejudice before a real start could be made, and even to-day the number of such concerns is lamentably small.

One of the enterprises now doing excellent work in India is the Alembic Chemical Works Company, Ltd., formed in 1907 with the object of manufacturing alcoholic preparations, foreign liquors, such as brandy, whisky, and rum, pharmaceutical chemicals as laid down in the British Pharmacopœa, perfumery and toilet requisites, and, further, of distilling rectified spirit and essential oils from Indian raw materials.

Before giving particulars regarding the progress made by the company it will be necessary to refer to events which led to its formation.

Professor T. K. Gajjar was Professor of Science in the Baroda College (Baroda is a State in the Bombay Presidency in political relationship with the Government of India) and with the approval of His Highness the Maharaja Gaekwar, established an Institute, somewhat on the lines of the one at Zurich in Switzerland, and also at Charlottenberg in Berlin, under the name of the "Kala Bhavan." He took special interest in the new methods of dyeing and calico printing as carried on by the leading German colour manufacturers, and when it was found, after a thorough investigation of the old vegetable dye-stuffs of India, that they had had their day and must be replaced by the new synthetic products of the chemical laboratory, those manufacturers were invited to introduce their specialities into this country. It was absolutely impossible for the old vegetable dyeing preparations to compete against synthetized alizarine indigo and other colours both in brilliancy and cheapness. A portion of the Kala Bhavan premises was then set apart for setting up a model dye house and calico printing works, and the Professor formed classes in which students could be instructed in the different arts. He removed to Bombay, however, in 1894, where his conspicuous abilities soon brought him into prominence, and in the year 1900 he founded the Techno-Chemical Laboratory in which students were trained for post-graduate courses in chemistry. The Professor's further research work made him more than ever convinced that the development of industrial concerns in India must be governed in a greater degree by the application of the principles of chemistry, and he accordingly collaborated with Father Dr. Kemp (Professor of Chemistry in St. Xavier's College), in modifying the rules of the Bombay University with the view of securing practical demonstrations to substantiate his opinions. These new regulations were accepted by the University authorities, and one of the first students to take up chemistry on the suggested lines was Mr. Kotibhaskar, who has been a tower of strength in the up-building of the Alembic Works. This gentleman zealously applied himself to his studies, taking his M.A. degree with first-class honours, and winning the Chancellor's gold medal in 1902.

Mr. Kotibhaskar was confident that alcohol was an essential in the preparation of chemical or pharmaceutical products, and in 1905 he obtained a concession from His Highness the Maharaja Gaekwar of Baroda, under which he erected a small factory at that place for the manufacture of the basic spirit. The alcohol produced there was used at Parel, in Bombay, in the preparation of tinctures and other drugs, and stills were erected at the same place for developing the perfumery industry.

The Alembic preparations (the word alembic indicates that the factory is equipped principally for the manufacture of alcoholic products) were submitted to a very severe test at Calcutta by such eminent chemical experts as Dr. D. Hooper, Curator of the Indian Museum in that city, and Dr. Rai Chunilal Bose Bahadur, M.B., F.C.S., chemical examiner to the Government of Bengal, with the result that they were placed at the head of all other similar preparations manufactured in India, and some of them, including spirit, *argenti nitras*, gold chloride, and others were regarded as possessing the highest chemical purity and excellence, and were awarded special gold medals.

Such indisputable proof as this of the value of the products of the laboratory led to the formation of a joint-stock company in 1907 with a capital of Rs. 5,00,000, and at the outset it was distinctly understood by the promoters that the concern was established chiefly for the training of research chemists, pharmacists, and biologists, and for the advancement of a knowledge of technical chemistry, and that it was not to be regarded as a money-making affair. At the same time, however, Mr. Kotibhaskar and others were anxious that the institution should pay its way, and also be serviceable to the State of Baroda. It was, therefore, proposed that the Government should grant to the company a monopoly to manufacture and supply liquor to the State for a period of fifteen years. The Revenue Department in replying to the proposal admitted that there were many undeniable advantages in the scheme, e.g. there would only be one large contractor, instead of several; inspection work would be simplified; the liquor would probably be better in quality; and the Government would not have to supply distillery buildings; but from a business point of view the Government deemed it advisable to postpone the question of the monopoly until the works were firmly established. The company were, however, advised to forward a tender when the time arrived for calling for new contracts.

The company, having set their minds upon securing this privilege in due course, dispatched Mr. Kotibhaskar to England to purchase machinery and to gain experience in distillery and pharmaceutical work in that country and on the Continent and in America. French machinery of the value of about a lakh of rupees was bought for the distillation of rectified spirit, and it was installed at Baroda in a building comprising a distillery, laboratories, and pharmacy, erected at a cost of about two lakhs of rupees. The site chosen is on the Gorwa Road near to the Baroda Camp.

A contract was eventually obtained to supply the State of Baroda with liquor from April 1, 1910.

Mr. Kotibhaskar at once set himself to make all arrangements to meet the undertaking, but he was overcome by illness, and Professor Gajjar, as consulting

director of the company, hastened to Baroda to take control. He met with initial difficulties of a most trying description, for in the first place the figures as to the quantity of liquor required were found to be incorrect; and, secondly, the machinery was new and untried, and the method of manufacturing spirit was entirely different from that which was then in vogue. The Professor, however, courageously grappled with his work, and by training graduates to assist him, he placed the factory in a position to meet requirements, and thus saved the reputation of the company at a time when failure would have practically spelt ruin. His duties were most arduous, occupying the greater portion of every day and night, and had it not been for his untiring personal energy and his skill in making the best use of his assistants, the result would have been serious indeed. The Professor was loyally supported by Mr. B. D. Amin, the managing agent, who manifested a wonderful capacity for organization, and upon whom devolved the sole responsibility of developing the business, which has by his strenuous efforts been put on a sound and systematic basis. He possesses the three essential qualities of a business man, namely, tact, resourcefulness, and self-reliance, and these qualifications stood him in good stead in managing the affairs of the company. The control of the financial portion of the business, particularly when the money-market was very tight, was admirably and competently conducted by him by bringing into play day after day the resources of his own personality, and by acting in a crisis on his own responsibility. Mr. Amin deserves the greatest credit for discharging his duties in a conscientious and efficient manner, thereby raising the concern to its present prosperous position. It will not be out of place to mention Mr. Jayashanker K. Daftary, in whom the company has secured a competent, thoroughly honest, and trustworthy office manager, and an accountant who is the head of the accounts department.

Rectified spirit is prepared from *mahura* flowers and molasses, the juice being extracted and then allowed to ferment in vats with yeast prepared in the laboratory.

Macerators for obtaining juice from flowers or molasses were obtained from France, but Professor Gajjar, who was not altogether satisfied with them, caused others to be made locally from designs of his own, and these, with alterations and additions, have proved to meet all requirements. In the preparation of rectified spirit, fusel oil, or amyl alcohol, and aldehyde are separated by machinery. While the juice is being fermented it is examined microscopically in order to ascertain whether it contains pure yeast or whether foreign bacteria and moulds have gained an entrance.

There is a generally accepted idea that the objectionable odour of *mahura* flowers is reproduced in liquor, but this obstacle even has been removed by the persistent experiments of Professor Gajjar.

Scientists of high attainments and members of the University Inspection Committee paid visits to the Institution, and all were struck with the remarkable progress made. In connection with the process of fermentation conducted by the company, extracts may be quoted from two of these eminent authorities. The Rev. Dr. Mackichan says: "In these works the processes of fermentation have been subjected to a thoroughly scientific investigation, and results of the knowledge thus acquired have been applied to the industries of the factory. The processes employed in distillation appear to be of the most recent type, while the pharmaceutical department is also organized on a thoroughly scientific basis," and Dr. Mann wrote: "I have not visited any place in India where fermentation and distillation is as carefully carried out, and by such up-to-date methods. I was impressed with the measures taken to obtain and maintain pure yeast for fermentation purposes, and with the constant check of chemical analysis which is applied to the process."

The institution possesses fermentation and chemical laboratories. The former has been equipped for the culture of pure yeast, samples of which were obtained from the Pasteur Institute, France, and in it are two specially made tables fitted with two microscopes for research work; culture experiments are also carried out in this room, and two balances for rough and accurate weighing have been provided. The library, also in this block, contains all the recognized standard works, in English, French, and German, bearing upon the alcohol industry, and it is worthy of note that statistical and other reference books and journals are obtained from time to time in order that the most up-to-date information on that subject may be available. The adjoining room is fitted as a chemical laboratory in which the distillation of alcohol, the analysis of the various products of the pharmacy, and special work in ascertaining the quantity of sugar in *mahura* flowers and molasses is conducted. Four gentlemen who have passed their M.A. examinations, and two others who are Bachelors of Science, investigate problems connected with pharmacy and distillery work, their duties being of a practical research nature. Pharmaceutical preparations are manufactured in a large hall, in which there are an emulsifier; tabloid, sugar-coating, polishing, and suppository machines; in addition to a vacuum-still and a condenser for products likely to be decomposed if dried by ordinary heat in open air. There are also steam pans, a still for distilled water, a filter press, centrifugal and grinding machines, a drug mill, together with a sifting machine, and a still of the latest pattern for the manufacture of essential oils. Behind this hall is the workshop containing engine and lathe rooms, together with engines and boilers for driving the machinery of the pharmacy. Near to the pharmacy is the bond room, where flavoured liquors, alcoholic tinctures, extracts, and perfumed spirits, are manufactured under the supervision of the governing staff. Two stills of the old type are worked when there is an exceptional demand for liquor. The company have large godowns for the storage of *mahuras*, molasses, and other raw materials used in the preparation of alcohol, and a large building in which engineering stores are kept, while in the compound there are residential quarters for the general manager, the engineer, and other members of the staff.

The institution is charmingly situated with its surrounding extensive lawns, well laid-out gardens, and plantations; in fact, all these arrangements have been designed to provide enjoyment for those who are associated in its work.

The company, in directing the attention of the public to the products of the Institute, make a point of the fact that the manufactured rectified spirit is 68 degrees over proof, that it is free from fusel oil and other aldehydic ingredients, that it is pure, neutral, and quite odourless, and that it is eminently suitable for medicinal and potable purposes.

When the importation of foreign liquors was discontinued owing to the Great War, the company undertook the manufacture of brandy, rum, whisky, gin, and liqueurs, which they declare to be equal, if not superior, to imported spirits. They are agreeably flavoured, and are largely sold in British India and Native States.

Alembic toilet preparations, especially

THE ALEMBIC CHEMICAL WORKS, LTD.

1. Chemical Laboratory. 2. View of the Works, Front End. 3. Another View of the Works.

THE ALEMBIC CHEMICAL WORKS, LTD.

1 Pharmacy Machinery Hall 2. Distillery 3 Fermentation and Yeast Culture Hall

Eau-de-Cologne (doubled distilled) and lavender water, compare most favourably with imported perfumes.

In conclusion, reference may be made to remarks by the late Sar Suba Saheb of the Baroda State: "This enterprise was an altogether new undertaking in an important line of industry with a vast potentiality in itself, and as such is deserving of every encouragement from the Government. The small factory has grown into a large concern, and its present position is entirely due to the unceasing perseverance of Professor T. K. Gajjar, who put the factory on a sound basis at the sacrifice of his health and wealth. The company have an up-to-date plant for the manufacture of alcohol, and have adopted the latest scientific processes by which means they have been able to give the public a purer and far less harmful product than formerly."

His Highness the Maharaja Gaekwar of Baroda State, who is well known throughout India for his progressive views, his active support of industrial reform, and his comprehensive grasp of current social topics, paid a visit to the Institute in October 1912, and after spending a considerable time in minutely observing the various interesting processes in each department, expressed himself as being highly pleased with everything shown to him, and particularly with the scrupulous cleanliness of the yeast room and of the manner in which cultures were prepared.

The Bombay offices of the company are situated at 50 Princess Street, and their telegraphic address is "Alco."

Messrs. Kotibhaskar, Amin & Co. are secretaries, treasurers, and agents of the company.

ARDESHIR D. WADIA & CO.

Several pages of this volume might very easily be filled in giving descriptions of the various activities of the firm of Messrs. Ardeshir D. Wadia & Co., engineers, of the Imperial Iron Works, Ahmedabad, but a somewhat condensed account of some of the principal items must suffice.

The firm was founded by Mr. A. D. Wadia, Mem.Am.Soc.M.E., M.I.M.E., in the year 1899, when he took Mr. Motilal Hiralal into partnership and opened the works with a capital of Rs. 25,000. The greatly increased demand for machinery which has arisen in India during the past twenty or thirty years has given an enormous impetus to the iron, steel, and allied trades, and this advance has been more particularly noticeable in connection with electricity and the milling of cotton, jute, and other industries. Messrs. Wadia & Co. established themselves at a most favourable time, and enlargement of premises and increase of capital soon became necessary.

They describe themselves as engineers, contractors, manufacturers of cotton gins, machines for crushing sugar, pressing oil, grinding corn, sawing timber, and cutting iron and steel, but they make a speciality of cotton gins, complete with all component parts, the "Imperial" being the only works in India capable of doing such work.

The cotton gins just referred to are self-feeding, with double action, and are peculiarly adapted for ginning Indian cotton and for separating the seed from the fibre without injuring the staple or in any way damaging the seed. For the high finish, good materials, and excellent workmanship of these machines the firm have received awards at exhibitions, comprising gold medals at Bhavnagar and Nagpur, together with silver and bronze medals at Lahore, while in the early part of the year 1917, the highest praise was given and a gold medal was secured at Baroda.

The following, among other goods, are kept in stock by Messrs. Wadia & Co. at Ahmedabad, and at their branch establishment at 63 Apollo Street, Fort, Bombay: asbestos packing, cloth, tape, and mill-board; best English and American leather belting; camel-hair belting; slubbing and roving bobbins and skewers; weft pirns; warping bobbins; Portland cement; fire-bricks; flue covers; fire clay; gauge glass; hoop iron, hose pipe, hosiery needles; oils of all kinds for cylinders, spindles, shafting, and engines; ring travellers (Cook's standard); cotton driving rope (1 inch to 2 inches in diameter); india-rubber sheets and valves; rubber rings; Carnelwood shuttles; tallow; all kinds of sundries for spinning machines; gun-metal wheel valves, cocks, and steam unions; lever safety valves; Casartelli's new type high-speed and high-pressure steam engine indicators; gun-metal fittings and canvas hose for fire appliances; standard sight-feed lubricators for stationary engines, with pressure up to 200 lbs.; copper and brass case thermometers; circular saws, taper shank and back twist drills; parallel bench vice; belting made of the best parts of hides; crab winches; overhead travelling cranes; self-sustaining pulley blocks; vertical grinding mills fitted with French burr stones; "Luzon" combined rice hulling, separating and polishing machines; the "Opal" horizontal cane mill; seed rolls; hydraulic filters; the "Wadia" improved rotary oil mill; generators; cables and wires manufactured by Edison and Swan, Ltd., "Royal Ediswan" lamps and accessories; horizontal triple expansion and other engines; boilers; hydraulic cotton baling press; circular saw benches; humidifiers for moistening and ventilating purposes (installed and now worked with complete success in a large number of spinning and weaving mills); oil engines; traction engines; Maud and Turner's machine tools; cart weighbridges; centrifugal and other pumps; and steel shafting; together with a very large assortment of all kinds of machinery, plant, and appliances required in every kind of constructional, mechanical, electrical, manufacturing, and industrial occupations.

Repairs of every class of machinery are undertaken by skilled and experienced workmen under the expert supervision of Mr. Wadia, who is assisted by four fully qualified engineers, and castings up to six tons in weight are constantly made in the foundry.

The firm are up-to-date in every respect, and they invite comparison of the products of their works with those of any other similar concern in India, while they are always ready to give new or old patrons the benefit of their great and varied experience.

The works have gradually grown to such an extent that they now cover about two acres of ground, and the capital, which was only Rs. 25,000, has increased to Rs. 4,50,000.

Messrs. Wadia & Co. are largely employed in carrying out important undertakings for several Government departments, the Bombay, Baroda, and Central India, and other railways, municipalities, district boards, and the cotton and general milling industries.

The firm are sole agents for Messrs. Daniel Adamson & Co., makers of steam engines and boilers; Messrs. T. & R. Lees, makers of small steam engines; Messrs. George Hodgson, Ltd., makers of plain calico looms; the Philadelphia Belting Company; Messrs. Petters, Ltd., makers of oil engines; Messrs. Horsfall and Bickham; the Buffalo Steam Pump Company; the Climax Refining Company; Messrs. John Bedford & Sons, makers of tool steel; Messrs. John Hague, Sons & Co., manufacturers of roller skins and leather; the Sterling

IMPERIAL IRON WORKS (ARDESHIR D. WADIA & CO.)

1. Exterior. 2. Moulding Shop. 3. Machine Shop. 4 Fitting Shop.

Electric Motor Company; the Cincinnati Milling Machine Company; the Skinner Chuck Company; Gould and Eberhardt, makers of high-speed shapers; the Trimint Manufacturing Company, makers of high-class wrenches.

The telegraphic addresses of the firm are "Engineers," Ahmedabad; and "Mechanic," Bombay.

THE ARYODAYA SPINNING AND WEAVING COMPANY, LTD.

This company was formed in the year 1892 by Mr. Mangaldas G. Parekh, with an authorized capital of Rs. 5,00,000, divided into five hundred shares, each of Rs. 1,000 (the present market value being Rs. 4,500), and the sum of Rs. 2,69,000 was paid up at that time, while the remainder of the shares were disposed of in 1895, when the company erected a second mill, which is referred to later. In 1916 the shareholders, desiring to have their own floating capital, decided to issue two thousand new shares, each of Rs. 250, with the right of a preferential dividend of not more than 5 per cent., such shares to be issued and paid for from profits of the mills. In pursuance of this resolution five hundred of these shares were issued to shareholders out of the surplus of the year 1915, and from the profits of 1916 a further thousand shares were issued, two of these being given as dividend to each of the original shareholders for each Rs. 1,000 share held by him.

The first mill belonging to the company, and containing 8,100 spindles, was started in July 1892, and, as trade developed so rapidly, owing to the energetic spirit and enthusiasm of Mr. Mangaldas, that further accommodation became a necessity, the directors agreed to erect a new mill rather than enlarge the old one. The new factory, known as No. 2 mill, and built out of profits made by the working of the other one—was constructed upon approved modern principles, and was opened in July 1895. Since that date the directors have withdrawn obsolete machinery and have replaced it with entirely up-to-date plant, realizing that unless they kept abreast of the times they would never be able to compete successfully with other similar companies.

The mills which adjoin each other in Asarwa Road, Ahmedabad, are worked conjointly, and they contain the following equipment, namely: No. 1 mill, 422 looms and 17,218 spindles; and No. 2, 790 looms and 20,616 spindles. The machinery is driven by steam power derived from a 63·58 nominal h.p. Hick-Hargreaves engine in the original factory, and a 94·2 h.p. Scott and Hodgson and a 25·25 h.p. Sexton engine in the new mill.

More than 1,320 tons of raw cotton are consumed annually in the mills, and all yarn produced is used in the manufacture of cloth made expressly for the purpose of meeting the requirements of bazaar trade in Calcutta, Delhi, Agra, Cawnpore, and Amritsar.

The mills are most conveniently situated near to Asarwa station on the Bombay-Baroda and Central India Railway system, from which place the company have two private sidings direct to the factories.

The whole of the premises cover an area of about 13 acres, and in addition to the mills there are offices and warehouses, together with *chawls* containing two hundred rooms for employees, while others are now being erected. All buildings are lighted by electricity, generated by the company's two dynamos, and they are further extensively provided with sprinklers for the prevention of fires.

The total amount expended on the buildings is Rs. 5,77,496, while the cost of the machinery stands at the substantial figure of Rs. 16,86,238.

The mills have been worked most successfully from the commencement, and this is largely due to the capable control of Mr. Mangaldas, one of the partners of the managing agents, Messrs. Mangaldas and Balabhai & Co., while reports show that apart from funds set apart for the establishment of reserve and other funds original shares have up to the present time (1917) repaid holders Rs. 3,787.

Fully equipped bleaching and dyeing works were started soon after No. 2 mill was opened, and this department has been so efficiently managed and has produced such excellent results that considerable extension of the buildings has been necessitated.

The company employ about two thousand hands.

The directors are Messrs. Jivanlal Girdhardas, Jethabhai Amritlal, Girdhardas Harivalavdas, Somnath Bhudardas, Mangaldas Girdhardas, and Balabhai Damodardas.

THE ARYODAYA GINNING AND MANUFACTURING COMPANY, LTD.

The mill now belonging to the Aryodaya Ginning and Manufacturing Company, Ltd., was first started in the year 1893 by the Veparutazak Spinning and Manufacturing Company, Ltd., but its value as a paying concern was seriously diminished owing to constant changes in ownership and management. The latter company eventually went into liquidation, and the Aryodaya Ginning and Manufacturing Company, Ltd., was formed in 1914 by Mr. Mangaldas G. Parekh, with the object of purchasing the entire assets of the defunct concern.

The new company was registered in January 1915 with a capital of Rs. 5,00,000, made up of 5,000 shares each of Rs. 100 (the present market value is Rs. 185), all of which was fully subscribed, but the mill had actually been working under the efficient management of Mr. Mangaldas since August 1914, and handsome dividends were paid to shareholders for the first year's working.

At the time of the transfer of the mill the plant consisted of about 17,000 spindles and 30 gins, but the energetic business methods of Mr. Mangaldas infused new life into the company, with the result that improvements were effected comprising the addition of machinery and plant of an improved type, thus bringing the equipment to 27,000 spindles, one hydraulic cotton-baling plant, and 32 gins.

About 10,600 cwt. of raw material are annually manufactured into yarn of various counts up to 70's, and this is either disposed of locally or is sent to Bombay and other spinning and weaving centres.

The premises, which are near to the Asarwa railway station, cover an area of about 7 acres, and every part of the factory is maintained in a high state of efficiency.

Some five hundred hands are employed in the mill, for which the managing agency are Messrs. Mangaldas and Brother.

THE BHARATKHAND TEXTILE MANUFACTURING COMPANY, LTD.

Evidence of the progress made in the cotton industry in India is shown in Government statistics, from which it is gleaned that the value of exports of raw cotton and cotton piece-goods during the year 1916 was greater than in 1915 by £7,240,096 and £1,483,326 respectively. About a hundred mills have been erected in India in the past twenty years, and a large number of these may be seen in Ahmedabad, a most important centre in the cotton trade.

Among the many successful mills which

THE ARYODAYA SPINNING AND WEAVING COMPANY, LTD.

1 Mangaldas G Pareek and Chamanlal G Pareek
2 Aryodaya Spinning and Weaving Company, Ltd , Nos 1 and 2.
3 Aryodaya Ginning and Manufacturing Company, Ltd
4 The Ragnagar Spinning, Weaving and Manufacturing Company, Ltd , Nos 1, 2, 3.

THE BHARATKHAND TEXTILE MANUFACTURING COMPANY, LTD, AND THE AHMEDABAD NEW TEXTILE MILLS COMPANY, LTD

1 General View of the Bharatkhand Textile and Manufacturing Mill
2 Staff of the Bharatkhand Textile and Manufacturing Mill.
3 Spinning Department (Ahmedabad New Textile Mill), Front View
4 Weaving Department (Ahmedabad New Textile Mill) Side View
5 Manager and Staff, Ahmedabad New Textile Mills Company Ltd

have assisted in furthering the cotton industry is the one founded in 1905 by Mr. Jivanlal Girdhirlal, who proceeded to form the Bharatkhand Textile Manufacturing Company, Ltd., with a capital of Rs. 5,00,000 divided into 500 shares of Rs. 1,000, of which 425 were issued and fully subscribed, thus giving a working capital of Rs. 4,25,000. The premises, including the mill, godowns, and necessary warehouses, were constructed upon a portion of a fine plot of land, some 16 acres in extent, situated on Camp Road, Ahmedabad, and work was commenced in 1906 with 16,000 spindles.

Messrs. Jivanlal Girdhirlal & Co. were appointed managing agents, and they not only gave the company the benefit of their valuable practical experience, but as *shroffs* in a large way of business on their own account they have rendered liberal financial assistance whenever the necessity has arisen. The total amount expended by the company up to the time of opening the mill was Rs. 5,25,000.

Steady progress was made in spinning, each year of working showing a substantial advance upon previous records. In the year 1911 the directors erected a weaving shed and added a bleaching and dyeing department, as it was realized that these were necessities in order that the company might compete successfully with other concerns.

The weaving shed, which was equipped with 432 looms, was paid for entirely out of profits. It should be mentioned that the whole of the machinery and plant has been obtained from well-known manufacturers, who are ever on the alert to adopt any new device which may be of benefit to mill-owners. Steam power, derived from two boilers worked by a 600 h.p. engine, is used for all machinery in the mills.

No fewer than 900 tons of raw cotton are required annually, and this is spun into yarn, which is manufactured in the mill into *dhoties*, fancy goods, coloured pieces and shirtings, all of which are disposed of for bazaar trade in Calcutta, Bombay, Cawnpore, Delhi, Amritsar, Madras, Bangalore, and other cities and towns in India. About a thousand hands are employed.

The various undertakings of the company are very efficiently managed, and that their financial position is built upon a sound basis is proved by the fact that excellent dividends have been paid to shareholders, and several reserve funds, with substantial credit balances, have been established.

The property is about one mile distant from the railway stations of Ahmedabad and Asarwa.

THE AHMEDABAD NEW TEXTILE MILLS COMPANY, LTD.

In the year 1895 Sheth Lalubhai Raichand established the Ahmedabad New Spinning and Weaving Company, Ltd., with spinning and weaving mills outside the Raipur Gate in Ahmedabad, but owing to untoward circumstances the company was forced into liquidation in 1909, and the concern was purchased by Messrs. Naranlal Jivanlal & Co. for the sum of Rs. 7,25,000. The new owners worked the mill on the hire system, at occasional periods, during the next eight years, the net proceeds being handed over to the trustee acting on behalf of the debenture holders, and in the course of the year 1917, they formed the Ahmedabad New Textile Mills Company, Ltd., with a capital of Rs. 5,00,000, made up of 2,000 shares of Rs. 250, all of which have been fully subscribed. The registered offices of the company are at Ahmedabad.

The mill is admirably situated in the heart of the excellent cotton-producing centres of the Bombay Presidency, and as it is not more than a quarter of a mile distant from the railway station at Ahmedabad, unique facilities are obtainable for receiving and dispatching raw materials and manufactured goods.

Some 850 tons of cotton are spun into yarn annually, and about one-half of this quantity is used in the mill in the manufacture of cloth, while the remaining portion is disposed of locally. All cloth, too, is sold in home markets.

The premises, comprising spinning and weaving mills, together with bleaching and dyeing departments, are erected upon ground about 17 acres in extent, but there is ample room for extensions which the directors intend to make in due course.

The managing agents are Messrs. Naranlal Jivanlal & Co., and the manager of the mill employs about seven hundred permanent hands.

THE COMMERCIAL AHMEDABAD MILLS COMPANY, LTD.

The remarkably steady progress made by this company since its formation in 1896 is manifested not only by the most recent statement of accounts, which reveals a sound financial position, but by the fact that on several occasions it has been necessary for the directors to make additions to the original plant in order to cope with the increasing demands made upon the resources of the mill. Shortly after the mill was constructed it was equipped with 8,256 spindles, and spinning was actually commenced in 1898; in 1902 there was an increase of 2,432 spindles; 3,952 were added in 1903; 4,864 in 1904 (the cost of the three last-mentioned additions being defrayed out of profits), and in 1913 the total was raised to 22,984, the figure at which it still remains.

Again, in 1908 the weaving shed was fitted with 152 looms, 50 were added in the following year; 52 in 1910; 32 in 1911; 118 in 1912; 6 in 1913; and 52 in 1914; thus making the present total of 462.

The machinery, which was obtained from eminent makers, is driven by steam power derived from one 500 h.p. (indicating 675 h.p.) engine, by John and Edward Wood, of Bolton, England, and two Lancashire boilers, one non-condensing high-pressure steam engine, indicating 75 h.p., by Ruston, Proctor & Co., of Lincoln, and used specially for calender driving; and one 50 brake h.p. oil engine by the same makers, which propels the machinery in a factory containing 14 single roller cotton gins.

Raw cotton, to the extent of about 52,350 *maunds*, are annually spun into yarn of counts from 20's to 40's, and practically the whole of this is manufactured into cloth of various kinds, which is consigned to Calcutta, Cawnpore, Farukhabad, Amritsar, and other towns.

Yearly dividends have been paid at an average rate of Rs. 68 per share, but in 1906, a record year as regards profits, the sum declared was no less than Rs. 140.

The company was formed by Sheth Tricumlal Bhogilal, Dunjibhoy Jamshedji, and Chottalal Lalloobhai, with a nominal capital of Rs. 5,25,000 (525 shares at Rs. 1,000), of which 415 were issued and fully subscribed, but as only 19 were partially paid up the working capital was Rs. 4,19,400. In 1912 the 19 forfeited, and the remaining 91 shares were sold at a premium, the profit of premium amounting to Rs. 7,331 being carried to the reserve fund. The subscribed capital today amounts to Rs. 5,25,000.

Sheth Nathalal Tricumlal of the agents' firm at all times carefully safeguarded the company against contingencies, and at the close of the year 1916 he had established a reserve fund of Rs. 72,739, and a depreciation of buildings and machinery account with a credit of Rs. 2,23,429.

THE COMMERCIAL AHMEDABAD MILLS COMPANY, LTD

1 General View 2 Spinning and Engine Room 3 Weaving Department 4 Nathalal Tricumlal 5 Bhikhalbhai Tricumlal

The present satisfactory position of the company is practically entirely due to the zeal and efficient management of Sheth Tricumlal Bhogilal and subsequently of his eldest son, Sheth Nathalal Tricumlal, who had control until his unfortunate death in March 1917.

The mill is now managed by Sheth Bhikhalbhai Tricumlal.

The managing agents of the company are Messrs. Dunjibhoy and Tricumlal & Co.; the manager of the mill is Mr. J. R. Riley; the mill engineer is Mr. D. R. Kavina; and Mr. E. Guest is the weaving master.

The managing agency was in that year transferred to Messrs. Moolchand Jaikishandas & Co.

The original capital was Rs. 4,00,000, divided into 400 shares of Rs. 1,000, of which Rs. 3,55,000 were paid up, but the new agents promptly reduced the subscribed capital to half the amount and issued 355 ordinary shares of Rs. 500, together with 695 new preference shares of the same value, of which 452 shares have been taken. The capital now, therefore, stands at Rs. 5,25,000, with Rs. 4,03,500 paid up.

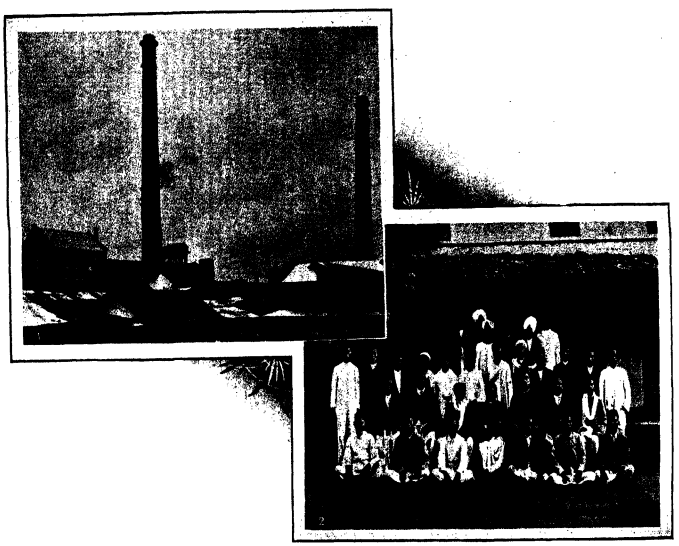
A weaving shed, started by the former agent as his private property in the year 1905, has been attached to the company's spinning mill since the year 1910.

The mill now contains 420 looms, 16,224 spindles, and 20 gins, and the chief products are yarn and cloth, comprising *dhoties, chaders,* long-cloth, shirtings, prints, *sadlapet,* jacconets, twill, *susi,* zephyr cloth, and many other articles, both grey and bleached. The annual output of yarn is about 1,300,000 lb., and of cloth, 1,600,000 lb.

A marvellous change has taken place in the company's affairs under the present management, and the mill, instead of being a "white elephant," has been yielding a fair return for invested capital, and is at the present time in a flourishing condition. Soon after the commencement of the new regime the directors were able to pay a 7 per cent. dividend on preference, and 5 per cent. on ordinary shares, while at the annual general meeting held on June 10, 1917, it was agreed that the rights of ordinary and preference shareholders should be deemed to be equal, thus enabling the company to declare an all-round dividend of Rs. 21 per share for the six months ending December 31, 1916.

Messrs. Moolchand Jaikishandas & Co. have erected a fine building containing about 175 rooms on their private property on the Naroda Road in the vicinity of the mill, and they have also opened a dispensary for the benefit of employees and of others residing in the neighbourhood. Such privileges as these are an inducement to labourers to seek occupation in the mill, and having obtained work therein they are loth to discontinue it.

About seven hundred hands are con-



THE BHARATKHAND COTTON MILLS COMPANY, LTD.

1. The Bharatkhand Cotton Mills Company, Ltd. 2. Group of Sheth and Officials

THE BHARATKHAND COTTON MILLS COMPANY, LTD.

The mill belonging to the Bharatkhand Cotton Mills Company, Ltd., in Asarwa Road, Ahmedabad, was erected in the year 1896 by Parikh Kevaldas Tribhovandas, who also acted as agent, but owing to various causes the annual returns were very unsatisfactory, and in 1912 the concern was in a deplorable condition, and the company had to face a heavy deficit.

stantly employed, and there is no difficulty in obtaining fresh supplies of labour should the necessity arise.

DAMODARDAS BHAVANIDAS & NADIADWALLA

In the year 1847 there was established at Nadiad, a town in the district of Kaira, in the Province of Guzerat, a small business for the sale on commission in that town of grain, groceries, and other goods produced in the surrounding villages.

The founders were the late Messrs. Damodardas Bhavanidas and Jamnadas, who were well known in the neighbourhood for their enterprising spirit, and for their strictly upright conduct in transactions.

It is a truism that an article well bought is already half sold, and Mr. Jamnadas not only discovered the best markets for the disposal of his merchandise, but, a matter of greater importance, he knew exactly where, and how, to purchase it. From the very commencement he laid down certain rules for the conduct of business, and one of these was that as he gained greater experience and became more acquainted with the requirements of the people, he would endeavour to meet those needs by adding other varieties of goods to those in which he was then dealing.

Hence it turned out that in every fifth year up to the death of both of the partners in 1895 they increased the number of their departments and succeeded in building up a sound commercial undertaking, which then passed into the hands of *gumashtas*, or clerks. The management of these agents was not by any means successful, and the business suffered considerably until it was taken over in 1900 by Mr. Brijbhukhandas, the son and grandson of Jamnadas and Damodardas respectively, the original proprietors.

An all-round improvement was soon manifested, and in 1913 a branch was opened at Kalupur, in the district of Ahmedabad, under the style of Messrs. Damodardas Bhavanidas & Co., but the title has since been changed to Damodardas Bhavanidas alone.

The firm now deals on an extensive scale in banking, grain, groceries, oil, oil-seeds, cotton, and country cloth manufactured in Indian mills, and they have their own corresponding agents in the principal towns throughout India.

In 1915 the firm further increased their operations by importing synthetic dyes, analine salt, and alizarine, for use in cloth mills in Ahmedabad and other large cities in India, but they have more recently erected a laboratory in which various dyeing preparations are manufactured. An expert dyer is also kept for the purpose of matching various colours, and a special representative travels throughout India for the sale of these products.

Several godowns have been acquired at Nadiad and Kalupur (those at the former place being the property of the firm), and a very large stock is carried of every class of goods in which Mr. Brijbhukhandas, the grandson of Mr. Damodardas Bhavanidas, usually deals.

That gentleman supervises every detail of work and employs a staff of about a dozen clerks in addition to a large number of ordinary hands.

RUTTONJI FRAMJI DABOO

The subject of these notes belongs to an honoured family of Parsis, who for many years past have been exceedingly staunch supporters of the *Jarthosti* religious creed. The late Sheth Ratanji Framji Daboo was born in 1846 in Navsari, a town in the Native State of Baroda, in the Presidency of Bombay. His noble character, renowned business career, open-hearted generosity and complete devotion to the principles of his faith, are worthy to be recorded in annals relating to famous men who have lived unselfishly for the benefit of others.

The late Mr. Daboo was born in a priestly class, not with a silver spoon in his mouth, but as his father and grandfather had been *Mobedi* (religious) reciters in the Parsi temple at Navsari, the boy's early training was such as would enable him to follow in their profession. He became a pupil at the *Jarthosti Madressa*, in the town of his birth, and although he did not take readily to studies, he distinguished himself in wrestling matches and other athletic contests with his comrades in the school.

Young Daboo's teachers and others openly expressed the opinion that his unyielding courage, firm determination, great tact and kindly disposition would in later life "make a man of him," and subsequent events proved that the prognostication was a correct one. English was not then taught in the Madressa, but Daboo acquired a fair knowledge of that language, and at an early age he joined the railway service at Navsari, and subsequently became postmaster at the same place. Monotonous duties of that nature did not appeal to the young man full of energy and with the strong ambition of youth, and therefore he commenced business on his own account as a contractor, chiefly, at first, in connection with railway work. He executed several works of a public character in the State of Baroda, as well as in surrounding British territory, in addition to the vegetable market, police station, and Court House at Navsari.

Sheth Daboo then turned his attention to the distillation of liquor, which was performed by any person willing to pay a moderate tax to the State, and it was through his instrumentality that the contract system, which ensured control, was afterwards adopted.

In the year 1873 he began to take up waste Government land for development in British territory as well as in the State, eventually acquiring 35,000 *bighas* and paying assessment to the value of Rs. 50,000 annually. His next project was to obtain the right to cut wood in certain forests in return for the payment of a sum of Rs. 60,000, and shortly before his death he was granted another timber concession for Rs. 50,000.

The *sheth* was regarded as a great organizer and leader of men, and when His Highness the Gaekwar of Baroda visited Navsari about the year 1885 and again in 1908, it was said that this gentleman was the only one in the State who could have so efficiently perfected all arrangements that the functions, involving the attendance of an immense assemblage of persons, passed off with great satisfaction to all.

Although the *sheth* was immersed in the management of his vast landed estates and business transactions, all of which were controlled in that spirit of strict justice to all for which he was famous, yet questions concerning the welfare of his town, and particularly of his co-religionists, have possibly received even a greater share of his solicitude. Though not an appointed head (Akabar) of the Parsi Anjuman (community) of Navsari, he was esteemed as highly as if he were actually one of those officials, and he was always ready to help them. For example, the fire temple (*Agiari*) of Navsari was in a desolate condition several years ago by reason of the cessation of the usual rituals, but the *sheth* revived the ceremonial of daily recitations of "*Baj Ijashna*."

DAMODARDAS BHAVANIDAS NADIADWALA.

Vr jbhokhandas Jamnadas Shah, Proprietor of the Firm of Damodardas Bhavanidas Nadiadwala

DINSHAW B. DABOO

1 The R. F. Daboo Parsee General Hospital, Navsari. 2. The R. F. Daboo Students' Hostel, Navsari
3 The Late Mr Ruttonji Framji Daboo.

Sheth Ratanji Framji Daboo was a true Parsi *Jarthrosti*; he was a strict observer of religious rites, and was extremely zealous for the advancement of the principles to which he clung with such tenacity. He was a lover of children, and took a deep interest in providing means of education for them, while it was his delight to distribute sweets and other delicacies to large gatherings of them at various festivals.

On the "*Barsa*" (twelfth day) of the birthday of the grandson of the present heir-apparent of His Highness the Gaekwar, the *sheth* announced his intention of giving Rs. 10,000, to be used in the construction of suitable quarters for students at Navsari, and after his death that amount was increased by his sons to Rs. 20,000, an equal amount being contributed by His Highness the Gaekwar. He also gave Rs. 1,500 for the purchase of prizes in the local school for girls, and a sum of Rs. 2,000 to the local high school in commemoration of important events in his life; but his charities were so numerous and generally so unobtrusively performed that not even his own children ever heard of a tithe of them.

Sheth Daboo always sought the co-operation of Hindus and Mahomedans in the support of proposals and measures for the well-being of Navsari and its inhabitants, and in this way he rendered a great public service in establishing a bond of friendship between communities who had previously held aloof from each other.

Sheth Daboo acted as administrator, trustee, or secretary for many charitable funds belonging to the Parsis: he was secretary for fifteen years of the "First Dastoor Meherji Rana Library," of Navsari; he was one of the managers of the fund for starting a Parsi maternity home; of the Parsi distress relief fund; and of various other funds, but particularly the one which provided for the continuous recital of "*Baj Ijashna*," in the chief fire temple in Navsari.

The death of Sheth Daboo on July 27, 1908, came as a great shock throughout the State of Baroda, and, indeed, in a large number of neighbouring towns, even as far as Bombay, and the expressions of heart-felt grief manifested on the occasion of his funeral will never be forgotten. A memorial fund was raised and a portrait of him in oils was placed in the town hall by the public.

The surviving members of the family received a large number of letters and telegrams from various parts of the country (including a touching communication from His Highness the Maharaja of Baroda), all of which testified to the deep sympathy of the writers and their profound admiration for the high character of Sheth Daboo.

It was always a matter of sorrow to the late *sheth* that he had not had the privilege of a thorough educational training, but he was always determined that his sons and daughters should have the advantages which were denied to him.

After the death of the late Mr. Ruttonji Daboo, and according to his last wish, the following gifts were presented by his sons, namely: (1) a piece of land worth about Rs. 25,000, together with Rs. 15,000 in cash to form the nucleus of a fund to be raised for the purpose of starting a "Parsi general hospital" at Navsari and for its upkeep (this hospital has proved a boon to poor and afflicted Parsis); (2) a piece of land worth about Rs. 15,000, to be devoted to the "Muktad Fund," the main object of which is the daily performance of "*Baj Jashan*" and "*Ijashna*" ceremonies in the Parsi temple at Navsari.

The late Mr. Daboo's public services and charities were recognized by His Highness the Gaekwar of Baroda, although after his death, and his eldest son, as a representative of the family, was awarded a gold medal and was made a member of the "Society of the Generous" ("Datar Mandal").

The eldest son, Sheth Pestonji Ratanji Daboo, joined his father in business many years ago, and was associated with him in all his engagements, thus fitting him admirably for the position in public and private life of Navsari, to which he has been called. He was once a member of the Baroda Legislative Council. He and his brother, the second son, received a good commercial training, and they are proving themselves to be worthy successors of their late father.

The third son, Mr. Dinshaw Ratanji Daboo, is a University graduate, and his business transactions have necessitated a tour in Europe, which has been of the greatest possible benefit to him. Mr. Dinshaw was for three years the non-official vice-president of the Navsari municipality, and he now holds a seat on the Baroda Legislative Council as an elected member. The fourth son, Captain Erachshaw Daboo, M.C, I.M.S., obtained his degrees at the Medical College, Bombay, and while continuing his studies in England in 1914 he offered his services to the Government on the outbreak of the Great War. He was with the British troops during the march to, and the capture of, Baghdad; and although wounded himself, he bravely remained at his post, at the risk of his life, attending to those who needed professional aid. For this meritorious work a Military Cross was awarded to him by the Government. The fifth son, Mr. Framroz Daboo, is a B.A., B.Sc., of the Bombay University, and is at present prosecuting his studies in the science of agriculture.

THE GUJERAT COTTON MILLS COMPANY, LTD.

The cotton mills in Naroda Road, Ahmedabad, belonging to the Gujerat Cotton Mills Company, Ltd., were started in the year 1896, but they were worked with disappointing results for about five years, and although some improvement took place in 1905–7, troubles were again experienced, and it was not until 1916 that a more satisfactory state of affairs was reached, which is not only being maintained but gives promise of continuance.

The company was formed in 1895 by Mr. Motilal Ghelabhai, with a nominal capital of Rs. 7,00,000, consisting of 700 shares of Rs. 1,000, and as 600 shares were fully subscribed, the working capital amounted to Rs. 6,00,000. The mills were originally fitted with 10,000 spindles, and the managing agents were Messrs. Sarabhai Motilal & Co., but in 1898 the agency was transferred to Messrs. Tribhowandas Motichand & Co. This change was not productive of any better results, however, and in 1899 it was deemed advisable to close the mills, but in 1901 the present managing agents, Messrs. Shantilal Bhagwandas & Co., who were then mortgagees of the premises, took over the whole concern and recommenced working with an additional 4,000 spindles, which had been installed at various times since 1896.

As a result of careful investigation into the affairs of the company, and following upon a strict overhauling of the mills and their equipment, the new managers came to the conclusion that a thorough reorganization was necessary in order to secure success, and acting promptly upon that decision, they proceeded to reduce the capital to 1,200 shares of Rs. 250, thereby giving a working capital of Rs. 3,00,000, and to remove a quantity of unsatisfactory

GUJARAT COTTON MILLS COMPANY, LTD

1 Exterior 2 Interior of Spinning Department 3 Interior Weaving Shed 4 Group of Sheth and Officials

machinery and replace it with entirely modern plant. This reconstruction proved beneficial to the shareholders until 1908 when a loss occurred in the year's working, and the agents again stopped the mills until more favourable opportunities should arise. Re-opening took place in 1911, and the doors have not been closed since that date.

In the year 1914 a weaving shed containing 175 looms was erected, and increases of plant made on various occasions brings the total equipment of the mills to 22,000 spindles and 288 looms.

During 1916 about 49,600 *maunds* of raw cotton were spun into yarn, varying in counts from 16's to 40's, and although a small quantity of this yarn was disposed of locally, the major portion was woven into cloth for sale to merchants for Indian bazaar trade and for tents required by the Government for military purposes.

The present manager of the mills is Mr. H. Wilmore, and he usually employs about seven hundred and fifty hands.

The anxious times through which the company have passed are clearly revealed from the following figures: in 1904 a dividend was paid at the rate of Rs. 6 per share; in 1905 it was Rs. 33; in 1906 it was Rs. 31; and Rs. 23 in 1907; then came the period of bad trade when dividends could not be declared; and in 1915 and 1916 the amounts were Rs. 5 and Rs. 15 respectively. The satisfactory working of the last-mentioned year cannot, however, be entirely measured by the dividend paid, as the profits were also drawn upon for the establishment of a reserve fund of Rs. 11,000, and of a depreciation fund of Rs. 41,476. Funds of this character had been formed in previous years, but the totals had been expended upon improvements in buildings and machinery.

The company's premises are about half a mile distant from the railway stations at Ahmedabad and Asarva respectively.

THE GUJARAT GINNING AND MANUFACTURING COMPANY, LTD.

It is generally admitted that the late Sheth Runchhodlal Chhotalal, C.I.E., deservedly earned the honour of being the pioneer of the cotton-milling industry in Gujarat, but it is also conceded that, for developing and perfecting it until it has been brought to its present flourishing state, credit is due to Sheth Mansukhbhai Bhagubhai, a shrewd and enterprising Jain merchant of Ahmedabad, who was the founder of the Gujarat Ginning and Manufacturing Company, Ltd.

The company's mill is situated at Ahmedabad, about three hundred miles distant in a northwardly direction from Bombay, and it is not only one of the largest of its kind in Western India, but it also stands fifth on the list, as regards working capacity, for the whole of India.

Sheth Mansukhbhai in early life manifested keen business qualifications, and when he was only twenty years of age conceived the bold project of starting a cotton-spinning mill, and although the scheme appeared to be so stupendous, the esteem in which he was held overcame any hesitancy on the part of capitalists to invest money, and they at once came forward in hearty support of the proposal.

Negotiations ended in the formation of the Gujarat Spinning and Weaving Company, Ltd., and the promoter, who became manager, with unflagging energy and strict supervision, brought the mill to a high state of efficiency in the course of a very few years. Full control was subsequently undertaken by his brother, Sheth Jumnabhai Bhagubhai, and the mill under the latter's management at the present time has an equipment of about 27,000 spindles and 620 looms.

The very successful working of this company strengthened the faith of the people of Ahmedabad in the abilities of Sheth Mansukhbhai, and they pressed him to exercise his great gifts for organization by fathering another undertaking of a more pretentious character. He acceded to their wishes and established the Gujarat Ginning and Manufacturing Company, Ltd., in the year 1881. The mill was originally equipped with only 20,000 spindles, but the conspicuous ability and boundless energy of the founder practically made the concern a pronounced success almost from the commencement. The rapid growth of the turnover necessitated a corresponding increase in power of production, and in 1888 the plant in the building had reached 250 looms and 30,000 spindles.

Year after year the directors were able to present most satisfactory reports to the shareholders, and owing to greater demands upon the mill other looms were added from time to time, until in 1892 the number had risen to 600.

The company's prospects were now brighter than ever, their pathway had been extraordinarily smooth, and there did not appear to be a single cloud on its horizon.

But, alas! the falsity of hope is exemplified by the most unexpected occurrences, as in the year just mentioned a fire broke out which at one fell stroke swept away the work accomplished since 1881. The directors, men of stern determination, caused the premises to be reconstructed and the interior to be fitted with a plant capacity similar to that which obtained prior to the outbreak, thus proving to the shareholders that they were determined that the loss, although disastrous, had not prevented them from continuing to believe in the stability and the future welfare of the company.

Steady progress was reported annually, and not more than a dozen years later the profits amounted to a larger sum than had hitherto been recorded, the directors commemorating it by extending the plant to 74,500 spindles and 1,836 looms, the strength at which it now stands.

Among the many improvements which have recently been inaugurated were the substitution of finer counts for coarser ones, and the erection of bleached finished goods for which there was so great a demand.

These additional advantages brought still further prosperity, and shareholders have received dividends at the high rate of 35 per cent. on their investments.

The company started with a nominal capital of Rs. 5,25,000 divided into 525 shares, each of Rs. 1,000, but in 1888 the sum was increased to Rs. 9,87,000. While at the zenith of its prosperity, in January 1913, the company had the very great misfortune to lose, by death, the eminently efficient services of Sheth Mansukhbhai, a man who had endeared himself in no ordinary manner to the general public, but particularly to the Jain community, of which he was an honoured member. His thorough acquaintance with the smallest details of milling caused his advice to be sought frequently by owners of mills in Ahmedabad, and it was no uncommon occurrence during his career for him to have the management of some half a dozen concerns at one and the same time.

After the death of that gentleman the mill was managed by his uncle for about a couple of years during the minority of the founder's only son, Sheth Maneklal, but the latter assumed control in 1915, when nineteen years of age, and under his guidance the rate of progress of earlier days is being maintained.

GUJARAT GINNING AND MANUFACTURING COMPANY, LTD.

1. Front View. 2. Back View. 3. Sizing Department. 4. Folding Department. 5. Sheth Mansukhbhai Bhagubhai.

THE MANECKCHOCK AND AHMEDABAD MANUFACTURING COMPANY, LTD., AND THE NEW MANECKCHOCK SPINNING AND WEAVING COMPANY, LTD.

1. No. 1 Mill, The Maneckchock and Ahmedabad Manufacturing Company, Ltd.

2. No. 2 Mill, The Maneckchock and Ahmedabad Manufacturing Company, Ltd.

3. Front View, The New Maneckchock Spinning and Weaving Company, Ltd.

4. Back View, The New Maneckchock Spinning and Weaving Company, Ltd.

THE BOMBAY PRESIDENCY

THE MANECKCHOCK AND AHMEDABAD MANUFACTURING COMPANY, LTD.

There are two mills belonging to the Maneckchock and Ahmedabad Manufacturing Co , Ltd , in Camp Road, Ahmedabad. The oldest established of them was opened in the year 1893 with plant consisting of 5,100 spindles and 151 looms, an equipment increased in 1895 to 7,000 spindles and 335 looms

The company was formed in the year 1893 by the late Mr Tricumlal Jamnadas with a capital of Rs 5,25,000 of which Rs 3,60,000 were at once paid up, but the balance was called up in 1895, when the above-named additional equipment was provided

Mill No 2 was built in 1906 and the cost was defrayed out of reserve funds , in the same year the company raised the number of spindles to 15 000 and the looms to 580, and in 1908 further additions to the plant were made, bringing the totals of these two items to the figures at which they stand to-day, namely, 30,324 spindles and 660 looms All these last-mentioned fittings were purchased from reserve funds

Steam power is used for driving the machinery in the mills, and during the year 1916 about 54 000 *maunds* (40 lb) of raw cotton were spun into yarn for the manufacture of cloth, which is either disposed of locally or consigned to Calcutta, Cawnpore, Madras Bombay, Delhi, Agra, Amritsar and Karachi The premises are about 6 acres in extent and are half a mile distant from the railway s at ons of Ahmedabad and Asarva

The managing agency has been in the hands of Seth Hiralal Tricumlal since the death of his father, the founder of the company, in 1896, and the manager of the mill is Mr P W Hartley who employs about five hundred hands

The directors of the company are Seth Hiralal Tricumlal, Seth Lalbhai Tricumlal, Shah Bhogilal Mohalal, Shastri Amratram Karunashankar, and Khan Bahadoor Sirdar Rustomjee Jehangir Vakil

The company have safeguarded the interests of shareholders by setting aside considerable sums of money as reserve funds, and notwithstanding the large amounts drawn therefrom for increase of plant, the accumulated funds are large, the balance sheet for the year 1916 showing that Rs 8,58,837 stood to the credit of the depreciation of machinery and buildings account, and the sum of Rs 59,210 to the reserve fund

THE NEW MANECKCHOCK SPINNING AND WEAVING COMPANY, LTD.

The directors of this company are Seth Hiralal Tricumlal (chairman), Shah Mamlal Chunilal, Shah Bhogilal Moholal, Khan Bahadur Sarder Rustomjee Jehangir Vakil, and Shah Popatbhal Hamehand.

The company was formed in the year 1905 with a capital of Rs 5,25,000, divided into 525 shares each of Rs 1 000, all of which is fully paid The mill, which is situated at Ahmedabad, was started in the same year with 12,500 spindles, but the demands made upon it necessitated the addition of 4,500 spindles and 325 looms in 1907 Further increases in 1913 and again in 1914 brought the total to 25,000 spindles and 550 looms

The quantity of the yarn produced is just sufficient to meet the requirements of the weaving department, in which the company are manufacturing plain cloths, principally for shirtings and *dhooties*, and the whole of these goods find a market in Bombay, Cawnpore, Calcutta, Madras, and other places

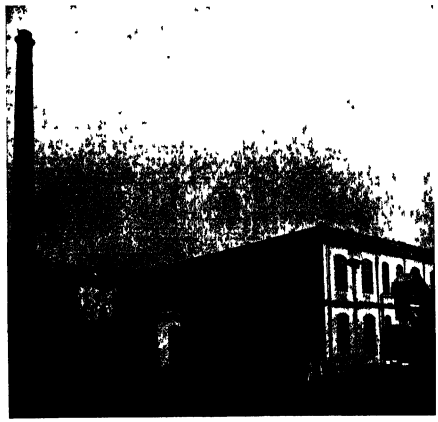
Dyeing works, capable of dealing with the entire output of the mills, have been constructed, and the machinery in this and other parts of the mill is driven by an 820 h p steam engine and two boilers

The company have a capital debt of Rs 4,50,000, and a depreciation fund of Rs 3,20,000, and although really good dividends have not yet been paid, the amount distributed in two instalments during the year 1916 was declared at the rate of Rs 105 per share.

Seth Lalbhai Tricumlal is secretary, treasurer, and agent of the company, and the telegraphic address is "Navimaneck," Ahmedabad

THE NATIONAL MILLS COMPANY, LTD.

Situated about a quarter of a mile from the city of Ahmedabad, and practically adjoining the railway station at Kankaria, are the spinning mills of the National Mills Company, Ltd , which was formed in 1905 by Sheth Chimanlal Harilal Nagari, with a nominal capital of Rs 6,00,000, comprising 600 shares of Rs 1,000, of which 440 were subscribed, thus giving a working capital of Rs 4,40,000



GENERAL VIEW OF THE NATIONAL MILLS' COMPANY, LTD., AHMEDABAD

When the mill was opened in 1908 it was equipped with 10,000 spindles, and 5 000 were added in 1910, but the marked prosperity which attended the venture caused the agents in the year 1914 to resolve upon very considerable extensions, including a weaving shed and other buildings, and the provision of a further 5,000 spindles

Orders for steel girders and other materials and fittings were being placed with contractors shortly before the outbreak of the Great War, but it has now been impossible to get these owing to the restrictions placed upon exportations from England, and it is unfortunately quite uncertain when the much desired improve-

ments can be made. The machinery, with the present plant of 15,000 spindles, is driven by a 650 nominal h.p. Saxon steam engine, and the mill has an average annual consumption of 700 tons of raw cotton, which is spun into counts of yarns ranging from 13's to 40's.

The company have a good local demand for a considerable portion of the produce, but a large quantity is disposed of through their own agents in Cawnpore, and in several towns in the Punjab and other centres in Northern India, to whom consignments are sent direct.

The managing agents are Messrs. Chimanlal Govindlal & Co., Ltd., and the manager of the mill is Mr. John Eckersall, while regular employment is found for about five hundred hands.

The directors have paid an average annual dividend of 6 per cent., and they have established a reserve fund of Rs. 40,000, and a depreciation of buildings and machinery fund of Rs. 1,25,671.

THE PIONEER MAGNESIA WORKS

One of the beneficial results which have flowed from the Great War has been the development of the resources of various countries of the world in regard to the manufacture of products which they had hitherto imported. India had much to do in this direction, and a case in point is supplied by the Pioneer Magnesia Works, where magnesium chloride, used for sizing cloth in the cotton-weaving industry, has been made from bittern locally obtained since the practical monopoly held by Germany came to an end. The idea originated with the Government of India in 1915 when they called for open tenders for the extraction of crude bittern from salt at their works at Kharaghoda, in the district of Ahmedabad in the Bombay Presidency. The successful contractor was Professor P. V. Mehd, M.A., B.Sc., whose preliminary experiments were eminently satisfactory, but a second tender—that of the Hon. Sardar Rustom Jehangir Vakil, who was in partnership with Mr. B. S. Lalkaka, B.A., was afterwards accepted, whereupon these three gentlemen formed a company and started the Pioneer Magnesia Works in a factory at Ahmedabad.

The scheme thus launched proved to be a success, and when the company obtained an extension of their contracts, the whole of the machinery and plant was, in January 1917, transferred to a new factory at Kharaghoda, near to the railway station, and on the outskirts of the Government Salt Works at that place. Since that date the company have been manufacturing magnesium chloride and Epsom salts, but experiments are now being carried on with the object of obtaining other by-products.

Several experts have been invited to express opinion as to the merits of the chloride, and in every instance the verdict has been entirely satisfactory.

All new ventures are met by obstacles, and especially in India, where there are endless race and caste prejudices, coupled with a natural antipathy to any innovation, but these difficulties have so far been overcome that the company's chloride is now used in the leading mills in Cawnpore, Bombay, Ahmedabad, Agra, and Delhi, in the north, and throughout the Madras Presidency, as far as Coimbatore, in the south.

The annual output of this substance is about 1,500 tons, but the factory is capable of meeting the demands of all the mills in India.

The general manager is Mr. B. S.

PIONEER MAGNESIA WORKS.

1. Pioneer Magnesia Works, Kharaghoda. 2. Sardar Khan Bahadur Rustomjee Jehangirjee Vakil. 3. Mr. B. S. Lalkaka. 4. Mr. P. V. Mehd.

Lalkaka, the consulting chemist is Professor Mehd, the chief agent is the Hon. Sardar Rustom Jehangir Vakil, and the canvassing agents are Messrs. H. M. Mehta & Co., of Bombay. The offices of the company are at Reid Road, in Ahmedabad.

THE RAIPUR MANUFACTURING COMPANY, LTD.

One of the most notable men connected with the commercial and social life of the city of Ahmedabad during the past half-century was the late Sirdar Sheth Lalbhai Dalpatbhai, who was a captain of industry, and a staunch champion of educational, moral, and political advancement, whose death left a blank in home and business circles which cannot easily be filled.

Owing to the death of his father he was compelled to relinquish his collegiate course at a very early age, but he had made the best use of his time, and with natural business instincts he soon proved himself to be capable of embarking upon a commercial career.

Sheth Lalbhai was still a young man when he applied himself to gain a mastery over the various problems of spinning and weaving, and he subsequently started the Saraspur Manufacturing Company, Ltd., of which he was the agent and managing director for a period of fifteen years. In the year 1906 he laid the foundation of a mill building for the Raipur Manufacturing Company, Ltd., which he had been instrumental in forming. The mill is situated on the eastern boundary of the city of Ahmedabad, near to the villages of Rakhial on the east and Saraspur on the north. The structure was completed in 1908, and work was at once commenced. The blocks comprising the spinning mill and weaving shed are spacious enough to accommodate 40,000 spindles and 700 looms, together with all necessary machinery and plant, but the present equipment consists of 26,700 spindles, with preparatory machines made by Messrs. Platt Brothers, Ltd., and 336 looms obtained from Messrs. Henry Livesey & Co., these firms being well-known English makers. Engines of 1,200 h.p., worked by steam derived from three Lancashire boilers, were supplied by Messrs. Musgrave and Sons, Ltd., of Bolton.

The mill consumes annually about 7,000 *maunds* of raw cotton of the value of Rs. 8,85,000, and its productions of yarn and cloth are estimated to be worth Rs. 5,65,000 and Rs. 10,95,000 respectively. The important question of housing employees in such a large undertaking was carefully borne in mind by the promoter of the company, who constructed the mill upon land about 45 acres in extent, and a considerable portion of this area is occupied by bungalows for head officials, and by buildings containing two hundred rooms, which give accommodation for about seven hundred persons. Modern scientific principles have been applied in the erection of these premises, but apart from this the general well-being and health of the residents is rendered more secure from the fact that the surrounding neighbourhood is very thinly populated, and therefore dangers arising from overcrowded dwellings have not to be reckoned with.

The capital of the company is Rs. 5,00,000, made up of 500 shares of Rs. 1,000, all of which have been fully paid.

Sheth Chimanbhai Lalbhai Dalpatbhai and Sheth Kastoorbhai Lalbhai Dalpatbhai (sons of the founder) are managing agents, exercising full control.

Reference should now be made to some personal characteristics of the late Sirdar Lalbhai, who was a distinguished ornament to the Jain community, and whose sterling qualities endeared him to all with whom he came in contact. Early in life he made a special study of economic and social subjects calculated to uplift the moral, intellectual, and industrial status of his fellowmen. He was ever zealous in impressing upon members of his own community the fact that education was the basis upon which fuller realization of their privileges must rest, and he emphasized his strong faith in the absolute necessity for the acquisition of knowledge by founding a school for girls in Ahmedabad, dedicating it to the memory of his mother, Gungabai.

This building was constructed at a cost of Rs. 30,000, the donor endowing it with a sum of Rs. 35,000, and for the convenience and comfort of his co-religionists a spacious *dharamsala*, dedicated to the memory of his father, Dalpatbhai, has been erected at a cost of Rs. 50,000.

Sirdar Lalbhai not only gained the esteem and affection of those among whom he mixed in daily life, but he also secured the confidence of Government authorities, who frequently sought his advice upon important State matters, and it was in recognition of such services that he was granted the title of Sirdar. In commercial matters he was regarded as a man of unswerving integrity, capable of giving sound advice, and as one who would never flinch from conscientious duty, and his great capabilities found exercise in positions of responsibility in connection with the management of mills, banks, and railways. His life was a noble example of simplicity of manner, and of a disregard for his own interests when the welfare of others was concerned, and in his death his family lost a faithful head, the public mourned a generous benefactor, and the Government sadly missed a loyal and trusted supporter.

THE SARANGPUR COTTON MANUFACTURING COMPANY, LTD.

No better testimony to the capable control of the Sarangpur Cotton Manufacturing Company's mills by Messrs. Sakarlal Balabhai & Co., the managing agents, can be adduced than the fact that a dividend for the year 1916 was paid at the rate of Rs. 146 per share.

The Sarangpur Company was formed in 1905 by Mr. Balabhai, and the mill, which is situated outside the Raipur Gate, in Ahmedabad, was started for work in the following year with only a portion of the required machinery. The first order given for plant was for 15,000 spindles, and these were completely installed by the year 1907, but more than 5,000 spindles and 300 looms subsequently were added, and the equipment now consists of 26,764 spindles and 384 looms. A further quantity of 96 looms was ordered in 1916, but this consignment is now (June 1917) awaiting shipment from England. The above-named additions were rendered necessary owing to the steady growth of business, but even at the present time the agents are constructing extensions to the weaving shed in order to provide accommodation for a total of 200 looms.

About 35,000 *maunds* (82 lb.) of raw cotton are annually made into yarn, the major portion of which is manufactured into cloth suitable for the Indian bazaar trade, and is sold locally.

The company have gained awards for their yarn in open competitions, and among these may be mentioned the Industrial and Agricultural Exhibition held at Navsari, in the State of Baroda, in the Bombay Presidency in 1911, when a gold medal was presented in recognition of the high-class quality of the exhibit.

The machinery is driven by an 820 h.p. Hicks-Hargreaves steam engine, and a dynamo has been installed for generating

THE RAIPUR MANUFACTURING COMPANY, LTD

1. Front View, Showing Office. 2. Engine and Boiler Rooms. 3. Weaving Shed 4. Spinning Department
6. Sirdar Shreth Lalbhai Dalpatbhai.

SARANGPUR COTTON MANUFACTURING COMPANY, LTD.

1 Sheth Balabhai Damodardas 2 Sakarlal Balabhai 3 Front View 4 Back View

electricity for the illumination of the buildings. The mills, offices, and other premises have been erected on land which has an area about 13 *bighas* in extent.

The nominal capital of the company is Rs. 5,25,000, divided into 525 shares of Rs. 1,000, but 464 shares have been issued for which the sum of Rs. 4,64,000 has been called up and paid. The present market price of shares is about Rs. 2,000.

The directors have thoroughly grasped the truth that the stability of a company rests almost entirely upon its reserve funds, and at the close of the year 1916 they were able to show the following substantial credit amounts: Depreciation of machinery and buildings account, Rs. 2,36,955; reserve fund, Rs. 1,53,000; and the equalization dividend fund, Rs. 18,000.

THE SARASPUR MANUFACTURING COMPANY, LTD.

The premises belonging to the Saraspur Manufacturing Company, Ltd., in Saraspur Road, Ahmedabad, cover an area of about 25 *bighas* of land, out of which the mill buildings stand on from 15 to 17 *bighas*, while the remainder is occupied by bungalows for the manager, the weaving-master, and engineers, and *chawls* for the workpeople.

The mill was opened in May 1899 with an equipment of 21,000 spindles, but this number was increased to 24,000 in 1901, and 34,000 in 1903. A weaving shed was erected in 1905, and work was commenced in it in 1907 with 520 looms, and three years later 100 others were added.

The whole of the spinning and weaving machinery is driven by a 900 h.p. steam engine, while a separate engine is employed for running a dynamo which provides electric lighting throughout the mill and offices.

The annual consumption of raw cotton is about 72,000 *maunds*, and the yarn is manufactured into cloth especially for Indian markets, including Delhi, Agra, Cawnpore, Amritsar, and in smaller measure to Calcutta and Madras.

The company have also a small ginning factory containing 20 gins, by Messrs. Platt Brothers, which are run for the convenience of cotton merchants generally.

The buildings are situated about equidistant between the railway stations of Ahmedabad and Asarva, and employment is found in them for about eleven hundred hands.

The company was formed in the year 1897 by Messrs. Lalbhai Dalpatbhai & Co., with a capital of Rs. 6,00,000, of which Rs. 5,00,000 have been paid up, and notwithstanding the increase of plant from time to time no further call has been made upon the shareholders.

The managing agents are Messrs. Jagabhai Manibhai & Co.

THE SHRINAGAR WEAVING AND MANUFACTURING COMPANY, LTD.

This company was formed in the year 1905 by Messrs. Dayabhai Kirpashanker & Co., Ltd., under whose managing agency the mill, which was started in 1906, was worked with indifferent success until 1915, when the agency transferred to Messrs. Jagabhai Manibhai & Co.

Soon after the last-named firm assumed control they reduced the share capital from Rs. 1,25,000 (nominal, and Rs. 1,17,000 subscribed), to Rs. 58,500, the amount at which it stands to-day, although power was obtained to increase it to Rs. 91,000 if the necessity arose. The result of the first year's working under the new management showed a loss of Rs. 12,000, but the energetic action of Messrs. Jagabhai Manibhai & Co., was apparent at the end of the second year (1916), when they were able to declare a profit of Rs. 15,000.

The mill, which is situated in Saraspur Road, Ahmedabad, and near to the railway station in that city, has an equipment of 220 looms, the modern machinery being driven by steam power.

Yarn, purchased locally, is manufactured into cloth for up-country bazaar trade, and the demand for the output is now so encouraging that it is proposed to make considerable extensions to the mill in the near future, there being ample room for carrying out this scheme as the property is about 6 *bighas* in extent.

The buildings have been substantially constructed and are replete with every possible convenience, including electric light, which is generated by the company's dynamo.

More than a hundred and thirty hands are constantly employed in the mill, the management of which is entirely separate from that of the Saraspur Manufacturing Company.

THE AHMEDABAD NEW EDWARD MANUFACTURING COMPANY, LTD.

This company's spinning and weaving mill, near the Saraspur Gate in Ahmedabad, was started in the year 1907, and was carried on by its founders, Messrs. Lalbhai Tricumlal & Co., Ltd., for about eight years, during which period the loss falling upon the company amounted to no less a sum than Rs. 2,00,000.

The company was established by the above-named firm in 1905, the nominal capital consisting of Rs. 5,25,000, made up of 525 shares each of Rs. 1,000, of which Rs. 5,00,000 were subscribed.

Owing to the disastrous financial position of the company at the end of the year 1915, the managing agency was transferred to Messrs. Jagabhai Manibhai & Co., on January 15, 1916, and they forthwith took steps to reduce the capital to a quarter of the original amount by fixing the sum of Rs. 250 as the value of each share of Rs. 1,000. It was, however, found that the reduced capital of Rs. 1,25,000 was insufficient to carry on the mill with reasonable prosperity of success, and hence 1,600 new shares of Rs. 250 each were issued, thus making the total capital Rs. 5,25,000.

When Messrs. Jagabhai Manibhai & Co. took over the managing agency, the equipment of the mill comprised 12,000 spindles and 250 looms, but about 10,000 further spindles have been purchased, and necessary extensions to buildings for their installation are now in progress.

The overhauling of the old machinery and other expenditure upon sundry improvements completely absorbed the profits, and shared a loss of Rs. 20,000 for 1916, the first year of control by the new managing agents, but it is confidently anticipated that the results of the present year will enable the company to pay a fair dividend.

Practically all of the yarn produced from an annual supply of about 24,000 *maunds* of raw cotton is used in the mill in the making of cloth for local and up-country bazaar trades. The premises are about 15 *bighas* in extent, and about three hundred and fifty hands are employed.

THE SHORROCK SPINNING AND MANUFACTURING COMPANY, LTD.

This company was formed in the year 1905 by Messrs. Mafatlal Gagalbhai, C. Shorrock, and Chandulal Acharatlal, the capital being Rs. 3,25,000, made up of 325 shares of Rs. 1,000, all of which have been fully paid up.

When the working of the mill was commenced in 1906, the building was equipped with 8,000 spindles and 200

THE SARASPUR MANUFACTURING COMPANY, LTD.

1 Saraspur Manufacturing Company Ltd 2 Shrinagar Weaving and Manufacturing Company Ltd
3 Ahmedabad New England Manufacturing Company, Ltd 4 Sheth Manibhai Dalpatbhai 5 Sheth Jagabhai Dalpatbhai 6 Staff

THE SHORROCK SPINNING AND MANUFACTURING COMPANY, LTD—THE NEW SHORROCK SPINNING AND MANUFACTURING COMPANY, LTD THE SURAT COTTON SPINNING AND WEAVING MILLS

1 Weaving Department The Shorrock Spinning and Manufacturing Company, Ltd Ahmedabad

2 Spinning Department The Shorrock Spinning and Manufacturing Company Ltd, Ahmedabad

3 The New Shorrock Spinning and Manufacturing Company, Ltd Nadiad 4 The Surat Cotton Spinning and Manufacturing Mills, Surat

looms, but necessary additions have been made from time to time, with the result that there are now 17,440 spindles and 628 looms The mill premises, covering an area of about seven acres, are situated in Asarva Road, opposite Asarva station, and about one mile distant from Ahmedabad.

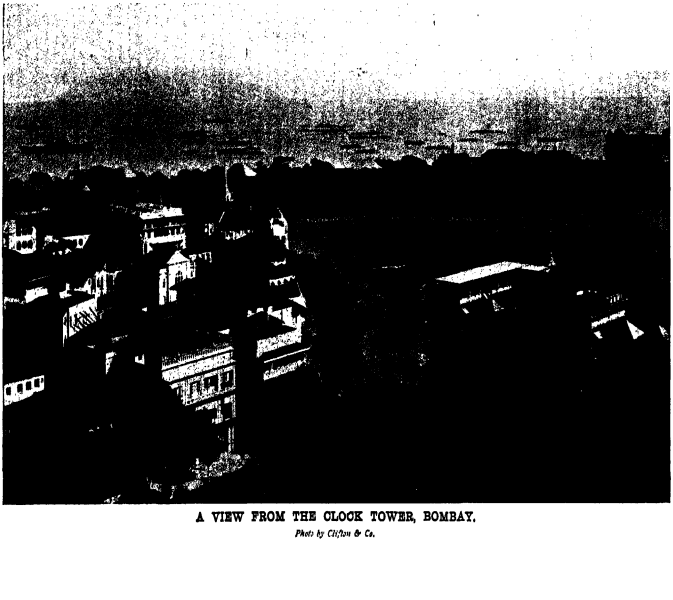
About 19,000 cwt raw cotton are consumed annually, and all yarn spun therefrom is manufactured into cloth suitable for the Indian bazar trade, the major portion of it being disposed of locally A special feature is, however, made of the manufacture of *dhotes* from fine yarn imported from England The company have their own selling agents in Calcutta, Bombay, and Cawnpore, to whom cloth is forwarded direct from the mill The machinery includes a 600-h p steam engine and three Lancashire boilers Mr Shorrock, the manager of the mill, usually employs about 850 hands

A recently published report and statement of accounts shows that the reserve fund of the company stands at Rs 2,42,100, the depreciation fund (buildings and machinery) amounts to Rs 2,92,580, and the average annual dividend has been paid at the rate of Rs 115 per share, the largest amount, namely, Rs 150 per share, having been declared in the year 1912

The agents of the company are Messrs Mafatlal Chandulal & Co Their offices are in Ahmedabad

AN INDIAN HACKEREE DRAWN BY GUZERAT OXEN.

From Forbes's Oriental Memoirs"



A VIEW FROM THE CLOCK TOWER, BOMBAY.
Photo by Clifton & Co.

THE CITY OF BOMBAY

IT has frequently been observed by European travellers when approaching the "Gate of India" by steamer, that their first view of the city gives them the impression that they have completed a voyage of some 6,000 miles merely to see a place outwardly almost identical with dozens of well-known towns in the "Old Country." They gaze upon palatial residences, huge warehouses, stores, and shops; electric and motor-cars and carriages of various descriptions throng the streets, and they hear the English language spoken. Surely, they say to themselves, this cannot be the East! Wait a moment, however: the supposition is too hastily made. Suddenly the visitor becomes aware of a babel of tongues; he sees the flowing robes and gaudy colours of the apparel of crowds of people so cosmopolitan in character that their equal could not be met with in any other city in the world. True, there are magnificent shops exhibiting modes and fashions as thoroughly up-to-date as those of London or Paris, but within a few hundred yards a stroll may be taken down the narrow tortuous streets of the bazaars, where the eye is attracted by apparently endless rows of small shops in which the owners sit cross-legged, surrounded by a marvellous collection of wares of the greatest possible variety. This is the Orient, at all events, and one is left to wonder at the huge throng composed of men of all races, creeds, and castes, whose ancestors were drawn to the western coast for trading purposes centuries ago.

Several theories have been advanced with regard to the derivation of the word Bombay, but there is now a general concensus of opinion that it may be traced back to Mamba, or Maha Amba, the great Amba, wife of Siva, and the chief goddess of the seven islands—of which Bombay was the principal—and that in course of time it was not only changed to its present name, but it also embraced the other six islands. Bombay was originally one of this group, lying off the Konkan coast on the Indian Ocean, which were probably the Heptanesia of Ptolemy (150 B.C.), and which comprised: Bassein, Dravi, Versova, Salsette, Bombay, Al Oman, and Kolaba.

Geologists agree that Bombay in the prehistoric period formed part of the mainland of India, and consisted of two rocky ridges running parallel to each other, between which was an extensive area of marshy plains or low-lying land, but that volcanic disturbances converted this tract into a group of seven islands. It is evident, however, that these islands must have been subsequently submerged, possibly by subterranean explosions, as not many years ago, when excavations were being made for Prince's Dock, a petrified *Khair* (Acacia catechu) forest was found, with upright trees, at a depth of 32 feet below high-water mark. The earliest inhabitants must have belonged to the Stone Age, as tools made of flint similar to those used by the cavemen of Europe have been discovered in several places. They probably lived by obtain-

ing fish from the sea or by catching animals and birds in the dense jungles, and their habits must have been of the crudest description.

> "Time was when clothing sumptuous or for use,
> Save their own painted skins, our sires had none."

These were the ancestors of the Kolis, a race of Dravidian descent, who about 800 years before the Christian Era lived in a most primitive fashion, ekeing out an existence by fishing or by making juices from Palmyra palm-trees. Kolis are found in Bombay to-day, still plying the same trades, and still living as a community separate from all other people.

Ancient records are in existence, however, which prove that the Aryans were in possession of extensive territories on the River Indus at least 3,000 years ago, and that a large trade was carried on between North-Western India and Persia, Egypt, and Babylon, the chief centre in this country being at Salsette, one of the islands already referred to.

The Aryans subsequently founded the North Konkan kingdom, which included Bombay and the adjoining islands as an outlying portion of their territories, which are mentioned in old Sanskrit writings under the name of "Aparanta." The Maurya and Chalukya dynasties held sway over the kingdom between the years 400 and 500 A.D., and in the ninth century the Silharas became paramount, the town of Puri (Mangalpuri), on the island of Elephanta, being their capital.

The last-named people were about the year 1260 driven from their possessions by the King of Gujarat, and although Hindus and Mahommedans alternately ruled, North Konkan and its dependencies became subject to the Sultans of Gujarat until the fifteenth century.

The first European visitors to the islands were the Portuguese who in 1510 cast anchor merely in order to obtain water and provisions, but about twenty-five years later they returned in force and obtained "for the king of Portugal and his heirs for ever the city of Bassein, its territories, islands, and seas."

These territories were transferred to the Portuguese in return for the promise of the Western nation's help in resisting the growing powers of the Mogul Emperors of Delhi. This was the beginning of a period extending over more than a hundred years, during which the new owners divided the land into areas which were leased to tenants who laboured, with considerable profit to themselves and no little gain to their landlords, by cultivating areca and coco-nut palms, and rice and other crops.

Early in the seventeenth century, however, English merchants obtained from the Mogul Emperor certain concessions which included the right to trade at Surat and other places on the western coast, and it was not long before they cast envious eyes upon the islands, believing that their development might result in the establishment of a huge seaport, with fine harbour, and illimitable possibilities for the foundation of a commercial centre which might be expected to attract the attention of merchants in every part of the world.

It was recommended to the British Government that the islands should be purchased for the construction of a naval base, and steps were being taken to secure them when the wheel of fortune turned in the direction of the English. On the 23rd June, 1661, a marriage treaty was entered into between Charles II of England and the Portuguese Infanta, Catherine Braganza, and the bride's dowry included the island of Bombay and all the rights, profits, territories and appurtenances thereunto belonging, which were to be "handed over to the King of Great Britain his heirs and successors for ever."

King Charles cannot be said to have placed much value upon his bridal gift, seeing that by Royal Charter issued in 1668 he transferred the islands to the Hon. the East India Company for an annual rental of £10 sterling.

The company on assuming possession took vigorous steps to provide for the construction of a harbour with docks, to establish industrial enterprises and to put all fortifications in a complete state of repair. The early settlers had great discouragements in their pioneer work, such as the continual danger of attacks from invaders, and the unhealthiness of the climate, but they were confident of the ultimate success of their project, and in less than twenty years instructions were sent from England that the seat of government in Western India should be transferred from Surat to Bombay, which was declared to be "the seat of the power and trade of the English nation in the East Indies." The erection of the city walls was completed by the end of the year 1718, and this was speedily followed by the building of a post office, the opening of a dry dock, and the establishment of a cotton press, and other industrial enterprises. Colonists then began to arrive from various districts in India and from England and elsewhere, and among them were Parsi and Armenian traders and a large number of Banias as well as skilled workmen. Houses for their accommodation were erected within the fortifications, and the population of the new colony increased at a rapid rate until the inhabitants were more than 50,000 in number. The swampy nature of the islands was a distinct menace to public health, and in the absence of satisfactory sanitary arrangements it is not surprising to find it recorded that within a few years disease had caused the death of nearly 40 000 people. The settlers were, moreover, continually being harassed by pirates, and in order to strengthen their position they in 1743 constructed a moat around the city walls and erected forts at Salsette, Mazagon, Mahim, and Butcher's Island.

The calamity which had fallen upon Bombay, resulting in so great a diminution in the number of the inhabitants, caused the Governor to adopt more stringent measures to provide better sanitation, and side by side with the promulgation of regulations in this direction the authorities issued by-laws with the object of securing the erection of approved types of dwelling-houses. These activities were accompanied by a marked increase of population, as in 1744 there were no fewer than 70,000 inhabitants. Further extensions of dock accommodation were made during the succeeding ten years, while the work of reclamation, coupled with that of connecting the various islands by causeways, was being proceeded with as rapidly as possible.

In 1803 a disastrous famine in surrounding districts caused a large number of persons to be thrown out of employment, and this was a very severe check upon the growth and prosperity of the young settlement. But "troubles never come singly," and before the year had closed a fire occurred which completely destroyed a huge quantity of buildings within the area of the Fort, in bazaars and warehouses and even among public buildings and private residences. It is rarely possible that it can be said that good follows evil, but in this instance one might be tempted to say that such was the case, as fire is the best germicide in the world, and further than that the cramped, unsightly, and unwholesome buildings crowded in small areas were replaced by new structures with better accommodation and standing in wider and healthier thoroughfares.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

Shortly after this date the Hon. Mountstuart Elphinstone became Governor of Bombay, and mainly through his ability and energy trade with the mainland was greatly extended, education was encouraged, swamps were reclaimed, and an efficient system of drainage was a prelude to an excellent supply of pure water for drinking purposes.

In 1858 the functions of the East India Company came to an end with the suppression of the Mutiny, and Bombay became subject to the government of the Crown through the India Office in London.

Although trading in cotton has been carried on in India for many hundreds of years, it did not assume great importance until the opening of the sea route to other countries. Cotton mills were established about the year 1860, and the exports of the raw material from Bombay received an enormous stimulus during the American Civil War (1861–5) when the confederate ports were blockaded, causing a cotton famine in Lancashire which compelled the spinners to fall back upon India for supplies for their mills, and it is estimated that during that conflict the surplus wealth which poured into Bombay must have reached a total sum of nearly £90,000,000 sterling.

A very large amount of money was then expended in the erection of handsome buildings of a residential and commercial character, and in great engineering works which resulted in the construction of dockyards, lighthouses, and railway and other workshops. It seemed as if there would be no limit to the expansion of the city, but the inflated market in cotton and cotton products received a severe check on the re-establishment of trade with America, and this resulted in the closing of many mills in Bombay and the financial ruin of hundreds of shareholders.

Although this calamity fell with great severity upon capitalists and others, the trade of the city had become too firmly established for it to be permanently affected.

The seven islands have for many years past been linked together and to the mainland by causeways and by the systems of the Great Indian Peninsula and the Bombay-Baroda and Central India Railway Companies, and Bombay now stands, an Imperial city, as the principal entrance into India from the west. It covers an area of about 22 square miles, and it consists of a low plain extending from Sion Causeway, in the north, which connects the city with the Island of Salsette, and continuing for about 11 miles in a southwardly direction to Black Bay, semi-circular in form, where two parallel ridges jut out into the sea.

The one on the west is Malabar Hill, the favourite residential quarter of wealthy Europeans and Parsis, while the eastern point is Kolaba, in which district there are barracks, docks, factories, and the noble Prongs lighthouse. The beautiful harbour stretching along the eastern side of the city affords safe anchorage to the largest steamers at all seasons of the year, and as one gazes upon the splendid docks it is extremely interesting to notice the numerous quaint-looking native craft, and larger ships flying the flags of every nation in the world.

It might be mentioned here that for some time after Bombay had become a city and seaport of great commercial importance many of its principal streets were narrow and indifferently paved but vast improvements have been effected during the past quarter of a century, and particularly since the foundation of the City Improvement Trust in 1898. The demolition of slum properties admitted a freer circulation of air to buildings which were sadly in need of it, and new structures have been built on more hygienic lines, while the question of up-to-date sanitation has everywhere been kept in the forefront.

In passing along the Apollo Bunder, which extends along the seaport on the eastern side of the city, one notices the palatial Taj Mahal Hotel, which has a grand frontage on the bay between the city and the mainland; while within a few minutes' walk are the Apollo and Great Western Hotels and the Hotel Majestic. Cruickshank, Esplanade, and Cross Roads are the localities in which educational institutions are somewhat numerous, these including St. Xavier's College and School and the Elphinstone High School, and they also contain three or four hospitals and the famous Crawford Market. Not far from these buildings is Abdul Rehman Street, which is one of the busiest thoroughfares in the city, with its numerous shops occupied by wealthy Indian merchants who deal in silver and brass-ware, ivory and wood carvings, gold and silver embroideries, carpets, rugs, and various other beautiful articles skilfully and artistically made. A large number of temples may be seen in the neighbourhood of this street, including the Jama Musjid, the principal Mahommedan place of worship, the temples of Mumbadevi, the tutelary deity of Bombay, and others dedicated to Hanuman (the monkey god), Siva, and Indrani.

Sweeping round the shores of Back Bay is the exceedingly fine carriage drive known as Queen's Road, which leads to Walkeshwar Road and thence to Malabar Point. To the north is the Hornby Vellard Causeway which unites Bombay and Worli. It was constructed during the governorship of William Hornby between the years 1771 and 1784, and it is about half a mile in length. This is one of the finest carriage drives in the city, and many very fine residences have been erected in the vicinity by several of the leading Parsi merchants. The causeway was rendered necessary owing to the tides of the sea encroaching upon the western coast of the island and leaving behind it swamps in which putrefying matter collected. After its completion it became possible to cultivate the soil and to erect dwelling-houses for the settlers.

Some of the most beautiful public buildings in the city are situated in Mayo Road. These include the Venetian-Gothic building, in which are the offices of the various secretariat departments of the Government of Bombay; the University Senate House in which degrees are conferred; the High Court buildings; the University Library; and the offices of the Bombay-Baroda and Central India Railway Company, together with a beautiful marble statue of Her Majesty the late Queen-Empress, Victoria.

The Fort is the name bestowed upon that portion of Bombay which may be termed the "city proper," much as one speaks of the City of London in which is included those storehouses of wealth of which the Bank of England is the centre. It covers a district in which are the dockyard; the old Custom House, which dates from the time of the English occupation; the Royal Alfred Sailors' Home; the Prince of Wales's Museum; and nearly the whole of the principal banking houses, merchants' warehouses, shops, stores, and hotels.

On the western side of the Fort is Malabar Hill, at the extreme point of which and bordering on Back Bay is Government House, and on the north are the districts of Mandvi, Girgaum, Byculla, and Mazagon. The most northerly districts in the Bombay Island are Parel, Dadar, Mahim, Dharavi, and Sion, the

1 PUBLIC BUILDINGS, BOMBAY 2 A VIEW OF "THE FORT," BOMBAY

Photo by Clifton & Co

3. STREET SCENE, BOMBAY 4. THE TOWN HALL BOMBAY 5 KING EDWARD'S STATUE, BOMBAY

Photo by T. Peters

last-named being connected by a very fine carriage road with the Island of Salsette.

Facing Hornby Road and not far from the docks is the magnificent pile of buildings known as the Victoria terminus, consisting of the station and offices of the Great India Peninsula Railway system, which, in addition to its own huge mileage, is connected with other railways serving practically the whole of India. The headquarters of the company were originally at Bombay Green now known as Elphinstone Circle, but several other sites were occupied until the year 1886, when practically all departmental offices were located in the imposing structure above mentioned.

The cost of erecting the offices alone was Rs. 16 35,562, while a sum of Rs. 10 40,248 was expended upon the station, exclusive of the track.

It is built in the Italian-Gothic style of architecture, and the structure, which is surmounted by a large central dome, is exceedingly handsome in appearance. It has a frontage upon Hornby Road of about 1,500 feet.

The building was given the name of "Victoria Terminus" in the year 1887 in honour of the Jubilee of the reign of Her Majesty the late Queen-Empress Victoria, to whom a statue has been placed in a suitable position under the clock.

The General Post Office, situated near to the Victoria Terminus, has been admirably designed for dealing quickly with the immense number of letters, parcels, and newspapers which pass through the city, which is the principal seaport in India for the receipt and despatch of foreign mails. It is constructed in the Indo-Saracenic style of architecture with basalt, obtained locally, which is dressed with yellow stone from Kurla and white stone from Dhrangadra. The rooms on the ground floor are devoted to the departments which handle the inland and foreign postal and parcel services, and registration of letters; on the first floor is the savings bank, and the offices of correspondence and accounts clerks; and on the second floor are the offices of the Postmaster General, the residential quarters of the Presidency Postmaster, and the office for returned unopened letters. The main or central hall rises to the full height of the magnificent dome by which the building is surmounted.

A crowd of people in an eastern city is to the Westerner a scene of the greatest possible interest, but a pen-picture cannot possibly give even an approximate idea of the cosmopolitan throng or the variety and picturesqueness of the variegated costumes. One realizes this to the full extent on entering the famous Crawford Market, which is bounded by the Esplanade, Carnac, and Pultan Roads. It is a handsome building, and was constructed between the years 1865 and 1869 at a cost of nearly Rs. 20,00,000. Nearly every race in India is represented in the busy crowd of vendors, purchasers, and casual visitors, and from about four o'clock in the morning until shortly before midnight bargaining is proceeding briskly for every conceivable form of saleable goods. The word "bargaining" is not used without just cause, as a native dealer invariably demands twice the value of his wares, and articles are frequently obtained eventually for one-third of the price originally asked.

Just as it is impossible to give a description of the people in the market, so it would be equally futile to enumerate a thousandth part of the contents of shops and stalls.

One may furnish a house obtain clothing of all descriptions, purchase meat, grain, meal, every kind of fruit, haberdashery, cutlery, perfumes, books, newspapers, smokers' requisites, boots and shoes, fish, game, poultry, confectionery, milk and its products, sporting goods, and a literally innumerable collection of sundries of every variety.

The municipal offices, situated opposite the Victoria Terminus, were erected between the years 1884 and 1893 at a cost of about Rs. 13,00,000. The Gothic style of architecture has been adopted, but the exterior decorations consist of beautiful Indian carvings of animals, birds, and tropical vegetation. The Assembly Hall is a very fine chamber 65 feet in length, 32 feet in width, and 38 feet in height, while the whole building is surmounted by a tower 235 feet above the level of the road.

The Cotton Green is notable as the place where vendors and purchasers of cotton meet for the transaction of business between the months of November and June, and the amount of produce which changes hands at these sales is naturally very great, as Bombay exports more cotton than any other port in the world with the exception of New Orleans. The "Green" is at Colaba, the extreme southern portion of Bombay, but prior to the year 1844 it occupied the site now covered by Elphinstone Circle, in which there are now some of the handsomest buildings in Bombay.

One of the most famous landmarks seen by commanders of vessels on approaching the harbour is the Rajabai tower, which surmounts a beautiful building in Esplanade Road in which the University Library is located. The latter, which is on the first floor, is filled with a remarkably fine collection of books, but attention is first directed to its teakwood doors, which manifest some of the finest examples of Indian carving, and to the handsomely-panelled arched ceiling of the hall. The tower is 250 feet in height from the ground floor, and within it is a clock with 16 chiming bells. The whole structure was erected in 1879 80 at a cost of Rs. 6,32,000, and the total expense was borne by the donor, Mr. Premchand Roychand, J.P., who named the tower Rajabai in memory of his late mother.

The town hall in Elphinstone Circle was opened in the year 1833, and it contains various offices on the ground floor, with a fine hall for public meetings on the first storey. It has a large number of very fine statues, including those of the Hon. Mountstuart Elphinstone, a former Governor of Bombay, Sir Charles Forbes, a pioneer in industrial enterprises in the city, Sir John Malcolm, Governor of Bombay from 1827 to 1830; the work of such famous sculptors as Chantrey, Woolner, and Marochetti, and many others.

A portion of the town hall is occupied by the Royal Asiatic Society's museum, which contains a very large and exceedingly valuable collection of archæological, geological, and anthropological specimens, as well as Oriental manuscripts.

It would be a very easy matter for visitors to overlook the historic building known as Bombay Castle, as it is hidden by trees in a secluded position behind the town hall, and not far from the Apollo Bunder, which was formerly the landing-place of passengers from overseas.

It was built by the Portuguese, and was originally known as Quinta, or the Manor House, but it was very seriously damaged by fire in the year 1627, and when the island passed into British hands the once famous house was in an almost ruinous condition. It was repaired by Gerald Aungier, Governor of Bombay, and subsequently became the residence of successive governors. The courtyard is enclosed by massive walls, and it con-

1 MALABAR HILL, BOMBAY. 2, 3 BOMBAY HARBOUR, FROM APOLLO BUNDER

4 A VIEW FROM THE CLOCK TOWER, BOMBAY

SHOWING BACK BAY AND B B & C I RAILWAY OFFICES IN THE FOREGROUND

tains subterranean dungeons and passages in which prisoners were confined and took their daily exercise. The old arsenal, the sundial with its curious carvings, and the strong battlements should not be overlooked.

Chief among institutions connected with the furtherance of educational matters is the University of Bombay, in Esplanade Road, which was established in the year 1859, and has power to confer degrees in the following four faculties: in Arts, Bachelor and Master of Arts, Bachelor and Master of Science; in Law, Bachelor and Master of Laws; in Medicine Bachelor of Medicine and Surgery, Bachelor of Hygiene, Doctor of Medicine, Doctor of Hygiene, and Master of Surgery; in Engineering, Bachelor and Master of Civil Engineering; and Bachelor and Master of Agriculture.

The Elphinstone College had its origin in the Elphinstone Institute, which was founded in 1835 as a memorial to the Hon. Mountstuart Elphinstone, a much-respected Governor of Bombay, whose term of office extended from 1819 to 1825. Records state that a public meeting was held for the purpose of considering the question of showing appreciation of the very valuable public services rendered by this gentleman, and that a resolution couched in the following words was passed unanimously: "That the most satisfactory and durable plan of carrying public wishes into effect is by accumulating a fund of money to be invested in Government securities, from the interest of which one or more professorships be established for teaching the English language and the arts and sciences of Europe." As a result of this meeting the Institute was founded as already stated, and in 1856 it was formed into a College, for the teaching of arts and sciences, and a school for giving instruction in primary standards. Four years later the College was recognized by the University of Bombay. St. Xavier's College was originally (1868) intended for the higher education of Roman Catholic students, but it subsequently opened its doors to pupils belonging to other denominations. It was recognized by the University in 1869, and it is well equipped with laboratories for research and experimental work in chemical, biological, and other branches of science. The College was at first located on the Esplanade Road, but it now occupies a suitable site in Cruickshank Road.

Few cities in India are able to offer to young men intending to embark upon a commercial career the advantages which are open to those who undertake a course of study in the "Sydenham College of Commerce and Economics" situated in Hornby Road. The curriculum provides for a university education of such a kind as will assist them to rise to the more important and responsible positions in their respective vocations, and for study in the various branches of economic science and by original research.

The only institution recognized by the University of Bombay for the teaching of medical and surgical science is the "Grant Medical College" in Parel Road. The building is well provided with laboratories furnished with up-to-date appliances; lecture hall and dissecting and other rooms. The College was founded in 1845, and has been recognized by the University.

The first mint in Bombay was founded in the year 1670 by Gerald Aungier, the second Governor of Bombay under the rule of the East India Company, but the present building in Elphinstone Circle was opened in 1829. It appears from published reports that about 24 tons of silver are melted daily, and that some 12 tons of approved coins are produced while the remaining silver is re-melted. The presses, 17 in number, are able to turn out 120 coins a minute, and the value of those produced from 12 tons represents a sum of Rs. 10,00,000. More than 30,000 gold *mohurs* are made every day, and 100 000 silver coins are minted daily for the Straits Settlements, in addition to an immense number of Indian coins of smaller value.

Exceedingly interesting from a historical as well as an archæological point of view is Old Government House in Parel Road. It was originally a Roman Catholic Church, but in 1719 it came into the hands of the Government, and after suitable alterations and improvements had been effected, it was named "Parel House," and became the summer retreat of several Governors of Bombay. In 1776 Mr. William Hornby, the then Governor, made it his official residence, and it continued to be used as Government House until the death from cholera of the wife of Sir James Fergusson, Bart., K.C.M.G., in the year 1883, when it was abandoned in favour of the present house at Malabar Point. Bishop Heber, writing in 1838, said: "It is very handsome, having a fine staircase and two noble rooms, one over the other, of 75 or 80 feet in length, and very handsomely furnished." His Majesty the late King Edward VII (when His Royal Highness the Prince of Wales) stayed there for a week when visiting Bombay in the year 1875; it was fitted as a plague hospital in 1879–98; and in 1899 it became the Bombay Bacteriological Laboratory.

There is little left in these prosaic days of the past glories of Old Government House, but in a large hall formerly used as a ball-room and in other parts of the building there are still traces of decorative work of a high order, while recent excavations have revealed relics which clearly connect the structure with the sacred edifice of two and a half centuries ago.

Bombay is an "advanced" city with regard to its provision of hospitals for the medical and surgical treatment of patients, and of institutions for conducting investigations and experiments in bacteriology, pathology, and other subjects with the object of discovering the practice to be followed in the prevention and cure of specific diseases.

The first hospital—St. George's—erected in 1677, was designed for the benefit of "sick English," and it was situated on the Esplanade, but after two or three changes of locality rendered necessary for enlarged accommodation, a suitable site was found for it on the north-eastern side of the Victoria Terminus of the Great India Peninsula Railway Company. The present structure, built in 1889–90, has ample accommodation for patients in general and special wards, and few hospitals can boast of more modern surgical and scientific appliances than those in St. George's.

Among other institutions of a similar character is the Sir Jamsetji Jijibhoy Hospital, which was erected in 1845 for the purpose of giving medical treatment to poor Indians of all castes, and at a subsequent date a fine new building was added which is known as the "Moore Operation Theatre." The station hospital at Colaba is set apart for European military officers and troops, and the Marine Lines Hospital is reserved for the use of Indian soldiers, while several public institutions in the city, such as the Prince of Wales Museum, the Royal Institute of Science, and certain railway offices, were during the Great War temporarily converted into hospitals.

It is impossible to over-estimate the value of the scientific work now being carried on in the Bombay Bacteriological

Laboratory, which, as stated, is located in the Old Government House at Parel. Special attention has been devoted to investigations and experimental work with regard to bubonic plague, cholera, malaria, dysentery, tuberculosis, and other diseases which are so frequently met with in India. Pathological specimens are diagnosed, water is chemically examined, and preventive and curative vaccines of various kinds are prepared by a large staff of scientists. A scheme is now under consideration for the enlargement of the building and for making the new portion a School of Medicine for tropical diseases.

There are several very beautiful temples in Bombay, but one which attracts great attention is a comparatively new one named Zaoba's Rama Mandar. The three principal deities are designed in marble and represent Rama, or Vishnu, in the centre; Sita, wife of Rama, on the left-hand side; and Lakshmana, his brother, on the right. The image of Rama is clothed in gorgeous silks decorated with precious gems; overhead is a richly gilded canopy; and the altar upon which the figures stand is enclosed by brass railings.

The temple of the Hindu goddess, Maha Lakshmi, is situated near Warden Road, almost at the extreme western side of Bombay. When land was being reclaimed from the sea it became necessary to connect the area now known as Worli with the main portion of the island, and it was proposed to construct a causeway in order to effect this junction. It is understood from tradition that only a very small portion of this work had been completed when the new bank collapsed, but after the damage had been fully repaired the builder a Prabhu, was not a little perplexed to find that the catastrophe was repeated at the very same spot. He was quite unable to account for this curious fact, but, according to popular tradition, he had a vivid dream in which Lakshmi declared that a stone representation of herself would be found in the strip of water over which he was endeavouring to throw a bridge. The goddess further desired that a search should be made for the image and that when discovered it should be housed in a temple to be built on a site which she then pointed out. This vision was fulfilled, and the causeway was completed which is known as Hornby Vellard.

By ascending a flight of steps a courtyard, in which stands the temple, is reached, and after entering the door one sees an altar upon which are three figures: the recovered image of Lakshmi in the centre; with Kali, "goddess of sacrifice," on the right; and Sarasvati, "goddess of learning," on the left.

Not far from the terminus of Walkeshwar Road, which traverses the entire length of Malabar, is the temple dedicated to Walkeshwar, signifying the "god made of sand." It has been erected almost at the brink of a large tank called Banganga, whose waters are believed to contain certain powers of healing, and it is the successor of one which was destroyed in the latter portion of the fifteenth century. It is constructed of stone, and it is alleged that it contains the original *lingam* made out of sand by Rama.

Fire temples are the public places of worship of the Parsi community, who revere fire, earth, and water, but who regard the first-named of these elements as the most sacred of all. There are about thirty of these edifices in Bombay, the oldest of which is one at Girgaum, which was consecrated in the year 1783. The principal fire temples are known by the name of Atesh Behram, or "the fire Behram," the "Angel of Success," and the sacred flame in them is fed with no fewer than sixteen different kinds of fuel.

In the centre of the shrine—to which priests only are admitted—is a silver brazier resting upon marble stands which contains the fire, which is not on any account to be permitted to be quenched.

It is not correct to say that Parsis are worshippers of fire, but as followers of Zoroaster it is a part of their creed that prayer should be offered by an individual when his face is directed towards the sun or a flame of fire.

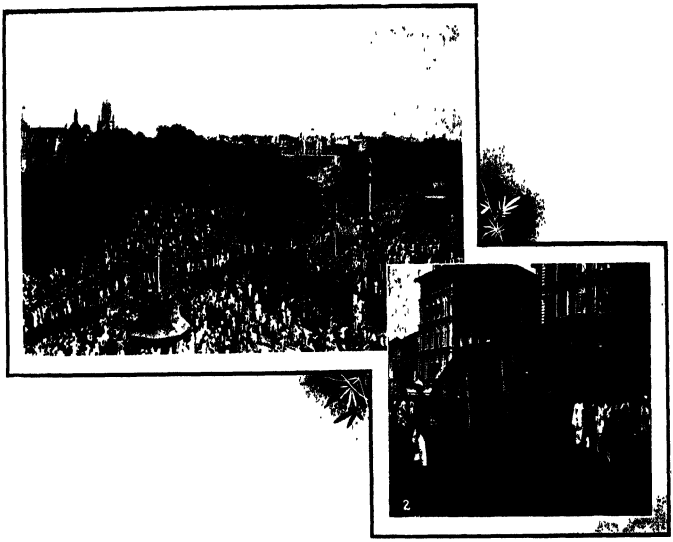
The method of disposing of dead bodies of Parsis has not changed during the past twenty-five or thirty centuries, and the towers in which the remains of deceased persons are deposited are, according to the religious teachings of that community, always erected upon an

A BUSY CORNER, BOMBAY.
Photo by J. F. Peters

eminence. Those in Bombay, called the "Towers of Silence," are situated on Malabar Hill on the south-western side

land, the Commander of H.M.S. *Bellerophon*, to whom Napoleon surrendered, to Captain Hardinge, R.N., who defeated

cutta, and in 1853 the city was made the seat of a Bishop, the church of St. James becoming St. Thomas's Cathedral.



1. INDIAN WAR LOAN PROCESSION, BOMBAY, AUGUST, 1918. 2. A WAR LOAN TANK, BOMBAY.

Photo by Vanderlemen.

of the city, and the enclosure in which they stand is about 8 000 square yards in extent. The towers - five in number - consist of solidly-constructed stone turrets of medium height, in which, at some distance from the ground, is a kind of chamber in which the dead are placed. Hundreds of vultures occupy advantageous positions upon walls or trees until the time arrives for them to swoop down upon the bodies, which are quickly denuded of every vestige of flesh. The bones are subsequently swept away into subterranean wells, and all traces of animal matter are thus removed.

St Thomas's Cathedral, in Elphinstone Circle, formerly known as Bombay Green, contains several remarkably interesting monuments of notable personages connected with the early history of the settlement of the English in Bombay. Among these may be mentioned the memorials to Jonathan Duncan Governor of Bombay about the year 1800; to Colonel Burton Barr, by whose victory in battle at Kirkee the whole of the Deccan passed into the hands of the British; to Admiral Maitthe French frigate *Le Pied Montaise* off the coast of Ceylon; to Bishop Carr, who is depicted in the flowing robes of a prelate, and many others.

The construction of the edifice was commenced about the year 1680, after a sum of more than Rs. 50,000 had been subscribed by the small English community, which included servants of the East India Company, but when the external walls had reached a height of 14 or 15 feet the work of building was stopped in a most mysterious manner, although rumours were current that the funds had disappeared. For a period of more than thirty years the site was merely waste land, the dumping ground for rubbish, and the abode of the smaller species of wild animals, and it was not until 1715 that a new foundation stone was laid, and rebuilding was commenced in a thoroughly energetic manner, the church being formally dedicated on Christmas Day, 1718, in the name of St. James. About a century later Bombay had risen to such importance that the incumbent was created an Archdeacon of the See of Calcutta.

Few cities in the East can boast of such a large number of statues of prominent men who have been closely associated with their political, social, literary, commercial, and economic life as are to be found in its principal public buildings, squares, and gardens of Bombay. These include one of the great Marquis of Wellesley in Elphinstone Circle Gardens; an equestrian statue of His Majesty the late King Edward VII, in the grounds of the Prince of Wales's Museum; one of Sir Richard Temple, Governor of Bombay (1887 80) near the University Library; of Her Majesty the late Queen Victoria, at the junction of Mayo and Esplanade Roads; of H.R.H. the late Prince Consort, in the Victoria and Albert Museum in Victoria Gardens; of Sir Dinshaw Maneckji Petit whose name is cherished as a great philanthropist; of Mr. J. N. Tata, "the pioneer of Indian industries," and several others; while marble and bronze busts may be seen in churches, colleges, halls, libraries, and public buildings in every part of the city.

Nearly sixty years ago it was decided

to establish a permanent memorial to commemorate the introduction of British rule in India under Her Majesty the late Queen Victoria, and it was decided to invite the co-operation of the Agricultural and Horticultural Society of Bombay in promoting the scheme. The garden at Sewri belonging to this society was given up, and a plot of land, nearly 50 acres in extent, in Parel Road, near the Byculla railway station, was selected as the site for the new venture. The gardens have been laid out in the most charming manner, and rare tropical trees and plants and beautiful flowers meet the eye everywhere, while the zoological collection embraces many varieties of wild animals, birds, and reptiles.

The Victoria and Albert Museum contains a large number of specimens of old-fashioned pictures, prints, drawings, photographs, indigenous products, and a miscellaneous collection of artistic curios.

Festivals in India are fixed according to the lunar calendar, as is the case with Easter celebrations in England, therefore the dates on which they are held vary considerably.

The Mahommedan festival of Mohurrum, signifying "most sacred," is held annually in memory of the martyrdom of the Prophet's grandsons, Hassan and Hussain. It commences when the new moon of the first month (Mohurrum) becomes visible, and by including the time spent in "visiting the grave," it continues for twelve days, although actual fasting is completed at the close of the tenth day. The Mahommedans are divided into two sections—the Shiahs and Sunnis—who trace their descent through different channels and do not acknowledge the same leaders. This causes much friction, and many of the lower classes of the two factions nurse their bitterness and jealousy until the Mohurrum affords them an opportunity for displaying their feelings in a somewhat unruly manner. The festival is conducted with particularly impressive ceremonials in Bombay, and the last day closes with a theatrical performance representing the martyrdom of Hassan and Hussain.

The Hindu festival of Dewalee is held in honour of Vishnu's victory over the demon "Narakasura." The conqueror entered his city amid the joyous acclamations of the inhabitants, who illuminated their houses to intensify the welcome. The festival—known as the "feast of lights"—now lasts for three days, and during this period the people rise early in the morning, bathe, and put on new clothing; merchants close their books of accounts and make calculation of profits; and as darkness falls thousands of small oil lamps are lit in honour of Lakshmi, the goddess of good fortune.

Coco-nut Day in Bombay is celebrated on the beach of Back Bay with the object of giving thanks for the beneficial rains of the monsoon, and of offering prayers for a successful harvest. Coco-nuts and other products of the fields are thrown into the sea as propitiatory offerings.

While enjoying the numerous beautiful attractions of Bombay, visitors should make a special feature of paying a visit to Elephanta Island. An exceedingly pleasant day may be spent by taking a trip by motor launch to the island, which is about six miles distant from Bombay. This strange name was given to the island by the Portuguese, as there was in former days a large stone elephant on the southern shore which stood as a sentinel guarding the treasures in the

VICTORIA TERMINUS, BOMBAY.
Photo by Clifton & Co.

interior. The native name was Gharapuri, signifying "place of the rock," or "purification." The island consists of two long hills with a valley between, and it has earned a world-wide fame on account of its caves and Brahmanical shrines, which were cut about the eighth century of the Christian Era. The "Great Cave"—the largest of these—in the western range, is approached by winding steps which ascend to the height of about 250 feet above the level of the sea, and the distance from the entrance to the furthest wall is not less than 130 feet. The central area is some 91 feet square, and the roof is supported by six rows of columns, six in each row, excepting where the regularity is broken by a small shrine. The most notable sculpture is the colossal Trimurti, or three-faced bust of the Hindu triad, namely, Brahma, the Creator; Vishnu, the Preserver; and Siva, the Destroyer. The whole block is nearly 18 feet in height, and it rests upon a stone slab about 2½ feet in thickness.

There are numerous other sculptures, such as the marriage of Siva and Parvati; a group of gigantic figures clustered round Siva, depicted as half male and half female; and Siva as *Kapalabhrit*, with a skull as part of the head-dress, and a string of skulls suspended from the left shoulder.

Another pleasant outing may be arranged to Bandra, an old Portuguese settlement in the Island of Salsette, and the journey of a dozen miles may be made from Bombay by the Bombay-Baroda and Central India Railway or by motor-car or carriage. Here are some interesting relics of Portuguese days, including the church of St. Andrew, built by the Jesuits in 1570.

An enjoyable trip may also be taken to the Vehar Lake, from which Bombay derives its chief supply of water. Much of the scenery along the road from the capital city is of a very charming description, and on reaching the shores of the lake one cannot fail to admire the placid appearance of the large sheet of water surrounded by most luxuriant vegetation. The lake was constructed in 1856, but in the course of a few years the supply was insufficient for the increasing population of Bombay, and therefore a second lake was excavated at Tulsi, near to Vehar.

Standing near the Vehar Lake is a monument bearing an inscription to the effect that "Captain J. H. G. Crawford," of the Bombay Engineers, was the author of the Vehar waterworks scheme. His plans were subsequently developed, and the work, which was commenced in 1856, was completed in March 1860.

Visitors to the Vehar Lake should extend their journey to the Kenneri caves, on the Island of Salsette. These rock temples, of which there are 109, are excavated in volcanic breccia out of the face of one of the highest hills in the island, some of which attain an altitude of about 1,500 feet. The caves are of Buddhist origin, evidently having been constructed between 100 B.C. and A.D. 900, and upon the wall are very finely-carved representations of Buddha and of elephan's lions, and other wild animals.

The first stone of the magnificent Prince's Dock was laid in 1875 by His Majesty the late King Edward (when Prince of Wales), and from that time forward the growth of the city has been phenomenally rapid.

One of the greatest factors in connection with the progress made in recent years is the "Bombay City Improvement Trust," which was brought into being by Act of Parliament in the year 1898. Power was granted to the Trust (*inter alia*) to acquire land or buildings under the provisions of the "Land Acquisition Act" of 1894, to take possession of unhealthy areas, to broaden old streets and construct new roads, and to erect suitable residences for the labouring classes.

Several ambitious schemes of improvement have been completed by the trustees, among which may be mentioned a new road, 80 feet in width, which has been constructed through the heart of the city from Back Bay to Prince's Dock; the making of Princess Street, which necessitated the removal of disease-producing localities and has provided Bombay with an excellent outlet for congested traffic; and the opening of an avenue, 120 feet in width, from Parel Road to Elphinstone Road. Other projects of importance now in progress include: a main avenue 150 feet in width through the Soparibag Estate, which is to be known as "Kingsway," and another thoroughfare, 120 feet in width and some three miles in length, which is to connect "Kingsway" with the southern portion of the city.

The city of Bombay undoubtedly owes its commercial importance to its unique position on the western coast in India, to its magnificent harbour, and to railway facilities for the establishment of trade with every part of the country. Its principal industry is the spinning and weaving of cotton—in fact, it is the chief centre of the cotton trade in India—and it now contains more than 80 mills, equipped with about 2 850,000 spindles and some 51,000 looms, employment being found therein for fully 120,000 workpeople.

There are also flour and silk mills, large chemical factories, tanneries, a large leather factory, and engineering and iron works, while a considerable number of the inhabitants are engaged in making gold and silver ornaments and useful articles of every description for household purposes.

The enormous loss of vessels during the Great War has caused a revival of ship-building, which was a thriving industry on the west coast many years ago.

Prior to the year 1914 the various railway companies in India were in the habit of importing a very large quantity of rolling stock and appliances, but since that date they have been compelled to depend upon their own resources, and in consequence have had to manufacture machinery and plant which they had previously obtained from Europe and America. The Great Indian Peninsula and the Bombay-Baroda and Central India Railway Companies have extensive workshops in which some 5,000 hands are employed in the construction and repair of all kinds of railway equipment. Educational institutions have in recent years been giving instruction in industrial work, and among them may be mentioned the Queen Mary Technical School for teaching disabled Indian soldiers the art of knitting by machinery, driving engines and motor-cars, tailoring, and farming. The Victoria Jubilee Technical Institute gives instruction in the manufacture of cloth and woollen goods, engineering, sanitation, and chemistry, and the School of Arts has classes for the teaching of the art of making pottery for drawing and kindred subjects.

Mention should also be made of the Tata Hydro-Electric Power Supply Company, which is capable of supplying 10,000 k.w. at a pressure of 5,000 volts. The current generated by this undertaking is transmitted to Bombay, a distance of 90 miles from the power station, and supplies the motive power for more than forty cotton mills in the city.

Other hydro-electric schemes have been projected, and it is estimated that in a very few years energy of fully 50,000 h.p. will be obtained for the use of railways, mills, factories, and other industrial enterprises.

Bombay is one of the finest sporting

centres in the East. Apart from the hunting of large game in jungles situated within easy distance from the city, it has frequent race meetings, as well as an immense number of fixtures for cricket, football, tennis, hockey, Badminton, and other games.

The racing of sailing-boats was in evidence more than three-quarters of a century ago, and an old file of the *Bombay Times* shows that in April 1839 a regatta was held at which one of the prizes consisted of a silver cup of the value of £50. A committee formed for the purpose of organizing racing events met from time to time in various places in Bombay, but the yachting interest had no permanent "home" until 1881, when a fine building, with garden and promenade, adjoining the Marine Parade, came into existence, and under the name of the Yacht Club became one of the most popular institutions of the city. Two years later the committee added reading and billiard-rooms, together with other accommodation, and these improvements were followed by a considerable increase in the number of members, who evinced the keenest interest in this popular branch of sport. It should be mentioned here that in 1880 permission was obtained from the Lords of the Admiralty to fly the blue ensign of the fleet over the club building, and in 1881 a similar concession was granted to yachts belonging to members of the club.

Residential chambers situated on the south side of the Apollo Bunder were acquired in 1897, and these have been of the greatest value in furthering the interests of the club. His Majesty the late King Edward and Her Majesty Queen Alexandra visited the club during their tour, when Prince and Princess of Wales, in the year 1905, and on the staircase are signed photographs of Their Majesties the present King-Emperor and Queen-Empress.

The Willingdon Sports Club was opened in 1917, and provision is made for all kinds of sports and games, membership being open to Indians as well as Europeans. The club-house stands upon land some thirty-five acres in extent, and is conveniently situated near Hornby Vellard.

The Bombay Club is the successor of the Old Indian Navy Club; the Orient Club was established for the express purpose of fostering friendly relation between European and Indian gentlemen; and there are also Gymkhana clubs for Europeans, Hindus, Mahommedans, Parsis, Catholics, and Japanese, the majority of these holding their sports along the shores of the Back Bay. The Byculla Club, the oldest of Bombay clubs, is the subject of a special notice.

ABDOOLABHOY AND JOOMABHOY LALJEE

If the merchants who a hundred or more years ago traded in the East with caravans, pack-bullocks, or coolies for the transport of their merchandise, and whose area of commercial activities was limited to a radius of four or five hundred miles, could to-day witness the widely reaching ramifications of many of the leading business houses in Bombay and other centres, they would be astounded at what has been accomplished by fast steamers, quick railway facilities, and telegraph and telephone conveniences in linking together in close trade relationship the principal cities and seaports of the world.

It is interesting to read the history of many companies and firms who, at the present time (January 1918) are princes among merchants, and yet who can look back upon the unpretentious foundations of their businesses and trace their gradual progress from small beginnings to enterprises of great magnitude. It is not, however, to be inferred that these successes have been obtained merely through improved means of communication. Far from it; those facilities only provided keen commercial men with opportunities for the development of their capabilities. A good illustration of one of those mercantile concerns whose history is summed up in the word "progress," is met with in connection with the well-known firm of Messrs. Abdoolabhoy and Joomabhoy Laljee, of 242 Samuel Street, Bombay.

The business was established about the year 1826 at Makalla, in Arabia, by Mr. Laljee Somar, who exported grain to African and Arabian ports, and who also engaged in banking. This branch is still in active existence, but the firm, as now constituted, are also agents for the Bombay-Persia, and Arab Steamship companies and contractors for the collection of custom dues for H.H. the Sultan of Arabia.

Mr. Laljee Somar was afterwards invited to establish a business at Aden, and his influence upon commercial matters in that port was such that its present-day importance as a trading centre is due in a very considerable degree to his energy and tact. His ambitions, however, led him to look in other directions for fresh fields of commercial enterprises, and the result was that he commenced a similar business at Bombay in the year 1856, in premises which are now occupied by the firm whose name appears at the head of these notes.

As trading relationships with countries in the Far East were about that time assuming considerable proportions, Mr. Laljee Somar deputed his son, Mr. Abdoolabhoy Laljee, to visit China for the purpose of opening a branch there, and that enterprise was worked in a most successful manner until the death of the father, when the son returned to Bombay and for a period of twenty years carried on the original concern in conjunction with his two brothers under the name of Hajee Laljee Somar. During those two decades the firm's interests expanded so greatly that they purchased five steamers (two of which were specially built in England) and commenced trading between Bombay and Varraval, Cutch Mandvi, Karachi, Ratnagiri, Mormugao, and Cochin.

Mr. Joomabhoy Laljee, who entirely managed this shipping branch, died in 1886, and the remaining partners decided to dispose of the five vessels. The two surviving brothers and Mr. Fazalbhoy J. Laljee, dissolved partnership in the year 1890, and the elder of them, Mr. Hajeebhoy Laljee, commenced business on his own account, while Mr. Abdoolabhoy Laljee and Mr. Fazalbhoy Joomabhoy Laljee (the latter being the only son of the late Mr. Joomabhoy Laljee) continued business jointly. The style of the firm was changed to Abdoolabhoy and Joomabhoy Laljee.

The enterprising spirit of the founder of the firm appears to have been inherited by all of his sons, and the two brothers who succeeded to the paternal business extended their activities by accepting military contracts for the supply of stores and goods of various descriptions. The first of these undertakings was for supplies for the Suakin and Afghan Expeditions, and the most satisfactory manner in which the firm met their obligations caused them to be entrusted with other large contracts for the South African War and the China and Somaliland Expeditions.

During the first year and a half of the great European War the firm shipped from Bombay stores to the value of more

ABDOOLABHOY AND JOOMABHOY LALJEE.

1. Reservoir (120 Acres) with Seven Sluices for Receiving Fresh Sea-water. 2. Pumping Station Drawing Water from Reservoir.
Evaporating Tanks and Crystallizing Pans. 4. Collecting Salt from Crystallizing Pans. 5. Trolley Lines, Crushing Mills, Loading Pier and Docks.

ABDOOLABHOY AND JOOMABHOY LALJEE

1. Loading a Full Cargo in Bulk
2 The Jivraj Spinning and Weaving Mills
3 Father—Hon Joomabhoy Laljee
4 Abdoolabhoy Laljee

than two crores of rupees, and they have also provided most of the supplies for the Aden Expeditionary Force since the commencement of the present hostilities. Contracts are also held for delivery of grain, articles of clothing, sugar, and other necessaries for the military divisions in India, and in order that the firm might be in a better position to execute such large orders they opened branches at Calcutta and Chittagong.

The branch at Aden has also been carried on with great success since it came into the hands of the present firm, and an important new venture was started when they opened a salt business there at the instance of Mr. Hoosainbhoy A. Laljee.

In 1908 the Government granted a lease of 1,000 acres of land for a term of sixty years, and the huge salt works which have been erected began by turning out 25,000 tons of salt annually, but that quantity has now been increased to nearly 70,000 tons.

Up-to-date machinery is used for crushing salt, which is shipped monthly in specially chartered steamers to Calcutta, Chittagong, Rangoon, and Singapore, the consignments to the first two places requiring the whole tonnage of the ships. Notwithstanding the fact that the works are within a distance of six miles from the Turkish trenches, crushing and manufacture is carried on continuously by five hundred hands, who are under the management of Mr. Ahmedbhoy Laljee, while supreme control of the undertaking is vested in Mr. Fazalbhoy J. Laljee, assisted by Mr. Jafferbhoy Laljee, of Bombay, who pays periodical visits to Aden.

The business house of the firm at Aden has been managed by Mr. Ismailbhoy Laljee and Mr. Nassurbhoy A. Laljee, and as illustrating the thoroughness displayed by them in their important positions it may be said that when Aden was made a coaling station about thirty-five years ago, at the instance of the late Joomabhoy Laljee, they constructed a pier to facilitate the bunkering of large steamers, and this pier was so soundly built that it is being constantly used at the present time.

A still further addition has been made in recent years to the operations of the firm at Bombay by the importation to that city of beet sugar from Europe, and of cane sugar from Java and Mauritius to Bombay, Calcutta, Karachi, and Aden.

About the year 1910 the firm obtained the managing agency of the Jivraj Baloo Spinning and Weaving Mills, situated at Tardea, in which there are 36,000 spindles and 700 looms driven by electric and steam power.

An entirely new plant of a modern type was erected in these mills in the year 1906, and other important additions included the building of a new dyeing house and the installation of electric lighting apparatus. Between 14,000 and 15,000 bales of raw cotton are used in the mills annually, and the manufactured yarn and cloth is either sold locally or is shipped to the various branches of the firm. About 1,800 hands are constantly employed.

Local agencies are held by the firm (under the management of Mr. Yusuf Laljee) for the Triton Insurance Company, Ltd., and for the collieries in Bengal for which Messrs. Jardine, Skinner & Co. and Messrs. Octavius Steel & Co., of Calcutta, are managing agents.

Coal is imported for consumption in Bombay mills and for bunkering purposes.

The firm are members of the Bengal, Assam, and Aden Chambers of Commerce, and of the Indian Merchants' Chambers and Bureau, of Bombay. Not only collectively, but individually, have the partners associated themselves with the material progress of Bombay. This point is well illustrated by the fact that one of the partners has represented the Mandoi Ward on the Municipal Council in Bombay for the past thirty-two years. The late Mr. Joomabhoy Laljee held the position for a period of six years, and on his death Mr. Fazalbhoy Joomabhoy Laljee occupied the seat for twenty-one years, and since 1910 Mr. Hoosainbhoy Abdoolabhoy Laljee succeeded him. The last-named gentleman is also a director of the Bombay-Persia Steam Navigation Company, Ltd., and the Arab Steamship Company, Ltd., for whom Messrs. Turner, Morrison & Co., Ltd., of Calcutta, Bombay, and Chittagong, are agents.

The present proprietors are Messrs. Abdoolabhoy Laljee, Fazalbhoy Joomabhoy Laljee, Ismailbhoy A. Laljee, Nassurbhoy A. Laljee, Hoosainbhoy A. Laljee, and Jafferbhoy A. Laljee.

The firm may be described generally as merchants, Government contractors, and mill and insurance agents. Their branches at the present time are at Calcutta, Chittagong, Aden, Berbera, and at many other important places throughout the world; and their telegraphic addresses are "Prime," "Security," and "Veteran."

THE AKBAR MANUFACTURING AND PRESS COMPANY, LTD.

There have been few more noticeable features in connection with industrial development in India than the remarkable fluctuations in price, quality, and quantity of raw cotton during the past sixty years. Soon after the Mutiny of 1857 there was general stagnation, which was only relieved by the outbreak of the American Civil War, which caused an abnormal demand from English manufacturers for Indian cotton. Greatly enhanced prices were obtained for even inferior consignments during succeeding years, and this led to over-production, which resulted in the closing down of mills which had been hurriedly built during the period of unusual prosperity. It was a long time before the cotton trade recovered even a portion of its former stability, but as soon as a sound commencement was made in that direction the growth of the industry has been progressing steadily.

Forty years ago, or thereabouts, machinery was imported with the object of replacing manual labour, and spinning mills and pressing and ginning factories were equipped with up-to-date plant of a time-saving description.

One of the undertakings established about that time, namely, in 1878, which has been successfully controlled, was the Akbar Manufacturing and Press Company, Ltd., who are owners of cotton presses at Ahmednagar, Khandwa, Burhanpur, Karanja, and Savda, and ginning factories at Khandwa, Karanja, Jalgaon, Savda, and Kasandra, all of which places are situated in the richest cotton-producing districts in India.

The directors of the company are: Sir Shapurji B. Broacha, Kt., J.P. (chairman), Messrs. Bundalibhoy Hajeebhoy, O.B.E., J.P., Ruttonsey Mooljee, J.P., Sultanbhoy Hajeebhoy, Shavaksha C. Dinshaw, and the Hon. Mr. Mahomed Hajeebhoy, J.P. (*ex-officio*), member of the Legislative Council of His Excellency the Governor of Bombay, member of the Bombay Municipal Corporation, and Sheriff of Bombay for the year 1918.

The secretaries and treasurers of the company (whose registered offices are at the J. N. Petit Institute Building, 314 Hornby Road, Fort, Bombay) are Messrs. Hajeebhoy Laljee & Co., who have branch establishments at Aden, Berbera, Mukala, and other important centres.

THE AKBAR MANUFACTURING AND PRESS COMPANY, LTD.

1. Buildings, Carnac Bunder, Bombay 2. Factory, Burhanpur. 3. Bungalow and Garden, Burhanpur.

THE ALL-INDIA INSURANCE COMPANY, LTD.

1—4. Views of a Great Fire at Colaba, Bombay.

THE ALL-INDIA UNITED INSURANCE COMPANY, LTD.

It is believed that the above-named company is the only Indian undertaking which transacts business in both life and fire branches, although there are others which accept risks in one only of these departments The company was established in Bombay in the year 1906, and the first board of management consisted of several merchant princes of that city, who were fortunate in having for their Under the present management of Messrs M M Shirazee & Sons, the company is making excellent progress, operating all over India, and previous records have been beaten by threefold increase in the volume of business

One of the most satisfactory features in connection with the management of the All-India Company is that the directors are not mere figure-head investors trusting to the gods to give them good returns upon their investments they are business thrai Ambalal Desai B A (son of the late D B Ambalal Sakar Desai), who is the present managing director

The authorized capital of the company is Rs 50 00 000 and the subscribed capital is Rs 25 00 000 of which the sum of Rs 5,00,000 has been paid up

AMIN BROTHERS & CO.

The history of this firm whose business operations include the supply of reputable

AMIN BROTHERS & CO (NATIONAL GLASS WORKS)

1 Mr B S Parikh 2 Mr B V Patel 3 Mr S G Patel 4 Factory 5 Main Office and Showroom Staff

chairman the notable Indian patriot, the late Hon Sir Pherozeshaw Merwanji Mehta, whose powerful support inspired public confidence in the venture

The original articles and memorandum of association laid down the principle that all the Company's funds should be invested in public securities authorized or guaranteed by Government, and such documents have from time to time been deposited for safe custody with the Bank of Bombay

All newly inaugurated business concerns are fated to meet with unexpected difficulties, but this concern, which has now been running for over eleven years, has stood all tests and initial difficulties men of undoubted ability and of unimpeachable integrity and take a deep personal interest in all matters affecting the company's best interests

Efficiency and economy are watchwords underlying the policy of the directors, and as the shareholders reside in all parts of India it is manifest that the company is a thoroughly representative one

The board of directors comprises Mr I Portlock (of Messrs James Mackintosh & Co), the Hon Mr Mahomedbhai Hajeebhai Laljee (of Messrs Hajeebhai Laljee & Sons), Mr A A Dharamsey (grandson of the late Mr Ahmedbhai Habibbhai), Mr A J Noormahomed (of Calcutta and Bombay), and Mr Vaikunemployees of almost every class in life, the manufacture of glassware and the representation of several mercantile companies began with the purchase of the goodwill of the Servants Securing Agency of Bombay in the month of August 1916

This is now an important agency under European management and the partners are constantly engaged in finding suitable appointments for medical practitioners, surveyors overseers, drawing masters, civil, mechanical, and electrical engineers, motor mechanics and drivers, weaving masters, dyers, bleachers cotton spinners, teachers, accountants, compounders, nurses, and others in search of employment Offices were opened at 174 Hornby

NAWAB SALAR JU

Road, Fort, Bombay, and the activities of the firm are now extended throughout the whole of India as well as in other countries. Employers are invited to register their requirements with the agency and thus save themselves the trouble of advertising and of being compelled to peruse a host of letters from applicants, many of whom are entirely unsuitable. Names of persons desiring appointments are not entered in the books of the firm until the latter are satisfied as to antecedents and character, and they have already found positions for a large number of employees in Government departments, Native States, and commercial firms in all parts of India, as well as in Siam, the Federated Malay States, in Basra, and other towns on the Persian Gulf, and in British East Africa. The agency is the only one of its kind under European management in India, and the proprietors do their utmost to supply the right men for the right places. In asserting that their efforts on behalf of employers have been successful, it is only necessary to refer to the following memorandum from Field Controller of Military Accounts, Poona, dated December 22, 1916: "I acknowledge with thanks the valuable assistance rendered by you in recruiting several accountants and clerks for this office. The work was done with promptness and energy, proving the resourcefulness of the firm. I wish them every success. (*Signed* N. C. CARR-HUTT, Lieutenant-Colonel."

Numerous testimonials have been received by the agency from clients for whom satisfactory appointments have been secured. Some brief extracts from these documents may be given: Mr. J. H. Godwin, B.A., L.C.E., assistant engineer, says, "I have reason to be much indebted to you. You have dealt with my case promptly and have found a place for me in a reasonable time." Mr. A. R. Nisar, E.E., A.I.E.E., wrote, "It gives me the greatest pleasure to certify that I have found the agency a very useful and resourceful body. Their dealings and methods employed are very frank and sincere." Mr. Henry Martin, M.A. (Oxon.) says, "I have pleasure in recommending the agency. I have been enabled by their help to obtain two important educational posts." Miss G. Pownes, L.M.S., states, "I have by the help of the agency been able to secure a very good post." Mr. C. W. Harding stated that it was through the exertion and help of the agency that he obtained his appointment on the Rohilkhand and Kumaon Railway, and he added, "I am very grateful to the agency and wish it every success, and would recommend any one out of employment to place their cases with the firm." A mill manager says, "I am glad to certify that you have helped me in securing this appointment." A great many other congratulatory letters could be referred to, but sufficient has been said to show that the agency is doing excellent service in bringing together those who are either needing men for positions of trust and responsibility, or are, on the other hand, desirous of securing good appointments.

Messrs. Amin Brothers & Co. subsequently became local representatives of the Allahabad Glass Works, but in addition they are owners of the National Glass Works, at Mazagaon, Bombay, which is under the control of Mr. B. V. Patel, one of the partners, who obtained expert knowledge of his work under the tuition of German and Japanese skilled operatives. Mr. G. Kunikata, a Japanese expert, is now the manager of the factory.

They are therefore in a position to supply carboys, roof-lamp globes for railway carriages, "Washington," "Aladdin," "Kitson," "Standard," "Pinemoon," "Autolux," and other special kinds of globes, as well as various descriptions of electric globes and chimneys and other fittings, while they are always prepared to manufacture any article of hollow glassware in accordance with the designs of customers.

The firm has succeeded in gaining the confidence of the general public as well as of the principal authorities of the Great Indian Peninsula and other leading railway companies, and they also have extensive transactions with European firms who support local industrial efforts rather than rely upon imported goods. They have recently entered into a contract with the Government for the supply of chutney bottles.

Messrs. Amin Brothers & Co. are also agents for the sale of leather washers, rolls, and laces, as well as of stone, lime, cement, and other building materials, and they are carrying on a growing business in the export and import of general merchandise, while they have regular correspondence with several firms in foreign countries.

The main office is under the management of Mr. R. E. Perry, while Mr. B. S. Parekh, another partner, exercises close supervision over each department.

The telegraphic address of the firm for general business matters is "Aminbros," while the word "Vacancies" is employed in connection with questions requiring the attention of the Service Securing Agency. Their telephone number is 3856.

THE APOLLO HOTEL AND RESTAURANT

The reputation of this famous hotel has not been gained by flashy advertisements, but it is based upon the excellent provision made for guests or residents, thousands of whom have vouched for it as a most desirable home in the very heart of the best business portion of the splendid city of Bombay. It is most conveniently situated near the Fort and the principal commercial houses, and is within a minute's walk from the Apollo Pier, upon which reinvigorating breezes may be enjoyed at all seasons of the year.

The hotel was established on its present site in the year 1887 by Mr. Hormasji H. Mody, and his son, Mr. Jehangir H. Mody, is the present proprietor.

The ground floor of the extensive premises—known as the Apollo Hotel Stores—contains a very large assortment of high-class goods and provisions, which have a commanding sale throughout India. The various departments are handsomely fitted with show-cases in which one sees every kind of English and French provisions, special lines of bacon, hams, and cheddar cheese of the finest quality, while there is also a constant demand for oysters when in season. Bombay customers are promptly supplied with goods direct from the stores, while purchasers in the mofussil and elsewhere, who are furnished with descriptive price catalogues, forward their orders, which are executed with all dispatch in the forwarding department.

The hotel has been very considerably enlarged in recent years, in order to provide greater accommodation for visitors, two hundred and fifty of whom can now be received. Improvements recently made include a lift to all floors, a comfortable lounge, and the installation of electric lights and fans throughout the building. There is a handsome public dining-room capable of seating two hundred persons, a drawing-room for ladies, and private dining and other rooms. A special feature of the hotel is the restaurant, which is exceedingly popular among the dining public of Bombay, and the billiard-room, which is acknowledged to be the finest in India. The latter has

APOLLO HOTEL.

1. Apollo Hotel, Entrance from the West. 2. Stores Department. 3. Hotel Dining Saloon. 4. Restaurant, Drawing room.

been furnished in the best style by Messrs. John Roberts & Co., Ltd., and it contains five excellent tables fitted with that firm's famous low cushions. Several champion cueists (including John Roberts, Gray, Stevenson, Taylor, Inman, and others) have played exhibition games here, perfect ventilation and real comfort being not the least attractive features.

The increasing popularity of the hotel is very largely due to the more than ordinarily courteous demeanour of the proprietor, who is ever on the alert to secure the comfort of his guests, and Mr. Mody has a doughty supporter in the person of his able general manager, Mr. T. Youll, an old and greatly appreciated member of the staff, who has contributed largely to the popularity which the hotel has gained in the last decade, and who is always at the command of its large clientèle.

Beyond this personal attention, however, there are other factors which have contributed to the good name of the "Apollo," as, for instance, the *cuisine* is said to be beyond all criticism; the utmost cleanliness is observable everywhere, the servants are attentive, and the very important question of sanitation has been dealt with in a thoroughly effective manner.

Mr. Mody is to be congratulated that, notwithstanding the keenest competition, prevalent in India as elsewhere, the "Apollo" is regarded with increasing favour by old patrons and with keen appreciation by new ones.

It should be mentioned that the stores and restaurant are also under the efficient control of Mr. T. Youll.

The telegraphic address of the hotel is "Apollo," Bombay.

THE APOLLO MILLS (GREAVES, COTTON & CO.)

These mills, situated in De Lisle Road, Chinchpoogly, Bombay, were opened in the year 1876. They are now owned by Mr. H. R. Greaves, and are managed by Mr. H. B. Shepherd.

The property covers an area of 52,000 square yards, and the three-storied mill is equipped with excellent machinery and plant, consisting of 35,032 spindles, 5,298 doubling spindles, and 3,500 condenser spindles.

Weaving is not carried on at all, but the spinning plant is capable of turning out 1,400 bales of yarn every month, the greater portion of which is consigned to China. The mills contain one of the largest doubling plants in Bombay, combined with a complete outfit of universal winding machines, and an automatic system of transferring goods from one floor of the premises to another is used.

The workshop is fitted with a very complete and up-to-date plant for the insertion of wire in the plants and rollers of carding machines and of testing the wires to one-thousandth part of an inch.

The plant is at the service of the trade generally.

The whole of the machinery—which is of the very latest description—is electrically driven by an alternating current, the power being obtained from seven motors.

About 1,896 hands are constantly employed.

ARTURO BONESCHI

History has established the fact that in the vastly different conditions which have prevailed in the social, commercial, or political worlds during past centuries men have arisen who are peculiarly adapted for the periods in which they have lived, and the country of Italy, by way of example, furnishes abundant proof of this statement. In earliest days when war, involving the overthrow of nations, raged from East to West, it was the Romans who carried the proud standard of the eagle to every shore; when arts and sciences reigned supreme Italy was in the forefront manifesting the genius of Michael Angelo, Cellini, and other notabilities; and in the golden age of the "Rinascimento" the same country was represented by highly-skilled artisans whose brilliant workmanship was not excelled by men of any other clime. And in the sterner realities of the present practical business age, in which merchant princes frequently wield greater power than ruling sovereigns, Italy is producing leaders in commerce who have attained exalted positions by their untiring energy, boundless ambition, and conspicuous abilities.

A concrete illustration of the forcefulness of the Italian character is found in the remarkably successful business of Mr. Arturo Boneschi, which, in less than twenty years has, under his able management, developed into one of the most important commercial concerns with operations extending throughout Europe, Asia, Africa, and America.

The firm was originally started on a small scale at Milan, in Italy, and trading commenced with an agency for yarn manufactured by the Trobaso Spinning Mills of Intra, whose managing director, Mr. Baggini, was the first to recognize the enterprising spirit of Mr. Boneschi, and who was also the one who encouraged him to embark in a career which has been attended with such gratifying results.

A remarkable expansion of the new venture took place during the first four years, and it was found necessary to establish a branch of the firm at Turin and also to extend the headquarters premises. In 1905 a department was opened for the import of American, Indian, Egyptian and Asiatic cotton, and this event marked the dawn of so great a growth of the firm's activities that the Milan establishment is now employing a highly-paid technical staff of assistants, and including in its manifold organizations various departments of commerce embracing nearly all commodities of general business and household requirements. A raw-cotton department, subsequently added, was followed by an elaborate system of exporting and importing goods of various descriptions, thus linking Milan with the chief manufacturing and industrial centres of the world.

At the present time the firm controls the Italian Producers' and Exporters' Association with a capital of francs 1,000,000 (one million); the "Boneschi & Co. Spinning Mill" at Intra; the Indian Cap & Fez factory at Monza; the "Mercury" Film Producing Co. at Milan, and the "Velodromo Milanese," the principal pleasure resort in the same city, which, by the way, is soon to be furnished with a monster cinema plant. A large share is also held in the Trobaso Mills, and in partnership with other capitalists the firm will shortly absorb and manage an artificial silk factory, in addition to three of the most up-to-date concerns in northern Italy for the manufacture of "Corozo" and "Dum" buttons. Mr. Boneschi and his colleagues are, further, Government contractors, and importers of immense quantities of timber, metals, hides, seeds, and oils.

In order to meet the requirements of post-war trade the firm has from the 1st February, 1919, established branches at London and Trieste, while the establishment of two other branches, one at Marseilles and the other at New Orleans, U.S.A., is under consideration.

The foregoing is a brief account of the rapid progress of the firm at Milan, and

GREAVES, COTTON & CO. (THE APOLLO MILLS).

1. Power Transformer House (The Electric Current is Transformed from 6,600 to 25,000 Volts).

2. General View, Apollo Mills.

GREAVES, COTTON & CO. (THE APOLLO MILLS).

1. Blow Room. 2. Revolving Flat Cards. 3. Ring spinning Room.

the history of the advance made in India is no less striking.

An agency was established at Mac-Millan Building, in Hornby Road, Fort, Bombay, in 1914 with the object, firstly, of supplying Continental spinners of cotton with parcels of raw materials specially selected and shipped by the firm; and secondly, with the view of giving greater encouragement to the export of Indian produce.

Mr. Francesco Battistessa, one of the oldest employees of the firm, was sent from Italy to establish the Indian branch and assume the duties of general manager in Bombay, and in spite of almost insurmountable difficulties caused by the European War, this gentleman has succeeded in placing the firm in the front rank of exporters of Indian cotton.

In the year 1917 18 more than 37,000 bales of raw cotton, valued at fully £820,000 sterling, were shipped to Europe, notwithstanding the shortage of cargo-space at that time, while the value of imported goods from the continent amounted to £100 377, thus bringing the entire turnover to the remarkable sum of £920.377.

The Bombay office, in conformity with the practice of the Milan establishment, is not confined to transactions in any particular line of business, as the firm are prepared to deal with every description of mercantile commodities, while they are the largest importers in Asia of films for cinema performances, and they at present control for the duration of fifteen years the Hippodrome Bioscope and the Majestic Theatre in Rangoon (Burma), having acquired half-share rights of both these pleasure resorts.

The head offices are situated at 1 Via Romagnosi, Milan, and the telegraphic address in the city and at all branches is "Artboneschi."

ASSUR VEERJEE & SONS

The principal agent in the formation of the Assur Veerjee Mills, Ltd., in 1896, was Mr. Assur Veerjee, who had originally acted as *Mucradam* to Messrs. A. Blasheck & Co., of Bombay, and subsequently had charge of the Sun Mills, Ltd., until the factory was sold in the year 1894.

The Assur Veerjee Mills, opened in 1897, are situated at Parel, Bombay, near to the Lower Parel station on the Bombay-Baroda and Central India Railway system, and they cover an area of about 35,000 square yards. There were only 17,292 spindles originally, but these have been increased in number from time to time, and there are now (1917) 29,000 mule and ring-spindles, which are driven by a steam engine of 750 h.p.

The annual consumption of raw cotton is about 18,000 bales (each of 392 lb.), and this quantity is spun into lower counts of yarn, the greater portion of the product being exported by local shippers to Chinese markets.

These mills have, by the exercise of skilful management, received their full share of the gains which have accrued to cotton milling companies in recent years, and in 1906 their accounts showed a record profit of Rs. 5,15,000.

The authorized capital of the company is Rs. 10,00,000, divided into 2,000 shares of Rs. 500; the sum of Rs. 5,00,000 has been fully subscribed; and there are debentures amounting to Rs. 1,00,000; while the reserve fund stands at Rs. 2,29,145. The present directors are: Mr. Khimjee Assur Veerjee (chairman), *ex-officio*, and Messrs. Moolji Haridas, Rao Bahadur Kessovjee Nathoo Sailor, and Premji Goculdas.

Mr. Assur Veerjee died in 1902, and his interests were taken over by his son, Mr. Khimjee Assur, who, in 1916, started the Ramdas Mills on Elphinstone Road, Bombay, which are owned by a private family company.

The factory contains 19,000 mule spindles, which are driven by steam power, and all yarn of lower counts spun in the mills is disposed of locally, and in the Chinese markets.

About 600 hands are constantly employed.

The registered offices of the Assur Veerjee Mills, Ltd., and of the Ramdas Mills, are at 320 Mint Road, Bombay, and each of the factories is under the management of Mr. Khimjee Assur Veerjee.

BANK OF BOMBAY

The Bank of Bombay was originally established in 1840 under a charter granted by the East India Company, its capital being Rs. 52½ lakhs, of which the Government of Bombay subscribed Rs. 3 lakhs. The bank was successfully conducted for more than twenty years, but the financial crisis which followed the period of wild speculation with which Bombay was affected during the years 1861 to 1865 found it deeply involved. Consequent on the losses then sustained, reconstruction of the Bank was necessary, and this was accordingly carried out in 1868 as the New Bank of Bombay, Ltd., with a capital of Rs. 1,00,00,000. Government contributed Rs. 6,00,000 to that sum, and remained a shareholder until 1875, when its shares were sold.

The bank resumed its earlier title of Bank of Bombay under the provisions of the Presidency Banks Act, 1876, by which it and the Presidency Banks of Bengal and Madras are now constituted and regulated. The Act confines the sphere of the Presidency banks' activities to India, and imposes various restrictions and limitations on the business which they may conduct.

Government conduct their ordinary banking business through this bank, and during its earlier years the public deposits constituted a very important part of its resources, but in more recent times, with the growth of other deposits, Government balances have formed a relatively small part of its working capital.

Other deposits of the bank amounted on the 31st December, 1916, to Rs. 13,67,09,414-12-11. These comprise ordinary banking accounts, fixed deposits, and saving bank deposits. The Savings Bank Department allows interest at 3 per cent. per annum on the deposits up to Rs. 10,000, the maximum amount which may be placed to an account in any one year being Rs. 2,000.

The nature of the bank's investments is strictly limited by the Presidency Banks' Act, which was designed to attain a high standard of liquidity. The bank can only purchase Government securities, guaranteed railway stock, and debentures issued under the authority of Government by such public bodies as municipalities and port trusts, and these investments are shown at the present time to be considerably over three crores of rupees. Apart from investments in securities of Government and local public bodies the bank has rendered considerable financial assistance to the latter by granting them large advances to take the place of public loan issues which present war conditions render difficult of successful flotation. All banks have been faced with the problem of depreciation of investments occasioned by the new standards of money value that have been set up as a result of the vast borrowings of the Allied Governments for the prosecution of the war. The Bank of Bombay has followed the wise policy in this connection of providing in full,

BANK OF BOMBAY.

Dr. LIABILITIES.				*Cr.* ASSETS.			
	Rs.	*a.*	*p.*		*Rs.*	*a.*	*p.*
To Capital paid up	1,00,00,000		0	By Government Securities	2,78,22,743	14	5
Reserve Fund	90,00,000		0	Other Authorized Investments	34,79,216	11	0
Public Deposits at Head Office ... . Rs. 59,79,851 5				Loans on Government and other Authorized Securities	1,41,89,362	10	7
Public Deposits at Branches 82,28,793 10				Accounts of Credit on Government and other Authorized Securities	1,57,88,557	5	0
	1,42,08,644	15	6	Bills Discounted and Purchased	1,13,05,994	0	2
Other Deposits at Head Office and Branches ...	13,67,09,414	12	11	Balances with other Banks	12,04,908	1	1
Bank Post Bills	6,632	1	4	Bullion	6,370	6	8
Sundries	24,30,091	0	6	Dead Stock	10,14,058	10	11
				Stamps	9,967	10	0
				Sundries	7,53,541	7	8
				Cash and Currency Notes— At Head Office... Rs. 4,91,12,231 14 7			
				At Branches ... 1,76,68,040 2 2			
					6,67,80,272	0	9
Rs.	17,23,54,782	14	3	Rs.	17,23,54,782	14	3

from reserve fund and profits, for all depreciation, so that the bank's investments stand written down to their present market values, placing it in an exceptionally strong position.

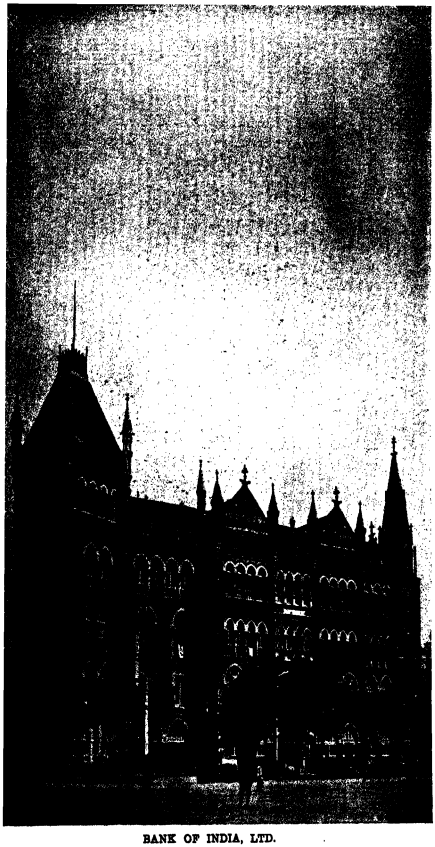
The bank's advances are granted against the same classes of securities as are authorized for its investments, and also on the security of goods, bullion, bills of exchange, or endorsed promissory notes.

In addition to its ordinary banking business and that of the Government treasury, the bank has the management and transaction of all the business at Bombay of the registered public debt and securities of the Government of India. The various loans of the Bombay Municipality and City of Bombay Improvement Trust and part of the Bombay Port Trust loans are also in its charge.

The bank has branches in the city of Bombay at Mandvi and Sandhurst Road. The other branches maintained are at Ahmedabad (with a sub-branch in the city), Akola, Amraoti, Broach, Hyderabad (Sind), Indore, Jalgaon, Karachi, Poona, Rajkot, Sholapur, Sukkur, and Surat. General banking business is carried on at these branches, together with the management of Government treasuries and the custody of Government currency chests.

Since 1868 the bank's career has been marked by great prosperity. Its growth has kept pace with the rapid expansion of trade and industry in Bombay, and as the

leading bank in the west of India, it holds a powerful and influential position. Its business has increased to such an extent that the accommodation in the present premises in Elphinstone Circle, in Bombay, is quite insufficient, but the directors have acquired a new site, adjacent to the building now occupied, upon which more spacious quarters will be erected in the near future. The bank has built up a reserve fund amounting at the present time to Rs. 90,00,000, and has paid steadily increasing dividends to its shareholders, the distribution for the past three years being at the rate of 15 per cent. per annum free from income tax. Its net profit for the year ending 31st December, 1916, was Rs. 24,65,261–10–7, representing 24·65 per cent. on its capital.



BANK OF INDIA, LTD.

1. Oriental Buildings, Bombay—Bank of India, Ltd. (Ground Floor).

The bank's present board of directors consists of: The Hon. Sir Fazulbhoy Currimbhoy, president; the Hon. Mr. M. N. Hogg, vice-president; Mr. Tribhowandas Vurjeevundas, Mr. Meyer Nissim, Sir Jamsetjee Jejeebhoy, Bart., Mr. S. J. Gillum, and the Hon. Mr. J. S. Wardlaw Milne.

The executive officers are: Mr. R. Aitken, secretary and treasurer; Mr. A. Logie, deputy secretary and treasurer; Mr. R. A. Don, inspector of branches; and Mr. R. Lindsay, chief accountant.

The abstract balance sheet as at December 31, 1916, is as given on page 129.

THE BANK OF INDIA, LTD. (BOMBAY).

This bank was registered in September, 1906, with an authorized capital of Rs. 1,00,00,000, in shares of Rs. 100. The full amount has been subscribed, but only Rs. 50,00,000 have been called up in shares of Rs. 100, upon which Rs. 50 were paid.

Every description of banking business is transacted at rates which may be obtained on application.

Current deposit accounts are opened for approved customers; fixed deposits are received at interest; advances are made on approved securities; and Government and other securities are received for safe custody.

The bank has made rapid progress during the ten years of its existence, and it has been able to pay regular and increasing dividends, rising from 5½ per cent. per annum for the first few years to 8 per cent. for 1916.

The deposits on December 31, 1916, amounted to more than Rs. 3,13,00,000, and the Reserve Fund stood at Rs. 10,00,000.

The directors of the bank are Sir Sassoon David, Bart. (chairman), Sir Cowasjee Jehangir, Bart., Mr. Khetsey Khaisey, Mr. Ramnarain Hurnundrai, the Hon. Sir Ibrahim Rahimtoola, C.I.E., Mr. R. Barlow, Mr. R. D. Tata, Mr. F. E. Dinshaw, and Mr. F. C. Rimington.

Mr. H. P. Stringfellow has been manager since the foundation of the bank.

THE BANK OF TAIWAN, LTD.

The island of Formosa, lying off the coast of China, was ceded to Japan in the year 1897, and two years later the Bank of Taiwan, Ltd., was incorporated by special charter of the Government of the latter country with a subscribed capital of Yen 5,000,000; the capital now is Yen 30,000,000, of which Yen 22,500,000 have been paid up. The Bank holds a reserve fund of Yen 5,680,000. A yen is equivalent to two shillings and three farthings of English money, and nearly

one rupee and nine annas in Indian coin. The operations of the bank have increased rapidly during the short space of twenty years, necessitating the establishment of branches in a large number of important commercial centres in the far East, and owing to the enormous development of trade between India and Japan—especially since the outbreak of the great war—the directors have also deemed it advisable to have their own offices and representatives in this vast continent.

A branch has therefore been opened at 56 Esplanade Road, Fort, in the city of Bombay, and every description of banking and exchange business is transacted there with the same promptitude and close attention to the requirements of clients as at the head office at Taipeh, in Formosa, its various branches at home and abroad, or in any of the other numerous commercial centres of the world where the bank has accredited agents or correspondents.

Current deposit accounts are opened for approved customers, and interest is allowed on daily balances, while deposits are received for fixed terms which may be learned on application at any of the bank's offices.

The Bank of Taiwan, Ltd., grants drafts payable at any of its branches or agencies; bills of exchange are received for collection; letters of credit are granted; and Government and other securities are accepted for safe custody.

Branches of the bank may be found in Tokio, Yokohama, Kobe, Osaka, New York, London, Bombay, Singapore, Batavia, Semarang, Soerabaya, Hongkong, Canton, Swatow, Amoy, Foochow, Shanghai, Kiukiang, Hankow, Keelung, Taichu, Kagi, Tainan, Takow, Giran, Tamsi, Towen, Shinchiku, Ako, Taitoh, Karenko, and Makung.

The manager of the branch at Bombay is Mr. K. Takemura.

THE BRITISH INDIA PRESS

This printing press was established by Mr. Hussonally Abdoolally in the year 1900 in premises near the Elphinstone Circle, opposite the well-known Bombay Stationery Mart, of which he is also the proprietor, and its inception was due to the fact that he found his stationery contracts included printed forms and books, and that as a consequence a printing department had become indispensable.

From small beginnings the business increased from year to year, and in the early part of 1905 it was decided to take over an adjoining building and fit it with new machinery and the latest styles of British and American types, and in the same year a thoroughly trained English printer was appointed to superintend the practical working of the press.

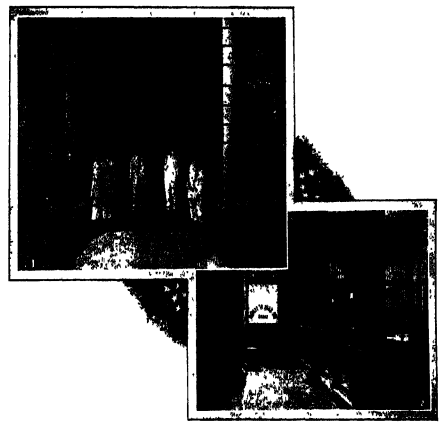
Owing to further expansion of trade and a growing clientèle it was found in 1908 that the premises were inadequate for rapidly increasing demands, but as no suitable site or premises could be found in the Fort, the proprietor looked further afield, and he eventually purchased the Bombay Education Society's press at Byculla. The incorporation of this, the oldest and one of the largest presses for general printing in the Bombay Presidency, together with its machinery and material, furnished additional scope for the execution of large orders in the vernacular as well as in English educational works, but during reorganization it was apparent that, owing to the several departments being located in separate buildings, the premises were not adapted for modern requirements.

A suitable site of 1,50,000 square feet was subsequently secured in a central position in Love Lane, Mazagon, at a very reasonable price, and it is worthy of notice that a similar area of land near the Fort would have cost about thirty-two times the price paid for the newly acquired plot. The same economical principle and foresight for future expansion was applied in erecting suitable modern works for carrying on a large printing business under the best conditions, and the spacious buildings being well lighted and ventilated, and all departments furnished with labour and time-saving appliances, form valuable assets in securing contracts for various classes of printing.

For the convenience of the public an office is still retained in the Fort for receiving orders and inquiries, and for the execution of urgent work on a small scale. There is a direct private telephone line connection between the two sets of premises, together with a motor-car service to and from the Mazagon works. These facilities of communication save a considerable amount of time, and place the works on equal terms as regards competition with other establishments in the environs of the Fort.

The British India Press may be described as "self-contained," that is to say, all the processes allied to letter-press printing are executed on the premises, and they include lithography, engraving, copperplate printing, die-stamping, bookbinding, account-book making, stereotyping, and type-casting, in addition to a fitter's shop for repairing machinery.

In the letterpress department printing is done for railways, shipping companies, and banks; school-books are prepared for publishing firms; and vernacular printing



BANK OF TAIWAN, LTD.

1. Exterior. 2. Interior.

BRITISH INDIA PRESS.

1. Bird's-eye View of Works. 2. A Portion of the Staff. 3. Composing Department. 4. One Line of the Press Department.

is executed in fourteen languages. Lithographic work consists of the production of bank cheques, debenture forms, maps, plans, wall calendars, mill labels, and a large variety of colour printing. In the bookbinding department, which is one of the largest in India, there are to be seen huge bank ledgers, a splendid selection of account books, and educational works in all kinds of bindings, from the cheap cloth back to the full morocco extra gilt.

The press employs about one thousand workmen in the various departments, all of which are under the able management of Mr. B. Miller, a practical printer of wide experience, and it may be added that this gentleman spares no pains to do everything in his power calculated to further the interests of the proprietor. The proprietor's financial readiness to maintain the establishment in a state of efficiency by the addition of new machinery, and by the adoption of modern methods of printing and binding, has raised the press to its present successful position. Consideration for the personal well-being of the employees is shown by the daily attendance of a medical man at the works for the purpose of administering preventive and curative medicines to those who require treatment.

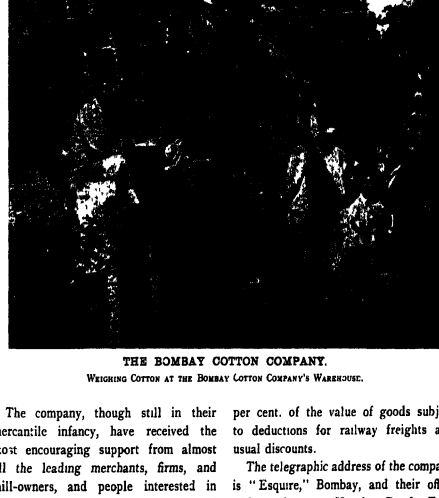
The founder of the British India Press is entitled to regard himself as a notable factor in the commercial progress of the city of Bombay, and the above record may claim to be a contribution to industrial enterprise in India.

Mr. Hussonally Abdoolally, who is a Justice of the Peace, and one of the leading citizens of Bombay, is a public-spirited man, and is held in high esteem for his broad, liberal views and philanthropic principles, while his simple and unostentatious mode of living and his courteous manner endear him to all who come in contact with him.

THE BOMBAY COTTON COMPANY

This business of brokers and commission agents for the sale or purchase of general merchandize must rely very largely for its success upon the confidence which the general public have in those who are concerned in its management, and if the Bombay Cotton Company, of 249 Hornby Road, Fort, Bombay, be judged by that standard alone, they have every right, by the way in which they have gained the goodwill of their numerous customers from their inception, to look forward to the building up of a very prosperous concern.

The partners of the company are Seth Cheniram Jesraj, who has for many years been connected with an old-established Bombay firm of shroffs and merchants dealing extensively in piece goods, raw cotton, and oil-seeds; and Mr. Pherozshaw Sorabji Guzdar, late of Messrs. Mitsui Bussan Kaisha, Ltd. (Jetha department), who has had great experience in all branches of the cotton trade for more than nineteen years, the most eminent firms of the city having testified in eulogistic terms to his ability and integrity in business transactions.



THE BOMBAY COTTON COMPANY.
WEIGHING COTTON AT THE BOMBAY COTTON COMPANY'S WAREHOUSE.

The company, though still in their mercantile infancy, have received the most encouraging support from almost all the leading merchants, firms, and mill-owners, and people interested in the cotton trade in various parts of India have had no hesitation in entrusting their business to them, with the result that in the face of the crisis in the commercial world, born of the great European War, the Bombay Cotton Company have not only secured the confidence of their numerous customers by their timely and profitable advice, but have placed themselves in the front rank with other old-established concerns.

The company undertake to sell baled cotton, and their godowns in Bombay are always full of goods of their many up-country constituents. They also undertake to buy and sell cotton as brokers and commission agents on behalf of local firms and mofussil clients, while they are prepared to make forward and ready purchases and sales of Indian and American cotton on behalf of customers and agents of approved standing in all parts of the globe. The great factors which have contributed so much to the success of the firm are their integrity in executing orders and their charges all round, which compare very favourably with those of other similar firms.

Against consignments of goods received in Bombay they make advances up to 75 per cent. of the value of goods subject to deductions for railway freights and usual discounts.

The telegraphic address of the company is "Esquire," Bombay, and their office address is 249 Hornby Road, Fort, Bombay.

THE BOMBAY CYCLE AND MOTOR AGENCY

In the year 1885 was laid the foundation of this business, then known as the Bombay Cycle Agency, which now conducts an immense trade in all types of motor-cars, trucks, bicycles, pedal bicyles, and allied goods.

The concern is exclusively owned by a Parsi gentleman, Mr. K. D. Wadia, who

BOMBAY CYCLE AND MOTOR AGENCY

1. Front View of Principal Showroom
2. A Wing of the Principal Showroom.
3. Portion of Machine Shop
4. Exterior View of Repair Shop

became proprietor within a few years of its inauguration. By force of shrewd business foresight and sound working principles, the firm, which can look back with pride upon the importation of its first pedal bicycle more than three decades ago, has gained for itself the proud distinction of being recognized as "the leading motor house of Asia."

The business of the Bombay Cycle and Motor Agency (with headquarters at New Queen's Road, Bombay) is carried on in its own premises, a cluster of three specially constructed large buildings, which, æsthetically and geometrically, may fairly be said to be the most unique of their kind in India, and the volume of business turnover standing to its credit is also in a sense peculiarly singular.

Mr. K. D. Wadia, through whose enterprise the firm under review has attained its present position, is a man of vast ideas and vivid imagination with regard to the extension of his business connections, and he has, therefore, made a point of annually visiting the leading manufacturers in Europe and America, where he generally spends the greater part of each year.

In making a tour of the headquarters of the agency in Bombay, the visitor is instantly impressed by the vastness of the undertaking; firstly, there is an exceptionally large and well-appointed showroom, then an electrically equipped machine shop, and, finally, one sees very extensive repair works, garages, and stores. Manufacturers of the highest repute in England, France, Italy, and the United States send to this agency their contributions of the world's best-known motor vehicles and bicycles, accessories, and other goods. The dimensions to which the firm has grown are an indication of the success which it has attained.

Having secured an exceptional position in the trade, the Bombay Cycle and Motor Agency can boast of an influential clientèle from the remotest corners of India, Burma, and Ceylon, and Indian princes, high State officials, and a very large section of the general public look to this firm to fulfil their requirements for all motor accessories. In order to meet the needs of its far-reaching connections throughout the length and breadth of India, this firm has a branch of its own at Lahore, which is conducted under the name of the Bombay Cycle and Motor Agency, at the Mall, in that city. This depot, an important centre in itself, ministers to the ever-growing necessities of the Punjab and Northern India generally. In addition to this, the firm has agencies at Poona in the Bombay Presidency, and at Secunderabad in the Hyderabad Assigned Districts, both of which have an important influence within their own provinces. One is carried on under the name of the Bombay Cycle and Motor Poona Agency, at 6 Arsenal Road, Poona, and the other, known by the name of the Bombay Cycle and Motor Agency of Secunderabad, Ltd., at James Street, Secunderabad.

The past history of the firm is a record of extensions made to its undertakings from time to time; it has reached proportions which are, indeed, unequalled in India, and it is expected that in time to come it may be further augmented, and its sphere of influence be still further enlarged.

It is believed that the firm was the first importer of motor-cars into Bombay.

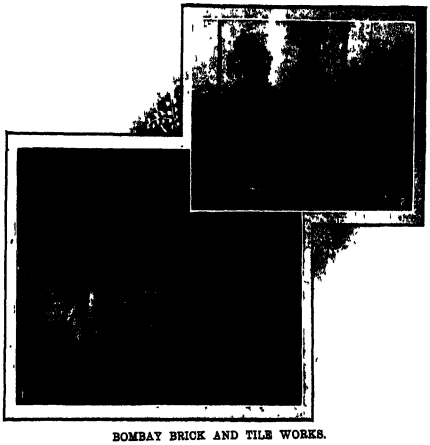
Mr. Wadia's telegraphic address is "Cyclosters."

THE BOMBAY BRICK AND TILE WORKS

It is a common complaint among builders and contractors that bricks manufactured from clay found in the Bombay Presidency are most unsatisfactory, being exceedingly porous, lacking in strength and quality, and quite unable to withstand the rough usage to which they are subjected during transit from the kilns to the place where they are required for construction purposes.

Many men of business in India have long been aware that in nearly every country in Europe, in the United States of America, and elsewhere, bricks, tiles, and other earthenware goods have been made from sand and lime, but this practice had not been adopted in this country until the Bombay Brick and Tile Company established a factory at Merve, near Malad, in the district of Thana, in the above-named Presidency. A scientific fact, evidenced by the hardness and durability of the sand-lime brick, is that when the constituents are converted into a soluble condition a certain chemical action takes place which forms a kind of cement, binding together the minutest particles, and thus solidifying the article which is being made. When the industry was first started in Western countries it was the habit of manufacturers to harden newly made bricks by exposure to the weather for a period of five or six months, but about thirty-five years ago it was discovered that this process could be completed far more satisfactorily and in a much shorter time by the application of steam pressure.

In briefly describing the present method of manufacturing it may be said that fresh lime, ground to powder, is thoroughly mixed with sand, water being added during the transit of the compound through various mills to a press, in which the moulded bricks are then wheeled on trolleys into immense



BOMBAY BRICK AND TILE WORKS.

1. Bricks Coming from the Press. 2. Manufactures.

steel cylinders, and after steam pressure of 120 lb. to the square inch has been applied for about seven hours the trolleys are withdrawn, the bricks being left to be cooled in the open air.

The company are working with two complete units, each of which is capable of turning out twenty-five thousand bricks daily, and these products are now being used in the construction of a new station at Kalyan, on the Great Indian Peninsula railway system, as well as in the erection of a considerable number of commercial houses and private residences in Bombay. The thoroughly up-to-date machinery of the factory is arranged on automatic principles, there being no necessity for handling the materials from the moment they are put into the mills to the time when they are removed from the table in the shape of bricks to be passed into the hardening cylinders, where they are steamed. Sand-lime bricks may be used without a facing of plaster, and their superior strength places the company in an excellent position for complying with the regulations of the Bombay municipality, which require that extreme hardness shall be the first consideration in bricks used in the construction of buildings in the city.

Flooring and other tiles of the famous "Mangalore" type are also being manufactured in large numbers, and the demand for these as well as for bricks is increasing very rapidly.

The directors of the company are: The Hon. Sir Fazulbhoy C. Ebrahim, Kt., the Hon. Mr. Lalubhai Samaldas, C.I.E., the Hon. Mr. Purshotamdas Thakordas, the Hon. Mr. Phiroze C. Sethna, Mr. E. G. Pearson, and Mr. G. T. Mawson, and the agents are Messrs. Mawson & Co., of Esplanade Road, Bombay.

THE BOMBAY ELECTRIC COMPANY

The first factory in India for the manufacture of electrical machinery and plant, known as the Bombay Electric Works, in Andheri, Bombay, was erected by the Bombay Electric Company, founded in the year 1892 by Mr. Archibald A. Crawford.

This gentleman had been called to India some four years previously, to assist in initiating an engineering venture with head-office in London, and branches both for electrical and for general engineering, by the well-known Swiss firm of Messrs. Volkart Brothers. Mr. Crawford was specially entrusted with the electrical branch in Bombay, on the recommendation of the late Professor Dr. H. F. Weber, Director of the Physical Institute of the Swiss Federal Polytechnicum—now the Technical University—in Zurich, Switzerland, where Mr. Crawford received his higher education, particularly in mathematical and electrical science, during the years 1881 to 1885.

Mr. Crawford brought to India considerable practical experience obtained in large machine works in Milan, St. Petersburg, and in leading electrical establishments in Hungary and Switzerland, where he worked chiefly on construction of electrical machinery and apparatus, design and erection of hydro-electric projects.

Four years later, Messrs. Volkart Brothers, being largely engaged in other schemes, decided to withdraw from their engineering venture, and Mr. Crawford was invited to continue the promising enterprise on his own account, on the strength of his previous work with the firm, and of their then available important stock of electrical supplies. This proposal was the origin of the Bombay Electric Company, the title shortly afterwards adopted by the proprietor for his business.

One of the first undertakings of the young firm was the electrical installation of the Royal Bombay Yacht Club, the success of which was followed by an increasing flow of orders from all parts of India. The Royal Indian Marine, the Telegraph, and several other Government departments, in addition to important private firms, such as the British India Steam Navigating Company, the Bombay, Baroda and Central India, and great India Peninsula Railway Companies, became its regular patrons.

In this connection it may be added that, at the start of the South African War, Mr. Crawford was given a free hand in the electrical outfit of some thirteen transports and two hospital ships. This work was of the most urgent nature, and had to be carried out under immense difficulties. Despite this, no complaint was registered against the installations provided, and the firm was honoured with excellent testimonials from the Government and from the British India Steam Navigation Company, whose steamships were chartered as transports.

Another particularly important undertaking entrusted to the company was the electric lighting of the entire passenger service on the Rajputana-Malwa Railway.

The details of this, the first and, for India, most extensive electrical project for lighting railway carriages, were worked out in collaboration between Mr. A. T. Houldcroft, then carriage and wagon superintendent of the line, and the engineers of the Bombay Electric Company. The entire contract was carried out under Government supervision.

The electric lighting proved successful; and not only was the increased comfort and convenience to passengers widely appreciated, but the cost of upkeep was actually lower than that of the former system of lighting by oil, and some 20 per cent. less than the figures guaranteed by the Bombay Electric Company.

This achievement on a meter-gauge line was soon followed by the outfit of trains on the Great Indian Peninsula Railway, under Mr. A. M. Bell, and on the Bombay, Baroda, and Central India Railway, under the late Mr. W. P. Johnson.

The higher demands of the broad-gauge carriages necessitated the use of axle-driven dynamos. The Vicarino system, invented a few years previously by the late Mr. Charles Vicarino, director of the Compagnie Générale Electrique, of Nancy, offered the highest technical advantages, including an absolutely steady voltage on the lamps, economy of generating power, facility in handling, the most simple regulation with avoidance of belt-slip and consequent loss of power, destruction of belts and pulleys, and other consequent troubles. Mr. Crawford went to Nancy, and, after careful investigation, arranged for the sole agency of Mr. Vicarino's invention for Indian territories. The system has since been in use from Burma to Kathiawar; and it was employed throughout on the meter-gauge Royal train for light, heat, cooking, pumping, and ventilation.

The carriage-lighting work of the company led to a further important manufacturing venture, namely, the Bombay Battery Works. The company had, in connection with railway-carriage lighting, secured the sole agency of the well-known "Tudor" railway-carriage batteries, manufactured by the Accumulatoren-Fabrik Aktiengesellschaft of Berlin. This great concern, at a later date, started an autogenous carriage-lighting system of its own, under Dr. Buttner's patents.

Mr. Crawford was requested by the Accumulator Company to adopt this for India, in place of the Vicarino system.

THE BOMBAY ELECTRIC COMPANY'S WORKS, ANDHERI.

1 Crawford's Patent Railway Carriage Dynamo, Showing Patented Twin Self Lubricating Drive, Securing Constant Minimum Tension on the Belts

2 Crawford's Patent Railway Carriage Dynamo, Dismounted

3 First Great Indian Peninsula Train Fitted with the Vicaring Crawford System of Electrical Supply

4 Crawford's Patent Railway Battery Box, with Independent Plates. 5 Bombay Electric Works Mechanics' Shop, North West Corner.

6 Bombay Electric Works Andheri: Main Building Nearing Completion.

As an alternative, the battery agency would be withdrawn.

Mr. Crawford chose the alternative, and proceeded "somewhere near the front," where he obtained details of the manufacture of Tudor plates, together with the requisite machinery and apparatus. Thus it came about that the manufacture of Tudor plates was in full swing in Bombay shortly after the agency lapsed.

The New Bombay Battery Works in Andheri continue the manufacture of accumulators, and are further arranging to supply Leclanché, Bunsen, dry, and hermetic cells.

The premises of the company consisted for many years of a block of three houses in Medows Street, in the Fort, Bombay. This place was ill-adapted for the development of a manufacturing concern, though a fair output of batteries, fans, fittings, switchgear, railway-carriage dynamos and plant was achieved, and (in the years 1915 and 1916) of 13 Pr. Q.F. shell under orders from the Munitions Board.

Consequent upon a demand for a greatly increased rent of his premises, the proprietor applied to Government for a site on the Island of Salsette, a salubrious district adjoining Bombay, and with good railway connection with the Fort; but his request was refused. Mr. Crawford however, on the 27th November, 1916, purchased a plot some 6,800 square yards in extent, close to Andheri station, and shortly afterwards commenced building the Bombay Electric Works, which are now nearing completion.

At this moment, June 1919, all the plant from the Fort premises has been laid down again, much of the higher-speeded machinery on heavy foundations. The Accumulator Works have been greatly enlarged, and the baths are now served by dynamos with an output of 700 ampères. A cupola is in process of construction, as an addition to the former plant for crucible castings, in the foundry. The machine plant, which is driven by three oil engines, comprises a great variety of tools: lathes; shaping, planing and universal milling machines; electric- and shaft-driven drilling machines; plate shears and circular cutters; universal wood-working machinery; hack and circular sawing machines; presses, up to fifteen tons, both rapid, for small repetition work, and also for heavier duty; mixing machine; ball mill; casting machines, lead foundry, and a particularly good selection of grinding machines, including an American precision grinder, for the manufacture and maintenance of the company's cutting tools, and for the grinding of armatures and armature spindles.

The products of the works as at present constituted comprise continuous-current dynamos and motors, in normal speeds, to 30 k.w. out or in-put, ceiling, pendant, and table-fans (with special attention to railway service), switchgear and cut-outs of any required dimensions, including automatic maximum and minimum switches, resistances for kinema work, motor starters and dynamo regulators. The plant for making dynamos includes a large lathe for boring out magnet frames, a special automatic machine for punching slots in armature plates, also two automatic coil-winding machines for the manufacture of magnet coils large and small. A feature of the equipment is a patented machine which, by adjustments, produces widely differing types of former-wound armature coils in great variety of sizes.

The Bombay Electric Company's patented "Hope" fan was adopted, after carefully conducted competitive tests with other leading makes, throughout the offices of the Royal Indian Marine in Bombay. It is also used by the Government Telegraph Department, and is said to have been the first electric fan installed in Bagdad after the British occupation, the work being carried out by a former engineer of the company.

Repair work, both in electrical and mechanical lines, has for many years been an important feature of the enterprise, as well as bronzing and electroplating in silver, gold, nickel, and brass. Indeed, the out-turn of the works in fans and fittings is largely dependent on the latter department.

The electrical import and stores supply department is generally well stocked, and is laid out on scientific lines, in order to cover the widest possible demand in higher-class articles.

The policy of the company has always been to give of the best, both in imports and in articles manufactured in the works. It looks to the "repeat" order for its profits, and is out to meet, in every reasonable way, the rapidly developing demand for electrical, hydraulic, and prime-moving machinery and plant manufactured locally.

The manufacture of single and multistage centrifugal pumps and pumping sets forms an important branch of the enterprise. Special constructions are undertaken on demand for inventors and patentees.

It may be mentioned, in conclusion, that all drawings, weights, and measures used by the company are metric, and that this system has been employed for many years with entire success, no notable difficulties whatever having arisen as far as internal affairs are concerned.

THE BOMBAY PORT TRUST

The harbour of Bombay is a deep arm of the sea between the island of Bombay and the mainland, which has a maximum length of eleven miles and a width of from 4 to 6 miles.

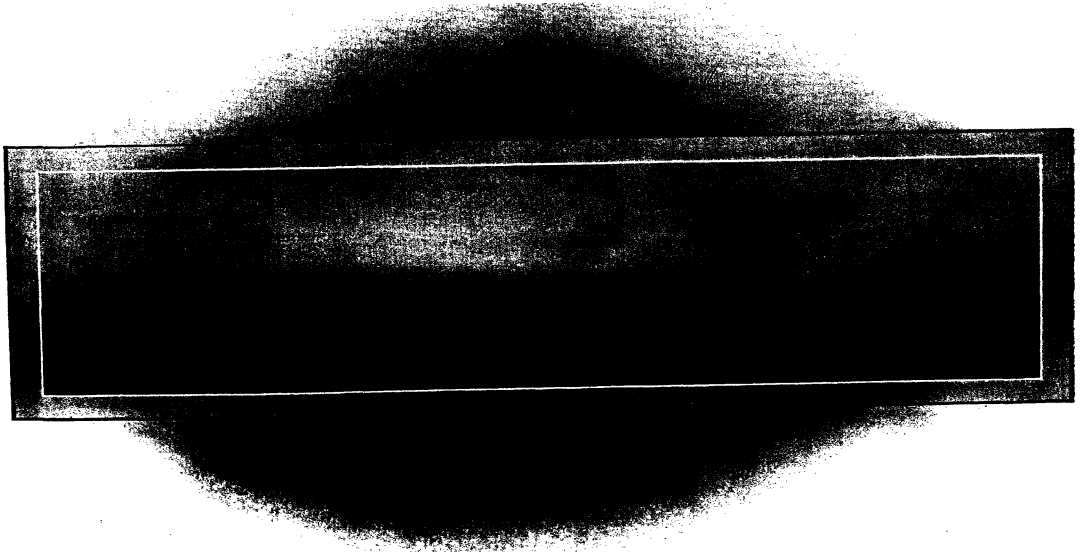
The harbour is fairly well protected from the monsoon winds, and its approaches are well lighted, the two principal lights being on Kennery Island, about eleven miles south from the extreme southerly point of the Island of Bombay, and on the Prongs reef, about one mile south-west of the same point.

The character of these two lights, and their range of visibility, is as follows: Kennery—A group flashing white light, every ten seconds, visible 18 miles. It has a red sector from 338° through north to 1°; Prongs—A white flashing light, every ten seconds, visible 18 miles, flash-light three seconds, eclipse two seconds duration. The extreme range of tide at Bombay is 18 feet 7 inches, but the range between H.W. and L.W.O.S.T. is only 12 feet.

The docks are situated on the Island of Bombay, on the west side of the harbour, and are as described below. In addition to the closed docks, there are a number of basins and bunders at which traffic from country boats is handled.

All matters in connection with the administration of the harbour lighting, pilotage, docks, bunders, and landed estate are under the control of the trustees of the Port of Bombay.

The Board of Trustees, which was constituted in 1873 to control the trade operations of the port which had previously been in the hands of various companies, now consists of seventeen members: One chairman, appointed by Government; nine trustees nominated by Government, of whom one is a military officer serving in the Bombay Brigade, and not less than three are natives of India residing in Bombay; seven elective trustees, of whom five are



THE BOMBAY PORT TRUST.
VIEW OF ALEXANDRA DOCK, BOMBAY, LOOKING NORTH.

elected by the members for the time being of the Bombay Chamber of Commerce, and two by such body or bodies as Government from time to time selects as being most suitable to represent the interests of the Indian mercantile community. Nominee and elective trustees are appointed for two years.

The principal trade commodities of the port are: Imports—cotton piece-goods, metals, machinery, railway plant, kerosene oil, rice, sugar, and timber; exports—coal, cotton, grain, oil, seeds, hides, piece-goods, twist and yarn, and manganese ore.

The value of trade in 1915–16 was as follows: Foreign imports, £35,253,000; foreign exports, £36,040,000; and coasting, £20,140,000, not including imports and exports on Government account.

Previous to the war the figures were: 1913–14—Foreign imports, £62,793,000; foreign exports, £49,643,000; and coasting, £22,463,000.

Prior to the year 1880, there was only one small closed dock in Bombay, namely, the Sassoon Dock, constructed about 1870 by Messrs. D. Sassoon & Co., which has a water area of 3.45 acres, with a depth on sill at H.W.O.S.T. of 21 feet 3 inches and H.W.O.N.T. of 18 feet 3 inches, but in that year the first of the closed docks, the construction of which had been undertaken by the then newly-formed board of trustees, was opened. This was the Prince's Dock, the foundation-stone of which had been laid by H.R.H. the Prince of Wales (afterwards King Edward VII) on November 11, 1875. This dock measures 1,460 by 1,000 feet, and has two entrances 66 by 55 feet in width. The water area is 30 acres in extent, while the depth over sill at entrance at H.W.O.S.T. is 28 feet 3 inches, and at H.W.O.N.T. 25 feet 3 inches. The dock is fitted throughout with hydraulic cranes, of which there are one of 30 tons (fixed), fifty-five of 30 cwt. (portable), and one of 5 tons.

The total length of wharves is 6,910 feet, and all berths are provided with transit sheds, most of them being single-storied. The total area of shed accommodation is 438,121 square feet. In its early days much opposition was manifested towards the use of the Prince's Dock, but this was gradually overcome, and in 1888 the Victoria Dock was opened, which is situated immediately to the south of the Prince's Dock, and connected with it by a communication passage 64 feet in width.

The Victoria Dock has an entrance 80 feet in width, with a depth over sill at H.W.O.S.T. of 30 feet 3 inches, and at H.W.O.N.T. of 27 feet 3 inches. The water area is 25 acres in extent, and the total wharf length is 7,805 feet. The dock is fitted with hydraulic cranes, of which there are one 100-ton fixed crane, and fifty-eight 30-cwt. portable cranes. Nearly all the berths in the Prince's and Victoria Docks are now connected with the railways, and accommodation in this respect has been considerably improved in the last few years. All berths are provided with transit sheds, some of three and some of two storeys, but the majority have a single storey only.

The great increase in the trade of the port necessitated the provision of still greater dock accommodation, and on November 13, 1905, the foundation-stone of the Alexandra Dock was laid by H.I.M. King George V (then H.R.H. the Prince of Wales), and the dock was opened by H.E. Lord Hardinge, P.C., G.C.B., G.C.M.G., G.C.V.O., G.M.S.I., G.M.I.E., I.S.O., Viceroy of India, on March 21, 1914.

This dock is still further to the south, and is separated from the Victoria Dock by a distance of about 1,550 feet, in which is at present the Carnac Basin. It is intended later on to connect the Alexandra Dock with the Victoria Dock by a communication passage, which will be 100 feet in width at the ends and which will be widened for a length of 1,000 feet in order to provide four 500-feet berths for vessels lying on either side. This great dock has a water area of 49.52 acres, and provides accommodation for seventeen vessels of large size, the standard length of berths being 520 feet. In addition there is a berth 425 feet in length at the end of the jetty. This dock is the only one in Bombay having an entrance lock permitting vessels to enter or leave the dock at all states of the tide. The lock is 750 feet in length by 100 feet in width, and has a depth over the outer sill of 41 feet 3 inches H.W.O.S.T. and 38 feet 3 inches H.W.O.N.T. The crane outfit, not yet completed, will consist of one 60-ton floating crane (built, but commandeered for war purposes), four 6-ton hydraulic portable cranes, and eighty-five 35-cwt. cranes of a similar character.

The berths are provided with large sheds, most of which are either three or two storeyed, and the total area of which is now 1,175,145 square feet. All berths are connected with the railway.

The wall on the west side of the lock is extended 1,500 feet, to form a mole at the south end, of which a passenger station connected with the Indian railways system is being constructed and is nearing completion. When this is finished passenger steamers will lie alongside for the discharge of passengers, instead of landing them in launches as at present.

There are two dry docks on the estate of the port trustees, the first to be constructed being the Merewether dry dock, opened in 1891. This lies to the north-west of the Prince's Dock, and has a maximum length of 525 feet, with the caisson in the outer groove with a width of entrance of 65 feet 6 inches. The depth over blocks is at H.W.O.S.T. 27 feet 2 inches, and at H.W.O.N.T. it is 24 feet 2 inches.

The Hughes Dry Dock, of 1,000 feet in length with a width of entrance of 100 feet, is situated at the south end of the Alexandra Dock, and it was opened on March 21, 1914.

This dry dock is provided with two caissons, and has three stops at 450, 500, and 550 feet from the entrance, so that it can be used for ships of different lengths.

The dock is fitted with three lines of blocks, one in the centre, and the others on each side, so that large and small ships can be docked together.

The depth over blocks at the outer end is H.W.O.S.T. 31 feet and H.W.O.N.T. 28 feet, the depth at the inner end being one foot less.

All these docks are situated on the Elphinstone and Mody Bay reclamations, which have taken in from the sea 483 acres, and have raised and improved 157 acres of mud swamp.

Adjacent to the docks are the Port Trust warehouses, of which the total area completed to date is 937,346 square feet.

For many years most of the merchandise imported or exported at Bombay was handled by means of bullock carts, and each of the two railways in Bombay had its separate goods yard, but the railway facilities in the Prince's and Victoria Docks and the connections with the railway goods yards were wholly inadequate. In order to lessen the cost of handling goods, and in view of the construction of the Alexandra Docks, a scheme was prepared by which the port trustees constructed their own railway, taking over traffic from the two other railways at a

point about six miles from the docks, and distributing it at their several goods depôts (all of which have railway connection with the docks), or railing it direct to the docks as might be required. This scheme necessitated the provision of a large area of land to the north of the docks, and a scheme for raising and reclaiming from the sea an area of 583 acres was taken in hand. This is not quite completed, but the trust have already construc.ed temporary depôts for coal, a part of the cotton trade of Bombay, and a considerable portion of the trade in grain and seeds. Eventually the whole of the cotton trade will be removed to this place, while all of the export trade in grain and seeds will also be located there.

The following are the principal officers of the trust: Chairman, Sir Frederick L. Sprott, Kt.; deputy chairman, Mr. G. W. Hatch, I.C.S.; chief engineer, Mr. P. Glynn Messent, M.Inst.C.E., C.I.E.; traffic manager, Mr. E. T. Watson; docks manager, Mr. J. A. Cherry; port officer, Commander C. S. Hickman, D.S.O., R.I.M.; secretary, Mr. H. E. Hart; railway manager, Mr. J. R. Reynolds; chief accountant, Mr. J. Tyers; chief storekeeper, Mr. H. Lees; consulting engineers, Messrs. Sir J. Wolfe Barry, K.C.B., A. J. Barry, Sir Walter Hughes, Kt., C.I.E., and K. A. W. Barry, Dartmouth House, Queen Anne's Gate, London, S.W.

BURGES & CO.

A prominent feature of Carnac Road, Bombay, is the fine block of buildings, opposite the Crawford market, occupied by Messrs. Burges & Co. The ground-floor premises are tenanted as shops, chief among which is the chemist's and druggist's establishment occupied by the above firm, but the four upper stories constitute the Orient Hotel, opened in the year 1913, of which the same firm are proprietors.

The hotel is admirably situated for the convenience of persons engaged in commerce in Bombay, or for visitors, as it is near to the leading business houses and places of interest in the city. It has about forty-two apartments, including public, billiard, sitting, and other rooms, and it is worthy of note that each one of these has access to a wide balcony, and is further fitted with electric lights, fans, and lift, while each bedroom has its own bath accommodation.

BURGES & CO.
EXTERIOR.

The management of the hotel is in the capable hands of the proprietors, who are zealous in their endeavours to secure the comfort of residents, and who exercise efficient control over a staff of well-trained servants.

Messrs. Burges & Co. are wholesale and retail chemists and druggists, and are, further, manufacturing chemists, making a speciality of Hawkinson's dental powder and "Embro" balm; the former is declared to be an excellent preparation for preserving and cleansing the teeth, whilst the latter is a wonderful preparation for all bodily pains.

They import direct from England, the continent of Europe, and America, drugs, medicines, hospital and surgical appliances, and toilet and other requisites, and their numerous customers include residents of Bombay, hospital authorities, and the chiefs of several native States. This branch of business, too, is under the personal supervision of the proprietors.

THE BYCULLA CLUB

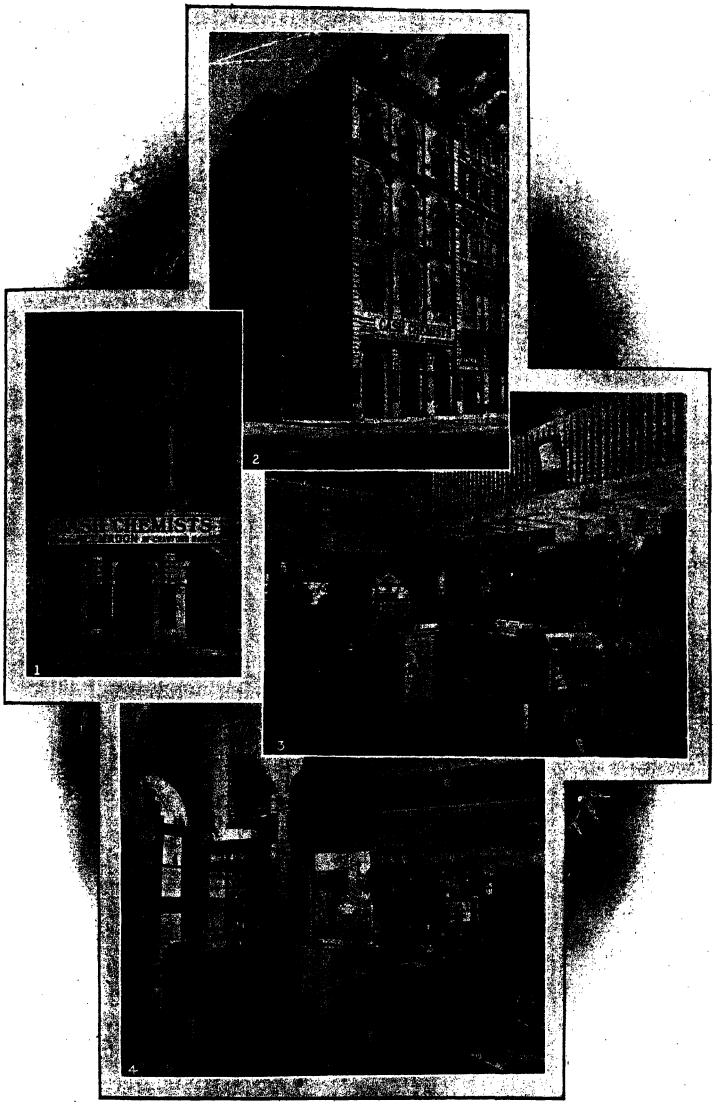
Famous among Indian clubs, the Byculla is the oldest of Bombay clubs. It was founded in 1833. But it has even an earlier origin, for some of the usual privileges enjoyed by members of a club were afforded by the Sans Souci Club Society, which commenced its existence in 1821, though, as it possessed no property, it was impossible for it to meet the wants of those who desired to form a permanent club home for themselves.

A committee was appointed early in the year 1832 to undertake preliminary arrangements in connection with the foundation of a club, but it was not until March 1833 that a report was presented to the effect that several buildings had been inspected, but that in practically every instance there had been some insuperable difficulty with regard to the purchase of the various properties. These failures did not deter the promoters from pushing forward their inquiries, and although records of the efforts made are not forthcoming, it is certain that in June 1833 a club was formed with headquarters at the Byculla Assembly Rooms, and that the members had resolved upon adopting the title of the Byculla Club. Structural alterations and additions were at once made; in 1841 eight bedrooms were erected at a cost of Rs. 13,500; in 1845 the billiard-room, hall, and entrance were completed, and two years later the present coffee-room, designed and built by Lieutenant W. S. Stuart, then assistant-engineer at the Mint.

Since that date various other improvements of a modern character have been effected, and the Byculla Club now stands as one of the leading institutions of its kind in India.

"CASH CHEMISTS"

Bombay, the premier city of India, has an area of about 22 square miles, and an ever-increasing population: thus it fol-



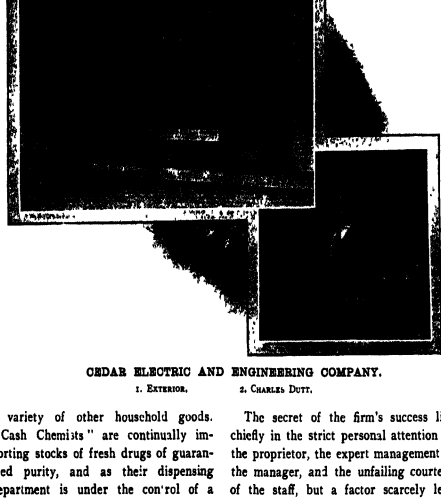
"CASH CHEMISTS."

1. Front View of "Cash Chemists." 2. Side View. 3. Interior of the Showroom. 4. Another Interior.

lows that new businesses are continually being established in order to meet extended requirements. Provision stores must be placed first on the list of essentials, but surely second place must be given to the drugs and chemicals, and imposing premises for the sale of the latter have recently been opened in the part of the city known as the Fort, the firm being known by the name of "Cash Chemists."

A very large business is conducted in patent medicines, surgical and medical sundries, toilet requisites, wines, spirits, provisions, tobacco, cigars, cigarettes, and possible prices. Specialities for the cure of ailments common to tropical climates have given proof of their efficacy, and the high regard in which their "tropical remedies" are held has caused them to be in great demand by all classes of people.

The business is conducted in such a unique and original fashion, particularly with regard to the manner in which articles are exposed for sale, that "Cash Chemists" have obtained a solid grip of custom not alone in the Fort but also in a rapidly extending circle for many miles beyond its boundaries.



CEDAR ELECTRIC AND ENGINEERING COMPANY.
1. Exterior. 2. Charles Dutt.

a variety of other household goods. "Cash Chemists" are continually importing stocks of fresh drugs of guaranteed purity, and as their dispensing department is under the control of a fully-qualified compounder of great experience, they are able to satisfy their patrons that the instructions of medical men are accurately followed.

A prominent feature of this establishment is the character of the internal fittings and show-cases in which unusually fine facilities are afforded for making an attractive display of goods, especially those connected with toilet and perfumery articles.

The firm are sole agents in India for the Nyal family's famous medicinal remedies, which have a great reputation, and as a large stock of them is always kept, orders are promptly executed at lowest

The secret of the firm's success lies chiefly in the strict personal attention of the proprietor, the expert management of the manager, and the unfailing courtesy of the staff, but a factor scarcely less important is that, notwithstanding the heavy expenses of maintenance of so large an establishment and the keen competition now prevailing, ordinary market rates only are charged upon all sales.

THE CEDAR ELECTRICAL ENGINEERING CO.

This private company was not established until the latter portion of the year 1917, and although the business is of such recent formation it has already grown to considerable dimensions owing to the practical experience and persevering character of Mr. Charles Dutt, the managing partner. Extensive and very suitable premises, including stores and godowns, have been secured at 16–20 Medows Street, Fort, Bombay, and they contain a really fine selection of up-to-date goods. The company are contractors for installing electric power and light, they supply cables, wires, and other accessories; and dynamos and motors are always kept on hand; while their chemical fire extinguishers, railway fire extinctors, canvas hose, and fire buckets, are meeting with a good demand. A speciality is made of all kinds of rubber goods and of "Ediswan" metal filament lamps, which are being supplied to the Admiralty. Other stock-in-trade includes flexible steel and bronze tubings; oil engines; ceiling, desk, bracket, and railway carriage fans; carbon lamps; anti-friction metals, together with aniline and alizarine dyes, colours, and chemicals. The company are distributing agents on behalf of Messrs. Balmer, Lawrie & Co., of Bombay, of stores for mills.

An important feature of the business is the sole agency held by the company for the sale of "Culmino," or compressed asbestos fibre jointing, which is considered to be the best material of its kind on the market for high pressure steam, gas, and air-tight joints of every description.

This speciality is not prejudicially affected by steam, heat, oils, acids, ammonia, or other liquids, and it has been thoroughly tested and approved by experts of the highest standing, and is being used by leading engineering and manufacturing firms throughout the world. It is supplied in standard size sheets, measuring 40 in. by 40 in., 48 in. by 48 in., or 63 in. by 54 in., the usual thicknesses being 1-32 in., 1-16 in., 3-32 in., and 1-8 inch.

Mr. Dutt was trained with the object of acquiring all-round commercial knowledge, but he profited greatly by visiting Paris and other important cities in Europe, where he spent a couple of years in studying the most improved types of machinery and plant, and in making the acquaintance of many of the leading merchants and manufacturers of all classes of goods.

THE CENTRAL BANK OF INDIA, LTD. (BOMBAY).

This banking institution was commenced at Bombay in December 1911 with an authorized capital of Rs. 50,00,000, divided into 1,00,000 shares of Rs. 50, while its subscribed capital amounted to Rs. 20,00,000, one half of which was paid up. The bank

CENTRAL BANK OF INDIA, LTD.

1. Alice Building—Office of the Central Bank of India, Ltd. 2. Main Banking Room, Central Bank of India, Ltd.

very quickly secured the confidence of the public owing to the sound financial position of its directors and the business-like manner in which its officials conducted its affairs. Owing to the rapid progress made in the first year's working, the directors in 1912 deemed it advisable to increase its subscribed capital to Rs. 30,00,000, with Rs. 15,00,000 paid up, and in June 1913 the deposits in the bank amounted to more than Rs. 1,00,00,000. Auspicious as the position of the bank was at this date, the directors were in the course of the next few months brought face to face with one of the most serious financial crises ever witnessed in India.

Owing to various causes, which have not yet been fully established, more than fifty banks under the management of Indians in the Punjab, Bombay, and elsewhere suspended payment, and thus the Central Bank, with others which managed to keep open doors, suffered enormously owing to the withdrawal of money from, and the lack of continued confidence in, banks of a similar nature to those which had collapsed.

The directors of the Central Bank, however, fought bravely against abnormal difficulties, and they soon had the satisfaction of gaining the re-establishment of the popularity of their undertaking.

The truth of this statement may be illustrated by the following figures. On June 30, 1915, the bank's public deposits amounted to Rs. 40,20,000; twelve months later they were Rs. 85,00,000; in June 1917 they had increased to the enormous sum of Rs. 2,18,00,000, and in December of the same year they stood at more than Rs. 3,50,00,000.

On the strength of such remarkable progress as this and with the object of enabling the bank to take a greater interest and a more active participation in the industrial trading of India at the conclusion of the war, the directors in 1917 increased their subscribed capital from Rs. 30,00,000 to Rs. 50,00,000, with Rs. 25,00,000 paid up, and the authorized and subscribed capital remains today (January 1918) at Rs. 50,00,000 with Rs. 25,00,000 paid up. The bank issues fortnightly statements of liabilities and assets on the same lines as the Presidency banks, and with the view of safeguarding the interests of its depositors it has a special clause in its articles of association providing that in the event of two-thirds of the paid-up capital being lost the company should go into voluntary liquidation.

The bank, for itself and its constituents, has invested a sum of Rs. 41,00,000 in the Indian War Loan of 1917. Branches or agencies have been opened in London, at Calcutta, Delhi, Karachi, Akola, Amritsar, and Jharia, while the London agents are the London, City, and Midland Bank, Ltd.

The affairs of the bank are entirely under Indian management, and the directors, who are well-known commercial men, are: Mr. A. J. Bilimoria, chairman; Mr. M. F. Khan, Mr. Kalianji Vurdhman, Mr. A. B. Dubash, Mr. Motilal Kanji, Mr. Moolji Haridas, Haji Golam Mahomed Ajam, and the Hon. Mr. Phiroze C. Sethna.

The chief manager, residing at Bombay, is Mr. S. N. Pochkhanawala, who is a certified Associate of the Institute of Bankers, London.

CHHAGANLAL & CO.

Success in business cannot always be attributed to large capital, for there are many instances in which young men have started practically without money, and yet after a few years of perseverance and steady work they have been able to rise to the pinnacle of success as leading merchants in their trade. One who has passed through such an experience is Mr. Chhaganlal Jamnadas, founder and now sole proprietor of Messrs. Chhaganlal & Co., leading iron and steel merchants, railway contractors, and dealers in all kinds of hardware and metals.

Mr. Chhaganlal Jamnadas, son of Mr. Jamnadas Bhookhandas, is a self-taught man, and was connected for a period of thirteen years with Messrs. Khimjee Jeeva & Co., iron and steel merchants, in Bombay. In the year 1900 he commenced business in partnership with some friends in the name of Messrs. Chhaganlal Hansraj & Co., as iron and steel and general merchants. His great business abilities, sound practical experience, and shrewd judgment of men, enabled him to secure the entire confidence of his increasing circle of customers, and in 1908 he was able to make arrangements by which he became the sole proprietor of the firm, whose style was then changed to Messrs. Chhaganlal & Co.

The firm specialize particularly in metals, hardware, and iron and steel in every form and shape, and the turnover of the business in this line alone is so extensive that it compares most favourably with those of the principal merchants of Bombay. Their innumerable and important business connections are such that manufacturers can rely upon the firm as one of the best channels for the introduction or the increase of the sale of any new line in metal, hardware, and iron and steel used in the construction of buildings and in other works. Their financial position is a very strong one, and they are always prepared to satisfy manufacturers with the best of references, and can also provide for large credits abroad whenever required.

During the past seven years, very great assistance has been rendered by Mr. Hiralal Chhaganlal, the eldest son of the proprietor, who has manifested considerable aptitude for business.

The name of Messrs. Chhaganlal & Co. is on the recognized list of contractors to the Bombay Port Trust, the Royal Indian Marine Dockyard, the Great Indian Peninsula Railway Company, and the Indian Munition Board, while they regularly supply all kinds of machinery and stores to leading engineering and milling firms, including such well-known merchants as Messrs. Richardson and Cruddas, Messrs. Geo. Gahagan & Co., Messrs. Alcock Ashdown & Co., and others.

From the above abstract it will be seen that the firm under notice are able to give excellent opportunities to manufacturers in Europe, America and elsewhere, for the disposal of their products in Eastern markets, and it should be added that their position as the premier dealers in iron and steel in Bombay has been gained by sheer hard work, frequently carried out under harassing conditions.

Messrs. Chhaganlal & Co.'s premises are situated at Carnac Bunder in Bombay, and their telegraphic address is "Quarter."

CHILDS AND JOSEPH.

Trading relationships between India and the African continent have been established for many hundreds of years, but with the development of industrial enterprises in the two countries and the provision of better shipping facilities, a remarkable growth of imports and exports has taken place. An increasing demand has sprung up in India for the indigenous products of Southern and Eastern Africa, and merchants on the other side of the dividing water have eagerly responded to the commercial possibilities thereby presented to them.

Messrs. Childs and Joseph, an East

CHHAGANLAL & CO.

1 Office and Stores. 2 Chhaganlal Tammadar 3 —

African firm of merchants of many years' standing, whose head offices are at 60 Wall Street, New York, have for a long time been represented by branches at Mombasa, Nairobi, Kisumu, Kampala, Zanzibar, Aden, and Durban, and they have more recently commenced business at 56 Esplanade Road, Fort, Bombay. These premises, however, do not now contain sufficient accommodation for the volume of trade which has already been built up in India, and it is their intention to enter into possession of more commodious quarters at Ballard Pier, in the same city, as soon as their construction has been completed. Messrs Childs and Joseph have important and old established business connections with manufacturers and merchants in London and Manchester.

The firm are, further, agents at all their coastal branches for the Smith Navigation Corporation Steamship Line.

The sole partners are Mr. Harris R. Childs and Mr. Hugo S Joseph.

CHILDS & JOSEPH.

NEW PREMISES OF CHILDS AND JOSEPH, BOMBAY

F. M. CHINOY & CO.

For anything and everything connected with motor-cars it would be sound advice to say, "Go to F M Chinoy & Co.," of 2 Apollo Pier Road, Bombay, whose extensive business was founded in the year 1882 by the Hon Mr. F. M. Chinoy, C I E (then Mr. Chinoy). This family belongs to the "Khoja" community, which originally hailed from Cutch, a Native State in Guzerat under the political superintendence of the Government of Bombay. The Khojas have contributed to a great extent to the commercial and industrial development of Bombay, and during the past few years they have risen to contest with the Parsis the palm of superiority in commercial and social activities They are unfettered by the tyranny of caste customs which hamper the Hindu community, and they travel to and carry on extensive trade with all parts of the world Their advance in wealth has been synchronous with their enlightenment, for with the spread of liberal education they have taken an increasing interest in matters affecting the social well-being of the community In the Hon Mr Fazulbhoy Chinoy all the typical qualities of his race were personified His profound loyalty, his sincerity, his undoubted abilities, his commercial activities, and his public spirit marked him out as a prominent citizen He was highly esteemed by his colleagues and associates for the practical bent of his mind and the sincerity and sobriety of his views He was a man of few words but effective action, and that was the secret of his success in public life

Mr Chinoy filled a large and honourable part in the public life of the Bombay Presidency He was a Government nominee on the Bombay Municipal Corporation for several years, and rendered undeviating assistance to successive municipal Commissioners His services in the Corporation were recognized by his being elected chairman of the Standing Committee for the year 1913-14 In that position he showed a grasp of finance and municipal administration which earned him approbation from both sides of the Assembly His lucid and interesting Budget speech dealt in a masterly manner with various complicated phases of municipal administration It was a happy coincidence that in the same year that he was elected chairman of the Standing Committee, he received the high honour of the Shrievalty. His election to the Bombay Legislative Council by the

F. M. CHINOY & CO.

1. Repair Shop and Yard. 2. Machine Shop. 3. Works Entrance.

Mahommedan electorate provided a striking evidence of the high esteem in which he was regarded by his co-religionists, for he beat his opponent by a majority of 530 votes in a poll of 697. By his election the Mahommedans secured a representative who was a zealous worker on their behalf, and the Council received a new member who was respected by all communities for his many admirable qualities. In January 1915 the honour of C.I.E. was conferred upon him.

On the death of this honourable member of the family in 1915, the business of the firm was transferred to, and is now being carried on by, his three brothers, Messrs. R. M. Chinoy, Sultan Chinoy, and N. M. Chinoy, together with his eldest son, Mr. Dost Mahomed.

This firm introduced petrol into India, and have been sole agents for "Shell" petrol ever since. Mr. Sultan Chinoy, who is in charge of this department, opened the largest garage in Bombay known as the "Bombay Garage," which is one of the principal ones of its kind in the East. In a very short time the progress made by the "Bombay Garage" was very noticeable, and the following extract from an article which appeared in the December 1916 number of "The Indian Industries and Power," proves that statement :—

"Among the various important motor-car firms in this city few are showing greater enterprise and developing more rapidly than the Bombay Garage. Notwithstanding the fact that it only came into existence in May of this year (1916), it has already found the need for expansion, and after absorbing the business, staff, and premises of the Mahableshwar Motor Service Company, Ltd., it has, as from November 1916, secured from Government the contract for transporting His Majesty's mails within the town and island of Bombay.

"The proprietors of the firm are Messrs. F. M. Chinoy & Co., who are well known in business circles both in Bombay and up-country, and their name is a guarantee that in every department of their business a high standard of efficiency will be maintained."

Messrs. Chinoy & Co. have now built a very fine showroom at Apollo Bunder, and attached to the same are extensive workshops (equipped with machinery driven by electricity) in which all descriptions of repairs to any kind of cars are carried out under the supervision of three highly qualified European engineers. A special feature is made of the construction of lorries and of welding work. Messrs. Chinoy & Co. have also been connected with Messrs. Grahams, of Bombay, for the past thirty-five years, and the latter firm act for them as their London agents for buying cars and other goods.

THE CHOTANI SAWMILLS

It is not by any means an uncommon experience to hear European visitors declare on arriving at Bombay that they were scarcely prepared to see on the western coast of India a city so modern in appearance, with such a large number of palatial buildings and inhabited by such a thriving, go-ahead people. Those persons, however, who have studied the history of the growth of that city from the earliest days, must be acquainted with the strenuous efforts put forth by enterprising merchants to make it what it has actually become, namely, one of the leading commercial ports in the East.

It may have been British capital and British influence which laid the foundation of the port, but much of its later prosperity is due to the enterprise of business-like Indian gentlemen whose descendants are now occupying a prominent position in the commercial activities of the city.

One of these well-known citizens is Mr. Mia Mahomed Haji Jan Mahomed Chotani, J.P., who is at the present time carrying on an exceedingly prosperous business in Sewri Bunder, in Bombay, as a Government railway and general contractor, and timber and hardware merchant. Mr. Chotani, who is still young in years, developed keen business instincts ere he had completed his educational career, and he has manifested such strict integrity in his transactions that he has justly gained the respect of Government and railway officials, as well as of the leading members of the commercial fraternity in Bombay. He has established trading connections with England, America, Japan, Singapore, Norway, and other places, and he exercises direct personal supervision over each department of his well-ordered establishment.

The opening of the Chotani Saw Mills in 1912 (which are equipped with thoroughly up-to-date machinery) gave a great impetus to an extensive timber business—an enterprise which has recently been of incalculable benefit to the Imperial Government, as the proprietor has been able to supply timber of all kinds, of the value of more than a crore of rupees, for military requirements. Further than this, Mr. Chotani undertakes the loading of the wood in transport steamers within the shortest possible time, and for this prompt and efficient dispatch he has earned the deep gratitude of those responsible for the prosecution of the war.

Several contracts for the supply of war materials are now being executed, and the Government of India having recently requisitioned broad-gauge deodar sleepers, Mr. Chotani most loyally came forward and willingly placed at the disposal of the Munitions Board his huge stock, numbering about 250,000, at the same time agreeing to accept the price fixed by the arbitrator of the Government. This gentleman has now in stock in Bombay an immense quantity of several varieties of timber, including Moulmein, Rangoon, and Bangkok teak logs and scantlings; engwood, padouk, pynkado, and pymea square logs; poonwood logs and spars; rosewood; Oregon pine logs and scantlings; Japanese pine boards; Swedish pine ceiling wood; deodar logs; and Nepal sal.

The value of this produce is not less than 60 lakhs of rupees, but large as it is the proprietor holds the stock in reserve in order to meet any emergency which the Government may be called upon to meet.

It will not be out of place to refer now to two highly gratifying testimonials received by Mr. Chotani from Colonel N. Kirby, R.E., C.I.E., the Engineer Stores Officer, Bombay. The latter wrote on November 4, 1916, as follows: "I certify that I know Mia Mahomed Haji Jan Mahomed Chotani personally, and have often visited his timber yards and saw-mills. I have purchased very large quantities of teak timber from him, also Singapore wood, and Oregon and Norwegian pine, and have always been satisfied with the general quality of the timber supplied. His business is a well-established one, and the work performed is good and supplies are reliable." On May 21, 1917, Colonel Kirby in a letter says: "As I have now severed my connection with the timber supply for overseas expeditions I write to thank you for your assistance in collecting and placing large supplies of pine timber from Scandinavia, America, and Japan; teak and eng from Burma and sariaya from Singapore; together with country teak, poon deodar and other kinds from India, at my disposal. The general quality of timbers supplied by you has been excellent and the prices have been reasonable. I have

THE CHOTANI SAW MILLS.

1. Planing Timber. 2. Band-Saw Work. 3. Sawing Logs with Hand-Saw. 4. Removing Sawn Timber to Godown.

1. Travelling Steam Crane at Work. 2. Staff of the Chotani Saw Mills. 3. Mia Mahomed Haji Jan Mahomed Chotani.

to thank you for your foresight in always having an ample supply of timber ready to hand, and do so heartily."

Mr. Chotani is a leading member of the Mahommedan Hallai Memon community of Bombay, and he is regarded by those who know him best as a strictly religious, sympathetic, generous, and benevolent gentleman. He personally maintains a charitable dispensary and a lying-in hospital for the benefit of his own people, and he distributed large sums of money annually to hundreds of the deserving poor, as well as for educational purposes.

It has already been shown that Mr. Chotani is ever ready to make personal sacrifices in the cause of the Allies, but he has also contributed the magnificent sum of Rs. 10,000 to be dealt with by the General Commanding the Bombay district for the benefit of sick and wounded soldiers, and he has invested about Rs. 1,25,000 in Government war loans.

THE CITY OF BOMBAY BUILDINGS COMPANY, LTD.

Bombay, the second city in the Empire, as far as population is concerned, is generally spoken of as a "fine city." Such a description is, however, only partially true; certainly there are many imposing palatial buildings, but when it is borne in mind that about 75 per cent. of its million inhabitants live in one-roomed tenements, it is manifest that there must of necessity be a tremendous amount of overcrowding and a sad indifference on the part of landlords to the primary principles of hygeine and sanitation.

When that fell disease, the plague, broke out in Bombay in the year 1896, the attention of the authorities was forcibly directed to the disgraceful condition of the thickly-populated portion of the city, and the Bombay Improvement Trust was formed with the object of clearing away miserable dens, of erecting model dwelling-houses, and of constructing wider streets and open spaces in the more congested quarters.

The Trust has already caused vast improvements to be made, and its praiseworthy example has been followed by companies and private capitalists, among whom is the City of Bombay Buildings Company, Ltd., which was formed on December 1, 1905, with a capital of four lakhs of rupees.

The inception of the company was due to Mr. A. J. Bilimoria, and the primary object was the building of a first-class theatre—to be known as the "Empire"—in Bombay. The work of construction was thereupon commenced, and the capital was at the same time increased to ten lakhs (of which six lakhs have been fully subscribed), for the purpose of acquiring another plot of land upon which the old "Novelty" theatre then stood, and of constructing a modern well-furnished play-house on the same site, now the "Excelsior."

The company were determined that the buildings which they were about to erect should be in every way worthy of comparison with other similar theatres in the East, and one has only to view the handsome exteriors, or the sumptuous furnishings, fittings and decorative work of the interiors to realize that the manner in which all who have been concerned in the work of construction have carried out their duties is beyond all praise. Each theatre has been designed with the view of affording the utmost comfort to patrons, and the boxes, stalls, dress circle and other portions have been arranged in accordance with the best examples of London houses. Thorough ventilation, providing an abundance of fresh air without draughts, so essential to comfort in any building, but especially in India, has been secured by an installation of rotary appliances, and overhead electric fans ensure protection from the stifling heat which so frequently attends the assemblage of large audiences.

The "Empire" theatre is situated in a commanding position in Hornby Road, Fort, Bombay, and is within a very short distance from the leading hotels and the principal residential quarters of the city. Electric trams pass the doors every few minutes. Until about the close of the year 1916 the building was leased to Indian Dramatic Companies, but it has now been re-decorated at a cost of some £2,000, and has been turned into a picture-palace. The original cost was not less than £24,000, and it has seating accommodation for 1,200 persons.

The name "Novelty" was bestowed upon the new theatre which took the place of the old "Novelty," but that was changed to "Excelsior" during the winter of 1916.

The very fine proportions of this building have given opportunity for seats for 1,400 visitors, and the total cost of construction and equipment was more than £30,000.

The two theatres are now leased to the "Excelsior Theatre Syndicate." As regards the Excelsior theatre, the syndicate have a working arrangement with Mr. M. E. Bandmann for the supply of touring theatrical companies, and of individual artists. When the theatre is not occupied by dramatic or other companies the syndicate exhibit pictures, and in order to avail themselves of that privilege both in the Excelsior and the Empire theatres, they have entered into business relationship with Mr. J. F. Madan, the well-known picture-house proprietor of Calcutta.

Many highly talented performers have faced the footlights at the "Excelsior," some well-known names being Ada Reeve, Chung Ling Soo (the world-famed Chinese conjurer), Horace Goldin, Nikola, and Hugh Ward and his London Comedy Company.

As soon as normal travelling conditions have been restored it is expected that an excellent London Opera Company will appear in some of Gilbert and Sullivan's choice productions, and Harry Lauder and other entertainers have also promised to visit Bombay; Madame Nordica, the "Queen of Song," under an engagement for the "Excelsior," was on her voyage between Australia and Bombay to fulfil an engagement there when the S.S. *Tasman*, upon which she was travelling, was wrecked off the coast of Java.

The films exhibited at the two theatres are of the highest quality obtainable, and they include all Pathe Frerés star productions, the Itala Company's star films, such as Cabiria, the British Government war films; they show Macbeth as acted by Sir Herbert Tree, King Henry VIII represented by Arthur Bourchier, and, in short, all notable films which arrive in the East are secured for these Bombay houses.

It cannot be denied that these two elegantly-appointed and well-managed theatres meet all the needs of the European and the educated Indian population of Bombay.

The Excelsior Syndicate have possibly rendered greater service than any other similar concern in the East in obtaining funds for war purposes and in providing entertainments for wounded soldiers. They have raised more than £6,000 in cash, and they have made all necessary arrangements when touring companies have so willingly given their services in support of so deserving an object. They are supported in this matter by the

general officer commanding, Bombay, the military authorities supplying transport and other similar service. Wounded soldiers—European or Indian—are, however, admitted to any performance at either theatre free, and Mr. James McGrath, the manager of the syndicate, is the distributing agent for the Overseas Club of a publication, "Al Hakikut" ("The Truth"), an illustrated periodical in the vernacular, relating to British war pictures, which is supplied to all Indian troops in Bombay.

The City of Bombay Buildings Company naturally regard the construction of the "Excelsior" and "Empire" theatres as their *Magnum opus*, but they have also erected a very considerable number of important buildings in Bombay, including residential flats and offices. The directors are: Messrs. A. J. Bilimoria (managing director), S. A. Nathan (chairman), Rahimtoola M. Chinoy, Ardesher Merwarji Madan, Manilal B. Nanavati, Salemahomed Dharamsey, and Abdul Kader Haji Esmail, with Mr. Ardesher R. Bilimoria as secretary.

COWASJEE DINSHAW & BROS.

This firm was established in the year 1854 at Aden, and their head offices are still situated in that town, but they have opened branches at Bombay, Zanzibar, Hodeida, and at places on the Somali coast. They are widely known in the East as shipping, forwarding, and landing agents, as well as bankers, and they are owners of six steamers plying between ports in the Gulf of Aden, the Red Sea, and the coast of Benadir. Their floating dock at Aden (capable of accommodating vessels up to 1,400 tonnage) has hitherto been used by coasting ships whenever required, but it has recently been handed over to the Admiralty in connection with war services. At Aden, too, the firm are shipping contractors and agents for the British India Steam Navigation Company, Ltd., and purveyors to the Peninsular and Oriental Steamship Company, agents to the Bombay-Persia and Arab lines, and for others belonging to Dutch and American owners.

The Bombay branch at 23 Medows Street, Fort, was started in 1870, and an important department of the firm's extensive undertakings carried on at that address is the banking business which is conducted with the headquarters at Aden.

The founder of the firm was the late Mr. Cowasjee Dinshaw, C.I.E., and the partners now consist of Messrs. Hormusjee Cowasjee Dinshaw, Kaikobad Cowasjee Dinshaw, and Sorabjee Cowasjee Dinshaw, residing at Aden; and Mr. Roostumjee Dorabjee Dinshaw, who lives in Bombay.

Trading between India and other countries has grown to a remarkable extent during the past half-century, and the firm now under notice have taken an active part in its expansion, and in doing so they have gained for themselves an honoured name in commercial circles generally, but they have at the same time manifested such a deep interest in social matters that they have, collectively as well as individually, frequently been called upon to undertake distinguished positions in several important functions. By way of example reference may be made to the fact that the firm had the high honour to provide beautiful carriages and pairs of horses at Aden for the use of His Majesty the late King Edward when, as Prince of Wales, he visited India in 1875, and a similar privilege and honour has been granted to them in connection with the passing through that port of every other member of the Royal Family up to the present time. The late Mr. Cowasjee Dinshaw had the honour of presenting an address to His Majesty on that occasion, as well as another one to H.R.H. the Duke of Connaught when he arrived as Commander-in-Chief, and a further one to H.R.H. the Duke of Edinburgh.

Mr. Hormusjee Cowasjee Dinshaw, the present head of the firm, read an address before His Majesty King George V when, as Duke of Cornwall and York, he was journeying through Aden to Australia for the purpose of opening the Commonwealth Parliament, and he acted in a similar capacity when His Majesty opened the Coronation Durbar in Delhi in 1911. During those proceedings Mr. Dinshaw was honoured by being made a M.V.O. He also read an address to H.R.H. the Duke of Connaught when, on his return journey from Cape Town after opening the Union Parliament of South Africa, he landed at Aden for the purpose of unveiling a statue to the memory of Her late Majesty Queen Victoria. Mr. Hormusjee has, further, been appointed consul at Aden for the Portuguese Republic.

Messrs. Cowasjee Dinshaw & Brothers are agents for the Burhanpur Tapti Mills Company, Ltd., whose mills are situated on the Tapti River at Burhanpur in the district of Nimar in the Central Provinces. The company was formed by Messrs. Hajeebhoy & Co., of Bombay, and the management of the concern was transferred to Messrs. Cowasjee Dinshaw & Brothers in the year 1915.

The whole of the machinery, which is driven by steam power, is up-to-date in every respect, and there are 20,000 spindles and 350 looms, but the latter are, at the present time, being increased to 500.

The mills are admirably situated with regard to obtaining their average monthly requirement of 800 bales of raw material, as Burhanpur is in the centre of a large area which is noted especially for its cotton-producing capabilities. Local markets, chiefly in the Central Provinces, provide an excellent outlet for all manufactured products.

The capital of the company consists of 10 lakhs of rupees, all fully subscribed, and about 1,200 hands are constantly employed.

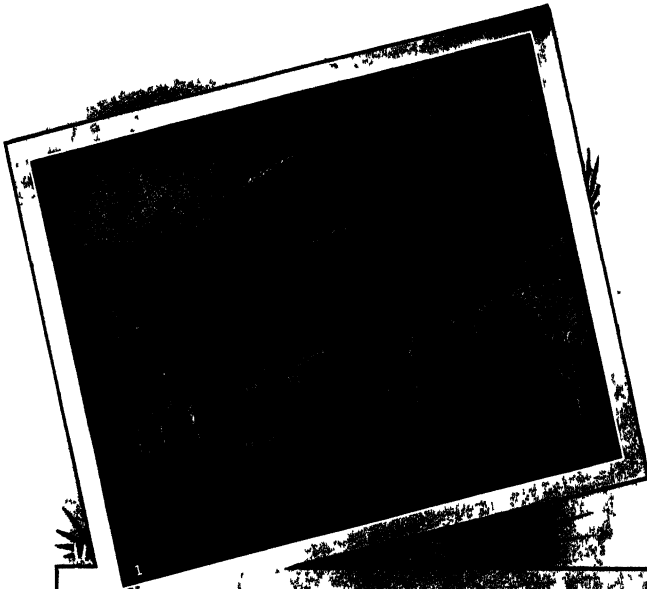
W. CROWDER & CO., LTD.

The guiding principles upon which the old-established business of Messrs. W. Crowder & Co., Ltd., have been conducted are "sound quality of all goods supplied, together with prompt attention to all orders entrusted to them," and by strict adherence to their watchwords they have steadily increased their business connections and have established so high a standard of quality that their goods have an excellent reputation throughout the length and breadth of India, Burma, and the Persian Gulf.

The company was founded in the year 1887 by the late Mr. William Crowder, who was succeeded in due course by his sons, Mr. W. B. Crowder (since retired) and Mr. M. H. Crowder, the present managing partner.

The company's offices are at 71 Apollo Street, Fort, Bombay, with branches established at Calcutta and Karachi.

All kinds of railway, public works department, mill, and engineers' stores such as paints, oils, belting, cement, pulleys, manila and steel-wire ropes, pressed-steel rowing boats, canvas, tarpaulins, and a large variety of goods of a similar character are kept in the company's extensive godowns and warehouses, and in addition to the very large circle of private customers, the company's name is on the list of supplying firms accredited by Government and railway authorities. The company are bunkering agents for Messrs. Pyman, Watson & Co., Ltd.,



COWASJEE DINSHAW AND BROTHERS

1 Offices and Stores, Steamer Point, Aden 2 Exterior View, Tapti Mills, Burhanpur

Messrs. Moxey Savon & Co., Ltd., and Messrs. Evans & Reid, Ltd., all of whom are coal exporters of Cardiff and London; they are sole agents for the Bowring Petroleum Company, Ltd., of London, for lubricating oils; Messrs. R. & J. Dicks, Ltd., Glasgow, for Dicks' patent canvas and balata belting; for "Ripolin," Ltd., London, for enamel paints; for Messrs. William Briggs & Son, Ltd., Dundee, for bituminous solution and enamel; for the Atlas Preservative Company, Ltd., London, for preservatives for wood, metal, and steam boilers; for the British Anti-fouling Composition and Paint Company, Ltd., of London; for Lawson's Non-Conducting Composition Company, Ltd., Bristol, for asbestos goods; and also for the Busserya Coal, Ltd., near Kusunda, in the Province of Behar and Orissa.

Messrs. Crowder & Co. are experts in their business, and they are always prepared to place their practical experience at the service of old customers or of others anxious for assistance, and all communications regarding this matter should be addressed to the Manager-in-Charge at the Bombay offices.

The telegraphic address of the company is "Faraday," Bombay, Calcutta, and Karachi.

CURRIMBHOY EBRAHIM & SONS, LTD.

Among the merchant princes of Bombay who have built up remarkably successful commercial enterprises, the firm of Messrs. Currimbhoy, Ebrahim & Sons, Ltd., of 13 Esplanade Road, Fort, stand out most prominently. The business was founded by Mr. (now Sir) Currimbhoy Ebrahim, son of the late Mr. Ebrahimbhoy Pabaney, who was a leading merchant carrying on an extensive business between Zanzibar and Bombay, having his own vessels for the conveyance of merchandise. He subsequently migrated to Bombay, where he died in 1855, leaving three sons, of whom Sir Currimbhoy, the youngest, at the early age of sixteen, founded the firm which is the subject of these notes. At that time the trade with China and the Far East was in a very flourishing condition, and the young merchant, who fully realized that fact, determined to develop his connections in that direction. He therefore opened a branch in his father's name at Hong Kong in 1857, and followed this up shortly afterwards by the establishment of similar branches at Shanghai and Kobe, whilst later still another one was started under his own name at Calcutta. Upon the strength of these agencies, and by careful management, a large trade in opium, cotton, yarn, silk, and other merchandise has been carried on, and to-day the firm is said to be the largest individual house of importers and exporters carrying on business with the Far East. For many years Sir Currimbhoy personally managed this huge concern, but in 1891 he admitted his first and second sons, Messrs. Mahomedbhoy and Fazulbhoy (now the Hon. Sir Fazulbhoy) Currimbhoy, into the firm; a few years later his third son, Mr. Golamhusain Currimbhoy became a partner; and eventually his three younger sons, Messrs. Ahmedbhoy, Rahimtulla, and Habbibhoy Currimbhoy were given shares. The management of the firm now devolves on these sons, Sir Currimbhoy having practically retired.

It must not be imagined that in building up the Far Eastern trade Sir Currimbhoy allowed Indian industries to be neglected. The clearest proof of his activity in this sphere is to be found in the number of the firm's connections in nearly every part of this huge continent.

A commencement in the cotton industry was made when Sir Currimbhoy Ebrahim took over the managing agency of the old Prince of Wales Mill in Bombay. It was not, however, until 1888 that he founded his own mill under the style of the Currimbhoy Mills Company, Ltd. This mill proved such a success that it was followed by the establishment of the adjoining Mahomedbhoy Mill, which was built and equipped in the year 1898 out of profits from the Currimbhoy Mill. To-day the firm are managing agents for no less than four other mills and large bleaching and dyeing works in Bombay as well as for the Indore-Malwa United Mills at Indore, representing in all a total of 301,940 spindles, and 5,743 looms. Some 14,500 hands are employed daily in these concerns, which, with one exception, were founded by the firm.

The Currimbhoy Mills Company, Ltd., was founded by Sir Currimbhoy in 1888, with a capital of 8 lakhs of rupees in 800 shares of Rs. 1,000 each. The factory was equipped with 30,528 spindles, and was opened in April 1890 for the purpose of spinning yarn for the Far Eastern and local markets. Most satisfactory results followed the working of these mills, and in order to cope with increasing trade the Mahomedbhoy Mill was opened. The two mills are worked together under the style of the Currimbhoy Mills Company, Ltd. The Mahomedbhoy Mill was opened in 1899, and was equipped with 26,844 spindles. Such was the success achieved that it was soon realized that further machinery was necessary, and in 1906 a new wing was added to the main building, and 13,600 spindles were added to the plant. A still further expansion of business compelled the company to enlarge the plant again by adding 1,000 looms and 10,000 spindles, necessitating still further building operations. In the year 1912 the original Rs. 1,000 shares were divided into four shares of Rs. 250 each, and the capital was increased by 8 lakhs of rupees, making it 16 lakhs, whilst in July 1916 6 lakhs were added, making a total capital to-day of 22 lakhs of rupees, made up of 8,800 shares at Rs. 250 each. The average monthly consumption of raw material by the two mills is 3,000 bales, and this is spun into different counts of yarn, from 10 to 24. Practically the whole of the finer count of yarn is used at the Mahomedbhoy Mill for the manufacture of cloth, and the coarser counts are sold in local markets or are shipped to China by Messrs. Currimbhoy Ebrahim & Sons. The machinery of both mills was originally driven by steam power, but since the completion of the Tata Hydro-Electric scheme the Mahomedbhoy mill has been electrically driven, whilst the Currimbhoy Mill is dependent upon steam, the power being derived from an engine of 1,700 h.p. Each mill is lighted throughout by electricity, for which purpose they have their own generating plant, and they provide employment for 3,600 hands. The premises are situated in the De Lisle Road, Parel, and cover an area of 65,000 square yards.

The statement of accounts of the Currimbhoy Mills Company, Ltd., for the year ended December 31, 1916, showed a net profit of Rs. 4,78,670, and dividends amounting to 14 per cent. for the past twelve months were paid.

Stimulated by the success of his initial ventures, Sir Currimbhoy next founded the Ebrahimbhoy Pabaney Mill Company, Ltd., which was registered on December 3, 1895, with a capital of 8 lakhs of rupees, of which Rs. 6,91,000 were paid up. The mill was erected on the same substantial principle as its predecessors, and when it was opened in 1897 it was equipped with 28,184 spindles. It was at once apparent that the machinery was wholly inadequate, and in 1898 no fewer than 12,240 new spindles were ordered

1. The Ebrahim Pabaney Mills. 2. The Crescent Mills. 3. Mahomedbhoy Mills.
5. The Currimbhoy Mills

CURRIMBHOY EBRAHIM & SONS, LTD

GROUP OF MILLS UNDER THE AGENCY OF CURRIMBHOY EBRAHIM & SONS, LTD

from England; 5,400 were added in 1904; some 7,200 in 1905; and further additions were made in 1913, when a quantity of the old machinery was removed. The number of spindles now working is 55,400, but 500 looms are now being obtained from England, and to accommodate these a new shed has already been built. This mill at present consumes 2,500 bales of raw cotton monthly, and this is spun into yarn of counts from 6's to 24, the coarse yarn being sent to China and Rangoon markets and the finer counts disposed of locally. The machinery was originally driven by steam, but electric power is now supplied by the Tata Hydro-Electric Power Supply Company, Ltd. The area of the property, which is in De Lisle Road, Parel, is 44,140 square yards in extent, and the mill provides employment for about two thousand hands. It should be mentioned with regard to the capital of the company that in 1906 the original Rs. 1,000 shares were split up into four shares of Rs. 250 each, whilst in 1913 the balance of the original capital was allotted, and the total increased to 10 lakhs, fully subscribed, at which figure it now stands.

In May 1900 Sir Currimbhoy's firm took over the agency of the Damodar Lakhmidas Mills Company, Ltd., a concern which was started in 1893 by Messrs. Lakhmidas Khimji & Co., of Bombay. The company commenced with a capital of 10 lakhs of rupees, made up of 1,000 shares of Rs. 1,000 each, and they equipped the mill with 26,736 spindles. Work was begun in October 1894, two years later a further 10,080 spindles were ordered from England and subsequently installed in the mill. The fortunes of the company do not appear to have been happy ones, for one of the first things done by Messrs. Currimbhoy Ebrahim & Sons on taking over the mills was to make alterations with regard to capital, and this was done in 1904 by writing off 9 lakhs of the original capital against losses, and by raising 9 lakhs of new capital, at the same time renaming the concern "The Crescent Mills Company, Ltd." In 1906 a commencement was made with weaving, and 1,092 looms were imported from England. These were duly installed, and were in working order in 1907, a large new weaving shed having been built to accommodate them. In 1912, 6,400 spindles were obtained to replace old machinery and to keep the mills up-to-date, whilst the equipment at the present day consists of 44,688 spindles and 1,106 looms. The plant is electrically driven, the power being supplied by the Tata Hydro-Electric Supply Company, Ltd. Some 1,800 hands are employed in the mills, which are situated in Ferguson Road, Parel, and cover an area of 70,000 square yards. As a testimony to the excellent management of Messrs. Currimbhoy Ebrahim & Sons, it should be stated that the Crescent Mills Company, Ltd., has never yet failed to declare a dividend, and for the twelve months ending as December 31, 1916, the interest paid was at the rate of 20 per cent. per annum.

Sir Currimbhoy's energies in the cotton industry have never wavered for an instant, and his energy led him in 1905 to found the Fazulbhoy Mills Company, Ltd., which was registered in July 1905 with a capital of 12 lakhs of rupees, divided into 4,800 shares of Rs. 250 each. The mills were originally equipped with 29,776 spindles and 912 looms, but in that year (1906) a further 15,360 spindles were added; 296 looms were fixed in 1907; and 50 looms and 6,000 spindles in 1912; whilst the equipment at the present date is 52,256 spindles and 1,307 looms. This machinery was driven by steam power prior to December 1915, when electric power, supplied by the Tata hydro-electric scheme, was installed. In 1907 the capital was increased to 18 lakhs by the issue of 2,400 additional shares of Rs. 250 each. The company employ some 2,500 hands, and the greater portion of their manufactured goods are sold locally, but some of the yarn finds its way to Syrian markets. The area of the premises is 60,000 square yards. A dividend for the year 1916 was paid at the rate of 22 per cent. per annum.

In October 1912 Sir Currimbhoy founded the Pearl Mills, Ltd., which company was registered with a capital of 20 lakhs, made up of 8,000 shares of Rs. 250 each. Milling was commenced in July 1914, with 32,400 spindles and 1,036 looms, but since that date 1,800 spindles have been added. It had been arranged with the Tata Hydro-Electric Power Supply Company, Ltd., to furnish electric current to drive the machinery, and the mills were constructed with that end in view, but when they were completed the Tata scheme had not been carried through. An arrangement was therefore made between the Tata Company and the Bombay Electric Supply and Tramway Company, Ltd., whereby the latter supplied the necessary power until the Tata scheme came into operation, which took place in December 1915. About 1,850 hands are employed in the mills, which are situated in Ferguson Road, Parel, the premises occupying an area of 86,411 square yards.

Not to Bombay alone has this prince of business men confined his energies in the cotton industry, for in 1907 he founded the Indore-Malwa United Mills, Ltd. The company was registered on November 9, 1907, with a capital of 15 lakhs of rupees. They obtained a plot of land, 21 acres in extent, on a perpetual lease from the Indore Durbar, and immediately proceeded with building operations. The mill was equipped with 21,000 spindles and 500 looms, and was opened in 1908. As in the case of other mills, it was soon realized that this equipment was totally inadequate, and additions have been made from time to time until the plant now consists of 32,000 spindles and 1,280 looms, all of which are driven by a 1,450-h.p. steam engine. It should be mentioned that this mill is in the heart of a huge cotton-growing district, and in order to deal more effectively and expeditiously with raw cotton the company in 1910 erected their own ginning factory at the mill, whilst in 1915 they added a complete and up-to-date bleaching and dyeing department for the convenience of the mill only, no outside work being undertaken. This branch of work necessitated alterations to buildings, and the premises are now equipped with the latest type of machinery, capable of dealing with all the requirements of the mill. The monthly consumption of raw cotton is 1,200 bales, and the bulk of the yarn spun is consumed in the mill for the manufacture of cloth, which is disposed of to the company's own stores situated in different parts of India. Some 2,500 persons are employed, and with an eye to their welfare the company secured from the Indore Durbar the lease of 15 acres of land, adjoining their original grant, for the purpose of erecting chawls for these workpeople. The mill has had an unbroken period of prosperity, and dividends, commencing with 4 per cent. declared on the first year's working, have been gradually increasing year by year. In 1915 the rate was 18 per cent. for the half-year ended June 1916. An interim dividend at the rate of Rs. 15 per share was declared, and for the six months ending on December 31, 1916, the directors proposed to pay a sum of Rs. 35 per share, which is equivalent to 50 per cent. per annum.

Realizing the absolute necessity of

INDIAN BLEACHING, DYEING & PRINTING WORKS (CURRIMBHOY EBRAHIM & SONS, LTD.).

1. The Indian Bleaching, Dyeing and Printing Works. 2. Bleaching Department. 3. Dyeing Department.

INDIAN BLEACHING, DYEING & PRINTING WORKS (CURRIMBHOY EBRAHIM & SONS, LTD.).

1. Pearl Mills—Warping Department. 2. Pearl Mills.

INDORE-MALWA UNITED MILLS COMPANY, LTD. (CURRIMBHOY EBRAHIM & SONS, LTD.).

1. General View of the Indore Malwa United Mills. 2. Spinning Room. 3. Warping Room. 4. Weaving Shed.

providing bleaching and dyeing works for the use of his own group of mills, and in order to supply a general long-felt want, Sir Currimbhoy founded the Currimbhoy Bleaching and Dyeing Works in 1905, this being a private company. Greatly increasing demands made upon the works caused the company to be formed into a limited liability concern in 1908 under the style of the Indian Bleaching, Dyeing, and Printing Works, Ltd., with a capital of 12 lakhs, made up of 12,000 shares of Rs. 100 each. On the formation of the new company the existing machinery was thoroughly overhauled, and a considerable number of new machines were added in order to make the works as modern in character as possible. Improvements have been made from time to time, and the works are now capable of dealing with 20,000 lb. weight of material daily. All classes of dyeing and bleaching are done, and the printing machinery is capable of executing any required design. The entire works have been driven electrically since they were originally laid down, and the power used is generated on the premises. The company employ some three hundred persons, and their works, which cover an area of 42,829 square yards, are situated in Lower Mahim, Bombay. An exhibit from the works shown at the Navsari Exhibition in 1911 was awarded a gold medal and diploma. A dividend at the rate of 27½ per cent. was paid out of the profits for the year ending on December 31, 1916.

The latest venture to date, in which Sir Currimbhoy is the prime mover, is the formation of the Premier Mills, Ltd., the object of the company being to utilize cotton waste (which is now exported from the country in large quantities) for the manufacture of coarse cloth blankets, flannelette, towels, and other similar articles. At the time of writing (January 1917), plans for the mill are being prepared by architects, and as soon as the building is completed it is proposed to equip it with 500 looms and the necessary preparatory and finishing machinery. This company was registered in Bombay on October 19, 1916, with a capital of 20 lakhs of rupees divided into 20,000 shares of Rs. 100 each, all of which has been fully subscribed privately.

The total amount of capital absorbed by the mills and dyeing and bleaching works under Messrs. Currimbhoy Ebrahim & Sons' control reaches the stupendous figure of Rs. 1,17,00,000, or, in English money, considerably more than three-quarters of a million sterling, but this does not include the capital of the Currimbhoy Ginning and Pressing Company, Ltd., of which the firm are managing agents. Other developments are also projected which will increase this already large sum to a million sterling—an eloquent testimony to the confidence reposed in the firm as managing agents of mills. It should be mentioned that a considerable share of their success is due to Mr. M. M. Fakira, the superintendent of the six mills in Bombay, who has acted in that capacity since the Currimbhoy mills were being built in 1888, and whose energy has never flagged, despite advancing years and an ever-increasing volume of responsibilities.

EBRAHIM CURRIM & SONS

This firm, carrying on business in Princes Street, and Jooma Musjid, in Bombay, are manufacturers of umbrellas which are more extensively sold than any other kind throughout India, excepting perhaps in the Bengal Presidency. The founder, Mr. Ebrahim Currim, opened small premises in Bazar Gate Street, Fort, Bombay, in the year 1860, dealing in umbrellas imported from England, and he plodded along there for about eight years, until increasing trade necessitated his removal to Jooma Musjid in the same city. The latter premises consisted at that time of two shops, but the development of the business has been so great that periodical additions to them have brought the number to eight, all in one block.

Mr. E. Currim admitted into partnership his three sons, Messrs. Rahimbhai, Ramjanally, and Goolamally, styling the firm Ebrahim Currim & Sons, and in 1902 they established the National Umbrella Factory. In the following year the eldest son paid a visit to Europe, where he studied the methods of manufacturing umbrellas, and he also purchased a complete equipment of machinery and plant for the use of the firm in Bombay. Further accommodation being required for extended operations, the old factory premises were given up and spacious premises near Jail Road were bought. As soon as the new plant had been installed the firm began to manufacture their own umbrellas, which comprise the "Stag" brand, of first quality and exceedingly popular in nearly every part of India, and other brands, with scarcely inferior reputations, known by the names of "Globe," "Dragon," and "Peacock." Not more than 15 per cent. of the firm's stock is now imported, the whole of the remainder being made in their own factory.

All raw materials are imported from various parts of the world, the cane for the handles, for instance, being obtained in China, and subsequently bent, shaped, and polished in the factory at Bombay. The machinery is kept running throughout the year, and the average daily output of umbrellas is about 2,500, but during a pressure of business as many as 4,000 can be completed in the same length of time.

Branches for distribution purposes only have been opened at Madras, where the firm commenced with one shop, and they now own four, and at Calicut, where the original single store has been replaced by three suitable shops. These facts speak volumes for the enterprise of the partners, who are strong advocates of the policy of "a large business, small profits, and quick returns."

Prior to the opening of the Calicut branch the majority of the people on the Malabar coast used palm-leaves as protection against sun and rain, but Messrs. E. Currim & Sons have taught them to adopt umbrellas, and *purdah* ladies have even been converted to the use of them.

A large wholesale business, giving the firm a practical monopoly in India in the umbrella trade, has been built up, and the partners attribute this success in a very large measure to the strictly honourable manner in which they conduct their business.

The firm carry large stocks of raw materials, not only for use in their own factory but also for sale to other traders to encourage them to commence similar industrial concerns for themselves.

The working capital of the firm amounts to 5 lakhs of rupees, and besides each partner has landed property in the cities of Bombay and Madras. Umbrellas have been sent to industrial exhibitions at Bombay, Benares, Calcutta, Surat, Bhavnagar, and Lahore, and gold, silver, and bronze medals, as well as certificates of merit, have been awarded for the superiority of their factory workmanship.

The partners personally conduct the whole business, having managers at each branch, and the factory is controlled by Mr. Mahomedbhai E. Currim, who has been admitted a partner since the death of the father.

Apart from the factory, where three hundred hands are employed, the Bombay establishment has a staff of forty salesmen and clerks, Madras has thirty, and Calicut twenty men, while the wages and rent

EBRAHIM CURRIM & SONS.

1 Head Office, Bombay 2 Madras Branch. 3. The Branch at Calicut, Malabar
4 A Corner of the Umbrella Factory in Jail Road, Bombay

sheets show an annual expenditure of Rs. 60,000 approximately.

The offices and showrooms in Princess Street were first occupied in the year 1916.

M. DAMODAR BROTHERS & CO.

The first-class workmanship displayed in the execution of orders in the printing offices of Messrs. Damodar Brothers, of 7 Church Gate Street, Fort, Bombay, has earned a most desirable reputation in private as well as commercial circles.

The present proprietors, Messrs. Essabhoy Abdul Kadr Vasi and Ali Mahomed Sheikh Huseinali Merchant (trading as M. Damodar Brothers), carry on business as printers, stationers and paper merchants, and they undertake all kinds of printing work, engraving, ruling and punching of paper, gold-blocking, edge-gilding and marbling, die-sinking, copper-plate printing, and the making of account books, while they make a special feature of binding albums and ledgers, and of embossing.

The works contain a complete set of modern printing machinery and plant, including an excellent assortment of type, but even this equipment would be of little value without the controlling influence of such an expert as Mr. Merchant, the managing partner, who closely supervises the carrying out of all orders.

The firm are constantly importing paper and other requisites for the proper conduct of a high-class printing establishment, and they are thus able to compete on favourable terms with other similar printing works.

The telegraphic address of the firm is "Sensitized," Bombay.

M. DAMODAR BROTHERS.

1. A Corner of the Stationery Premises. 2. Proprietors and Staff. 3. Interior of Press Rooms and Works.

A. B. DARUKHANAWALLA.

The sole representative in Bombay, Calcutta, Delhi, Karachi, and in Northern India generally, of "Simplex Conduits, Ltd.," is Mr. Ardeshir B. Darukhanawala, A.I.E.E. (London), whose offices and showrooms are situated in the J. N. Petit Institute Building, Hornby Road, Fort, Bombay. The company are general manufacturing electrical engineers, but they have become famous throughout the world as manufacturers and suppliers of the "Simplex" steel conduit system, the ideal protection for electric wiring for lights, fans, lifts, motors, and other purposes, ensuring immunity from losses by fire as well as being a reliable safeguard against injury or death to electricians and other persons.

The "Simplex" system for the efficient encasement of electric wiring circuits consists of a combination of smooth-bore tubes or conduits having the exterior and interior surfaces finished with special flexible, rust-proof enamel or electro-galvanized material which is used in conjunction with malleable cast-iron fittings and accessories. This combination of substances forms a complete system of which the various parts have been designedly prepared with the object of meeting the requirements of electric installation of a high-class character suitable for every possible purpose.

The numerous kinds of fittings required in connection with this conduit system, and manufactured by the company at their extensive works in Maxstoke Street, Birmingham, in England, are the outcome of

ARDESHIR B DARUKHANAWALA.

1 Offices and Showroom. 2 Gold Medals Awarded to Simplex Conduits, Ltd. 3 Mr Ardeshir B Darukhana, Sole Representative

expert knowledge gained during twenty years' study of installations in every part of the globe.

During this period a very great impetus has been given to conduit-wiring of installations, and in no commercial branch of electrical industry have developments been more marked, and in no other branch were they more necessary.

The "Simplex" system—the pioneer of its kind—was designed with the view of giving to electric wiring the maximum mechanical protection combined with the cheapest "erected" cost and adaptability for all descriptions of work, in fact, it provides for "efficient earthing" and "electrical continuity," the two greatest possible safeguards against all kinds of risks.

The company's factories, erected at Birmingham in the year 1905, cover an area of ground several acres in extent, and they are adequately equipped with modern machinery and plant, while the several buildings include a foundry, workshops for annealing, the making of core and patterns, sand-blasting, and enamelling, together with a number of large cupolas fitted with air-blasts driven by electric motors.

In addition to the very large output of "Simplex" appliances, the company are wholesale suppliers of requisites of all descriptions and of best quality connected with electrical engineering, such as cables, wires, flexibles, distribution boards, switches, fuses, lamps, reflectors, shades, heating and cooling apparatus, radiators, table and ceiling fans, small motors, and many other sundries.

The London offices and stores of the company are at 113-17 Charing Cross Road, W.C. 2.

Mr. Darukhanawala started in business in 1903, and in order to gain experience and make himself more conversant with modern practice in electrical engineering he has on two occasions paid a visit to Europe, where he came into contact with the leading manufacturers in his own particular line. He has (in the name of the firm of which he is sole proprietor) carried out under his own supervision during the past fifteen years many large electric installations on the "Simplex" system in cotton spinning, manufacturing and milling concerns, offices, bungalows, and residential quarters. Valuable business connections have been formed by him in London, Paris, and New York as an importer of electrical machinery, pneumatic tools and plant, workshop appliances, mill stores, non-corrosive paints, bituministic enamels, solutions, and other goods.

In 1901 Mr. Darukhanawala was nominated as an associate of the Institute of Electrical Engineers in London. In 1904 he was appointed by the Bombay Fire Insurance Association as one of their experts to examine and report upon electric installations; and in the same year he was awarded a gold medal for the very efficient manner in which he carried out the lighting and illuminations at the Bombay Industrial and Agricultural Exhibition, and at the same time he was presented with a gold watch and chain by the Exhibition Committee. He is, further, a member of the British Chamber of Commerce in Paris, and the name of his firm is registered in the books of the Royal Indian Marine Dockyard of Bombay.

Mr. Darukhanawala's telegraphic address is "Install," Bombay.

DHUNJEESHAW M. DAROOKHANAVALA & CO.

Small ironworks and iron and brass foundries were opened by D. M. Darookhanavala at 118 Arthur Road, Jacob Circle, Bombay, in the year 1893, and such ability was exhibited in the conduct of the business that on the death of the founder in 1902, his eldest son, Mr. Motabhoy, took over a concern which had been firmly established in the commercial world of that city. The new proprietor followed in his father's footsteps, quietly but surely extending the area of his activities, and at the present time (1919) the business is one of the largest of its kind, owned by an Indian, in Bombay.

The firm are iron and brass founders and engineers, having large workshops well equipped with suitable modern machinery, worked by a 42 h.p. Ruston and Proctor suction gas plant, and comprising lathes, drilling, punching, hammer, and bolt and nut-making machines. There is, also, a complete plant for rivetting and drilling in connection with all kinds of structural work, including the building of tanks. The foundry is capable of smelting about ten tons of grey iron daily, and castings up to seven or eight tons in weight are turned out.

The firm make a special feature of the manufacture of all kinds of mill machinery, but particularly of plant required for the ginning and pressing of cotton. Many important contracts have been undertaken, one of the chief of these being with the Tata Iron and Steel Company, Ltd., for extensive structural work carried out in conjunction with the Omiar Founding and Engineering Company, also of Bombay.

The area of the whole property comprises 12,972 square yards (4,000 square yards of which are sub-let), and the buildings, which are lighted throughout by electricity from the firm's own dynamo, are most conveniently situated with regard to railway facilities, as the Bombay-Baroda and Central Indian system passes the works, and two of its stations, Grant Road and Mahalaxmi, are less than a mile distant in southwardly and northwardly directions respectively, while the Jacob Circle tram terminus—from which access to all parts of the city is obtained—can be reached in five minutes' time.

The proprietor exercises personal supervision, and finds constant employment for nearly 300 men.

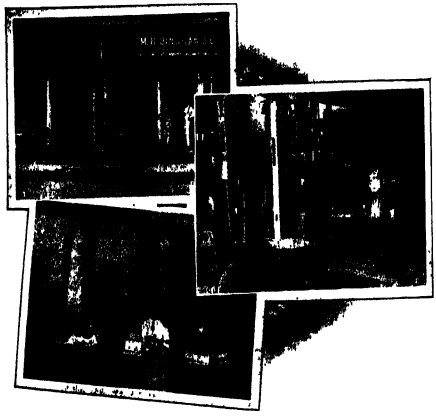
M. H. DINSHAW & CO.

The idea of establishing a business which would have a very large population of Europeans and Indians within a circumscribed area, to depend upon for support, an unrivalled position for the quick receipt or dispatch of goods, and a practically unlimited sphere of possible operations in country districts, must have been in the mind of Mr. H. Dinshaw (or, Hormusji Dinshaw Dungor) when he entered into negotiations with Mr. M. V. N. Parekh, successor of Mr. V. N. Parekh, who had carried on a commercial undertaking for about twelve years in Surat, in the Bombay Presidency. These two gentlemen became partners on November 2, 1917, and commenced business, under the style of Messrs. M. H. Dinshaw & Co., at the Fort, Bombay, with a good stock of milling and ginning stores, machinery, and hardware goods of all kinds. Both partners possess sound knowledge of and have a long experience in these lines, and Mr. M. H. Dinshaw, who manages the concern, has, by his personal influence, straightforward dealings, and unceasing endeavours, coupled with hard work, gathered together a large clientèle of purchasers, foreign traders and manufacturers, and has, further, brought the firm in so short a time to rank with the oldest and largest firms dealing in these particular commodities in Bombay.

There are always difficulties of one sort or another to be faced in obtaining a good

selection of stock-in-trade for a new venture—particularly at a time when it is extremely difficult to obtain cargo-space in ships—but the energy of the partners enabled them to succeed in their endeavours, and they confidently trust that they will be able in future to meet the increasing demands of their growing circle of customers.

A special feature is made of the supply of hand, centrifugal, and power pumps, some of which are of almost the greatest capacity known to engineers, but the firm rely upon the high-class quality of the whole of their goods as the basis upon which they intend to build up a sound connection not only in Bombay but in the *mofussil*.



M. H. DINSHAW & CO.

1. Exterior of Premises. 2. Showroom. 3. Office.

DIXON'S ENGINEERING CO., LTD.

It is doubtful if there is a single commander of any vessel of a considerable size trading in or out of the Port of Bombay who does not know "Dixon's," one of the leading establishments in that city undertaking repairs of all kinds to every description of ship. A special feature is made of dry-dock work, but nothing is of too great a magnitude for them to take in hand, and they are equally as skilful and prompt in fitting out a transport as they are in dealing with the requirements of a craft of comparatively small tonnage.

The business was founded in the year 1886 by the late Mr. H. I. Dixon, who opened works in Hospital Lane, Mazagon, Bombay, and it was not long before the concern was regarded as a rapidly rising and reliable establishment.

Each succeeding year witnessed very considerable development, but eventually the greater portion of the site upon which the works were erected was required for the construction of the Port Trust railway. As the remainder of the land was utterly inadequate for the business, a suitable plot in Mazagon Road was obtained, wheron the new workshops were built in the year 1911, and fully equipped with modern machinery and plant. The original premises in Hospital Lane are still retained for the manufacture of brass and copper specialities, which have reached a high standard of perfection, but the bulk of the work—and particularly that of a heavy character—is done in the new shops, which comprise the usual departments for an engineering concern.

The new venture met with an unprecedented increase in business, and in 1913 a limited liability company was formed, with the well-known shipping firm of Messrs. James Mackintosh & Co. as secretaries and treasurers.

Although the new company had to strain every nerve to meet fresh demands made upon them, they have—since the outbreak of the Great War—been entrusted by the Government of India with important and urgent commissions in preparing and equipping steamers for transport service. All kinds of constructional, engineering, and repairing work is accepted, and it may be added that they are among the companies who hold a licence to use the Hughes and Merryweather dry docks, and being also on the list of recognized Government contractors, they secure a considerable amount of work for public works and other departments.

They have a large staff of certificated European engineers, who exercise strict supervision in every department, and several hundred skilled workmen are constantly employed.

The telegraphic address of the company is "Noxid," Bombay.

THE EASTERN BANK, LTD.

This institution was incorporated in England on December 17, 1909, with a subscribed capital of £1,000,000, divided into 100,000 shares, each of the value of £10, and it was provided that one-half of the amount of each share should not be called up unless this step became necessary for the purpose of winding up the company. The sum of £4 was actually called up on each share of the subscribed capital, thus giving an original paid-up capital of £400,000.

The registered head offices were at 4 Crosby Square, London, E.C., and branches were forthwith opened at Bombay and Calcutta, while another one was established at Baghdad in the year 1911.

From the outset the bank has been conducted on sound financial principles, and the balance-sheets of the first four or five years' business showed that steady and prudent progress had been made.

In June 1914 the directors, being of opinion that circumstances justified an expansion of the company's operations which would provide a profitable outlet for further capital, offered to the existing shareholders 50,000 new shares of £10 upon the same terms as the old shares at the price of £5, of which £4 was credited as the amount paid up. These shares were taken up in full, and the premium of £1 on each share, totalling £50,000, swelled the reserve fund of the bank.

The outbreak of the Great War caused the contemplated development to be deferred, and shortly afterwards the Baghdad branch of the bank fell into the hands of the Turks.

The company succeeded in 1915, however, in re-establishing their business connections in Mesopotamia, upon

DIXON'S ENGINEERING WORKS (JAMES MACKINTOSH & CO.).

1 Exterior of Works. 2. Works and Office. 3 Bottom Repairs to a Steamer.

DIXON'S ENGINEERING WORKS (JAMES MACKINTOSH & CO.).

1 Interior of Works. 2. Interior of Works.

becoming bankers to the Government of India and to the British army in that country, a branch being opened at Basra, the base of military operations.

The difficulty of obtaining a sufficient number of competent assistants at that time placed serious obstacles in the way of development, but the progress of the victorious army made it possible for the bank afterwards to re-open its premises at Baghdad and to establish new branches at various places throughout Mesopotamia in order that the requirements of the military authorities might be met. It will be seen that the company have been of considerable assistance to the Government during the past five years, and it is confidently expected that they will continue to contribute to the development of Mesopotamia under British occupation.

The headquarters of the bank are still at Crosby Square in London, and branches are to-day established at Bombay, Calcutta, Ashar (Basra), Basra City, Baghdad, Hillah, Amara, and Mosul.

The balance-sheet for the year ending on December 31, 1918, showed the bank to be in a strong financial position, with its paid-up capital remaining at £600,000, its reserve fund standing at £110,000, and total assets account at £7,576,972.

The directors in London of the Eastern Bank, Ltd., are the Right Hon. Lord Balfour of Burleigh, K.T. (chairman), Sir Edward Sassoon, Bart., of Messrs. E. D. Sassoon & Co., M. Emile Francqui, director of the Société générale de Belgique; Lieutenant-Colonel J. Leigh-Wood, C.M.G., of Messrs. Brown, Shipley & Co., Mr. J. S. Haskell, of Messrs. E. D. Sassoon & Co., and Mr. G. Bromley-Martin, of Martin's Bank, Ltd. The local advisory committee at Bombay consists of Mr. A. J. Raymond, Sir Dinshaw Maneckjee Petit, Bart., and Mr. Narottan Morarjee.

EBRAM PEER MAHOMED & CO.

Probably the best-known glassware merchants in India are Messrs. Ebram Peer Mahomed & Co., of 112 Chuckla Street, Bombay, whose goods enjoy a well-earned reputation from Cape Comorin to Peshawar.

This firm was established about fifty years ago by the late Mr. Ebram Peer Mahomed, who commenced business in the above-named premises, importing all kinds of glass articles direct from Austria, Germany, Belgium, England, and America, and disposing of them by retail and also to wholesale dealers.

Steady progress was made from the very beginning, and as the circle of customers extended in various directions, a branch establishment was ten years later opened at Popham's Broadway in the city of Madras, followed by others at Calcutta, Rangoon, and Karachi, the last-named one being necessary for supplying markets in Northern India.

Mr. Peer Mahomed died in the year 1893, and the business was transferred to his two brothers, Messrs. Vali Mahomed Peer Mahomed and Dost Mahomed Peer Mahomed. The former retired from the firm and died in 1905, since which time Mr. Dost Mahomed has been sole proprietor.

Shortly after the outbreak of the Great War the greatest difficulty was experienced in obtaining regular importations of goods from Europe, and with the view of overcoming that trouble a

THE EASTERN BANK, LTD.

1, Ismail Building, Bombay—The Eastern Bank, Ltd. (Ground Floor).

branch office was started in Japan in 1916 for the purchase and dispatch of glassware, crockery, enamel ware, and earthenware. That arrangement, however, did not enable Mr. Mahomed to satisfy his requirements, and with characteristic energy he forthwith proceeded to establish a glass factory at Matunga, near Bombay, which was formally opened on Christmas Day, 1916, under the name of the Peer Mahomed Glassworks.

An expert in glass-making, Mr. S. M. Shafi, who obtained his experience and diplomas at the Higher Technological College at Tokio, was appointed, and work was commenced with the manufacture of all kinds of glass, special attention being given to fancy articles, such as chandeliers and lamps. Sheet or window glass has not yet been made, but the proprietor intends to include this as soon as circumstances permit.

The unfortunate dislocation of trade with Europe has caused an alarming scarcity and a very great increase in the cost of raw materials and chemicals, and it is extremely unlikely that this hindrance to successful working can be removed until the cessation of hostilities, although Mr. Mahomed is doing the utmost in his power to overcome it. True, there are certain raw materials obtainable in India, but before they can be utilized in the factory they must be chemically treated in Europe by a process for which provision has not been made in this country.

The factory is further handicapped by the inability to procure suitable machinery, and by the entire absence of skilled labour. The owner is, however, determined to maintain open doors at the works, and he is now having the factory worked by hand, and is engaging boys of twelve or thirteen years of age, and is training them to become expert workmen. Only one furnace has been used up to the present time, but another is in course of construction.

The area of the premises is about 9,000 square yards in extent; thus ample room is afforded for extensions, which it is proposed shall include the manufacture of earthenware, enamelware, porcelain, and articles of brass.

The firm have numerous customers in practically every city in India, and it is the intention of the proprietor, at the earliest possible date, thoroughly to equip his factory with the most modern type of plant, and thus enhance the reputation already gained for excellent workmanship. Contracts are held for the supply of goods to the Bombay-Baroda and Central India, the Great Indian Peninsula, and Burma railways, while His Highness the Amir of Afghanistan and other ruling princes are regular patrons of the firm.

Mr. Dost Mahomed exercises personal control over every department of work, while each branch is placed in the hands of a capable manager.

The firm hold agencies for the following well-known manufacturing concerns, namely: Messrs. James Hinks & Sons, Ltd.; Messrs. A. Young & Co., of London; Messrs. Degrille Hudret & Musa Lecon et Cie., of Belgium; Messrs. Bacara & Co., and Frankie et Cie., of Paris; and Messrs. R. E. Dietz & Co., of New York; in addition to other firms in England and elsewhere.

In the year 1911 the proprietor visited the principal manufacturing centres in Europe, studying the process of glass-making and gaining other valuable information, and during that trip he had the honour of being accorded a personal interview with His Majesty the present Sultan of Turkey.

Mr. Dost Mahomed is a Justice of the Peace and an Honorary Magistrate for the city of Bombay, and he recently had the distinguished pleasure of escorting His Excellency the Governor of Bombay through every branch of the Matunga Works.

EBRAHIM MAHOMEDALLY & CO.

This firm was established at 368-70 Abdul Rehman Street, in Bombay, in the year 1870, and during the past two decades a large and lucrative business has been carried on by them as ship-chandlers, hardware merchants, and general contractors. They import direct through manufacturers in England, America, and Japan, and keep in stock a large quantity of paints, oils, and varnishes, from such well-known makers as Messrs. Hubbucks, Ltd., Messrs. Blundell, Spence & Co., and Messrs. Goodlass & Co., brass and copper pipes and rods, wire nettings of brass, copper, and galvanized iron, fencing wire, plain and barbed, Manila hemp, and flexible steel-wire ropes, zinc sheets and slabs, pig-lead, lead pipes, wrought and galvanized iron pipes, canvas, rubber sheets, rubber and canvas hose, water fountains, cement, fire-clay, fire-bricks, leather and hair beltings, hand and power pumps, drilling and chaff-cutting machines, grinding mills, ice machines, cooking stoves, and ranges for the consumption of coal, wood, or oil.

Messrs. Mahomedally & Co. are regular suppliers of goods to His Excellency the Governor of Bombay, the civil and military department of the Bombay Presidency, several railway companies, the Bombay Port Trust and Municipality, steamship companies, and to the rulers of several native States.

The present partners are: Mr. Ebrahim Mahomedally, Mr. Mahomebhoy A. Tyebjee, and Mr. Tyebjee Esoofally.

Their bankers are the Bank of Bombay and the National Bank of India, Ltd., while their telegraphic address is "Culture, Bombay."

THE EMPRESS IRON AND BRASS WORKS

Nearly thirty years have elapsed since the late Mr. Burjorji Pestonji Reporter established the Empress Iron and Brass Works at Grant Road, Bombay, but his persevering nature and sound mechanical skill caused such an expansion of business that within five years of its birth the establishment had outgrown the available accommodation, necessitating the owner's removal to Connaught Road, Byculla, in the same city. The latter premises, which cover an area of about 6,000 square yards, are immediately opposite the famous Victoria Gardens, and are within two minutes' walk from the Byculla railway station.

Many difficulties which had to be faced in those early days seemed to exhibit a formidable threat to this new enterprise, but Mr. Reporter, being a man of calm courage, enduring perseverance, and firm determination, was at last able to overcome them all, and eventually his workshop, which originally had only a small lathe, became one of the largest foundries in Bombay.

Mr. Reporter died in the year 1906, and was succeeded by his sons, each of whom makes a speciality of the management of one branch of the works, and controls it personally, thereby giving particular attention to the various details as they come under his notice.

The building comprises shops for engineers, mechanics, fitters, blacksmiths, pattern-makers, and boiler-makers, together with iron and brass foundries, offices, and a number of sheds and stores. The engineering shops are fully equipped with all necessary modern machinery, which is driven by a 45-h.p. Ruston & Proctor crude oil engine, while a second engine of similar power, and by the same

IBRAHIM MAHOMEDALLY & CO.

NTERIOR. 2. OFFICE AND SHOWROOM. 3. GODOWN.

THE EMPRESS IRON AND BRASS WORKS.

1. Building 2 Mechanic Shop 3 Mechanic Shop. 4 Foundry.

makers, has been installed for use in case of emergency.

The firm specialize in repairing work and in the manufacture of entire machines, and of all spare parts, and it is a pardonable pride of the partners that theirs is the only Indian firm of manufacturing engineers who actually make parts of machinery in their workshops.

They undertake to turn out from their works any machinery requisite for cotton mills or motor-cars, and a large amount of work is carried out in marine engineering, chiefly in repairs to steamers and launches, castings, either of brass or iron, and of all sizes up to five tons in weight being made in the foundry.

A strong point is made of structural work, and the firm have in a most creditable manner erected several handsome structures in Bombay, but particular mention should be made of Oomrigar's Building near Crawford Market in that city.

The firm have, further, concluded arrangements with the owners of some fifty cotton mills in Bombay for carrying out repairs to machinery and for furnishing spare parts whenever required, and as contractors they supply building and other materials to various railway companies, and indirectly to the Public Works Department.

A branch of business has been opened at Abdul Rehman Street, Pydhony, a thickly populated business centre of the city.

All employees, obtained locally, are trained in the works, and some of the men have been with the firm for fifteen or twenty years. The majority of the hands in the mechanics' shops are Parsees with whom specially favourable arrangements as to apprenticeship are made and to whom various encouragements are made.

The total number of hands now employed in the foundry is about two hundred.

FELICE CORNAGLIA.

"Five o'clock at Cornaglia's!" "Certainly, where else?" These two phrases, short, but full of meaning to young men and maidens, and even to others of maturer age, may frequently be heard as one threads the busy thoroughfares or the residential streets of the beautiful city of Bombay. After the toils of the day in stuffy offices, warehouses, or shops, the place where any one is likely to find any other one is in the famous restaurant of Felice Cornaglia at 7, Esplanade Road. In this delightful retreat may be seen ladies and gentlemen who have passed through forty or fifty summers sipping their pekoe and chatting over recollections which renew their freshness in the telling; clerks and warehouse assistants pay visits in search of chums; hard-headed commercial men revel in refreshing beverages while discussing transactions involving the transfer of lakhs of rupees; typists and telephone girls, shop girls and school girls, and girls of no occupation; all are in the habit of congregating there, bent on business or pleasure. But this is anticipating!

A business of a restaurateur and confectioner was established at 83-5 Medows Street by Felice Cornaglia about the year 1880. These premises, situated in the heart of the commercial portion of the city, grew to be exceedingly popular as a restaurant in which dinners, lunches, and other meals were served in first-class style, but as that neighbourhood was practically deserted after business hours, the proprietor realized that by catering for those who loved to while away an hour or two during afternoon tea in some more favoured locality he would have an opportunity for the development of his business. Mr. Cornaglia therefore secured the building at 7 Esplanade Road already referred to, and his action was so warmly appreciated by the public that it speedily became the fashionable resort for five o'clock gossip.

French pastry and Italian confectionery, together with the choicest blends of spirits and wines from the finest vineyards in Europe, are placed on tables in a faultless style which has earned a deservedly high reputation for the proprietor.

A branch establishment was opened at Poona about twenty-five years ago, and in this city the name of Cornaglia is equally as well known as in Bombay. Wedding parties, banquets, balls, and ceremonies are supplied with the choicest refreshments of all descriptions, and an unlimited staff of well-trained servants adds in no small measure to the success attending such gatherings.

Business operations have been extended throughout India, and there is scarcely a city of any importance to which the activities of this well-known house have not been directed. Mr. Cornaglia has been honoured with special appointments as caterer to several successive governors of Provinces in India.

The proprietor retired into private life a few years ago, leaving the flourishing business to be carried on by his able managing partner, Signor B. Ciravegna, who worthily maintains the traditions of the past.

THE FRENCH MOTOR-CAR AND ELECTRIC COMPANY, LTD.

This company first started business in Calcutta in 1905. They met with such success in that city that in 1910 it was decided to extend their business activities to Western India, and a very good site on New Queen's Road, in Bombay, was selected, whereon they erected their first building, with a showroom in front and a workshop behind. They actually commenced operations in the beginning of 1911. It was soon found that their business was seriously handicapped on account of insufficient accommodation, and they therefore acquired the adjoining plot, on which they have constructed a handsome building, which is certainly the finest motor-car showroom in India. The whole block covers an area of over 5,000 square yards, with a frontage of 280 square yards on New Queen's Road. Their staff, which in March 1911 consisted of fifteen hands, now comprises about two hundred workmen.

The premises include offices, show and store rooms, repair works, and body-building factory, and as all these are under one roof the company are assured of a maximum amount of work being done in the least possible time consistent with great efficiency. Motor body-building is a line of which the company make a speciality. Bodies of the most elaborate styles have often been turned out which have been illustrated in European industrial magazines as specimens of Indian labour. This industry being new to the country men had to be trained with great patience.

Repairs of all kinds to every type of car, irrespective of make and year of manufacture, are carried out in their up-to-date works. In this department they make a speciality of repairing magnetos, and it is significant that from every part of India such parts are sent to them for that purpose.

The company have on their list of customers many institutions such as the municipality, Port Trust, the Great Indian Peninsular Railway, and others.

They have from the commencement of their business been agents for European manufacturers of cars such as the Minerva Motors, Ltd., Antwerp; Panhard and Levassor, Paris; Berliet Motor Company, Lyons; the Mors Company, Paris; and the Bianchi Motor Company, Milan; but as there has recently been an increasing

F. CORNAGLIA.

1. Exterior, Esplanade Building. 2. Interior, Esplanade Building. 3. Interior, Meadows Street Building.

FRENCH MOTOR CAR AND ELECTRIC CO., LTD.

1 Front of Building. 2 Showroom. 3. Workshop.

demand for American cars—probably on account of the European War—the company have become agents for the Studebaker Corporation of Detroit, Michigan, U.S.A.; the White Company, of Ohio; and the Federal Motor Truck Company, of Detroit.

A large stock of spare parts and motor accessories is always kept in stock by them.

The reputation of the firm is very high in the country, and they contemplate extending their business still further in the future.

The manager of the company in Bombay is Mr. S. Guevrek, while their head office is at 45 Longue Rue d'Herenthals, Antwerp, and their Paris office is at 56 Rue Lafayette.

FORD AUTOMOBILES (INDIA) LTD.

It is generally admitted that the extent to which goods on the market find favour with the public is one of the surest proofs of their real value, and viewed according to this standard, Messrs. Ford Automobiles (India), Ltd., have every reason to congratulate themselves upon the excellence of the motor-cars supplied by them, seeing that the demand for them in this country has been exceptionally great. During the late war the military authorities were supplied with no fewer than 2,000 *chassis* for use on the frontier.

Since the re-establishment of trade under more normal conditions the firm have been deluged with requests for Ford cars, and they have not only delivered 700 "Fords" of various models, but they have also a list of more than 800 names of applicants who are patiently waiting for the execution of their orders.

The firm are sole distributors for the whole of Western India for "Ford" cars and spare parts. Their motor showrooms in Hughes Road, Bombay, are the finest in the city, and in their extensive stores (in the same building) they carry a stock of spare parts of the value of Rs. 6,00,000.

Apart from the showrooms and stores at Hughes Road, the firm have a large assembling godown at Mazagaon, where new cars are put together, and large workshops, covering an area of 24,000 square feet, for the repairing of "Ford" cars only, have been constructed upon land at Worli, about four miles out of Bombay.

Employment is found for fourteen European expert assistants and about 350 Indians, all of whom are toiling day by day in order to meet the increasing demands for the justly famous "Ford" cars.

It may be interesting to mention that this firm commences work at the very early hour of 7.30 a.m., the office is closed at 4.30 p.m., and the showrooms and stores are open to the public up to 6.30 p.m. These hours are more in accordance with the Calcutta office hours, and are certainly very suitable for a hot climate such as prevails in Bombay.

FRAMJEE, SONS & CO.

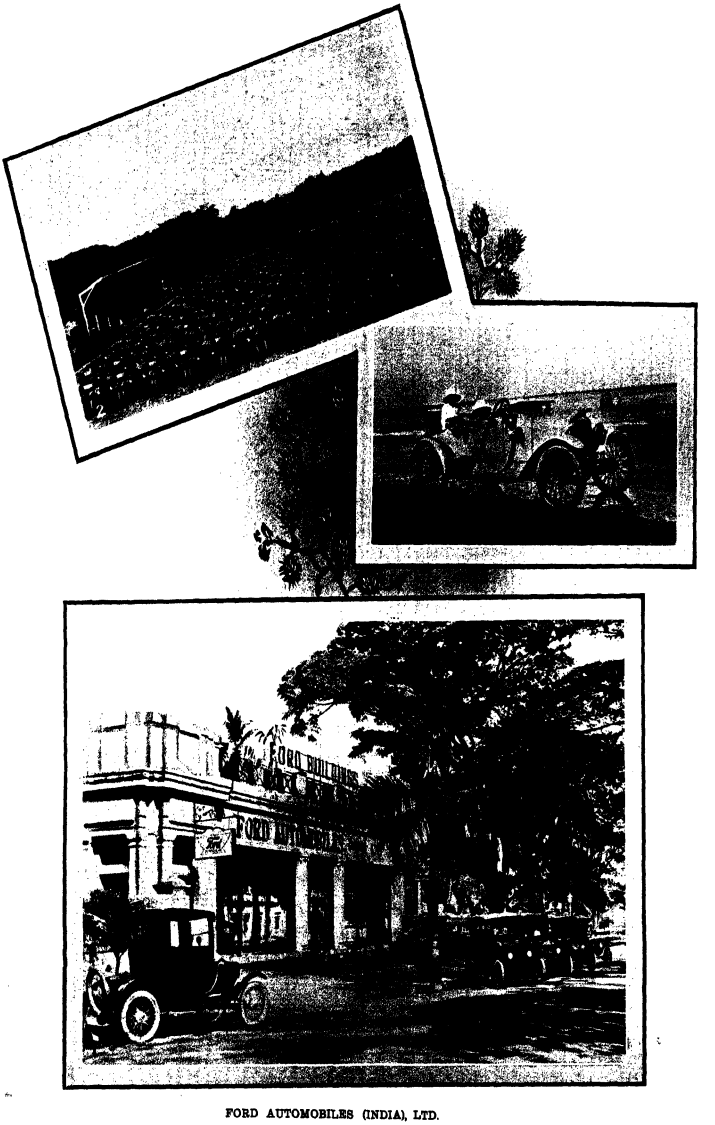
This highly respected and well-known firm, who carry on business as merchants and agents in the Oriental Buildings, Bombay, was founded in the early portion of the nineteenth century by the late Mr. Framjee Nusserwanjee Patel, who was not only one of the most successful commercial men in the then rising city of Bombay, but was also a prominent figure in the social, civic, educational, and philanthropic life of Western India.

Framjee was born in the year 1804 at a time when the torch of education in India was just beginning to burn, and when Parsi parents were commencing to realize the benefits that might accrue to their sons by giving them opportunities for the acquisition of knowledge. With a thorough grasp of his own vernacular, and with a smattering of English, young Framjee entered upon a business career in 1819, when he was still in his teens, and a mercantile pursuit proved so congenial that by 1827 he worked his way to a partnership in the firm of Frith, Bomanjee & Co. His sound experience enabled him, in a few years, to raise the status of the concern to the high-water mark of commercial respectability, and in 1844 he founded a business house under the name of Messrs. Wallace & Co., he himself being a partner with the English members of the firm. Fourteen years later, however, he severed his connection with this firm and established another on similar lines under the style of Messrs. Framjee, Sands & Co., the partners of which comprised some of his sons, together with two or three Englishmen of known commercial shrewdness and integrity.

Engaged as he was through life in extending business connections to various parts of the civilized world, and for upwards of thirty years being intimately associated with the trade and commerce of the city of Bombay, it is not surprising that Mr. Framjee's name became a household word in widely distributed commercial centres, and that he was recognized as one of the most eminent native merchant princes of Western India.

It will thus be seen that Dame Fortune smiled on Framjee Patel in early life, and as his wealth increased, he manifested a desire to share it with the needy or spend it for the benefit of the public at large. From this time onwards the stream of his beneficence never slackened in its flow, and the public spirit which he had imbibed from contact with his European partners now found an outlet in his vigorous advocacy on behalf of education for boys and girls. His example inspired younger men of his time—such as Dadabhoy Nowrojee, the first Indian member of the English House of Commons, Navrojee Furdoonjee, the "Tribune of the People," and Sorabjee Bengali, a public-spirited citizen of Bombay. An ardent advocate of learning, Framjee realized from the beginning that it was education, and education alone, that could give power of thought and expression, quickness, vigour, integrity, and other commendable characteristics, and that in order to uplift a fallen nation in the scale of humanity, education must be brought within the reach of all. When, therefore, Lord Elphinstone, during his governorship of Bombay, conceived the idea of disseminating education broadcast in the Presidency, Framjee Cawasjee and Framjee Patel were among his chief collaborators and supporters. It was to their joint initiative that the establishment of the "Elphinstone" School and College was due, these being institutions which have to the present day continued to hold foremost rank among similar academies more recently founded in Western India. In furthering the cause of education Framjee established in Bombay, in 1839, an Anglo-vernacular school for the benefit not only of his own co-religionists, but also for those of other communities, to whom he extended a hand of encouragement. The name of this pioneer of education in Western India has therefore become a household word in the homes of rich and poor alike.

Another sphere in which Mr. Framjee Patel's activities were displayed may now be referred to. The passing by the Government of India of the Parsi Marriage and Divorce Act and the Parsi Intestate Succession Act (Nos. 15 & 21 of 1865) was chiefly due to the initiative and efforts of himself and other stalwarts



FORD AUTOMOBILES (INDIA), LTD.

1. Showrooms. 2. Chassis Assembled Ready to be Tested. 3. Ford de Luxe Car.

FORD AUTOMOBILES (INDIA), LTD.

1 Interior of Showrooms

2 Repair Service Depot, Worli.

3 Interior, Repair Service Depot, Worli.

FRAMJEE, SONS & CO

1 The Hon Mr Framjee Nusserwanjee Patel. 2 Mr Sorabjee Framjee Patel. 3 Mr Bapujee Sorabjee Patel.

FRAMJEE, SONS & CO.

1. s.s. *Phamix.* 2. s.s. *Rahmani.*

of his time. Since the advent of the Parsis into India, their domestic affairs had been in a very unsettled state; matrimonial obligations and the rights of succession in cases of intestacy had fallen into hopeless confusion; the sanctity of marriage ties was cast to the winds; and the goddess of Justice was thus deprived of her dues. This state of lawlessness was too intolerable for the community, and continuous agitation led to the appointment of a commission under the presidentship of the distinguished Sir Joseph Arnould, Mr. Framjee Patel being the chief Parsi member. The Parsi Law Association, of which Mr. Patel and Mr. Bengali were the guiding spirits, rendered invaluable assistance to the Commission, and their joint efforts resulted in the passing of these Acts, which heralded the dawn of a new epoch in the history of the Parsi community.

The Government of the Right Hon. Sir W. R. Seymour Vesey-FitzGerald appointed Mr. Patel in 1866 to be a member of the Legislative Council of Bombay, where his services in the cause of the public touched a high level of excellence and elicited universal recognition in all quarters.

During the whole of his eventful life, which wellnigh extended to about three quarters of a century, he was one of the best beloved and most highly revered of the distinguished natives of India, and his character was built upon the most correct principles of integrity, benevolence, and honourable conduct. Pious without cant, liberal without ostentation, dignified without effort, benevolent without show, this great Parsi was no less remarkable for the generosity of his disposition, which procured him the gratitude of a grateful people, than he was for those mild and respectful manners which gained him the honour, the esteem, and the admiration of his countrymen. Thus, with a wreath of laurels bedecking his brow, this "Nestor of the Parsis," as Sir George Birdwood called him, breathed his last at the age of four-score years and eight.

It is said that sons of great men labour under a heavy disadvantage as they can only on rare occasions rise to public expectations, and however much they may strive to do their duty to their countrymen, their services are not as a rule appreciated as they should be. In the case of Sorabjee Patel, Framjee's son and heir, it was different, however. By the exercise of amiable and endearing qualities of head and heart during an exemplary life of nearly half a century, during which he participated in all public movements, he reared a tablet in the hearts of his friends and admirers more lasting and more prominent than many raised by the frail hand of mortal man.

After the death of Mr. Framjee, his son, Mr. Sorabjee, took up the reins of control and added not a little to the prestige of this much-respected house. When Mr. Sorabjee passed away, the whole conduct of the business practically devolved upon his eldest son, Mr. Bapujee, who had already worked with his father for over ten years, and who now became senior partner, having his younger brothers, Messrs. Kharshedjee and Ardeshir, associated with him at the same time. In 1908, however, the younger brothers retired and sold their interest to Mr. Bapujee for the sum of Rs. 1,30,000 (£8,600), and from this year forward Mr. Bapujee has been the sole proprietor of this ancient and well-known undertaking. For more than sixty years the firm have been agents for His Majesty's Government of Ceylon, and a very extensive trade in the export and import of all classes of goods has also been established with Europe and the Far East.

The firm were also owners of two steamships, the *Rahmani* (4,000 tons) and the *Chamix*, together with one sailing ship, the *Patel*, all English craft acquired in Bombay by private purchase, but the first-named was, in 1917, sunk in the Mediterranean Sea.

A few words concerning Mr. Bapujee's career may now be given. He took his B.A. degree at the Elphinstone College in Bombay in 1884, where he was a distinguished pupil of Dr. Wordsworth (the grandson of the poet), having been "Ellis" scholar of his year. With sound business capabilities, Mr. Bapujee combines literary attainments of a very high order, and he has also a thorough grasp of the financial problems which frequently confront the Government of India. The value placed upon his views on such difficult subjects as currency and other similar matters may be gauged from the fact that when the mints were closed in India in 1893 to the free coinage of rupees, Mr. Bapujee was one of the handful of men in this country who not only favoured the opinion of Government when this step was taken by the Imperial authorities, but who were confident that a stable exchange was one of the first necessities of the foreign commerce of India. The most gloomy prophecies were indulged in, not only by Indian but even by English bankers and merchants regarding the ability of Government simply by legislation to maintain exchange at 1s. 4d. It was thought that not only was a gold reserve a chimera and a dream, but that there would be a sudden scarcity of rupees, and that the credit of Government would be so jeopardized that they should be compelled to re-open the mints at very short notice in the future. The stability with which exchange has been maintained at the "artificial rate" fixed by Government tells its own tale too convincingly to be denied even by practical men of business.

Mr. Bapujee's good fortune in commercial life has been recognized, and he has evinced a peculiar shrewdness of mind and alert talent in all his undertakings. As the sole proprietor of a successful and eminent firm, Mr. Bapujee worked heart and soul for its development, and it has been through his exertions and diligence that it has now become a thorough financial success. But wealth alone cannot command respect; accomplishments and virtues are required to refine it into a respectability which can only result from a proper use of the power which it bestows. Mr. Bapujee's acts of benevolence have been of a private character, and they are marked by keen discrimination in relation to the objects upon which they are bestowed. It is this virtue, along with many others inherited from his ancestors, that has made him a highly respected citizen of Bombay.

FORBES, FORBES, CAMPBELL & CO., LTD.

The development of the mercantile interest in Bombay was a plant of slow growth. In the earliest years of the island's history trade was hampered by the restrictive policy of the East India Company, which treated all independent merchants as interlopers. It was not until the seventeenth century had well advanced that the mercantile system as we know it to-day took firm root.

Some of the leading commercial houses in Bombay to-day (1918) can trace their establishment back many years, but Messrs. Forbes, Forbes, Campbell & Co., Ltd., of Forbes Buildings, in Home Street, are able to substantiate a claim that their present firm is the result of an amalgamation of two of the oldest concerns in the whole of India, namely, Messrs. Forbes, Forbes & Co., Ltd., and Messrs. Ritchie, Steuart & Co.

The first-named was founded in the year 1767 by Mr. John Forbes, of Newe, and although the name of the firm has been changed on more than one occasion the Forbes interest and name have always been maintained.

In the early days of the history of this firm—when it was under the guidance of Mr. Charles Forbes (who was afterwards created a baronet), it rendered exceedingly valuable services to the Government at a most critical period, by advancing very large sums of money to the Treasury to enable campaigns to be undertaken against the Mahrattas, who threatened, between the years 1799 and 1800, to overrun the British settlements in India, including the stronghold of the East India Company at Bombay.

Charles Forbes came forward at a crisis in the history of the company and formulated a scheme for assisting the Government with cash when war, and the selfish attitude of the Bombay *shroffs*, threatened the very existence, both militarily and financially, of the British in Western India. When the Company's troops were being beaten back by the Mahrattas, and when owing to lack of vital necessities which go to feed and render mobile an army, things were looking black for the Company's arms, Charles Forbes, acting for his own firm and for Messrs. Bruce, Fawcett & Co., lent money freely to Government at low rates of interest on the security of the Company's standing crops of cotton and teak and sandalwood forests. Forbes paid down cash and took over the produce afterwards. At one time these two firms had lent half a million sterling to Government at rates of interest which were most unfavourable to the lenders as compared with the return obtainable on their money if employed in their ordinary commercial transactions.

The loans extended over two or three years and (in the words of a well-known chronicler of their times) "enabled the war to go on when the war could not go on without them, and supplied those sinews which to the hour and the man were essential to its prosecution. Who knows if Assaye could have been fought without them?"

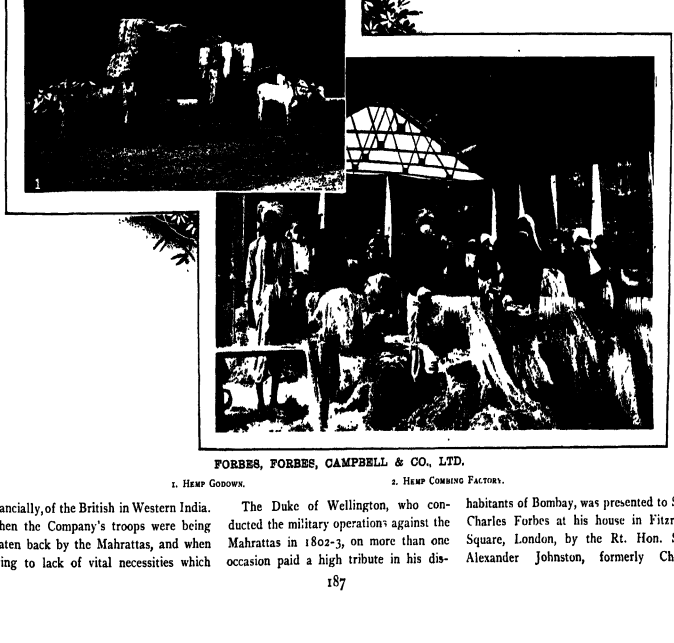
The Duke of Wellington, who conducted the military operations against the Mahrattas in 1802-3, on more than one occasion paid a high tribute in his dispatches to the public-spirited action of Charles Forbes in assisting Government at a most critical period in their history.

The Forbes loans were the forerunners of the Indian Government public loans, the first of which was issued in 1813.

Mr. Charles Forbes was head of the firm of Forbes, Forbes & Co., in Bombay, from 1790 to 1811, when he left India for London, where he was senior partner at the head office until his death in 1849.

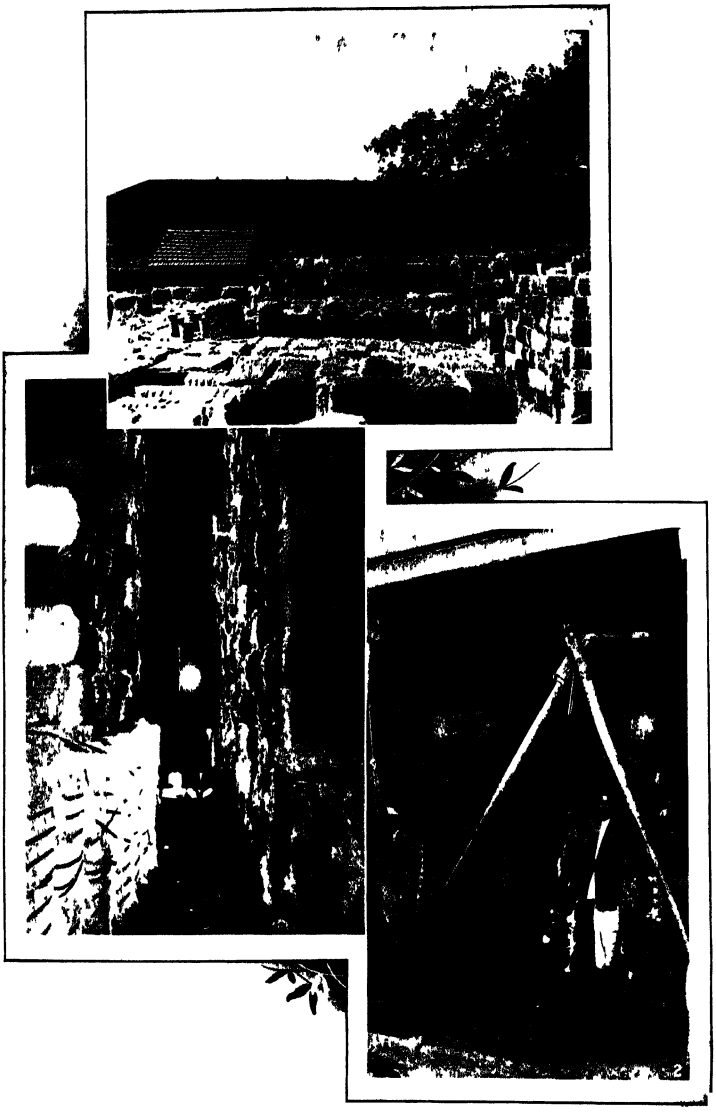
For his eminent services, which have been referred to above, he was created a baronet in the year 1823. During this gentleman's residence in Bombay he was the most prominent figure in its commercial life. He was a man of unimpeachable integrity, and he earned the wholehearted confidence of the entire native community of India.

In the year 1840, an address, beautifully illuminated and written on parchment in English, Persian, and Gujarati characters, and signed by 1,042 of the principal native gentlemen and other inhabitants of Bombay, was presented to Sir Charles Forbes at his house in Fitzroy Square, London, by the Rt. Hon. Sir Alexander Johnston, formerly Chief



FORBES, FORBES, CAMPBELL & CO., LTD.

1. Hemp Godown. 2. Hemp Combing Factory.



FORBES, FORBES, CAMPBELL & CO., LTD.

1 Cotton Jaitha. 2. Cotton Godown. 3 Cotton Godown.

Justice and President of His (then) late Majesty's Council on the Island of Ceylon, and at that time a member of the Privy Council (Judicial) of Her late Majesty Queen Victoria

The signatories expressed their long-cherished desire of publicly recording the sentiments of respect and esteem universally entertained towards Sir Charles by the native community of India, and of evincing the admiration and deep gratitude with which they had beheld his unceasing efforts to promote their interests and the moral and political improvement of its people The address, further, referred to Sir Charles's continued interest in their affairs, to his steady and uncompromising advocacy of their cause in obtaining civil rights enabling them to sit as jurymen and to become justices of the peace, and to his kindness and friendly treatment of them on all occasions of personal intercourse This interesting document also contained a request that Sir Charles would consent to give sittings to Sir F Chantry in order that a statue of him (for which the sum of Rs 4,000 had been subscribed) might be erected by them in Bombay.

Sir Charles, in feeling but noble words, expressed his gratitude for the sentiments conveyed to him in the address, and said that language failed him to say how deeply affected he was by an attachment which time and separation served only to confirm He alluded to his twenty-two years in Bombay as a period endeared by a confidence, mutual and unlimited in affairs of business, and by a kindliness of disposition on the part of the signatories which his experience of other communities had shown him to be peculiar to the natives of India

A statue was subsequently erected in the Town Hall, Bombay, the inscription being as follows "Sir Charles Forbes, Bart, the disinterested benefactor of the native inhabitants of this island, and the true and trusted friend of the people of India Erected in token of esteem and gratitude by the native inhabitants of Bombay"

After Sir Charles's death there was protracted legislation over the apportionment of partnership assets between his heirs and the deceased's partner, Roderick Mackenzie, and his heirs This matter was, however, settled about the year 1865

The second Sir Charles Forbes, then head of the London house of the firm, hearing that the Bombay branch was speculating largely, sailed for India and thereupon severed all connection with the Bombay partners, opening his own establishment under the style of "Sir Charles Forbes & Co," at 1 Rampart Row In the same year he took over the good-will and offices of the old-established firm of Messrs Leckie & Co, together with the Prince of Wales Press Company, which was subsequently remodelled and transformed into the New Prince of Wales Press Company, Ltd, for whom the present firm of Messrs Forbes, Forbes, Campbell & Co, Ltd, are agents The old firm went into liquidation in 1879, and its business was taken over by a Mr C H B Forbes (who had previously been an assistant in Forbes, Forbes & Co), and became sole proprietor of C H B Forbes & Co

In 1894 the name of the firm of Sir Charles Forbes & Co, was changed to Forbes, Forbes & Co, Ltd, but even to the present day (nearly fourteen years since the amalgamation with Ritchie, Steuart & Co), telegrams are delivered

THE BOMBAY SAFE DEPOSIT COMPANY, LTD

1 North West View of Forbes Buildings. 2 Entrance Bombay Safe Deposit 3 Interior Bombay Safe Deposit

FORBES, FORBES, CAMPBELL & CO., LTD. (THE GOKAK WATER POWER AND MFG. COMPANY, LTD.).

1 Full View of Mills 2 View of Mill Village. 3. Interior of Power House 4. Falls, Power House and Steam Stand by Building.

FORBES, FORBES, CAMPBELL & CO., LTD. (HUBLI MILLS, LTD.)

1. No. 1 Mill, S.E. Front. 2 No. 2 Mill, Showing S.W. 3. Winding and Sizing Room. 4 Interior of Card Room No. 2 Mi

in envelopes addressed to "Sir Charles Forbes & Company."

Messrs. Ritchie, Steuart & Co., founded in 1816, retained the same style of the firm until the amalgamation in 1903. This was an exceedingly well-known business house in Bombay, and it came into special prominence during a share purchasing mania which broke out in Bombay in the years 1864-66, as the result of their connection with Premchand Roychand (a leading broker in Bombay who is specially referred to below) and the Bombay Reclamation Company, Ltd. Incidentally it may be mentioned that the original seal of this company is now in the possession of Messrs. Forbes, Forbes & Co., Ltd.

Mr. Michael Scott, manager of this firm at the time, was an eminent financier who enjoyed the full confidence of the Government, and he opposed this gambling in shares to the utmost of his ability until his departure from India. He was closely connected as a director with the Old Bank of Bombay, and he did strenuous work in lessening the effects of the crash when the concern went into liquidation. Mr. Scott's integrity was beyond question in Bombay, and native merchants had such confidence in him that they dubbed him "the wizard of Bombay." He sat as one of a committee of three, appointed by the Bombay Chamber of Commerce, who petitioned the Government to introduce gold currency in India. Personally liked and esteemed by all, Mr. Scott left India in a very weak state of health in 1867, and died in England before twelve months had elapsed.

Premchand Roychand above referred to, was broker for Messrs. Ritchie, Steuart & Co., and he made enormous sums of money, which were spent lavishly, his donations to charities amounting to no less a sum than about 10 lakhs of rupees. One of his most ambitious schemes was the erection of the Rajabhai Tower, named after and dedicated to his wife, and another was the University Library (adjoining the Tower), these two structures costing him about £40,000.

Cheques for this amount were drawn by Roychand upon Messrs. Ritchie, Steuart & Co., and passed to the debit of the drawer in the firm's books, but Roychand's failure in 1866 was one of the main causes of the closing of the doors of the Old Bank, he owing it £247,000, while his indebtedness to Messrs. Ritchie, Steuart & Co. amounted to over £800,000.

The head offices of Messrs. Forbes, Forbes, Campbell & Co., Ltd., are at 9 King William Street, London, E.C., but they have branches in England at Liverpool and Manchester (at the latter they trade under the name of Messrs. Finlay, Campbell & Co., Ltd.), and in India at Bombay and Karachi. They are bankers and general merchants, large importers of all kinds of merchandise, chief among which are Manchester piece goods, cotton, yarn, sugar, metals, and matches, and they further export very considerable quantities of Indian produce, raw cotton, hemp, wool, and myrabolams, these being some of the largest items in the bills of lading. They have also a ginning and pressing factory at Harpalpur, in the district of Cawnpore.

The firm are managing agents for two cotton mills known as the Gokak Water Power and Manufacturing Company, Ltd., and the Hubli Mills, Ltd., in the districts of Belgaum and Dharwar respectively. The spinning machinery of the first-named company is driven by electricity generated by water turbines, while the power for the Hubli plant for spinning and weaving is derived from steam. The two factories afford employment for about three thousand hands.

Managing agencies are also held for the Bombay Safe Deposit Company, Ltd., who have constructed and fixed in Forbes's buildings in Home Street a number of strong rooms and safes of various sizes, all of which are identical with those found in similar establishments in England and elsewhere, and for the New Prince of Wales Press Company, Ltd., who have ginning or pressing factories at Bombay, Hubli, Barsi, Nandura, Dondaicha, Khangaum, Dhulia, Bijapur, and Mulkapur, together with an oil-pressing mill at Pulgaum.

A considerable amount of trade is carried on as agents for the Borneo Company, Ltd., in the importation of Siamese timber, which is conveyed to India in ships specially chartered for the purpose.

In fire and motor insurance business the firm do a large business as agents for the Liverpool, London, and Globe Insurance Company, Ltd., while in marine insurance business they are agents for the Marine Insurance Company, Ltd., the Ocean Marine Insurance Company, Ltd., and the Sea Insurance Company, Ltd. Other agencies held by the firm are the British Central Africa Company, Ltd., Messrs. Curtis and Harvey, Ltd., Messrs. Horrockses, Crewdson & Co., Ltd. (Manchester), Messrs. A. Y. Maclaurin & Co. (Glasgow), Messrs. Coutts & Co., Ltd., the Union of London and Smith's Bank, and Sir Charles McGregor, Bart., & Co.

FRAMROZ SORABJI KHAN & CO.

1. Exterior. 2. Interior of Showroom.

The offices of the firm in Home Street, Bombay, known as "Forbes's Building," form one of the handsomest blocks in the city, and are most conveniently situated

in the centre of the European commercial quarter, and in close proximity to the docks, the banks, and other principal buildings.

The registered telegraphic addresses of the firm are "Yestermorn," Bombay, and "Koran," Karachi.

FRAMROZ SORABJI KHAN & CO.

Only a few months have elapsed since this firm of diamond merchants and jewellers was established at 87 Medows Street, Fort, Bombay, this being one of the most important commercial centres in the city. The sole proprietor is Mr. Framroz, a graduate of the Bombay University, who inherited certain artistic tendencies which led him in early life to associate himself with his late father, who was one of the pioneers in this particular line of business in the Presidency.

The son spent several years in making himself thoroughly acquainted with every detail in jewellery work as carried on in India, and he subsequently visited England, as well as many of the chief cities in Europe, gaining further experience in his art, and making a special study of Western processes of manufacture with the object of employing them in his own business or of combining them with methods peculiar to Eastern cities.

Notwithstanding the financial strain now resting upon practically every country in the world. Mr. Framroz obtained possession of the extensive and attractive premises now occupied by him in Medows Street, and furnished them with a large stock of all kinds of exquisitely beautiful jewellery of a general character, in addition to a fine assortment of fancy articles, all of which were imported from Europe and America.

The proprietor, who is his own manager, is applying his energies to the development of a business in which he has unique experience, and he is strong in his confidence that the success which has already attended his efforts will be manifested in a far greater degree in the near future.

GEO. GAHAGAN & CO.

A very short time spent in Bombay is amply sufficient to become convinced of the important part which engineering firms have played in the development of the principal port on the western shores of India. The land upon which the city is built was originally an island almost uninhabitable by reason of its unhealthiness, but engineering skill converted it into a peninsula, constructed extensive docks, and made it possible for British pioneers to erect commercial and other buildings of an extremely solid yet beautiful character.

Though much of this progressive work was carried out a good many years ago, the advance made in recent years has been particularly noticeable from the fact that contractors and others have adopted more modern methods of construction and have profited by the experiences of their predecessors. An illustration of this is given by the history of the firm of Messrs. George Gahagan & Co., engineers, iron and brass founders, and metal and timber merchants, of 271 Bellasis Road, Byculla, in Bombay.

The business was established in 1875 by the late Mr. George Gahagan, who commenced in a very small way in Elphinstone Circle, and in 1882 erected a workshop in Grant Road, but subsequently removed to Modi Bay, where he obtained greater accommodation for larger works on the site on which the Bombay Port Trust offices now stand.

The business continued to grow, however, and the workshops were enlarged to the full extent of the limited space obtainable from the Trust officials. This increased accommodation soon proved to be insufficient, and an application made for a further grant of land having been refused by the Trust, who had decided to build new offices for themselves on the site of the works, Mr. Gahagan, in 1886, received six months' notice of determination of the lease under which he held the premises.

This necessitated a search for another site, and eventually a suitable plot of land was secured in Bellasis Road, Byculla (near the Bellasis Bridge), and within five months Mr. Gahagan erected new shops, removed his machinery and plant from Modi Bay, and re-erected it in the new buildings, which cover a very large area of ground. The works include the usual shops for fitters, turners, machinemen, smiths, boilermakers, moulders, patternmakers, and carpenters, and all these buildings are fully equipped with machinery of sufficient power to enable the firm to undertake work of any magnitude.

Single castings, weighing more than ten tons, have been turned out of the moulders' shops, and these have subsequently been machined and finished off. Ornamental and plain castings, forgings of all kinds, and the construction of girders, roofs, and structural works of various descriptions are undertaken by the firm.

Messrs. Gahagan have in recent years specialized in the construction of irrigation works and in providing all necessary apparatus and appliances in connection therewith. As examples of the excellent work carried out by them in this direction may be mentioned the Bhatghar, Lake Fife, and other important schemes.

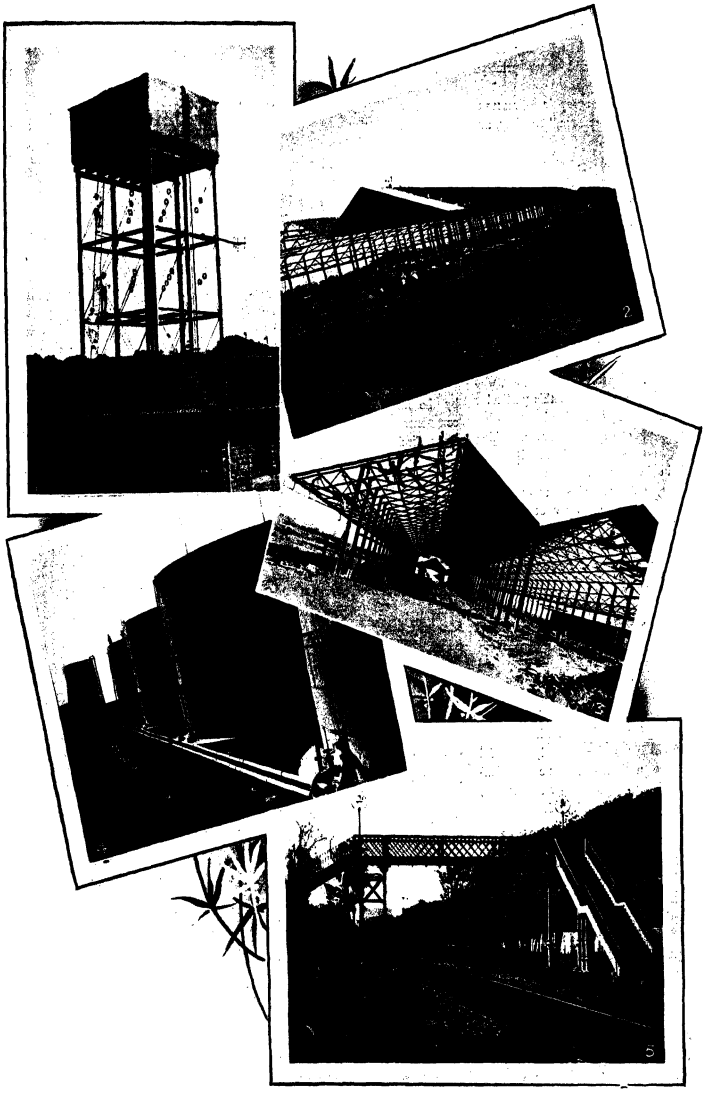
Amongst other activities the firm have had very great experience in oil-tank work, and the numerous tanks for conservation in bulk which have been erected by them in India are abundant testimony to the thoroughly efficient manner in which they carry out all orders entrusted to them.

In connection with ordinary structural work, reference may be made to the sheds recently built for the Bombay Port Trust to the value of many lakhs of rupees, and it may be added that a further large order for similar sheds is now being executed.

The firm have for several years been on the list of Government contractors, and very many large and important works have been completed, not only for the Government but also for railways, municipalities, and other public bodies.

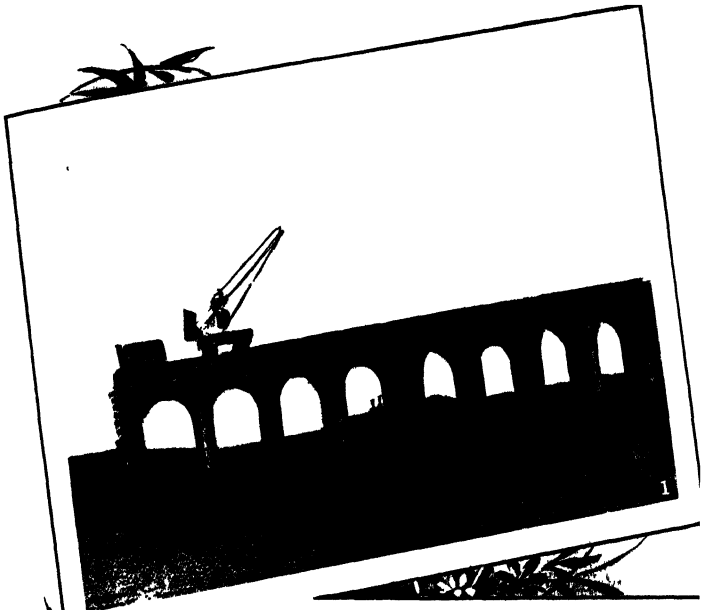
THE GODREJ & BOYCE MANUFACTURING COMPANY.

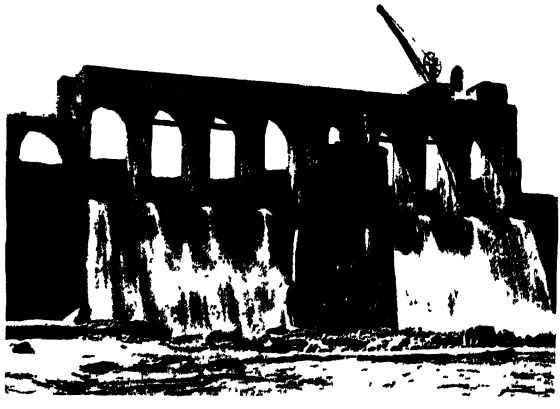
The increasing size of stores of combustible materials in large cities has led to the provision of the most elaborate appliances for the prevention and extinction of fires. In addition to this, the increasing skill of the criminal classes has called forth the highest talent of the mechanical constructor to provide sufficient protection against the burglar. The result of this combination of circumstances is the modern fire and thief-proof safe, which in its best types has been adopted throughout the civilized world for the protection of valuable books, specie, jewels, and treasure of every kind. Among the firms who have gained a high reputation in this class of manufacture, the Messrs. Godrej and Boyce Manufacturing Company of Bombay are well known throughout India and the Far East. The proprietor, Mr. A. B. Godrej, during an active career of business extending over twenty-five years, has found his best training in the experience of destructive fires and their effect upon the safes of various makers. He has also been able to observe the effect of a tropical climate on the non-conduct-



GEO. GAHAGAN & CO.

1. 21,500 Gallon Storage Tank, with 50-ft. High Staging. 2. Side View of Grain Sheds. 3. End View of Grain Sheds.
4. Oil Storage Tanks. 5. Railway Foot Overbridge.





GEO, GAHAGAN & CO

1. Front View of Automatic Sluice Gates (Closed). 2. Back View of Automatic Sluice Gates (Opening)

ing composition with which safes are protected, and also on the destructive effect of some of these compositions upon the materials of the safes.

A safe-maker cannot afford to avoid a well-organized fire test of his wares, and so for the satisfaction of certain prospective purchasers a test was made of a safe measuring 22 by 22 by 22 inches at the company's works in November 1904. The safe contained a strip of pinewood, to which were attached pieces of linen, cotton, silk, and flannel. This was placed on the lower shelf against the wall of the safe. In addition a coil of pure tin electric fuse wire, a ten-rupee note, a sheet of foolscap paper, and several newspapers were placed in the drawers and on the shelves. A lacquered Indian box containing a piece of wax was also added. The fire of wood was lighted at 2 p.m. and was continued until the outer case was seen, through a long pipe placed against it, to be red hot. The heat was unpleasantly felt at a distance of 25 feet. Nearly three hours later the door of the safe was opened quite easily, and the referees, the principal of whom was Mr. John Wallace, C.E., editor of the *Indian Textile Journal*, reported that every one of the samples were found intact and without any sign of deterioration. The wax had melted, but it solidified again on removal.

In 1912 the Director-General of Posts and Telegraphs held a competitive test by fire of safes with a view of placing an order to the value of Rs. 85,000. The test was one of four hours' duration, and the fire was so severe that the handle of the competing safe was melted off. The prize was awarded to the Godrej and Boyce Manufacturing Company, the contents of whose safe were quite uninjured. They included an order for 372 safes for the Savings Bank in India and Burma, which were used to replace other safes that had been found unsatisfactory.

At the Benares Exhibition of 1905 Mr. Godrej was the only safe-maker who consented to submit his insulating composition to a test for permanent efficiency and non-corrosive action on the material of the safe. After a prolonged examination, Mr. Shanial, M.A., Professor of Chemistry at Queen's College, Benares, in his report stated that the composition fulfilled all the requirements above stated. Mr. Godrej received the only prize.

Welding by electricity is now employed in the construction of these safes, and all the keys are cut by a machine which can turn out a million without producing exactly the same pattern.

"Godrej" keys are drop-forged and cut by machinery, and are not filed out by hand; the keys are cut first, and locks are made to fit them, this practice rendering the locks practically unpickable and ensuring durability.

Four different qualities of safes known as A, B, C, and D, are made in this factory, but the body plates in each consist of one continuous piece of plate bent at the four corners. The thickness of plates varies in the different qualities, and the riveting and other work, calculated to impart thief-resisting strength, is closer and more strongly done in the higher than in the lower qualities. The fastening bolts are secured in all cases with absolutely unpickable ten, eleven, or twelve lever locks protected on the top with a quarter-inch steel plate, and for still further security a plate of hardened steel three-eighths of an inch in thickness is applied to the door-plate over the lock in order to resist the process of drilling.

"Godrej" safe locks have two distinct pairs of keys; one is for opening and securing the safe in the usual way, while the other is to be used after the loss of the first pair so as to prevent the finder from opening the safe.

The company also manufacture fire and burglar-resisting strong-rooms, railway travelling cash safes, adjustable steel shelving, and wooden cabinets for safes, all of which are of uniformly first-class quality.

Other severe tests have since been made with equally good results, and the company have, further, received many testimonials from Government departments, companies, and firms whose offices have been literally demolished but whose valuables in the safes have always been preserved.

The company have supplied (*inter alia*) seven burglar-resisting doors for His Majesty's Mint, two similar doors for the Currency Office, a strong-room and two safes for the Yokohama Bank, a safe costing Rs. 10,750 for the Eastern Bank, a strong-room and safe for the Central Bank, eleven safes for the Punjab National Bank, ten safes for the Merchants' Bank, and ten for the Bharat National Bank, together with other strong-rooms and safes for other banks, Government offices, courts of justice, municipalities, railways, the General Post Offices, and for a host of well-known commercial houses.

"Goodrej" safes were used by Their Imperial Majesties the King-Emperor and the Queen-Empress during the Coronation Durbar at Delhi in the year 1911, and the Queen-Empress, when visiting India as Princess of Wales, had one for the custody of her jewellery.

The company received the patronage of Their Excellencies the late Lady Curzon and the Countess of Minto, and they are holders of an appointment to His Excellency the Governor of Bombay.

The highest prizes, consisting of gold medals, have been awarded to the Godrej and Boyce Manufacturing Company, at exhibitions at Calcutta in 1900, Ahmedabad in 1902, Madras in 1903, Bombay in 1904, Benares in 1905, Cawnpore in 1907, Lahore in 1908, Broach and Mysore in 1909, Allahabad in 1910, Calcutta in 1911, and at Mysore in 1914.

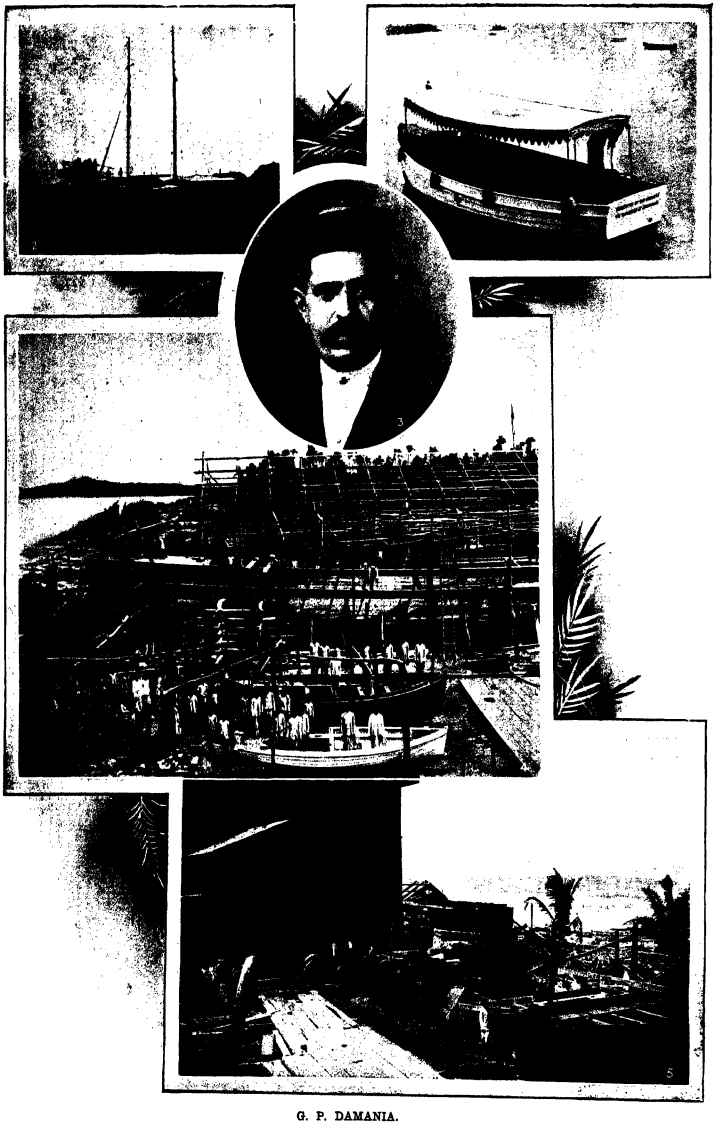
The company's works are situated at Parel, in Bombay, where at least five hundred trained men are constantly employed, and they have agencies at Calcutta, Madras, Bangalore, Rangoon, Colombo, and Pekin, and also at Kuala Lumpur for the Straits Settlements.

GOVIND P. DAMANIA.

Ever since the commencement of the Great War, much attention has been attracted to the necessity of encouraging native industries, and the old wooden ship-building enterprise of India is one of the most important which even Government is now desirous of developing.

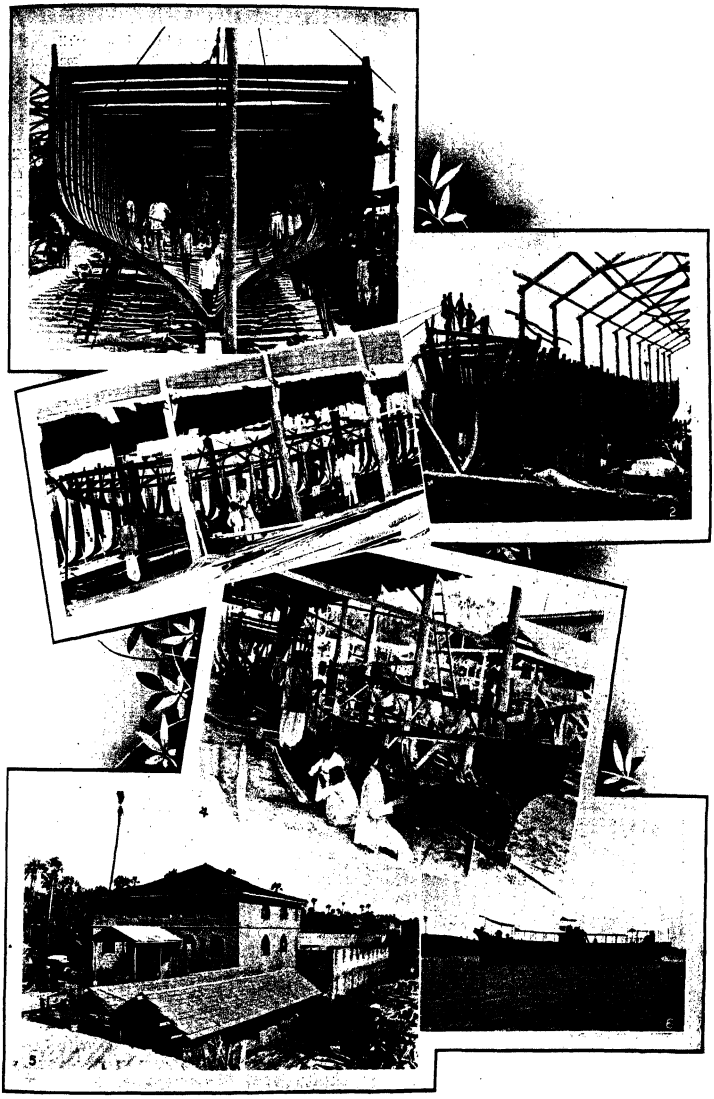
During the continuance of the war and the consequent loss of tonnage the difficulty of obtaining freight for even coast cargo increased to such an extent that persons engaged in commerce were compelled to make inquiries for architects who were capable of building suitable boats. At such a time it was satisfactory to find a large shipyard started at Versova near Andheri (a station on the Bombay-Baroda and Central India Railway) by the energetic efforts of Mr. Govind Purshotam Damania, who is an expert naval architect accustomed to designing and building the boats turned out from this yard.

No one imagined that there would be any one like Mr. Damania coming forward at such an opportune time from the Indian population to help the Mother Country in its necessitous condition with regard to shipping. Mr. Damania has been a boat-builder for many years, having supplied motor launches, life and sailing boats, yachts and craft to Government and other departments. During the year 1917 he



G. P. DAMANIA.

1. Motor Launch. 2. Sailing Schooner. 3. Govind Purshotam Damania. 4. A View of the Shipbuilding Yard.
5. Another View of the Shipbuilding Yard.



G. P. DAMANIA.

1. Vessel Under Construction, View from Aft; 173 Ft. × 28 Ft. × 15 Ft. 2. Vessel 173 Ft. Long; View From Bow, Showing Frames Erected.
3. Launch, 42 Ft. Long, Under Construction. 4. Cutter, 19 Ft. Long, Under Construction. 5. General View of the Shipyard and Buildings.
6. Vessel, 115 Ft. Long, Almost Complete.

enlarged his field of activities by starting the above-mentioned shipyard at Versova, where he purchased a large property and completed arrangements for the simultaneous construction of three cargo vessels with from 600 tons to 1 000 tons deadweight capacity To start with he finished in June 1918 a semi-cargo passenger vessel, 115 feet in length with a carrying capacity of 125 tons below deck and having accommodation for about a hundred and fifty passengers This vessel has been fitted with a 160-h p 'Speedway' kerosene oil engine, and it is estimated to attain a speed of 9 to 10 knots an hour This is the first motor vessel built in India, and the next keel laid down is one of a ship of 600 tons cargo capacity which was expected to be ready by December 1918 Orders have been received for two more cargo vessels the construction of which will be commenced shortly and it is anticipated that within a year or two the shipyard will be able to turn out several others

"Mr Govind Purshotam Damania, who has taught himself the art of naval architecture, has been a successful boatbuilder for the past fifteen years Some years ago it would have been doubted whether anything like shipbuilding could be started in India by native enterprise but in the efforts of Mr Damania lay the seed of an industry which is likely to play an important part or at least be one of the small causes that will slowly help towards moulding the future of Indian industries Mr Damania comes of a shipbuilding stock and the history of the Damania shipyard at Versova, near Andheri, really dates back to some fifty years when his uncle built boats for native craftsmen Thereafter they commenced taking Government contracts for wooden ships and barges and ultimately attracted the attention of and secured orders from, the Collector of Salt Revenue, who was greatly pleased with the work Many European officers also testified to Mr Damania's ability, and this encouraged him to enlarge his field of activities by taking up the building of motor-launches, yachts, and life and sailing boats, of which in a few years he made a speciality Steam launches, both wood and iron, have also been constructed in his yard Recently launches have been supplied to the Red Cross and the Royal Indian Marine for war service"

The progress made since the publication of the above article is partly mentioned above, and it is pleasant to state that whilst the construction of cargo vessels is proceeding, motor launches and life boats are also being built to order from various customers, including the rulers of Native States

THE GREAT WESTERN HOTEL CO., LTD.

This hotel was founded in the year 1883 by the late Mr Jewanjee Hormusjee Guzdar, who was the pioneer of European hotels in Bombay He commenced the hotel business by opening the old Byculla Hotel in 1865, and although it was not an up-to-date hostelry according to present-day ideas, it answered its purpose admirably until the proprietor realized its shortcomings and was convinced of the

THE GREAT WESTERN HOTEL COMPANY, LTD

1 The New Extension 2 The Tea Pavilion 3 Reading Room
4 Drawing Room

The following notes relating to this enterprise are extracted from the *Bombay Chronicle* of February 17, 1918

necessity for an up-to-date hotel in a more central situation. With this object he secured the lease of the old Admiralty House in Apollo Street, Fort, in 1883, and converted it into the Great Western Hotel, subsequently purchasing the premises outright. The building is a historical one, having been the residence of the admiral from *circa* 1764 to 1792, whilst eight years later it became the Court of the first Recorder of Bombay, and remained the chief Court of the city until the present High Court was completed in 1879. The late Mr. J. H. Guzdar died in 1895, and the business then passed into the hands of his four sons, and they, finding that the hotel was becoming increasingly popular amongst Europeans, both tourists and residents, decided to erect a new five-storied building, adjoining the old one, thus doubling the accommodation. This was completed in 1899 at a cost of more than 2 lakhs of rupees. In 1914 a private limited liability company was formed, under the style of Jewanjee & Co., with the brothers Guzdar as managing agents.

The hotel is very conveniently situated, being close to the Royal Yacht Club, the Museum, theatres, and other attractions of the city, whilst it has the advantage of trams passing the door. It has some two hundred bedrooms, each of which is fitted with electric lights and fans, and has its own bathroom and lavatory constructed according to the latest sanitary principles. The public rooms include a comfortable drawing-room, dining-room to seat two hundred persons, a reading-room, and billiard-room with two tables. Two electric lifts are provided for the convenience of visitors, and the company's own carriage meets all mail trains and steamers.

The principal feature of improvements now in progress (1917) will be a tea pavilion, artistically designed by Mr. E. W. Fritchley, a leading Bombay architect, which is certain to meet a sadly needed want in that city. It is further proposed that in front of the pavilion there shall be a tastefully laid out garden, which will doubtless prove to be an ideal retreat for hotel visitors or for Bombay residents, who cannot fail to appreciate the cool shade and seclusion which it is certain to afford; and, finally, there is to be a roof terrace, upon which *al fresco* evening dinner parties will be accommodated amid the pleasantest surroundings away from the dust and racket of crowded streets. It will only be in keeping with the remaining portions of the hotel that these delightful additions are to be sumptuously furnished and lighted by electricity, and among numerous other attractions not the least will be a band of musicians who will play daily in the garden.

From the top floor of the old building a good view of the harbour is obtained, whilst from the roof terrace of the new building one can have a magnificent view of almost the entire city and harbour. A staff of well-trained, English-speaking Indian servants is kept, and the management of the hotel is undertaken by the agents personally.

S. N. GUNDI.

1. Corner of the Showroom. 2. Corner of the Office.

S. N. GUNDI.

The acquisition of extended knowledge of and practical experience in nearly every line of business is greatly facilitated by visits paid to commercial centres in other parts of the world, and Mr. S. N. Gundi, wholesale chemist, pharmacist, and dealer in surgical instruments and medicines, of Oriental Buildings, Fort, Bombay, has taken full advantage of opportunities presented to him for coming into personal contact with scientific institutions, factories, and hospitals in Japan and the Far East, as well as in India, and thus he is well qualified to meet all requirements of his increasing circle of professional and other customers. In addition to holding a large stock of fresh drugs of great purity, and a splendid selection of surgical instruments and appliances suitable for medical or private business houses, he has made a special feature of supplying syringes in three parts, quinine, bi-hydrochlor, ampoules, camphorated oil, sterilized distilled water, and saline for arsenical injections.

It is not more than eight years since Mr. Gundi started his undertaking, but its growth has been rapid even from the commencement, and the larger premises situated in a most central position, into which he has recently removed, have been rendered necessary owing to lack of accommodation in the building originally occupied by him.

Some dislocation in trading is only one of the many results of the exigencies of war, but the proprietor has established a sound connection extending over a wide area, and therefore has not experienced difficulties which cannot be overcome by energy and perseverance.

Mr. Gundi belongs to an old and highly respected Jain family, and he is the son of Mr. N. H. Gundi, Inspector of Land Records in the district of Broach.

His telegraphic address is "Gundisan," Bombay.

HEPTOOLA NOORUDDIN & CO.

The only rope factory in Bombay is owned by Messrs. Heptoola Nooruddin & Co., who were also among the first to engage in ship-chandlering in the same city, and they still carry on business

HEPTOOLA NOORUDDIN & CO

1 Drawing and Spinning Machines 2. Engine. 3 Rope Making Department. 4 Rope Godown

as general merchants and railway contractors.

The concern was established about seventeen years ago at 452-54 Abdul Rehman Street, Bombay, by the late Mr. Heptoola Nooruddin, father of the present proprietor (Mr. H. H. Nooruddin), who had previously been a partner in the important firm of Heptoola Shaikadam & Co., in which there were two other partners. Upon the death of these two, Mr. Heptoola experienced such difficulty in his endeavours to arrive at a satisfactory settlement with the relatives of the deceased partners that he decided to dispose of the firm's business, which comprised cotton mills, a rope factory, paper mills, ginning and pressing factories, and a ship chandlers' stores.

This resulted in his purchase of the rope factory which has been carried on up to the present time under the name or style of Heptoola Nooruddin & Co.

Extensions of a general character were made from time to time, such as the enlargement of the premises and the addition of machinery of a more modern type, but the premises were in the year 1913 taken over by the municipality of the city in connection with their scheme of street improvements, and the firm removed to Nos. 351-53 in the same street.

Raw material for manila ropes is imported from Manila, while that for the manufacture of coir ropes is obtained from the Malabar Coast. Ropes are made in all sizes from $\frac{1}{4}$ inch to 14 inches in circumference, and they are usually 720 feet in length, although this can be extended to 1,500 feet without any joint or knot in the fibre. Practically all ropes are made by machinery driven by a 30-h.p. steam engine which has a steam pressure of 100 lb. to the square inch, but there are a few special small lines which are made entirely by hand.

All hemp ropes are tested by a Government official, who has always given a satisfactory report upon their quality, and nearly all of the output of the factory is sold to various Government Departments, while the pressure of work at the present time is so great that the machinery is kept in motion throughout day and night in order that existing contracts may be punctually carried out.

A gold medal and certificates were awarded to the products of the firm's works at the Indian Agricultural Exhibition held in Bombay in the year 1904.

In the ship chandlering branch a very large stock is kept of all descriptions of stores suitable for railway and shipping purposes and for cotton ginning, pressing, and spinning factories. The premises, situated opposite the railway station at Chinchpoogly, cover an area of 30,000 square yards, and comprise the factory, *chawls*, godowns, offices, buffalo stables, an iron foundry, and other necessary buildings.

The management of the concern is in the hands of Mr. H. H. Nooruddin, who has constant employment for about a hundred hands.

Telegraphic facilities have been installed at the works, offices, and private residence of the proprietor, and the telegraphic address, "Immunity, Bombay," is the one formerly used by the original firm of Heptoola Shaikadam & Co.

HEPTOOLA SALEBHOY & CO.

India has from time immemorial been the home of the cotton industry, and Bombay is the great centre of the trade in that vast country. During the first half of the nineteenth century the exports of cotton did not increase at an abnormal rate, but during the progress of the American Civil War in 1864-5, which produced a cotton famine in Lancashire, causing English spinners to fall back upon India for supplies of raw material, the annual quantity sent oversea grew from 528,000 bales to nearly one million bales.

Many Bombay merchants profited greatly by the sudden influx of trade, and among them may be mentioned the firm of Messrs. Heptoola Shaikadam & Co., established about the year 1800, who not only acquired lucrative cotton mills and ginning factories, but also had extensive business connections as ship-chandlers, railway and dock contractors, general merchants, proprietors of oil and paper mills, and suppliers of equipment and stores for mills of various kinds and for cotton ginning and pressing factories.

Wide as was the range of the firm's activities, it was covered by a rigid devotion to the development of the business by the partners, whose efforts met with deserved success.

About the year 1890 the firm was dissolved, and Mr. Salebhoy Habibullah, the head of the establishment, and Mr. Nooroodin Shaikadam, the son of Mr. Shaikadam Nooroodin, the junior partner, established another firm under the name of Messrs. S. N. Shaikadam & Co., and continued in the same line of business. That partnership was annulled in the year 1909, and Mr. Salebhoy Habibullah, with his nephews, Messrs. Heptoola Allibhoy and Eusoofali Alibhoy (who had been assisting in the two previously mentioned concerns) started the present firm of Messrs. Heptoola Salebhoy & Co. Mr. Salebhoy Habibullah retired in the year 1912, leaving his two nephews to conduct the business on their own account.

The high position attained by the firm at that date had been secured by the shrewd intelligence and keen business instincts of the various partners since the founding of the firm, and the present proprietors have had the satisfaction of witnessing a still greater development since they took up the reins of control.

In connection with the milling of cotton, Messrs. Heptoola Salebhoy & Co. are always on the alert in order to obtain the latest improvements in machinery and plant; as contractors they have earned a fully warranted reputation for the manner in which they carry out work entrusted to them; and ships' stores and general requisites are stocked in large quantities to meet the growing demand of the numerous vessels calling at the Port of Bombay; but briefly it may be stated that in all branches of the firm's activities there are abundant evidences of the "master" hand in management.

Since electricity has become such a prominent factor in connection with practically every phase of commercial and private life, the firm have kept in stock a large variety of electrical appliances and fittings, and it would be no exaggeration to say that they could at almost a moment's notice erect illuminating installations in all the palaces of all the rajas in India.

The offices of the firm are at their own premises, 327 Abdul Rehman Street, in Bombay; their foreign correspondents are Messrs. Moses Eadon & Sons, Ltd., Sheffield, England; and their telegraphic address is "Civility, Bombay."

THE HONGKONG & SHANGHAI BANKING CORPORATION (BOMBAY).

This banking concern was incorporated under and by virtue of an ordinance effected by the Governor of Hongkong, with the advice of the Legislative Council, dated August 14, 1866, and it was confirmed by Her late Most Gracious Majesty Queen Victoria.

The indenture creating the bank is dated July 20, 1867, and the capital at its inception was $5,000,000, divided into 40,000 shares of $125 each.

HEPTOOLA SALEBHOY & CO

1 Premises 2 Haptoola Alibhoy 3 Dudoopali Alibhoy, 4 Salebhoy Mulla Hubibullah

By proclamation dated July 12, 1884, the capital was increased to $7,500,000, and on July 13, 1897, to $10,000,000, while on June 20, 1907, it was raised to the present amount of $15,000,000, all of which is fully paid up

The reserve funds of the bank, according to the balance sheet of December 31, 1915, are Sterling Reserve, £1,500,000, invested in 4½ per cent War Loans, and Silver Reserve, $18,000,000

The note issue in circulation amounted to $25,562,488, against which bullion to the extent of $15,500,000 is lodged with the Hongkong Government

The dividend paid for the year 1915 was £4 6s per share, with a bonus of 5s per share, and the interim dividend for 1916 was £2 3s per share.

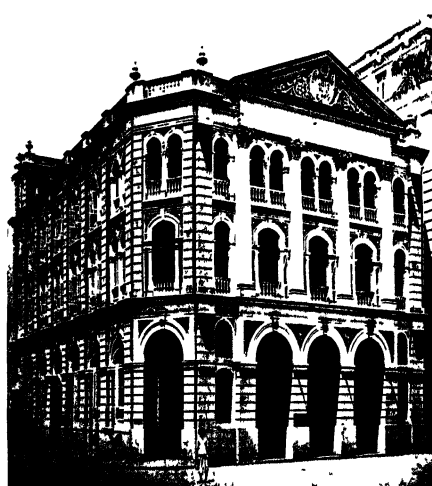
The Bombay branch was opened in the year 1869, and in 1887 the bank secured a plot of land in Churchgate Street, upon which they erected suitable buildings, while the present handsome stone structure, standing on the same site and occupied since 1913, is admirably adapted for its purpose, especially with regard to the strong rooms, which are remarkably well arranged

The head office of the Corporation is at Hongkong, and there are branches or agencies at Amoy, Bangkok Batavia, Bombay, Calcutta Canton, Colombo Foochow, Hankow, Harbin, Hongkew Shanghai), Ipoh, Johore, Kobe (Hiogo), Kuala Lumpur, London (9 Gracechurch Street), Lyons, Malacca Manila Nagasaki, New York, Peking, Penang, Rangoon, Saigon San Francisco, Shanghai, Singapore, Sourabaya Tientsin, Tsingtao, Yloilo, and Yokohama

A. HYLAND, LTD.

The remarkably rapid growth of this business of automobile engineers, specialists, and mechanical engineers, is a clear indication of the vast scope in India for concerns of this nature, provided, however, that they are conducted upon sound commercial principles The concern was established in a comparatively small way at Bombay in the year 1906 by Mr Alfred Hyland, and it was conducted by him in such a conspicuously able manner that in January 1917 it was converted into a limited liability company with a capital of Rs 6,00,000, employing some two hundred and fifty mechanics and workmen, having an office staff of about fifty clerks, and holding a stock of cars and automobile accessories which in its all-round comprehensive character second to no other undertaking of similar nature in India

Mr Hyland constructed his [illegible]



HONG KONG AND SHANGHAI BANKING CORPORATION.
THE HONG KONG AND SHANGHAI BANK, BOMBAY

modern works in Hughes Road, Bombay in 1912, but the great expansion of business necessitated additions being made to machinery as well as buildings, and although at the close of the year 1916 the property had a frontage of 500 feet in length, it was found to be impossible to obtain any adjoining land for the purpose of enlargement.

It was at this juncture that the company was formed and as the premises were quite inadequate for the steadily increasing quantity of work as well as for the immense stock of cars and motor sundries, more extensive accommodation was obtained in Haines Road, and a handsome showroom was also constructed immediately opposite the original establishment in Hughes Road, the company's property now extending over a total frontage of 950 ft

The company in their brief career have

A HYLAND, LTD

1 Exterior of Showroom 2 Portion of Workshop, 3 Part of Office. 4 Manufacturing Department.

gradually acquired the agency for many of the leading British manufacturers of cars, including the "Sunbeam," "Austin," "B S A", "Vulcan," and "Thorneycroft" (commercial vehicles), as well as for prominent American automobiles, chief among them being the famous "Overland," which is being sent through the medium of this agency to all parts of Central and Western India at the approximate rate of five hundred a year

This obstacle has however now been satisfactorily overcome

This brief history of the building-up of a prosperous undertaking shows what can be achieved by a man of energy and determination in the short space of twelve years, a name and reputation have been firmly established from the southernmost point of India to Kashmir and from Bombay to Assam and even Burma and it is perfectly safe to prophesy that in years

and private rooms, all of which are models of refinement and comfort

The lessees are Messrs Vighetta and Palazzi, and the managing partner is Mr. A Palazzi, late of the "Savoy," Mussoorie, and the "Carlton," at Lucknow

The telegraphi address is "Celestial," Bombay

HUSSONALLY ESOOFALLY.

More than half a century ago, when

HOTEL MAJESTIC

1 Colaba Causeway Side. 2 Wodehouse Road Side

It must not be forgotten that the machinery in the shops is thoroughly up-to-date in every respect, and therefore the company are able to turn out work in the best possible manner, in fact, it has been asserted that that which has been done in the factory (the major portion of which has for a long time been devoted exclusively to military ordnance supplies has proved to be a revelation in certain quarters as to what can actually be accomplished in India.

During the progress of the war great difficulty was experienced in obtaining a sufficient number of qualified European overseers, and the trouble was accentuated when the company enlarged their works

to come the company's activities will be very greatly increased

THE HOTEL MAJESTIC.

This magnificent hotel, luxuriously furnished, fitted with most modern sanitary arrangements and hot and cold baths for each room, is most centrally situated at the junction of Wodehouse Road and Colaba Causeway, two of the principal thoroughfares in the city of Bombay.

The huge building, which was specially constructed for an hotel business, on the site previously occupied by the Y.M.C.A. premises, has a large number of public

Bombay was only just beginning to be recognized as the leading seaport of India for trade with Western nations, the firm of Hussonally Esoofally was established in a small way of business, but trade begets trade, and confidence placed in a merchant is, like an epidemic, sure to spread Thus it happened that the premises occupied by the firm at 7 Lohar Chawl, in Princess Street, became known to the public as a store in which reliable hardware goods could be obtained at lowest market rates

Each succeeding year witnessed an increasing turnover, and as the necessity arose, the proprietors added other branches for the exercise of their activities.

At the present time the firm are ship-chandlers, brass and ironmongers, dealers in mill stores, engineering tools, hardware of all descriptions, and railway contractors, while they specialize in electric and telephone accessories, together with flexible cable, silk, cotton, and workshop wires.

The firm hold large stocks of all classes of goods in the above-named departments, and they are now directing the particular attention of their patrons to the is of the highest possible quality, and that all orders entrusted to them are executed with signal promptitude.

THE IMPERIAL BANK OF PERSIA.

This well-known banking institution was incorporated by Royal charter in the year 1889, and among its numerous agencies was one in the city of Bombay, which remained open for about ten years, when it was closed.

HUSSONALLY ESOOFALLY.

1. Exterior. 2. Showroom.

"Blizzard" freezer, which is said to be the best in practical use, because it is convenient as regards size, compact, uses a minimum quantity of ice and salt, is easily worked, and freezes quickly.

These pails have electrically welded wire hoops, and they are made of heavy tinplate with drawn steel bottoms guaranteed not to fall out through continuous usage.

The North Brothers Manufacturing Company, of Philadelphia, U.S.A., are the makers of these machines, large numbers of which have been sold in India.

Messrs. Hussonally Esoofally pride themselves upon the fact that the very large stock of goods always kept by them

Events which have occurred, however, in Mesopotamia, as well as Persia, during the past five years, have created a more satisfactory understanding, politically as well as commercially, between Great Britain and the principal cities in the two countries just named. The result has been that a very great stimulus has been given to trading relationships between East and West, and as a consequence the Imperial Bank has again established an agency at Bombay, the offices being at 62 Esplanade Road.

At the present time the bank has branches or agencies at Ahwaz, Baghdad, Birjand, Bombay, Bunder Abbas, Bushire, Basra, Hamadan, Ispahan, Kazvin, Kerman, Kermanshah, Meshed, Mohammerah, Nasratabad (Seistan), Resht, Shiraz, Sultanabad, Tabriz, and Yezd.

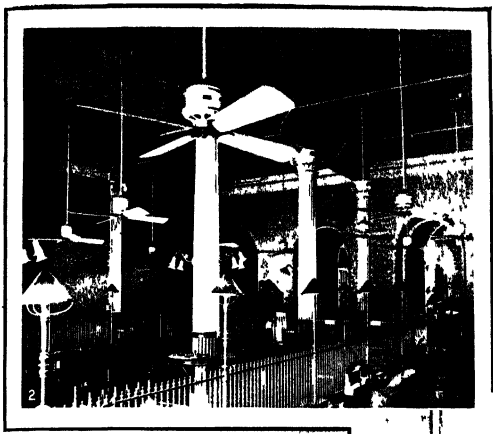
The capital of the bank is £650,000, made up of 99,800 ordinary shares of £6 10s., and of 200 founders' shares of the same amount.

The reserve account stands at £220,000, and the reserve liability of proprietors under the charter is £1,000,000.

The twenty-ninth ordinary general meeting of shareholders was held in London on April 7, 1919, and the statement of accounts then presented for the year ending on September 20, 1918, showed that the profits for that period, after making provision for expenses of management, and general charge in London and at the chief office and branches, income tax, excess profits duty, and bad and doubtful debts, amounted to £83,136, to which must be added the sum of £24,230, the amount brought forward from the previous year's accounts.

The London office of the bank is at 25 Abchurch Lane, and the chief office in Persia is at Teheran.

The directors are: Sir Hugh S. Barnes, K.C.S.I., K.C.V.O. (chairman), Messrs.



THE IMPERIAL BANK OF PERSIA.

1. Entrance to Imperial Bank of Persia, 62, Esplanade Road 2 Interior, Looking West. 3 Interior, Looking North West.

W. A. Buchanan, E. A. Chettle, H. E. R. Hunter, V. A. Cæsar Hawkins, D. Gubbay and Colonel Sir A. Henry McMahon, G.C.M.G., C.V.O., K.C.I.E.

THE INDIA CULTURE AND DEVELOPMENT WORKS CO., LTD.

It is a curious fact, and one which has for many years past been a source of great surprise to economists in Europe as well as in this country, that India, with all her wealth of raw materials in the animal, mineral, and vegetable kingdoms, has been the seat of such a small number of industrial enterprises for the manufacture of such substances into products which she has been importing annually at the rate of several hundreds of thousands of pounds sterling.

Reference might be made to leather goods of all descriptions which have been brought from England and America, where they have been prepared from skins and hides sent from India for that very purpose, and also to glassware purchased in Austria and elsewhere, although the supply of the necessary ingredients for its production is practically unlimited in almost every province. Recently, however, tanning and leather factories and glassworks have been established, and the result has been that money formerly sent abroad has been retained in the country, and constant employment has been found for a very large number of workpeople.

But these notes refer to a still greater anomaly seen in the fact that very little has yet been done in the distillation of wood alcohol, the recovery of its by-products, and the manufacture of chemicals on a large scale from indigenous sources.

Incidentally it may be observed that as recently as the month of April 1918 the importations of wholly or mainly manufactured chemicals, drugs, and medicines amounted in value to Rs. 31,86,230, and that dyes and colours worth nearly Rs. 24,00,000 were introduced into India during the same month.

With the object of turning importations into exportations and at the same time meeting the requirements of the Indian markets, several new enterprises have been started, but one of particular importance is the formation of the India Culture and Development Works Company, Ltd., with registered offices in Whiteaway Laidlaw Buildings, Hornby Road, Fort, Bombay, and manufacturing works at 95 Pasel Road, Chinchpoogly, in the same city.

The moving spirit of this new undertaking is Mons. Maurise Magnier, a French expert, who has gathered round him a directorate of well-known successful men of business, who are convinced of the immense possibilities of development of the company, especially at the present juncture, when abnormal trading conditions, caused by the Great War, render it exceedingly difficult to obtain goods from European countries.

The company have already obtained valuable concessions in Indo-Portuguese territory, entitling them to exploit several thousands of acres of forests, and they are now manufacturing tannin extracts and vegetable dyes, together with various by-products, for which there is an exceptionally good demand in India and elsewhere, and the manufacture of wood alcohol, chemical oils, and other specialities will be commenced as soon as the necessary factories have been completed. Large contracts have been obtained for the supply of various kinds of goods from the works, and the directors are so satisfied with their prospects that authority has been given for the construction of additional factories.

The telegraphic address of the company is "Indiatanna," Bombay, and the sole agents in India are Messrs. Magnier & Co., of Whiteaway Laidlaw Buildings, Hornby Road, Fort, Bombay.

THE INDIAN COTTON OIL CO., LTD.

Not more than about ten years have elapsed since really serious attention was directed to the very great annual increase in the quantity of cotton seed exported from India, and it was shown that, whereas not more than a thousand tons left these shores in the year 1896, the consignments twenty years later reached a total of 300,000 tons.

It was pointed out that India was merely using the seed as a cattle food, and that no profitable use whatever was made of its component parts, which in England and elsewhere had been converted into oil and flour for human consumption, and into meal, cake, and hulls for the feeding of cattle.

It is believed that the late Mr. J. N. Tata, of Bombay, brought the question to the notice of chambers of commerce, agriculturists, and others in the nineties, and that the *Indian Trade Journal*, *Capital*, and other newspapers, urged that India was losing a considerable sum of money annually by neglecting to establish an industry which was calculated to be of immense benefit to the country.

About 1908-9 some six or seven companies were formed with the object of supplying cotton-seed oil and vegetable *ghee* in India, but the management of the mills was placed in the hands of incompetent persons, and the result was that only one factory was worked for any length of time, and even in that instance the promoters were compelled to discard the pressing of cotton-seed in favour of castor or peanuts.

Men learn by the failures of others, and a handful of enthusiasts, convinced of the enormous possibilities of the cotton-seed industry in all its phases, formed the Indian Cotton Oil Company, Ltd., in the year 1909, with a nominal capital of Rs. 2,00,000. Public interest in the scheme had not, however, been sufficiently aroused, and the consequence was that not more than about one-half of that sum was subscribed at the time. Fortunately the company had for its chairman the Hon. Mr. Goculdas K. Parekh, a gentleman with profound faith in the future of the industry, who practically placed a blank cheque in the hands of the directors, and threw the weight of his great personal influence in furthering the company's interests, with the result that difficulties began to disappear and pressing was commenced under distinctly encouraging circumstances. The capital was, in 1912, increased to Rs. 10,00,000, only four lakhs of which were issued and fully subscribed by investing capitalists.

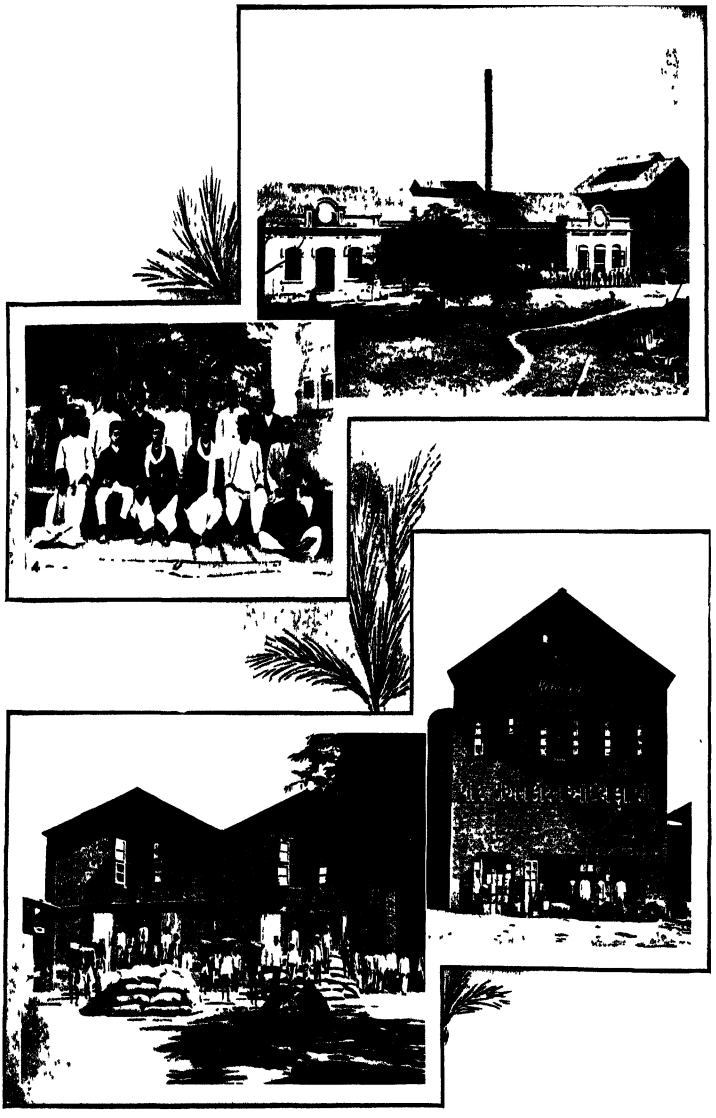
The factory is located at Navsari, in the district of Surat, in the northern division of the Presidency of Bombay, where the company are owners of about 40,000 square yards of Government *ryotwary* land, and all the buildings are constructed of bricks and *chunam*, and have iron roofs. The premises comprise the mill, which has a floor space of nearly 10,000 square feet, a refinery, two sets of extensive seed and cake godowns, full houses, stores, offices, a laboratory, and workmen's quarters.

American machinery of the most approved type has been installed, and no pains have been spared to secure every appliance calculated to ensure products of first-class quality, which comprise: (1) refined cotton-seed oil; (2) cotton-seed flour for consumption by human beings, (3) decorticated cotton-seed cake and meal, and (4) cotton-seed hulls for feeding farm stock of all kinds.

Analysts declare that oil or fat is the

INDIA CULTURE AND DEVELOPMENT WORKS COMPANY, LTD.

1 Managing Director, Staff and Labourers, Bombay Factory
2 Workers, Tobacco Group, Valpoy, Goa
3 Workers, Assuri Group, Valpoi, Goa
4 Mormugao Harbour, Goa.



THE INDIAN COTTON OIL CO, LTD

1 General View of the Indian Cotton Oil Co, Navsari 2 Refinery. 3 Seed Godown. 4 Office Staff Group

best form of fuel for the human body, and it is indispensable for industrial purposes.

Butter, *ghee*, lard, and similar substances have been in general use from time immemorial, but there has always been a danger of their being obtained from a diseased animal, in which case some terrible malady would in all probability be contracted by the consumer. This was one of the chief reasons which weighed with the company in the establishment of their factory, and an eminent scientist has said that "refined cotton-seed oil as sold under a guarantee by a first-class manufacturing concern like the Indian Cotton Oil Company, Ltd., is the purest, cleanliest, and most desirable edible fat from a hygienic point of view." Cotton-seed oil, therefore, may briefly be said to be the purest of all vegetable oils; it is the only substitute worthy of the name for butter or *ghee*, and it is wholesome, palatable, digestible, and nutritious. The second product, cotton-seed flour, is a vegetable substitute for and is nearly three times more nutritious than meat. Physicians and others not only speak highly of it for ordinary food purposes, but they also recommend it as being valuable for delicate patients of all ages.

Cotton-seed cake is usually made by having the whole seed, including husk, pressed for oil, but the method adopted by the Indian Cotton Company is to separate the husks or shells, and make use of kernels only for the extraction of oil. The latter course produces decorticated cake, an excellent food for cattle, and a most desirable fertilizer of impoverished land.

Husks, representing about 40 per cent. of the cotton-seed, are shelled during the process of decortication, and are sold as "hulls." They were formerly used as fuel for boilers, but since their feeding value was discovered they have been used largely as food for all kinds of ruminants.

Mr. W. Smart, I.C.S., Acting Director of Agriculture, Bombay Presidency, in reporting on the fodder problem to the Agricultural Conference held at Poona in September 1913, said, "I am convinced that the use of hulls for feeding purposes, as in America, would be of immense benefit to the cotton tracts of the Presidency. It would save the cultivator much money which he now wastes in the purchase of fodder and in buying new cattle every year for the sowing season," and the manager of the Government Civil Dairy, of the same Presidency, wrote that "cotton hulls are equal in feeding value to ordinary dry *kadbi*, weight for weight, and comparison of prices will decide which is more economical."

All the products of the company's mills are of uniformly high quality, and the directors are worthy of all praise for their persevering pioneer work in establishing an industry which has given a largely increased monetary value to component parts of cotton-seed, and in addition has provided sustaining food for human beings as well as animals.

The offices of the company are situated in Hummun Street, Fort, Bombay. Messrs. Kothari, Sutaria & Co. are the managing agents.

THE INDIAN GLASS MANUFACTURING COMPANY.

For very many centuries India held a high reputation for the variety as well as the beauty of her artistic handicrafts, and one should remember that these industrial enterprises were carried on entirely by the people without any extraneous aid whatsoever.

These products were sent to the courts of ancient Rome and Greece, and in later years they found favour in all the principal cities in Europe, where they have been treasured as unique specimens of the marvellous skill of a considerable portion of the inhabitants of this country. Many years ago there was a distinct decline in the demand for these goods, owing, primarily, to the supersession of manual labour by machinery, while a preference for imported articles began to take hold of the people of India.

This was followed by an outcry that the different Governments of India should render practical assistance in the way of reviving old-time industries, and of starting new enterprises, it being contended that India had practically all necessary raw materials within her own borders, and that there was no reason why imported goods — especially those manufactured from indigenous products sent to Europe for the purpose — should not be replaced by home-made articles.

Several Governments recognized the force of this contention, and industrial departments, controlled by experts, have rendered very great help by giving advice and holding demonstrations, with the object of enabling workers to understand thoroughly the basic principles essential to success in their undertakings.

Such action deserves all praise, but there are many manufacturers who declare that certain Governments have started enterprises on their own account and for their own benefit alone, and are thus—with their unlimited capital -threatening the continuance of private factories already in existence. The objectors urge that Governments should not enter into competition with small manufacturers, but should restrict their operations entirely to the work of teaching others.

How far this objection has been supported is beyond the scope of these notes, but it is beyond question that instruction by experts is an absolute necessity if goods manufactured in India are to command attention in company with high-class imported commodities.

This fact may be illustrated in connection with the glass industry—one which has developed wonderfully since the Great War put a check upon importations—as it has been clearly proved that crude methods of former days are absolutely useless in the present progressive era, and it is only owing to the technical and practical experience of Mr. Padamshin Narshinbhai, the founder and proprietor of the India Glass Manufacturing Company, that the products of its factory at Matunga, Bombay, are unsurpassed for quality and variety throughout the whole of India.

Every description of glassware is manufactured in the best possible style with thoroughly up-to-date machinery controlled by experts, who excel in their work.

The products include: "Kitson," "Aladdin," "Washington," "Pinemoon," "Autolux," "Continental," and "Standard" glass globes, railway roof-lamps, battery boxes, jars, electric globes, tumblers, cups, lamps, plates, jugs, and chimneys of all kinds, while a special feature is made of flower vases, and fireproof flasks for smelting gold and for chemical purposes. It should be added that the Matunga factory was the first to produce these flasks, which were formerly imported from Germany and Austria. Japanese kilns are used in preference to those of German pattern, as experience has shown that they are far more satisfactory.

The proprietor has received numerous testimonials from scientific men as well as customers, who bear witness to the excellent quality and workmanship displayed in all goods, and he attaches great importance to a letter which he recently received from the Bombay Rubber Manufacturing Company, of Bombay, of which the following is a copy: "We have the

INDIAN GLASS MANUFACTURING COMPANY

1 Blowers Removing Glass from a Pot Lying in the Furnace 2 Blowing Work 3 Proprietor (Mr Padamshih Narshinbhai)
4 Cutting Work. 5 Polishing Work

pleasure to state that the glass tubes manufactured by you, which we are using in our factory at present, are equal to any manufactured on the continent of Europe. We have tested the glass and find it up to the test, and in every way superior to the glassware made elsewhere in India." At an industrial exhibition held a few months ago at Baroda a medal was awarded to the company's collection of manufactured goods.

It should be added that Mr. Padamshin Narshinbhai purchased a moribund glass factory at Baroda, but he has reconstructed and developed it in such a manner that it is now a flourishing concern, giving employment to about seventy workpeople.

THE INDIAN MERCHANTS' CHAMBER AND BUREAU.

This Chamber and Bureau was established in 1907 with the following objects, namely: (*a*) to encourage a friendly feeling and unanimity among commercial men on all subjects involving their common good; (*b*) to promote and protect the trade, commerce, and manufactures of India, and, in particular, the general commercial interests of the Presidency of Bombay; (*c*) to consider and deliberate on all questions affecting the rights of Indian merchants, to represent to the Government their grievances, if any, and to obtain, by constitutional methods, the removal of them; (*d*) to collect, compile, and distribute, in such manner as may be most expedient for purposes of disseminating commercial and economic knowledge, all statistics and other information relating to trade, commerce, and finances, especially Indian, as well as to form and maintain a library, and generally to do all such matters as may promote the above objects in view; (*e*) to arbitrate between parties willing to refer to and abide by the judgment of the Chamber; and (*f*) to receive and decide references of matters of usage and custom in dispute, recording such decisions for future guidance, and assisting by this and such other means as the Committee for the time being may think fit, to form a code of practice so as to simplify and facilitate the transaction of business.

The idea originated with the Bombay Native Piece-goods Merchants' Association, at the offices of which preliminary meetings were held. From 1907 the Chamber began its regular work with the Hon. Mr. Manmohandas Ramji as its first president, and the Hon. Mr. Purshottamdas Thakoredas as first vice-president. There was no change in the presidentship and vice-presidentship for about six years, but in the year 1913 14 the Hon. Mr. Purshottamdas Thakoredas was president, and the Hon. Sir Fazulbhoy Currimbhoy was vice-president. During the following year the Hon. Sir Fazulbhoy Currimbhoy was president, and the Hon. Mr. D. E. Waccha was vice-president; for 1915 16 the Hon. Mr. D. E. Waccha was president, and the Hon. Mr. Lallubhai Samaldas, C.I.E., was vice-president, while for the year 1916 17 the Hon. Mr. Lallubhai Samaldas, C.I.E., is president, and Sir Vithaldas Damodar Thackersey v.ce-president.

The following bodies are connected directly and indirectly with the Chamber, although no public body is directly affiliated to it: (1) The Bombay Native Piece-goods Merchants' Association (which sends a large number of representatives); (2) the Grain Merchants' Association; (3) the Bombay Rice Merchants' Association; (4) the Bombay Fancy Piece-goods Association; (5) the Bombay Yarn, Copper, and Brass Native Merchants' Association; (6) the Bombay Shroff Association; (7) the Bombay Country Tobacco Trades Association; and (8) the Hindustani Native Merchants' Association.

Leading officials of the Government of India meet the committee of this Chamber whenever they visit Bombay.

Any person engaged in mercantile pursuits or interested in trade and commerce desirous of joining the Chamber is eligible for membership, there being two classes of members, viz. ordinary and honorary. Ordinary members shall be (1) resident members who pay an annual fee of Rs. 30; and (2) mofussil members who pay a yearly subscription of Rs. 5. An ordinary member also pays an entrance fee of Rs. 50 on being elected. Gentlemen distinguished for public services, or who are eminent in commerce and manufactures, or are otherwise interested in the aims and objects of the Chamber, may be elected as honorary members by a general meeting of the Chamber on the recommendation of the Committee, but they are exempted from the payment of subscriptions. They are not entitled to vote at any meeting of the Chamber, nor are they eligible to serve on the committee. They are, however, supplied, free of charge, with all the publications of the Chamber.

The following are the officers of the Chamber for the year 1916–17:—

Chairman, the Hon. Mr. Lallubhai Samaldas, C.I.E.; vice-chairman, Sir Vithaldas Damodar Thakersey; committee, the Hon. Mr. Purshottamdas Thakoredas, the Hon. Mr. Dinshah Edulji Wachha, the Hon. Mr. Manmohandas Ramji, the Hon. Sir Fazulbhoy Currimbhoy Ibrahim, the Hon. Sir Ibrahim Rahimtulla, Sir Shapurji B. Broacha, Mr. Devidas Madhowji Thackersey, the Hon. Mr. Chunilal V. Mehta, Mr. Jethabhai Walji, Mr. Revashanker Jagjiwan, Mr. Motilal Vallabhji, Mr. Gopalji Walji Sunderji, Mr. Motilal Kanji, Mr. Chatrubhuj Shivji, Mr. Phiroz J. Billimoria, Mr. Naranji Haribhai, Mr. Mulji Haridas, Mr. Mathuradas Vasanji Khimji, Mr. Ruttonsey Mulji, Mr. Sorabji Edulji Warden, Mr. Morarji Velji, Mr. S. B. Billimoria, Mr. M. P. Madan, Mr. Laxmichand Maneckchand Khokhani (representative of the Bombay Shroff Association), Mr. Jugannathji, *munim* of Seth Tarachand Juharmal (representative of the Hindustani Native Merchants' Association), and Mr. Currimbhoy Lalji Sajan (representative of the Rice Merchants' Association).

(1) Representative on the Bombay Legislative Council, the Hon. Mr. Manmohandas Ramji; (2) representative on the advisory board of the Sydenham College of Commerce, the Hon. Mr. D. E. Wachha; (3) representative on the Bombay Port Trust, the Hon. Mr. Manmohandas Ramji; (4) representatives on the Bombay Indigenous Industries Committee, the Hon. Sir Fazulbhoy Currimbhoy Ibrahim and the Hon. Mr. Manmohandas Ramji; secretary, Mr. J. K. Mehta, M.A.; assistant secretary, Mr. Kunjvihari G. Dhru; hon. auditor, Mr. Ardeshir Edulji Cama (of Messrs. A. C. Rice & Co.), chartered accountant; and solicitors, Messrs. Edgelow, Gulabchand Wadia & Co.

The Chamber publishes a monthly journal in the Gujarati language, giving information on commercial and industrial subjects, and publishing all important statistics relating to the trade and commerce of India.

The following is a list of some of the privileges obtained through the agency of the Chamber during its nine years' existence: (1) Securing the right of having an elected member in the Bombay Legislative Council; (2) of having a nominated member from the Indian Commercial Community in the Imperial Council;

(3) of having two elected members from the Indian Commercial Community on the Board of the Bombay Port Trust; (4) of having a representative on the Holidays Committee; (5) of having a representative on the Advisory Board of the College of Commerce; (6) of enjoying the distinction of presenting addresses of welcome and farewell to His Majesty the King Emperor, H.E. Lord Hardinge, Lord Sydenham, H.E. Lord Willingdon, and H.E. Lord Chelmsford; (7) of being officially invited to several public functions; (8) of enjoying the privilege of having interviews with members of the Government; (9) of having its chairman being considered specially entitled to private *entrée* at levées; (10) of conducting the vernacular *Commercial Journal*; (11) it protested strongly against the removal of the Bombay, Baroda, and Central India railway line from Grant Road in a southwardly direction; (12) it took a leading part in the discussion on the question of commercial education, which led to the establishment of the College of Commerce and the institution by the Bombay University of the degree of Bachelor of Commerce; (13) it contributed to some extent to the enactment on modern lines of the Indian Companies' legislation; (14) it protested successfully against an attempt made in some quarters to prevent Indians from assuming and trading under European names; (15) it was because of the representation of the Chamber that the important clauses twenty-two and twenty-five of the Patents and Designs Bill were introduced; (16) it protested successfully against the new wharfage rules of the Great Indian Peninsula Railway, introduced in 1910; (17) it supported the Government in Insurance Legislation; (18) it carried on agitation against the refusal of the Bombay, Baroda, and Central India Railway to grant refund of freight on shortage of coal; (19) it got the limit of the weight of Indian sample post raised from eighty to two hundred tolas; (20) it successfully represented to the Government the necessity of publishing the figures of the annual yields of certain food crops such as juar, bajra, and others; (21) it carried on an agitation against undue preference being given to some merchants by the Great Indian Peninsula Railway, and it was successful in securing the adoption of the scheme of serial loading by that line; (22) it sent its opinions on the questions of the Life-saving Appliances Committee and of the Weights and Measures Committee, and was represented by its chairman as a witness at a meeting of the latter; and (23) it organized the Commercial Congress.

THE INTERNATIONAL BANKING CORPORATION.

The head office of this banking institution is situated at 55 Wall Street, New York, and branches have been, or are being, established at Batavia, Bombay, Calcutta, Canton, Cebu, Colon, Hankow, Harbin, Hongkong, Kobe, London, Manila, Medellin, Panama, Peking, Puerto Plata, Rangoon, San Francisco, San Pedro de Macoris, Santcago D. R., Santo Domingo, Shanghai, Singapore, Soerabaya, Tientsin, Tsingtao, and Yokohama, but through the close affiliation of the corporation with the National City Bank of New York, the directors are able to offer the services of the branches of that bank which have been opened at Bahia, Buenos Aires, Caracas, Cardenas, Cienfuegos, Genoa, Havana, Matanzas, Monte Video, Rio de Janeiro, Sagua La Grande, San Juan P. R., Santiago (Chili), Santiago (Cuba), Santos, Sao Paulo, and Valparaiso.

The directors of the corporation open current deposit accounts, for approved customers, free of charge, and they allow the usual rates of interest upon credit balances. Fixed deposits are received for one year, or for shorter periods, but application should be made to local managers or agents for the terms upon which such arrangements can be made.

Every description of general banking and exchange business is transacted in the principal cities throughout the world.

According to the thirty-third semi-annual statement, it appears that on the 31st December, 1918, the capital and surplus of the corporation was $6,500,000.00, and the undivided profits amounted to $2,563,825.77.

The London offices are situated at 36, Bishopsgate, E.C. 2, and the Bombay branch is in Church Gate Street, the local manager being Mr. H. A. W. Brent.

JAPANESE FINE ARTS.

An excellent subject for philosophical discussion is the extent to which the element of chance enters into the relations of life. Few probably will deny that an apparently trivial circumstance, frequently unpremeditated, has changed the whole course of a man's career, or has been the first step in the building up of successful business operations. An example of this type of influence is supplied by the life of Mr. B. D. Mehra, the proprietor of the business carried on under the name of the "Japanese Fine Arts," established in Lahore in the Province of the Punjab, with branches at Bombay, Yokohama, Delhi, Lahore, Simla, Rawalpindi, and Murree.

This gentleman was originally a contractor, but during a visit to Delhi in 1910, made for the purpose of obtaining contracts for building materials, he heard of an Industrial Exhibition then being held at Allahabad in the United Provinces, and he at once decided to proceed thither in order to see it. He was so greatly interested in the magnificent display of Japanese silks, ornamental and other useful goods displayed in the Japanese section, that he took into serious consideration the question of opening, in the Punjab, an emporium for the sale of such goods. Mr. Mehra then discussed the matter with his two uncles, who were at the time manufacturing silk articles at Amritsar, with the result that these gentlemen proceeded to China and Japan, where they purchased a large quantity of silk curios and articles of an ornamental character and other sundries, and in October 1911 they returned to India and opened suitable premises at Hathi Gate, Amritsar, trading under the name of Basantamull Keshomall. The venture was not a success, as the contents of the imported consignments were adapted more particularly for Europeans, of whom there were but few in that town. As there was practically no sale for the stock it was removed in October 1912 to premises on the Mall at Lahore, where Mr. M. D. Mehra and Mr. B. D. Mehra entered into partnership, trading under the name of "The Japanese Fine Arts," and soon disposed of the whole of the goods, chiefly to European customers. Further importations were made from time to time, and the business continued to flourish until the outbreak of the Great War, when Mr. B. D. Mehra, on his own account, started a wholesale importing business in order that diminution of retail sales might be counterbalanced by the returns from the new enterprise.

Before the close of the year 1914 a considerable quantity of surplus stock was sold by auction at very satisfactory prices at Simla and Murree, at which places branches were opened.

At the end of 1916 Mr. M. D. Mehra desired to have a dissolution of partner-

INTERNATIONAL BANKING CORPORATION.

1. Exterior 2 Interior

ship, and the necessary steps having been taken, Mr B D Mehra became sole proprietor of the whole business

In February 1917 a wholesale depôt was established at Zakaria Masjid, in Bombay, and later retail showrooms were opened at Esplanade Road in the same city Before the close of the year 1918 other branches were started at Yokohama (Japan), Delhi Amritsar and certain places in the Deccan

Mr Mehra has now a very large and successful undertaking in which he makes a specialty of offering to his large circle of customers Japanese works of art, curios, silks for suitings for summer wear, fancy ties, socks, crepe-de-chine, hosiery and silk for ladies, together with a unique selection of high-class goods of various descriptions

About seventy-five hands, including Europeans, are employed in the depôts and branches, and the careful attention given by these assistants—under the supervision of Mr Mehra—has contributed largely to the success which has attended the enterprising efforts of the proprietor

JINTAN AGENCY

It is only necessary to skim through the columns of any reputable newspaper, magazine or journal to be filled with astonishment at the countless advertisements of medicinal remedies for every disease or complaint to which men are liable Many of those so-called remedies or preventives are gigantic frauds, therefore when a really reliable medical preparation is in the market one has little hesitation in referring to it.

It is claimed by the manufacturers of 'Jintan'—a Japanese discovery—that it has attained a world-wide reputation as a curative preparation which should be kept in every household.

The sole agent for the sale of this medicine in the Bombay Presidency, Central Provinces Rajputana, United Provinces Punjab, and Sind, is Mr G R. Chaubal of Juma Masjid, in the capital city, who has held this position since he visited Japan in the year 1909.

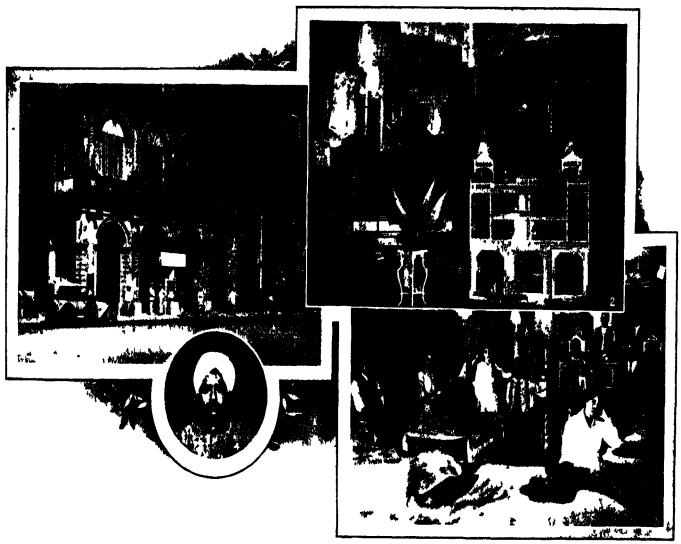
It is not an easy matter to induce the public to purchase a new product of any kind, seeing that, in order to obtain success, quite as much depends upon the vendor himself as upon the genuineness of the article which he deserves to sell.

"Jintan" was introduced into India with a ready-made reputation, and Mr. Chaubal had the tact and ability to let that fact be widely known to residents in his agency, with the result that he has established a sound and largely-increasing business for the disposal of it This gentleman has given such satisfaction to the proprietors of "Jintan" that the latter have awarded him a gold medal, together with certificates in order to mark their appreciation of his valuable services

Mr Chaubal believes in the efficacy of advertisements of an attractive character, being confident that in the rush and whirl of commercial life at the present day, the sale of commodities—be they medicines or matches—cannot be pushed forward vigorously unless such wares are continually being brought to the attention of the people

The management of the agency is in the hands of Mr Chaubal himself, while very valuable assistance is rendered by the manager, Mr R S Bhagwate

The telegraphic address of the agency is "Jintanvala," Bombay



JAPANESE FINE ARTS.

1 Interior 2 Showroom 3 Drapery Department. 4 Mr B D Mehra, Proprietor

JINTAN AGENCY.

1. Jintan Agency Office, Bombay. 2. Staff of Jintan Agency. 3. Proprietor of the Agency. 4. "Jintan" and its Usefulness.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

JOST'S ENGINEERING CO., LTD.

The firm of Messrs C Jost & Co, which was established in 1862, were the pioneers of electrical engineering work in Bombay On the introduction of the public electrical supply for lights and fans into Bombay about 1906, the electrical trade assumed greater proportions, and Messrs Jost & Co were not slow to take advantage of the opportunities provided for business expansion

In 1907 the firm was formed into a limited company under the style of "Jost's Engineering Company Ltd" It continued its remarkable development and is now classed among the leading electrical contractors in India Many lighting power, and pumping schemes have been carried out by the firm and at the present time it is engaged on some important electrical contracts for Government The firm's activities are not confined entirely to the Presidency of Bombay, as it has carried out numerous contracts in the various Provinces, and is prepared to undertake work anywhere in India

The company also has an extensive connection in telephone engineering and as sole agent for the Western Electric Company, Ltd, London and New York, it supplies railways with special apparatus for controlling traffic by telephone All the leading railway companies in India are adopting this method of control, and many of them are now equipping their lines with this system

A speciality of great utility is the "Jost Radio" fan, a device that has brought comfort and health to thousands whose lot in life is to dwell on the plains of India where a public electric supply is not available, and the only method of keeping cool is by means of the old-fashioned swing punkah, pulled by a very annoying and unreliable coolie Its surpassing advantages have made the "Jost" fan an absolute necessity to the residents in the sweltering tropics For about a quarter of a century Mr Jost devoted his attention to the perfection of a mechanical punkah which would be reliable portable, and reasonable in price and eventually he achieved success with the result that the name of "Jost" is now a household word in the East

The firm has also experts to deal with schemes for the installation of electrical passenger and goods lifts pumping plant of all capacities and general electric light and power plant and they are in every way equipped to undertake electrical engineering work of any magnitude

The directors are Sir Stanley Reed, Kt (chairman, Mr Newman Taylor and Mr. E G Pearson The general manager is Mr. G. M Wise, A M I E E, A.M.I.M.E.

JOST'S ENGINEERING COMPANY, LTD

1 Office 2 Royal Institute of Science Bombay in which building Jost's Engineering Company Erected Two Express Lifts

JULIUS GOVE

In the midst of the rush and whirl of present-day life, with its express trains and steamships, malodorous motor-cars and noisy aeroplanes, it is refreshing to bear in mind that there is not, and never will be, any invention of human beings which can completely usurp the place of the horse as the servant as well as the faithful friend of man. There may be fewer channels in which the services of the horse are essential, and long distances may be covered in shorter time by other means of locomotion, but surely the day can never dawn when he will no longer be in request

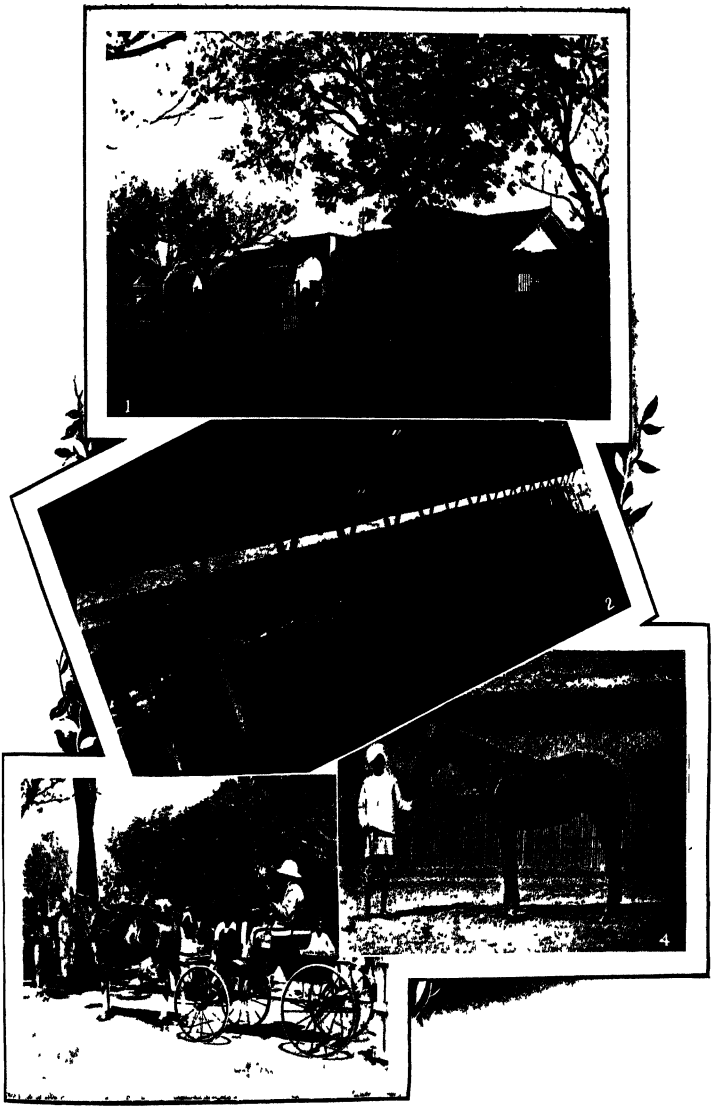
There is a demand in India for well-bred horses at the present day, and this is being largely met by Mr Julius Gove, of Bellasis Road, Byculla, in the city of Bombay, who imports from Australia regular consignments of first-class animals of all descriptions

This gentleman commenced dealing in horses in Calcutta about forty years ago, but he shortly afterwards removed to Bombay and entered into partnership in the same line of business with Mr R G Baldock, trading as Baldock & Gove

In the course of a few years this arrangement was terminated, and Mr Gove set up his own establishment in Gilder Street, where he remained until he obtained the premises now occupied by him, which cover an area of about 66,000 square yards and have accommodation for 1,000 horses

Mr Gove is the holder of Government contracts for the supply of army remounts, including cavalry and artillery, he is constantly furnishing high-class ponies to polo clubs as well as to private individuals, and he is introducing into India a large number of race-horses bred from thoroughbred sires and dams, which have excellent records for performances on the Australian turf The success achieved by Mr Gove is due primarily to his long practical experience with horses and to strict personal attention given to the wishes of his numerous patrons, while his knowledge of the Indian market enables him to select animals which are of a particularly suitable type for this country

Mr Gove, whose home is in Melbourne, is still hale and hearty, notwithstanding the fact that he has reached his seventieth year, and the esteem and confidence of the public which have been accorded to him are now extended to his sons.



JULIUS GOVE

1. Exterior of Stables. 2. Interior. 3. Carriage Pony. 4 Army Remount.

K. H. KABBUR & CO.

The head office of this firm is at 30 Brown Street, Manchester, whence Mr. K. H. Kabbur, the sole proprietor, personally controls the very large business activities of a young but thriving undertaking in which colours, chemicals and oils are exported to India, and spices of all kinds, as well as castor, linseed and coco-nut oils are sent from this country to Europe and elsewhere.

The Manchester premises were opened in 1914 by Mr. Kabbur, who has resided there for several years, and has also, in the course of the development of business, visited the principal cities of Europe; while the Bombay establishment was commenced in 1916, and is still managed by Mr. P. Ankatikar, B.A. and LL.B. of the Bombay University.

Branches have been opened at 21 Mincing Lane, London, E.C.3, and at Calcutta, Paris, Madras, Delhi, Alexandria, Cairo, Barcelona and Milan, while a project is now on foot to extend the operations of the firm so as to include New York.

A large staff of experts and experienced salesmen is employed at branches as well as headquarters, and the proprietor has the satisfaction of seeing that prompt attention given to orders, methodical conduct in connection with all transactions, and, above all, an insistence upon quality of goods, have resulted in the establishment upon a sound basis of a most prosperous commercial enterprise.

The firm supply any article in connection with colours and chemicals in almost every part of the world, seeing that their Manchester house has business relations on an extensive scale with Egypt, France, Greece, Italy, Belgium, Spain, Holland, Japan, China, India and the United States of America.

They have also commenced the manufacture of aniline dyes and intermediate products, and they have placed on the market a selected range of acid, basic and sulphur "direct" and other dyes.

K. H. KABBUR & CO.
EXTERIOR OF OFFICES, BOMBAY.

C. D. KERRAWALLA & CO.

The proprietor of this firm, Mr. C. D. Kerrawalla, was for many years engineer and manager for Messrs. W. H. Gribbin & Co., of the Parel Machine Works, in Kalachowki Road, Parel, Bombay, but he gave up his appointment in the year 1898 and commenced business on his own account as a cotton machinist, engineer, and mill furnisher, taking over some shops near the Parel fire brigade station.

The Parel Works, covering 3,000 square yards of land, came into the market in 1903, and were purchased by Mr. Kerrawalla, who renamed them the Chinchpoogly Machine Works.

A large quantity of additional plant of a modern type was installed, and at the present time the works are thoroughly well equipped with necessary machinery for making all kinds of spare parts for cotton-spinning appliances. Steam power for driving purposes was formerly used in the works, but a 25-h.p. oil engine has recently been introduced.

The firm have their own foundry, in which castings for all spare parts of cotton-spinning machinery are made, and owing to the very large stock of those parts which are always kept on hand, they are able to execute orders at a moment's notice. The works are situated in the heart of the cotton-milling districts of India, but breakdowns in machinery are not confined to one particular area, or even to one class of mills, and thus it follows that the well-known manufactures of the Chinchpoogly Works are sent in large quantities to Madras, Cawnpore, Delhi, Ahmedabad, and other important centres throughout India.

The firm keep a large stock of twist wheels, cut change-pinions; bobbin, spindle, split shaft, coupling, and drag wheels; flyers, pressers, long collars, loom wheels, cap barnebs, steel rings, ring travellers, plate pulleys, mule spindles, tin roller wheels, reversing bevels, weight levers and hooks, and a variety of other goods.

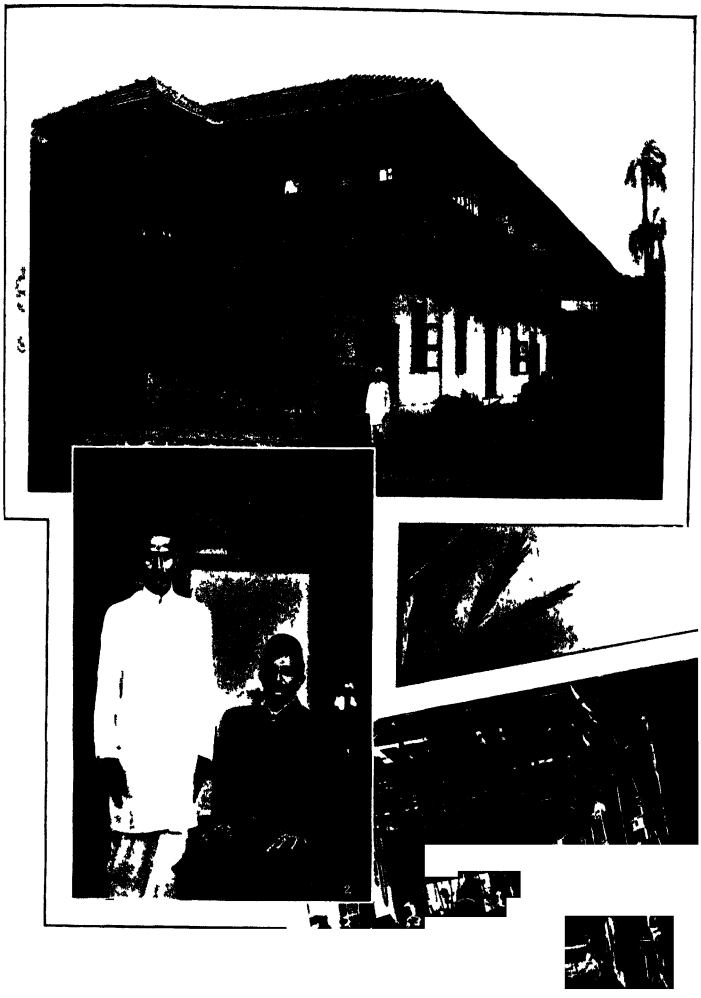
Messrs. Kerrawalla & Co. are sole agents in the Bombay Presidency for Messrs. William Bodden & Sons, Ltd., of the Hargreaves Works, Oldham, England, manufacturers of spindles, flyers, steel ring spindles of all kinds for spinning and doubling cotton, silk, flax, wool, worsted, and other fibres; of spinning and doubling rings, long and short collars, wheels, footsteps, and other accessories for cotton machinery. They are also sole agents for "Avance" crude oil engines, and for Messrs. S. W. Clough & Co., of Shipley, Yorkshire, for "Clough" oil engines.

About forty-five hands are employed, and the supervision of them and of the whole works is in the capable hands of Mr. Kerrawalla himself.

The telegraphic address of the firm is "Machinery, Bombay."

J. F. KARAKA & CO.

The adoption by the inhabitants of Bombay as the motto of their city, "*Urbs prima in Indis*," may, at the time of its conception, have appeared to some persons to have savoured of unwarrantable pride, but who can now behold that mag-



C. D. KERRAWALLA & CO.

1 Building. 2 Proprietor 3 Mechanic Shop

nificent gateway on the west of India, with its palatial buildings standing in an unrivalled position on the shores of the Arabian sea, or witness the numerous enterprises which have called forth grit and determination on the part of those who have taken a share in its progress, without being convinced that the claim to the title has been justified to the very letter?

The names of those who have contributed to the establishment and subsequent growth of commercial life in Bombay include men of many races of India, as well as of several European nations, but history shows that there was an ingrained conviction among the majority of them that Bombay must and should become one of the most important and beautiful cities in the East.

One of the leading commercial firms in Bombay at the present time is that of Messrs. J. F. Karaka & Co., whose partners—Messrs. J. F. and B. F. Karaka—are sons of the late Mr. Fardunji Framji Karaka, J.P., who, up to the time of his death, was one of the best-known figures in Bombay.

It must be borne in mind that an exceedingly small quantity of coal was required in Bombay when Mr. Fardunji Karaka commenced his career in the year 1876, and, indeed, there were few industries which then made use of it.

Several cotton mills were in existence, but their consumption was exceedingly small; only two railway companies—the Bombay, Baroda and Central India and the Great Indian Peninsula Companies—required it, and even then on many of their lines wood was used for fuel.

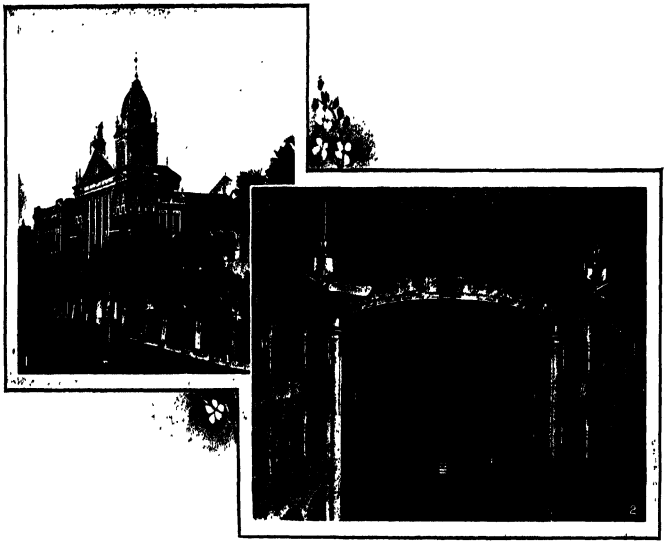
Again, it must be remembered that, as practically the whole of the shipping trade at the port was carried on in sailing ships, there was no bunkering going on as there is now.

Messrs. J. F. Karaka & Co. are at present the leading firm in Bombay in all matters connected with the sale or handling of coal. The stability of the firm, and their ability to supply all kinds of ships with coal in the shortest possible time, has resulted in their having contracts for bunkering steamers in the mercantile marine and Government services, and in being appointed sole representatives of Messrs. Cory Brothers, Ltd., the largest exporters of coal in the world.

The firm are owners of a fleet of two steam launches and nearly thirty iron and wood lighters, specially designed with the view of preventing unnecessary delay in putting coal into ships.

Messrs. Karaka & Co. are naturally proud of having such notable supporters, but they are particularly gratified at the distinguished honour conferred upon them by being selected to coal the ships which arrived at Bombay during royal visits to India on two occasions.

H.M.S. *Terrible* was coaled at the rate of 153 tons an hour, and H.M.S. *Medina* at 156 tons, and the work performed by Messrs. J. F. Karaka & Co. was highly commended by the Royal Navy and other authorities, and by the local and foreign press.



J. F. KARAKA & CO. (ROYAL OPERA HOUSE).

1. The Royal Opera House. 2. The Stage.

KARANJIA & CO., LTD.

Every historian who has contributed to the literature of the world a treatise on arts and manufactures gives prominence

J. F. KARAKA & CO. (ROYAL OPERA HOUSE).

1. View of the Foyer, Showing Central Entrance to the Auditorium 2. The Stalls and Dress Circle in the Auditorium.
3. The Side Boxes in the Auditorium.

J. F. KARAKA & CO. (COAL DEPARTMENT).

1. Coal Arriving in the Railway Yard and being Carted by J. F. Karaka & Co. 2. Coal Stores in Bombay belonging to J. F. Karaka & Co.
3. Delivery of Coal by Weight by J. F. Karaka & Co. 4. Loading Coal into Lighters for Exportation by J. F. Karaka & Co.

to the fact that many hundreds of years ago India was famous for its silks embroideries, muslins, and other similar goods Those productions were fine examples of the marvellous skill of handicraftsmen of bygone ages and even today articles of a like nature are highly prized in Europe and other parts of the world

Industrial art attains its highest development in Northern India and one cannot travel through this vast territory

M N Gobhai and B N Karanjia managing directors of the present company Although the new undertaking is of so recent formation the business it has been in existence for a considerable number of years having been in fact one of the concerns in its particular branch in the city of Bombay It had offices in China and Japan together with agencies in Europe and America but within the short space of a year Messrs Karanjia & Co Ltd have extended these connections

THE KATHIAWAR TRADING COMPANY.

The riches of India such as spices perfumes jewels cotton and other goods were known to the civilized world as long ago as the days of King Solomon when they were carried by traders through the Red Sea to Asia Minor and elsewhere and at a later date the Pharaohs of old were among the principal purchasers of these precious products Notwithstanding the turmoils during the centuries which with the rise and fall of dynasties and the

KARANJIA & CO, LTD

1 Trousers Interior of Showroom The Staff

successive control of the seas by Portuguese Dutch and other nations India still remained the market in which the above-named and other costly articles were obtained for the courts of Europe in kings The interchange of ideas following upon the opening of communications between East and West had its effect upon Indian art but primitive industries were carried on with little or no change until comparatively recent years when new methods of manufacture and scientific discoveries caused certain modifications to be made

without being struck by the extreme beauty delicacy of workmanship and chaste designs in silk wood, ivory and gold and other metals which are displayed in numberless warehouses and shops

An emporium well known to lovers of art is situated at 207 Hornby Road Fort, Bombay, belonging to Messrs Karanjia & Co, Ltd, and this position is in the centre of one of the best commercial quarters of the city

The business was established in 1917 as a private limited liability concern under the name of Messrs Karanjia & Co, Ltd The agents are Messrs M N Gobhai & Co, whose partners, Messrs

which now embrace the whole of India as well as the principal centres in Europe America and the Far East

The paid-up capital amounts to Rs 1 00,000 but provision has been made for its enlargement at any future date The company deal in silks embroidered piece goods fancy cotton articles, jewellery silver-ware and marble busts while a specialty is made of silks and embroideries for which the company have gained a high reputation among a largely increasing circle of customers and praise has also been lavishly bestowed for the degree of perfection attained in the delicate arts of dyeing and printing

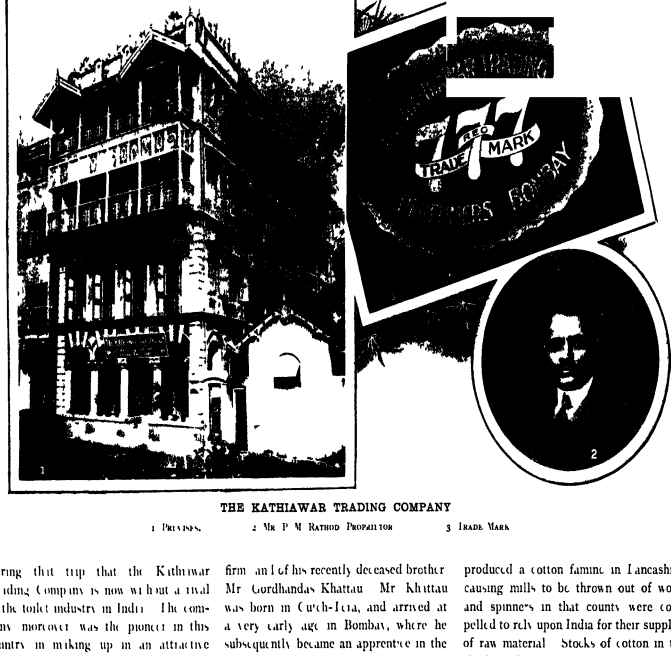
The proprietor of the business established in 1907 and carried on at Girgaum Bombay under the name of the Kathiawar

Trading Company is Mr P M Rathod who has had a life-long experience in the preparation of perfumes and he possesses such special qualifications in the art of blending his ingredients that the æsthetic tastes of the most refined Indians are more than satisfied

Mr Rathod in the year 1913 visited many of the centres in Europe in which perfumes are manufactured, and it is largely owing to the experience gained during that trip that the Kathiawar Trading Company is now without a rival in the toilet industry in India The company moreover was the pioneer in this country in making up in an attractive European style all kinds of toilet preparations, and perfumes free of alcohol

Mr Rathod's business premises present such a handsome appearance that even in Bombay, a city adorned with magnificent architectural structures they compare most favourably with others owned by firms who have been established for a much longer period

With regard to their productions it may be safely said that there is hardly a city or town in India in which they have not gained a great reputation for quality and in which they are unobtainable



THE KATHIAWAR TRADING COMPANY

1 Premises. 2 Mr P M Rathod Proprietor 3 Trade Mark

KHATTAU MAKANJI & CO.

The above-named firm, carrying on business in Oriental Buildings, Esplanade Road, Fort Bombay, was founded by the late Mr Khattau Makanji, father of Mr Mulraj Khattau (the present head of the firm and of his recently deceased brother Mr Gordhandas Khattau Mr Khattau was born in Cutch-Jeria, and arrived at a very early age in Bombay, where he subsequently became an apprentice in the flourishing, *bhatia* firm of his maternal uncle Jivraj Baloo, which was then conducted by Mr Dwarkadas Vassanji

His natural intelligence and keen business instincts were soon manifested to such a degree that within a comparatively short period of time he was admitted as a partner in the firm's establishment at Coomta, and only a few years later he was entrusted with the entire management of the headquarters of the concern at Bombay Events soon followed which gave young Khattau an opportunity for a display of faculties which showed that he possessed a master-mind in commercial matters, being quick and accurate in his judgment of men, and of the various commodities which he had either to buy or sell It was in the year of the outbreak of the Civil War in America that the chance came to him

The closing of Confederate seaports produced a cotton famine in Lancashire, causing mills to be thrown out of work, and spinners in that county were compelled to rely upon India for their supplies of raw material Stocks of cotton in the chief producing areas were sold at abnormally high prices, and the influx of such vast quantities of money into Bombay, for example, where there was little or no opportunity of investing it to advantage produced the wildest speculations in shares, which resulted in the total ruin of many financial and milling concerns.

Mr Khattau was one of the few who held aloof from the share mania, preferring rather to trade steadily at current

KHATTAU MAKANJI SPINNING AND WEAVING COMPANY, LTD

1 Seth Gordhandas Khattau 2 Folding Department 3 Bleaching Department.

market prices than swim with the tide which washed the flotsam and jetsam of moribund companies and firms on to the rugged rocks of bankruptcy. Highly respected in business circles, and beloved by his own community, he made for himself a name which is still honoured in many provinces in India.

He died in 1876, leaving two sons, Gordhandas and Mulraj Khattau, aged eleven and eight years respectively, and the management of the business was undertaken by Mr. Jairaj Makanji, his surviving brother.

Gordhandas Khattau received an excellent education, including a good knowledge of the English language, and began his business career when only seventeen years of age by making himself acquainted with the working of the Khattau Makanji Spinning and Weaving Mills Company, Ltd., which was established in 1874 by his late father.

He assumed full control of these mills long before the death of Mr. Jairaj Makanji, as well as of the Bombay United Spinning and Weaving Mills Company, Ltd., for both of which concerns the firm have been agents for a considerable number of years.

Mr. Gordhandas Khattau was in 1890 elected a member of the Bombay Municipality, and by reason of the esteem in which he was held in business and social circles he was subsequently created a Justice of the Peace. He was, further, one of a limited number of Bombay citizens who received invitations to attend the first Coronation Durbar held at Delhi. It was impossible for this gentleman to devote as much attention to civic duties as he desired, seeing that he was busily employed in managing cotton mills, was chairman or a director of several public companies, and was, further, actively concerned in the pearl business which his late father had founded. This last-named industry was carried on by Mr. Gordhandas Khattau on his own account until 1908, when a syndicate was formed, under the name of Messrs. Khattau Makanji, Sons & Co. Pearls were received by them for export and sale on commission to their agents in London and Paris, and so successful were they in their transactions that they completely ruled the market in Bombay. The syndicate was dissolved in 1910, and Mr. Gordhandas Khattau again assumed full control until the time of his death.

This gentleman was very greatly respected in Bombay, where he was regarded as one of its foremost citizens, and in his private life he firmly upheld the good reputation of his family.

In conjunction with his brother, Mr. Mulraj Khattau, he devoted a sum of Rs. 1,00,000 to the cause of education, the interest arising therefrom to be expended in the maintenance of twelve Bhatia boarders at the Goculdas Tejpal Boarding School, and he was instrumental in the building of the fine Bal Rajeshwar temple at Thana, erected there in memory of his sons.

Special mention should be made of a strange incident which occurred in connection with the visit to Europe, in May 1913, of Mr. Gordhandas Khattau, his son, Mr. Tulsidas G. Khattau, and his son-in-law, Mr. Narottan Morarji Goculdas. On the return of the party in October the same year the Cutchi and Halai Samasth Bhatia Mahajan - the caste to which Mr. Khattau, senior, belonged - raised the question as to whether they could be received again into their caste. In answer to their inquiries Mr. Gordhandas entered fully into the reasons which prompted the journey, and he also rendered a complete account of his proceedings while there, including his manner of living, but the Mahajan (which consisted chiefly of orthodox members) appeared to be somewhat sceptical, as it passed a resolution to the effect that other persons of the same community (the Bhatias) should have no dealings with the families of the three travellers.

Exclusion from the caste was not agreed to, and the original resolution was adopted only as far as the book in which it was written was concerned, as other families connected with them by ties of relationship still maintain these ties. The result of these proceedings was that a new Mahajan was formed under the name of the Bombay-Bhatia Mahajan, and it was promptly joined by five hundred members who had grievances against the old Mahajan. The new body adopted a resolution that as Mr. Gordhandas Khattau and his companions had kept their religious principles strictly when in Europe, and had taken their cook with them they should be admitted into membership.

The first president of the second Mahajan was the late Rao Bahadur Seth Vassonji Khimji.

During Mr. Gordhandas Khattau's stay in Europe he opened establishments on behalf of his firm in London and Paris under the name of Khattau Sons & Co., but since the outbreak of the Great War these have been closed.

Mr. Gordhandas was for twenty-three years a director and thirteen years chairman of the Oriental Government Security Life Assurance Company, Ltd.; twenty-five years a director and twelve and a half years chairman of the Bombay Telephone Company, Ltd.; chairman of directors of the Khattau Makanji Spinning and Weaving Mills Company, Ltd.; of the Presidency Mills Company, Ltd.; the Morarji Goculdas Mills Company; and director of the Bombay United Spinning and Weaving Company, Ltd., and of the Bank of India, Ltd., since its foundation.

Mr. Gordhandas Khattau died in November 1916, at the early age of fifty-one, leaving his brother, Mr. Mulraj Khattau, as head of the firm. He had two sons. The elder, Mr. Tricumdas, is now a partner and undertakes the management of the Khattau Makanji Mills and of his father's other businesses. The younger son, Mr. Tulsidas, is also a member of the firm, and he assists his brother generally, while both are directors of the Khattau Makanji Spinning and Weaving Mills Company, Ltd. Mr. Mulraj Khattau conducts all affairs connected with the Bombay United Spinning and Weaving Mills Company, Ltd., and is an *ex-officio* director. He is assisted by his eldest son, Mr. Morarji M. Khattau, who is also a partner in the firm.

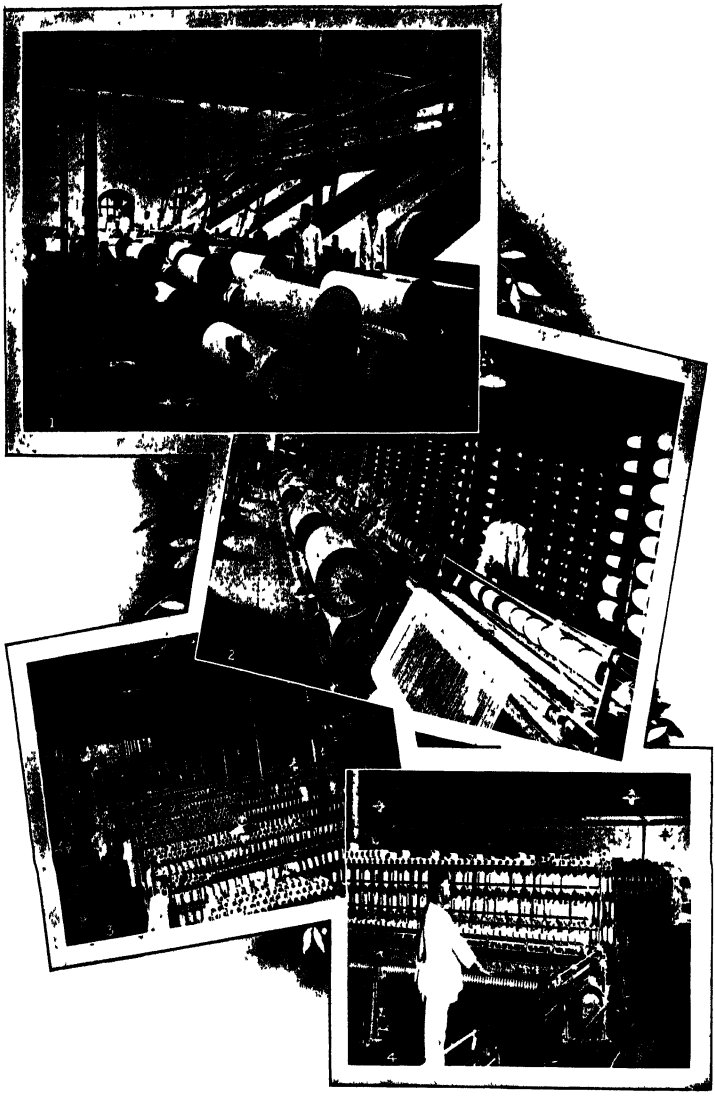
These mills were started some sixty years ago by Sir Mangaldas Nathubhai, the first Hindu knight in Western India, and they were controlled by him for several years until the firm of Khattau Makanji & Co. became agents through their founder, Mr. Khattau Makanji.

THE BOMBAY UNITED SPINNING AND WEAVING MILLS COMPANY, LTD.

The mills were originally equipped with a very small number of looms, but in the year 1904 the agents commenced a thorough renovation of the premises, which resulted in the provision of greater accommodation, in the fixing of 1,300 looms and 50,000 spindles, and the laying down of machinery suitable for the production of materials of a higher quality. In short, the alterations enabled the directors to discontinue the practice of spinning coarse yarns, and to make a special feature of using finest "counts" only for the manufacture of cloth which would compete favourably, as regards quality, with Manchester goods. A further improvement

BOMBAY UNITED SPINNING AND WEAVING COMPANY, LTD. (KHATTAU MAKANJI & CO).

1 Portion of the Blow Room 2 Portion of the Card Room. 3. Frame Department 4. Twisting Room



KHATTAU MAKANJI SPINNING AND WEAVING COMPANY, LTD.

1 Sizing Department 2 Warping Department 3 Ring Department 4 Mule Department.

KHATTAU MAKANJI SPINNING AND WEAVING COMPANY, LTD

1 Weaving Department 2 Drawing Machine 3 Cloth Dyeing Department.

was made in 1910 when the company added a very large bleaching and dyeing department. Raw cotton to the value of about Rs. 1,50,000 is consumed monthly, and all cloth manufactured is readily disposed of on the spot at current wholesale prices.

The greater portion of the machinery is driven by steam power derived from Babcock tube boilers, but a small quantity depends upon electric force generated at the mills.

Since the year 1904 the mills have enjoyed an unbroken spell of prosperity, and the company's shares at the moment (1917) are quoted at a tolerably high premium. The Government is paid about Rs. 75,000 annually by way of excise duty, and the monthly wages account for the two hundred or more hands employed reaches a total of Rs. 60,000.

A novel feature in connection with the management of the mills has been provided by the directors in the shape of a mess for about forty clerks, who are given a free dinner daily. The bill for stores for the mills runs up to nearly Rs. 50,000 a month.

The capital of the company consists of Rs. 15,00,000, divided into 6,000 shares, each of Rs. 250, all of which are fully paid up. The agents of the company, Messrs. Khattau Makanji & Co., are paid 10 per cent. upon the annual profits, in addition to a monthly remuneration of Rs. 1,000.

The secretary of the company is Mr. K. M. Cooper.

THE KHATTAU MAKANJI SPINNING AND WEAVING COMPANY, LTD.

The firm of Messrs. Khattau Makanji & Co. have been agents for the above-named company since it was formed, in the year 1874, by the late Mr. Khattau Makanji.

The authorized capital was originally Rs. 10,00,000, made up of 1,000 shares of Rs. 1,000 each, but within two years of the inception of the company nearly Rs. 8,00,000 were subscribed, and at the present time the amount paid up is Rs. 9,95,000.

The mills were designed at first for spinning, and there were formerly about 20,800 spindles, but in less than a year 304 looms had been added. Spinning was proceeded with uneventfully until the year 1885, when the late Mr. Gordhandas Khattau, who had become a director, instituted a more vigorous policy, making further additions to both machinery and plant. The increases as regards the latter consisted of: 5,000 spindles in 1886; 4,500 spindles in 1889; 83 looms in 1892; 138 looms and 3,000 spindles in 1894; and 152 looms in 1905; while at the present time the mills contain 942 looms and 44,284 spindles. About 300 of these looms are fixed in a separate newly erected shed, and they are driven by a 500 h.p. Deisel oil engine, while the remainder of the machinery, which is in the main building, is driven by steam power given by a 1,300 h.p. engine served by five boilers, four of which are always in use. This engine (by Musgrave & Co.) is on the quadruple vertical principle, with high and low pressure, and it is the only one of its kind in Bombay mills.

About 850 bales of raw cotton are consumed monthly, and that material is made into different "counts" of yarn, ranging from sixes to forties, which are woven into various qualities of cloth, such as long cloths, or white shirtings, twills, figured and striped cloths and *dhotis*, together with dyed cloth of different kinds. The greater portion of the spun yarn is used in the mills, and a small surplus quantity, consisting of coarse "counts," is disposed of locally.

The company have their own bleaching and dyeing works, which were started in 1901 by the late Mr. Gordhandas Khattau, and it may be added that they were the first of their kind to be erected in the whole of India.

The mills are situated in the Haines Road, Byculla, Bombay, and were erected upon land which in 1874 covered an area of 10,392 square yards; there were added 4,474 square yards of adjoining ground in 1887; 5,932 square yards, also adjacent, were acquired from the municipality in 1900 for the bleaching and dyeing works; 6,782 square yards of other adjoining land were secured in 1911 for a new weaving shed; and in the present year (1917) an additional area of about 8,000 square yards has been purchased with the object of extending the bleaching and dyeing department, and of providing accommodation for a further supply of looms.

When Mr. Gordhandas Khattau became a director in the year 1885 the funds of the company consisted of about Rs. 2,75,000, and at his death in 1916 they had accumulated to Rs. 23,25,000. Surely an eloquent testimony to his conspicuous managing abilities!

Nearly two thousand hands are constantly employed in these mills.

Mr. B. L. Khokhani has been secretary of the company for the past five years.

KILLICK, NIXON & CO.

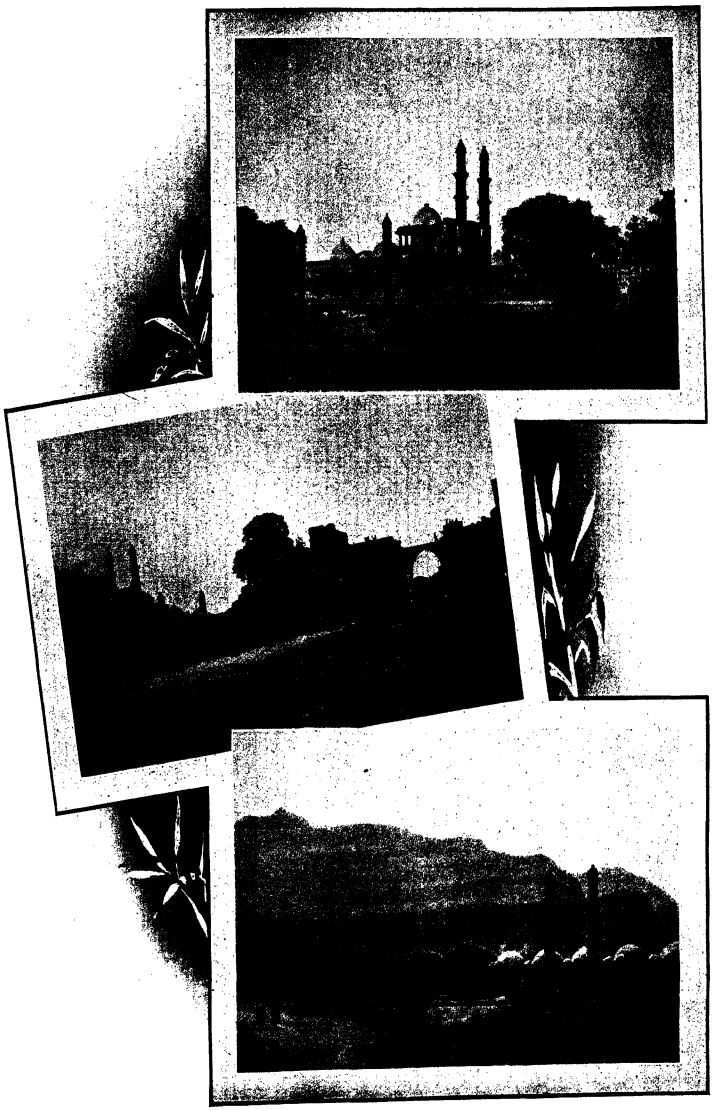
This firm, whose offices are situated in Killick Building, Home Street, Fort, Bombay, are interested in a very large number of business activities as general merchants, and company, shipping, and insurance agents. Their history dates from the year 1857, when Messrs. Charles Killick and Robert Preston Nixon established themselves as partners and laid the foundation of a huge commercial undertaking which has spread throughout India.

The firm took over the Bombay businesses of Messrs. Edward Lawrence & Co. in 1875, and of Messrs. Edward Bates & Sons in 1898.

Subsequent partners, after the original ones, included Messrs. William Nixon, admitted in 1873, R. B. Sedgwick in 1875, and F. A. Reddie in 1900, while the firm to-day (1917) consists of Mr. L. R. W. Forest and Sir Henry E. E. Procter, Kt. (in London), and Messrs. T. W. Birkett and H. P. Hebblethwaite, resident in Bombay.

The registered address of the following companies are at the offices of Messrs. Killick, Nixon & Co., for whom they are agents: The Tapti Valley Railway Company, Ltd., the Ahmedabad-Parantij Railway Company, Ltd., the Ahmedabad-Dholka Railway Company, Ltd., the Amritsar-Patti Railway Company, Ltd., the Central Provinces Railway Company, Ltd., the Guzerat Railways Company, Ltd., the Mandra-Bhon Railway Company, Ltd., the Sialkot-Narowal Railway Company, Ltd., the Central India Mining Company, Ltd., the Bombay Steam Navigation Company, Ltd., the Kohinoor Mills Company, Ltd., the Shivrajpur Syndicate, Ltd., the Ahmedabad Electricity Company, Ltd., the Hingir-Rampur Coal Company, Ltd., and the Bundi Hydraulic Lime and Cement Company, Ltd.

Ordinary agency business is transacted by the firm on behalf of the Sara-Serajganj Railway Company, Ltd., the Mymensingh-Bhairab Bazar Railways Company, Ltd., the "Knight," "Bedouin," "Harrison," "Bibby," "India," "Saint," Bates, and Ellerman (Hall and City) lines of steamers, the Callenders Cable and Construction Company, Ltd., the Boase Spinning Company, Ltd., Messrs. F. W. Heilgers & Co., of Calcutta, the Perrim Coal Company, Ltd., the Bengal Timber Trading Company, Ltd., the Yorkshire Insur-



KILLICK, NIXON & CO. (GUZERAT RAILWAY COMPANY, LTD.).

VIEWS TAKEN AT PAVAGARH, GUZERAT RAILWAYS.

ance Company, Ltd., the British and Foreign Insurance Company, Ltd., the Sea Insurance Company, Ltd., the British Traders Insurance Company, Ltd., and the Tokio Marine Insurance Company, Ltd.

The corresponding firms of Messrs. Killick, Nixon & Co. are Messrs. Nixon, Forrest & Co., London; Messrs. Edward Lawrence & Co., of London and Liverpool; and their own personal representatives at Calcutta and Mormugao.

Some particulars may now be given of the working of a few of the above-mentioned concerns.

The Tapti Valley Railway Company, Ltd., was promoted by Messrs. Killick, Nixon & Co. in the year 1895, and the line, 155½ miles in length, and with gauge of 5 feet 6 inches, is laid along the Tapti Valley in the Bombay Presidency. Construction work was undertaken by the Secretary of State and entrusted by him to the Bombay-Baroda and Central India Railway Company, and the railway connects the port of Surat, on the Arabian Sea, with the fertile plains of Khandesh and other districts in which cotton is extensively grown, and where a considerable number of ginning and pressing factories have been built. The section is worked by the Bombay-Baroda and Central India Railway Company on behalf of the Tapti Valley Company, on rebate terms for 44 per cent. of the gross earnings, and this charge covers the use of rolling stock and the efficient maintenance of the railway property. The total capital amount expended prior to the close of the year 1910 was Rs. 1,32,10,382.

The Ahmedabad-Parantij Railway Company, Ltd., was registered on January 6, 1897, with an authorized capital of Rs. 25,00,000, and its Articles of Association provided for the construction of a 3 ft. 3⅜ inch gauge line about 54 miles in length, connecting Parantij, Talod, and other places in the rich district of Guzerat with the important city of Ahmedabad. The building of the line by the Bombay-Baroda and Central India Railway Company was sanctioned by the Imperial Government, and contracts entered into between the Secretary of State and the last-named company include clauses for the management, maintenance, and working of the line. This section was subsequently extended from Idar Road station to Khed Brahma, a distance of 34 miles, which latter section was opened for traffic on July 1, 1911. All rolling stock is provided by the Bombay-Baroda and Central India Railway Company, and the cost of this, including working and maintenance expenses to the Ahmedabad Parantij Railway Company, is not to exceed 44 per cent. of the gross earnings. The total capital expended to the present time is Rs. 37,20,546.

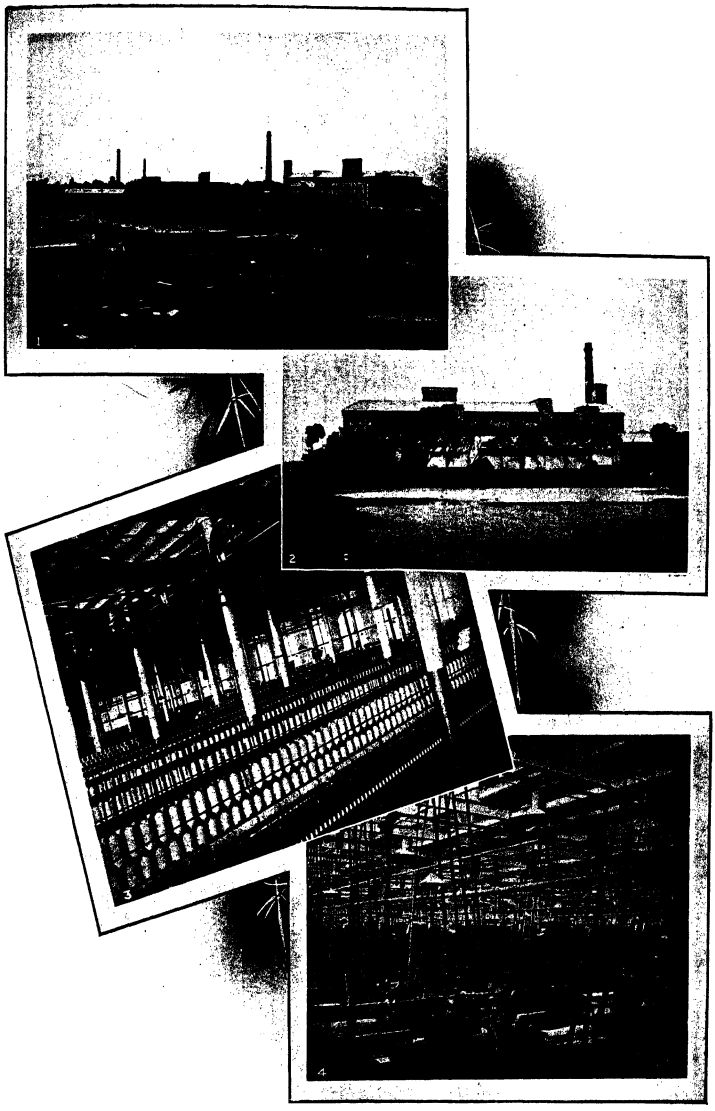
The Ahmedabad-Dholka Railway Company, Ltd.: The line belonging to this company, nearly 34 miles in length, commences at Sabarmati, a station on the Rajputana-Malwa railway, and connects Dholka, a town of about 15,000 inhabitants, in the district of Ahmedabad, with the city of Ahmedabad itself, and its construction was undertaken by the Secretary of State, through the offices of the Bombay-Baroda and Central India Railway Company. The company was registered in July 1901 with a capital of Rs. 13,00,000, and the line was opened for traffic in April 1903. The sum of Rs. 11,47,443 has been expended in constructional and other works, and the earnings of the company, less the deduction of 44 per cent. to meet the charges of the Bombay-Baroda and Central India Railway Company, usually permit of a dividend of over 5 per cent.

The Amritsar-Patti Railway Company, Ltd., was registered by Messrs. Killick, Nixon & Co. in the year 1905 with an authorized capital of Rs. 34,00,000. The line commences at Amritsar, a large city of nearly 153,000 inhabitants, situated in the Lahore division of the Punjab, and passes through Tarn Taran, noted for its beautiful Sikh temple, to Kasur, a junction station on the Ferozepore branch of the North-Western Railway system. The total length of the line is about 54 miles, and it bisects an exceedingly fertile district which has a population numbering about five hundred persons to the square mile. These facts are sufficient to account for the recent payment of a dividend at the rate of 8 per cent. per annum, after deducting 45 per cent. of the gross earnings for the working and maintenance expenses of the North-Western Railway system.

The Central Provinces Railways Company, Ltd., was formed in the year 1910 for the construction of two feeder lines in the Central Provinces, from Murtajapur, on the Great Indian Peninsula Railway system, to Ellichpur, a distance of 47½ miles, and to Yeotmal, a distance of 70 miles. The company was promoted by Messrs. Killick, Nixon & Co., and they, and the directors who were subsequently appointed, had great confidence in the future of the two proposed branches, seeing that they would pass through districts which were practically wholly cultivated, and which yielded excellent returns of cotton, oil seeds of various kinds, and other produce. In addition to the goods traffic, which was expected to be considerable, the large population of the area concerned augured well for the carriage of a large number of passengers. The two lines were constructed on the 2 feet 6 inch gauge by the Great Indian Peninsula Railway Company on behalf of the Central Provinces Railway Company, and they were opened respectively in the years 1913 and 1915. The latter company is at the present time carrying out the construction, through the Great Indian Peninsula Railway Company, of a branch from Pulgaon to Arvi, and a proposition has been made to extend the lines from Yeotmal, via Pisgaon, to Wun, about 70 miles; from Darwha to Pusad, 32 miles; and from Ellichpur to Chandur Bazar, a distance of 20 miles. The working of the already constructed as well as of the prospective line has been undertaken by the Great Indian Peninsula Railway Company, they receiving 45 per cent. of the gross earnings. The capital of the Central Provinces Railway Company is Rs. 1,00,00,000, and the amount expended to date is Rs. 71,96,276.

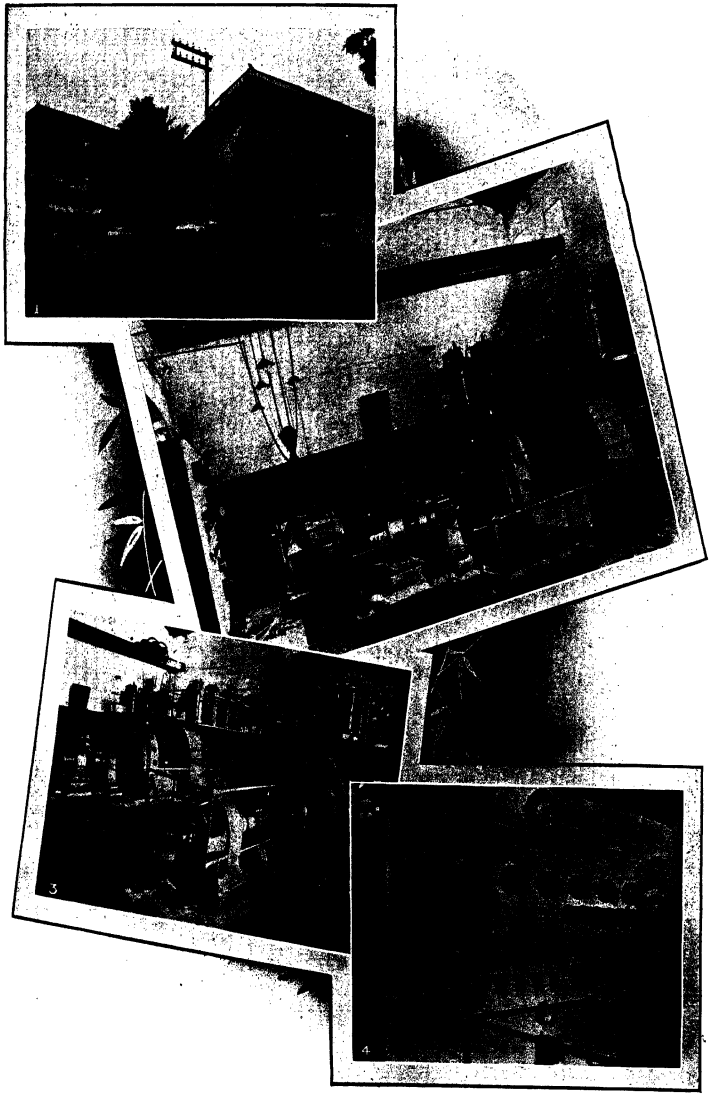
The Guzerat Railways Company, Ltd., registered in 1911 by the promoters, Messrs. Killick, Nixon & Co., with an authorized capital of Rs. 50,00,000, are owners and are responsible for the working of the following 2 ft. 6 inch gauge lines, namely: Nadiad to Kapadvanj, 28 miles, opened in 1913; Godhra to Lunavada, 25½ miles, opened in 1914; Champaner Road to Shivrajpur, 17 miles, opened in 1911; and Shivrajpur to Pani, 12 miles, opened in March 1917. The Champaner-Shivrajpur railway was purchased from the Shivrajpur Syndicate, Ltd., but the remaining three sections were constructed by the Guzerat Railways Company. Rebate terms on the working of all these lines are granted by the Government of India. It is now proposed to make the following extensions, namely: Kapadvanj to Modasa, Lunavada to South Rampur, Modasa to Meghraj, and from Thasra to Virpur. The outlay to the present date amounts to Rs. 41,64,657.

The Mandra-Bhon Railway Company, Ltd., are owners of a 5 feet 6 inch gauge line, about 46 miles in length, between Mandra and Bhon, but it is worked by the North-Western Railway Company on behalf of the branch company on rebate terms for the percentage of working expenses ruling



KILLICK, NIXON & CO., (KOH-I-NOOR MILLS COMPANY, LTD.).

1. Exterior View of Mills. 2. Another View from Kingsway. 3. Spinning Room. 4. Weaving Shed.



AHMEDABAD ELECTRICITY COMPANY, LTD. (KILLICK, NIXON & CO.).

1. Exterior View, Central Station and Office. 2. Interior, Central Station. 3. Mirrlees Diesel Engines and Crompton's Alternators. 4. Switch board, Central Station.

with that company with a maximum of 50 per cent. of the gross earnings. The railway was built by the North-Western Company, who provide engines and other rolling stock. The line was opened for public traffic in 1916.

The Sialkot-Narowal Railway Company, Ltd., was promoted by Messrs. Killick, Nixon & Co. in the year 1914, and its system extends from Sialkot, a large cantonment and civil station in the Lahore division of the Punjab, for a distance of 38 miles to Narowal in the district of Sialkot. The North-Western Railway Company constructed the line on the 5 feet 6 inch gauge, and they are under agreement to provide all rolling stock and to be responsible for working upon rebate terms not exceeding 50 per cent. of gross earnings. The Sialkot Company have an authorized capital of Rs. 35,00,000. It is proposed to extend the line in the near future to Shahdara (Lahore).

The Sara-Serajganj Railway Company, Ltd., was founded in the year 1913 by Messrs. Killick, Nixon & Co. in conjunction with Messrs. Gillanders, Arbuthnot & Co., of Calcutta. The line is laid from Ishurdi, a junction on the Eastern Bengal Railway, to Serajganj, a distance of about 50 miles, and it has opened up a large agricultural and commercial area by providing through communication with the chief city in Bengal. The railway was constructed on the 5 feet 6 inch gauge by the Eastern Bengal Railway Company, who furnish all requisite rolling stock and receive in return a percentage, not exceeding fifty, upon gross earnings.

The Mymensigh-Bhairab Bazar Railway Company, Ltd., was formed in the year 1915 by Messrs. Killick, Nixon & Co., jointly with Messrs. Gillanders, Arbuthnot & Co., of Calcutta, with the view of constructing three branch railways in the districts of Mymensingh and Tippera in the Presidency of Bengal. The lines are now being built by the Mymensingh-Bhairab Company, on the 3 feet $3\frac{3}{8}$ inches gauge, and it is confidently expected that they will be opened for traffic in the year 1918. The proposed sections are: Mymensingh via Gouripur to Bhairab Bazar, a distance of about 72 miles; Gouripur via Shamganj to Bagmara, about $30\frac{1}{2}$ miles; and Shamganj to Netrakona, about 11 miles. These will be worked by the Assam-Bengal Railway Company, partly on rebate and partly on guarantee terms for the percentage of working expenses ruling on that company's system, but subject to a maximum of 50 per cent. of the gross earnings.

The Bombay Steam Navigation Company, Ltd., was formed in 1900 and purchased from Haji Ismail Hassan the well-known coasting steam trading concern known as "Shepherds," which was established by Mr. J. A. Shepherd, of Bombay. The whole fleet of vessels was transferred to the company, but the directors have expended a very considerable amount of money in increasing the number of their ships and in making certain improvements which have tended to give greater facilities for transfer of either passengers or cargo.

Mail services are maintained by the Company on the Konkan coast throughout the fair-weather season, the ships calling at all ports between Bombay and Panjim, and cargo boats ply regularly between Bombay and Mangalore, Bhavnagar, the Gulf of Cutch, Kathiawar, and Karachi. Goods are booked through, in either direction, between stations on the Madras and Southern Mahratta and the Kathiawar Railway Company, and a mail service is also maintained throughout the year between Rozi and Tuna. The company have a fleet of launches which visit the principal creeks on the Konkan coast, and they have also the control of a harbour ferry service in Bombay. The company was initiated by Messrs. Killick, Nixon & Co., and the authorized capital is Rs. 60,00,000.

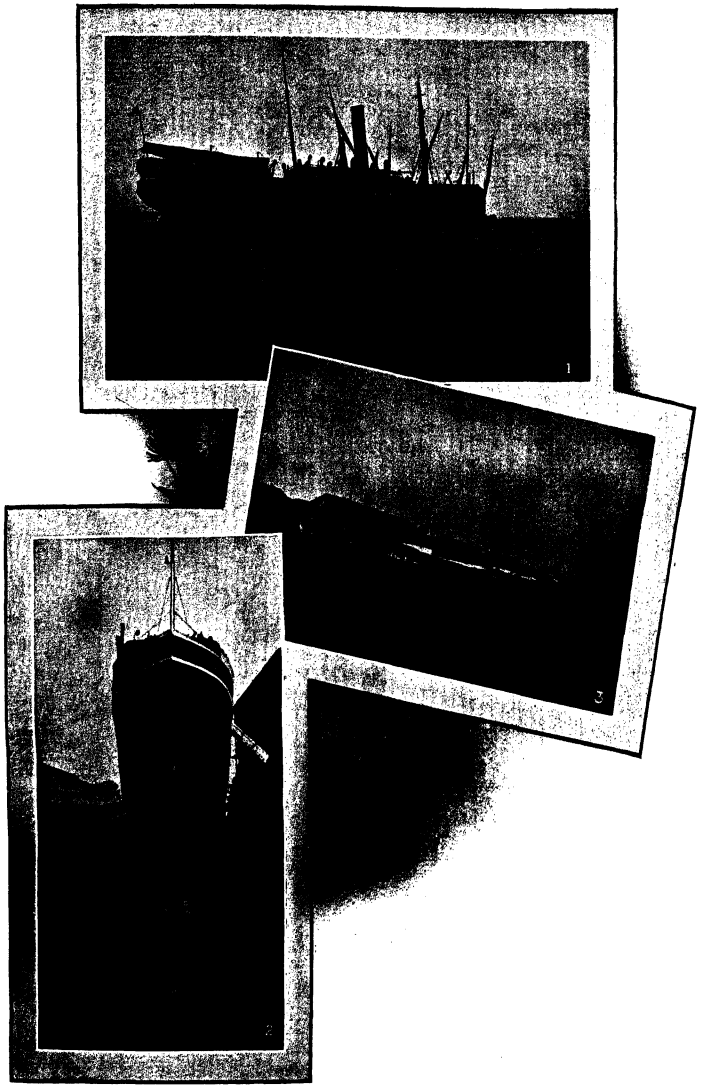
The Hingir-Rampur Coal Company, Ltd., was formed for the purpose of exploiting mineral concessions in the Hingir zemindary in Gangpur, one of the Feudatory States of Orissa, and also with the view of opening a coal-field in the district of Sambalpur in the province of Behar and Orissa. Two pits have been sunk, and they are now yielding about 60,000 tons annually. The colliery is connected by a short siding with the main line of the Bengal-Nagpur Railway Company, who are purchasers of a proportion of the output, and there is a brisk demand for the coal for consumption in mills and presses in the Central Provinces, and in the districts of Berar and Ahmedabad. The company have an authorized capital of Rs. 5,00,000.

The Ahmedabad Electricity Company, Ltd.: It may seem somewhat strange when one reads that, not more than two years ago, Ahmedabad, one of the most picturesque and at the same time most interesting cities in India, had not been provided with electricity for lighting and other purposes. An opportune time for action, however, presented itself in the year 1913, when Messrs. Killick, Nixon & Co. floated the Ahmedabad Electricity Company, Ltd., with an authorized capital of Rs. 7,50,000. The prospectus stated that the object of the company was to supply electric energy for lighting, fans, and power for machinery in the city of Ahmedabad. The generating station, situated in Shapur Road, is thoroughly up to date in all respects, and it contains three Mirlees-Diesel internal combustion oil engines of 150 b.h.p., which supply current on the three-phase alternating system. The station was erected, and all plant and mains were provided, by Callender's Cable and Construction Company, Ltd., of London and Bombay, contractors, on behalf of the Ahmedabad Electricity Company, Ltd. The municipal authorities of the city have adopted electricity for the lighting of streets, and all the principal thoroughfares are now illuminated by this means. Current is sold to consumers at a maximum rate of six annas per unit for lights and fans and two annas per unit for motive power. The supply was first given to the public on February 1, 1915.

The Kohinoor Mills Company, Ltd., was formed in July 1890 with an authorized capital of Rs. 20,00,000. The directors are the Hon. T. W. Birkett (chairman), Mr. H. P. Hebblethwaite, Sir Sassoon J. D. David, Bart., and Messrs. Purshotamdas Thakordas, H. A. H. Payne, and Ramdass Narandas. The company proposed to erect a cotton spinning mill with 30,000 spindles, and to call for capital up to Rs. 14,00,000, but after some preliminary work had been carried out the capital was increased to Rs. 16,00,000. In 1907 the directors decided to commence weaving, and they accordingly constructed a suitable shed and equipped it with preparatory machinery for 750 looms, the capital at the same time being augmented by a sum of Rs. 2,58,000, making a total of Rs. 18,58,000. The first loom was started in January 1910, and in May 1913 an addition of 250 looms was made. In the year 1909 the directors purchased for Rs. 4,00,000 the property of the Maigam mill, which had been partially destroyed by fire. The work of reconstruction was not completed until 1912, when plant consisting of 484 looms and 18,000 ring spindles was installed. This latter mill is driven by electric power obtained from the Tata Electric Power Supply Company,

THE BUNDI HYDRAULIC LIME AND CEMENT COMPANY, LTD (KILLICK, NIXON & CO).

1. General View of "BBB" Portland Cement Works 2 General View looking West. 3 General View of Quarry



BOMBAY STEAM NAVIGATION COMPANY, LTD.

1. S.S. *Sairunji.* 2. S.S. *Sabawali* ON THE PATENT SLIP, MAZAGON. 3. FERRY STEAMERS AT ALEXANDRA DOCKS.

Ltd., and started working in March 1915. Debentures to the amount of Rs. 10,00,000, bearing interest at 5 per cent. per annum, and repayable in ten years, were issued by the company in 1912. The total value of the company's properties is estimated at Rs. 50,00,000; a sum of Rs. 16,00,000 has been written off for depreciation; the reserve fund stands at Rs. 6,50,000; and an average annual dividend of 7 per cent. per annum has been paid.

The Central India Mining Company, Ltd.

The mining of manganese ore in India commenced about twenty-five years ago in the Province of Madras, when the production did not reach a total of 700 tons, but in the year 1900, when the rich deposits in the Central Provinces were discovered, the annual output increased at a very rapid rate, the quantity obtained in the year 1913 being no less than 637,391 tons.

The Central India Mining Company, Ltd., was promoted by Messrs. Killick, Nixon & Co. for the purpose of acquiring from a syndicate a number of manganese-bearing properties in the Central Provinces, together with a tramway connecting the mines in the district of Tharsa with the station of that name on the Bengal-Nagpur railway system. The company subsequently laid some 50 miles of tramway lines in the district of Bhandar in order to serve their own and other mines, and this undertaking proved such an important factor in the development of the industry that it was acquired by the Bengal-Nagpur Railway Company in 1916.

There is an average annual output from the company's mines of 70,000 tons of high-grade ore, which ranges from 50 to 54 per cent. of the metal.

The authorized capital of the company is Rs. 5,00,000.

The Shivrajpur Syndicate, Ltd.

Messrs. Cory Brothers & Co., the famous coalowners of London, Cardiff, and Bombay, established this syndicate in the year 1905 in order to acquire an extensive manganese mine at Shivrajpur, in the district of Panch Mahals, in the Central Provinces, but the managing agency was in 1909 transferred to Messrs. Killick, Nixon & Co.

The deposits now being worked cover a very large area of land, and the average annual raisings amount to about 30,000 tons of ore of first-class quality. Adjoining deposits, owned by the Bamankua Manganese Company, Ltd., have been mined on royalty terms by the Shivrajpur Syndicate, Ltd., since the year 1914. A light railway was constructed between the years 1909 and 1911, connecting the Shivrajpur mine with Champaner Road station on the Bombay-Baroda and Central India Railway system, mainly for the carriage of ore but also in order to meet the demands upon traffic caused by the journeying of pilgrims to the city of Champaner, the ancient capital of Guzerat, and to the neighbouring Pavagad Hill. The ownership of this line has been transferred to the Guzerat Railways Company, Ltd.

The authorized capital of the Shivrajpur Syndicate, Ltd., is Rs. 5,00,000.

The Bundi Hydraulic Lime and Cement Company, Ltd.

This company in the year 1913 acquired from a syndicate of vendors their leasehold rights over a valuable cement-stone deposit at Lakhiri in the State of Bundi in Rajputana, together with the experimental plant erected by them. The limestones in the area worked by the company are probably unique in their suitability for the production of hydraulic lime and for Portland cement of the finest quality. The hydraulic lime closely resembles the blue lias lime of Lyme Regis, in England.

The kilns have a capacity of 1,500 tons per month. This lime is being almost exclusively used in the construction of the new Imperial city of Delhi.

Portland cement is manufactured on the rotary kiln system. The whole of the plant, which has a capacity of from 500 to 600 tons per week, is electrically driven, and is of the most up-to-date description.

The Portland cement known by the brand of "B.B.B." is rapidly acquiring the reputation of being absolutely the best obtainable.

The company was initiated by Messrs. Killick, Nixon & Co., and the authorized capital amounts to Rs. 10,00,000.

KURWA AND KAJIJI.

This is the oldest firm in Bombay carrying on business as ship-chandlers, ironmongers, and contractors, importers and dealers in stores and tools of every description for engineers, builders, contractors, and others, and of marine and railway stores. The establishment was founded about a century ago, and for the past fifty years trading has been carried on under the style and name of Messrs. Kurwa and Kajiji in huge six-storied premises at 356-358 Abdul Rehman Street, together with several other godowns, which are the partners' own properties. The present partners are sons of Messrs. Kurwa and Kajiji (the original proprietors retired a few years ago), who conduct the business entirely on their own account.

All of the principals connected with the firm since its inception have been shrewd men of business, and they have displayed such energy and skill in management that the concern is to-day recognized, not only as the oldest of its kind in the city, but also as one of the leading ones. Their success is due to their reputation and also to the fact that the firm advertise largely in local daily and other newspapers, and that they have for many years past published wall calendars and a handy *vade mecum* which their patrons can use as a pocket memorandum card.

It would be next to impossible to enumerate a tithe of the goods which are continually being imported, but a visit to the extensive premises reveals a heterogeneous collection of constructional and railway stores for engineers and ships, ranging from an anchor to a needle, and for every branch of railway and public works department engineering works. A large stock is also kept of paints, oils, varnishes, and colours made by well-known English makers.

This firm also maintain large stocks of Siemen's patent water meters and water works requirements.

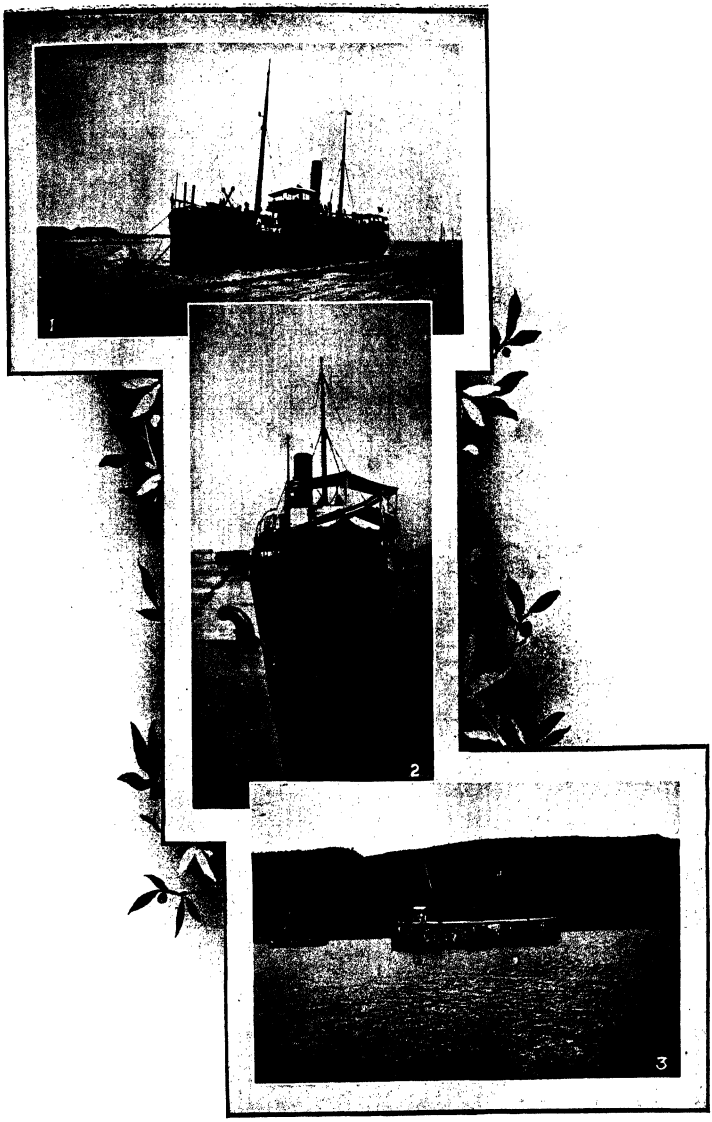
Messrs. Kurwa and Kajiji have for the past fifty years or more executed work for and supplied stores to several Government departments.

JOHN LEMONJIAN & CO.

The manufacture of jewellery in chaste designs is an art of great antiquity in India, but in recent years many of the most observant men engaged in this skilled work have to some extent adapted their productions to conform with Western ideas, although they have as far as possible retained the distinctive characteristics of the East.

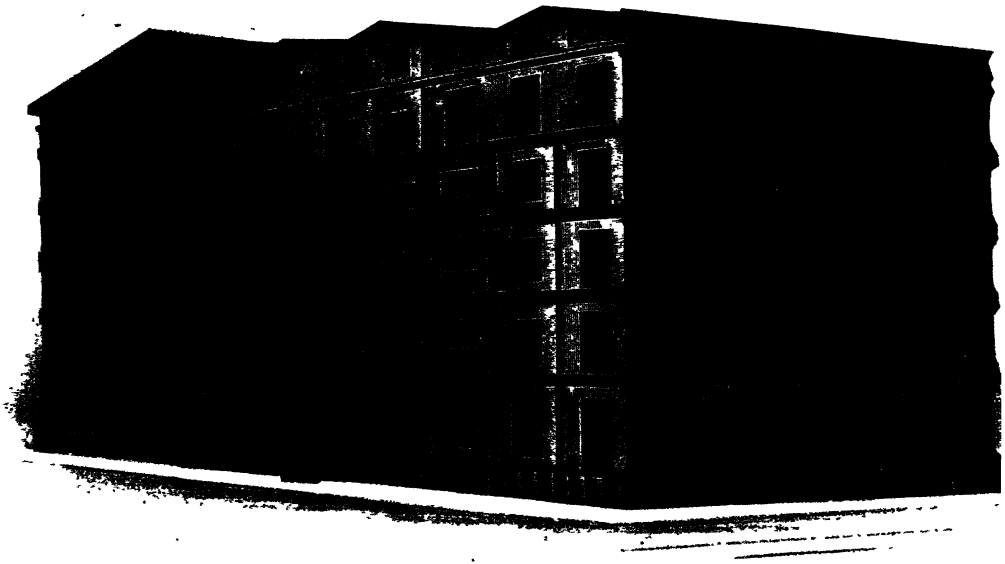
This modification in procedure is illustrated by the well-known firm of Messrs. John Lemonjian & Co., of 36-8 and 47-9, Medows Street, Fort, Bombay.

The founder, Mr. John Lemonjian, commenced business as a manufacturing jeweller in the year 1907, and he manifested such skill in his work that he



BOMBAY STEAM NAVIGATION COMPANY, LTD.

1. S.S. *Sahemati* AT BHAVNAGAR. 2. S.S. *Satyavati* IN ALEXANDRA DOCK (GOA MAIL SERVICE). 3. S.S. *Ambalika* (SHASTRI RIVER SERVICE).



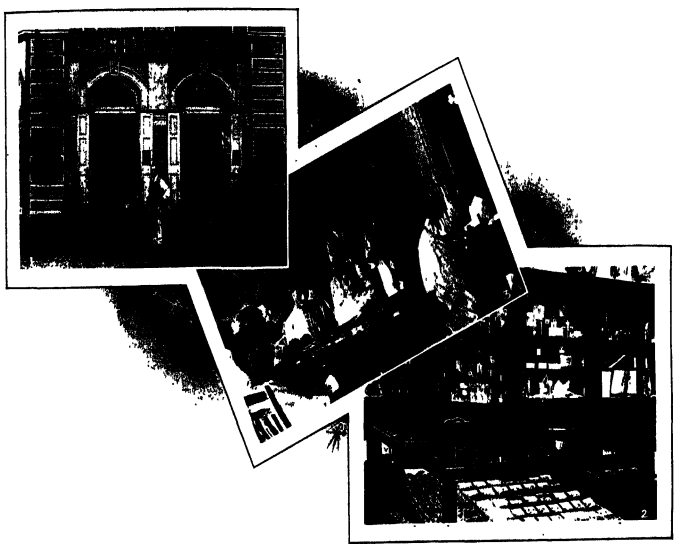
KURWA AND KAJIJI.

PREMISES OF MESSRS KURWA AND KAJIJI.

gained the confidence of the public to such an extent that ten years later he extended his operations by opening a showroom, the whole undertaking being thenceforward carried on under the name of John Lemonjian & Co. The enormous strain upon the financial resources of both public and private individuals owing to the Great War has acted as a deterrent to the expenditure of money in luxuries such as jewellery, but the firm relied upon the quality of the work performed in their shops, and their confidence has been fully justified by a still further growth in their returns. They have recently commenced the importation of all kinds of jewellery manufactured by leading English firms, and this branch, too, has been supported in a most satisfactory manner.

Messrs. John Lemonjian & Co. are now recognized goldsmiths, dealers in precious stones and art designers of the latest fashionable Parisian models. They always keep a large stock of rings, necklaces, pendants, Indian silver ware, and other articles of first-class quality and in the most finished style of workmanship. A special feature is made of enamelling, platinum work, and mill-grain settings, for which there is a vastly increasing demand, and it may be added that there are few reliable exponents of this art in India.

Messrs. Lemonjian & Co. are assiduous in their endeavours to conform faithfully with designs submitted by their patrons, and they are most painstaking in their efforts to maintain the high reputation which by strict attention to orders and unfailing courtesy to customers they have secured for themselves. The expansion of trade and the rapidly increasing support of the public since the founding of this firm in Bombay have induced Messrs. Lemonjian & Co. to admit Mr. S. K. Malcolm as a working partner in the business.



LEMONJIAN & CO.

1. Exterior of Showroom. 2. Interior of Showroom. 3. Workshops.

THE LONDON AEROGRAPH PRINTING WORKS

These works, situated at "Aerograph" Building, 36 Charni Road, Girgaon, Bombay, were founded in 1914 by Mr. M. L. Pedneker, who is now managing partner in the firm of Messrs. M. Peny & Co., the present proprietors. The premises are exceedingly well equipped with a large stock of machinery and plant, the greater portion of which has been recently purchased from leading manufacturers in England and America.

Artistic and general calico (cotton) printing is executed by experienced hands, under the able supervision of Mr. Pedneker.

Messrs. Peny & Co. are also carrying on an extensive business as engineers and contractors, and they are constantly importing machinery suitable for mills and factories, and for agricultural and constructional purposes.

Mr. Pedneker is specially qualified for the management of this department, as he recently made a lengthy tour in Europe, visiting foundries, factories, and stores in a number of the principal centres, and by personal interviews with iron and steel magnates he derived a vast amount of information in engineering matters which enables the firm to meet all requirements of their steadily increasing number of customers.

The firm are sole agents in India for the Aerograph Company, Ltd., of London, and Durvite (1909), Ltd., (London), and their telegraphic address is "Aerograph," Bombay.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

MACBETH BROS. & CO., LTD.

For particulars as to the formation of the business which at the present time is carried on in Bombay and elsewhere by Messrs. Macbeth Brothers & Co., Ltd., it is necessary to revert to about the year 1883, when the late Mr. J. B. K. Macbeth arrived in Bombay as the representative of Messrs. J. and E. Wood, of Bolton, England, to supervise the erection of certain machinery at the time when the cotton-milling industry was being started in that city.

On the completion of his work Mr. Macbeth established himself in Bombay as a consulting engineer, and he also secured agencies for several leading English engineers and manufacturers of machinery. His elder brother, Mr. Norman Macbeth, joined him in partnership shortly afterwards, the firm being styled Macbeth Brothers & Co., and offices were opened in Tamarind Lane. The name of Macbeth had by that time become famous in connection with general engineering, but particularly with regard to machinery and other appliances for the fitting of cotton-spinning, ginning, and weaving mills.

The jute industry about the year 1875 suffered a serious blow on account of the building of too many mills, and by reason of wild speculations in connection with the establishment of companies formed by persons who were ignorant of the trade and its requirements, and who were simply "out to make money"; but a revival followed a few years later, and Messrs. Macbeth Brothers & Co., ever in the forefront in the development of legitimate business, opened a branch office in Calcutta in 1895 with the view of keeping in touch with the mills, all of which are situated on the banks of the Hooghly within a short distance from the premier city in Bengal. The company has recently moved into new offices in Hare Street in the same city.

Mr. Newman Taylor joined the firm in 1903, becoming a partner four years later, and the offices in Bombay were about that time removed to the present address in Standard Buildings, Hornby Road, Fort.

Mr. Norman Macbeth retired from business in 1913, Mr. J. B. K. Macbeth taking over his brother's interest in the business, but the latter unfortunately lived for only a short time afterwards, his death occurring on December 9, 1914.

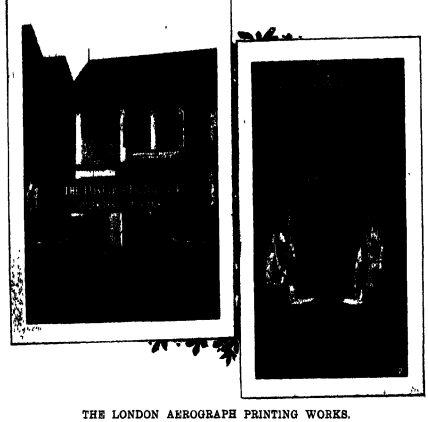
Family reasons then rendered it advisable that the business should be turned into a private limited liability company, and this was accordingly done on January 1, 1916, the directors being Mr. Newman Taylor (chairman), and Messrs. N. Bruce Macbeth, E. H. Cutbill, and Mr. W. Roberts.

The original firm, and the company following them, have made a special feature of obtaining agencies for leading manufacturers of engineering machinery and plant, and of other goods used in connection therewith, and they are now representatives in India for the following: Messrs. Mather and Platt, Ltd., of London and Manchester, for the "Grinnell" automatic sprinkler, the "Vortex" humidifier, cast-iron tanks, filters, and other goods; Messrs. Thomas Robinson & Sons, Ltd., of Rochdale, for flour-milling and woodworking machinery; Bell's United Asbestos Company, Ltd., London, for asbestos goods of all kinds; Messrs. Samuel Osborn & Co., Ltd., of Sheffield, for high-speed steel and drills; Messrs. George Turton and Platts & Co., Ltd., of Sheffield, for springs of various descriptions, and for railway specialities; Messrs. Mirlees, Pickerton and Day, Ltd., of Stockport, for Diesel oil engines; Messrs. Fullerton, Hodgart and Barclay, Ltd., of Paisley, for large mill engines and hydraulic machinery; the Unbreakable Pulley and Mills Gearing Co., Ltd., of London and Manchester, for all kinds of mill gearing; Messrs. Samuel Law & Sons, Ltd., of Cleckheaton, for card clothing; the Magnolia Antifriction Metal Company of Great Britain, Ltd., London, for white metal; the Delta Metal Company, Ltd., of London, for bronze goods; Messrs. Leyland Motors, Ltd., of Leyland, Lancashire, for commercial vehicles; the International Harvester Corporation, Ltd., of Chicago, U.S.A., for agricultural machinery; the National Roofing Company, Ltd., of Tonawanda, New York, for "Security" roofing materials; and the Empire Fence Export Company, Ltd., of Walkerville, Canada, for "Empire" fencing materials; together with other smaller agencies for a number of smaller concerns.

In Bombay and Calcutta the company carry large stocks of goods manufactured by the companies and firms whom they represent, which comprise all kinds of stores used by cotton, woollen, jute, flour, oil, and other mills, as well as railways, public works departments, municipalities, and various other industrial establishments, particular attention being devoted to the requirements of railways, military and naval departments, municipalities, and public works.

They have their own plant (all under European supervision) for grinding and fluting rolls for flour and oil-milling machinery, and a special plant for mounting flats for carding engines.

As engineers and contractors the company undertake to erect and equip mills



THE LONDON AEROGRAPH PRINTING WORKS.

1. Printing Works. 2. Shop at 24, Bhulishwar, Bombay.

MACBETH BROS. & CO., LTD.

1. Head Office, Standard Buildings, Bombay. 2. Warehouse and Workshops. 3. Fluting Department. 4. Card Clothing Department.

or factories for any purpose that may be required.

All European assistants, whether in Bombay or Calcutta, are fully qualified engineers.

The London agents of the company are Messrs. Macbeth, Taylor & Co., Ltd., of 57 Bishopsgate, E.C., the directors of this company being Mr. A. C. Adams (chairman), and Messrs. Newman Taylor, H. C. Begg, and H. Woolley.

JAMES MACKINTOSH & CO.

One of the oldest shipping houses in the Port of Bombay is that of Messrs. James Mackintosh & Co., of 17, 18, 19 Elphinstone Circle. The firm was established in the early portion of the nineteenth century by a Mr. Blay, who was shortly afterwards joined in partnership by Mr. James Mackintosh, the style of the firm then being Messrs. Blay and Mackintosh.

Mr. Blay retired about 1850, and Mr. Mackintosh continued on his own account for some years until Mr. Chubildas Lulloobhoy, and subsequently Mr. J. R. K. Johnson, were admitted into partnership, the firm being styled Messrs. James Mackintosh & Co.

In about 1887 Mr. Mackintosh died, and Mr. Kidd arrived in Bombay from England in the latter part of the year to assist in the management of the business, and on January 1, 1892, he became a partner of the firm.

In the year 1887 Mr. Johnson proceeded to London and opened the home office in Leadenhall Street, which was under his control until he retired in 1899, when Mr. Kidd took over charge, since when the London firm has remained under the control of Mr. Kidd, the present address being Bury Street Chambers, London, E.C.

Mr. F. Portlock, son of the late Mr. G. T. Portlock, for many years a director of the Clan Line, reached India in 1908 to take over the management of the Bombay office, and four years later he became a partner. Mr. Chubildas Lulloobhoy died in the year 1914, and since then the business has been owned and carried on by Mr. Kidd in London and by Mr. Portlock in Bombay.

The interests of Messrs. James Mackintosh & Co. are of a very diversified character, but they centralize in shipping matters, especially in the agency of steamers, and the firm are also chartering brokers, charterers of ships on their own account, dealers in produce consignments, agents for sale and purchase of vessels, and representatives of several leading protection and indemnity associations, chief amongst the last named being:—

The North of England Protecting and Indemnity Association, the West of England Steamship Owners Protecting and Indemnity Association, the Sunderland Steamship Protecting and Indemnity Association, the United Kingdom Mutual Steamship Assurance Association, Ltd., the London Steamship Owners Mutual Insurance Association, Ltd., the Neptune Steamship Protecting and Indemnity Association, the Standard Steamship Owners Protecting and Indemnity Association, Ltd., Assurance Foreingen Skuld, of Christiania.

The firm are secretaries and treasurers for Messrs. H. I. Dixon & Co., Ltd., proprietors of Dixon's Engineering Works, one of the leading companies engaged in repairing steamships in Bombay; they are also secretaries, treasurers, and agents for the Baroda Tramway Company, Ltd.

The telegraphic addresses are "Mackintosh, Bombay," and "Dulal, London."

MADHAVDAS AMERSEY & CO.

The firm of Messrs. Madhavdas Amersey & Co., established in Bombay in the early fifties of last century, commenced operations as bankers and dealers in cotton, the greater portion of which was then delivered in the city in hand-pressed bales. Vigorous steps were taken to build up a connection with local milling companies, which were then being formed, and further, to open up business relationships in various parts of the world for the export of raw material and manufactured cotton goods.

Mr. Amersey Damoder, the founder of the firm, was joined in partnership by his son, Mr. Madhavdas Amersey, but on the death of the father, about twenty-five years ago, the surviving partner admitted his two sons, Messrs. Haridas and Manmohandas, into the business, and these three gentlemen now constitute the personnel of the firm.

The partners have witnessed the introduction of machinery for the baling, ginning, spinning, and weaving of cotton, but the rapid development of the cotton industry generally in India has not been more pronounced than the progress made by the firm now under notice. Messrs. Amersey & Co. control large transactions in the purchase of cotton in important commercial centres of the divisions of Berar and Kathiawar in the Central Provinces and the Bombay Presidency, and they have also erected gins and presses and established branch banking establishments in the same districts.

Since the year 1894 the firm have held an appointment from Messrs. Khattau Makanji & Co. to supply, weigh and sample raw cotton to be consumed in the mills of the Khattau Makanji Spinning and Weaving Company, Ltd., and the Bombay United Spinning and Weaving Company, Ltd., and during that period they have also acted in a similar manner for other companies which have now ceased to exist.

Very large quantities of cotton are sold on commission, and the bales exported annually to markets in Europe and the Far East now exceed a hundred thousand in number.

An extensive trade is carried on at the firm's head offices at 59 Esplanade Road, Fort, Bombay, and at their branch at Bhuleshwar, the native portion of the same city, in locally manufactured yarn and piece goods, and also in cotton materials imported from Japan.

The firm have their own marts on Colaba Cotton Green, in Bombay, where many thousands of bales are disposed of annually, and their godowns at that place are large enough to meet all demands for storage and other purposes.

As a result of a visit by Mr. Manmohandas to the United States and Japan, Messrs. Amersey & Co. began to deal in pearls and other precious stones in the year 1915, and an increasing business is now being conducted with those countries, while connections already established in London and Paris will be considerably developed now that the war has terminated.

An extensive insurance business is carried on by the firm on their own account, and they also act as sales agents for the majority of the principal insurance companies in Western India.

Mr. Madhavdas Amersey exercises general control over the whole business, and a large staff of assistants is employed at Bombay and at all of the branches in Berar and Kathiawar, while Mr. P. B. Wadia has, for the past seven years, been manager of the Bombay offices.

M. T. MADON & CO.

There is only one shop in Bombay that is known and patronized by all its inhab-

JAMES MACKINTOSH & CO.

EXTERIOR OF OFFICES

itants, namely, the favourite "Corner Shop" of Messrs. M. T. Madon & Co., of 24 26 Abdul Rehman Street, near Crawford Market. Established for the last thirty-five years as chemists, druggists, and general merchants, Messrs. M. T. Madon & Co. have, by straightforward dealings and up-to-date methods won the general esteem of all their patrons, so much so that from all parts of India customers place every description of orders with them.

The founder of the firm was the late Mr. M. T. Madon, who carried on his business until his death in 1912, when his son, Mr. K. M. T. Madon, took charge, and has since then been conducting the business in a more progressive way.

Though the firm was started in 1882 with a capital of about Rs. 500, the growth of the business during these years was proportionately moderate, for the assets left by the founder at the time amounted to Rs. 82 000.

From 1912 to 1917 the growth of the business was so rapid and extensive that the premises had to be enlarged about five times, and yet the accommodation has proved inadequate. They have now opened as "cash chemists" at 172 Hornby Road, where they occupy a very attractive showroom which is about six times larger than the old premises, the original building and business being still carried on. This new office has been established not only for the purpose of securing more accommodation, but also to facilitate transactions with their customers residing in the Fort and its vicinity, and to save them a considerable amount of expense and worry with conveyances.

In addition to the usual stock held by them in Abdul Rehman Street, they are now selling provisions, wines, spirits, tobaccos, cigars, cigarettes, and sundry requisites. The prices compare favourably with those of any other chemist, and are the same as charged by them in the market. The goods are the very best obtainable, and it is more due to their quality than to their lower prices that their customers are permanent ones.

Mr. K. T. Madon had, just before taking charge of the business, completed his chemistry course at the Technical College, Bombay, intending forthwith to proceed to England to qualify by examination as a chemist and druggist, but unfortunately the loss of his father and the development of the business necessitated a postponement of the journey.

After the customary formalities in connection with administration of the former proprietor's estate had been duly complied with, Mr. Madon booked his passage for London, but was again doomed to disappointment due to the outbreak of the Great War. He is still determined, however, to carry out his original project, and hopes that at an early period he may be able to complete his studies in the Old Country and to secure such degrees and diplomas as may be open to him.

The firm deals largely in patent medicines, medical and surgical sundries, and toilet requisites, many of which have secured an exceedingly wide reputation. The dispensing department is under the supervision of a fully qualified and experienced chemist, only first-class drugs and other ingredients of absolute purity are used, and every prescription is carefully registered, thus ensuring that the instructions of medical men are followed accurately.

The firm holds contracts for the supply of necessities to various hospitals, municipalities, railways, and other companies, and have representative agents in nearly all the principal cities in India for the convenience of dealers. The mail order and local free-delivery departments are perfect, and letters, telephonic and telegraphic communications are dealt with promptly, carefully, and with attention to their details, and the parcel despatching department is so organized that there is hardly a complaint about it.

Messrs. M. T. Madon & Co. are agents in India for some of the leading chemical manufacturers of the world, including Messrs. the New York and London Drug Company, and the Tropical Pharmacal Company, both of New York, Les Establissements Byla of Gentilly, France; Messrs. Williams Alfred & Co., and the Quit Laboratories, both of London, and they are always open to take any good agencies in their line of business.

Patrons of the firm have an almost endless variety of medicinal and other goods to meet their requirements, and the prices charged are as low as can possibly be, consistent with purity of ingredients and skill in preparation, but Messrs. M. T. Madon & Co. generously offer special terms to wholesale customers, hospitals, nurses, dispensaries, medical practitioners, railway and municipal authorities, missionaries, and schools. Messrs. M. T. Madon & Co. have made arrangements with several of the leading doctors in Bombay whereby all their prescriptions are dispensed by the firm.

The business is conducted by Mr. M. T. Madon under the direct supervision of an European expert and general manager, assisted by a large staff of Europeans and Indians.

The telegraphic addresses are "Thoughts," Crawford Market, Bombay, and "Cash," Hornby Road, Bombay.

MADON, SONS & CO.

The sole proprietor of this firm is Mr. B. S. Madon, the original founder of the well-known house of Madon. He started business as a chemist and druggist in Bombay in 1872, taking others into partnership and trading under the name of M. B. Madon & Co., although he was the sole working partner. On the death of one of his colleagues in 1876 the firm was styled B. S. Madon & Co.

Those who can recall to memory the conditions of this trade prevailing in the early seventies of the last century in Bombay are not likely to forget the level to which it had been brought by native dealers by their jealous competition and by the almost exclusive monopoly of public confidence enjoyed by the few European firms, who made enormous profits by their high prices. The want of a pharmacy conducted on European lines, with moderate charges, and at the same time commanding the confidence of the public, was daily felt. With that commercial insight peculiar to his race, Mr. Madon realized the necessity, and he was the first Parsee who started on his own account the business of chemist and druggist on the principle of a modern European pharmacy. The business prospered beyond all expectations, and in 1885 Mr. Madon was led to join forces with a firm of booksellers named Cooper & Co. The two businesses were amalgamated into a joint-stock concern under the title of Cooper, Madon & Co., Ltd., with a capital of Rs. 3,00,000. Everything looked very promising for some time, and Mr. Madon proceeded to England with the view of further developing the business, but on his return he found that his expectations had not been fulfilled, and despite his efforts to remedy matters, the firm went into liquidation in 1889. As Mr. Madon was one of the principal shareholders, he was also one of the chief sufferers, losing nearly his "all" by the failure. But this did not cripple his spirit, as in the same year he made a fresh start

M. T. MADON & CO.

1. A Portion of the Showroom. 2. Exterior. 3. Unpacking Stores.

by putting certain proprietary medicines on the market under the name and style of the Popular Remedies Manufacturing Company. One of these medicines, called Squibb's Ague Specific, has achieved an immense success, commanding a ready sale in India, and in many parts beyond it, as a cure for malaria and other fevers.

The present title of the firm, namely, Madon, Sons & Co., was adopted when Mr. Madon again established himself as a chemist and druggist in 1890 at Hummum Street, in the Fort of Bombay. In 1901, however, he removed his place of business to its present address at 16 and 18 Abdool Rehman Street, near the Crawford Market in Bombay. He had to face a great deal of competition from several of his old assistants who had set up separate businesses of their own, in some instances with a name similar to his own. In 1911 Mr. Madon was compelled to sue an imitator of his famous preparation, Squibb's Ague Specific, in the High Court of Judicature at Pombay, and the issue was decided by Mr. Justice M. H. W. Hayward, I.C.S., in Mr. Madon's favour, his lordship remarking in the course of his judgment that "the sales and reputation of Squibb's Ague Specific are hardly denied even by the defendant's witnesses." Besides many medicinal specialities, the "Zarina" brand toilet preparations are also the property of the firm, who also hold sole proprietary rights or sole agencies for sale in India for many medicinal and toilet requisites of foreign manufacture, for which they have excellent facilities for introducing them to the public and to the trade. One other important feature of the firm's activities is that they have the services of a qualified medical man, who introduces their pharmaceutical preparations among his professional brethren. Besides the ordinary staff of assistants Mr. Madon is helped in his business by his three sons.

MADON, SONS & CO.
INTERIOR, SHOWROOM.

MARSHALL, SONS & CO. LTD.

The development of a country is neither more nor less than the development of its agricultural and industrial resources, and in the progress made in India in these directions it is doubtful if any company or firm has had a greater share than Messrs Marshall, Sons & Co., Ltd., engineers of Bombay, Calcutta, and elsewhere. They have supplied machinery and plant for mills and factories, threshing machines for crops, and pumps for irrigation and other works; in fact, there is no town of any size, and very few villages, in India where "Marshalls," as they are usually called, are not represented by some of their manufactures.

The company's works and head offices are at Gainsborough, in England, where they were established in the year 1848, and since that date they have manufactured and supplied more than 163,000 engines and boilers for various industrial purposes in all parts of the world.

In addition to steam engines and boilers of all sizes and types, Messrs. Marshalls also manufacture steam threshing machinery for dealing with all classes of crops, as well as tea machinery, comprising rollers, dryers, and sifting and packing apparatus, also wood-cutting machinery, pumps, grinding mills, and various other plant. It is estimated that fully 75 per cent. of the steam engines employed in India have been made by them.

In 1888, the success which followed as a result of the high standard of their productions warranted a branch being opened at Calcutta, and this was followed by another at Bombay in 1900, whilst offices have also since been established at Lahore, Madras, and Bezwada.

This firm's productions are eminently suited to the industrial and agricultural development of this country, and their success in India is largely due to the excellent quality of their work.

The most significant factor in India today is the shortage of labour. The causes of this remarkable transformation from the conditions when it was customary to speak of the teeming millions of India, and the inexhaustible supply of cheap labour, are somewhat complex; broadly, they are the ravages of famine and plague, which have arrested the normal growth of the population at a time of considerable industrial expansion. The results are, however, of the first importance, and whether one turns to the great industrial centres or to the countryside, the report is the same —an insufficiency of labour for ordinary operations.

Indian industries, from agriculture to manufactures, are still for the most part organized on the basis of a large supply of cheap labour. Labour-saving appliances, until recent years, were little known, and every operation of industry or manufacture even now involves the employment of a large number of practically unnecessary workers. As long as the supply was plentiful and cheap these conditions were suited to a backward country short of material for skilled supervision, but the labour force has ceased to be adequate, and the rise of wages has brought the scale very near to the standard of Southern or Eastern Europe. Thoughtful economists have come to the conclusion that these conditions are likely to be permanent, as for generations to come the labour force,

MARSHALL, SONS & CO, LTD

1 Interior of Office 2 A Corner of the Showroom 3 Offices.

in view of the steady industrial expansion of the country, cannot be abundant, and the scale of wages tends to rise steadily.

The only remedy is the introduction of power plants to reduce the burden on the labour force, and Marshalls were amongst the foremost to recognize the importance of this.

Take cotton, for instance. This crop until comparatively recent times was ginned by hand; but owing to its extended cultivation it became impossible to continue to separate lint from seed by the old method, and most of the cotton grown in India to-day is ginned by machinery, and a very large proportion of these factories are equipped by motive power manufactured by Marshalls.

Rice is still largely cleaned by hand, but in a number of districts hullers are being introduced for this purpose, the majority of which have been installed by the same firm.

Marshalls have also successfully introduced small power-driven sugar-cane mills, which give an extraction of juice greatly in excess of that obtained by ordinary country made mills worked by bullocks.

They have, further, installed several hundreds of pumping plants for irrigat on purposes, the majority of which are worked on wells in various parts of the country, but there are also larger plants erected on the banks of canals and rivers. One might almost indefinitely continue this list of productions, but suffice it to say that no matter what branch of industry one looks into, be it oil mills, flour mills, small spinning, weaving, and other mills, it is found that Marshalls' productions are well to the fore.

The company's Britannia Iron Works at Gainsborough cover an area of 40 acres, and about five thousand men are employed therein; while their showrooms, godowns, and offices in Bombay are situated in Marshalls' Buildings, in Ballard Road.

MARSLAND, PRICE & CO., LTD.

It is less than twenty years since the use of reinforced concrete became general in connection with the construction of buildings in India, and it is claimed that the founders of Messrs. Marsland, Price & Co., Ltd., were pioneers in introducing the system into that country.

The business carried on by the company now under notice was established by Mr. J. J. Marsland in January 1899, and when that gentleman was shortly afterwards joined in partnership by a Mr. Sibley, the firm was known by the name of Marsland, Sibley & Co. Mr. Sibley died in the same year, and his partner continued to trade on his own account until a Mr. Price, of the Public Works Department, Kashmir, and a Mr. Willis, became associated with him, and the style of the new firm, who from that time specialized in constructional reinforced concrete work and in sanitary engineering, was changed to Marsland, Price & Co. That arrangement, with the exception of the admission to the firm in 1903 of Mr. J. Pearson, was continued until 1908, when a limited liability company was formed under the name of Marsland, Price & Co., Ltd.

The company's workshops and premises in Nesbit Road, Mazagon, Bombay, cover an area of about 14,000 square yards of land, and they are most conveniently situated with regard to facilities for the removal of materials, as they are in close vicinity to the Docks, and are, further, within a short distance from Byculla and Grant Road stations on the Great Indian Peninsula and the Bombay-Baroda and Central India Railway systems respectively.

The company were not only first in the field with reinforced concrete work, but it is a fine tribute to the manner in which they carry out contracts that the large majority of the *chawls* which have been erected for the Government, the Bombay Port Trust, and several of the principal railway companies, have been designed and constructed by them.

Among the more important works of this character standing to their credit in the Bombay Presidency and elsewhere in India, the following may be mentioned: Quarters for the employees of the Bengal-Nagpur Railway Company at Khargpur, near Calcutta; the Nasik Training College at Nasik; the Bhamboorda police lines at Poona; barracks and quarters at Kirkee; a lunatic asylum at Yeravda, near Poona; *chawls* for the Bombay Improvement Trust at Chandanwadi, Imamwada, Suparibag, and Nagpada; *chawls* for the Bombay-Baroda and Central-India Railway Company, at Grant Road and Agripada; *chawls* for the Great Indian Peninsula Railway Company at Parel and Gunpowder Road; telegraph offices and carriage and wagon offices for the same railway company at Matunga; *chawls* for the Bombay Port Trust at Wari Bunder; *chawls* for the Bombay Public Works Department for the water police, dock police, city police, Lamington Road, and city police in Palton Road; a kiln for the Indian Cement godowns; water-cooling towers, and latrines and other work at various mills in Bombay; bulk oil installations for the Standard Oil Company, the Burma Oil Company, and the Asiatic Petroleum Company; a factory at Marve, near Bombay, for the Bombay Brick and Tile Manufacturing Company; reinforced concrete flooring and roofing in various public and private buildings in Bombay; flooring to shed, warehouses, bridges, and galleries at the Alexandra Docks, Bombay; the Afzulganj Bridge at Hyderabad (Deccan); and the power house for the Bombay Electric Supply and Tramways Company, Ltd., at Kussara, Bombay.

The company are sole agents for Messrs. The Adams-Hydraulic, Ltd., of London and York, who are specialists in sewerage, and in fittings for purification of water and sewage; Messrs. Twyfords, Ltd., for sanitary appliances; Messrs. John Williams & Sons, Ltd., Cardiff, for malleable sashes and casements; Messrs. Fenner & Alder for paints, distempers, varnishes, and oils; the Crawshaw Patent Pile Helmet Company; the General Fireproofing Company for reinforcing materials, including expanded metals, trussit, self-centring and herringbone laths; and for Messrs. The Barret Manufacturing Company, for "Congo" roofing and damp-proof course.

The directors of the company are the Hon. Sir Vithaldas D. Thackersey, Kt. (chairman, Sir Shapurji B. Broacha, Kt., the Hon. Mr. Lalubhai Samaldas, C.I.E., the Hon. Mr. Chunilal V. Mehta, M.A., LL.B., Mr. Frank Harrison, M.I.M.E., Mr. J. J. Marsland, and Mr. Anant Narayan Datar (debenture director). The managing agents are Messrs. Lalubhai Samaldas & Co. The general manager is Mr. George T. Mawson, Assoc. Mem. Am. Inst. C.E., M.C.I., and the office manager is Mr. H. Elliot, while the telegraphic address of the company is "Sanitarian," Bombay.

McKENZIES' SAW MILLS, LTD.

The city of Bombay is conspicuous for the very large number of its exceedingly

MARSLAND, PRICE & CO., LTD.

1. Reinforced Concrete Bridges and Galleries at the New Alexandra Docks, Bombay.
2. Carriage and Wagon Superintendent's Office, G.I.P Railway, Matunga. 3. Reinforced Concrete Chawls Built at Gunpowder Road for the G.I.P. Railway.
4. Reinforced Concrete Water Tank for the P.W.D., Sholapur, Capacity 7,500 Gals.

handsome buildings, and it is a tribute to the reputation of the McKenzie Saw Mills, Ltd., that they have been the contractors for the sumptuous internal fittings and furnishings, the structural reinforced concrete work, or the roofing with "Malthoid" of many of those structures, and of Government and other buildings in up-country places.

The business was founded by the late Mr. Alexander McKenzie about sixty years ago. He commenced to trade in his own name in mills which he established at Mazagaon, Bombay, but in the year 1890, when he was joined in partnership by his eldest son, Mr. George McKenzie, the firm assumed the title of Alexander McKenzie & Sons.

The continued rapid development of the business necessitating greater accommodation and further assistance, a company was formed in 1907 under the style of the McKenzie Saw Mills, Ltd. A smaller mill, adjacent to the original establishment at Mazagaon, was acquired, and after being entirely refitted with new machinery it was used exclusively by the carpentering and finishing departments.

Mr. Kenneth McKenzie became a partner in 1903, just three years prior to the death of his father, and when his brother George died in 1913 he assumed management, and is now assisted by Mr. H. L. McNeill, who arrived in India in 1913 for the express purpose of joining the company.

Meanwhile the company had been extending their operations in various directions, and in 1912 it was decided to transfer the whole establishment to new premises erected on land at Siwri, Bombay, which had been acquired some years previously. The site consists of an area of 20,000 square feet, and is at the northern end of Bombay Island, and in close proximity to the new timber ponds belonging to the Bombay Port Trust. The property borders upon land owned by the Trust reclaimed under the Mazagaon-Siwri reclamation scheme; it is bounded by three main roads, and is very near to the Siwri station of the Great Indian Peninsula Railway Company.

Removal from the old mills to the new was commenced in 1912 and completed in 1913, work being carried on simultaneously at both the old and new premises; but the taking down, transfer, and refixing of such a large quantity of machinery was carried out in so masterly a manner that work was not entirely suspended for more than a single week during the final transfer.

The mills are remarkably well equipped with modern wood-working machinery, among which may be mentioned the following: six vertical saw-frames, one horizontal saw-frame, three band saws, ten circular or cross-cut saw-benches, nine planing machines, six mortising machines, four spindle machines, four trenching machines, four horizontal boring machines, three lathes, three grinding machines, and eighteen saw benches. The mechanics' shop is fitted with metal turning and screw-cutting lathes, and boring and other machines; the blacksmiths' shop has a full complement of up-to-date tools; there are three Lancashire boilers, and a steam engine supplies the driving power.

The company specialize in the manufacture of high-class heavy furniture, chiefly for banking and mercantile houses, and fittings of this description have been made for every bank in Bombay, for other banks in Calcutta and Madras, and for branches of some of these establishments at Amritsar and Mombasa. Fittings have also been supplied to all the important mercantile firms in Bombay. In connection with fittings manufactured for the dining-room of Government House, Poona, the secretary to His Excellency the Governor wrote: "I beg to congratulate you on the excellent manner in which you have carried out the panelling at Government House. His Excellency the Governor has desired me to express his appreciation of the work of all concerned."

The company have had very extensive business connections with several railway companies, including the East Indian Railway Company, Calcutta, the Bengal-Nagpur Railway Company, Nagpur, the North-Western Railway Company, the Bengal and North-Western Railway Company, the Oudh and Rohilkhand Railway Company, the Rohilkhand and Kumaon Railway Company, the Great Indian Peninsula Railway Company, and the Bombay-Paroda and Central India Railway Company. Goods have been consigned direct from the works to these several companies without any inspection by one of their officials, and although orders have from time to time been executed during a period extending over many years, there has never been the slightest complaint as to the manner in which contracts have been carried out.

Further than this, the company have supplied large quantities of cut timbers to the Public Works and other Government Departments in Bombay, and since the outbreak of the Great War they have supplied no fewer than seven thousand horse-boxes for transport steamers. They have also furnished deck planking in very large quantities, and special mention may be made of this material being supplied to His Majesty's Australian Ship *Brisbane*, and to Messrs. John Brown & Co., the eminent shipwrights, of Clydebank, Scotland, some of which was required for a super-Dreadnought which has recently been launched from their yard.

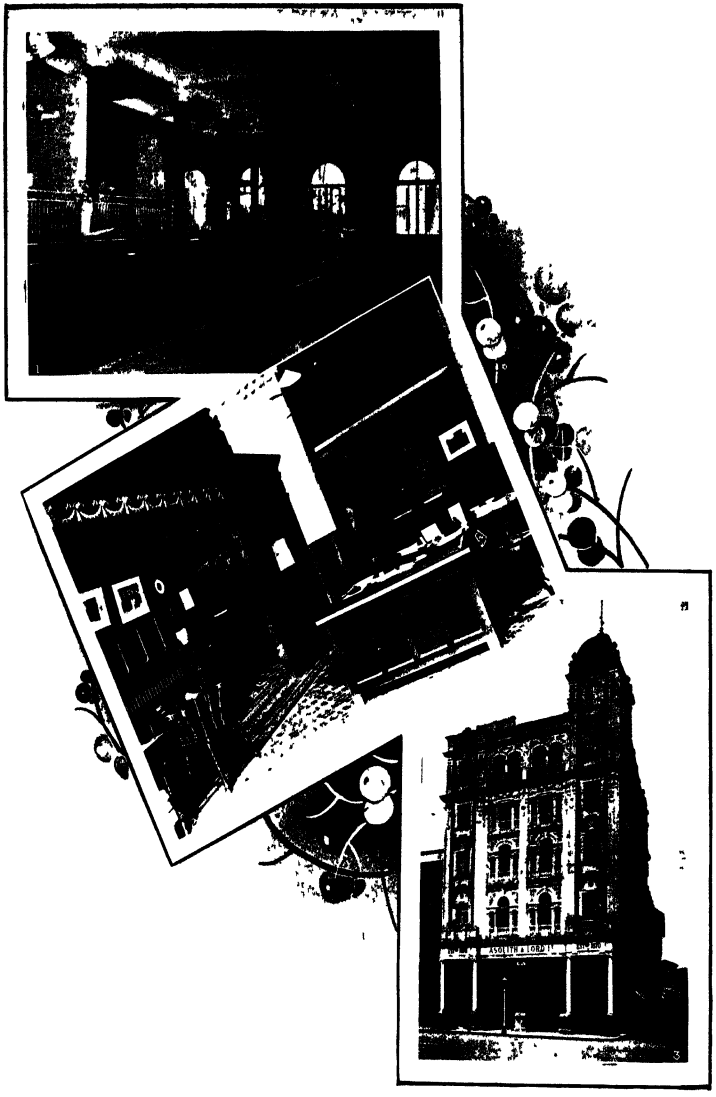
Log timber is imported chiefly from Burma and Siam, although shipments are occasionally received from Malabar.

The company have for the past ten years been sole agents in the Bombay Presidency, the Punjab, and Sind, for the Parafin Paint Company, of San Francisco, who are manufacturers of absolutely waterproof "Malthoid" roofing for buildings. This substance is made in four styles, namely, plain, white, terra-cotta, and green, and nearly all the important flat-roofed public and private buildings in Bombay are covered with it. The following among other buildings in Bombay have been covered with "Malthoid" by the McKenzie Saw Mills, Ltd., namely, the majority of the European and leading Indian commercial houses, the cathedral, the Hong Kong and Shanghai Bank, the Chartered Bank, the National Bank of India, the Pearl Mills (having an area of 57,000 square feet), the Science College (area of 40,000 square feet), the Mole Station, Alexandra Dock (area, 40,000 square feet), the Victoria Terminus Annexe (now used temporarily as the Victoria War Hospital), the Swan Mills (area 60,000 square feet), Messrs. E. D. Sasoon & Co.'s mills, and the members' stand of the West India Turf Club. Buildings beyond the Bombay Presidency include Government House, the Agricultural College, the central offices of the Public Works Department, and the Yeravada prison, all at Poona, and the Gaekwar's palace at Baroda. More than a million square feet of roofing has been laid in the Bombay Presidency alone.

The McKenzie Mills, Ltd., have recently made a special feature of structural work in reinforced concrete, which is effected by using Kahn's patent trussed bars, which have proved to be the only kind which give absolute certainty of calculation and safety of design. Information given by

McKENZIES' SAW MILLS, LTD.

1 General View—Front of Mill. 2 Interior of Mill—Saw Frames. 3. Interior of Mills—Finishing Machines.



McKENZIES' SAW MILLS, LTD

1 Mercantile Bank, Bombay—Counter 2 Chartered Bank, Bombay Office—Partition, Manager's Room.
3 Asquith and Lords' Building, Bombay—Reinforced Concrete and "Malthoid" Work.

McKENZIES' SAW MILLS, LTD.

1 Science College Building, Bombay—Roof Covered with "Malthoid" 2 Mole Station, Alexandra Dock—Reinforced Concrete and "Malthoid"
3 Mole Station, Interior. 4 Reay Road Station, Bombay—Reinforced Concrete.

the company is to the effect that actual tests show that the adhesion between the concrete and steel is greatly weakened by repeated loading and unloading of a beam. This means that, in any structure subject to shock or moving loads, it is not safe to rely upon the bond of concrete, and that rigid connection of shear members to main reinforcement must be provided, as is done by the Khan bar. One other great advantage possessed by this bar is that it provides the only possible absolutely fireproof construction. These bars have special shear members, formed by shearing up at intervals the flanges or wings of the cross-section of the bar. These members are therefore rigidly connected with the bar itself and cannot be displaced, the consequence being that the stresses in the body of the beam are positively and directly transmitted to the main steel bar. They do away with any possible and always probable defects in workmanship, and as each bar is built for the work it is intended for, there is always perfect accuracy of installation, and each reinforcement is exactly in its place, thus assuring the greatest possible efficiency.

Recently completed contracts have comprised the flooring for the Mole station, Alexandra Dock, and for Messrs. Asquith and Lord's new premises, and a platform roof for the Reay Road railway station of the Great Indian Peninsula Railway, this last named consisting of 22-feet cantilever rods on each side carried on a single row of pillars, thus giving an absolutely clear platform.

All reinforced concrete structures are erected under the supervision of the company's expert, Mr. C. C. Sherwood, who has had very great experience of the work in America, where it is very popular.

The company are sole agents in the Bombay Presidency, the Punjab, and Sind, for the Paraffin Paint Company, manufacturers of "Malthoid" and "Pabco" roofings and preservative paints; the Trussed Concrete Steel Company, for Kahn bars, rib bars, sashes; the Milwaukee Concrete Mixer and Machinery Company, for steam and petrol concrete mixers; Messrs. William Cook & Sons for saws and machine tools; and Messrs. A. & P. Steven for electric and hydraulic passenger and goods lifts.

Employees holding responsible positions in the company have been taken into the works when boys and have been specially trained for higher positions. About three hundred hands are constantly employed, some of whom have been on the books of the company for about thirty years, and while each department is subject to the control of an efficient European, the management of the whole concern is in the hands of Mr. Kenneth McKenzie.

H. M. MEHTA & CO., LTD.

This company, trading in Bombay as merchants and dealers in milling and other machinery and plant, was formed in the year 1896 by Mr. H. M. Mehta, with the limited capital of Rs. 15,000, which represented the first call of the nominal capital of Rs. 50,000. The founder had, in earlier days, acquired a sound business training, and the valuable experience thus gained was utilized to the fullest extent in promoting the interests of the new undertaking.

Mr. M. G. Parekh, of Ahmedabad, who was practically acquainted with the work of supplying general stores for mills and factories, joined the company, and was an active and capable supporter of Mr Mehta in the various concerns with which they were connected.

These gentlemen concentrated their energies upon the business of the company, and expanded it to such an extent that the minimum dividend paid to shareholders has been at the rate of twenty-five per cent. per annum. At quite an early stage of their partnership they purchased, for the sum of £16,000, the Victoria Cotton Mills, situated at Gamdevi Road, Bombay, which now give employment to more than eight hundred hands and have a plant of 31,000 spindles. The mills were so well managed that the cost of the buildings was covered by the profits made during the first year's working.

The company are chief agents in Bombay for the London and Lancashire Fire Insurance Company and the Gresham Fire Insurance Company, and they are direct representatives of Messrs. George Saxon & Co., for Lancashire and Cornish boilers; of Messrs. P. R. Jackson & Co., for all kinds of mill gearing; of Messrs. Kacking & Co., Ltd., for looms and weaving machinery; of Messrs. Bentley and Jackson, Ltd., for calendars and finishing plant; of Messrs. Wilson & Co., Ltd., for bobbins; of Messrs. Eadie Brothers & Co., for spinning rings; of Messrs. J. Lister & Sons, for card clothing of every description; and of Messrs. S. Porritt & Sons, Ltd., for roller cloths and flannels; and of Messrs. Kay and Wilkinson, for leather belting (Kawil patent).

As cotton merchants and general importers the company have established business connections with a considerable number of the leading manufacturing houses in England, on the Continent of Europe, and in the United States of America.

The company's offices are situated at 123 Esplanade Road, Fort, Bombay, and they have branches in Manchester, Glasgow, and Ahmedabad, together with agencies in a large number of towns throughout India and Europe.

They are also managing agents for the Zenith Life Assurance Company, Ltd.; the Jubilee Cotton Mills, Bombay; the Raja Goculdas Mills, Ltd., Jubbulpore; the British India General Insurance Company, Ltd., Bombay; and T. R. Pratt, Ltd., also of Bombay.

The Zenith Life Assurance Company, Ltd., commenced business on October 1, 1916, with a capital of Rs. 1,00,000, divided into 1,000 shares of Rs. 100, and although the full amount was subscribed, only Rs. 50 per share have been called up. In less than a period of three years more than four hundred proposals for not less than Rs. 10,00,000 have been secured, and it is creditable to all concerned with the management that this success has been achieved in spite of visitations of plague and the influence of the Great War. The company's funds are invested in Government and other securities authorized by the India Trust Act.

The Jubilee Cotton Mills, situated at Sewri, Bombay, are equipped with 31,000 spindles, and the premises were purchased from Sir Cowasjee Jehangir Readymoney for the sum of Rs. 5,50,000. Under the efficient control of Messrs. Mehta & Co., the total cost of the property was covered by the profits made during the first two years of change of ownership.

The Raja Goculdas Mills at Jubbulpore were in a most deplorable condition in March 1918 when they were purchased by Messrs. Mehta & Co., but a thorough reorganization and a general overhauling of machinery and plant have taken place, and it is confidently expected that a good dividend will be paid upon the working of the current year.

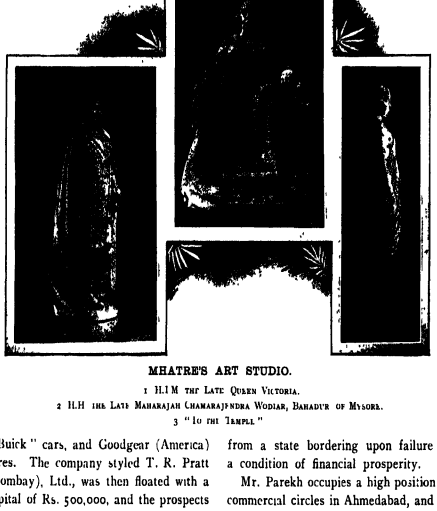
The British India General Insurance

H. M MEHTA & CO.

1 Office Building 2 Mr H M Mehta.

Company, Ltd., has only recently been promoted by Messrs. Mehta & Co., but public confidence in their management and the probability of ultimate success caused shares to be quoted at a premium of Rs. 20 as soon as the actual flotation of the company was announced. The company undertake fire, life, marine, accident, and other usual insurance business.

T. R. Pratt (Bombay), Ltd.—Early in the year 1918 Messrs. Mehta and Company decided to establish themselves as automobile engineers, and they were fortunate in being able to secure the sole agency for the sale of the famous



MHATRE'S ART STUDIO.

1 H.I.M THE LATE QUEEN VICTORIA.
2 H.H THE LATE MAHARAJAH CHAMARAJENDRA WODIAR, BAHADUR OF MYSORE.
3 "TO THE TEMPLE"

"Buick" cars, and Goodgear (America) tyres. The company styled T. R. Pratt (Bombay), Ltd., was then floated with a capital of Rs. 500,000, and the prospects of the concern are very promising.

Mr. Homi M. Mehta received a first-class education in Bombay, and in 1890 became an assistant accountant in the Government Mint in that city. Four years later he joined the firm of Messrs. D. R. Umrigar & Co., as chief salesman of mill stores and plant of every description, and in 1896 he formed the company of H. M. Mehta & Co., Ltd. In furtherance of the interests of the new company, this gentleman visited Europe on three different occasions, and during his tours he became acquainted with many leading manufacturers, and thus gained wider practical experience of milling machinery and stores, which has been of the utmost value in later years.

Mr. Mangaldass Girdhardass Parekh, a native of Ahmedabad, commenced his business career by becoming storekeeper in one of the local mills. He subsequently began to trade in mill stores on his own account, and in 1897 he became connected with the company formed by Mr. H. M. Mehta. He was personally largely responsible for the formation of the Aryodaya Spinning and Weaving Company, Ltd., for raising the Rajnagar Spinning and Weaving Company, Ltd., from a state bordering upon failure to a condition of financial prosperity.

Mr. Parekh occupies a high position in commercial circles in Ahmedabad, and he is held in high esteem on account of his great benevolence, large sums of money having been given by him to various charitable institutions.

MHATRE'S ART STUDIO.

On October 12, 1896, Mr. E. Greenwood, principal of the Sir Jamsetjee Jejeebhoy School of Art, Bombay, forwarded to Mr. G. K. Mhatre a letter in which the following words occur: "In sculpture, to which he (Mr. Mhatre) chiefly devoted himself while in this school, he showed greater ability than I have known in any other student, and he has modelled figures of a quality far beyond that of any other native of India, as far as I know." That testimonial was given to a young man, then in his teens, whose remarkable abilities had just become recognized, and who to-day is rightly regarded as the premier sculptor of India.

This gentleman entered the Bombay School of Art in 1891, where he carried off all the principal prizes in drawing and modelling, and only four years later his exceptional skill was rewarded by the presentation of a silver medal and a diploma of merit at the Bombay Art Society's exhibition. It was, however, in 1896 that what may probably be regarded as Mr. Mhatre's *magnum opus*, "To the Temple," was produced. The highest praise has been bestowed upon this excellent life-size statue in plaster-of-Paris, representing a Hindu girl going to the temple for worship; the *Journal of Indian Art and Industry*, published in London, referred to it as "an unequivocal pledge of the completest future mastery in the art to which Mr. Mhatre is to devote himself: . . . it takes a first place as a work of plastic art." Photographic copies of the same were sent for the acceptance of Their Excellencies the Viceroy and Governor-General of India and the Governor of Bombay, and in each instance a gracious reply, warmly congratulating Mr. Mhatre, was received.

The fame of this talented sculptor and artist spread with increasing rapidity from this date, and a large number of the leading chiefs of Native States in India have extended their patronage to him.

In 1910 Mr. Mhatre completed a magnificent statue of Her late Majesty Queen Victoria, and on January 8th of that year the ceremony of unveiling it took place in the Victoria Gardens at Ahmedabad. The *Times of India*, referring to the occasion, said, "the late Queen-Empress is represented seated in a chair of State, wearing her crown and royal robes, and holding a sceptre and globe in her hands. The height of the figure is more than seven feet, and it has been splendidly sculptured in the famous white Carrara marble. Mr. Mhatre has undoubtedly succeeded in carving an extraordinary good likeness, in which Her Majesty's serene noble dignity is faithfully portrayed."

Space forbids a complete list of the numerous beautifully executed works of Mr. Mhatre, but they include the following life-size busts in marble, namely, those of Her Imperial Majesty Queen Victoria,

for the State of Kolhapur; of His Imperial Majesty the King-Emperor George V; of His Excellency Lord Sydenham, the late Governor of Bombay; of Sir William Dring, K.C.I.E.; and a full-sized marble statue of His Highness the late Maharaja of Mysore. Life-size (or larger) statues in marble have been sculptured (*inter alia*) of His Holiness the late Shankaracharya, of the late Mr. Justice Ranade, of Bombay, and of ten different personages of the royal household of His Highness the Maharaja of Gwalior. Mr. Mhatre has also completed a number of life-size works in plaster, and medallions in marble, while his portraitures in oils have given the utmost satisfaction to his customers. He has just completed a marble bust of the late Mr. Gokhale for the Imperial Council at Delhi, and is now engaged on the statues in marble and bronze for the Bombay and Madras memorials respectively of the late Mr. Gokhale, and of the late Sir Kasturchand Daga, for Nagpur.

In addition to the honours already mentioned as having been conferred upon Mr. Mhatre, he secured the Bombay Art Society's silver medal in 1896, a gold medal at the Industrial and Agricultural Exhibition of the India National Congress at Bombay in 1904, a gold medal at the Calcutta Industrial Exhibition in 1906, a gold medal at Surat in 1904, another one at the Exhibition of Old Bombay in 1911–12, and also one at the Delhi Durbar Exhibition in 1902–3, together with a diploma at the Paris Exhibition in 1900.

Mention has also to be made here of the work of Mr. Mhatre's son, a lad of fourteen years who has, even at such an early age, executed works in plaster which give testimony of an original creative genius in plastic art. Master Shamrao has exhibited numerous works in plaster for successive exhibitions of the Bombay Art Society for the past three or four years. The following extracts from newspapers bear testimony to some of his notable works: "... the figure of a fisher-boy by S. G. Mhatre is a remarkably good effort for so young a student, and gives promise that his father's work will be carried on into a succeeding generation" (the *Times of India*, Bombay). "A most interesting fact in connection with Mr. Mhatre is that his young son, who is now only fourteen years of age, bids fair to follow in his sire's steps to the throne of greatness in art" (the *Looker-On*, Calcutta). "But the wonder of the studio is his son, whose work in vigour, in lifelikeness, and in vividness, would bring fame to a man four times his age" (*New India*, Madras). "The models in clay and plaster in course of production stamp this young man as nothing short of an *enfant prodige*, and it is quite clear that the genius of the father in this instance bids fair to be more than perpetuated in a gifted son" (the *Bombay Chronicle*, Bombay).

JOHN E. MINNITT, LTD.

The history of this limited liability company, which is now largely engaged in Government and railway work, is traced back to the year 1892, when Mr. John E. Minnitt started a small business in Elphinstone Circle, Bombay, in which he imported merchandise from England and also exported various kinds of Indian produce. This gentleman for a time combined in his own person the rôles of proprietor, manager, clerk, and assistant, but his energy and tact were soon rewarded by growing trade, which necessitated his removal to larger premises in Medows Street. That increased accommodation was soon taxed to its utmost dimensions, and in 1902 Mr. Minnitt was compelled to open spacious offices with sample and machinery showrooms attached at 72-76 Apollo Street, Fort, while depôts and godowns for stores have more recently been secured in Marine Cross Lane, 10 Bruce Lane, and at the Alexandra Dock. The business had by this time been firmly established, and as the proprietor was most desirous of extending his operations in general engineering, Mr. J. Anson Minnitt, A.M.I.M.E., gave up his position as chief mechanical engineer at the Caucasus Copper Company's Works, at Dzausoul, in Southern Russia, in order to take a hand in the Bombay business. This was in 1908, and in the same year a limited liability company was formed with practically all of the shares held by various members of the Minnitt family. Twelve months later the working strength of the company was increased by the arrival in Bombay of Mr. George C. Minnitt, A.M.I.C.E., who had been assistant engineer on the construction of water reservoirs for the Derwent Valley Water Board in England.

Rapid development of the company's activities followed, and not the least important step then taken was the acceptance of agencies for some of the largest engineering firms in the United Kingdom, including the Globe Pneumatic Engineering Company, Ltd., London; Silvertown Lubricants, Ltd., of London; Messrs. Steel, Peach and Tozer, Ltd., of Sheffield; Messrs. Lasson and Hjort, of London, for water softeners; Messrs. Heenan and Froude, Ltd., of Worcester, for refuse destructors; the Hardy Patent Pick Company, Ltd., of Sheffield; Messrs. George Angus & Co., Ltd., of Newcastle-on-Tyne, for beltings; Messrs. Thomas Hubbuck and Sons, Ltd., of London, for paints, oils, and varnishes; Messrs. Henry Rossell & Co., Ltd., of Sheffield, for steel files; Messrs. Slack, Sellars & Co., Ltd., of Sheffield, for saws; Mr. Thomas R. Ellin, of Sheffield, for engineers' tools, and Messrs. McDowell & Sons. Ltd., of Glasgow, for woodworking machinery.

The company have now established an engineering workshop in which they are manufacturing flour and oil mills, sugarcane rolls, saw benches, woodworking machinery, lathes, drilling, punching, and shearing machines, and mill-gearing, while a special feature is made of the manufacture of machine tools which were not made in India prior to the Great War.

A most important branch of the company's industries is carried on in a depôt in which railway and machinery stores are kept, the leading items of which are tool steels and twist drills.

The company's offices, situated in the best part of the Fort, are well lighted and thoroughly ventilated; the principal stores building, 135 feet in length and 40 feet in width, is connected by private sidings with the Bombay Port Trust railway, and is quite near to the Docks, while the workshop is built alongside the stores, with which it is identical in dimensions.

Steady progress has been made since the formation of the company, and there is every indication that a greatly increased turnover is certain to be realized in the near future.

The company employ about seventy hands, and their telegraphic address is "Minnitt," Bombay.

The directors are Messrs. John E. Minnitt (chairman and managing director), J. Anson Minnitt, A.M.I.M.E., G. C. Minnitt, A.M.I.C.E., and J. Pearson, M.I.M.E. (secretary).

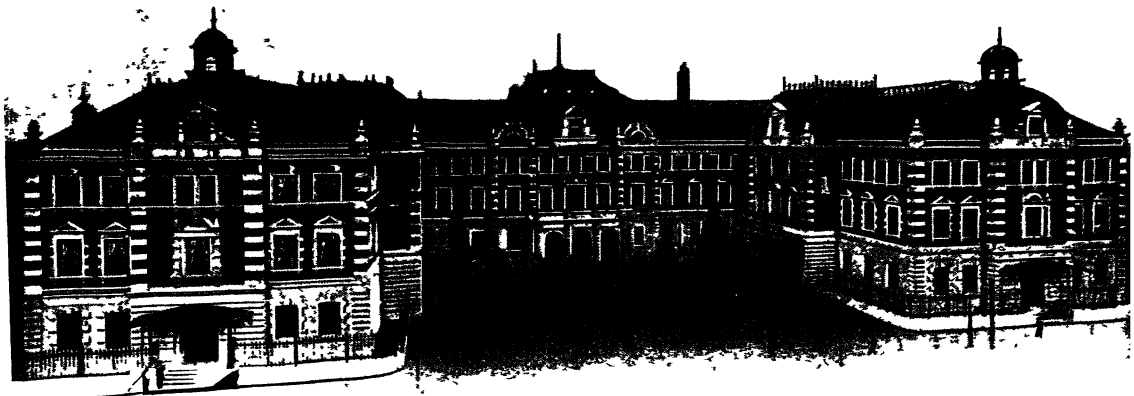
MITSUI BUSSAN KAISHA, LTD.

No more striking example of commercial and industrial progress has been presented in comparatively modern times than that furnished by Japan in opening up trade relationships with other countries of the world.

JAGMOHANDAS RANGILDAS & SONS, BOMBAY

JOHN E. MINNITT, LTD.

1. Smithy. 2. Bay in Stores Department. 3. Machine Shop. 4. Corner of Pattern Shop.



MITSUI BUSSAN KAISHA, LTD

MITSUI BUSSAN KAISHA LTD—HEAD OFFICE, TOKYO, JAPAN

Her financiers and merchants have intelligently grasped opportunities, and Japanese steamers conveying Japanese manufactures and products are found in nearly every recognized harbour.

One of the leading companies in that country is Mitsui & Co., carrying on business under the style of Mitsui & Co., Ltd., in Europe and America, and Mitsui Bussan Kaisha, Ltd. (literally Mitsui Products Company, Ltd.), in Asia, have captured nearly one-quarter to one-third of the total foreign trade of Japan, in addition to having secured vast interests in inter-foreign countries commerce.

It is a limited liability concern and all its shares are held by members of the well-known Mitsui family, the enterprising millionaires of Japan, who trace their origin as far back as the seventeenth century, when their ancestors were financiers to the Government of Shogun.

In addition to the Mitsui Mining Company, Ltd., the Mitsui Bank, Ltd., the Mitsui Bussan Kaisha, Ltd., and Miike Port, of which they are sole proprietors, the Mitsui family are large shareholders interested in many concerns, such as cotton mills, steel works, sugar refineries, forestries, paper manufactories, celluloid works, and insurance and other companies. This premier position of the family among commercial circles in Japan is the chief contributing cause of the success of Mitsui Bussan Kaisha, Ltd., which is the first Japanese firm to start branch offices abroad since Japan opened her doors to foreign business activities. The branch offices of the company are now found in nearly every part of the world, as enumerated below, and they are giving an extensive impetus to the trade of Japan with all foreign countries, not to speak of inter-foreign countries trading. They have been established in Bombay, Bangkok, Calcutta, Dallas (Texas), Karachi, London, Lyons, Marseilles, Manila, New York, Petrograd, Portland (Ore.), Rangoon, San Francisco, Singapore, Sourabaya, Semarang, Swatow, Sydney, at Amoy, Aomoyi, Antohken, Chemulpo, Canton, Choshun, Dalny, Foochow, Girin, Hongkong, Harbin, Hankow, Kwanchintu, Kobe, Kuchinotzu, Karatsu, Kishima, Mukden, Moji, Miike, Maizura, Muroran, Miyako, Newchwang, Nagasaki, Nagoya, Niigata, Otaru, Osaka, Peking, Shanghai, Seol, Sapporo, Sunagawa, Taipeh, Tainan, Tieling, Tientsin, Tsingtau, Tsuruga, Vladivostock, Wakamatsu, and Yokohama, and one can hardly find any other concern so well represented and so widely interested in trade throughout the world.

The business connection of the Mitsui House with India first began in 1892, when the firm commenced exporting cotton from Bombay to Japan, and within the last quarter of a century the Mitsui Bussan Kaisha, Ltd., at Bombay, have steadily built up their position in this line in India and are recognized on all hands as the premier cotton house in the Far East.

The firm's chief business in Bombay, besides cotton, covers oil-seeds, sugar, wool, textile goods, metal, timber, and other produce, while in almost all important places of the interior where cotton, oil-seeds, and wool are produced the firm has got its own establishment dealing in these commodities on the spot, and its position in Indian trade is now regarded as cosmopolitan, as it is no longer limited to any one-sided activity. Its business is not confined to Japan alone, but it extends to various spheres, and in its dealings in such commodities as Java and Mauritius sugar and Indian oilseeds it has always attained great importance and weight in Indian trade with other countries. The firm with its various mercantile dealings is now at home in every place in India and abroad, and has the distinction of being regarded as "Indian merchants" in India, and "American dealers" in America, its activities being directed to promote its own commercial interests side by side with beneficial effect upon the trade of the country in which it happens to be concerned.

The fleet of the firm consists of sixteen steamers, and these are frequently visiting Indian waters. Such outputs of the Mitsui Mining Company, Ltd., as coal, copper, silver, and other metals, are solely handled by Mitsui Bussan Kaisha, Ltd.

The head office of the company is at Surugacho, Tokio; the Bombay branch is at Hornby Road, Fort, and the manager in the latter city is Mr. T. Morioka.

MOOLJEE JAITHA & CO.

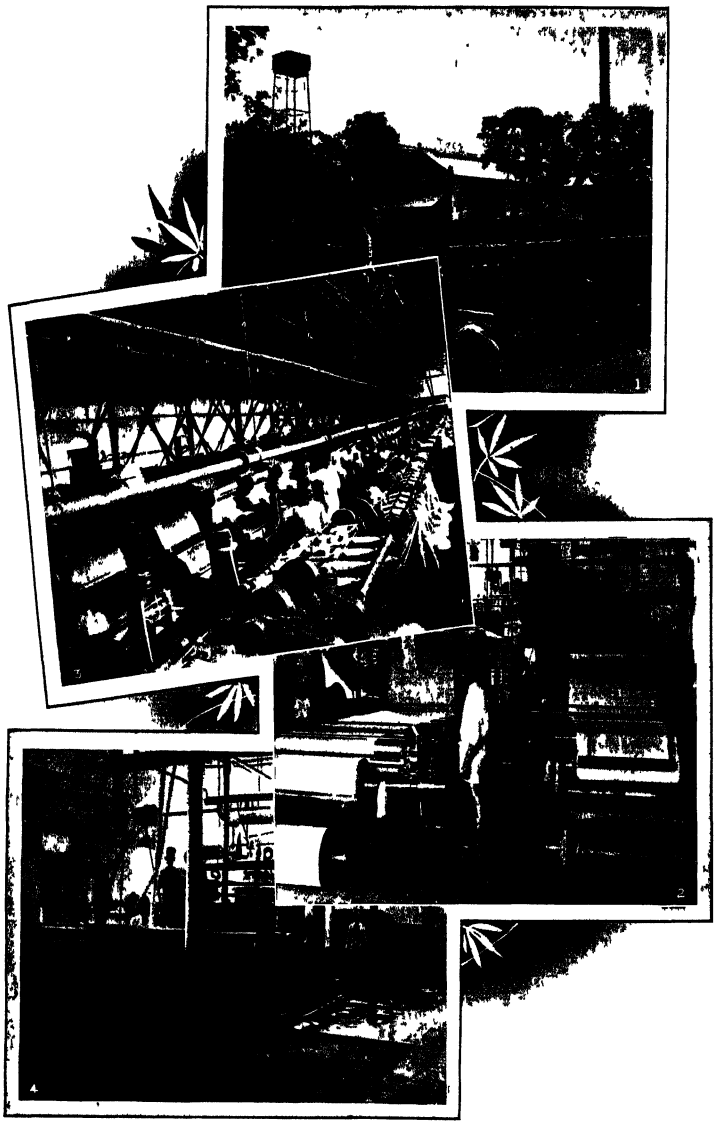
The establishment of this firm, who at the present day occupy a prominent position in commercial life in Bombay, and who are, further, owners of a very considerable amount of landed property, was due to the late Mr. Mooljee Jaitha of that city, who commenced business in a very small way in the year 1834 by dealing chiefly in coco-nut oil, coir ropes, and general produce obtained from Malabar, on the shores of the Arabian Sea. It was a very small beginning, but all transactions were carried through in such a businesslike and straightforward manner that the proprietor found it necessary to obtain further assistance, and twenty years later he founded the firm of Mooljee Jaitha & Co. Although the firm's headquarters are now in Bombay, they still retain premises at Cochin as a branch establishment whence produce is transferred to Bombay and Karachi by their own native craft. Twelve of these vessels were employed in former days, but the introduction of steam caused this number to be reduced to three. A speciality was made in dealing in the purest kind of coconut oil, and this practice resulted in the securing of several valuable contracts for supplying it to a considerable number of companies and firms, chief among which were the Great Indian Peninsula Railway Company and the Bombay Port Trust, who were the largest purchasers.

Mr. Mooljee Jaitha had one son, named Sunderdas, who joined his father in business as soon as he attained his majority, and it was he who was practically responsible for laying the foundation of the future prosperity of the firm. It occurred in this wise. Shortly before the outbreak of the American Civil War Mr. Sunderdas Mooljee Jaitha consigned six sailing vessels, laden with cotton, to Lancashire mills, and when they arrived in the Mersey, after a prolonged voyage round the Cape of Good Hope, it was discovered that hostilities were raging, and that owing to the shortage of raw cotton in England on account of the closing of American ports, prices had risen to such a fabulous extent that the Jaitha cargoes realized nearly their weight in gold. History tells of the consequent tremendous rush for shares in cotton mills which resulted in the utter ruin of dozens of speculators, but Mr. Sunderdas showed keen business perception by refusing to have anything whatever to do with rash transactions.

He was, however, a man of wonderful energy, and in 1870 he began to form a number of joint stock companies, the first being the New East India Press Company, Ltd., with a capital of Rs. 3,50,000. This was followed successively by the Khandesh Spinning and Weaving Company, Ltd., with a capital of Rs. 7,50,000; the Sind and Punjab Cotton Press Company, Ltd., with a capital of Rs. 1,00,000; the Madras United Spinning and Weaving Company, Ltd., with a capital of Rs. 5,00,000; the Sunderdas

MOOLJEE JAITHA & CO.

1 Mooljee Jaitha 2 Sunderdas Mooljee 3 Gordhandas Sunderdas



MOOLJEE JAITHA & CO. (KHANDESH SPINNING AND WEAVING COMPANY, LTD).

1. Exterior View of the Mills 2 Sizing Room. 3 Card Room 4 Bleaching House.

Spinning and Weaving Company, Ltd., with a capital of Rs. 8,00,000; and finally, the New Piece Goods Bazaar Company, Ltd., which is known locally as the Moolji Jaitha Cloth Market, with a capital of Rs. 6,00,000. Messrs. Moolji Jaitha & Co. were secretaries, treasurers, and managing agents for all these companies.

The Sunderdas Spinning and Weaving Mills Company, Ltd., has since that time gone into liquidation, the mill having been destroyed by fire in 1905; the Sind and Punjab Company went into voluntary liquidation after having paid a sum of Rs. 5,00,000 to their shareholders, the land upon which the Press was erected at Karachi having been acquired by the Government for development of the Port; and the firm are still managing agents for the Khandesh, the New East India companies, and the New Piece Goods Bazaar Company, Ltd.

Mr. Sunderdas Mooljee Jaitha died in January 1875 at the early age of thirty-six, leaving behind him his father, Mr. Mooljee Jaitha, and two sons, Dharmsi and Gordhandas, both of whom were minors. The conduct of the business was then taken up by Mr. Mooljee Jaitha, who was assisted by his cousin, Mr. Vallabhadas, and this arrangement was continued until his grandson Dharmsi attained his majority, when he became a partner, and assumed management. The younger brother, Mr. Gordhandas, joined the firm shortly afterwards.

The various industries carried on were uniformly successful, but in 1889 the firm suffered the loss by death of Mr. Mooljee Jaitha, and ten years later the grandson Dharmsi passed away, leaving Mr. Gordhandas Mooljee Jaitha with full control, but he unfortunately died in 1902.

Each of these two brothers left a son who was a minor, and in 1908 a partition of the firm's affairs was agreed upon, Dharmsi's son, Karsondas Mooljee Jaitha, taking over the Madras United Spinning and Weaving Company, Ltd., in his own name, while Chatrabhuj, the son of Gordhandas, succeeded to the original firm (with the remaining agencies), of Mooljee Jaitha & Co., of which he is now the head, and joint proprietor with his mother.

The Khandesh Spinning and Weaving Company, Ltd., registered in the year 1873, have mills situated at Jalgaon in the Collectorate of East Khandesh in the Bombay Presidency, and their premises cover an area of seven acres in extent. There were originally 13,000 spindles and 250 looms, but owing to the growth of the industry the present equipment consists of 20,000 spindles and 425 looms. The company was launched with a capital of Rs. 5,00,000, but the addition of improved machinery and plant caused that sum to be increased to Rs. 7,50,000. The mills consume about 350 ***kandies*** of raw cotton monthly, and this is spun into yarn of various counts, the major portion of which is woven into cloth in the mills, while the daily surplus of about 2,000 lb. is sold in up-country markets.

The company have their own bleaching and dyeing departments equipped with an up-to-date plant, but this is now being considerably enlarged, with the object of carrying out those processes for other firms as well as themselves.

A managing agency is also held for the New East India Press Company, Ltd., which was registered in the year 1874, and commenced business with cotton presses at Jalgaon and at Murtizapur in the division of Berar, in the Central Provinces. Since that time, however, the following additions have been made: ginning factories at Murtizapur and at Nagardevla in the East Khandesh Collectorate of Bombay; and pressing factories at Karanja Akola and Bassim in Berar, and at Barsee and Karmala in the Collectorate of Sholapur, in the Central Division of Bombay.

The company is also doing an extensive business in buying and selling cotton on its own behalf and for constituents. A representative has recently been sent to Europe with the view of influencing the export of cotton, and of appointing agents of the company in several countries in Europe.

The proprietor of the firm, Mr. Chatrabhuj, is one of the managing agents for the New Piece Goods Bazaar Company, Ltd., which was founded with a capital of Rs. 6,00,000, with the object of building a cloth bazaar in the centre of the city of Bombay, thus centralizing the piece-goods trade. It may be mentioned that the idea of establishing this institution originated with the late Mr. Sunderdas Mooljee Jaitha, and as a fine proof of the foresight of that gentleman it may be said that the present annual rents accruing to the company from the cloth bazaar alone amount to more than three lakhs of rupees.

Messrs. Mooljee Jaitha & Co. are owners of a large quantity of landed property in Bombay and elsewhere, and they are also proprietors of cotton ginning factories at Karanja, Neri in East Khandesh, and at Sankli in East Khandesh.

Another branch of the firm's industries is the establishment known by the name of Messrs. Chatrabhuj, Gordhandas & Co., in which is centred the sole cloth-selling agency of all cloth manufactured by the Bombay Dyeing, Spinning, and Weaving Company, Ltd.

MORARJEE, GOCULDAS & CO.

The late Mr. Morarjee Goculdas was well known in the early seventies of the nineteenth century as a shrewd business man, with a large experience of the British piece-goods trade in his connection with the firm of Messrs. Watson, Bogle & Co., and in 1871 he began to work the cotton mill in Bombay which bears his name. Three years' close acquaintance with the carrying-on of that factory in its minutest details convinced him that not only was a cotton mill a remunerative enterprise, but that if it were erected in a rich cotton-growing district where cheap labour could be obtained, it would be in a better position for earning large profits than would one built in the city. That conviction prompted him to cast about for such a locality. He therefore visited some of the cotton-producing areas, and eventually he resolved to erect a factory at Sholapur (in the Collectorate of the same name and in the Central Division of the Presidency of Bombay), where cotton from various parts of the Barsi district could be had in abundance and at a low price. The inhabitants in that neighbourhood are chiefly agriculturists, but the town was known to be a stronghold of hand-loom weaving. Thus Mr. Morarjee would be able to draw away a few hundred men from their agricultural pursuits and train them to be fairly skilled operatives for his mill, and the hand-loom weavers could also be induced to work on power looms, and that at better wages. There was, however, the difficulty of obtaining water, but he thought a sufficient supply might be obtained from the Government canal, Sholapur being notorious as an insecure area for an abundant supply of rain water. Thus the resolution to erect a mill at Sholapur was taken after mature consideration. Mr. Morarjee rightly conceived that the balance of advantage over disadvantages was great, and viewing the extraordinary prosperity which the mill has achieved for so many years past, it cannot be denied that the wisdom of the step has been amply justified.

Mr Morarjee formed a company with a capital of 5 lakhs, divided into 500 shares of 1,000 rupees each, and it was duly registered on December 10, 1874, the works for the erection of the mill being commenced in February 1875 The ground secured for the buildings was about 57 acres in extent The necessary machinery—including about 21,000 spindles—was ordered from England, but the question of accommodating looms was left in abeyance for some time On December 28, 1876, the engine was first started, but the mill came to be fully worked in the following March A most unfortunate event occurred about that time—a famine of a severe type had overtaken the district, and cotton prices were necessarily high Provision for fuel, chiefly timber, and for a good and abundant supply of water from the Government canal, running close by the mill, was, however, made The second year's balance sheet presented to the shareholders showed the cost of land and building to be Rs 3,06,317-15-4, while that of the machinery was Rs 7,29,367 The profit earned amounted to Rs 27,507-10-1, which, considering the prevalence of the severe famine referred to and the dearness of cotton, was deemed most encouraging The continuance, however, of the physical calamity in an accentuated form led to a smaller profit, say of Rs 20,375-7-6, for the next year, the mill having had to be closed for a portion of it In the following year 140 looms were added, and additions to buildings and machinery had to be made, the cost of the last named being Rs 5,87,870-12-8 After two years of physical stress and commercial strain the directors were able to show for the year ending on December 31, 1879, a satisfactory profit of Rs 60,642-15-9

Yet another calamity overtook the company owing to the sudden death of its able founder on October 16, 1880 The directors acknowledged in their report that he had been mainly instrumental in securing the prosperity of the mill, his active interest and usefulness contributing largely to its success The profits realized were handsome, and amounted to Rs 1,36,987-4-2, and for the first time a large dividend at the rate of Rs 90 per annum was paid It was indeed the glad harbinger of larger dividends which the industry and ability of the agents and their excellent direction of affairs have enabled them from time to time to divide among the proprietary.

In 1883 a further extension of buildings and machinery was necessitated by growing demands for the company's products, and the capital was increased from 5 to 8 lakhs

In 1890 there was a further addition to the strength of the then existing spindles, which consisted of 6,000 ring spindles (which were then fast coming into vogue),

MORARJEE GOCULDAS & CO

1 MORARJEE GOCULDAS C I I 2 DHARAMSEY MORARJEE GOCULDAS, J P

being erected with the view of replacing the old "throstle" type The weaving shed, too, was extended to accommodate another 100 looms The mill met with a serious disaster on December 5, 1891, as a fire occurred by which the whole of the spinning department was destroyed, but the directors immediately began to rebuild that portion of the premises, and to re-equip it with the latest up-to date machinery, they having recovered from the underwriters the sum of Rs. 5,37,835-6-5. New plant, consisting of 30,000 spindles from the well-known makers Messrs. Platt Brothers, together with the necessary preparatory machinery, was ordered, and the mill was started for work again

MORARJEE GOCULDAS SPINNING AND WEAVING COMPANY, LTD

1 Mule Department. 2 Card Department 3 Frame Department 4 Exterior View of the Mill

in its spinning branch from June 5, 1893, but it was not until November in the same year that it began to be fully employed.

In 1894, taking advantage of the prosperous condition of the cotton industry all round, 126½ shares which had remained unallotted of the new issue of capital to the extent of 3 lakhs were disposed of at a premium of Rs. 52,295. The mill had by that time more than recovered its normal position after having been subjected to divers vicissitudes during the first twenty years of its existence, during which period it had, by dint of perseverance, great caution, and the utmost care on the part of the management, built up a reputation which placed it in the front rank of the best managed mills in the Bombay Presidency. The accounts to December 31, 1893, showed a very satisfactory net profit of Rs. 3,10,116, and earnings continued, with occasional exceptions, to average more than 3 lakhs annually, but in 1905 there was a great boom in yarn, when all mills made exceedingly handsome profits. The Sholapur mills were able to show a net profit of Rs. 7,71,598, and from that time forward the profits have never been below 6 lakhs. As a matter of fact, there was a tide in the better fortune of the mill which has gone on uninterruptedly until this day.

Owing to the larger demand for the products of the mill in the Southern Mahratta country and elsewhere, a new block had to be built and fully equipped with the latest machinery as well as a fairly extensive plant for bleaching and dyeing. This new mill was started for work in August 1908. A further addition of 650 looms was made in 1912, owing to an unusually extensive demand for the various descriptions of cloth manufactured at the mill. The following broad results of earnings from the commencement to date will be found most interesting, as they are indicative of the fact that notwithstanding a small beginning forty-two years ago, the mill has risen to be considered one of the most flourishing and the best managed institutions of the kind in India.

The following figures represent total amounts: Profits, Rs. 1,22,01,512; dividends, Rs. 50,69,655; dividends per share, Rs. 6,547; reserve fund, Rs. 25,52,212; reserve dividend fund, Rs. 1,16,620; machinery depreciation fund, Rs. 24,99,770; buildings, Rs. 2,52,000; renewals of buildings, Rs. 3,08,000; fire insurance, Rs. 1,50,000; bad and doubtful debts, Rs. 25,438; library and recreation, Rs. 27,000.

Messrs. Morarjee Goculdas & Co. are the agents, and the firm consists of Messrs. Narottam Morarjee, Ratansi Dharamsi Morarji, Trikamdas Dharamsi Morarji, Madhavji Dharamsi Morarji, and the Hon. Mr. D. E. Wacha.

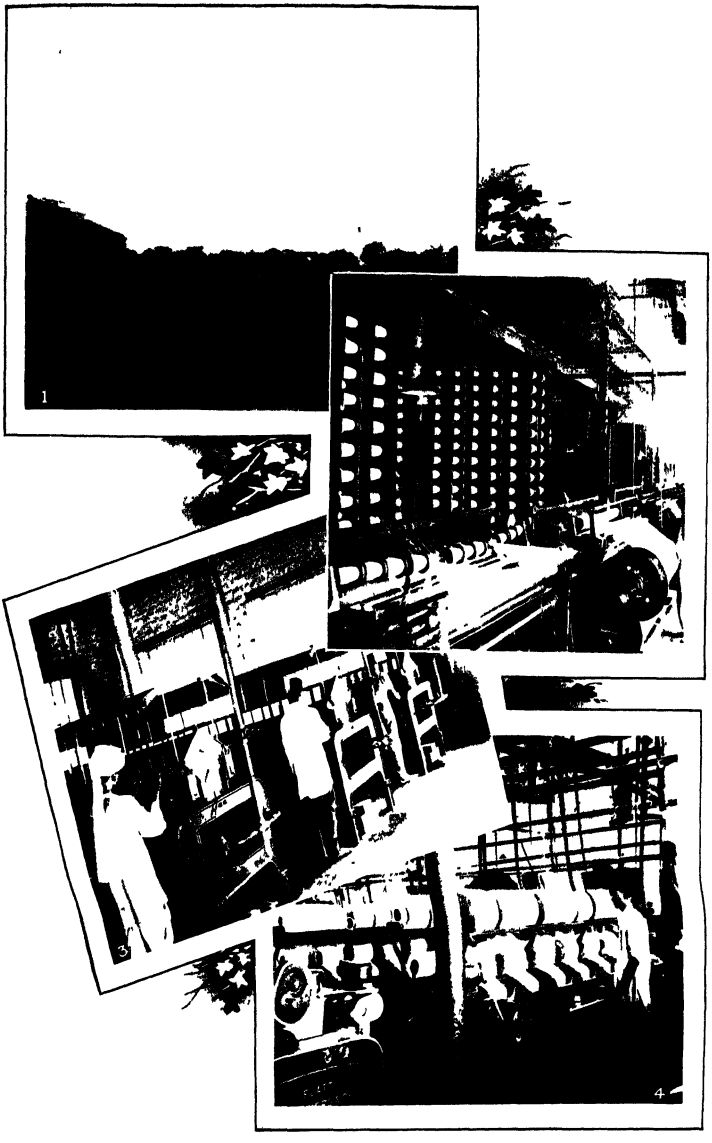
THE MORARJEE GOCULDAS SPINNING AND WEAVING COMPANY, LTD.

It is interesting to relate the origin of the above-named company, which for years past has stood in the front rank of concerns of its kind by reason of the wise and far-seeing policy of its distinguished founder and his worthy successors. Owing to the cotton famine in Lancashire (1861-5), during the period of the American Civil War, Bombay, by her large cotton shipments, made enormous profits, counted by crores of rupees. This plethora of wealth led in 1863, 1864, and four months of 1865 to the starting of a variety of banking, financial, and trading institutions, in addition to colossal reclamations, the shares of which reached more or less fabulous premia until the collapse came about July 1, 1865, which was considered as the "black day" of the city. Among the trading companies was one promoted by a wealthy firm of Parsi gentlemen, known as Messrs. B. and N. Wadia & Co. It was called the George III Jute and Wool Spinning and Weaving Company, Ltd. It was an industrial concern, but not of a speculative character like the majority of the companies; but when the collapse came, so great was the loss of confidence, that even apparently sound concerns, of which the afore-mentioned was a type, came to be wound up with scores of others of a "mushroom" type. Liquidation of good, bad, and indifferent concerns was general, and so it came to pass that in the general débâcle that company was also included in the list. It was put up to auction on April 19, 1869, when it was knocked down to a syndicate of four well-known merchants, namely, Messrs. Lakhmidas Khimji, Morarjee Goculdas, Jadwji Shamji, and Khattau Makanji, who were the highest bidders. The price paid for it was Rs. 1,14,000.

The object of the syndicate was to convert the concern into a cotton spinning and weaving company. It was a wise step, as neither jute nor wool is a product of any part of the Bombay Presidency. This conversion, however, meant a complete overhauling of a larger part of the machinery, which was unsuited to the purpose of spinning cotton, although the driving plant, and its accessories, was allowed to remain. The purchase was completed on June 21, 1869, when the property was legally conveyed to the four proprietors. The factory was situated in Supari Bag Road, Parel, on the same ground where the Morarjee Goculdas mill has been working for the past forty-five years. The land measured 19,800 square yards. The conversion was completed during the year 1871, and it then began to be worked as a spinning factory. On July 23, 1873, the proprietors sold it to one of their number, Mr. Morarjee Goculdas, for 8 lakhs, that being the fair value of the concern, including goodwill.

Mr. Morarji then formed a limited joint stock company, with a capital of 9 lakhs, divided into 900 shares of Rs. 1,000 each. It was started for work with 17,000 spindles and about 70 looms. The first year's profit, say for the twelve months ending June 30, 1872, amounted to Rs. 41,252-3-6, and the first directors were Messrs. Morarjee Goculdas, Khattau Makanji, Haji Ismail, Haji Habib, and Cumroodin Tyabji. Meanwhile the operations of the mill needed more land, which was accordingly acquired, and further machinery, including new boilers and engines, had to be purchased. As the number of spindles and looms increased the profits made became larger and larger, thanks to the energy, ability, and industrial enterprise of Mr. Morarjee Goculdas. The capital of the company, which originally stood at 9 lakhs, had gradually been increased to 11 lakhs by June 30, 1877, the mill machinery and landed property being valued at 11.64 lakhs.

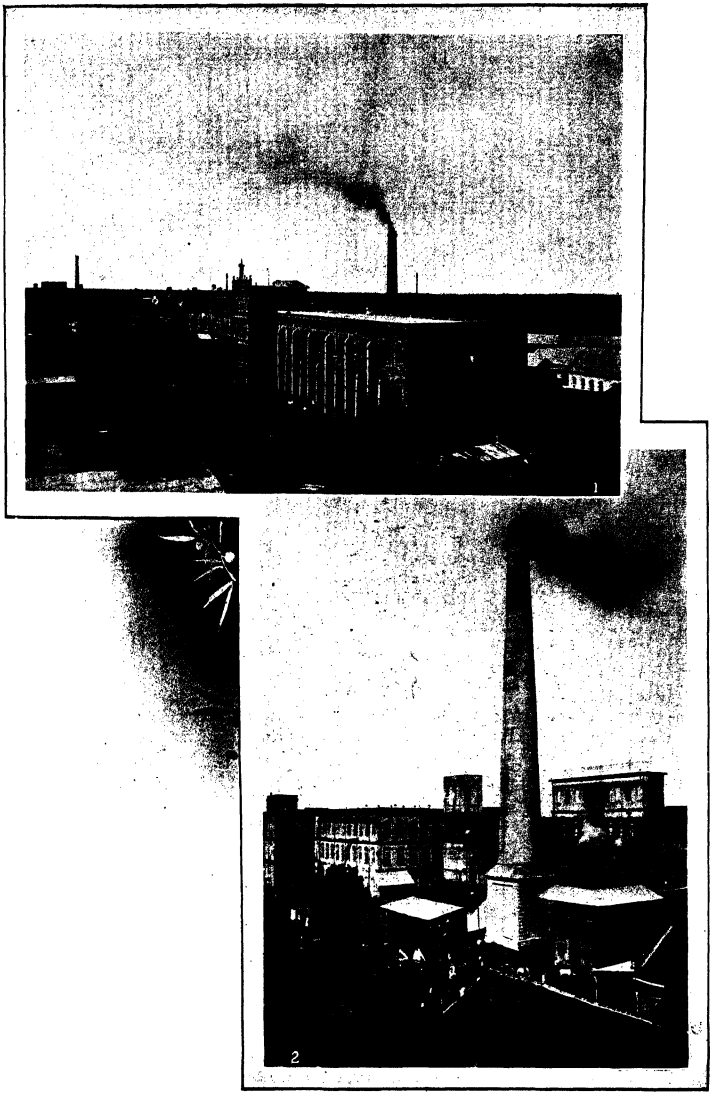
From the very commencement the mill was so excellently managed and kept up to date that its products had a kind of hall-mark in the consuming markets. The net profits earned in 1876-7 amounted to Rs. 2,44,594-1-9, and since that year the mills have grown so rapidly that on June 30, 1916, or, say, forty years later, by judicious reserves, they as a going concern were worth, according to the balance sheet, fully 57 lakhs of rupees, the capital for several years having stood at 11,50,000 rupees only. As profits increased, large sums were placed to reserve, depreciation, and other funds. Thus the mill was extended from time to time until it had 58,952 spindles and 1,560 looms on June 30, 1916, in addition to a large plant for dyeing and bleaching. Various improvements have been made continually in order to keep the factory up to date



MORARJEE GOCULDAS & CO. (SHOLAPUR SPINNING AND WEAVING COMPANY, LTD.).

1. Boundary View between the Narsingiriji Mills and Morarjee Gocudas & Co's Lands . Warping Department

3. In the Yarn Department 4 Combing Department



MORARJEE GOCULDAS & CO. (SHOLAPUR SPINNING AND WEAVING COMPANY, LTD.).

1. Exterior View of the Old Mill. 2. The New Mill.

with the keen competition coming almost daily more and more into prominence Three years ago further land in the vicinity had to be acquired for the erection of a new weaving shed, in which it would be possible to concentrate all the processes connected with the weaving under a central roof At the same time the mill has been electrified This process is not yet completed, but when the entire machinery of the mill is driven by electricity the total power consumed will be equal to 2,400 h p

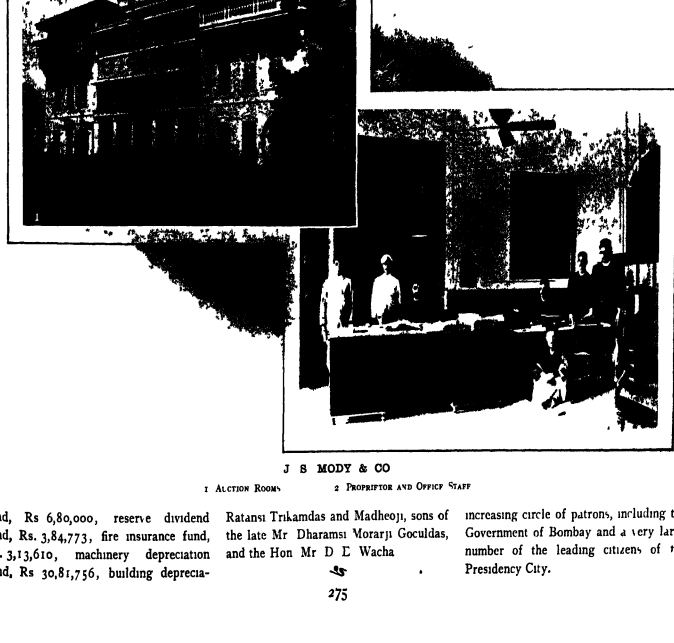
From 1871 to June 30, 1916, there has been not a single year in which dividend has not been paid to the proprietors, be the times never so depressed from one cause or another The total profits earned from the commencement amount to Rs 121,48 245 The total amount of dividend paid to the shareholders up to the aforesaid date is Rs 72,36,825, say Rs 6,293 per share The aggregate amounts carried to the different funds from the profits were as follows Reserve tion, Rs 3,68,967, bad and doubtful debts, Rs 1,00,222, other reserves, Rs 2,30,000 Renewals and extensions have partly been made by drawing on some of the funds, especially the depreciation fund

Thus by unceasing attention, continued vigilance, and energy a most successful concern has been built up which maintains a high position among the numerous well-managed mills in the city of Bombay and which gives fair promise of achieving an even greater measure of success than it has secured in the past Its distinguished founder left the company in 1880 in a state of the highest efficiency, and his two sons and a late partner, Mr Veerchand Deepchand, ably carried on his work and secured a high reputation for the mill Mr Veerchand Deepchand died in 1908, and Mr Dharamsi Morarji Goculdas, the eldest son, died prematurely in 1912, after worthily sustaining the traditions of his father The present firm of agents consists of Mr Narottam Morarji, Messrs Ratansi Trikamdas and Madhoji, sons of the late Mr Dharamsi Morarji Goculdas, and the Hon Mr D E Wacha

J. S. MODY & CO.

The well-known auctioneering and commission agency business carried on by Messrs J S Mody & Co at Raja Bahadur Motilal Mansions in Apollo Street, Fort, Bombay, was established in 1907, but the sole proprietor Mr J S Mody, served for a number of years with the late firm of Messrs Crawford & Co who conducted a similar undertaking for a period of about seventy years which terminated in the year 1913 The last-named concern was founded by the late Mr Thomas Crawford, and it subsequently belonged in succession to Mr J S Mody's late grandfather (Mr D N Mody father (Mr S D Mody, and uncle Mr P D Mody), but the interests of the relatives in the business were disposed of about three years ago

The Mody family have therefore had a long and honourable connection with the mercantile community in Bombay consequently it is not surprising that the firm now under notice should have a widely increasing circle of patrons, including the Government of Bombay and a very large number of the leading citizens of the Presidency City.



J S MODY & CO

1 Auction Rooms 2 Proprietor and Office Staff

fund, Rs 6,80,000, reserve dividend fund, Rs. 3,84,773, fire insurance fund, Rs. 3,13,610, machinery depreciation fund, Rs 30,81,756, building depreciation

The name of Messrs. J. S. Mody & Co. was, about three years ago, placed on the list of auctioneers recognized by the Government, for whom they conduct important sales, chiefly of Embarkation Supply and Army Clothing Factory, Bombay; they also hold weekly sales in their own rooms attached to their offices, where all kinds of property and general commodities are disposed of.

Private sales, too, are undertaken, and the reputation of the proprietor has gained for him an enviable position among the "knights of the hammer" in Bombay.

Mr. Mody is assisted in the business by his cousin, Mr. M. S. Crawford.

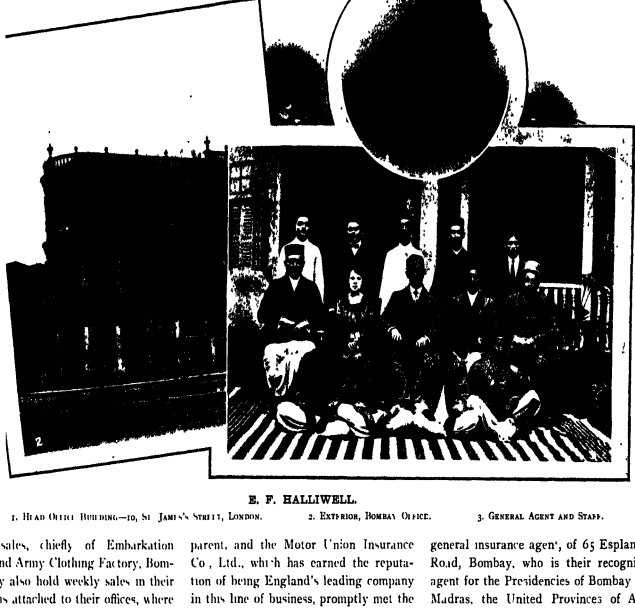
THE MOTOR UNION INSURANCE COMPANY, LTD.

The inauguration of any new means of locomotion, whether by land, sea, or air, must necessarily be attended by mishaps arising from various causes, and it is only natural that owners of animals, and motor-cars and cycles, or even aeroplanes, should welcome the establishment of insurance companies willing to undertake the responsibility for accidents involving the loss of, or damage to, their property.

After the motor industry had spread to India, bringing in its train a largely increasing number of vehicles, the need for some kind of insurance became apparent, and the Motor Union Insurance Co., Ltd., which has earned the reputation of being England's leading company in this line of business, promptly met the want. This company was founded in the year 1906 under the auspices of the Automobile Association and Motor Union of Great Britain, the largest and most popular organization for motorists in the world, and it has earned a well-deserved reputation for promptitude in investigating claims and the generous manner in which it deals with claims for losses.

Policies of insurance were, at first, issued in connection with motor-cars only, but the Motor Union Company, by its just dealings with clients, and its sincere determination to protect their interests in every conceivable way, recently acceded to requests made by a large number of supporters to extend their operations so as to include practically every branch of insurance work carried on in England.

As far as India is concerned, however, business is at present confined to motor, fire, and marine risks. By far the greater portion of the interests in India of the Motor Union Insurance Co., Ltd., is in the hands of Mr. E. F. Halliwell,



E. F. HALLIWELL.

1. Head Office Building.—10, St James's Street, London. 2. Exterior, Bombay Office. 3. General Agent and Staff.

general insurance agent, of 65 Esplanade Road, Bombay, who is their recognized agent for the Presidencies of Bombay and Madras, the United Provinces of Agra and Oudh, and the Province of the Punjab.

F. MURAGLIA & CO.

The honour attaching to the introduction of Italian marble into India belongs to Mr. F. Muraglia, the founder of the above-named firm, who arrived in India in the year 1868 at the early age of twenty-two years. After landing at Bombay, Mr. Muraglia was exceedingly surprised to find that marble had not been used in the construction of any of the fine buildings in that city, and his artistic soul rebelled against the solid yet comparatively unadorned structures. He must have been a man of originality as well, as he conceived the idea of hiring a room at a nominal rental and forthwith proceeded to break off the plaster from the

F. MURAGLIA & CO.

1 Front View. 2 Interior of Showroom 3 Workshop 4 Racehorse, 'Sirmust'

walls, replacing it with a substance in exact imitation of marble. The owner of the premises was so delighted with the work that he handsomely remunerated Mr. Muraglia, and also invited others to witness the fascinating representations which had been made, every one of the visitors expressing his approbation in words of highest praise.

This acceptable testimony to the beauty of the work induced Mr. Muraglia to import, on special indents, Italian marble goods of various kinds, but these orders were not, however, accepted until the indentor agreed to pay an advance of 50 per cent. on the total value. He subsequently sent to Italy for a large quantity of rough marble, from which he designed numerous ornamental articles, and for fully three years he extended his business by importing Italian products of a general character, including wines, almonds, and other specialities.

In the fourth year of his residence at Bombay Mr. Muraglia purchased, from the Port Trust, the lease for fifty years of a plot of land near the Apollo Bunder, and upon it he erected a substantial building, the ground floor being used as showrooms and offices, and the upper story as his private quarters. It was a fortunate circumstance that the Boribunder station and a number of public and private buildings, then in process of construction, required an extensive quantity of marble, as Mr. Muraglia was able to supply the stone and to embellish it so skilfully that the ornamentations caused his name to be known throughout the Presidency.

A report upon the work reached the ears of H.H. the Rao of Cutch, who gave instructions for the decoration of his palace with Italian marble, and the building when completed was found to have cost more than £100,000. The splendid manner in which this work was performed brought the firm into still greater prominence, and a very large number of other contracts were carried out with equal success.

Mr. Muraglia had by this time become a popular figure in Bombay, holding various important offices in civic and other matters, and as his business had grown beyond his most sanguine expectations, he retired from it in 1883 when only about thirty-six years of age, transferring the whole concern, for a comparatively small sum, to his assistant, Mr. Killabhai. The purchaser died within a few months, leaving minor sons, and the business was resold to Haji Suleman Haji Karim, who in 1885 disposed of it to Mr. H. Suleman Abdul Wahed, the present sole proprietor.

This gentleman was at that time trading also in horses, furniture, and woollen and other goods, and with such a load of responsibility on his shoulder he, on the advice of a friend, received Mr. Jumnadas Bhagavandas as a working partner. The operations of the firm continued to grow very rapidly, and it was not long before it had increased to such an extent that they were unable to undertake many contracts which were offered to them.

The firm subsequently introduced soft stones, known as alabaster blocks, which are used in making toys of all descriptions as well as miniature models of the Taj Mahal and other notable buildings. Flooring, glazed dado and other tiles were then imported. In 1908 Mr. Jumnadas, recognizing that a keen competition had sprung up in this particular line of business, sold his ten annas share in the concern to Mr. Wahed, who once more became sole proprietor.

The latter, shortly after this date, appointed as manager Mr. Dhansukhram Navitram, a Nagar Brahman of Surat, who induced Mr. Wahed to invest greater sums of money in order to make better provision for meeting the competition, which was about that time unusually marked. This step proved to be a wise one, as the business began to increase by leaps and bounds, and at the present time the proprietor's capital is three times greater than it was eight or nine years ago, thus enabling him again to accept contracts for outside work.

The firm is held in high repute in Bombay, and, indeed, throughout India and on the continent of Europe, and they are in a position to meet practically all demands made upon them.

Among the most important works undertaken in recent years are: the supply of marble to His Highness the Maharaja of Panna; ornamental English flooring and tiles to the late Sir Mangaldas Nathubhai; contract work for the Sassoon Hospital at Poona; the Daly College at Indore; the Medical College at Lucknow; the amphitheatre at the Coronation Durbar at Delhi in 1911; for the palaces of their Highnesses the Maharajas of Alwar and Indore; for various Public Works Departments in British India; for several railway companies; and for a number of chiefs of other States.

Mr. Wahed was the first Cutchi Memon Mahommedan to be elected as a member of the Legislative Council of Bombay, was Sheriff of Bombay in the year 1911, and has been a Government nominee in the municipality of the city during the past sixteen years.

He was a steward of the Western India Turf Club, and is now managing the firm of R. G. Baldock, Ltd., importers of Australian horses, while he is also the owner of a number of race-horses and stables in the name of Messrs. Ladha Ebrahim & Co., who are contractors to Government, general merchants, State agents, having their business as well as racehorses at Poona and Bombay.

MUNCHERJI & RUTTONJI TATA & CO.

When one considers the enormous number of traders in India dealing in indigenous products, it is not difficult to comprehend why not only cities and towns, but also practically every village, appears to be literally flooded with storekeepers, the majority of whom carry on thriving businesses in all parts of the country and even with foreign ports. Railways and steamships have to a very great extent changed the "old order" of communications, and at the present time city and hamlet are brought into close connection, to the mutual advantage of each.

Messrs. Muncherji and Ruttonji Tata & Co., a firm whose headquarters are at 78-82 Vadgadi Mandvi, Samuel Street, with branches at Mudi Bazar and at Carnac Bunder in the same city, and at Sangli in the Deccan, have built up an ever-increasing trade in saltpetre, aniline, and alizarine dyes, Burma rice, cardamoms, saffron, turmeric, tea, catechu, and other goods, and the energy displayed by them in the conduct of their business has been amply rewarded by the honourable position in the mercantile world which they have attained.

The partners are: Messrs. Ruttonji Shapurji Tata, Pestonji Ruttonji Tata, Shapurji Ruttonji Tata, Piroshaw Ruttonji Tata, Nadirshaw Muncherji Tata, and Burjorji Muncherji Tata.

Their telegraphic address is "Catechue."

M. NAGERSHETH SONS.

It is more than a hundred and fifty years since this firm was established in Bombay, where they commenced a banking business which from its inception gave indications of future success. The confidence of the partners in a very short time

warranted the extension of their operations to Ahmedabad and to practically every town in the district of Guzerat. Many banking institutions in India, however, frequently trade in general merchandise and thus render substantial financial assistance to agriculturists, merchants and others, against delivery of the products of the soil and other commodities. That practice was adopted in the present instance, and for very many years successive proprietors - under various names—turned their attention to the milling industry, to dealing in local goods, and in importing manufactured articles from England and elsewhere.

The firm continued to progress in all branches of its enterprises, and as the result of a visit to Europe by the present partners, Sheth Kastoorbhai Manibhai Nagersheth and Sheth Oomabhai Manibhai Nagersheth, in the year 1914, the brothers decided to extend their activities by opening what is generally known as an East Indian business. This particular venture is carried on under the style of M. Nagersheth Sons, but the banking concern is still conducted under the old name of Manibhai Premabhai.

It was unfortunate that this important event synchronized with the early days of the Great War; but in spite of the consequent dislocation of trade the firm has very considerably enlarged its commercial boundaries, it has added department to department, and its huge list of clients is increasing by leaps and bounds.

Among the manifold activities now engaged in by the firm may be mentioned the cotton department, which has an annual turnover of more than Rs. 10,000,000, and the jewellery branch, which receives regular consignments from Europe and America of jewellery, diamonds, and American and Venezuelan pearls, and which possesses the largest stock in India of "set" jewellery of Indian and Parisian workmanship, as well as of all kinds of loose gems, including rare specimens of diamonds, emeralds, rubies, sapphires, pearls, amethysts, cat's eyes, and other precious stones.

The pearl consignment department, which has a clientèle of rich Arabs and others who import pearls direct from Arabia, has been to a very great extent instrumental in making the firm known in the London, Paris, and New York markets as one of the few who are able to secure and consign valuable parcels of necklaces and other adornments which are frequently worth many thousands of rupees.

The import department embraces piece goods, yarn, gold thread, silk, mill stores, automobiles, perfumery, cereals, copra, coir, and various other items.

The firm also carry on, under the respective names of Manibhai Premabhai & Co. and Oomabhai Manibhai & Co., the management, as secretaries, treasurers, and agents, of the Zavery Spinning and Manufacturing Company, Ltd., and the Hathising Manufacturing Company, Ltd., both of Ahmedabad. The capital at the command of M. Nagersheth Sons is practically unlimited, they being bankers, large landed proprietors and owners of mills, and the phenomenal progress made by the firm is abundant testimony to the highly creditable manner in which business is conducted.

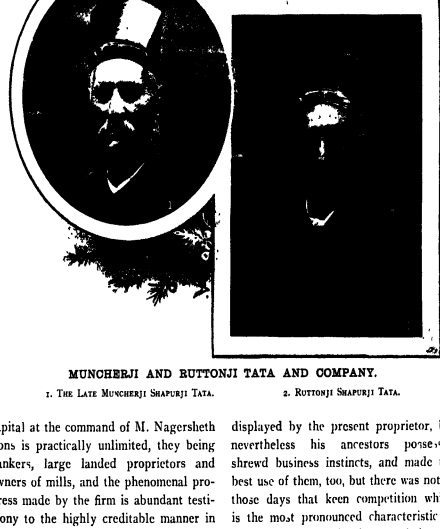
The firm is ever on the alert to take up new enterprises which appear to the practical minds of the partners to be worthy of support.

The head offices are at 25-29 Church Gate Street, Fort, Bombay, and branches have been established at 58 Rue Lafayette, in Paris, and at Wanda Villa, Ahmedabad. The manager at Bombay is Mr. Manek A. Karanjawala, M.A., LL.B., and the telegraphic addresses are: "Nagersheth, Bombay" (inland), "Aylviacon, Bombay" (foreign), and "Nagersheth, Ahmedabad."

A. S. NARIELWALA.

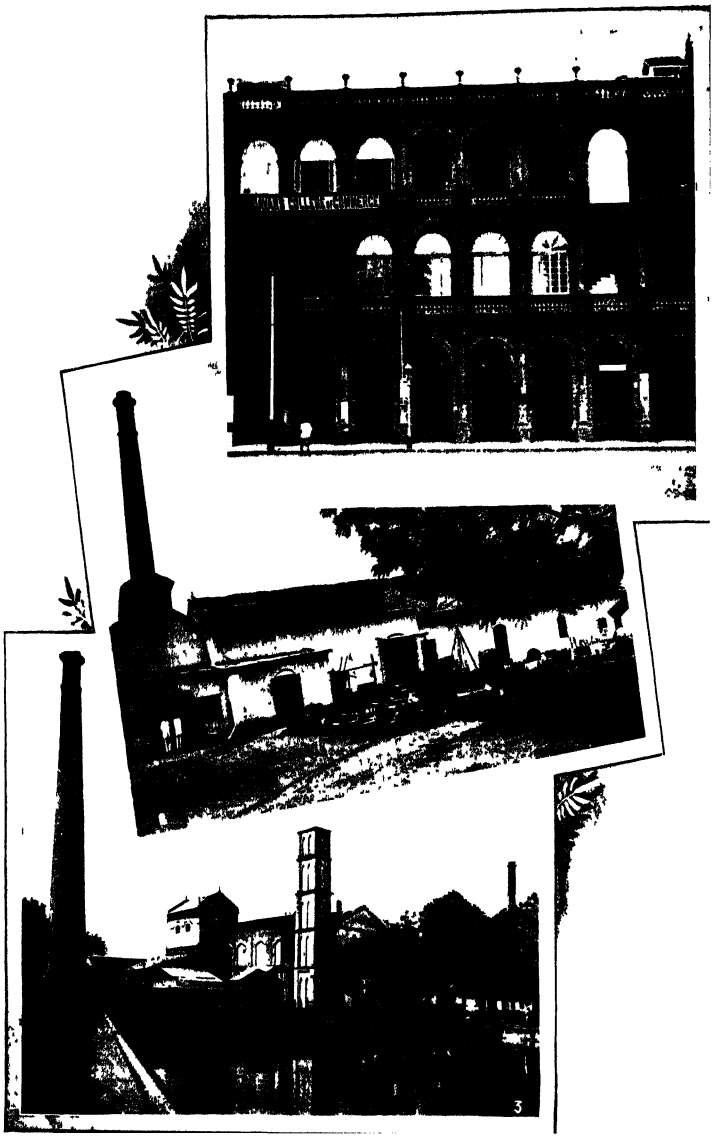
One of the leading concerns in Western India in which the proprietor acts as representative for a considerable number of European manufacturers, and also imports and deals in various kinds of milling machinery and mill stores of a general character, is that of Mr. Ardeshir Shapurjee Narielwala, of 5 Elphinstone Circle, Fort, Bombay. It may be true that the undertaking has reached its importance very largely owing to the tact and energy displayed by the present proprietor, but nevertheless his ancestors possessed shrewd business instincts, and made the best use of them, too, but there was not in those days that keen competition which is the most pronounced characteristic in commercial circles in the twentieth century. The history of the activities of the family which have resulted in the establishment of a prosperous business as well as in the acquisition of wealth reads like a romance.

It appears that the great-great-grand father of Mr. Narielwala (Mr. Nowrojee Cowasjee Narielwala was trading in partnership with his brother, Mr. Pestonjee, at Calcutta, and having acquired considerable wealth, went to Bombay, and engaged in shipbuilding, thus extending his business on a very large scale. It so happened that Mr. Pestonjee, during a sea voyage from Bombay to Calcutta, encountered a terrible storm, which compelled



MUNCHERJI AND RUTTONJI TATA AND COMPANY.

1. The Late Muncherji Shapurji Tata. 2. Ruttonji Shapurji Tata.



M. NAGERSHETH SONS.

1 Nagersheth Building Bombay 2 The Zaveri Spinning and Manufacturing Company, Ltd, Ahmedabad.
3. The Hathising Manufacturing Company, Ltd, Ahmedabad

A S NARIELWALA.

1 Office Premises 2 Staff Group 3 Mr Narielwala and His Family 4 Mr Narielwala's Bungalow

him to take shelter in the harbour of Alleppy, on the Malabar coast, in Southern India. After having found favour with the Raja of Travancore, he obtained permission from that ruler to proceed to Broach, his native city, for the purpose of visiting his relations, subject, however, to his giving a promise to return with his brother Mr. Nowrojee, who was staying in Bombay, as soon as circumstances allowed. The word of a Narielwala was then, even as now, equivalent to a bond; and both of the young men, on again arriving at Alleppy, were encouraged and supported by the Raja, with the result that they subsequently became owners of two steamers and several native craft, together with landed property in that town, at Broach, and Bombay.

Mr. S. S. Narielwala, great-grandson of Mr. Nowrojee, was in early life a salesman for the firm of Messrs. Finlay, Scott & Co., merchants, of Bombay, but he afterwards commenced business on his own account by dealing in Manchester piece-goods, and was, at a later date, joined in partnership by two experts in milling machinery, upon which the present concern was inaugurated. This venture was attended with great success, especially from the year 1877, when his son, Mr. A. S. Narielwala, became manager. The latter was only twenty-one years of age at the time, but his qualifications for the position, consisting of unbounded energy, ability, and tact, were manifested by the very rapid progress made after his assumption of control.

This success was well maintained until the year 1893, when the death of his father, following upon the retirement of the other two partners, made Mr. A. S. Narielwala sole proprietor of an extensive business in importing machinery and mill stores, in controlling a cotton-baling plant, and in supervising large operations in connection with landed properties.

Mr. Narielwala visited England in 1907, where he made the personal acquaintance of a large number of merchants and manufacturers with whom he had had important commercial relations; he further greatly extended his knowledge of the most intricate parts of modern machinery in order that his clients in India might be supplied with thoroughly up-to-date plant and accessories, and he also secured agencies for a large number of the leading manufacturing firms in the Old Country.

One of the most beneficial results of this five months' trip was the strengthening of the confidence which had through many years of transactions by correspondence been placed in Mr. Narielwala, and evidence of this was given before he left London by his being requested to act as arbiter for many houses in the settlement of disputes which might arise between home and Indian firms in general business matters.

Mr. Narielwala contemplated taking his family to England in 1911 in order to be present during the coronation ceremonies of His Majesty the King-Emperor, and he had actually secured passages for the proposed journey, but his wife unfortunately contracted small-pox, and the project was consequently postponed. The Great War has now intervened, but upon its termination Mr. Narielwala hopes to be able to carry out his cherished desire by taking his wife and his eldest son, Mr. Nowrojee, who will shortly complete his educational career at St. Xavier's College, Bombay, and who will join his father's business on his return from England. There are three other sons at present at St. Xavier's, and they too intend to follow the example of their eldest brother by taking up a commercial life under the guidance of their father.

Mr. Narielwala is now the owner of extensive land and household property in Bombay, as well as of about 2,000 acres on Salsette Island, which is situated about 10 miles distant from that city. The island is an ideal place for mills and other industrial enterprises, and its numerous hills are capable of furnishing all the earth, stone, and rubble necessary for the suggested reclamation of the whole of Back Bay, while its clay soil is eminently suitable for the manufacture of bricks and tiles equal in quality to those of the famous Mangalore type.

During the course of excavations made on behalf of the Bombay Port Trust authorities, seams of rock which give promise of rich mineral deposits have been discovered, and it is intended at an early date to submit these to a series of scientific investigations with a view to development. In the village of Anik, near Bombay, Mr. Narielwala has one of the few salt-pans to be found in the neighbourhood, as well as some five thousand trees from which toddy, a native drink, is drawn, and about three thousand valuable mango, palmyra, and other trees, from all of which an excellent income is derived. The baling of cotton is carried on at Barsi, in the district of Sholapur, and this enterprise, too, adds a very considerable amount to the annual revenue.

It has always been a leading principle with Mr. Narielwala throughout the whole of his business career that he would not engage in any commercial undertaking which could not be successfully completed with the capital at his disposal, and this reliance upon his own resources has contributed very largely to the sound financial position which he occupies to-day. But this gentleman has not been without help in another direction, as his wife, Mrs. Beheroze Narielwala, has always given him invaluable assistance in the management of his numerous ventures, and has even assumed responsibility for supreme control during her husband's absence in England and elsewhere.

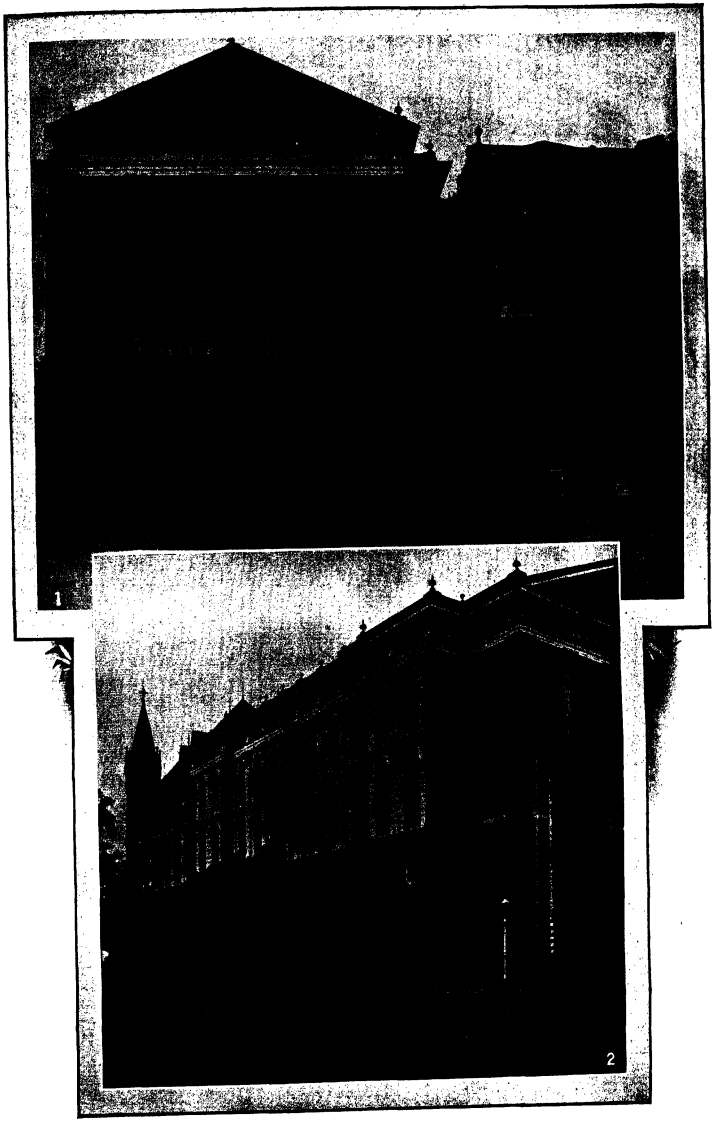
The support of public and private charities by liberal donations unostentatiously yet wisely bestowed has been a marked characteristic of each successive generation of the Narielwala family, and the gentleman with whom these notes are particularly concerned, is worthily upholding the splendid philanthropic traditions of his race.

THE NATIONAL BANK OF INDIA, LTD. (BOMBAY).

The paid-up capital of the National Bank of India, Ltd., which is incorporated in the United Kingdom, is £1,000,000, and the Reserve Fund stands at £1,200,000.

The bank has a splendid record of progress, not only in the three Presidency cities of Bengal, Bombay, and Madras, but also at Karachi, Cawnpore, Delhi, Amritsar, Lahore, Tuticorin, Cochin, and Chittagong, in India; at Rangoon and Mandalay, in Burma; at Camp Office, Aden, and Steamer Point, Aden, in Arabia; at Colombo, Kandy, and Newera-Eliya, in Ceylon; at Zanzibar, Mombasa, Nairobi, Nakuru, and Kisumu, in East Africa; and at Kampala, Entebbe, and Jinja, in Uganda. Branches have also recently been opened at Dar-es-Salaam and Tanga. Agencies have been established at a number of important towns throughout the world, and special correspondents have been appointed in cities in North and South America.

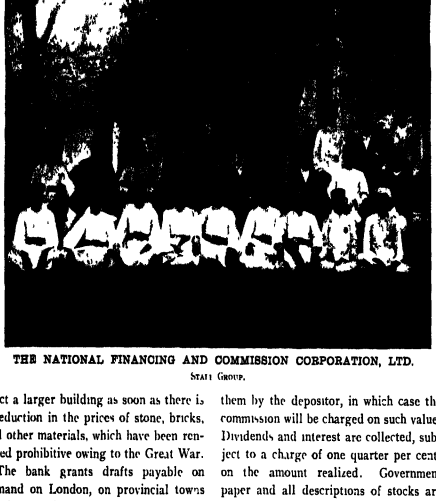
The Bombay branch was opened in the year 1863 in a small building in Hornby Road, but after a very brief tenancy other premises were obtained in Esplanade Road. The accommodation, however, proved to be quite insufficient to meet the



NATIONAL BANK OF INDIA, LTD. (BOMBAY).

1. FRONT VIEW. 2. SIDE VIEW

rapidly growing business of the bank, and in 1867 the Directors began the construction of the very handsome palatial block now occupied by them. The building was completed in 1868, and it is worthy of note that although the company did not at that time require the use of all the offices in the new structure but were able to let some of them to tenants, the annual turnover has in recent years increased to such an extent that every room has been requisitioned for the bank officials. Further than this, the Directors a short while ago purchased the adjoining site, whereon they propose to



THE NATIONAL FINANCING AND COMMISSION CORPORATION, LTD.
STAFF GROUP.

erect a larger building as soon as there is a reduction in the prices of stone, bricks, and other materials, which have been rendered prohibitive owing to the Great War.

The bank grants drafts payable on demand on London, on provincial towns in Great Britain, on its branches and agencies, it issues letters of credit for the use of travellers, and it remits money by telegraph to London and other important cities, and to all its branches at the exchange of the day. Bills of exchange on all parts of the world are bought and collected at current rates.

Deposits are received for fixed periods not exceeding one year, and the rates allowed at present on sums of Rs. 500 or more are fixed for twelve months certain, at 5 per cent. per annum. Rates for deposits to be fixed for shorter periods can be obtained on application.

Interest is not allowed after the notice of withdrawal has expired, nor can the amount be withdrawn before due date either for remittance or otherwise. In cases where renewal is desired, receipts should be sent in on due date and fresh receipts requested to prevent loss of interest.

The bank, in its agency department, undertakes on behalf of its constituents the safe custody of shares, title deeds, and other securities, charging on re-delivery a commission of one quarter per cent. on the nominal value of securities, except in cases when a special value is placed on them by the depositor, in which case the commission will be charged on such value. Dividends and interest are collected, subject to a charge of one quarter per cent. on the amount realized. Government paper and all descriptions of stocks are purchased and sold, the commission charged on such transactions being one quarter per cent. on the amount invested or realized.

Interest is allowed at the rate of 2 per cent. per annum on the minimum monthly balance at credit of current accounts from Rs. 1,000 to Rs. 1,00,000.

The directors are Mr. Robert Campbell, chairman; Mr. Robert Williamson, deputy chairman; Sir John P. Hewett, G.C.S.I., C.I.E.; Mr. C. C. McLeod, Mr. Robert Miller; Mr. Alfred Simson, Mr. J. N. Stuart; and Mr. J. A. Toomey.

The London bankers are the Bank of England, the National Provincial Bank of England, Ltd., and the National Bank of Scotland, Ltd.

THE NATIONAL FINANCING AND COMMISSION CORPORATION, LTD.

This institution was inaugurated at Bombay in July 1912 with the dual object of conducting ordinary banking operations and of promoting commercial enterprise not merely in that city but also between India and other countries. It must have been a staggering blow to the directors when that serious financial crisis occurred in the Presidency in 1913, which resulted in the enforced liquidation of a considerable number of Indian banking concerns, and it reflects the highest credit upon the managing authorities of that day that the unshaken confidence of shareholders and of the general public enabled them to steer their ship safely through the storm of destruction into the calmer sea of security in which it now rides.

Scarcely had the severity of that catastrophe been realized when the news of the outbreak of the Great War was flashed round the world, and again the newly established corporation had to face an event which might be the forerunner of either prosperity or adversity according to the manner in which new conditions were handled by the directors. Those gentlemen, however, were equal to the occasion, and they embraced the opportunity afforded them of laying the foundations of a business which now has flourishing trade relationships, on a commission basis, with Japan, Europe, and America.

The paid-up capital of the corporation amounts to Rs. 10,65,000, and the investments in Government paper and bonds have already reached a total of Rs. 1,50,000.

Satisfactory progress has been made in all branches of banking and exchange business, notwithstanding the difficulties with which new ventures are usually associated, and it is confidently anticipated that future years will witness a still further expansion of the resources of the corporation.

The board of directors consists of the following gentlemen, who are well known and honoured in the Presidency, namely, Rao Bahadur the Hon. R. N. Mudholkar, C.I.E., and Messrs. Chhotalal Kilachand Devchand, J.P., Gopaldas Tricumjee Jivandas, Pudamshin Nurshinbhai, and C. I. Parekh (*ex officio*), the capable and energetic manager. The London corre-

spondents of the corporation are the Union of London and Smith's Bank (Holborn Circus branch); and Messrs. Ford, Rhodes, and Parkes, and Messrs. A. S. Madon & Co., are the auditors.

The registered offices are at 75 Apollo Street, Fort, Bombay, and a branch establishment has been opened at Surat.

NIPPON MENKWA KABUSHIKI KAISHA.

The export of cotton from India to Japanese markets was commenced little more than twenty years ago by the Nippon Menkwa Kabushiki Kaisha (the Japan Cotton Trading Company, Ltd.), who sent representatives to Bombay for the purpose. The company is, moreover, one of the premier Japanese trading firms in that city, and its history is a brilliant example of what can be achieved by thorough organization and resolute energy in building up sound commercial enterprises between two Oriental countries.

Japanese merchants were at one time purchasers of a very considerable quantity of Indian yarn, but their own textile industry has progressed so rapidly that preference is now given to cotton, of which they are by far the largest importers.

In addition to the company's extensive dealings in cotton, operations are conducted on an extensive scale in cotton-yarn, cotton and silk goods, fibres, and general merchandise, and some idea of the magnitude of their turnover may be gauged from the fact that they have branch establishments in New York, Fort Worth, Shanghai, Hankow, Hongkong, and in practically every place of importance in the East.

It might be added that the first shipment of American cotton for consumption in Japanese mills was made through the agency of this company.

The company's head offices are in Osaka, Japan, and its capital comprises five million yen, while the Bombay establishment is in Carlton House, Outram Road, Fort.

The telegraphic address of the company is "Menkwa, Bombay."

THE NIPPON YUSEN KAISHA (THE JAPAN MAIL STEAMSHIP CO.).

This company was formed in 1885 by the amalgamation of the only two rival steamship companies in Japan at that time. The company confined itself at first to the coastwise trade, but gradually extended its sphere of work to Vladivostock, North China, and Chosen (Korea), with regular sailings to those ports, and occasional voyages to both Australia and Hawaii with emigrants and cargo. During that period the company received a yearly subsidy from the Japanese Government, to earn which it had to maintain, not only several mail routes, but also to hold itself in readiness to place its entire fleet at the Government's immediate disposal for use as transports, and so forth, when required. The wisdom of the Japanese Government in financially supporting and fostering the company's mercantile marine was soon to be put to a severe test. In 1894 war broke out, and nearly every vessel in the company's fleet was required for service as a transport, or an armed cruiser, or a hospital ship. The Nippon Yusen Kaisha was able to meet the Government's needs, sacrificing its own commercial interests in so doing. It then became necessary for the company to purchase more steamers to carry on its business and fulfil its mail contracts, which had been temporarily interrupted or delayed by the withdrawal of so many ships from the regular services. This placed the efficiency of the company beyond question and firmly established its reputation. It did more than this, however, as it showed the world at large that Japan had a mercantile marine of her own which could be depended upon to supply the Government's wants when required. After the close of the war the Nippon Yusen Kaisha determined to extend its foreign lines and fly the company's flag in the four quarters of the globe. In order to do this it inaugurated in 1890 three monthly mail and passenger services, namely, a European, an American, and an Australian line, and the rapid progress and development since made by them are well known to the public. The European line is now looked upon as an established travelling medium between India and Europe, via Colombo.

The company now owns 102 steamers, aggregating 500,000 tons gross, and it maintains the following lines: European Line, fortnightly; European Line (auxiliary service), fortnightly; New York Far East Line (via Panama), every four weeks; American Line (Kobe Seattle service), fortnightly; American Line (Hongkong-Seattle service), every three weeks; Australian Line, monthly; Bombay Line, fortnightly; Calcutta Line, fortnightly; Yokohama-Shanghai Line, semi-weekly; Osaka-Kobe-Shanghai Line, weekly; Osaka-Tsingtau Line, fortnightly; Yokohama-North China Line, three times a month; Kobe-North China Line, every six days; Kobe-Vladivostock Line, twice every three weeks; Kobe-Keelung Line, weekly; Yokohama-Formosa Line, four times a month; Kobe-Otaru Line, thirteen times a month.

The company's capital stands at Yen 44,000,000, or £4,400,000. It employs 750 officials on shore in its head offices and branches, and the staff afloat numbers 6,000, comprising officers, engineers, stewards, and crew generally, serving on board its steamers.

This record was achieved under the able management of the company's three presidents: first, the late Baron M. Morioka, who was nominated as president on the company's formation, and who held office until 1894, when he retired and was succeeded by the late Mr. T. Yoshikawa, who died in 1895 whilst holding office, and Mr. R. Kondo (now Baron), who was at once unanimously elected by his co-directors to the presidential chair, and was re-elected in 1907 on the expiry of his first term of office. He holds the same position to-day.

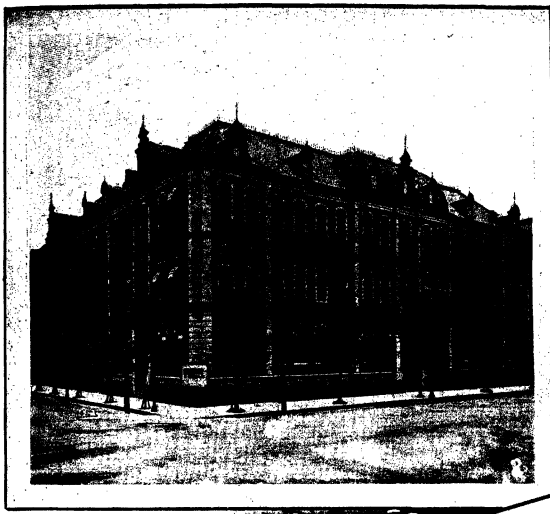
The Bombay Line was started in 1893, when the rapid development of the cotton-spinning industry in Japan rendered it important that there should be a regular supply of raw material, and a monthly service of three steamers was inaugurated. The growing demand for Indian cotton in Japan necessitated the company's increasing the number of its steamers on this line, and six steamers are now employed to maintain a fortnightly service between Kobe and Bombay, via Moji, Shanghai, Hongkong, Singapore, Colombo, and other places, extra steamers being dispatched in addition in order to meet the requirements of cotton shippers. The company has one more line connecting India with Japan, inaugurated in 1911, viz. the one from Calcutta to Japan. The service is a fortnightly one and is maintained with six steamers between Yokohama and Calcutta, via Kobe, Moji, Shanghai, Hongkong and Singapore, Penang and Rangoon.

The company's head office is in Tokyo, and its branch offices and agents in India, Burma, and Ceylon are as under: Nippon Yusen Kaisha, at 339 Alice Buildings, Hornby Road, Bombay; Nippon Yusen Kaisha, 2-3 Clive Row, Calcutta; the Arracan Company, Rangoon; the Bombay Company, Madras; and Messrs. Carson & Co., Colombo.

Other branch offices are at London

THE NIPPON MENKWA KABUSHIKI KAISHA (THE JAPAN COTTON TRADING COMPANY, LTD.).

1. Cotton Awaiting Shipment at the Cotton Depot, Tank Bunder, Bombay, Occupied by the Japan Cotton Trading Company, Ltd.



NIPPON YUSEN KAISHA.

1. S.S. *Suwa Maru.* 2. Head Office, Tokyo.

NOWROSJEE WADIA AND SONS.

THE LATE HON. MR. NOWROSJEE NUSSERWANJEE WADIA, C.I.E.

(4, Lloyd's Avenue, E.C.), Seattle, New York, Hongkong, Shanghai, Tientsin, Keelung, Nagasaki, Moji, Kobe, Osaka, Nagoya, Yokohama, Tokyo, Hakodate, and Otaru.

In addition to the above, the company has agents in nearly all other parts of the world.

NOWROSJEE WADIA & SONS

Original members of the Wadia family carried on business as shipbuilders at Bombay in the early part of the eighteenth century and during a portion of the following one, and in the course of years they constructed for the East India Company a large number of war vessels, noted for their seaworthy qualities.

The extensive business now carried on by Messrs. Nowrosjee Wadia & Sons was founded in the year 1895 by the late Hon. Nowrosjee Nusserwanjee Wadia, C.I.E., a descendant of one of the famous shipwrights, who was born on the 30th August, 1849. When only fourteen years of age young Wadia was sent to England to be educated at Mr. Neadam's school at Seaforth, near Liverpool. He returned to Bombay in 1868, and, having a natural leaning towards manufacturing, he erected a paper-mill, the first of its kind in India, designing the building and constructing the necessary machinery. This venture did not meet with the success it deserved, chiefly owing to troubles connected with the supply of labour, and in 1873 Mr. Wadia again proceeded to England, where his skill in engineering matters secured his appointment as a member of the Institute of Mechanical Engineers and an associate member of the Institute of Civil Engineers. While abroad the Government of India offered him the position of superintending engineer of the North-Western Railway, and he immediately returned to Bombay with the object of taking up his new duties. At that juncture, however, a serious accident befell the machinery in the Manockjee Petit Mills in Bombay, and Mr. Wadia's report upon the occurrence, confirmed by leading engineers in England, so thoroughly convinced Mr. (afterwards Sir) Dinshaw Petit of the capabilities of the author that the latter was offered the supreme control of those mills. Mr. Wadia accepted the position, and his management was so successful that the company took over the control of the Bomanjee Dinshaw Petit Mills and the Dinshaw Petit Mills.

In 1879 Mr. Wadia, in conjunction with Mr. Dinshaw Petit, Mr. John S. Alston, and Mr. W. Reid, started, as a private company, the Bombay Dye Works, situated on the Mahim foreshore, with the view of dyeing turkey-red and other colours on the lines followed by the eminent firm of Messrs. John Orr Ewing & Co., of Glasgow.

Mr. Wadia went to England again in 1881, and during his stay there he designed for the Manockjee Petit Mills its present huge engine of 4,000 h.p., which is in all probability the largest in India at the present time. He also obtained valuable agencies for a number of manufacturers of world-wide reputation, including Messrs. Platt, Brothers & Co., Ltd., of Oldham, the largest textile manufacturers in the world; Messrs. Hicks, Hargreaves & Co., the famous constructors of engines; Messrs. The Wilson Brothers Bobbin Company; and Messrs. Eadie Brothers & Co., makers of ring travellers, Paisley. These agencies are to-day held by the firm now under notice.

In the year 1890 Mr. Wadia's two sons, Messrs. C. N. and N. N. Wadia, were called upon by their father to become his pupils in order that they might be thoroughly trained in the managements of mills, and four years later, when Mr. Wadia began to take part in various phases of public life, he entrusted to his sons the sole control of the three Petit concerns already mentioned.

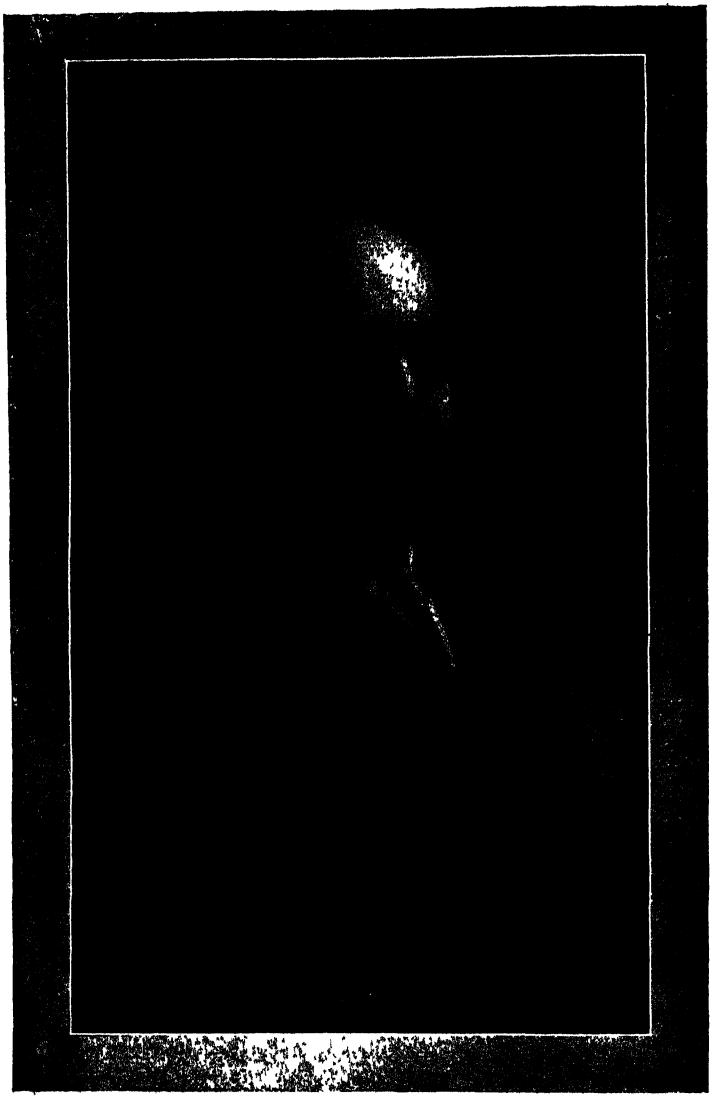
In 1895 Mr. Wadia, in conjunction with his two sons, Sir Dinshaw Petit, and two partners of the Bombay Dye Works, floated the Textile Manufacturing Company, Ltd., with mills containing a plant of 30,000 spindles, whereupon the firm of N. Wadia & Sons was founded, the partners being Mr. Wadia and his two sons. The new firm became agents for the last-named mill, and under their control the concern has grown to such an extent that the spindles have been increased in number to 55,472, 1,701 looms have been installed, and fully equipped bleaching and dyeing departments—capable of dealing with the total output of the mill—have been established. In 1898 the firm started the Century Spinning and Manufacturing Company, Ltd., with 30,000 spindles and 800 looms, which have been increased to 90,000 spindles and 3,000 looms.

In 1887 Mr. Wadia was invited by His Excellency Lord Reay, then Governor of the Bombay Presidency, to co-operate with him in founding the Victoria Jubilee Technical Institute, and it was largely due to his efforts, particularly as Hon. Secretary, a position which he held to the time of his death, that this institution, which has been of such immense value to Bombay, was established. Evidence of the forcefulness of character possessed by Mr. Wadia is found in the fact that he induced Messrs. Platt Brothers & Co. to present to the Institute a complete plant of textile machinery for the benefit of students who could thereby have ocular demonstration of the actual work of manufacturing in which they were to take an active part in later years. In recognition of his spirited public services, Mr. Wadia was in 1889 created a C.I.E. and a Justice of the Peace, while about the same time he became a member of the Bombay Legislative Council and continued as such for a period of eight years, when he resigned owing to failing strength. Owing to continued ill-health he proceeded to England in 1899 to seek rest and medical advice, but although some improvement was manifested for a short time, he died at Bournemouth on the 19th December in the same year.

Mr. Wadia was for several years an active and useful member of the Bombay Municipality, evincing deep interest in the cause of primary education, and he was most appropriately elected chairman of the joint schools committee of the corporation. He also designed plans for model schools and for the Lord Harris Municipal School. His subscriptions to charitable objects during life were enormous, and at his death he left a sum of about Rs. 5,00,000, with which his trustees have erected model dwellings—on the lines of the famous Peabody Buildings in London—for middle-class and poor Parsees.

The surviving partners of this gentleman, namely, Messrs. C. N. and N. N. Wadia, together with a younger brother, Mr. R. N. Wadia, continued to carry on the business, which included the management of the three Petit mills, the Bombay Dyeing and Manufacturing Company, Ltd., the Textile Manufacturing Company, Ltd., and the Century Spinning and Manufacturing Company, Ltd., together with the agencies of the principal English firms which were obtained many years previously, but in 1901 the firm's interests had extended so rapidly that they were compelled to relieve themselves of the management of the group of Petit mills.

Towards the close of the year 1905 the business was, for family reasons, divided,



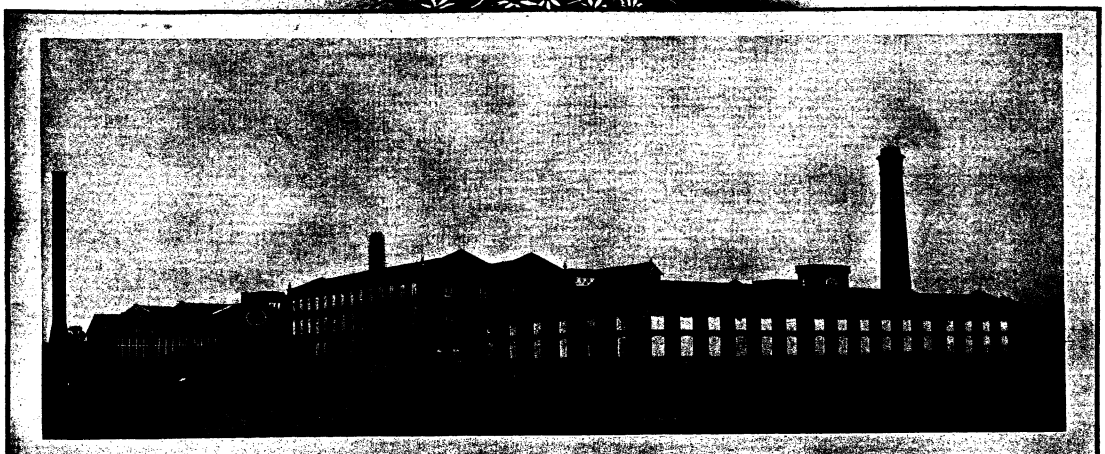
NOWROSJEE WADIA & SONS.

N. N. WADIA.

Photo by Sarony.

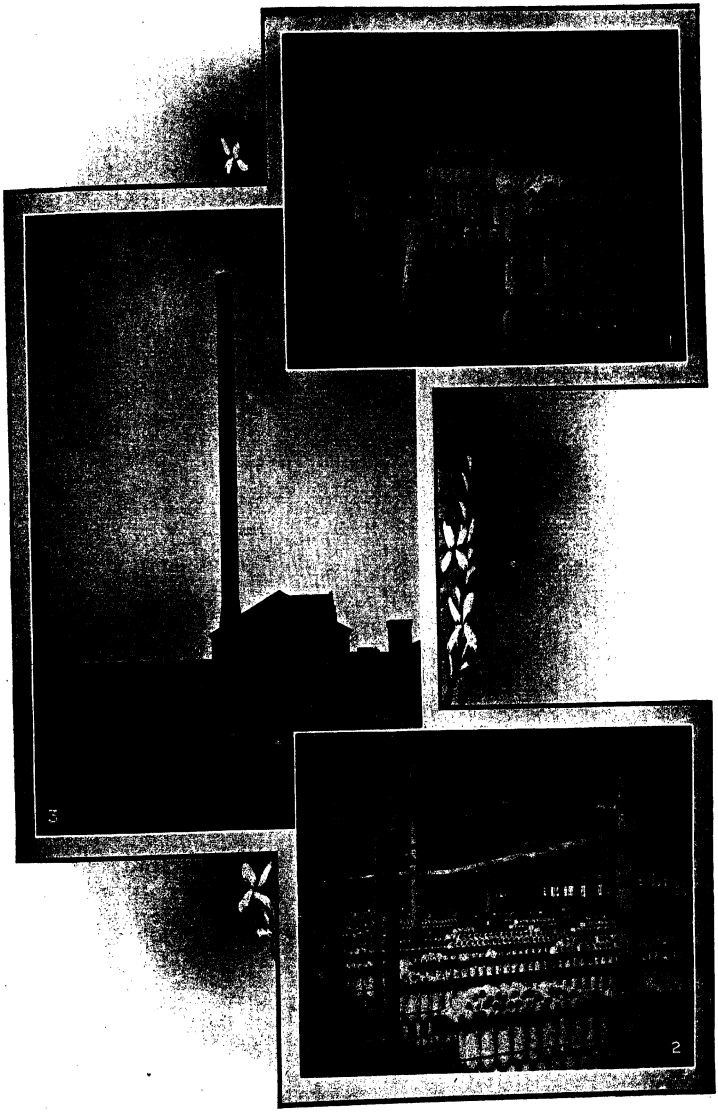
NOWROSJEE WADIA & SONS.

General View of The Bombay Dyeing and Manufacturing Company Spring Mills Dadar.



NOWROSJEE WADIA & SONS.

General View of The Bombay Dyeing and Manufacturing Company, Textile Mills, Parel.



NOWROSJEE WADIA AND SONS.

1. Carding Department, Spring Mills. 2. Spinning Department, Spring Mills. 3. View—Textile Mills, Showing the Weaving Department.

and Mr. C. N. Wadia took up the agency of the Century Spinning and Manufacturing Company, while his brothers continued to carry on the original concern under the old name.

MUNCHERSHAH N. CHANDABHOY.

Among the numerous successful architects, engineers, surveyors, and assessors of loss and damage resulting from fires there is no one in Bombay—one might probably say in the East—who has received a greater measure of confidence from those who are in the position of clients than Mr. Munchershah N. Chandabhoy, M.S.A., M.S.E.(Lond.), of Raja Bahadur Motilal's Mansions, Apollo Street, Fort, Bombay. He comes of a family born, as it were, to the various professions in which he is engaged, and after being soundly educated he entered the offices of his father, Mr. Nusserwanjee Chandabhoy, who practised as an architect, civil engineer, and surveyor in Bombay, and who was also a professor and principal at the Government Engineering School, subsequently converted into the Civil Engineering College, Poona.

This gentleman, Mr. Munchershah Chandabhoy, and his brother, entered into partnership in the year 1880, and they were concerned in the construction of many important buildings in Bombay. The father died four years later, and the practice was continued by the two sons until 1900, when they agreed upon a mutual separation.

The subject of this sketch has been professionally engaged in the erection of (*inter alia*) about thirty cotton mills, a large number of commercial and architectural buildings, the Byramjee Jeejeebhoy Charitable Institution on Queen's Road, and Jeejeebhoy Castle at Poona, together with some remarkably fine bungalows and residential quarters in the principal parts of the city, as well as in country districts.

Mr. Chandabhoy's great skill as an architect is only equalled by the thoroughness with which he supervises the carrying out of his designs, and the buildings erected by him will remain as a fitting tribute to one who is so intimately connected with the material progress and the social life of the city of his adoption. He has had a long and extensive practical experience as a valuer of land and buildings and as adjudicator in disputes of various kinds. As this branch of his profession he has been brought into greater public prominence by the particularly capable manner in which he has acted as assessor of losses on account of fires occurring in Bombay and in country districts.

Among the many insurance companies for whom Mr. Chandabhoy acts are the Central Fire Insurance Company, Ltd., the Royal Insurance Company, Ltd., the Royal Exchange Assurance Corporation, the Northern Assurance Company, Ltd., the Lancashire Insurance Company, Ltd., the Queen Insurance Company of America, the Century Insurance Company, Ltd., and many others.

A brief reference may also be made to some of the claims for losses which this gentleman has been instrumental in settling.

A very disastrous fire occurred in March 1914, when practically the whole of the cotton goods belonging to several leading companies and firms were destroyed. Insurances had been effected with various English and foreign companies, and Mr. Chandabhoy, acting on behalf of all parties, assessed loss and damages and awarded claims. A few out of many cases are as follows:

To Messrs. Hirji Khetsey & Co. he awarded a sum exceeding 11 lakhs of rupees; to Messrs. Mitsui Bussan Kaisha, Ltd., he allowed more than 7 lakhs of rupees; to the Allahabad Bank he granted 1¾ lakhs of rupees; and to the Bank of Bombay 3 lakhs of rupees. In April 1914 Mr. Harnandrai Surajmal sustained heavy losses, his claim being assessed at more than 3 lakhs and 80,000 rupees. Mr. Chandabhoy is called in as assessor at practically every fire which occurs in Bombay and in country districts.

He is also agent and proprietor of several cotton ginning and pressing companies in Khandesh, Berar, and in Malwa.

THE OMIAR FOUNDING AND ENGINEERING COMPANY, LTD. (Including the Western India Shipbuilding Yard).

Ironworks, which have quadrupled their output in the short space of the past two years, amply justify their foundation, and are deserving of the staunch support which must have been accorded to them. This somewhat unique experience has been realized by the Omiar Founding and Engineering Company, Ltd., which was formed in the year 1887 with comparatively small workshops in Foras Road, Bombay. The business was, however, commenced on sound principles embodying skill in execution of work and promptitude in carrying out large or small orders, and therefore it is not surprising to learn that in 1903 the company were compelled to obtain more extensive premises, covering an area of about 7,000 square yards, in Love Lane, Byculla, in the same city, and when further extensions, now under consideration, are completed, the works will cover an area of over 15,000 square yards.

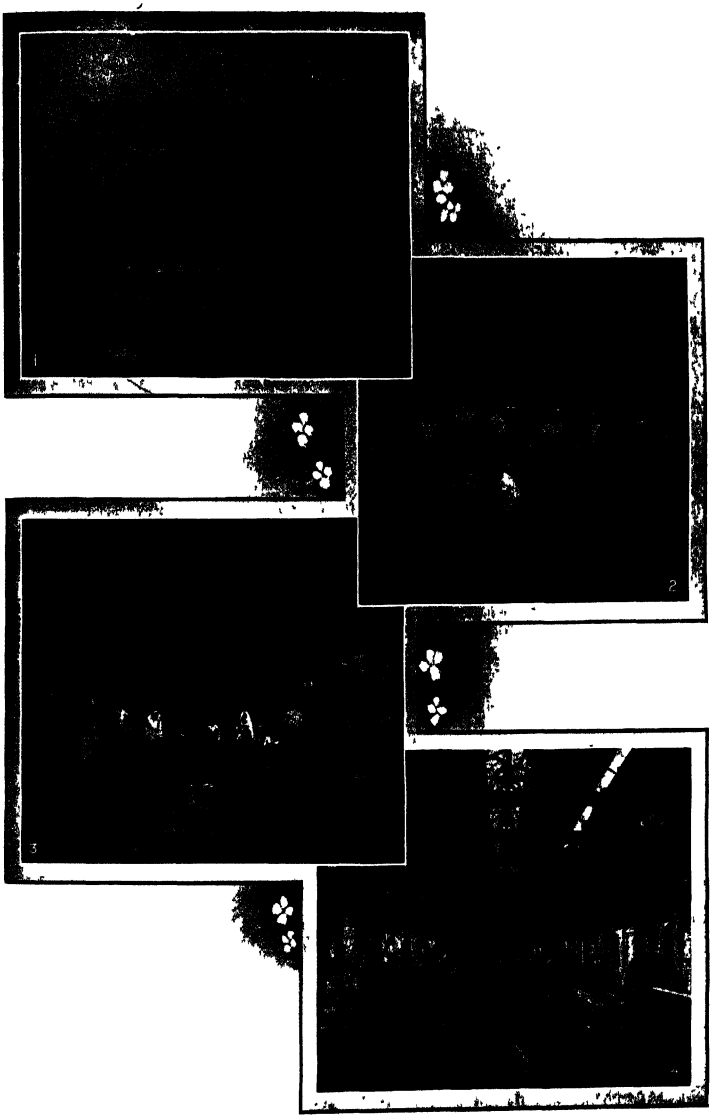
The company are general and constructional engineers, millwrights, shipwrights, founders of brass and iron, boilermakers, coppersmiths, plumbers and contractors, while they are included in the list of those firms who enjoy the privilege of using the Hughes and Merewether dry docks at the Port of Bombay.

The buildings include manager's bungalow, offices, stores and other structures. Castings of every description are made up to ten tons in weight. The workshops contain up-to-date machinery of every description capable of dealing with any kind of engineering work.

A special feature is made of repairs of all kinds to ships of any size, and of turning out grinding, rotary oil, sugarcane, mortar and other mills; cotton gins and spare parts; wrought and cast-iron tanks and pipes; mill gearings; rope pulleys; ornamental railings; fountains, gates, spiral staircases; roof trusses; road rollers; and, in fact, all tools and appliances required by district boards, Public Works department, and municipalities. Contracts are continually being entered into for carrying out work for, or supplying manufactured goods to, various governments, railway, military stores, and municipal authorities.

Owing to the war, munition work has naturally cast a severe strain upon the company's resources, but under the able management of Mr. A. F. Walters there has not been any serious dislocation of the ordinary routine. As a further proof of the readiness of the company to render all assistance in their power to the Government, it should be added that they lent fourteen absolutely new lathes from their plant and placed them at the disposal of the Government of India.

Among many important contracts for structural ironwork undertaken by the company, mention may be made of the one for the supply and erection of ironwork for the Tata mills in Bombay, one of the largest of modern cotton mill concerns, which compares most favourably



OMIAH FOUNDING AND ENGINEERING COMPANY.

1. Works Office. 2. Portion of Moulding Shop. 3 Another Portion of the Moulding Shop. 4. Portion of Machine Shop.

with similar enterprises in England and America.

During the past few months the company have shown still further enterprise by opening a shipbuilding yard at Vesava. Arrangements are well in hand for the construction of the requisite buildings. and for putting down the necessary plant for dealing with the construction of steel and wooden vessels.

The shipyard was started in December 1917, and up to the present time (April 1918) a large area of ground has been raised about four feet ; a wet dock is practically completed ; an auxiliary wood ship of about 750 tons deadweight capacity, and one sailing vessel of 200 tons capacity, are now practically ready for launching ; and numerous life-boats, jolly-boats, and other craft are ready for delivery to various clients.

The company are now in a position to construct auxiliary wooden vessels, yachts, dingies, barges, cutters, pontoons, and life and other boats, and in the near future will be able to build steel and composite ships.

The Omiar works take front rank among the largest and best equipped engineering shops in India, not only with regard to machinery and plant, but also in respect of modern conveniences, which include a complete electric light installation with power generated from the company's own plant.

The steady expansion of the business, consequent upon the extension of the plant and the reputation which the company has earned for excellence of work, has necessitated a corresponding expansion in office staff.

This has been accomplished by arranging with Messrs. Greaves, Cotton & Co. to take over the duties of secretaries and treasurers at their office, 1 Forbes Street, Fort, Bombay.

Constant employment is found for 1,500 hands at the works in Bombay and the shipyard at Vesava.

The telegraphic address is "Omiar Foundry," Bombay.

D. C. OOMRIGAR & CO.

The founder of the Oomrigar family was the late Mr. Cowasjee Nusserwanjee Oomrigar (father of the present senior proprietor, Mr. Ookerjee Cowasjee Oomrigar), who, hailing from Oomra, a village in the district of Surat in the northern division of the Bombay Presidency, removed to the city of Bombay in the year 1827, and commenced a small though promising business for the sale by retail of foreign and country liquor in one shop, but after the lapse of only a yew years Mr. Oomrigar found that it would be to his advantage to have his own distillery on a small scale for the manufacture of country spirit, and he accordingly opened one at Uran, in the district of Kolaba.

That step marked an epoch in the history of the business, as it began to show a gradually increasing annual turnover. The proprietor had two sons, namely, Mr. Dhunjibhoy and Mr. Ookerjee (the present senior partner), and the elder of the youths (Mr. Dhunjibhoy), after serving for a few years with a firm of stevedores in Bombay, joined his father, Mr. Cowasjee, in the business, and subsequently became sole owner on the death of the latter. Mr. Dhunjibhoy, who was born in September 1824 at Oomra, never enjoyed the advantage of a liberal education; but the reputation of Mr. Dhunjibhoy as a shrewd but honourable tradesman was a most valuable adjunct, and his natural keen abilities produced a still greater development of the concern. Mr. Ookerjee was born in Bombay on July 29, 1845, and after a course of instruction at the Bombay Society's High School, began his business career by becoming assistant to his brother in the year 1858, and that, too, when not more than thirteen years of age.

Ten years later (i.e. in 1868) Mr. Dhunjibhoy and Mr. Ookerjee became partners and opened premises on a moderate scale for the wholesale sale of foreign liquor in Abdul Rehman Street in Bombay.

On the death of Mr. Dhunjibhoy on October 13, 1892, Mr. Ookerjee became sole proprietor of the firm, his brother having died without leaving issue. The new owner possessed business qualifications of a high order, but he had something more than that, as he had intelligence and energy to back them up, and his efforts were rewarded in full measure.

Mr. Ookerjee's eldest son, Mr. Sorabjee, who was born in Bombay on August 5, 1868, and subsequently studied up to the Matriculation examination at the Chandanwadi High School, became associated with his father's business in the year 1887, and his help has been of the most valuable character. About two years later a separate establishment was opened for the sale of oilman's stores and provisions.

Mr. Cowasjee, the younger son of Mr. Ookerjee, was born in Bombay in the year 1882, and after completing his school career, joined his father and brother in business in the year 1905, the three entering into partnership under the name of Dhunjibhoy Cowasjee Oomrigar & Co., or as D. C. Oomrigar & Co., as they are usually called. In the year 1909 Mr. Cowasjee attended the Madras Distillery College for about three months to learn the art of distilling, and he subsequently passed the Government examination of that institution. The firm of D. C. Oomrigar & Co. are well known as progressive merchants, not only in the Bombay Presidencey, but throughout Western and Upper India, where they have extensive business connections. They have also helped many dealers in their businesses almost throughout the Bombay Presidency.

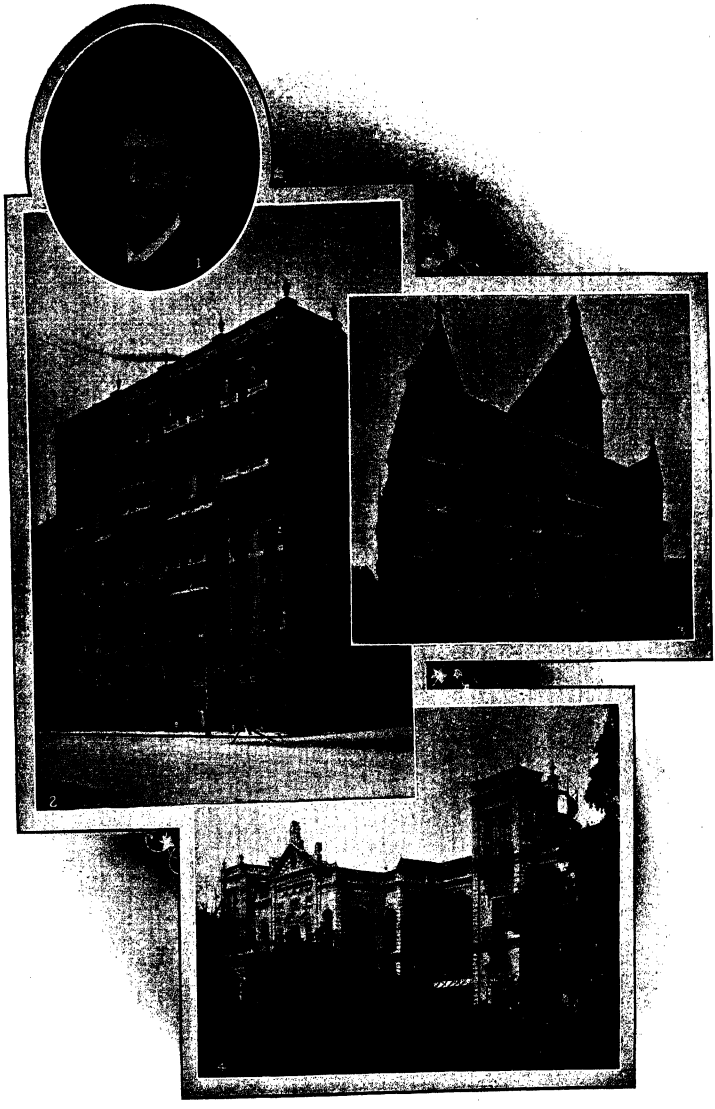
In accordance with the requirements of the Bombay Government they have, at a great cost, recently made very great improvements in their distillery at Uran, where country liquor, known as *mhowra*, is manufactured, and for the past seven years they have been contractors to the Government for the supply of that product in the districts of Karachi and Hyderabad.

Messrs. D. C. Oomrigar & Co. hold agencies in India for several important European firms, among whom may be mentioned: Messrs. John Begg, Ltd., Messrs. J. and W. Hardie, for whisky; and Messrs. Hurter & Son, of London, for their well-known brands of wines, and besides these they possess several other agencies. They are also sole agents in Bombay for the world-renowned tea of Messrs. Liptons, Ltd.

Mr. Dossabhoy Merwanjee Oomrigar, cousin of the senior partner, is general manager, and he renders most valuable assistance in the conduct of business. Individual members of the firm, while taking their full share in the control of their establishments, have never overlooked the claim of those who are less favourably situated than themselves, and many needy persons can testify to the generosity shown to them.

Mr. Dhunjibhoy, who was of a very amiable and charitable disposition, in an unostentatious manner greatly assisted poor relations, and he left behind him a large number of friends and admirers in business and private circles.

Mr. Ookerjee has been equally considerate to his poor relatives and other needy persons by giving private financial help to them, and he has, further, erected



MUNCHERSHAH N. CHANDABHOY.

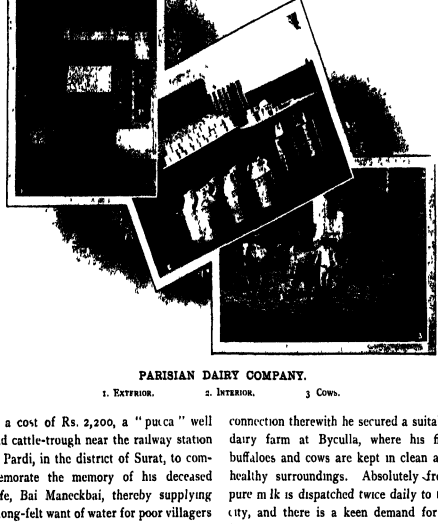
1. Munchershah N. Chandabhoy. 2. Alice Buildings, Bombay. 3. Byramjee Jejeebhoy Charitable Institution, Bombay.
4. "Jejeebhoy Castle," Poona.

a charitable school in the village of Vatar, in the district of Surat, in memory of his grandson, Mr. Shavakshaw.

The Bombay Government in the year 1908 honoured him by creating him a Justice of the Peace for the city and island of Bombay.

Mr. Sorabjee, who is of a very social and amiable disposition, has, in memory of his late wife, Bai Maneckbai, and his late son, Mr. Shavakshaw, set apart a sum of Rs. 30,000, in trust for charitable objects, out of which Rs. 8,000 have been contributed by his father Mr. Ookerjee.

In the year 1907 Mr. Sorabjee built, at a cost of Rs. 2,200, a "pucca" well and cattle-trough near the railway station at Pardi, in the district of Surat, to commemorate the memory of his deceased wife, Bai Maneckbai, thereby supplying a long-felt want of water for poor villagers and animals, and those conveniences have been handed over to the district Local Board of Surat. Accompanying the gift there was a transfer by Mr. Sorabjee of a 4 per cent. Port Trust Bond of Rs. 1,000, together with mango-trees planted on a plot of land measuring about half an acre, to provide the cost of filling the trough in perpetuity in terms of the preamble to Government Resolution No. 6,613, dated July 5, 1907. In addition to these he has given a large sum in other private charities during the last twelve years.



PARISIAN DAIRY COMPANY.

1. Exterior. 2. Interior. 3 Cows.

THE PARISIAN DAIRY COMPANY.

It is an indisputable fact that dairying in India has been more neglected in the past than any other industry of importance, and therefore one has all the more pleasure in referring to a dairy owner who is carrying on an extensive business in this line under thoroughly up-to-date conditions, and whose largely extending circle of customers is the best proof of the high-class quality of milk and other products.

Mr. Manekjee Sorabjee Mistry opened premises in the year 1911, under the name of the Parisian Dairy Company, at 1 Tamarind Lane, Fort, Bombay, and in connection therewith he secured a suitable dairy farm at Byculla, where his fine buffaloes and cows are kept in clean and healthy surroundings. Absolutely fresh pure milk is dispatched twice daily to the city, and there is a keen demand for it from a large number of private customers as well as from the leading clubs, hotels, messes, His Majesty's troopships, and the Supply and Transport Department of the military authorities.

Mr. Mistry also supplies large quantities of other dairy produce, such as butter, cheese, cream, ghee, and casein, which are not only purchased locally but are also sent to outlying districts as well as to Ceylon, East Africa, and Burma. Butter and casein are, further, exported to the London market, where there is steady trade at remunerative prices, and it may be added that an analysis of these products has shown that they are of the purest quality and entirely free from noxious ingredients.

At an exhibition of "Foods and Household Requisites," held in the Town Hall, Bombay, in December 1917, Mr. Mistry had the honour of being awarded a diploma of merit for his display of general dairy products.

Mr. Mistry undertakes the management of the whole concern, although he is ably assisted by his two younger brothers, Phirozesha and Shavaksha.

The consistently steady growth of this business may be attributed first of all to the fact that customers get full value for money, and, secondly, to the unfailing courtesy and straightforward conduct of the brothers.

PATHÉ FRÈRES.

One of the most astounding features of the early portion of the twentieth century has been the development of that unique industry which has given to the whole world attractive cinematograph displays, and it is a singular fact that in no other branch of commercial enterprise has such remarkable progress been made during the past few years, unless it be in connection with the manufacture of weapons of war. With its growth must ever be associated the name of Charles Pathé, Chevalier of the Legion of Honour of France, and head of the great international picture house in Paris which bears his name.

It is true that the first workable cinema machine was made by an Englishman, but it is equally true that the sale of it to Mr. Pathé was the practical foundation of the illustrious firm of which this gentleman is the guiding spirit.

The filming of incidents of everyday life met with such appreciation from the general public that the proprietors determined to give effect to their cherished project of screening dramas, and it is no exaggeration to say that millions of people, old and young, grave and gay, philosopher and factory hand, soldiers and sailors, in fact, persons from every walk in life, have been interested as well as instructed by these matchless presentations. In the development of the dramatic idea Mr. Pathé gathered together a small band of theatrical artists, and the first productions consisted of short and even crude stories in comparison with those magnificent scenes depicted to-day. Inciden-

D. C. COMRIGAR & CO.

1. Exterior View. 2. Dhunjibhoy Cowasjee Comrigar. 3. Cookerjee Cowasjee Comrigar. 4 Sorabjee Cookerjee Comrigar. 5. Cowasjee Cookerjee Comrigar.

tally it may be mentioned that the well-known Max Linder was a member of the original company selected by Mr. Pathé, and that he is still one of the most loyal employees in the famous Paris studio.

The five-reel drama succeeded the short sketches above referred to, and then came the serial, which, in spite of keen competition, has placed Pathé Frères far in advance of all rivals in the now fully established cinema industry.

The name "Gold Rooster" originally used by the firm as a kind of trade mark has become a household word, but the title of "Pathé Plays" has also been adopted as a guarantee of authorship, and it is rapidly gaining equal popularity.

Since the serial called "The Exploits of Elaine" drew forth amazement as well as admiration from lovers of pictorial plays, the firm have continued the present masterpiece after masterpiece, each new production seeming to eclipse its predecessors, especially in those details of portrayal and management which, in combination, are the secret of success.

Visitors to Paris cannot fail to have noticed the magnificent seven-storied building on the Grand Boulevard occupied by Pathé Frères, and it is the proud boast of the proprietor that every process of manufacture, from the working-up of raw materials to the issue of completed films of drama or comedy, is carried out on their own premises by their own staff. Projecting machines are made in their factories, and at the huge studios at Vincennes thousands of persons are employed in various ways in the production of the firm's incomparable works of art.

Pathé Frères have extensive warehouses and offices in Wardour Street, London, together with branches in all important cities in Great Britain.

The progress of the firm since the commencement of the war has, however, been more marked in the United States of America than elsewhere, and it is a regular practice for pictures to be submitted by leading New York studios for the approval of Pathé's representatives, and if these are judged to be equal to the recognized standard of this famous firm they are purchased and subsequently published under one of their distinguishing trade-marks.

In the year 1907 Pathé Frères opened an establishment in Calcutta, but the cinema had not then "taken hold" of India as it had done of other countries, and it was not until 1910 that a real start could be made. A small office was then obtained in Bombay, and not a day has passed during the intervening eight years upon which a distinct growth of business has not been noticeable. On no fewer than three occasions the firm have been compelled to secure increased accommodation, and when they decided a few months ago to construct a suitable building they were fortunate enough to secure one of the finest sites in the most important commercial centre of the city. It has a frontage of 80 ft. and a depth of 70 ft.; it is immediately opposite the fine new Custom House; and abuts upon a thoroughfare which will eventually be connected with Hornby Road. The building will have three floors, and a flat roof upon which studios will be erected, and there will also be special vaults (on the lines of Pathé's in Paris) for the storage of films, as well as a projecting room where new films will be shown to exhibitors, rooms for repairs, and commodious offices. All fittings are being obtained from Paris, and it is probable that the building will have been completed before this work is published.

During the few years' existence of Pathé Frères' wonderful organization in India its operations have been extended far and wide in the East, and one cannot visit a picture house in India, Ceylon, Burma, or even on the Persian Gulf in which Pathé's productions are not shown. By reason of the vast network of agents and subscribers to Pathé programmes the attention of the Government of India has been drawn to the advantages of co-operating with the firm in exhibiting films relating to incidents in the Great War, and at the present time an official Red Cross picture has been entrusted to them for circulation.

The Government has also realized that the cinema can be used as a powerful educational force by the presentation of screens prepared for giving ocular demonstrations of the science of agriculture, of the effect of various hygienic laws, or of industrial methods, but this form of instruction must necessarily be postponed until normal conditions of life are completely re-established. The firm are, however, in the meantime assisting literary institutions and schools by inaugurating a circulating library of films bearing upon the above-named subjects, and the pictures can be shown on a small K.O.K. machine, which can be managed by any one possessing ordinary intelligence.

Pathé Frères and the Y.M.C.A. in India are worthy of all praise for their united work in providing most enjoyable entertainments for soldiers. Nearly all large war hospitals, Y.M.C.A. huts, and soldiers' clubs are equipped with a K.O.K. machine; wounded men from the front are tempted to forget their sufferings; convalescents are cheered on the path towards recovery; and those on leave are able to spend many delightful hours which under other circumstances might be inexpressibly dull for them.

Mr. Charles Pathé was the originator of the weekly *Gazette*, which now publishes special editions in almost every civilized country, and is to be seen in 90 per cent. of the world's picture palaces.

PATEL BROTHERS.

This business was founded in the year 1894 by Mr. Pestonji Dhunjibhoy Patel, who commenced by buying cotton for several of the leading mills and exporting firms in Bombay, the principal areas from which such produce was derived being in the division of Berar and in the Central Provinces. A couple of years later the purchasing of cotton in the mofussil was given up in favour of an ordinary brokerage business, although several of his old customers were still supplied with cotton, which he secured in the open market in the city.

The proprietor's younger brother, Mr. Rustomji D. Patel, joined the firm in 1902, and in 1904 Mr. J. N. Dallaporta became a partner, when the style of the firm was altered to Messrs. Dallaporta and Patel. It was in the latter year that the firm were appointed house brokers to Messrs. Ralli Brothers, one of the leading firms in India. In 1906 they added the *Jetha* department for the purpose of receiving cotton from inland markets, for advancing money upon such consignments, and for the subsequent sale of them in Bombay to exporters and local mill-owners.

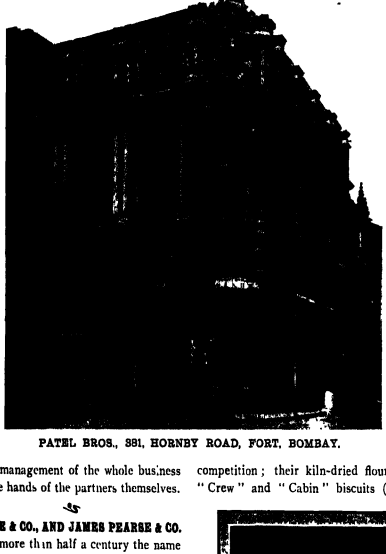
Mr. Dallaporta retired from the firm in the year 1914, and the brothers have continued the business, under the name of Patel Brothers, in Ismail Building, 381 Hornby Road, Fort, Bombay, retaining their connection with Messrs. Ralli Brothers and with a number of mills and exporters to Europe and Japan. They also receive orders for trading in American cotton in New York, New Orleans, and Liverpool, in which centres they have their own agents. They are always in the market to buy or sell cotton, having had great experience in the cotton business since 1894.

Messrs. Patel Brothers have ginning and

PATHÉ FRERÈS, LIMITED.

2. Pathé Building, Bombay. 2. Trade Mark. 3. Pathé's Factories, Near Paris. 4. Pathé's Head Offices in Paris.

pressing factories in Central India and in the district of Satara, near Bombay, the factories being situated in the centre of the best cotton-producing area in India.



PATEL BROS., 381, HORNBY ROAD, FORT, BOMBAY.

The management of the whole business is in the hands of the partners themselves.

PEARSE & CO., AND JAMES PEARSE & CO.

For more than half a century the name of Pearse & Co. has been a household word in Bombay among rich and poor, and old and young, as suppliers of high-class English and Italian confectionery, pastry, cakes, bread, and biscuits. The business was established in 1872 by Mr. S. O. Oomrigar, and it subsequently passed into the hands of Messrs. Oomrigar & Sons, but the popularity of this famous restaurant has grown with the years and is still in the forefront of catering establishments in the city of Bombay.

The headquarters of the firm—trading as Pearse & Co.—are in Apollo Street, Fort, but in the year 1917 an establishment was opened in Princess Street under the name of James Pearse & Co., with the object of affording facilities for their numerous customers who resided at a distance from the Fort business quarter.

The premises at each place are attractive, comfortable, and handsomely furnished in a modern style, and they have been fitted throughout with electric lights and fans. The firm are tea and coffee specialists; their confectionery, sweets, and other delicacies are unsurpassed in quality by any other purveyors in Bombay; their freshly-baked bread defies competition; their kiln-dried flour, and "Crew" and "Cabin" biscuits (which are their own specialities) are deservedly popular; and all kinds of the best brands of English provisions, including fish, bacon, ham, cheese, and other goods, are kept in stock.

The bakery at the Marine Street Cross Lane premises is equipped with thoroughly up-to-date machinery and plant, and it is the only one in the city in which patent smokeless steam ovens are used.

The firm are contractors to the Admiralty authorities and the Government of Bombay, while their numerous private customers reside not only in Bombay and its suburbs, but also in many surrounding districts.

Dinners, lunches, teas, and oyster and other dainty suppers prepared by master hands in the art of cooking, are served in faultless style by courteous, obliging, and highly-trained servants. Everything served at the tables, including wines and spirits, are of superior quality, and thus it follows that these famous purveyors have gained a distinguished reputation among an increasing circle of patrons.

The firm have the honour of having been confectioners to Their Excellencies the successive Governors of Bombay for several years past, and they have been awarded many gold medals at various exhibitions.

PEARSE & CO.

1. EXTERIOR OF PEARSE & CO., APOLLO STREET. 2. EXTERIOR OF JAMES PEARSE & CO., PRINCESS STREET.

PHATAK AND WALCHAND, LTD.

The construction of railways in India has been the most important factor in the peaceful settlement of the country, and in the establishment of industrial schemes

which have tended to bring together its various races and tribes. It was not until 1853 that, after several years of survey work had been carried out, steps were taken to act upon the advice of Lord Dalhousie, the Viceroy at the time, which was that great social, political, and commercial advantages would most assuredly follow the building of railways to connect the Presidencies with each other, to link city with city, and to bring inland regions into trade relationship with coastal ports.

It is easy to write that "construction work followed," but only those who are professionally acquainted with the engineering difficulties to be overcome in a country like India can have any conception of what is involved in those three words. Designs and plans were, however, prepared, and when the necessity arose, contractors were forthcoming to carry out the works.

In these notes reference is made to a company of engineers and contractors whose originators, individually and collectively, have been most successful in laying permanent ways, in the construction of railway stations and other buildings, and in the building of bridges, culverts, and other necessary works.

The company referred to, Messrs. Phatak and Walchand, Ltd., have a large brass and iron foundry called the Napier Foundry at 158 Foras Road, Byculla, Bombay, for general engineering work. At this establishment a special feature is made of the manufacture of heavy hydraulic cotton-baling presses, and presses for baling cloth and hay, mortar-grinding mills, cast-iron spiral staircases, railings, columns, gutters, pipes, and other goods.

The machinery and plant in the works include a seven-mile track of light railway, 200 tipping wagons (with a capacity of 18 and 27 cubic feet), 50 platform wagons, 3 locomotives, 30 h.p. each, steam crane with lifting powers of 3 tons, stone crusher with 36 h.p. Hornsby engine, a vertical boiler of 10 h.p., 5 centrifugal pumps with necessary oil engines, 3 Worthington pumps, 18 contractors' and rotary pumps, a steel derrick 81 feet in height and able to raise a weight of 10 tons, 2 mortar mills with oil engines, and a considerable quantity of other necessary plant.

The company have undertaken very large contracts with Government, railway, and other authorities, and they have quite recently erected a large railway board depôt camp and military hospitals at Bombay and Deolali, at a cost of about 22 lakhs of rupees.

Mr. L. B. Phatak, prior to his partnership with Mr. Walchand, did some excellent work on the Hyderabad State railways between the years 1897 and 1899, and he was highly complimented by the engineer-in-charge. Other contracts carried out by Mr. Phatak and his partner, Mr. Walchand Hirachand, included: earthwork, ballast, and masonry of culverts and bridges on the Barsi Light Railway; the construction of the Bombay Harbour branch for the Great Indian Peninsula Railway Company; the Murtajapur-Ellichpur branch (48 miles) for the same company; earthworks for quadrupling the lines between Byculla (Bombay) and Kalyan, and masonry work on that and other sections at a cost of Rs. 12,00,000, together with all works on the Pandharpur town extension of the Barsi Light Railway, the chief item being the construction of the Willingdon bridge. This bridge consists of 25 spans of 60-feet girders. The foundations for the piers were taken out in the open, and the contractors supplied all pumps and other plant required for this as well as for the erection of girders. The maximum height from foundation to level of rail is about 78 feet. Work was commenced on December 31, 1913, and the line was passed for opening on July 15, 1915.

This, says the chief engineer concerned, reflected the greatest credit on the contractors, as they were handicapped at the start by the delay in handing over the land, and in June and July 1915 by very early floods coming down the river, which several times covered up the girders while they were being riveted up. The contractors always maintained a good supply of labour, and the whole work of the extension, consisting of earthworks, station buildings, staff quarters, culverts, was executed in a workmanlike manner.

In all the above, and in a large number of other important contracts, the company have received unqualified praise for the most satisfactory manner in which they carried out all matters entrusted to them.

The second ordinary general meeting of shareholders of the company was held on October 23, 1916, when the report of the directors and statements of accounts for the year ended July 31, 1916, were presented.

From these it appears that the net profits of the company, after writing off Rs. 4,711 for preliminary expenses, Rs. 25,000 for goodwill, and Rs. 27,000 for depreciation on tools and plant, amounted to Rs. 40,011, from which sum the directors proposed to pay a dividend at the rate of 6 per cent. per annum, and carry forward the balance of Rs. 22,731 to the following year.

The present directors are Mr. Shet Hirachand Nemchand (chairman), Mr. G. B. Phatak, Mr. Ravji Sakharam Doshi, Mr. L. B. Phatak, and Mr. Walchand Hirachand, while the managing agents are Messrs. Walchand & Co.

The registered offices of the company are at Love Lane, Mazagaon, Bombay.

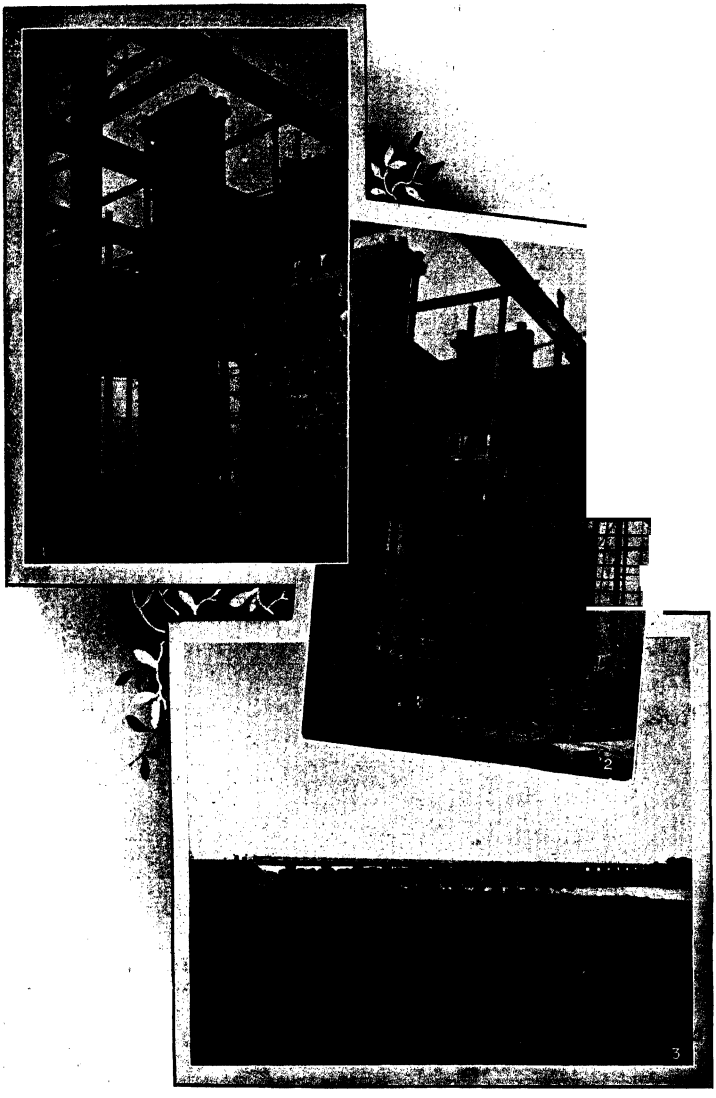
PHIROZE SORABJI CONTRACTOR

This gentleman, who is a prosperous building contractor in Bombay, attributes much of his success to the immense benefit derived by him from practical and theoretical training in England, but he does not forget that he owes much to the valuable advice and help of his father, Mr. Sorabji Ruttonji, who was engaged in the same line of business, and who is still active and in good health at the advanced age of seventy-five years. The latter was not afforded the opportunity of acquiring much educational knowledge, but he undoubtedly possessed exceptionally good natural business qualifications, as he commenced upon the lowest rung of the ladder and is now the fortunate owner of property valued at not less than Rs. 25,00,000.

Prominent among the fine buildings constructed in Bombay by Mr. Sorabji Ruttonji are the famous Taj Mahal Hotel, Waterloo Mansions, the Empire and Excelsior Theatres, the Customs House, the Mole railway station, the Science Institute, and the "Jacob Sassoon" and "Kohinoor" cotton mills, although there are many other fine memorials of a similar character testifying to the skill of this worthy contractor.

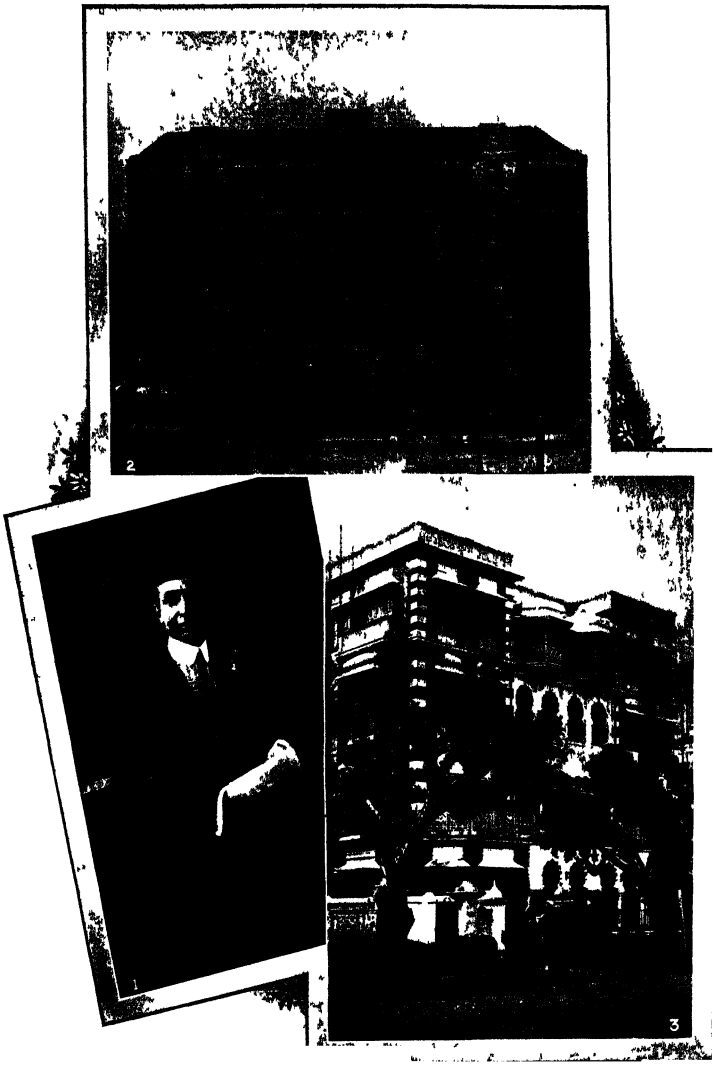
It is not too much to say that Mr. Sorabji Ruttonji enjoys the respect and goodwill not only of his own community, but also of a large number of the leading citizens of Bombay who belong to other creeds.

Mr. Phiroze Sorabji Contractor received the early portion of his education at Bombay, and he subsequently proceeded to England, where, after passing his matriculation examination at the Birmingham University, he undertook a course of study under Professor Ashley, with the object of obtaining the degree of Bachelor of Commerce, while he subsequently passed with honours in accountancy. He became connected with his father's business about twelve years ago, at the age of twenty-two, and he has been



PHATAK AND WALCHAND, LTD.

1. Hydraulic Cotton Press Under Erection. 2. Hydraulic Cotton Press Under Erection. 3. Willingdon Bridge, Pandharpur.



PHIROZE SORABJI CONTRACTOR.

1 Phiroze Sorabji Contractor

Oomrigar Buildings, Crawford Market Bombay

3 Big Mansion Chowpatti Bombay

personally responsible for the construction of several very fine private residences, stores, workshops, such as the Oomrigar Buildings near Crawford Market, the Beg Mansions at Chowpatty, and many other equally imposing buildings.

At the present time Mr. Contractor is erecting a huge palace for Sir D. M. Petit, Bart., in the compound of Magdala House property, situated on the Connaught Road in Poona.

THE PHOENIX MILLS, LTD.

A scheme for the building of cotton-spinning mills in Bombay was initiated in the years 1889 by the late Mr. K. M. Hiramaneck, and upon the completion of the buildings he formed a company known as the Britanma Mills, Ltd., the managing agents being Messrs. Hiramaneck & Co. About five years later the agency was transferred to Mr. Gordhandas Khattau, who traded under the name of Messrs. Khattau Makanji Sons & Co., and in 1905 a further change took place, the managing agency being taken over by Messrs. Tullockchund and Shapoorji, of whom Sir Shapoorji B. Broach, Kt., is the senior partner, and the name of the company was altered to the Phœnix Mills, Ltd.

The share capital of the company at the present time is Rs. 8,00,000, consisting of 8,000 paid-up shares of Rs. 100, together with debentures amounting to Rs. 8,00,000, and the general financing of the concern is arranged by the managing agents.

A sum of nearly Rs. 10,00,000 has been expended upon additions to and renewals of machinery and in other improvements prior to June 30, 1916; a new weaving shed has been constructed and equipped at a cost of about Rs. 7,50,000; and the excellent management of the company is evidenced by the fact that the reserve fund now amounts to more than Rs. 7,50,000, and that the average annual dividend paid since 1905 has been at the rate of 10 per cent.

The directors are Sir Sassoon David, Bart. (chairman), the Hon. Sir Jamsetji Jejeebhoy, Bart., Mr. Jamshedji Ardeshir Wadia, Mr. James H. Latimer, Mr. Nanabhai Cursetjee Bharucha, Mr. Nanabhai Tullockchund, and Sir Shapoorji B. Broacha, Kt. (*ex officio*).

The whole property of the company covers an area of 62,000 square yards, and the plant in the mills consists of 51,360 spindles, together with 500 looms, which have been fixed in a new weaving shed which was constructed in the year 1915. It might be mentioned that cotton spinning was the only undertaking of the company until a very rapid development of the weaving industry caused the installation of looms just referred to, and the company are so fully convinced of the certainty of the continuance of this growth that they intend at an early date to make further provision for weaving, especially as they have ample available space for the purpose.

About 25,000 bales of raw cotton are manufactured annually into yarn of various "counts," and the principal markets for the products are Hongkong and Shanghai, although the increasing number of cotton mills in Japan and China is driving Bombay merchants to seek more local markets for the disposal of their woven goods.

The machinery of the mill was formerly driven by steam power, but in January 1916 the whole plant was electrified, the supply being obtained from the Tata Hydro-Electric Power Supply Company of Bombay.

In connection with the establishment of that company's scheme, it may be of interest to note that Sir Sassoon David, Bart., and Sir Shapoorji Broacha entered into an undertaking to enlist support from owners of mills in Bombay who would collectively be prepared to take electric current of at least 30,000 h.p., and the directors of the Phœnix Mills were among the first to enter into a contract to receive a regular supply.

About two thousand operatives are in constant employment.

THE GOLD MOHUR MILLS CO., LTD.

These mills, like the Phœnix Mills, Ltd., and the Coronation Mills, Ltd., are under the managing agency of Messrs. Tullockchund and Shapoorji, but they were established by Messrs. Captain Sett & Co. in 1899, and carried on by them until the year 1912. The property comprises an area of 37,600 square yards, and is situated in Old Dadar Road, Dadar, in Bombay.

Great improvements in the mill premises have been effected since the present agents assumed control, chief among which is the fixing of entirely new machinery in place of obsolete plant.

The mills were originally fitted with 29,800 spindles, but the number has been increased to 36,000, and a proposal is now on foot to build a new shed and erect looms with the view of enabling the company to participate in the very marked revival of the weaving industry in India.

About 18,000 bales, each of 3¼ cwts. of raw cotton, are consumed annually, and this is made into different "counts" of yarn ranging from 4 to 22's. A portion of the output is disposed of in local markets and in Calcutta, but the company make a special feature of catering for the Chinese market, where very high prices are obtained.

Steam power was used for driving the machinery until October 1915, when a supply of electricity was obtained from the Tata Hydro-Electric Power Supply Company, Ltd.

Some fifteen hundred hands are employed, under the personal supervision of Mr. F. Boyd.

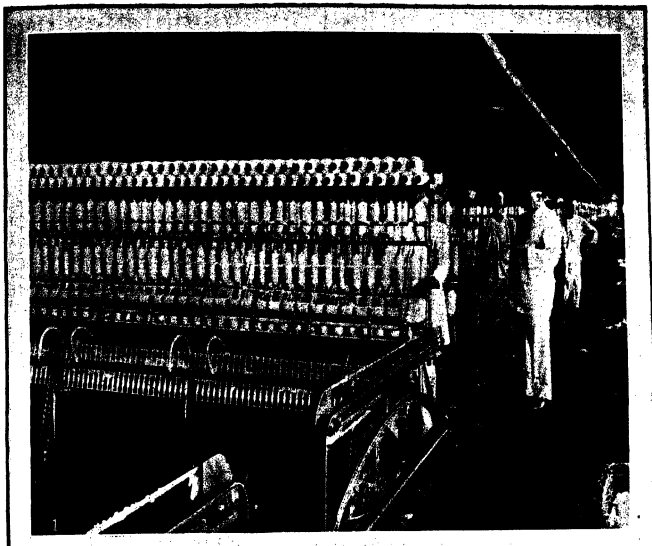
The directors of the company are Sir Shapoorji B. Broacha, Kt. (*ex officio*), Mr. C. H. Captain, Mr. Phiroze C. Sethna, Mr. James H. Latimer, Mr. D. M. Wadia, and Mr. Nanabhai Cursetji Broacha.

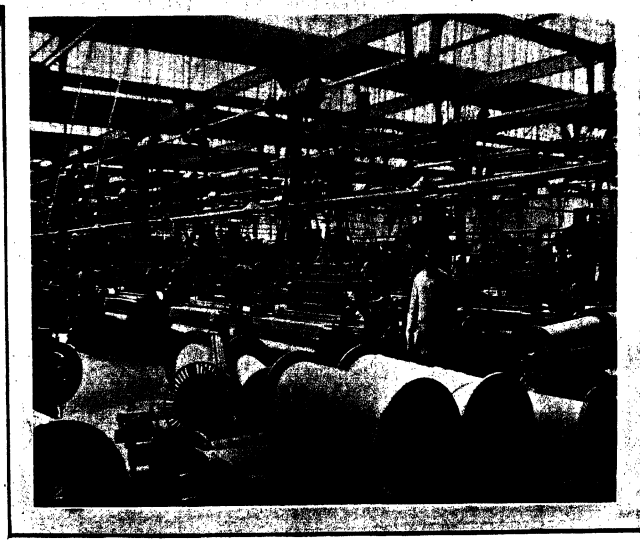
The authorized share capital amounts to Rs. 10,00,000, of which the sum of Rs. 7,64,000 has been paid up, and the annual dividend paid during the past eleven years has been at the rate of 6 per cent.

THE CORONATION MILLS CO., LTD.

These mills, situated in Ferguson Road, Lower Parel, Bombay, were established in the year 1890 by Mr. R. A. Spencer (under the name of the Peeroo Mahamed Mills), who carried on the spinning of cotton until 1902, when the managing agency was transferred to Messrs. Choi Kooka & Co., the latter being in 1914 succeeded by Messrs. Tullockchund and Shapoorji. The mills originally contained about 40,000 spindles, but the present agents on assuming management condemned practically the whole of the machinery, and further placed orders with leading manufacturers in Great Britain for entirely new plant of a more modern type. It was at this juncture that the declaration of war in Europe paralysed all peaceable trading occupations in the greater part of Europe, with the result that up to the commencement of the year 1917 the company have not received more than one-third of the requisite quantity of machinery.

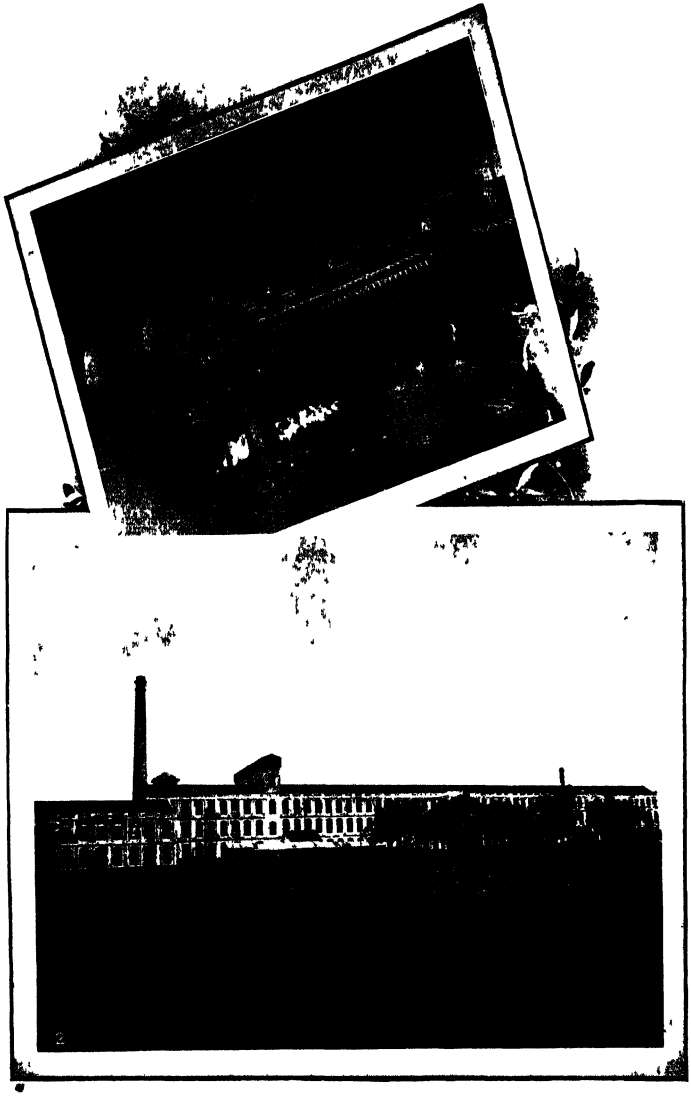
All work is, therefore, at a standstill, but the directors hope to be able at a comparatively early date to instal some 35,000 spindles for the spinning of all





TULLOCKCHUND AND SHAPOORJI (PHŒNIX MILLS, LTD.).

1. Mule Department. 2. Weaving Department.



TULLOCKCHUND AND SHAPOORJI (PHOENIX MILLS, LTD.).

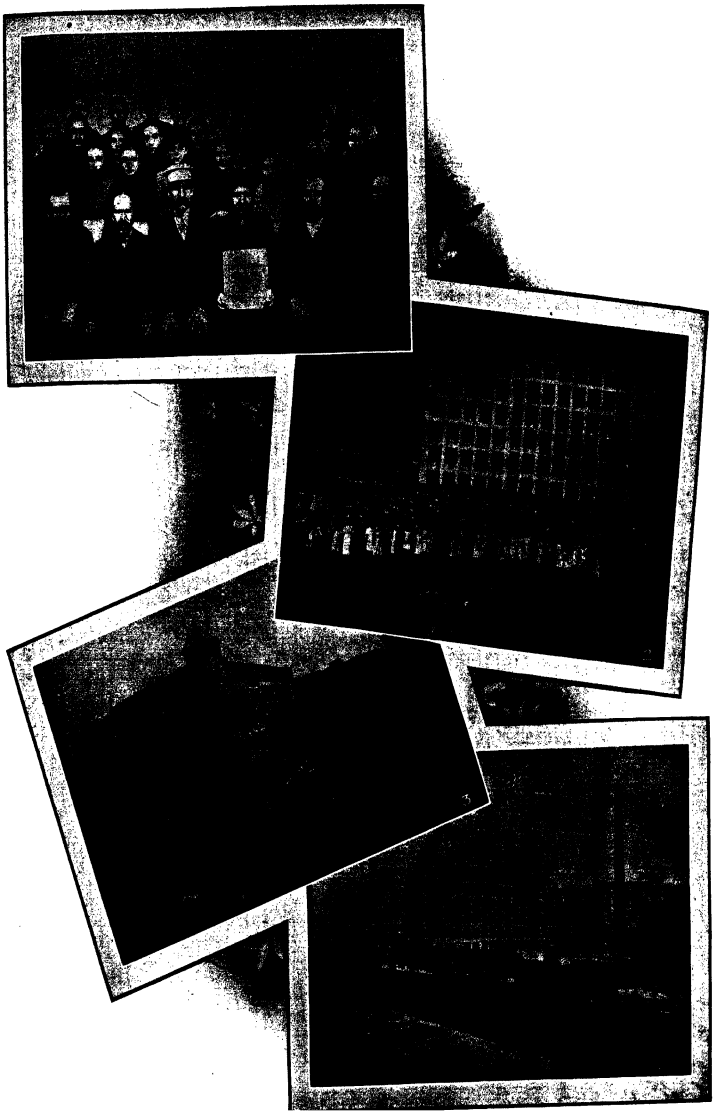
1. Reeling Department 2 Exterior Phoenix Mills

TULLOCKCHUND AND SHAPOORJI (GOLD MOHUR MILLS, LTD.).

1. Return Passageway. 2. Blow Room. 3. Engine House.

TULLOCKCHUND AND SHAPOORJI (GOLD MOHUR MILLS, LTD.).

EXTERIOR, GOLD MOHUR MILLS.



J. PIROJSHA & CO. (PHILLIPS' WORKS, EINDHOVEN, HOLLAND).

1. Staff, 1891 (30 Workers). 2 Staff, 1915 (3,000 Workers). 3. Western Front of Works. 4. Freight Train in Front of Factory.

"counts" of yarn for the Chinese market. They have also under consideration a scheme for the erection of a weaving shed and 700 looms, but it is considered unlikely that these proposals can be carried into effect in less than twelve or eighteen months' time.

It is intended that steam power shall be employed for driving some of the machinery, and application has already been made to the Tata Hydro-Electric Power Supply Company, Ltd., of Bombay, for energy for the works on their completion.

The paid-up share capital of the company consists of Rs. 6,00,000, derived from 1,200 shares of Rs. 500 each, debentures amount to Rs. 70,000, and the authorized capital is Rs. 7,00,000.

The general financing of the company is in the hands of the managing agents.

The directors are Mr. Hormusji Ardaseer Wadia (chairman), Mr. James H. Latimer, Mr. Roostunji Muncherji Kooka, Mr. Cowasji Nowroji Chhoio. Mr. Nanabhai Cursetji Broacha, and Sir Shapoorji B. Broacha, Kt. (*ex officio*).

The whole property, comprising 40,035 square yards, adjoins the Phœnix Mills, Ltd., which are also under the managing agency of Messrs. Tullockchund and Shapoorji, of whom Sir Shapoorji B. Broacha is the senior partner.

J. PIROJSHA & CO.

This firm of general merchants and commission agents, carrying on business at 47B Apollo Street, Fort, Bombay, was founded in the year 1910 by Messrs. Jehangir Aspandiar Irani and Pirojsha H. Divecha, but these gentlemen subsequently admitted into partnership Mr. Cursetjee Aspandiar Irani, also of Bombay.

The firm deal largely in all kinds of general merchandise, but the special feature of their business is the sole agency which they hold for the sale of Phillips' world-famed metallic glowlamps, which, for giving brilliancy of light, for durability, simplicity, and cleanliness, are not excelled by any other similar goods on the market.

The manufacturing works are at Eindhoven, in Holland, and as Messrs. J. Pirojsha & Co. are constantly receiving consignments of these lamps, their numerous customers can rely upon prompt execution of their orders.

The telegraphic address of the firm is "Precious," Bombay.

POLSON'S, LTD.

The twentieth century is essentially an era for specialists in commercial life, and specialities in the manufacturing and industrial world.

Shrewd men of business are not tumbling over one another in their anxiety to engage assistants who possess a mere smattering of knowledge of everything and thorough efficiency in nothing at all; they want experts in their own particular calling, and they are willing to pay well for their services.

The same principle applies with regard to products in every branch of science, mechanics, and general commerce. Purchasers look for, and have a right to expect, value for money; they want goods and articles of standard quality in their different grades; in short, a speciality which has survived the unerring test of competition and has gained approbation in circles of distribution is one which will automatically force its own way far ahead of inferior productions.

By way of illustrating the foregoing remarks, one might direct attention to a private company which was established at Bombay in the year 1892, under the style of Messrs. Polson & Company, by Mr. Pestonji E. Dalal. The promoter was a specialist in tea and coffee, and therefore the goods which he placed upon the market were of such superior quality that only a few years had elapsed before business operations had been carried into almost every part of India.

In 1909 a limited liability company was formed under the name of Polson's, Limited, Mr. Dalal being chosen as managing director.

The company's works and offices are situated at 115 Frere Road, Fort, Bombay (adjoining the General Post Office), and they are equipped with modern British-made machinery for converting raw coffee into the product known as "Polson's French Coffee," which has become an immense favourite throughout the length and breadth of this vast country.

Power for driving the roasting and grinding plants respectively is obtained from gas and electricity, and several thousands of pounds are manufactured daily.

In the year 1914 the company placed "Polson's Table Butter" upon the market, and here again purity and excellence in quality have been the factors which have earned for this commodity as great a reputation as that gained by coffee and tea. The sales of both coffee and butter have increased to a very great extent during the past few years, and since the outbreak of war large quantities have been consigned for the use of the troops at the front.

A feature of the business of the company is the absolutely free gift of artistic silver-ware, watches, and jewellery to customers who send to the head offices a certain number of coupons which are found in tins of 1 lb. weight of coffee, butter, and tea, and the illustrated list of such presents, which is sent post free to applicants, contains an array of beautiful articles of considerable merit and value.

The company had the unique honour of supplying coffee for the royal camps at Delhi, the royal garden-party, and for the royal camp in Nepaul in the year 1911 during the visit of their Majesties the King-Emperor and the Queen-Empress to India, and as testified by Mr. Faletti, caterer by royal appointment, it was pronounced by the guests to be excellent in quality.

The whole of the works are ably managed by Mr. P. E. Dalal, assisted by a competent staff under the control of an efficient board of directors.

The company have branches and agencies at Calcutta, Madras, Karachi, and Rangoon; their London agents are Messrs. Levetus & Co., and their bankers in Bombay are the National Bank of India, Ltd.

The telegraphic address is "Polson's," Bombay.

N. POWELL & CO.

Among the great variety of national enterprises of India, one which has worked up to its reputation and now occupies a conspicuous place in connection with surgical instruments and drugs, is that conducted by Messrs. N. Powell & Co., of Bombay. This renowned firm was founded in the year 1888, and ever since its inception the most distinguishing features of its career have been steady development and well-merited success. At present their extensive premises at the junction of Lamington and Sandhurst Roads consist of a four-storeyed building replete with the most up-to-date contrivances, and containing their head office and showrooms. The total floor area of this building is 1,400 square yards. In addition to this structure, they have another extensive

POLSON'S LTD.

1 Front View of Premises 2 Corner of Butter-Churning Room 3 Prestonjee L. Dalal Managing Director
4 Corner of Coffee-Roasting Room 5. Corner of Coffee-Grinding Room

plot of land on the same road upon which stand an up-to-date surgical factory, a chemical laboratory, and a general workshop. The firm's activities are many-sided, as they control the Zander Orthopedic and Medico-Electric Institute, N. Powell's Bacterio-Pathological Laboratory, and the Bombay School of Pharmacy. They are pioneers as well as specialists in the manufacture of surgical instruments, hospital aseptic furniture made of metal, furniture for invalids, artificial limbs, deformity appliances, and trusses, while they are also manufacturing pharmaceutical chemists and wholesale drug merchants.

Briefly viewing their recent activities, it may be said that during the late war they were the only people in the whole of India with whom the Government of the King-Emperor could enter into an agreement for the equipment of a large number of war and base hospitals and hospital ships, and the fact that they succeeded in carrying out so prodigious a task in a comparatively short period amply justifies the high encomiums showered on them by the Government and military authorities. The leading medical journal, the *Indian Medical Gazette*, wrote at that time as follows:

"No name is better known amongst the medical circle than that of N. Powell & Co. The progressive activity of the above-named and widely known concern in connection with the manufacture of surgical instruments and hospital furniture has placed it in the front rank of a highly important trade. No firm in India has done more towards the perfecting of such productions.

"Had it not been for this very enterprising firm it would have been almost impracticable to fit up several base and war hospitals in such a short time. . . .

"The fitting-up of the hospital ships *Loyalty* and *Madras*, and of the "Lady Hardinge" war hospital, is to be credited to this firm, and as far as our knowledge goes we can positively say that no other single firm in this country could have met such a sudden demand for medical furniture, surgical instruments, and ambulance and hospital requisites.

"We know that Messrs. N. Powell & Co. are pioneers in manufacturing surgical instruments, orthopedic appliances, artificial limbs and aseptic hospital furniture in India, and they have thus popularized and cheapened the most useful articles indispensable in the art of healing."

In this connection it might be added that during the war their activities were not confined to India alone, but they extended as far as Alexandria, Mesopotamia, and Malta in the form of supplying units of field hospital equipments.

This was, however, not the first time that Messrs. Powell & Co. had to cope with a situation of the kind referred to above, for during the Turko-Balkan war of 1913 their services were requisitioned in connection with the fitting-up of field, war, and base hospitals, and it is with no small amount of pride that their articles and appliances were greatly praised by Enver Pasha, when he learned that they were manufactured in India. Nearly all Indian hospitals have obtained furniture from this firm, and they are proud of the fact.

Messrs. N. Powell & Co.'s surgical instruments and other appliances are of world-wide repute, and they have earned high awards wherever they have been exhibited, including the Paris Exhibition

N. POWELL & CO.

1. Exterior View of Premises. 2. Sectional View of the Zander. 3. Orthopedic and Medico Electric Institute.

of 1900, at which they were awarded the grand prize. The opinion of the Royal Commission, Paris, was as follows: "Your interesting exhibit was duly received in good time. The jury were much pleased with the quality and finish of your instruments."

Again the well-known journal, the *Chemist and Druggist*, published in London contained these words: "Messrs. N. Powell & Co., the well-known manufacturers of surgical instruments, are opening a show-room in Hornby Road, Fort, Bombay. From a modest beginning some eight years ago, this firm have steadily developed their business, until to-day they stand in the front rank in their particular line in Asia."

Messrs. N. Powell & Co. hold a contract from H.M. War Office and they are by special appointment chemists to Lord Hardinge of Penshurst, late Viceroy and Governor-General of India, and to His Excellency the Governor of Bombay.

They hold a very large number of agencies on behalf of well-known firms in almost every part of the world.

THE D. PUDUMJEE PAPER MILLS.

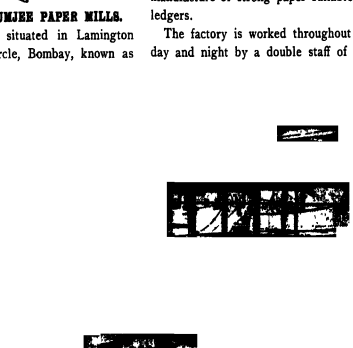
The premises situated in Lamington Road, Jacob Circle, Bombay, known as the D. Pudumjee Paper Mills, were originally owned by the Soondardas Cotton Mills Company, but they were partially destroyed by fire about the year 1906. In 1913 Messrs. D. Pudumjee & Co. obtained a lease of the damaged building and a considerable portion of the land upon which it stood, and they at once commenced the work of reconstruction with the view of adapting it to the manufacture of paper.

Machinery of a modern type was imported direct from Messrs. Bertrams, Ltd., of Edinburgh, Scotland, and it includes, besides the usual boilers and preparatory machines, one pulping and refining machine, one 72-inch quick-running paper machine with 19 dryers, one tub-sizing air-drying machine, and one "Fullner" eight-bowl supercalendar with the usual re-reelers, cutters, and guillotines. The driving power is derived from a Deisel oil engine by Carells Brothers, of Ghent.

Prior to the Great War pulp was imported direct from Norway and Sweden, but since hostilities commenced raw material has been obtained locally.

All kinds of paper, ranging from superior white to the coarsest brown, are made by the ordinary machinery at the mills, but special plant is used for the manufacture of strong paper suitable for ledgers.

The factory is worked throughout the day and night by a double staff of employees, and from four to five tons of paper are turned out in the twenty-four hours, the major portion of which is sold to local customers, although a large quantity is supplied to the Stationery Department of the Government of Bombay.



PUDUMJEE & CO.
INTERIOR OF PAPER MACHINE ROOM.

The mills are very conveniently situated about half a mile distant from Grant Road station (Bombay-Baroda and Central Indian Railway), and three-quarters of a mile from Byculla station (Great Indian Peninsula Railway).

About two hundred hands are required for the day and night shifts, and the management of the mills is in the hands of Messrs. H. D. Pudumjee and F. D. Pudumjee.

The offices of the firm are at 305-309 Hornby Road, Fort, Bombay.

G. S. RANADE & CO.

The earliest records in which reference is made to India, whether they consist of writings on palm-leaves or inscriptions on slabs of stone, afford abundant proof that the rich indigenous products of the country were eagerly sought after by primitive races who, in quest of new territories, or driven by the hand of Destiny, discovered the magnitude of the wealth revealed to them when they landed from vessels which were the prototype of the *dhows* now seen in the waters between Bombay and Suez.

Cotton, silk, spices, jewels, and perfumes were carried from India to the courts of King Solomon and to the festivals of the Cæsars of the early Roman Empire, while Phœnicians, Venetians, Portuguese, and Dutch have successively introduced them to the chief markets in modern Europe.

India is still taking a prominent position in the production of these valuable commodities, and in nearly every town in the country there are manufacturers or vendors of these goods.

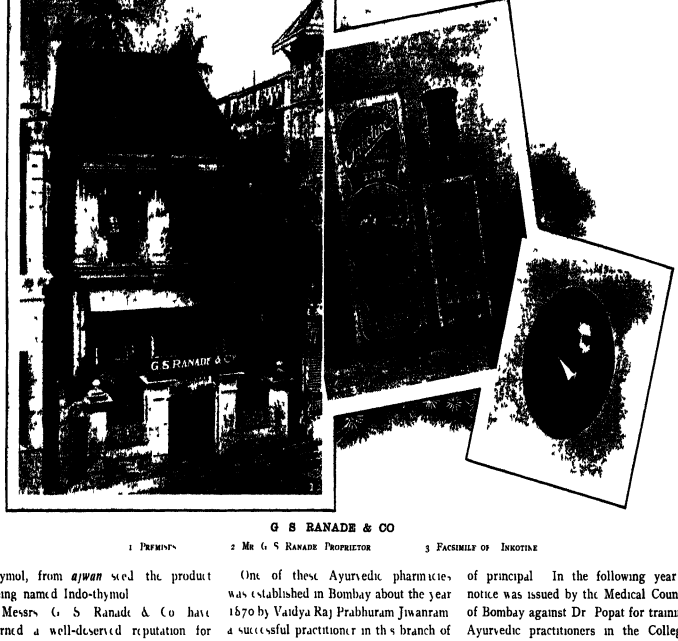
In Bombay, for instance, there is the establishment of Messrs. G. S. Ranade & Co., in Girgaum Road, who are general merchants, importers, and exporters, but who make a speciality of dealing in natural and synthetic perfumes and perfumery requisites. The proprietor, Mr. G. S. Ranade, son of the late Pandit Shivaram Govind Ranade, commenced business in the year 1908, and his practical experience of the process of distillation and his acquaintance with the requirements of perfumers in India has enabled him to build up a connection which extends throughout India, Burma, and Ceylon.

The firm are also inventors and manufacturers of "Inkoline," a liquid extract

of ink, which makes an excellent writing fluid by the addition of a certain quantity of water, and they are also making pure

firm faith in Ayurvedic medicines and thus they naturally cling to native drugs and practices of healing

"The Prabhuram Ayurvedic College," and Dr Popat, who had hitherto been superintendent, was appointed to the office



G S RANADE & CO

1 PREMISES 2 MR G S RANADE PROPRIETOR 3 FACSIMILE OF INKOTINE

thymol, from *ajwan* seed the product being named Indo-thymol

Messrs G S Ranade & Co have earned a well-deserved reputation for each of these specialities, and a large stock of them, as well as of the choicest perfumes, is always kept on hand in their warehouses

The firm are sole representatives for India, Burma, and Ceylon for Messrs Cresp Martineng and Isnard-Maubert the well-known perfume manufacturers, of Grasse, in France

Mr G S Ranade exercises general supervision over the whole business, while his brother, Mr P S Ranade, is in charge of the manufacturing department

RATILAL POPAT, A.A.M.S.

The indigenous methods of treatment of diseases in India are retaining their hold upon the inhabitants of the country notwithstanding the introduction of Western systems of medicine The people have been brought up from infancy to have a

One of these Ayurvedic pharmacies was established in Bombay about the year 1870 by Vaidya Raj Prabhuram Jiwanram a successful practitioner in this branch of the profession and on his retirement in 1896 he was succeeded by his son Dr Popat Prabhuram, who at the time was chief medical officer of the State of Porbandar in the Kathiawar Political Agency having obtained his medical degree at the Bombay University and who had further acquired an efficient knowledge of Ayurvedic practice

Vaidya Raj Prabhuram evidently did not believe in a life of inactivity, for he was soon afterwards busying himself in the establishment of a college, primarily for teaching Ayurvedic science, but also for the dissemination of information regarding the medical advance made in Western countries The college was subsequently established but after the first batch of students had obtained their diplomas the worthy founder unfortunately died

In 1914 the institution was named

of principal In the following year a notice was issued by the Medical Council of Bombay against Dr Popat for training Ayurvedic practitioners in the College, charging him with infamous conduct in a professional respect and an inquiry was held which resulted in favour of Dr Popat The question seemed to be worrying professional men so much that a debate on the subject took place in the Legislative Council of Bombay, where the principal's action received a considerable measure of support Even Lord Hardinge in a speech said that 90 per cent of the Indian population depended upon Ayurvedic and other indigenous systems of medicine Dr Popat is one of the leading medical practitioners in Bombay, and he holds the important positions of President of the "Bharatiya Vaidya Mandal" Indian Ayurvedic Association, and principal of the Prabhuram Ayurvedic College.

His son, Bhishagwar Ratilal Popat, A A M S, having graduated in the Ayurvedic College, began to assist his father in his practice, and he is now Professor

1 Head Office
2 Drawing Office
3 General View of the Works

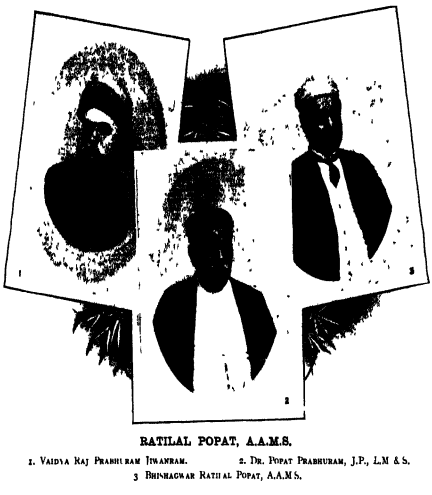
RICHARDSON AND CRUDDAS

of Ayurvedic Materia Medica in that institution, and is also in charge of the Dayal Bhimiji Ayurvedic Aushadhalaya.

RICHARDSON & CRUDDAS.

The very large business carried on by Messrs. Richardson and Cruddas as engineers, contractors, iron and brass founders, and sanitary engineers, was founded in Bombay by the late Noble Carr Richardson in the year 1858. The firm now owns the Byculla Ironworks, Nesbit Road Ironworks, and the Bombay Metal Mart, all situated at Byculla, Bombay, dealing with general mechanical engineering work.

The works are now electrically driven throughout, and each shop is served by electric overhead travelling cranes. Besides structural and general engineering work for the Public Works and Military Works Departments, railways, mills, etc., the firm also manufacture some specialities such as Gill's patent oil engine, Musto's patent boring plant, Bell's patent dredgers, Horbury's patent latrines, Irani's patent hay presses, Bowman patent disinfector, etc., while at the present time (1918) they are busily engaged on munitions and war work, such as the manufacture of shells, "tanks," trench pumps, buoys, camp ovens, water bottles, stakes for wire entanglements, pontoon bridges, etc.



RATILAL POPAT, A.A.M.S.

1. Vaidya Raj Prabhuram Jiwanram. 2. Dr. Popat Prabhuram, J.P., L.M & S.
3 Bhimagwar Ratilal Popat, A.A.M.S.

covering in all about fourteen acres and employing fifteen hundred to two thousand hands, besides a considerable number on erection work in different parts of the country, the whole being supervised by a staff of over thirty European engineers and foremen.

The Byculla Works comprise bridge and girder shops fitted with the most modern plant and machinery for expeditiously turning out structural steelwork of all kinds and of the highest class; a well-equipped foundry capable of dealing with castings up to 10 tons in weight, a smiths' shop containing about 150 hearths and 6 pneumatic hammers of the latest type, and a machine shop in which are modern high-speed lathes, planing, shaping, and other machines capable of

The Nesbit Road Works are somewhat similar to the Byculla Works, but on a smaller scale, and are used chiefly for the manufacture of conservancy carts and appliances, pumps of all kinds, tanks, fencing, and light structural work.

The Bombay Metal Mart is the branch of the business which deals with the merchanting of iron and steel and other metals, machinery, and engineering materials and stores. The following are a few of the agencies held by the firm: Edgar Allen & Co., high-speed steel and twist drills, etc.; the Farnley Iron Company, best Yorkshire iron; the British Steel Piling Company, steel sheet piling and pile-driving equipment; the Smith patent concrete mixer; Alexander Fergusson & Co., "Elephant" brand paints; Gibb's "Diamond" brand Portland cement. The firm are also sole licencees in India, Burmah, and Ceylon for the Kitson system of incandescent oil lighting.

Sanitary work is dealt with by a special department in charge of a qualified English sanitary engineer. Large contracts for sanitary installations of hospitals, colleges, clubs, palaces, railway stations, offices, etc , too numerous to mention in detail, have been carried out in various parts of India. The firm are agents for Messrs. Doulton & Co., London, whose reputation for sanitary fittings stands second to none.

The headquarters and offices of the firm are at the Byculla Ironworks, Bombay. There is a branch office at 7 Second Line Beach, Madras, and the firm are also proprietors of the business of George Service & Co , Bombay, the principal feature of which is rolled steel beams.

S. ROSE & CO.

The oldest European firms in India dealing exclusively in music and musical instruments are those of Messrs. S. Rose & Co., of 33 Rampart Row, Fort, Bombay, and Messrs. Harold & Co , of Dalhousie Square in Calcutta. The latter establishment was founded in 1847 by Mr. Samuel Harraden, and a branch was opened at Bombay under the name appearing at the head of these notes. During the Indian Mutiny business nearly came to a standstill owing to the conditions then existing and the consequent financial strain placed upon commercial undertakings. Mr. Harraden thereupon called a meeting of his creditors, and after the position of affairs had been explained to them they unanimously agreed to waive their claims until normal times returned. The confidence thus shown in the proprietor was rewarded as, at a later date, he not only paid his accounts in full but also voluntarily insisted upon adding interest at the rate of five per cent. per annum from the date of the arrangement.

In the early eighties of last century Messrs. S. Rose & Co. became independent of the parent firm, and in 1904 they purchased the goodwill of the Calcutta House from the executors of the late Mr. Harraden, but business is still

RICHARDSON AND CRUDDAS.

1 Blacksmiths' Shop 2. Foundry. 3 Foundry 4 Machine Shop

S. ROSE & CO.

1. Exterior. 2. Sale Room. 3. Sale Room. 4. Messrs. Harold & Co.'s Calcutta Sale Room.

carried on there under the original name of Harold & Co.

The two firms are agents for the principal manufacturers of England, the continent of Europe, and America for the best grades of pianos, organs, and band and other musical instruments of every description. together with all accessories, and they are continually importing new music as soon as it is issued by the publishers. Everything in the establishment is therefore thoroughly up-to-date, and the proprietors have succeeded in gaining a very wide circle of customers who appreciate the courtesy and the obliging manner in which their enquiries are met.

It may be mentioned that during the present war one of the partners and several assistants of the firms have joined the army, and two sons of the proprietors have won the Military Cross for valour.

The firms have, in the course of their career extending over a period of seventy years, had many unique experiences, and their London offices contain records of several interesting items, more particularly of those relating to freights and shipping.

For example it is shown that goods were originally brought round the Cape to India in sailing vessels, and that freights have varied from seven shillings and sixpence to £30 a ton, this alone sufficing to explain the difference between the actual cost of articles in England and the price at which they can be sold in India—a matter of the highest importance to traders, but one which is not always understood here.

The telegraphic address of Messrs. S. Rose & Co. is "Rosebut," Bombay, while that of Messrs. Harold & Co. is "Pianoforte," Calcutta

L. ROY SAMPAT.

There are few successful men of business who will deny that their prosperity has been attained largely by advertising extensively in an attractive manner. English firms have the reputation of being slow and blind to their own interests, but they had a "rude awakening" many years ago when their competitors in the land of the "stars and stripes" threatened to oust them from their own markets by persistently directing the attention of the reading public to advertisements which savoured more of an erudite treatise than a mere description of goods for sale. That awakening was the precursor of great activity among merchants, and the services of journalists and artists of repute were employed in literary efforts, pen-and-ink sketches, and even paintings, to point out the distinctive qualities of manufactures or products of every conceivable type, from a shoe button to a chaste design of architectural skill.

Who can forget Sir John Millais' "Bubbles," a painting which has been reproduced again and again upon almanacs and in various publications? What newspaper does not remind one of the fact that Beecham's Pills are said to be a medicine-chest in themselves? And where is the thirsty soul who is not made more thirsty by reading of the ever-green "Johnnie Walker"?

Truly, a "catchy" advertisement is worth a king's ransom to an enterprising firm.

India is a long way behind in the way of advertising, but her tradesmen have during the past two or three decades realized that, if they wish to climb the ladder of fame, they must advertise, advertise, and advertise largely.

Mr. Liladhar Sunderji Roy Sampat, who is an importer, exporter, jeweller, and general merchant, with offices at 70 Apollo Street, Fort, Bombay, and showrooms at Vazir Mansion, New Queen's Road, in the same city, is a profound believer in keeping his name prominently before the public by means of advertisements, but he also employs a number of canvassing agents who push the sale of their commodities in the homes of likely purchasers.

Further than this, Mr. Sampat has circularized a very large number of the leading manufacturers in Europe, America, and elsewhere, directing attention to the vast possibilities for the disposal of their goods in a country with a population of more than three hundred million persons, who are only now beginning to appreciate the results of modern industrial enterprises. He reminds them of the almost interminable list of raw materials awaiting development locally or exportation to great manufacturing centres; he points to his experience of the export and import trade, extending over a period of fifteen years, and his business connections with foreign countries as well as throughout India; and he refers with justifiable pride to the unique advantages offered by him—with agents in every part of the civilized world, with a large staff of highly trained employees, and with forceful travellers—in conducting transactions for the great benefit of both parties. He adds that not only has his name become a household word in India with the mass of the inhabitants, but also that he enjoys the patronage of a large number of maharajas, rajas, chiefs, and merchant princes throughout the country.

Mr. Sampat's methods of conducting business are thoroughly up to date, and he exercises such strict personal supervision over the buying, selling, and other departments, that he is in a position to guarantee the quality of his wares and to give a satisfactory undertaking that customers will never be able to find fault with the quality or price of them. He belongs to the Bhatia community, which is well known for its enterprising and go-ahead commercial capabilities, and he combines with those qualifications a reputation for square and straightforward dealing.

Mr. Sampat imports all kinds of hard and soft goods and useful articles of all descriptions, making a speciality of hardware, and he obtains the majority of these from leading manufacturers in various parts of the world. His exports include Indian products, chief among which are wheat, cotton, and seeds of a general character. He holds the sole agency for a number of the best-known manufacturers in England and other countries, and he has formed large business connections in Europe, America, and Japan.

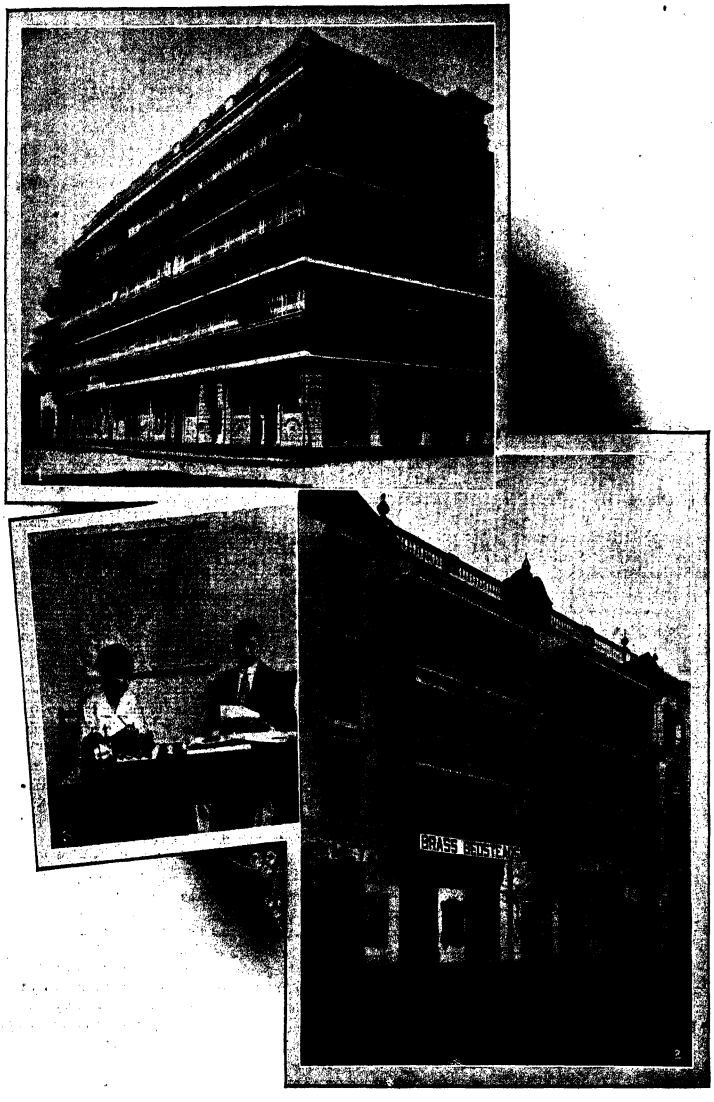
Bombay is a city renowned for its palatial buildings, but Mr. Sampat's showrooms are so attractive that they have been the means of making the New Queen's Road one of the leading business quarters of the "gateway of the West."

Branch establishments have recently been opened at Delhi and Karachi, and although still in their infancy, they have already been of great service in effecting the growth of the proprietor's vast undertakings.

Mr. Sampat's telegraphic address is "Satchit, Bombay."

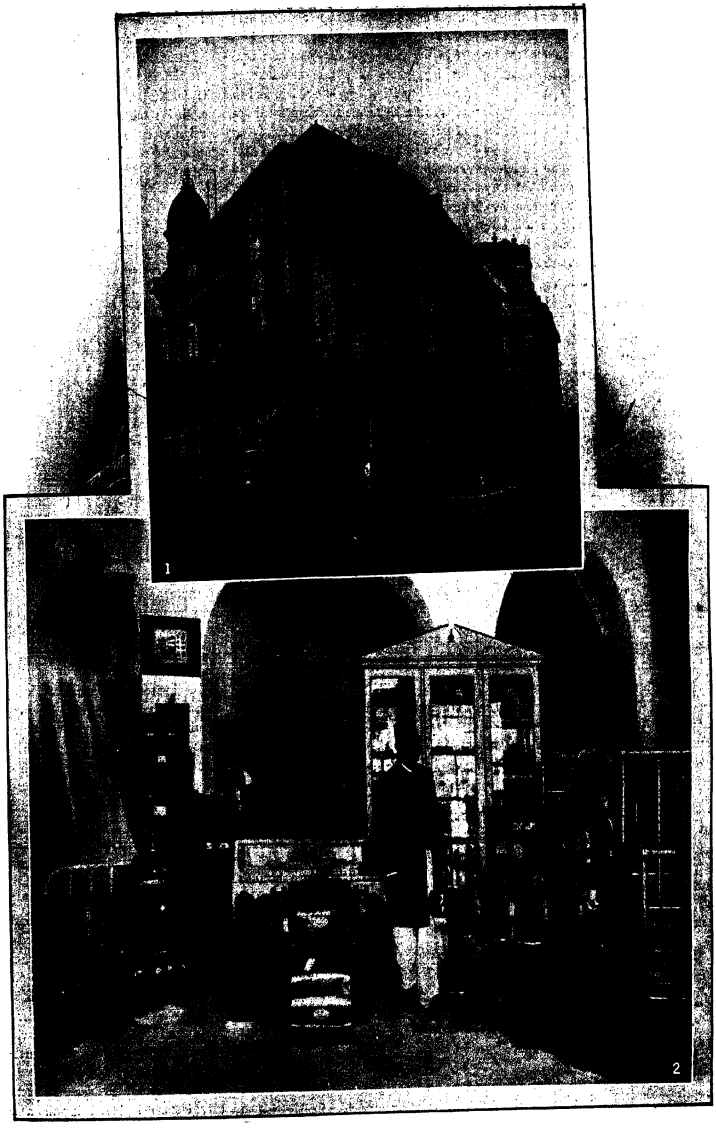
THE ROYAL BOMBAY YACHT CLUB.

He would be a bold man indeed who would venture with the slightest hope of success upon a search for authentic records of the first series of competitions between boats, or whatever other floating substance which by any stretch of the imagination could be designated as such. The instinct of sport in some shape or form must have been inherent in pre-historic men, and half a dozen or more individuals sitting astride on trees



L. ROY SAMPAT.

1. The Bombay Office, 70, Apollo Street. 2. First Showroom. 3. L. Roy Sampat in Office.

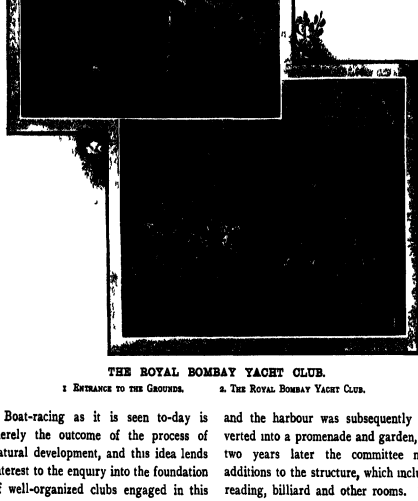


L. ROY SAMPAT.

1. Second Showroom. 2. Showroom, Delhi.

or logs of wood, bound for a new habitation, must, without doubt, have been compelled by some hidden force to endeavour to outstrip each other during their progress.

Even in these days of civilization one may visit many portions of Central Africa and witness displays of this nature by tribes who have never in their lives seen a properly-constructed boat. Yet they have been taught by their ancestors how to ride upon their rivers in a primitive fashion, and they are literally frenzied with delight when they succeed in arriving first at their destination.



THE ROYAL BOMBAY YACHT CLUB.
1 Entrance to the Grounds. 2. The Royal Bombay Yacht Club.

Boat-racing as it is seen to-day is merely the outcome of the process of natural development, and this idea lends interest to the enquiry into the foundation of well-organized clubs engaged in this form of sport, such, by way of example, as the Royal Bombay Yacht Club.

The magnificent city and seaport on the western shores of India possessed inhabitants nearly a hundred years ago—and probably for a much longer period—who kept yachts and boats for racing purposes, and in the *Bombay Times* of April 1839 is a record of a regatta which had just then been held in which one of the prizes consisted of a silver cup of the value of £50.

Each succeeding year witnessed keener interest taken in these competitions, and vast improvements were continually being made in the construction and handling of the boats.

In the year 1880 the committee controlling these regattas at Bombay resolved to form a yachting club, and to construct a clubhouse for the convenience of members.

A suitable site adjoining the Marine Parade was obtained from the Bombay Port Trust, and a handsome building, designed by Mr. John Adams, Government architect, was opened on November 1, 1881, this event practically marking the actual formation of the club. A strip of land lying between the club and the harbour was subsequently converted into a promenade and garden, and two years later the committee made additions to the structure, which included reading, billiard and other rooms. This property is now assessed for rateable purposes at a sum of not less than Rs. 11,00,000.

The club has increased in importance as well as numerically since its establishment, and one of the most noteworthy additions made in recent years was the acquisition in 1897 of a fine block of residential chambers situated on the southern side of the Apollo Bunder Road.

The club was honoured by a visit from His Majesty the late King Edward and Her Majesty Queen Alexandra during their tour in India in 1905, and signed portraits of their present Majesties the King-Emperor and Queen-Empress occupy a prominent position on the wall of the staircase.

It should be added that the Lords of the Admiralty, in the year 1880, gave permission to the club to fly the Blue Ensign over the premises, and in the following year a similar concession was granted to yachts belonging to members.

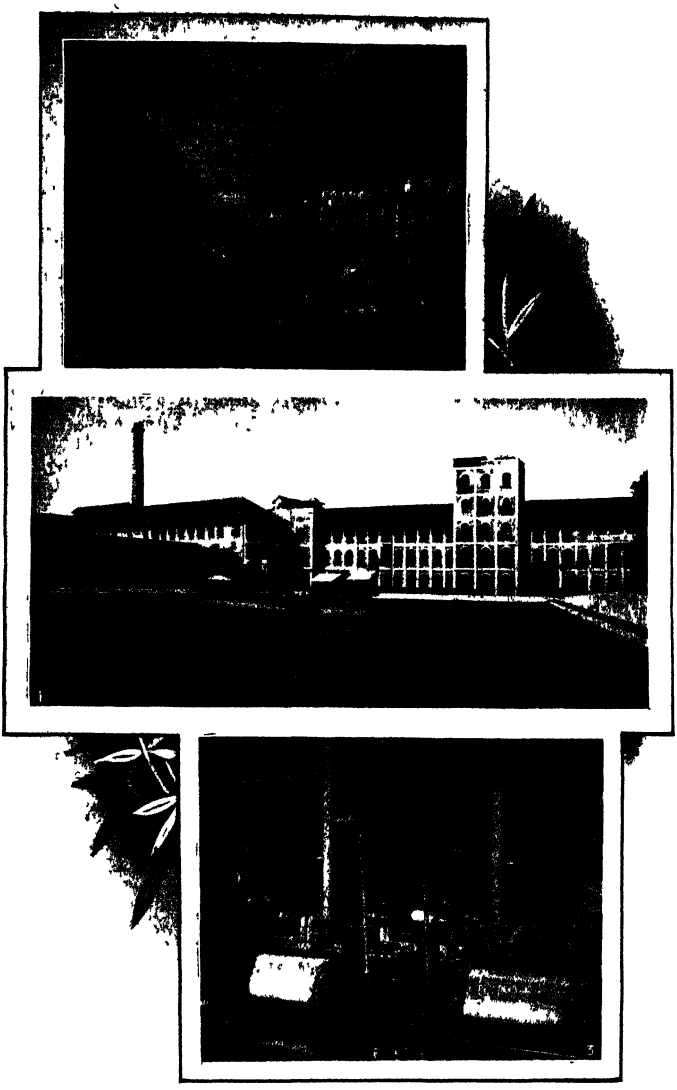
THE ROYAL OPERA HOUSE

Messrs. J. F. Karaka & Co. are the owners of the well-known building in Bombay known as the Royal Opera House, the finest theatre in the East, and it is situated on Queen's Road, in which are Government House and a large number of the most fashionable private residences in Bombay. It is worthy of note that, when no more than the outer walls had been completed, there was presented a series of cinema entertainments, with artistic draperies on the brick walls, with carpets on the slope made of earth. The pictures represented (among others) scenes at the Coronation of H.M. King George V, and the unveiling of the statue of Her late Majesty Queen Victoria. On several subsequent occasions, while the structure was in progress, arrangements were made for the appearance on a temporary stage of first-class theatrical companies and evening entertainers who visited Bombay.

On approaching the Royal Opera House at the present time, one is struck by the remarkably symmetrical proportions of this handsome structure, nothing seems to have been omitted which could have contributed further to the impression of solidity, coupled with elegance of design, which is forced upon the mind; and an additional charm is provided by the very pretty adjoining garden in which refreshments are served during intervals of performances.

There are three separate entrances to the auditorium dome, embellished with paintings of illustrious musicians, poets, and painters of a former age. In the *foyer* are splendidly-upholstered boxes, and the stall seats, extremely comfortable, are so arranged that an excellent view of the stage is obtained from all quarters of the house.

The boxes on the sides, constructed of carved stone, besides being the acme of comfort and beautifully adorned in cream and gold, add to the striking splendour of the auditorium, and with the dado below, reflected in the brilliance of a



DAVID SASSOON & CO., LTD.

1. General View, Sassoon Spinning and Weaving Company, Ltd 2. Sassoon Spinning and Weaving Company, Ltd., Card Room No 2
3. Weaving Shed, Sassoon Spinning and Weaving Company, Ltd.

crown of lights and two "Stars of India," furnish unique manifestations of that class of high art which is not by any means common in India.

The handsome stage is of extensive dimensions, and it is equipped with a large stock of elegantly painted scenery, while the grand drop-curtain will bear comparison with any in Europe. Its roof glitters with gold, and it has been so ingeniously constructed that it acts as a sounding-board, and thus is a great aid to the acoustic properties of the hall.

The dressing rooms, comprising twenty-four apartments fitted with hot and cold shower baths, afford excellent accommodation, as well as luxury, for artists, and in designing the building, the owners have fixed powerful inhalers, which draw pure air from the garden into channels (in which are large blocks of ice), which extend under passages to all parts of the theatre. In addition to this, however, they have erected in the roof of the building a number of extractors, which expel all impure air.

The foregoing brief notes as to the general features of the Royal Opera House would perhaps lead anyone to suppose that all projects for the further improvement of the building and for the comfort and enjoyment of the public had been wellnigh exhausted, but the enterprising proprietors now contemplate the provision of further luxuries, which are to include a first-class café with a roof garden, an up-to-date billiard-saloon, and a carefully designed up-to-date photographic room for use in connection with "moving" pictures.

Messrs. J. F. Karaka & Co. are deserving of the warmest congratulations of all classes of people in Bombay, as everyone must admire the exquisite architectural features of the Royal Opera House, while those who experience keen enjoyment in performances of a high standard of excellence rendered by powerful companies, can have their most æsthetic tastes ministered to within its walls.

No expense has been spared in equipping it with all modern appliances needed for high-class shows, while it cannot be denied that any entertainment announced in bills emanating from the Royal Opera House is one which may be relied upon as being of high-class character.

The Royal Opera House is conducted on the lines prescribed by its famous prototype in London, and the management are to be congratulated on being pioneers in advocating ideas calculated to promote the welfare of the rising generation. One may be agreeably interested in noticing the phrases on some of the attractive "posters" issued by the Royal Opera House, a fair sample of which is as follows: "A dedication to Art, Science, and Music," "Rendezvous of the cultured," "Home of celebrities," "A Pioneer of healthy amusements," "Always a clean show," and "Under pledge to the public to prohibit words or acting by artists or by cinema presentations apt to produce bad effects on youthful ideals."

DAVID SASSOON & CO., LTD.

The Sassoon family of Bombay trace their descent from the Ibu Shoshans of Spain, and the first of the race to attain distinction was the late David Sassoon, founder of the firm of David Sassoon & Co., Ltd. That gentleman was born at Bagdad in October 1792, his father being a wealthy Mesopotamian merchant, who for many years was State Treasurer to the Turkish Governor of Bagdad, and was known as "Nasi (Prince) of the Captivity." David Sassoon was engaged in banking at Bagdad until the year 1822, when, owing to an outbreak of plague, he removed to Basra and subsequently to Bushire. He visited Bombay in the course of business in 1832, and having decided to remain there, he made a home for his family and established the present firm, opening branches at Calcutta, Shanghai, Canton, and Hongkong, while his commercial enterprises—which included a monopoly in the opium trade—led him as far afield as Yokohama, Nagasaki, and other cities in Japan. Shrewd in business, while noted for integrity, David Sassoon soon made his mark in Bombay, and the great success which he afterwards achieved was attributed by him mainly to the assistance which he received from his sons, and to his strict observance of the old Jewish law relating to tithe, which required a man to devote a tenth portion of his income to charitable purposes.

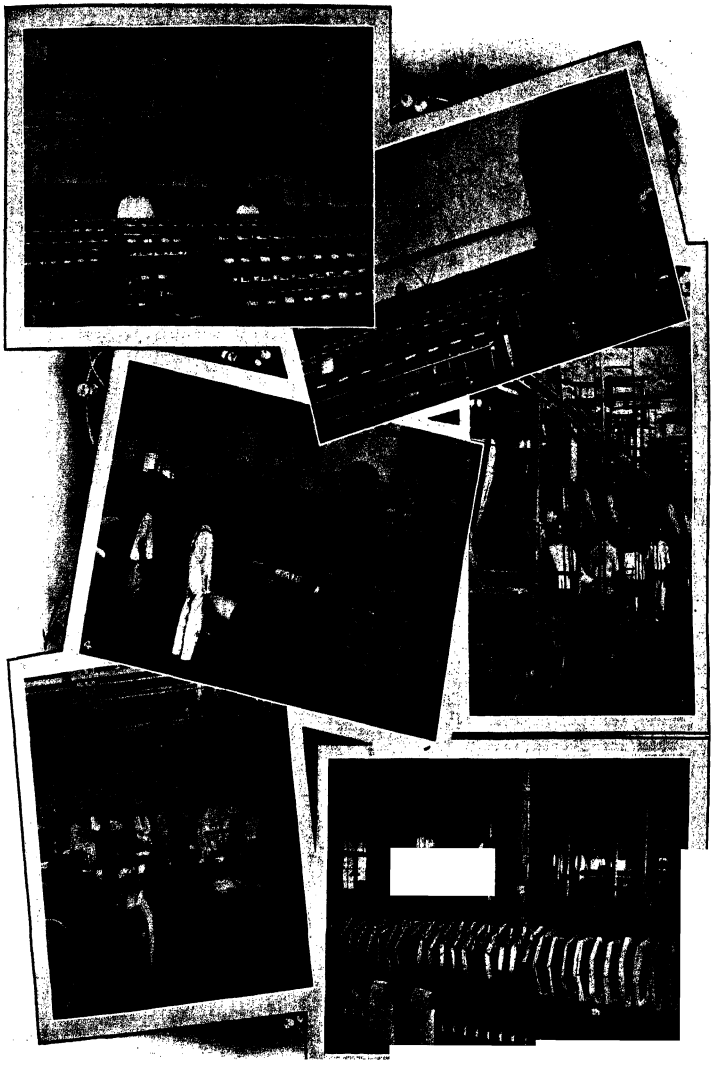
He was a great benefactor to the poor, and was well known for his benevolence to Jews in Turkey, China, Japan, Persia, and India. In Bombay he built and munificently endowed the Talmud Torah School, and at Poona, his summer residence, he bore the cost of the construction of a very handsome synagogue. He was a most liberal subscriber to Sailors' Homes in Bombay and Hongkong, to famine funds, funds for widows and orphans of those who were killed during the Indian Mutiny of 1857, and to the Lancashire Relief Fund. He was an accomplished linguist, speaking Arabic, Persian, Turkish, and Hindustani, and evincing a desire to promote education, he was a warm supporter of an institution for teaching English, Arabic, and Hebrew to the rising generation. Shortly before his death, in Bombay in 1864, he set apart a large sum of money for the erection of a mechanics' institute and library in that city, which is called by his name, but perhaps one of the most important of his gifts was the donation of the Sassoon Reformatory and Industrial School for juvenile offenders. An asylum for infirm persons and general hospital for individuals of all castes and creeds were erected by him at Poona, and his last gift to the public was a statue of Prince Albert the Good.

In appreciation of his philanthropy the citizens of Bombay erected a marble bust of David Sassoon in the Victoria and Albert Museum in Parel Road, Byculla, to which he had presented an illuminated clock-tower, and on December 13, 1864, a special meeting of his late fellow-citizens was held, under the chairmanship of His Excellency the Governor, at which it was resolved to erect a statue to his memory in the Sassoon Mechanics' Institute.

The vacancy in the firm caused by his death was filled by his eldest son, Albert (afterwards Sir Albert Sassoon, Bart.), who was born at Bagdad in 1817, and died at Brighton in England in October 1896. This gentleman had the advantage of a sound education in English as well as in other languages, and by his foresight the business of the firm was very greatly extended, with the result that David Sassoon & Co. came to be known as the "Rothschilds" of the East. During the lifetime of Sir Albert the firm constructed the Sassoon wet dock, which was the first of its kind to be made in India, and this enterprising action stimulated the Government to undertake the building of the Prince's dock, into which water was admitted, during an imposing opening ceremony, by the late Sir Richard Temple, Governor of Bombay, in the year 1879. The Sassoon dock is 1,460 feet in length, 1,000 feet in breadth, and has a length of quay of 6,910 feet.

The firm's manufacture of silk and cotton goods was considerably developed about that time, and they also became managers of the Port Canning Company, who held estates near the mouth of the Mullah River in Bengal.

In private life Sir Albert Sassoon fol-



DAVID SASSOON & CO., LTD.

1. Sassoon and Alliance Silk Mill Company, Ltd.—Neat Silk Clearing, Doubling, and Twisting Departments.
2. Sassoon and Alliance Silk Mill Company, Ltd.—Neat Silk Winding Department.
3. Sassoon and Alliance Silk Mill Company, Ltd.—Jacquard Weaving Department.
4. Union Mills, Ltd.—Warping Department.
5. Union Mills, Ltd.—Weaving Department.
6. Union Mills, Ltd.—Winding Department.

lowed closely in the footsteps of his illustrious father by his loyal support of educational and charitable institutions, and in these he exhibited a similar catholicity of spirit, as his generous gifts were intended to benefit young and old of all races and beliefs. Special mention may be made of large sums of money contributed to the Elphinstone School in Bombay, of his foundation of scholarships at University and art schools, and of his maintenance of the "David Sassoon Benevolent Institution," a school affording instruction to hundreds of Jewish children. Sir Albert was elected vice-president of the Anglo-Jewish Association in Bagdad, where he erected the "School of Alliance Israelite Universelle," presenting it to the community free of all expense.

In 1867 he was appointed a Companion of the Star of India, and in the following year he became a member of the Bombay Legislative Council, holding this honourable position for a considerable number of years. It was due to his munificence alone that the colossal statue of His late Majesty King Edward VII—as Prince of Wales—was erected in Bombay. He received the honour of knighthood in 1872, during the next year he received the freedom of the city of London (he being the first Anglo-Indian to be thus distinguished), the Shah of Persia entertained him at the Empire Theatre in London in 1889 and conferred upon him the Order of the Lion and Sun, and in 1890 Her late Majesty Queen Victoria raised him to the rank of baronet.

The succeeding head of the firm was Solomon David Sassoon, brother of Sir Albert, who was born in Bombay in 1841. In early life he went to China on behalf of the firm, and on returning to Bombay assumed control of the Bombay establishment, a position which he held until his death, in 1894. He was a director of the Bank of Bombay, one of the Trustees of the Port, he was twice nominated during the time of Sir James Ferguson as an additional member for framing laws and regulations in the Council of the Government of Bombay, he was chairman of the Sassoon Spinning and Weaving Company, Ltd., the Sassoon and Alliance Silk Mills Company, Ltd., the Port Canning Land and Improvement Company, the Oriental Life Assurance Company, and several other Jewish joint-stock associations.

The head offices of the present firm are in London, and branch establishments are open at Bombay, Calcutta, Karachi, Hongkong, Shanghai, Hankow, and Manchester in England. They carry on an exceedingly large business as general merchants and bankers. The directors are Mr. F. D. Sassoon, Sir Philip Sassoon, Bart., M.P., Mr. D. R. Sassoon, and Mr. R. Sassoon.

The firm, whose offices in Bombay are at 3 Forbes Street, Fort, are managing agents for the following among other important undertakings:—

THE SASSOON SPINNING AND WEAVING COMPANY, LTD.

This company, formed in 1874 with a capital of 15 lakhs of rupees, owned mills on the Mount Estate in Mazagon, Bombay, covering an area of 84,486 square yards, but a portion of the premises was let to the Sassoon and Alliance Silk Mills Company, Ltd. Additions were made to the mills from time to time to cope with increasing trade, and in 1896 the capital was increased to 22½ lakhs for further expansion. At the present time (January 1917) there are 22,644 mule spindles and 29,200 ring spindles, of which 49,277 are in daily use. The looms are 1,196 in number, and 1,134 of these are in constant employment. Two steam engines of 1,500 and 800 indicated h.p. respectively are used for driving the machinery of spindles and looms, and electric lighting for the whole of the mills is generated by the firm's own plant. The output of the mills is disposed of in India, Burma, East Africa, and on the Persian Gulf. About 2,400 hands are usually employed.

THE SASSOON AND ALLIANCE SILK MILLS COMPANY, LTD.

This company is the result of an amalgamation of the old Sassoon Silk Manufacturing Company, Ltd., and its factory is situated on the Victoria Road, adjoining that of the Sassoon Spinning and Weaving Company, Ltd. It was formed in the year 1883 with a capital of 10 lakhs of rupees, the amount at which the share list still remains.

The mills contain 9,520 spindles and 277 looms, driven by steam power, and they have an average annual consumption of 40,000 lb. of raw silk, which is manufactured into yarns and cloth, the greater portion of the latter meeting with a ready sale in local markets. The raw silk material is imported from the Province of Bengal, while all waste silk is obtained from China, Japan, and Bengal.

The mills are thoroughly up to date in every respect, as all the processes of manufacture, commencing with the treatment accorded to raw silk, and finishing with dyeing and bleaching, are carried out upon the mill premises.

Manufactured cloth has been exhibited by the company from time to time, and the following honours have been obtained: Gold medals at the Calcutta International Exhibition in 1883-4; at the Bombay Industrial and Agricultural Exhibition of 1904; the Central Provinces and Behar Exhibition at Nagpur in 1908; the Agricultural Implements and Indian Arts and Goods Exhibition at Bhavnagar in 1908; and at the Mysore Dasara Industrial and Agricultural Exhibition in 1914. Silver medals were gained at the Fine Art Exhibition at Bombay in 1879; the Eighteenth Indian National Congress Industrial Exhibition in Madras in 1903; while a diploma and silver medal were bestowed upon the company's goods at the Exposition Universelle d'Anvers in 1885.

Employment is found for about a thousand hands.

THE PORT CANNING AND LAND IMPROVEMENT COMPANY, LTD.

A scheme was formulated in 1865 by a Mr. Ferdinand Schiller, of Calcutta, which had for its object the reclamation of land from the sea, the subsequent construction of docks at Port Canning, and the making of that place an auxiliary trading port to the chief city in Bengal. A company was therefore formed under the name of the Port Canning Land Improvement, Reclamation, and Dock Company, Ltd., with a capital of Rs. 1,20,00,000 in 6,000 shares, each of Rs. 2,000. The work of reclamation of land was proceeded with, and developments included the building of docks, and of a rice mill which was said to be the largest of its kind in Asia, but the cyclone of 1867 destroyed all shipping facilities and washed away a considerable portion of the newly made ground, although the majority of the structures resisted the fury of the storm.

The company went into liquidation in 1870, and a new concern, styled the Port Canning Land Company, Ltd., took over the whole of the assets with a reduced capital of Rs. 60,00,000. The area comprising 3,51,000 *bighas* was partitioned into (*a*) the Ellengunge and Canning division, and (*b*) the Meenakhan division.

SHALIBHOY TYEBJEE AND SONS.

1. Office and Showrooms
2. Metal Department
3. Shipping Department
4. Rope and Canvas Godown.
5. Paint and Oils Godown.

The measurement of a bigha varies considerably in different portions of India, but in the neighbourhood of Calcutta it is equivalent to about one-third of an English acre.

In 1872 the company was entirely reconstituted with the view of amending its Memorandum of Association, and the present company was registered at Bombay in the following year.

The capital of the latter was obtained by the issue of 6,000 shares, each of Rs. 1,000, and such has been the success of the new venture that whilst the rents realized for the first year's working were Rs. 1,54,000 derived from rents of 1,06,000 bighas, at a general meeting of shareholders held in August 1916 the accounts submitted by the directors showed that during the twelve months ending April 30, 1916, a sum of Rs. 5,44,000 had been collected as rent from 3,07,000 bighas, this very large increase in area having resulted from land reclaimed from sea and jungle. The rice mill was closed about the year 1886, and the machinery was subsequently disposed of.

In 1874 the company was under the control of a secretary and board of management, and its shares decreased in value to Rs. 200, but considerable progress has been made since Messrs. David Sassoon & Co., Ltd., took up the agency in 1875, the shares rising by degrees to Rs. 430, until at the present time they are quoted at Rs. 750.

Prior to the year 1907 an average annual dividend of Rs. 22 a share was paid, but the one declared in August 1916 was at the rate of Rs. 45.

All that remains of the premises belonging to the original company consist of the rice mill, an hotel building, an agent's house and barracks; the first-named is now used as a warehouse, while the other three have been turned into suitable residences for employees of the present company.

The whole of the property is worked on zemindary lines—that is, by leasing the land to *ryots* (small cultivators). The directors of the company are Messrs. M. Nissim (chairman), Framjee Jemsetjee Batliboy, T. Powell, the Hon. Mr. Chunilal Vigbhucandas Mehta, and Ishwardas Lukhmidas.

The manager is Mr. Peroshaw B. R. Mody; the agent at Canning is Mr. A. C. Mitter, and the secretaries, treasurers, and agents are Messrs. David Sassoon & Co., Ltd.

THE UNION MILLS, LTD.

This company was registered with head offices at 3 .Forbes Street, Fort, Bombay, in March 1888, with a subscribed capital derived from 479 shares of Rs. 1,000. The mills, which are situated in De Lisle Road, Parel, Bombay, were at that time equipped with 21,000 ring spindles, but in the year 1893 the number of these was increased to 32,000, and additional shares were issued, making a total subscribed capital of Rs. 7,40,000, an amount which was subsequently raised to Rs. 8,40,000.

Messrs. Vithaldas Gopaldas & Co. were agents of the mills until the year 1909, when they were succeeded by Messrs. David Sassoon & Co., Ltd., and simultaneously the value of the shares was reduced to Rs. 250, and 1,196 new shares were issued.

The capital is now Rs. 5,00,000, divided into 2,000 shares of Rs. 250.

The machinery in the loom shed, to which 866 looms were added in 1915, is driven by electricity, the installation having been fixed by the Tata Hydro-Electric Power Supply Company, Ltd.

About sixteen hundred hands are constantly employed in the mills.

The directors are Messrs. M. Nissim (chairman), F. R. Wadia, T. Powell, and Roognathdas Gopaldas.

SHALEBHOY TYEBJEE & SONS.

Probably the oldest, and certainly one of the largest, ship-chandlery businesses in Bombay is that belonging to Messrs. Shalebhoy Tyebjee & Sons, of Bank Street, Fort, Bombay. It was commenced in the year 1840 by Mr. Tyebjee Dawood Khan, and by sheer perseverance and absolutely straightforward dealings the proprietor so greatly increased his circle of supporters that in a very short time he held a foremost position in his own line of business. On his death, in 1881, the concern passed into the hands of his eldest son, Mr. Shalebhoy Tyebjee, who maintained the honourable reputation gained by the firm, and it redounds to the credit of father and son alike that not a single captain of a steamer left Bombay about that time without paying a visit to this noted business centre. This gentleman gave strict attention to every detail of his quickly growing business, but he interested himself keenly in the welfare of his own people—the Borah community at Surat—and he was always ready to render them all assistance in his power.

The Government of Bombay, recognizing his sterling business qualifications and his unbiased judgment upon questions submitted to him, made him a Justice of the Peace, a position which he has filled with distinction for the past ten years.

Among a number of profitable undertakings prompted by Mr. Tyebjee's keen perception, was the purchase of a large estate in the Collectorate of Balsar in the Northern Division of the Bombay Presidency, which is known to-day as the Bhagal Estate. This property comprises 8,000 acres of fertile land, extensively covered with coco-nut plantations, and it is estimated that the present value is not less than Rs. 5,35,000.

After a strenuous business career of nearly twenty years, Mr. Shalebhoy Tyebjee handed over the management to his son, Mr. Abdulcayum Shalebhoy Tyebjee, and latterly to Mr. Amiruddin Shalebhoy Tyebjee also, who have conducted it most successfully, and especially during the past two years while executing very heavy war contracts.

With the further expansion of the firm's business it was found necessary to open a branch establishment in Bombay, and this venture is now a flourishing concern (under the name and style of Amir Brothers) in Nagdevi Street, the management being at present in the hands of Mr. Dawoodhkhan Shalebhoy Tyebjee (Mr. Shalebhoy's youngest son).

The firm always carry a huge stock, worth from Rs. 10,00,000 to Rs. 15,00,000, of all kinds of shipping and railway stores, hardware, and other goods, and they are agents for the Ganges Rope Company, Ltd., Brunton's wire ropes, Walker's "Lion" packings, Randall Brothers' enamels, Caille's portable boat-motors, and for the South Manchuria Steamship Company, Ltd.

Large contracts are held for the supply of stores to marine and military authorities, to the Government Public Works Departments, to railways, and to the leading steamship companies trading with Bombay.

The firm's very extensive premises have a long frontage upon Bank Street, and are quite near to the Government dockyard and within a distance of a quarter of a mile from the Bombay docks.

About fifty hands are employed in the stores, under European management, and a number of experienced sailmakers are regularly engaged on the premises, while the stock of canvas imported from England is maintained at a quantity of 10,000 yards.

SHAW, WALLACE & CO.

This firm, whose head office is in Calcutta, opened a branch office at Bombay in 1902, which has developed into one of considerable importance. The direction of their Mormugao branch is also conducted from Bombay.

The firm hold the appointment as agents of the Burmah Oil Company, Ltd., and of the Anglo-Persian Oil Company, Ltd., and are the managing agents of the Eastern Chemical Company, Ltd., and of the Bamankua Manganese Company, Ltd.

In order to handle with efficiency and despatch the enormous quantities of mineral oil marketed through Bombay, the Burmah Oil Company, Ltd., have in course of erection a large new and up-to-date installation at Sewri, which from the point of view of the cheap and efficient handling of the various oils and other products and of the manufacture of tins, drums, and other necessary packages, will be second to none. In this connection it was found necessary to transport two bulk oil tanks, each capable of containing one million gallons of oil, over a distance of several miles, from the old installation at Chinchpoogly to Sewri.

The Eastern Chemical Company, Ltd., a pioneer concern with remarkably good prospects of success in the near future, endowed as it is with most powerful financial and technical support both in England and in India, is managed by Messrs. Shaw, Wallace & Co.

This company's works near Rowli Hill, in the north-east corner of Bombay Island, are rapidly extending, and, already one of the largest and most modern in the East, are producing mineral acids and heavy chemicals in large quantities.

In addition to these extensive industrial interests, Messrs. Shaw, Wallace & Co. are large importers of cotton and other textile goods from England, France, and Japan, and they also handle European, Asiatic, and other timber in considerable quantity; their business in rice and sugar is rapidly increasing, and as agents for "Red Hand" brand of anti-corrosive paints, they are at times unable to import sufficient to meet the demand. They are also agents for Messrs. Harker, Cable & Co.'s prospecting drills, for Messrs. Holman Brothers' rock drills, and for "Holden" liquid fuel burners. Important railway, bunkering, and other contracts are regularly secured for the supply of coal from the collieries managed by their Calcutta principals.

Their corresponding firm in London is Messrs. R. G. Shaw & Co., of Winchester House, Old Broad Street, E.C.

M. M. SHIRAZI, J.P.

The subject of this sketch succeeded his father, Haji Abdul Hoosein, in the year 1900, as managing agent of the Bombay and Persia Steam Navigation Company, Ltd., Bombay, which was established in 1877, chiefly through the efforts of Mr. Hoosein, and it may not be out of place to make a brief reference to some of the early history of this well-known Bombay family.

The grandfather of Mr. Shirazi—Haji Zenal Abedin Shirazi—was a native of Shiraz, in Persia, and the remarkably rapid advance made in the early portion of the nineteenth century by the Port of Bombay led him, in the year 1840, to leave the land of his birth, and to establish himself in business as a general merchant in the city known as the "Gate of India." He soon came to be highly respected in leading commercial circles, and he subsequently became owner of four steamers, which traded regularly between this continent and the Persian Gulf, the Red Sea, Mauritius, and other places. This establishment of new markets for Indian produce caused so large an expansion of Haji Zenal's activities that, when needing further assistance, he availed himself of the services of his son, Haji Abdul Hoosein, and it was the experience thus gained respecting shipping matters which ultimately resulted in the formation, in 1877, of the Bombay and Persia Steam Navigation Company, Ltd., of which Mr. Hoosein was the first managing agent.

Mr. Hoosein threw a tremendous amount of energy into the working of the company, and it soon became necessary to make substantial additions to the original small fleet of four vessels. Mr. Hoosein retained the managing agency until his death in 1900, when that responsible position was ably filled by his son, Mr. Mirza Mahomed Shirazi. Thirteen years later Mr. Shirazi retired in favour of Messrs. Turner, Morrison & Co., Ltd., when the registered offices of the company were transferred to 40 Church Gate Street, Bombay.

There is now a complement of fourteen steamers, which sail from Bombay to ports in the Gulf of Persia, the Red Sea, and elsewhere, while agencies for the conduct of the very extensive transactions of the company have been established at Calcutta, Colombo, Karachi, Bunder Abbas, Lingah, Dabai, Baharein, Bushire, Mohamerah, Basra, Mukalal, Aden, Berbera, D'Jibouti, Hodeida, Massowah, Suakin, and Jeddah.

It might be mentioned that Mr. Shirazi was formerly agent for a Turkish line of steamers, but he was compelled to resign this office on the outbreak of the Great War. One of the fleet, the *Kara Denez*, was seized at Bombay, and is still detained there by the naval authorities.

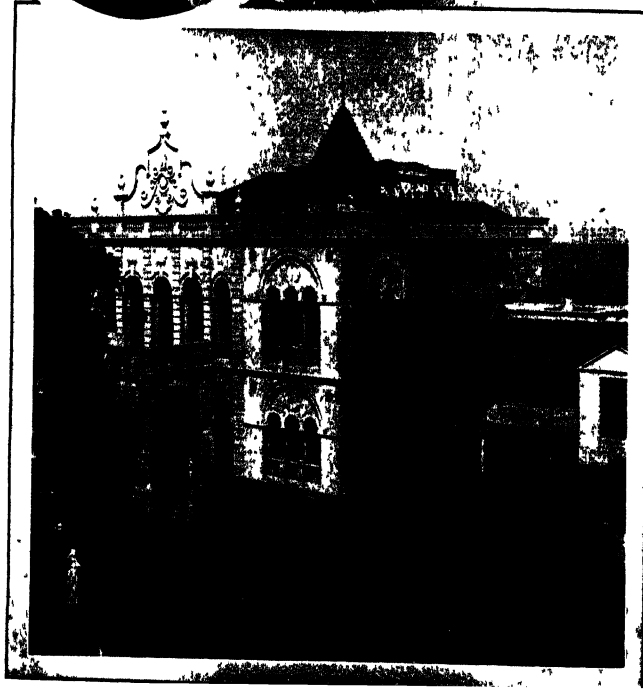
Haji Zenal Abedin Shirazi amassed considerable wealth and gained the highest respect of a very large number of friends in public and private life. He was very benevolent, and in the distribution of charitable gifts was uninfluenced by questions of caste or creed. He received from the Shah of Persia the high honour of the title of "Amintojar."

Haji Abdul Hoosein proved his business capabilities by his able control of the affairs of the above-named Shipping Company, and he, like his father before him, was a most generous supporter of charitable institutions, particularly among the Mahommedan community. His charities, privately bestowed, have cheered the hearts of hundreds of persons in Bombay, and even in Persia, the home of his ancestors, and his distinguished services were rewarded by his appointment as a Justice of the Peace, and as Vice-President of the "Anjuman-i-Islam."

Mr. Mirza Mahomed Shirazi, on giving up the managing agency of the Shipping Company, opened extensive offices at 15 Elphinstone Circle, in Bombay, where he conducts a very large business on his own account as a financier and general merchant. This gentleman has not identified himself largely in the public life of Bombay, but he takes a warm interest in any projects launched for the welfare of the inhabitants generally. He has given liberally of his wealth, and it is significant of him that his sympathy is of such a broad-minded character that he is ever ready to assist those in distress, whatever their nationality may be. His services have been recognized by the placing of his name upon the list of Justices of the Peace for the city of Bombay, and he is Vice-President of the Anjuman-i-Islam.

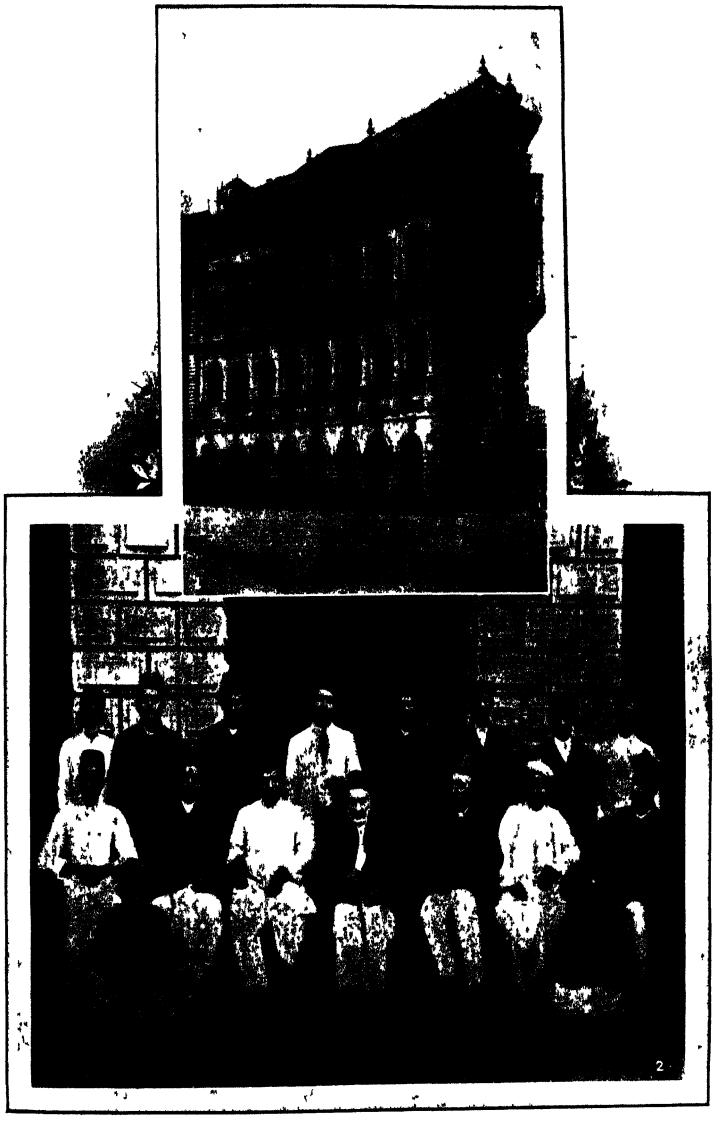
THE SIDDELEY ICE MANUFACTURING COMPANY, LTD.

The absolute necessity for the production of large supplies of pure ice is



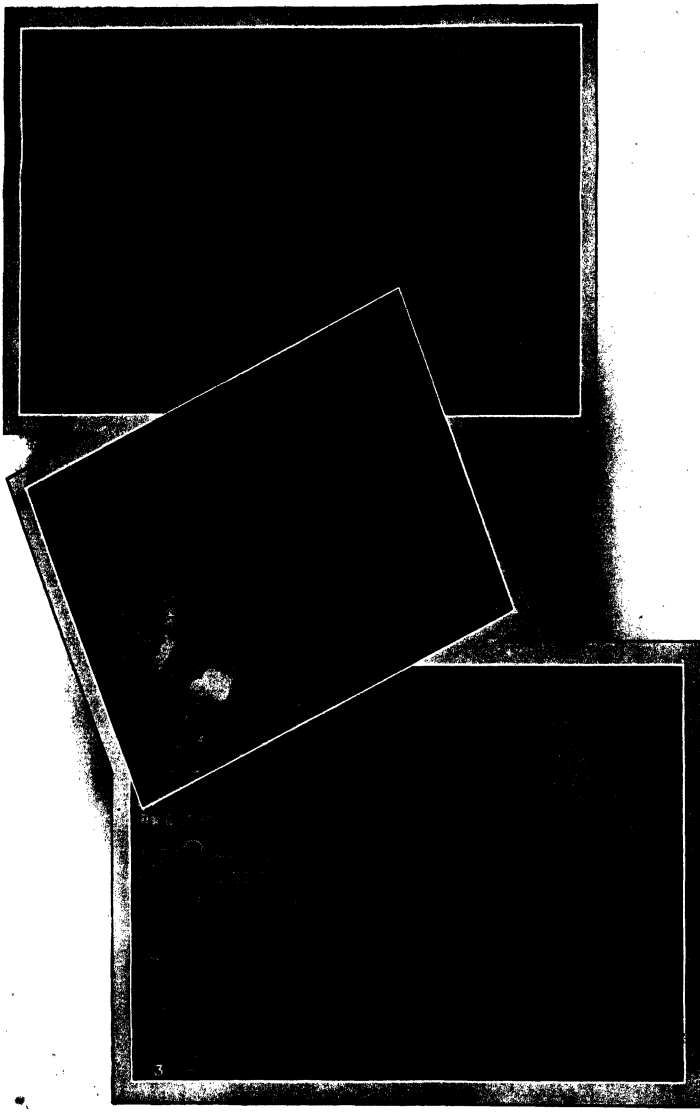
M. M. SHIRAZI.

1 Mirza Mahomed Shirazi, J.P 2. Residence. "Baharestan." Dongerri Road. Malabar Hill.



M. M. SHIRAZI.

1. Exterior, Office, 'Shirazi" Building. 2 Office Staff Group.

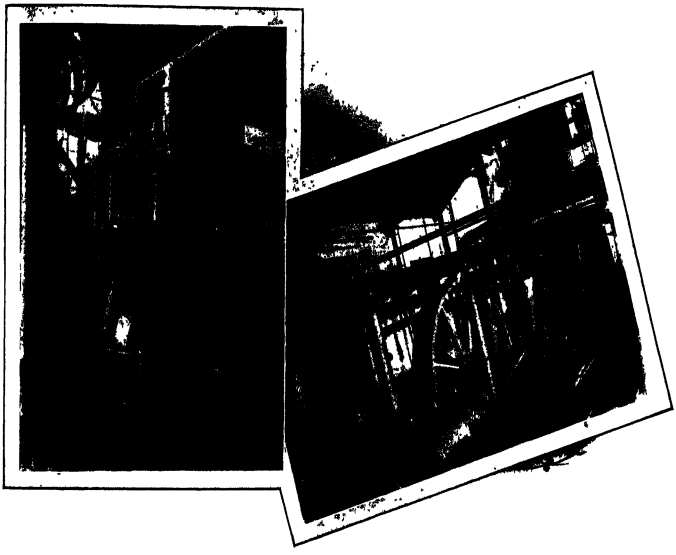


D. M. WADIA & CO. (THE SIMPLEX MILLS COMPANY, LTD.).

1. General View, Simplex Mills Company. 2. Blow-Room Department. 3. Card-Room Department.

becoming more and more apparent, and that which was formerly regarded as a luxury is now a daily essential.

Ice is required for the cold storage of meat, vegetables, and other perishable food; it is found on all tables, refreshment bars, and the majority of private residences; and there is not a single hospital surgeon or medical man to whom its use does not frequently mean the difference between the life and death of patients.



THE SIDDELEY ICE MANUFACTURING COMPANY, LTD.

1. Diesel Engine for Driving Ice Plant. 2. Ether Ice Plant.

The Siddeley Ice Manufacturing Company, Ltd., of 9-11 Arthur Road, Tardeo, Bombay, was formed in April 1911 by Messrs. Kavasji K. Bhappu, Keki C. Bhappu, Jehangir C. Bhappu, and Khan Bahadur Bomanjee D. Pudumjee, for the purpose of manufacturing regular supplies of fresh ice to meet the requirements of the inhabitants of that city.

It has an authorized capital of Rs. 2,50,000, of which a sum of Rs. 1,63,000 has been subscribed.

The plant in the factory is of the well-known Siddeley type, and is driven by a 160 b.h.p. Diesel crude oil engine. The average daily output of ice is 16 tons or thereabouts, and the whole of this quantity is conveyed by cartage contractors from the premises to the company's customers, including the principal hospitals of the city.

The company are, further, in the habit of providing cold storage accommodation by converting freezing boxes into chambers suitable for the purpose.

The original board of directors consisted of the Hon. Sir Jamsetjee Jejeebhoy, Bart. (chairman), Khan Bahadur Bomanji D. Pudumjee, and Messrs. Pestonjee M. Kanga, Kavasji K. Bhappu, Nowrojee E. Screwvalla, Sorabjee B. Kapadia, Dorabjee S. Dajee, and Ardeshir Bomanjee Setna, while the present directors are Messrs. Pestonjee M. Kanga (chairman), Sorabjee B. Kapadia, Dorabjee S. Dajee, Nowrojee E. Screwvalla, Ardeshir B. Setna, Kavasji K. Bhappu, and Keki C. Bhappu.

The registered offices of the company are at the factory, and the company have constant employment for about twenty to twenty-five hands.

THE SIMPLEX MILLS CO., LTD. (D. M. WADIA & CO.).

This company was formed in the year 1913 with a capital of Rs. 15,00,000 divided into 6,000 shares of Rs. 250, for the construction and equipment of a thoroughly up-to-date mill for "ginning, spinning, and weaving cotton, for manufacturing, dyeing, bleaching, and printing yarns, cloth, cotton, wool, silk, and other goods, and for producing raw cotton, wool, silk, hemp, jute, yarn, and cloths of various fibres." Bombay is famous for its cotton mills, but the Simplex Mills, erected by this company in Jacob Circle, Bombay, are unexcelled in general appearance, in their equipment of machinery and plant, and in the high-class character of their products. The supervision of the whole work of construction was placed in the hands of Mr. D. M. Wadia, managing director, who has had a lifelong experience in the cotton industry and who has in the past shown unique capabilities as manager of the Century, Textile, Bomanji Petit, and Maneckji Petit Mills.

The Simplex Mills have been solidly built

D. M. WADIA & CO. (THE SIMPLEX MILLS COMPANY, LTD.).

1. Spinning Department. 2. Sizing Department. 3. Weaving Department.

on entirely modern principles, and even a most cursory inspection of them impresses one with the fact that the greatest care has been manifested in the arrangement of the various rooms, in the installation of the machinery, and in the provision of all accessories calculated to promote the welfare of the hundreds of hands employed therein.

The plant comprises 30,000 spindles and 800 looms, but the premises have been constructed in such a manner that additions, either to the buildings or the machinery, can be made in the future without any disturbance of the existing plant.

The machinery in the blow-room, card-room, and spinning-room was supplied by Messrs. Tweedale and Smalley, Ltd., of Castleton, near Manchester, through Mr. J. H. Dunkerly, then agent in Bombay. A special feature in connection with the plant in the card and blow-rooms is the substitution of ball bearings in the scutchers and openers in place of the old-fashioned type, which, owing to friction, was the cause of so many disastrous fires.

The whole of the gearing for the mills was supplied and erected by Messrs. Macbeth Brothers & Co., Ltd., of London and Bombay (agents for the Unbreakable Pulley and Mill Gearing Company), and the work has been so satisfactorily carried out by that firm that there is practically no vibration in any part of the building, nor has there been heating of any part of the machinery.

Special reference should be made to a novel arrangement which forces the fluff and dust from the card-room into cyclone dust collectors, and this plan, simple as it may seem, is of immense importance to the health of the workpeople.

It is evident that while the architect of the building exercised the greatest care to provide means for obtaining sufficient ventilation and natural light in the mills, Mr. Wadia has been no less thoughtful, as he has caused Messrs. Mather and Platt, Ltd., to instal a complete system of the "Vertex" ventilating and self-cleaning humidifiers, and he has, further, taken the utmost precautions against fire by equipping the premises with a sufficient number of "Grinnell" sprinklers.

Electric motors, supplied with current by the Tata Hydro-Electric Power Supply Company, Ltd., are used for driving the machinery and for lighting the mills, thus obviating the necessity for engines, furnaces, and chimneys, which are a constant source of danger to human beings as well as buildings.

The major portion of the raw material is obtained locally, though the manager occasionally makes his purchases in more northerly districts.

During the year 1916 no less than 57,36,199 lb. of yarn were spun, and 35,16,416 lb. of cloth were manufactured.

The fourth report of the Board of directors was presented at a general meeting of the shareholders of the company on March 16, 1916, and the statement of accounts for the year ended on December 31, 1915, showed a net profit of Rs. 2,80,966.

After certain amounts had been transferred to reserve fund, depreciation, and other accounts, the balance for disposal of Rs. 58,444 was appropriated as follows: Dividend for six months ending on December 31, 1915, at Rs. 12-8-0 per share (equal to 10 per cent. per annum), Rs. 48,925; bonus to mill and office staff, Rs. 2,007; and balance carried forward to the following year, Rs. 7,512.

The directors are to be congratulated on having given to Bombay mills which are a credit to the leading cotton manufacturing city in India, and they are fortunate in having such a capable managing director in the person of Mr. Wadia.

The directors are Sir Shapurji B. Broacha, Mr. F. E. Dinshaw, the Hon. Mr. Phiroze C. Sethna, Mr. Mathradas Goculdas, Mr. J. H. Dunkerley, and Mr. D. M. Wadia.

SORABJEE SHAPURJEE & CO.

Industrial development in India during the past forty or fifty years has been brought about principally through the force of outside influences. In other words, India, half a century ago, was scarcely in touch with the progress made in other countries; she was importing immense quantities of manufactured goods while she had all necessary raw material at her own doors, and not only could she have converted it into marketable commodities, but she could at the same time have become a benefactor to her own sons by finding congenial employment for them in mills, factories, collieries, and other concerns.

India, in fact, was paying the European labourer an unnecessary price for his work, inasmuch as she was receiving her raw material back again in the shape of manufactured products, and was purchasing them at full market value, which, of course, included freightage and the cost of labour in making up.

The industrial development that has taken place was in part due to the investment of capital in fostering the agricultural and mineral resources of the country, and to the establishment of fresh enterprises and the erection of mills and factories The movement proved highly successful, for no sooner had a new industrialism been born than it began to grow vigorously.

The possibilities which were then presented were grasped by British capitalists and by leading business men in India, and among the latter a place of honour must be granted to the well-known firm of Messrs. Sorabjee Shapurjee & Co., engineers and machinery merchants, of 207 Hornby Road, Fort, Bombay.

The history of the firm, who have been prominent in the development of India's industries, must be traced to the grandfather of Mr. Shapurjee Sorabjee (the head of the firm to-day), who mastered the practical details of iron-founding and engineering in the Government gun carriage factory in Bombay, and who, in the year 1850, established the first foundry and engineering works in Western India. That gentleman, a typical Parsee, was a notable pioneer in industrial movements, as it is found that he was the first to start a flour mill, and to introduce into India machinery for the opening and cleaning of wool.

Mr. Sorabjee, senior, then paid a visit to England, where he placed with such well-known firms as Messrs. Crawhall & Campbell and Messrs. Whitworth orders for circular boring, turning, and planing machines, and a varied assortment of first-class tools.

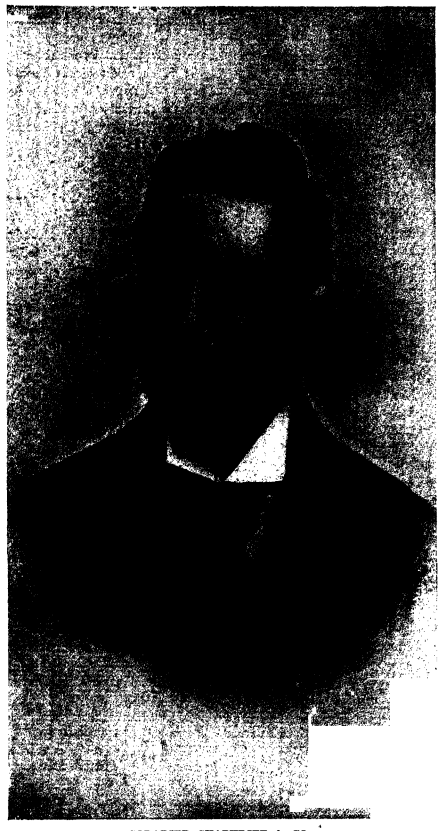
The enterprising spirit of that gentleman gave abundant promise of a brilliant career in the engineering industrial world, but he unfortunately died at the early age of forty, leaving an only daughter, who was married to Mr. Hormusjee Cowasjee. A son of this alliance had been adopted by the grandfather during his lifetime, and the boy took the name of Shapurjee Sorabjee. The business was conducted by Mr. Hormusjee Cowasjee until 1876, when the latter died suddenly at the age of thirty-six, and the works were for the three following years carried on by employees in such a negligent manner that they were brought to the verge of ruin.

Mr. Shapurjee Sorabjee was at that time only sixteen years of age, but as he had passed the matriculation examination

of the Bombay University, and had already exhibited exceptional business capabilities, he boldly stepped into the breach and took over the management of the concern in the hope of arresting further catastrophes. After several years of hard work he succeeded in re-establishing confidence in the commercial world and turned a losing undertaking into a paying one. He, in 1884, wished to visit England in order to familiarize himself with Lancashire industries and to obtain a wider experience in engineering generally. Mr. Ratanshaw Dadabhoy, brother-in-law of the owner, was therefore left in full charge of the business, and Mr. Sorabjee entered the works of Messrs. Hick, Hargreaves & Co., the well-known engineers of Bolton, and remained there for a period of three years. He spent his evenings in Manchester attending engineering classes at Owen's College, where he won an Ashbury scholarship; he gained first-class honours in mechanical engineering at the City and Guilds of the London Institute; and in 1887 he was enrolled as a Member of the Institute of Mechanical Engineering and an Associate Member of the Institute of Civil Engineers.

Before Mr. Sorabjee returned to India he secured the agency of many leading engineering firms, and on arrival in Bombay he entered into large contracts for the supply of a vast quantity of machinery for new mills and for replacing obsolete plant. Mr. Ratanshaw Dadabhoy was about this time admitted into partnership with Mr. Sorabjee. The firm were the first to succeed in inducing mill owners in Bombay to make use of revolving flat cards, invented and patented by Mr. Elijah Ashworth, of Manchester, and they obtained from well-known English engineers a number of boilers, engines (with an aggregate total of over 50,000 h.p.), and a large quantity of gearing and other plant. During another visit to England Mr. Sorabjee secured other important agencies, notably that of Messrs. Brooks and Doxey, Ltd., of Manchester, manufacturers of ring spinning machinery, and Messrs. Butterworth and Dickinson, of Burnley, manufacturers of weaving machinery. Both of these firms have supplied very extensively and have always in hand large orders for new and old mills in India.

The above particulars convey a very imperfect idea of the extent of Mr. Sorabjee's personal activities in the introduction into India of machinery and plant, together with newly invented appliances, and it only remains to be added that the commercial house of Sorabjee Shapurjee & Co. is one of the best known in Bombay in connection with the development of the engineering and cotton machinery industries in this country.



SORABJEE, SHAPURJEE & CO.
Mr. Shapurji Sorabjee.

THE SINCERA WATCH COMPANY.

A comparison between the insignificant business as a watchmaker and jeweller, founded by Mr. D. R. Pundole in the year 1886, and the fine establishment and extensive manufacturing and trading concern at 369–371 Hornby Road, Fort, Bombay, now belonging to that gentleman and his two sons (Mr. Nowrojee and Mr. Nariman), and carried on under the name of the Sincera Watch Company, reveals the fact that there must inevitably have been a clever directing mind in supreme control—a man who was an experienced workman, who gave value for money, and was unfailing in his courtesy to customers.

In July 1911 the old-established firm of Messrs. Kanny & Co. was absorbed by Messrs. D. R. Pundole & Sons, and it was at that time that

the name of the Sincera Watch Company was adopted.

The partners have an office at La Chaux-du-Fonds, the cradle of the watch-making industry in Switzerland, and this alone is sufficient to account for the superior quality of their stock-in-trade. Further, they are agents for the well-known watch manufacturing firm of Messrs. Rotherham & Sons, Ltd., of Coventry, England, and they themselves are makers of the popular "Beaumont" Swiss watches. They carry a large stock of imported English clocks, together with a choice assortment of jewellery of all descriptions, in which a rapidly increasing trade is carried on.

A very distinct advantage accrued to the firm owing to the valuable experience gained by Mr. Nowrojee during a two-years' course of study in horology at l'Ecole d'horologerie in Bienne, near Neuchâtel, in Switzerland. This gentleman subsequently proceeded to London, where he increased his special knowledge, and before returning to India he was awarded a certificate and diploma by the British Horological Institute.

Such a unique experience as this is a potent factor in the conduct of the firm's business, and clients are not slow in recognizing its influence upon the character of the products of the workshops.

Messrs. D. R. Pundole & Sons have, by strictly honourable conduct and unswerving devotion to the interests of their customers, secured an honourable position in the commercial world of Bombay.

SINCERA WATCH COMPANY.

1. Exterior Frontage. 2. Interior of Showroom. 3. Workshop.

THE SOUTH BRITISH INSURANCE COMPANY, LTD.

This company, which was incorporated in New Zealand, is a colonial institution, with branches and agencies spread over the whole world.

The Bombay branch, under the managership of Mr. H. T. Gorrie, assisted by Mr. L. C. Margoliouth, has its office in Canada Building, Hornby Road, and it is the best fitted and most commodious insurance office in Bombay. The European staff has been reduced to the two above-named gentlemen, owing to the war, one, Lieutenant R. T. Peacop, having given his life in France.

The company undertakes fire, marine, motor, and all kinds of transit insurances, and is deservedly popular on account of its liberal and prompt settlement of claims and of all matters pertaining to its business. The balance sheet for 1916 sets forth the strength of its financial position. In addition to the paid-up capital of £300,000, there are the Reserve Fund of £320,000, the Re-insurance Fund of £260,000; the reserve for losses outstanding, £130,515, and the Contingency Fund of £20,000, while the assets have been increased from £1,094,963 to £1,168,334.

The year 1917 shows a very much stronger position. £200,000 has been capitalized from reserves, to which £50,000 has been added. £30,000 has been placed to the Re-insurance Fund, and £20,000 to the Investment Fluctuation Fund. These figures show the

SOUTH BRITISH INSURANCE COMPANY, LTD.
INTERIOR OF OFFICE, BOMBAY.

strength of the company, regarding which a leading financial paper in London wrote on the 25th of November, 1916: "The underwriting has been so skilful and the administration so effective that for a considerable period the whole of the savings were accumulated, and even during the past financial year, which closed on the 31st of August last, the rate of dividend of the past two years was repeated."

The rate of dividend for 1917 has been increased.

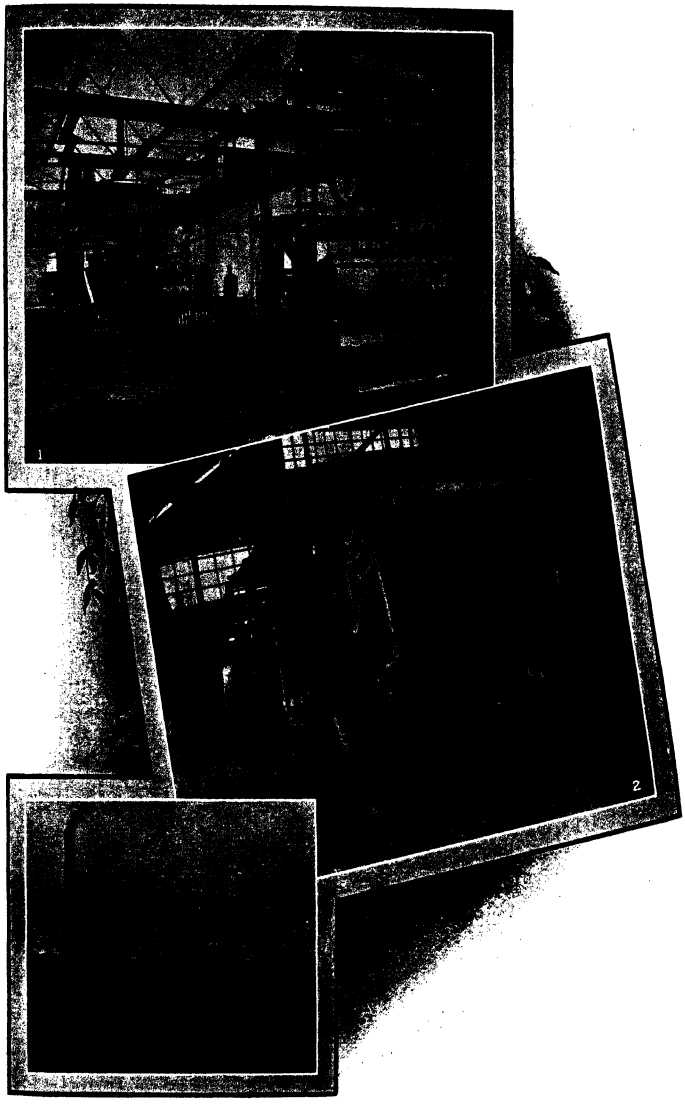
The manager, Mr. H. T. Gorrie, is chairman of the Bombay Underwriters' Association and Bombay Salvage Corps Association, and deputy chairman of the Bombay Fire Insurance Association.

E. STELLA & CO.

Messrs. Stella & Co., of Queen's Mansions, Prescott Road, Fort, Bombay, commenced business in the year 1914 by importing and dealing in all kinds of medicinal preparations suitable for the representatives of every individual branch of the animal kingdom, and from the commencement it has been the leading feature of their commercial policy to become agents for only those manufacturing firms whose preparations have, in practice, been proved to be eminently satisfactory.

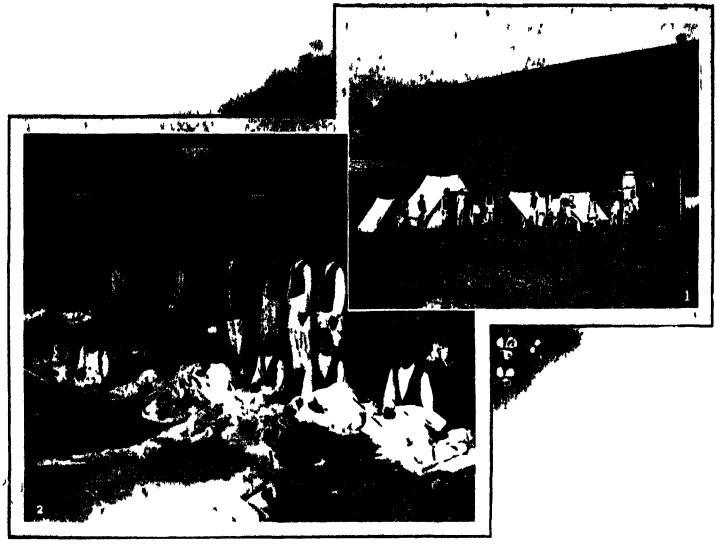
The firm have, however, gone a step further than this by requiring definite evidence that the medicines sold by them

E. STELLA & CO.
1. RECEPTION AND MANAGER'S ROOM.
2. A CORNER OF THE STOCK ROOM, SHOWING REFRIGERATOR FOR STORAGE OF BIOLOGICAL PRODUCTS.
3. PORTION OF A SUPPLY OF MEDICAL STORES TO THE BOMBAY GOVERNMENT FOR WAR PURPOSES.



SIR ADAMJEE PEERBHOY AND SONS (SPINNING AND MANUFACTURING MILLS).

1. Cloth Bleaching Plant. 2. Cloth Printing Plant. 3. General View, Adamjee Peerbhoy.



SIR ADAMJEE PEERBHOY AND SONS (SPINNING AND MANUFACTURING MILLS)

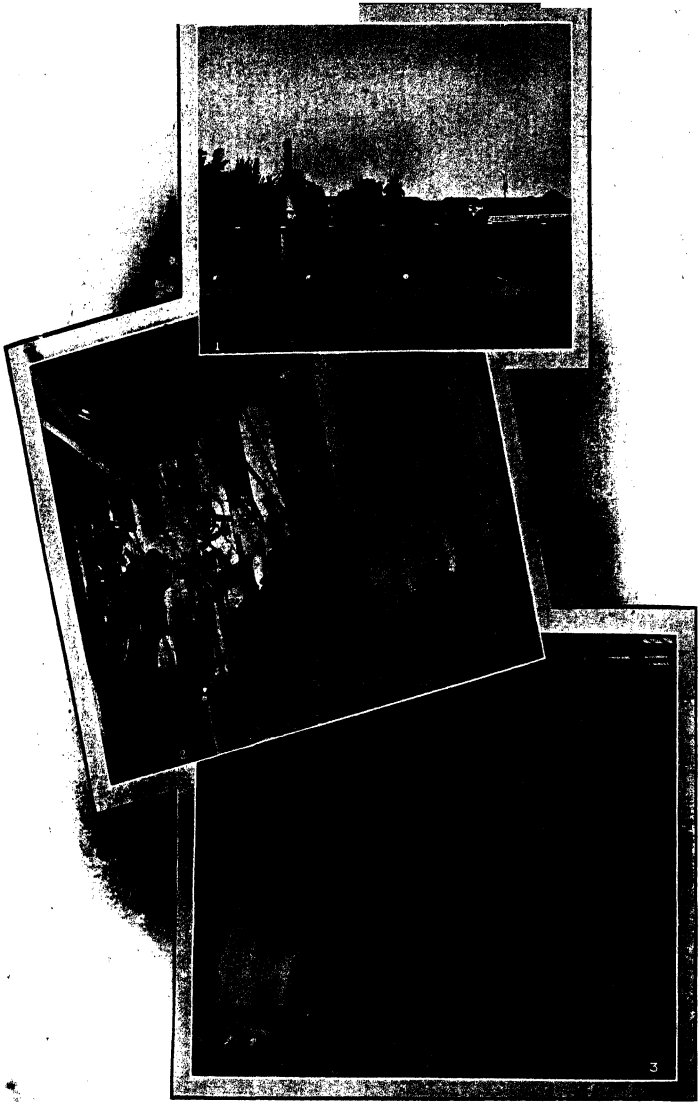
1 Exterior, Tent Factory 2 Interior, Tent Factory

SIR ADAMJEE PEERBHOY AND SONS (SPINNING AND MANUFACTURING MILLS)

1. Matheran Railway Train at Matheran Terminus. 2 Panorama Point, Matheran, Round which the Train Circles

SIR ADAMJEE PEERBHOY AND SONS (SPINNING AND MANUFACTURING MILLS).

1. Harness Department. 2. Interior, Cornier Shop 3. Tannery Lime House.



SIR ADAMJEE PEERBHOY AND SONS (SPINNING AND MANUFACTURING MILLS).

1. Bird's-eye View of the West India Army Boot and Equipment Factory, Sion. 2. Boot Department, Machine Section—Ammunition Boots.
3. Boot Department, Hand-Sewn Section.

have passed the severest laboratory tests as to purity and efficacy and that they are actually standardized productions. Hence they became representatives in India for the H. K. Mulford Company, the famous manufacturing chemists of Philadelphia, in the United States of America, whose magnificent laboratories are conducted on the most modern scientific principles, each separate department or building being in charge of an expert practitioner. The company are leaders in the pharmaceutical and biological fields by reason of their scientific preparation, chemical and physiological standardization and bacteriological testing of drugs and biological products.

It would be impossible in the space at disposal to attempt a list of the various medicines to be found on the shelves of the well-appointed stores of Messrs. Stella & Co., but it is safe to say that they are able to meet the requirements of the most erudite professor of medical or veterinary science as well as the needs of the humblest villager in India.

The firm are agents for other specialists in Europe, including Dr. Zambeletti, whose laboratories of high repute are situated in Milan, and they also have professional correspondents in London and other cities in England.

The sole proprietor is Mr. E. Stella, who has been appointed contractor to the Government of Bombay, and is now supplying very large quantities of drugs and chemicals to the military authorities.

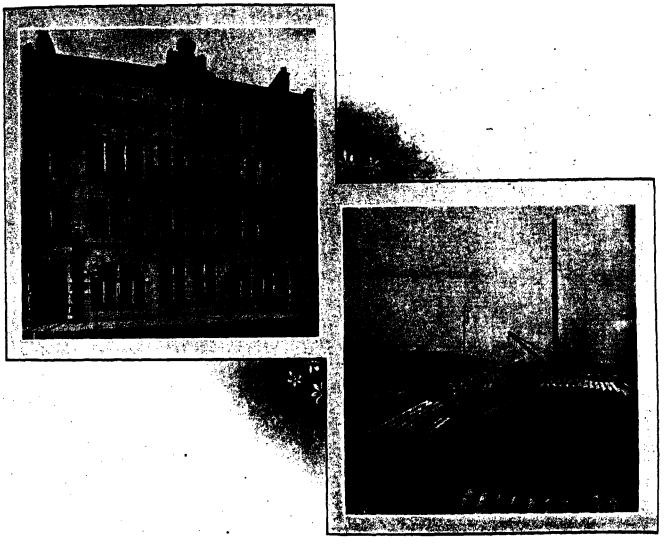
STEWARTS AND LLOYDS, LTD.

The enterprise of Messrs. Stewarts and Lloyds, Limited, although not claimed as a local one, may be looked upon as an essential adjunct to the many industries of Bombay and the Punjab, or of any other provinces in India.

The firm was among the first British manufacturers to recognize the potentialities of the Indian market, and, coupled with the fact that there is probably no industry which does not in some way depend upon iron and steel tubes, they considered it necessary that they should be directly represented in India, so that contractors, engineers, and others, might have the benefit of expert advice in the multitudinous uses to which such pipes could be put.

A commencement was made by opening an office in Calcutta fully nine years ago, but as the business of the firm increased so rapidly it was found necessary, before two years had elapsed, to open an office in Bombay, and this step has been fully justified. The firm have a world-wide reputation for the class of goods manufactured by them, and the demands made on them may necessitate in the near future a further important step which would be beneficial to Indian industries. Railway companies, cotton and other mills, mines, municipalities, and public works departments can accordingly have all their requirements for tubing fully met, as large stocks of pipes and accessories for various purposes are kept, while orders of a special character can be promptly attended to in the well-equipped machine-shop and smithy attached to the warehouse.

Ample supplies of good water for domestic and sanitary purposes and for irrigating agricultural land have for long been a crying necessity in India, and the various methods to obtain them have undergone many changes. Sub-soil water is prolific in most parts, but the antiquated



STEWARTS AND LLOYDS, LTD.

1. Head Office. 2. Coating Steel Water-Mains.

wells, with their primitive and costly processes for raising it, have always been a great drawback Rapid strides have been made in recent years in the sinking of wells by means of tubes, and as this method is much less costly than by digging, and then building up the walls with brick or stone, as was formerly done, the Government and a number of companies and private individuals have adopted that practice in carrying out irrigation schemes After the boring operation is completed the wells are installed with an Ashford patent well screen (the licensed manufacturers being Messrs Stewarts and Lloyds, Ltd), a few feet of suction pipe, and a reliable pump Large tracts of soil have been irrigated and turned into rich agricultural and pastoral land by the use of this equipment, which has proved the most suitable for obtaining supplies of potable water, the nature of the well preventing contamination from the surface

The rapid extensions in water-supply schemes may be directly attributed to the introduction by Messrs Stewarts and Lloyds, Ltd , of their light steel water mains, which are much lighter than the heavy cast-iron pipes formerly used. They are made in lengths up to 40 feet, and in diameters to 6 feet, and, unlike cast-iron pipes, are unbreakable They are therefore cheaper in the first instance, and they are less costly to lay, being easily handled and having fewer joints to be made The numerous water schemes all over India in which these steel pipes have been used are a testimony to their efficiency, and should ultimately lead to their universal adoption

Messrs Stewarts and Lloyds, Ltd , have shown that steel tubes have not only taken the place of cast-iron and copper pipes for high-pressure steam installation, but they have been used for a variety of other purposes, such as columns for buildings, trusses for roofs of sheds and huts, and for tramway, electric light, telephone and telegraph poles, and for ships' davits, derricks, and masts

The firm are also manufacturers of iron and steel plates for the building of boilers, ships, bridges, tanks, and wagons, as well as of iron and steel castings which are required in many industrial concerns

The local office of Messrs Stewarts and Lloyds, Ltd , is situated at 5 Hornby Road, Bombay, and other offices are at Glasgow, Birmingham, London, and Calcutta

SURAJMAL LALLUBHAI & CO.
STAFF GROUP

SURAJMAL LALLUBHAI & CO.

This well-known firm of diamond merchants and jewellers was established in the year 1895, and at an early date the partners realized that it would be greatly to their own advantage as well as to that of their customers, if they were personally represented at Antwerp, in Belgium, which is the centre of the diamond-cutting industry of the whole world They accordingly opened offices in that city which are in direct communication with their headquarters at 225 Kalbadevi Road, Bombay, and also established branches in Rangoon, Calcutta and Madras, while they in addition have influential agents in a considerable number of important towns throughout India and the East generally

All kinds of precious stones and pearls are purchased at lowest possible rates, and as the processes of cutting, polishing, and manufacturing them into artistic jewellery are carried out without the intervention of middlemen, it follows that

TAHER & CO.

1. Market Godown. 2 Another View of Market Godown 3 Carnac Bunder and Iron Godown 4 Tardeo Godown

the firm are able to place their productions on the market at the lowest possible rates.

It may be mentioned here that diamonds consist of pure carbon; they are the hardest and most durable of all known gems; they have a wide range of colour, including white, yellow, brown, green, red, and blue tints; and although the caprice of fashion has at various times favoured emeralds, rubies, sapphires, or pearls, diamonds seem to be more popular to-day than ever before.

India has from time immemorial yielded a quantity of these priceless stones, but since the year 1867 the markets of the world have been almost entirely supplied by South Africa, in which country the famous Cullinan stone, weighing 3,253 carats, was discovered in the year 1908.

Messrs. Surajmal Lallubhai & Co. manufacture bangles, chains, necklaces, brooches, pendants, rings, earrings, pins for the breast or hair, and many other beautiful articles.

The business is carried on by four brothers, namely, Surajmal, Keshavlal, Manilal, and Hiralal, who belong to the Jain community, the leading dealers in jewellery in India.

They are always glad to form connections in other countries, especially with regard to transactions in diamonds, pearls, and other precious stones, and they are purchasers as well as vendors of these goods.

The firm invite correspondence from intending purchasers, and they are at all times prepared to give their advice or services upon questions relating to the preparation of new designs, or in estimating the value of all kinds of precious stones which their extensive practical knowledge enables them to offer.

Many years ago the firm adopted the motto of "small profits and quick returns," and their strict adherence to this old adage has undoubtedly contributed very largely to the high reputation which they now enjoy.

The word used as the telegraphic address at Bombay is "Calmness."

TAHER & CO.

Bombay, the natural gateway to India and the nearest large seaport to Suez, can show a long weekly list of arriving and outgoing vessels, and, as one might expect, there are in that progressive city a considerable number of commercial houses which are prepared to meet the wants of commanders or stewards for practically everything in the nature of stores that may be required above or below decks.

One of these well-known houses is that which is owned by Messrs. Taher & Co., of 95-7 Nagdevi Street, who are engineers, ship-chandlers, hardware and coal merchants, suppliers of stores for cotton mills, gins, and presses, and railway, Government, and military contractors.

The firm consists of Mr. Hatimbhoy Gulamhusein and Mr. Mahomedalli Abdulcader, and the business, which was commenced in the year 1906, is controlled entirely by the two partners.

The premises at headquarters comprise offices, godowns, and store-rooms, in which large stocks of all kinds of piping, fittings, mill stores, colours, varnishes, hardware, leather belting, oils for engines, spindles, gins, cylinders, and general machinery are kept. A branch establishment has been opened near Connaught Bridge, in Bombay, where a good supply is always maintained of various descriptions of iron, but a speciality is made of corrugated iron sheeting. Calcutta has more recently attracted the attention of Messrs. Taher & Co., but all orders for the eastern port are executed upon indent through the office in David Joseph Lane in that city. The firm holds contracts with several Government departments, military arsenals, and supply and transport departments, and a very large business is also carried on with a number of railway companies in India for the supply of tools in almost endless variety.

One important contract recently carried out by Messrs. Taher & Co. was for 120 miles of piping, ranging from 2 inches to 6 inches in diameter, for the use of the military authorities in Egypt during the command of General Williams; while at the commencement of the Great War large quantities of barbed wire and sand bags were provided for the protection of local bridges, ports, and other vital places in September 1914, when the German cruiser *Emden* caused a scare in Eastern seas.

Goods of American manufacture are imported on a small scale only, as the customary demand is for English products, which are regarded as being more reliable.

The firm have been honoured by being placed on the list of Government contractors, and this recognition of their wares, and, incidentally, of the manner in which they execute orders entrusted to them, is excellent proof of the high reputation they have gained. Messrs. Taher & Co. import all English goods through their own agents in London.

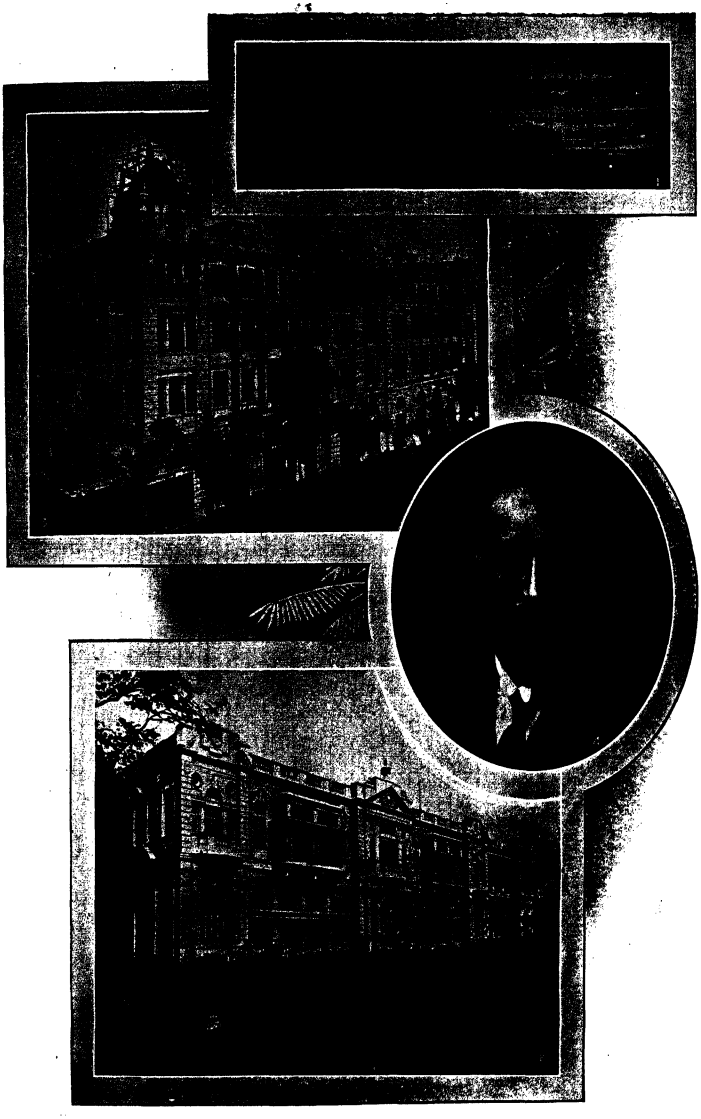
About 150 hands are constantly employed at the various establishments.

The telegraphic address of the firm is "Ginmart, Bombay."

TARAPORVALA AND BHAROOCHA.

This is a leading firm of architects, engineers, and surveyors of Bombay, consisting of Mr. Vicajee A. Taraporvala, M.S.A., F.S.Sc. (London), and Mr. Sohrab F. Bharoocha, M.S.A., F.S.Sc. (London). They are architects of long standing, and were partners in the late firm of Messrs. Shapoorjee N. Chandabhoy & Co. until January 1915, when the firm dissolved. While thus associated with the late firm, the business acquired a high status for efficiency in architectural and fire survey work and secured a large and lucrative practice. In the course of this partnership Messrs. Taraporvala and Bharoocha designed and carried out many large buildings of varied descriptions and styles, and displayed architectural skill and technical knowledge of a high order. They were also responsible for a very large proportion of the firm's business.

The following are the buildings, amongst others, designed and carried out by them during their connection with the late firm: The Bomanjee Dinshaw Petit Parsee General Hospital, Wadia Bungalow, Mon Desir, Chothia Manor, Welji Bungalow, Kallianivalla House, and Mount Petit at Cumballa Hill; Darab Manor, and Doongersey Road sub-station for the Bombay Electric Supply and Tramway Company, Ltd., at Malabar Hill. Patel Mansion in Gowalia Tank Road; Petit Mansions in Grant Road; Katrak Mansion in Harvey Road; Gazdar Mansion and Garden View in Hughes Road; Bai Jerbai Wadia Parsee Fever Hospital at Chowpatty; Petit Mansions in Sleater Road; Bombay Cycle and Motor Agency in New Queen's Road; Dubash Building at Girgaum; Gazdar Mansion, Tavavala Building, Justice Budruddin Tayabji's Building, and Esplanade sub-station for the Bombay Electric Supply and Tramway Company, Ltd., in Princes Street; Carnac House in Carnac Road; Saiboo Building, Victoria Jubilee Technical Institute departmental buildings, and R.I.F. concrete buildings for students' quarters and hostels at Byculla; Wadia Buildings

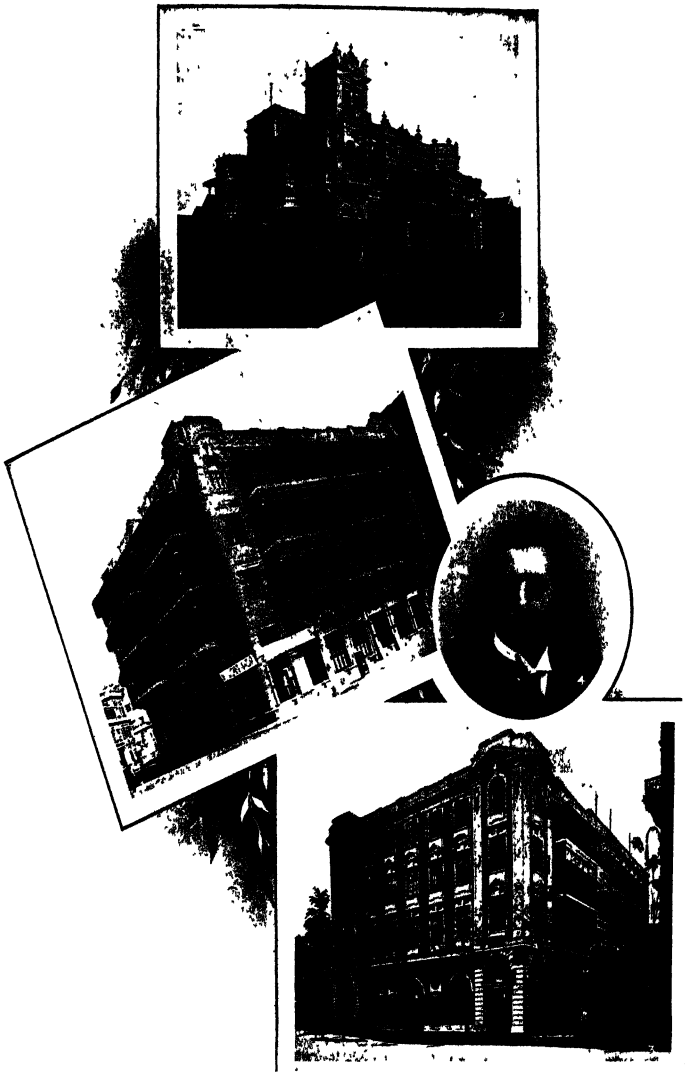


TARAPOREVALA AND BHAROOCHA.

1. "The Bomanjee Dinshaw Petit Parsee General Hospital," Cumballa Hill, Bombay. 2. "West Field," Warden Road, Bombay.
3. "Raval Buildings," Lamington Road, Bombay. 4. Vicajee A. Taraporevala, M.S.A., F.S.Sc. (London), of Taraporevala and Barooch, Architects

TARAPORVALA AND BHAROOCHA

1. "Kalliahivalla House" Gowali Tank Road Bombay 2 "Darab Manor Napean Sea Road Bombay 3 "Eau Lieu" Malabar Hill, Bombay
4. "Homelands Colaba" Bombay 5 "Petit Mansions Sleater Road Bombay 6 Tavavalla Mansions "Princes Street, Bombay



TARAPOREVALA AND BHAROOCHA.

1 "Carnac House," Carnac Road, Bombay. 2. "Crothia Manor," Warden Road, Bombay.
3 Bombay Cycle and Motor Agency Building, New Queen's Road, Bombay.
4. Sohrab F. Bharoocha, M.S.A., F.S.Sc., F.N.B.A. (London) of Taraporevala and Bharoocha, Architects

and the J. N. Petit Parsee Orphanage dormitories at Parel; Kasara power station for the Bombay Electric Supply and Tramway Company, Ltd., at Mazagaon, and its sub-stations, Ramjanalli's Bungalow at Mazagaon; Meher Buildings, Gangaram Terrace, and Zorastrian Association Buildings at Tardeo; Jaffer Building at Nagpada; Essa Building in Ripon Road; Essa Building in Kazi Street; Saiboo Bungalow at Matunga; the Hon. Mr. B. J. Trust Settlement Building at Fort; Gazdar Bungalows and P. B. Jijibhoy's Bungalow in Wodehouse Road; Star Mansion, Beach Manor, and Home Lands at Colaba Reclamation; Guest Houses at "Garden Reach," Ponao; and Kapadia's Bungalow at Matheran. Extensions and additions were made in Victoria Mills at Gamdevi; City Mills at Chichpookli; New Great Eastern Mills at Byculla; and Sun Mills at Parel.

After the dissolution of the partnership, Messrs. Taraporvala and Bharoocha opened their new office at 7-10 Elphinstone Circle, Fort, Bombay, and soon obtained a splendid practice. They have designed and carried out a number of architectural buildings, such as palaces, residences, bungalows, shops, garages, mills, and other structures. The scheme of laying out the Cotton Market on Cotton Green, Colaba, was designed by the firm, and the work in connection with it was carried out within a time which is a record for an undertaking of such magnitude, for this is considered to be the largest storehouse of cotton in India.

Messrs. Taraporvala and Bharoocha also act as fire insurance surveyors and adjusters, and in addition have undertaken cases of light and air, valuations, acquisitions, and arbitrations.

The following are the works or buildings designed and carried out by Messrs. Taraporvala and Bharoocha in their new firm, including those in progress: West Field at Cumballa Hill; Beau Lieu, Dawoodbhoy's Bungalow, Ahmad's Bungalows, and extensions of Darab Manor at Malabar Hill; Dale Ridge in Watchaghandhy Road; Nasik House, Pooli House, Alloo Villa, and Gool Villa in Laburnum Road; Ranchhoddas House in Tejpal Road; Morvi Mansion, Tribhuvandas Mansion at Chowpatty; Ranchhoddas Kanji Sadavarat and the Hon. Dr. C. Fernandez Building at Girgaum; Govindjee Mansion, Raval Building, Moorad Building in Lamington Road; Bhookhandas Building, Nensey Building, Keravala Building, and Rahimbhoy Mansion in Princess Street; Moorad Building, Gulam Hussein Building at Market; Sayana Building at Byculla; Zora Mansion at Tardeo; Jaffer Buildings at Imamvada; Kazi Building, Anandi Bhuvan and Khan Mansion at Mazagaon; Ismail House in Moorland Road; Cotton Warehouses at Cotton Green, Colaba; Mehta Villa and Kikabhoy Bungalow at Poona. Extensions and additions in Emperor Edward Mills, Mazagaon, and Bradbury's Mills, Ripon Road.

Mr. Vicajee Ardeshir Taraporvala, M.S.A., F.S.Sc. (London), was born in 1875. He is connected with the well-known family of Vicajee Meherjee of Tarapor, in the district of Thana in the Bombay Presidency, which is his ancestral place. After passing his matriculation examination he joined St. Xavier's College, but having a pronounced aptitude for draftsmanship and constructional work, which he manifested while young, he left the college to join his father, Mr. Ardeshir Dorabji Taraporvala, who was a well-known building contractor in Bombay. He soon after took up the architectural course by correspondence, and articled himself to Mr. Shapoorjee N. Chandabhoy when he was in partnership with his brother, Mr. Munchershaw N. Chandabhoy. Here he soon had the opportunity of displaying his abilities in carrying out the work of the Framjee Dinshaw Petit Parsee Sanatorium, a magnificent pile of buildings on Cumballa Hill, Bombay. He also carried out the work of the Petit Hall, a palatial building on Malabar Hill, and prepared designs of palaces and other buildings for the Maharaja of Dhrangadra, the Chief of Miraj, and the chiefs of other States. Further to the credit of Mr. Taraporvala is the Bomanjee Dinshaw Petit Parsee General Hospital, a magnificent cluster of buildings, which in its simple grandeur and vastness of proportions, is a standing memorial to his powers of designing—powers displayed in the minutest details. Mr. Taraporvala designed and carried out many other works of an ornate style, which are a fitting addition to the beautiful buildings of the city. He was elected a member of the Society of Arts, and Fellow of the Society of Science in 1901, and a member of the Society of Architects in London in 1904. He is the honorary architect of Lady Sakerbai Dinshaw Petit Hospital for animals. He is a trustee of the Tarapor Parsee Panchayat Funds and a delegate of the Chief Parsee Matrimonial Court, Bombay.

Mr. Taraporvala is an enthusiastic Freemason, being one of the founders of several lodges in Bombay and the mofussil, including "Jamsetji Jeejeebhoy Lodge of Royal Ark Mariners, No. 72, E.C.," in Bombay.

Mr. Sohrab Framjee Bharoocha, M.S.A., F.S.Sc., F.N.B.A. (London), was born in 1877. His father, the late Mr. Framjee Sorabjee Bharoocha (nephew of the late Mr. Nowroji Furdunji, C.I.E., a pioneer of local self-government) was Chief Justice, Judicial Counsellor, and Dewan of Jamnager State, Kathiawar. The younger Bharoocha received his education at the Elphinstone High School, Bombay, and as he displayed considerable aptitude for drawing, art, and mechanics, he took up this course of studies at the Technical Institute and passed the London City and Guilds Examinations with credit. He also had a thorough business training under his late father, as he co-operated with him in conducting the Victoria Roller Flour Mills. Thus equipped, he joined Mr. Shapoorjee N. Chandabhoy (then in partnership with his brother, Mr. Munchershaw N. Chandabhoy) as an articled assistant in 1899, the year in which the former was engaged in the work of the Framjee Dinshaw Petit Parsee Sanatorium. Here again Mr. Bharoocha took up an architectural course for S.A. and R.I.B.A., and also the course of accountancy, and he passed the London Chamber of Commerce and other examinations. He has designed and carried out many architectural buildings, amongst which Clothia Manor and Mon Desir, at Cumballa Hill; the Bombay Cycle and Motor Agency, at New Queen's Road; Govindji's Mansion and Raval Building, at Lamington Road; Carnac House, at Carnac Road; a building for the late Hon. Mr. Justice Badruddin Tyabji; and Tawavalla Building, at Princess Street, testify to his architectural skill and knowledge, and are worthy additions to the architectural features of Bombay. He also carried out the works of the Kasara Power House and the principal Esplanade substation of the Bombay Electric Supply and Tramway Co., Ltd., with great ability. Mr. Bharoocha, besides, was responsible for preparing a scheme for the laying out of the Cotton Market on Cotton Green, Colaba, and for carrying out the construc-

tion of the warehouses there with remarkable expedition. Mr. Bharoocha's knowledge of accounts, both English and Indian, as well as his knowledge of technologics, has enabled him to acquire a large practice as fire insurance surveyor and adjuster. Mr. Bharoocha was elected a member of the Society of Arts and Fellow of the Society of Science in 1901, became a member of the Society of Architects in London in 1904, and was elected a Fellow of the North British Academy in 1909.

TRIKAMJEE JIVANDAS.

Mr. Gopaldas Trikamjee.

Mr. Bharoocha takes a keen interest in Freemasonry, being one of the founders of several Lodges in Bombay and the mofussil, including "Jamsetjee Jeejeebhoy Lodge of Royal Ark Mariners, No. 72, E.C.," in Bombay.

THE GODREJ SOAP COMPANY

It was only in the early portion of the year 1918 that arrangements were completed by the above company for the manufacture of high-class toilet soaps in their specially-fitted premises at Sankli Street, Byculla, Bombay, and therefore it is impossible to refer in laudatory terms to an industry in which operations are only now being commenced. When, however, it is mentioned that the promoter of this concern is identical with the proprietor of the Godrej and Boyce Manufacturing Company, whose name is famous throughout the commercial world as the maker of safes which have remarkable powers of resistance against fire and burglars, it is not difficult to believe that the brains and energy manifested with such conspicuous success in the one instance, will, when employed in the production of soap, be rewarded with equally satisfactory results.

Mr. Godrej, the proprietor, has already secured flattering opinions regarding his soaps from well-known authorities, some of which may here be referred to.

Mr. J. Ross, M.P.S., F.R.M.S., analyst in the firm of Messrs. Kemp & Co., Ltd., of Bombay, stated on the 21st August, 1914, that he had analysed a sample of the soap, and he found it to be a carefully saponified product of purely vegetable oils containing no free alkali. It lathered readily, had excellent cleansing properties, and would be found economical. It was especially to be recommended for delicate skins on account of its freedom from all harmful or irritating ingredients.

Messrs. Treacher & Co., Ltd., of Bombay, certified on the 1st September, 1914, that they had analysed the soap in question, and they found that it was composed of vegetable oils, and that the absence of free alkali made it a very excellent toilet preparation and one to be recommended for tender skins.

Major W. H. Dickinson, M.B., F.I.C., I.M.S., chemical analyser to the Government of Bombay, made a complete analysis on the 26th September, 1914, and formed the opinion that it was a high-grade article which satisfied all tests applied to it. He found that it was a super-fatted soap adapted for toilet purposes, and the oil was entirely of vegetable origin. It was practically free from any uncombined alkali, and thus was suitable for use on the most delicate skins.

TRIKAMJEE JIVANDAS.

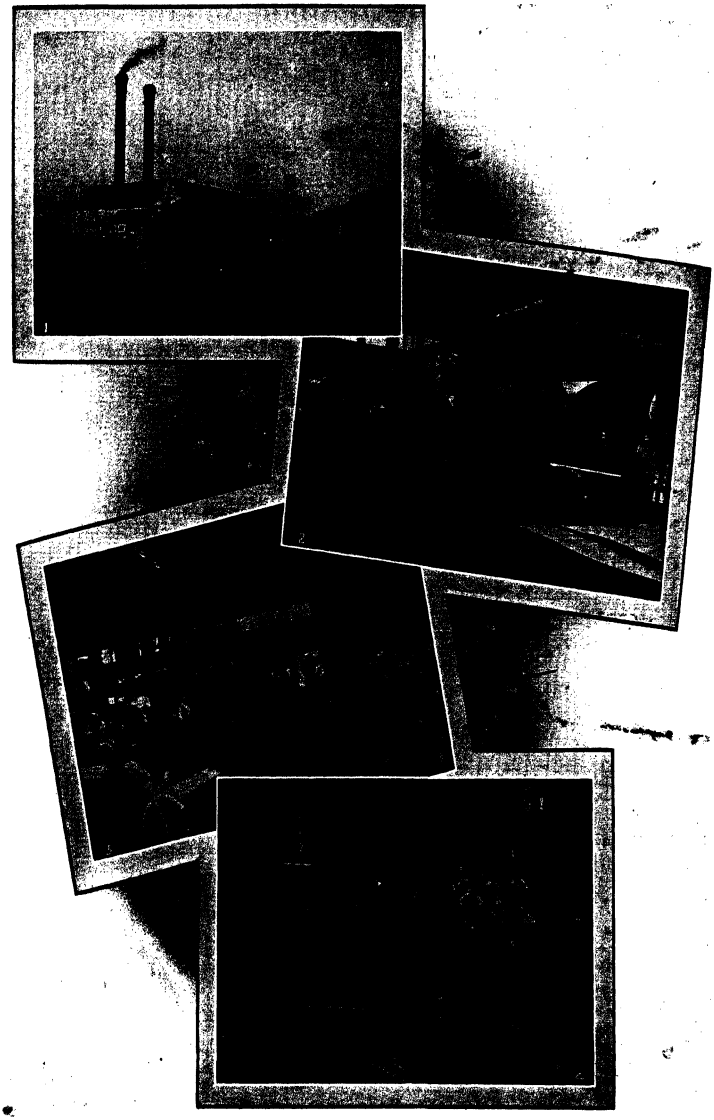
The success which has been achieved by the firm of Messrs. Trikamjee Jivandas is very largely due to the shrewd business abilities and able management of the present controlling partner, Mr. Gopaldas Trikamjee Jivandas, who was born at Anjar, in the native State of Cutch, which is under the political superintendence of the Government of Bombay.

The head offices of the firm are at 302-6 Bazargate Street, Fort, Bombay, while branch establishments have been opened at Calcutta, Karachi, Jharia, Basra, Anjar, and Muscat.

A very large business is carried on as general merchants, bankers, and commission agents, and the firm are also proprietors of the Ballihari, Jeenagora, Joyrampore, Dhadka, Kujama, and Pandabera collieries, from which large quantities of steam and other coal are derived.

Mr. Gopaldas Trikamjee has had the great satisfaction of watching the steady growth of the various concerns in which he has been the moving spirit, but while increasing wealth has fallen to his lot he has shown that he possesses a heart full of the milk of human kindness. He has expended large sums of money upon various charitable objects, and has given financial assistance to the deserving poor in Calcutta, Bombay, and elsewhere, while he will be long remembered for his unbounded benevolence during a serious famine at Anjar about ten years ago. That the cause of education is dear to him was manifested by his founding an English school at Anjar, where such an institution was greatly needed on account of the illiterate condition of the inhabitants of the district.

The telegraphic address of the firm at Bombay is "Neatness."



TURNER, MORRISON & CO., LTD. (ALCOCK, ASHDOWN & CO., LTD.).

1. Ship Yard. 2. Boiler Shop. 3. Machine Shop. 4. Foundry.

ALEX. HERBERT TUCKER

It does not often fall to the lot of a man who in early life maps out a commercial career in a certain line of business to be able to gratify his ambition while he is still a comparatively young man. This, however, is the experience of Mr. A. H. Tucker, general merchant, of Bombay, Calcutta and Rangoon. He was born in Far-off Tasmania in the year 1886, his father being a well-known mining magnate in Australasia, and as soon as he had completed his scholastic course he commenced business on his own account, meeting with remarkable success in developing new fields of minerals in China, Burma and India. In fact, he has made a speciality of giving the benefit of his wide experience in getting the best value out of new mining enterprises, but this is not done with the object of furthering his own interests, or of advertising himself, as he derives the greatest satisfaction in devoting his best energies to his pet scheme of mining development for the benefit of the community at large.

At the same time, Mr. Tucker conducts commercial transactions of various kinds on an extensive scale with several European countries, although the diminution of trading enterprises caused by the late great war affected him to a serious extent, as the merchants and traders in Germany were some of his best clients.

In his private life, too, Mr. Tucker's name has become widely known and respected on account of his intensely sympathetic nature, which is demonstrated most clearly in the unobtrusive manner in which he renders substantial practical help to needy persons who come under his notice.

MR. ALEXANDER (ALEX.) HERBERT TUCKER.

TURNER, MORRISON & CO., LTD.

For a considerable number of years the old-established and extensive business of Messrs. Turner, Morrison & Co., shipping agents and general merchants, was conducted from their offices in Calcutta, they merely having a representative at Bombay to look after the interests of the Asiatic Steam Navigation Company, Ltd., for which they were the managing agents.

In 1887, however, the late Mr. G. H. Morrison, of the firm of Messrs. Turner & Co., of Liverpool, was despatched to India for the purpose of establishing a permanent branch in Bombay, and the late Mr. R. C. Lees, who was transferred from the headquarters in Calcutta, became the first manager of the newly-opened offices. The business operations directed from the chief seaport in India grew to such an extent that Messrs. Turner, Morrison & Co. soon became one of the largest European firms in the Presidency.

In 1913 the business was converted into a private company, which was registered at Calcutta under the style of Turner, Morrison & Co., Ltd.

The present directors are the Hon Sir Frank Carter, C.I.E., M.B.E., Mr. R. M. W. Smyth, and Mr. W. S. J. Willson, while the local director at Bombay is Mr. T. W. Dowding.

The company are now managing agents for Messrs. Alcock, Ashdown & Co., Ltd., the Globe Manufacturing Company, Ltd., the Arab Steamers, Ltd., the Bombay and Persia Steam Navigation Company, Ltd., the New Union Flour Mills, Ltd., the Western India Brick Company, Ltd., and the Bamboo Paper Pulp Syndicate, Ltd, and they are agents for the Asiatic Steam Navigation Company, Ltd, the Bombay and American line, the Shalimar Paint, Colour, and Varnish Company, Ltd., the Gourepore Company, Ltd., the Australian Alliance Assurance Company, the Scottish Union and National Insurance Company, the Corporation of the Royal Exchange Assurance, the Thames and Mersey Marine Insurance Company, Ltd, the City of Glasgow Life Assurance Company, the Indian Manganese Company, Ltd., the Burma and India Dissolved Acetylene Welding and Lighting Company, the Royal Mail Steam Packet Company,' the International Mercantile and Marine Company (American line).

The company carry on a large business in chartering ships, in arranging for the despatch of steamers to Europe, the Far East, and local ports, while they also have extensive transactions in coal, sugar, and country produce of a general character.

ALCOCK, ASHDOWN & CO., LTD.
(Turner, Morrison & Co., Ltd.)

Ever since the days when steps were first taken for connecting the seven islands which now form the city of Bombay, an immense amount of engineering work of all descriptions has been carried out, and a firm which has had a promi-

nent share in this particular direction is that which was established in the year 1880 under the name of Messrs. Alcock, Ashdown & Co. They commenced business as engineers, boilermakers, shipwrights, builders of launches, tugs and barges, iron and brass founders, and builders of roads and bridges, and the enterprise developed so rapidly that in 1884 the concern was converted into a limited liability company with a capital of Rs. 3,50,000. Further progress rewarded the efforts of the directors, who in 1889 purchased a branch factory known as the "Carnac" Iron Works, situated opposite the Victoria Docks; and in 1912 they acquired the old-established engineering business of Messrs. Charles Brown & Co.

When this amalgamation was completed the capital was raised to Rs. 5,75,000, and Messrs. Turner, Morrison & Co., Ltd., of 40 Church Gate Street, Fort, Bombay, were appointed managing agents, a position wh ch is still occupied by them.

The work which poured into the hands of the company during the past four or five years especially has naturally been of a very heavy character, but it has been carried out in a most satisfactory manner.

In March 1918 the capital of the company was again increased to Rs. 8,62,500 by the creation of 2,875 new shares of Rs. 100 each, issued at a premium of Rs. 400 per share.

The position of the company as shown in the statement of accounts for the year ending 31st December, 1918, was as follows: Expenditure on premises, machinery, steam launches, etc., Rs. 14,90,000 which, after deducting Rs. 13,70,000 se aside for depreciation, leave a balance of Rs. 1,20,000 current liabilities, including amount reserved for dividend and bonus Rs. 30,51,000, and liquid assets including stock in trade Rs. 85,20,000.

The directors of the company are: Messrs. T. W. Dowding (chairman), Newman Taylor, S. R. Bomanjee, A. J. Raymond, and C. E. L. Milne-Robertson.

The postal address of the managing agents is 40 Church Gate Street, and their telegraphic address is "Morrisons."

THE GLOBE MANUFACTURING COMPANY, LIMITED

(Turner, Morrison & Co., Ltd.)

Among the numerous companies and commercial enterprises for which Messrs. Turner, Morrison & Co., Ltd., are managing agents is the Globe Manufacturing Company, Ltd., whose registered offices are at 40 Church Gate Street, Fort, Bombay.

The cotton-spinning and weaving mills, situated at Delisle Road, Parel, Bombay, contain an equipment of 29,104 spindles and 744 looms, and they are engaged in manufacturing cotton yarns of cotton piece-goods.

The capital of the company consists of Rs. 10,00,000, made up of 10,000 shares of Rs. 100, each of which is fully paid up.

The directors of the company are: Mr. T. W. Dowding, Sir Shapurjee B. Broacha, Sir Jamsetjee Jeejeebhoy, Bart., and Mr. C. E. L. Milne-Robertson.

The postal address of the managing agents is 40 Church Gate Street, Fort, Bombay, and their telegraphic address is "Morrisons."

THE NEW UNION FLOUR MILLS, LTD.

The milling of flour on thoroughly modern principles in India is one of the industries which have been greatly developed during recent years by the introduction of improved machinery and plant and by the adoption of new methods of manufacture. The construction of a mill suitable for present-day necessities is, further, a matter of supreme importance, and the skill of architect and builder must be manifested in various ways calculated to give better accommodation, greater facilities for unloading grain and despatching products, and in the provision of up-to-date arrangements for securing perfect ventilation as well as fire-resisting capabilities.

The premises of the New Union Flour Mills, Ltd., which cover an area of 13,000 square yards, were erected in the year 1883, and they are situated at Chinchpoogly, near Bombay, and within a short distance from the Byculla station on the Great Indian Peninsula Railway system.

All the excellent machinery, of a special self-oiling pattern, was supplied by the well-known firm of Messrs. Henry Simon, Ltd., of Manchester, and it may be added that this was the first mill in India to be driven electrically, the power being derived from two motors of 350 h.p. and 160 h.p. respectively which were obtained from Messrs. Tata, Sons & Co., Ltd. The plant of this fine roller mill includes scalpers, suction dust-collectors, purifiers, centrifugals, sifters, separators, graders, cylinders, washing machines, scourers, whizzers, drying and cooling apparatus, fans, and in fact all apparatus of the highest order calculated to turn out the cleanest and purest products of superior quality.

Wheat for grinding purposes is purchased chiefly in the Punjab, the Central Provinces, and the United Provinces of Agra and Oudh, and the output of flour, bran and other commodities has reached a daily total of 1,000 bags, each of 196 lb.

Employment is found for about two hundred hands, who reside in various parts of Bombay and suburbs.

The capital of the company is Rs. 6,00,000, divided into 6,000 shares of Rs. 100, all of which are fully paid.

The directors are Mr. J. S. Wardlaw Milne (chairman), Sir Shapurjee B. Broacha, Kt., Mr. James H. Latimer, Sir Jamsetji Jejeebhoy, Bart., and Mr. T. W. Dowding, while the manager is Mr. F. Willis.

Messrs. Turner, Morrison and Co., Ltd., of 40 Church Gate Street, Bombay, are managing agents, and the registered offices of the company are at that address.

THE MOGUL LINE.

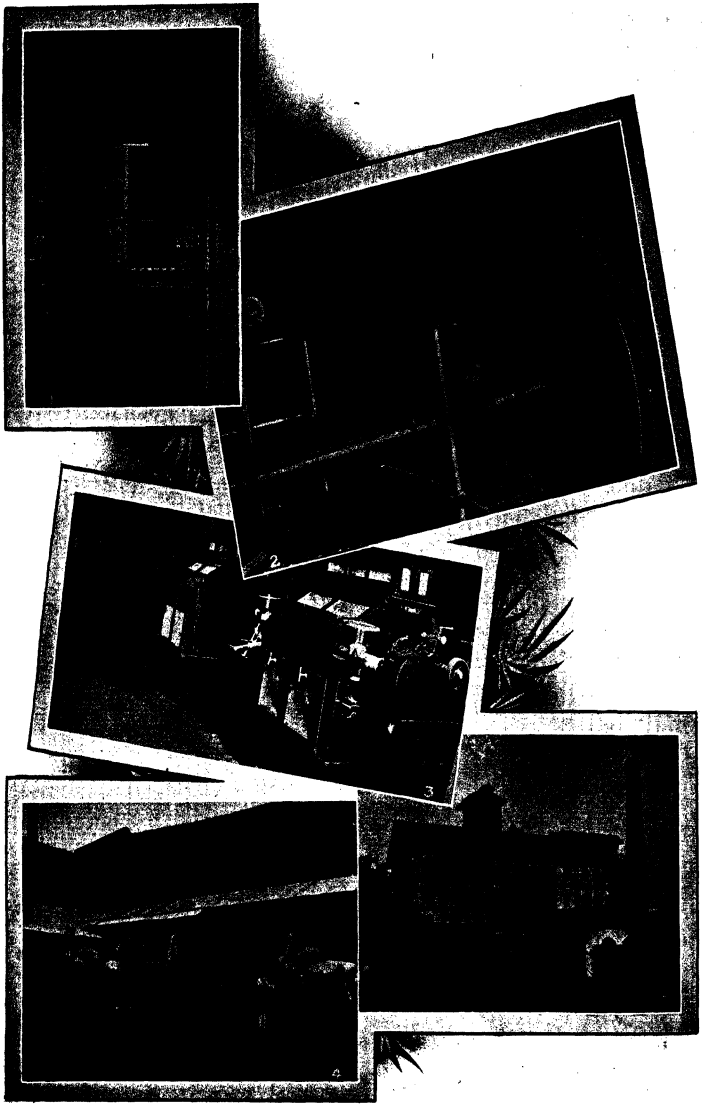
The Mogul Line of steamers, embracing the Bombay and Persia Steam Navigation Co., Ltd., and the Arab Steamers, Ltd., is controlled by the managing agents, Messrs. Turner, Morrison & Co., Ltd., of 40 Church Gate Street, Fort, Bombay.

Services are regularly maintained from Bombay, Karachi, and Calcutta to the Red Sea and the Persian Gulf; from Bombay to Mauritius; and from the Persian Gulf to Red Sea Ports; and among the places in the above mentioned area at which agencies have been established are:—Aden, Bagdad, Bahrein, Basra, Bushire, Jeddah, Kobe, Massowah, Mohamerah, Port Said, Port Soudan, Suakin, and Suez. Messrs. Turner, Morrison & Co. are also represented in England by Messrs. Turner & Co., of 6 Dale Street, Liverpool, and of 46 St. Mary Axe, London, E.C.; at Calcutta by Messrs. Turner, Morrison & Co., Ltd., of 6 Lyons Range, and also at Chittagong, Colombo, Karachi, Marseilles, Mauritius, Rangoon, Reunion, and Singapore.

Steamers are despatched from Bombay at intervals of about ten days to the Red Sea and the Egyptian and Arabian coasts; from Calcutta to the Red Sea

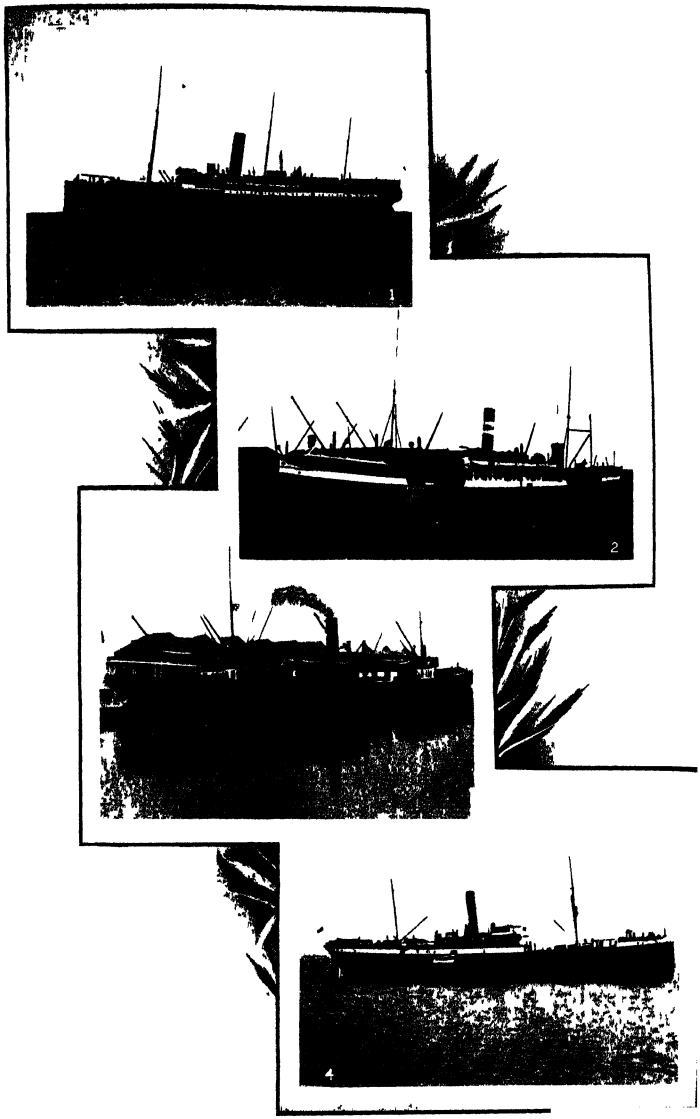
TURNER, MORRISON & CO, LTD. (GLOBE MANUFACTURING CO, LTD)

1 Card Room 2 Spinning Room 3 Engine Room 4 General View of Mill 5 Weaving Shed



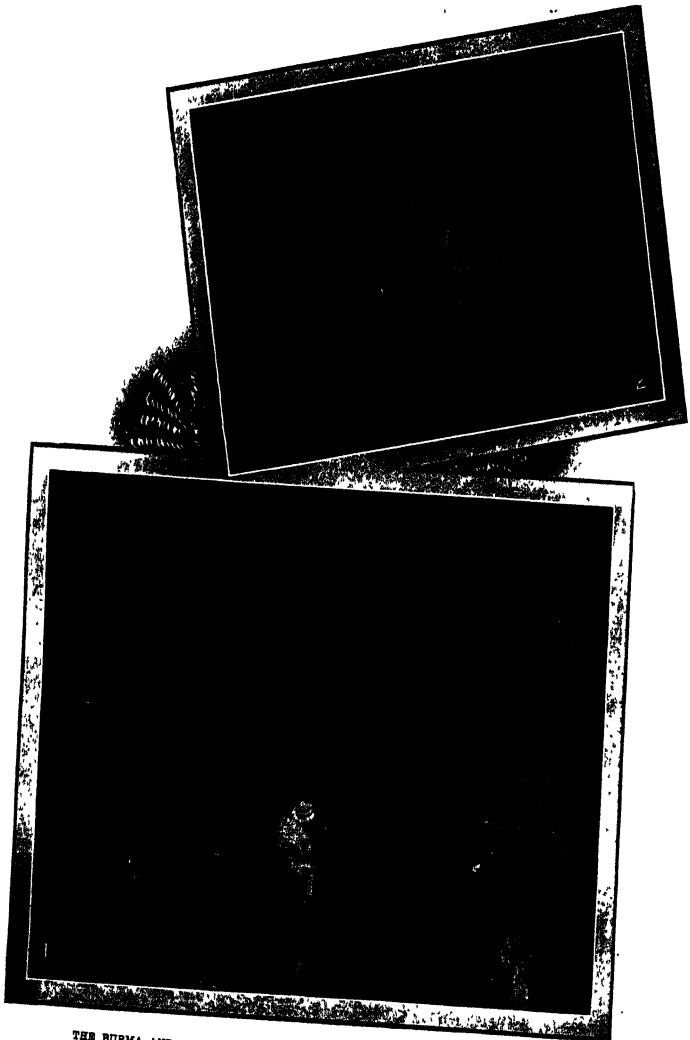
TURNER, MORRISON & CO., LTD. (NEW UNION FLOUR MILLS, LTD.).

1. A Motor House. 2. Main Rope Drive. 3. Roller Floor. 4. Loading Flour. 5. Front of Mill.



TURNER, MORRISON & CO., LTD. (MOGUL LINE OF STEAMERS)

1. ss *Kuwait* 2. ss *Jeddah* 3. ss *Shiraz* 4. ss *Herat*



THE BURMA AND INDIA DISSOLVED ACETYLENE WELDING AND LIGHTING COMPANY
(TURNER, MORRISON & CO., LTD.).

1. Oxy-Acetylene Welding a Cracked Stern Frame. 2. Cutting Out Crack in Rudder Stock.

and Persian Gulf Ports as opportunity offers; there are regular sailings from Basra and all Persian Gulf Ports to Aden, Jeddah, Suakin, Port Soudan and other places, and from Bombay to the Gulf, while a steamer is sent monthly to Mauritius.

All vessels are provided with excellent accommodation for passengers as well as cargo, but special arrangements have been made on some of the steamers for the conveyance of pilgrims from Bombay, Karachi, and the Gulf Ports to Jeddah during the Haj season.

The somewhat unusual requirements of these occasional travellers receive most sympathetic consideration by the managing agents, whose representatives are always prepared to give all possible assistance to them at ports of call and disembarkation.

The fleet of steamers comprises the *Akbar*, 4,573 tons gross; *Bahrein*, 2,197 tons; *Dara*, 4,922 tons; *Firoozi*, 3,102 tons; *Hejaz*, 3,876 tons; *Jeddah*, 4,683 tons; *Khosrou*, 3780 tons; *Kowiet*, 3,692 tons; *Naderi*, 3,715 tons; *Nairung*, 4,425 tons; *Nurani*, 4,432 tons; and *Shuja*, 4,932 tons.

It may be interesting to give some particulars regarding the first steamer designed and built exclusively for the carriage of pilgrims to the Hejaz. It is 400 feet in length, 53 feet in width, and 27 feet in depth, lifting a dead weight of 7,990 tons on a draught of 26 feet 2 inches. The ship has been constructed according to the type known as an "awning deck" vessel, this method giving two roomy decks for the use of visitors to the Holy City, and a third which provides ample space for recreation. Special attention has been devoted to the system of ventilation which is so essential on voyages in the East, ample supplies of cool fresh air being admitted through a number of large tubes. Cooking ranges are reserved in accordance with Government Regulations for the use of pilgrims, and these have been fixed in suitable positions with the view of securing absolute privacy.

The most modern mechanical devices have been employed for facilitating the lowering of boats, for the rapid handling of cargo, and for the telemotor control of steering geer. All vessels are fitted with water-tight bulkhead doors, and several are equipped with installations for wireless telegraphy.

The board of directors of both the companies comprises: Messrs. J. S. Wardlaw Milne (chairman), Hajee Ebrahim Bushiry, J. H. Fyfe, F. Portlock, H. A. Lalljee, A. H. Froom, and T. W. Dowding.

The telegraphic addresses of Messrs. Turner, Morrison & Co., Ltd., are: "Mogul," Bombay; "Turner's," Calcutta; "Turner's," Liverpool; and "Cossipore," in London.

THE BURMA AND INDIA DISSOLVED ACETYLENE WELDING AND LIGHTING COMPANY.

(Turner, Morrison & Co., Ltd.)

Under the managing agency of Messrs. Turner, Morrison & Co., Ltd., of 40 Church Gate Street, Fort, Bombay, the above-named company (the proprietors being Messrs. Lim Soo Heam & Co., of Rangoon) have established one of the most efficient oxy-acetylene welding installations in the East, and the work performed by the company compares very favourably with that carried on by any other similar concern in the whole world.

During the great war, when the prompt repair and despatch of steamers was of the most vital importance, the splendid services offered by this company were fully appreciated by Government as well as private engineering firms, and their large staff of European, Chinese, and Indian welders was busily employed night and day throughout that trying period. With the object of keeping their plant as thoroughly up-to-date as possible, the company have recently introduced into Bombay an electric welding outfit constructed on the quasi-arc principle, and they have, further, a fully-equipped workshop, mounted on a motor lorry, which can be taken alongside a steamer in need of repairs.

Highly qualified experts are also available for the purpose of boarding vessels on arrival in port and giving advice as to the best methods of effecting repairs.

Messrs. Turner, Morrison & Co., Ltd., have been appointed sole agents for the Quasi-Arc Company, and they are always prepared to give full instructions and render assistance to firms proposing to make use of this system.

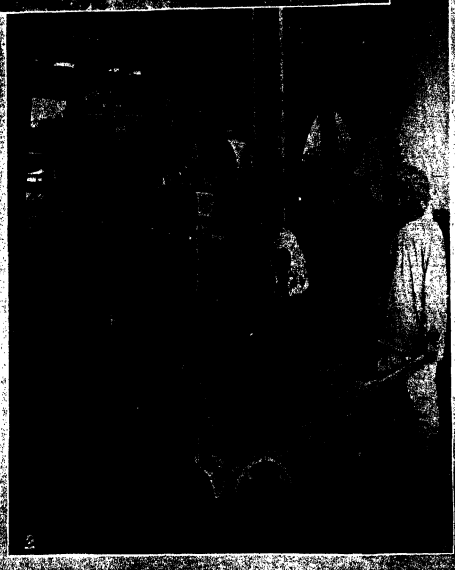
The telegraphic address of Messrs. Turner, Morrison & Co., Ltd., is "Morrisons," Bombay.

TURNER, HOARE & CO., LTD.

The firm who have recently formed a private limited liability company under the name of Messrs. Turner, Hoare & Co., Ltd., were almost the first to commence business in Bombay as engineers and contractors. For many years a very extensive undertaking of a many-sided nature has been conducted with conspicuous success at 11 Elphinstone Circle, but before the close of the present year (1919) the company will have entered into possession of new premises specially built for them, which cover a large area of ground in one of the most suitable portions of Parel, in Bombay.

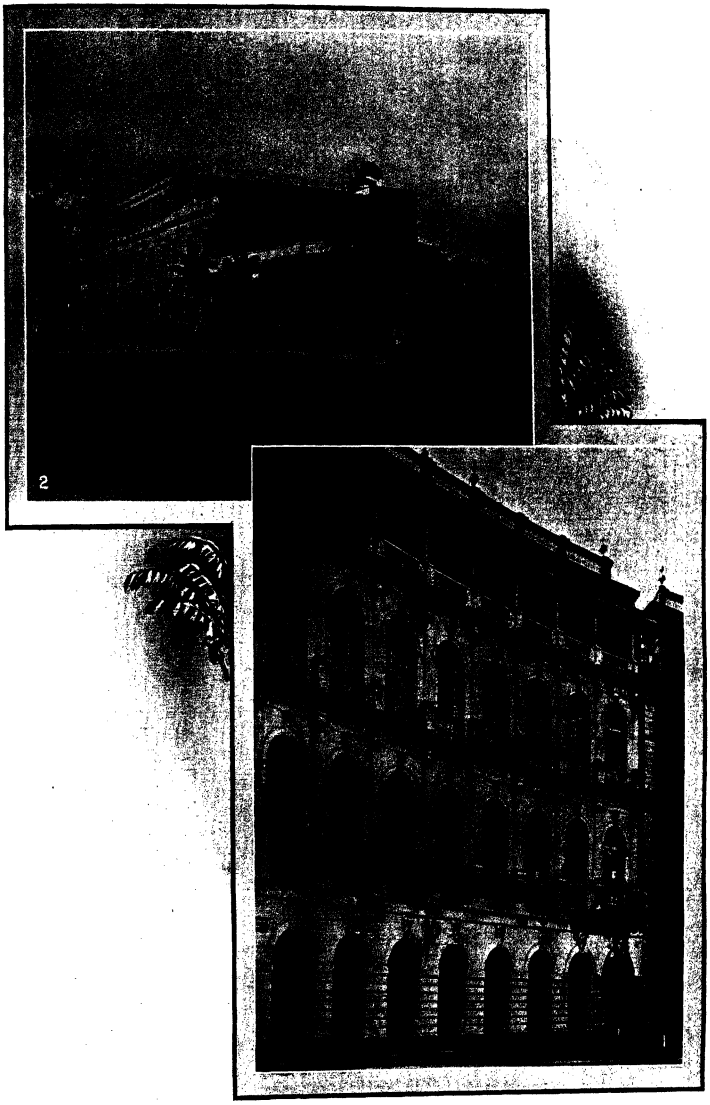
To the original firm belongs the honour of giving the automobile an introduction into India, and Messrs. John Birch & Co., Ltd., the London agents of the company, have recently arranged for the execution of foreign orders placed with Messrs. Beardmore & Co., Ltd. (also of London), the famous shipbuilders and manufacturers of aeroplanes.

The company are agents for the Bombay Motor Car Company, Ltd., of Bombay; for the British Thomson-Houston Company, of Rugby; for electric plant, motors, generators, switchboards, incandescent "Mazda" drawn wire lamps, and transformers; Messrs. Aveling and Porter, Ltd., of Rochester, for steam road rollers, scarifiers, wagons, trailers, and tractors; Messrs. Johnson and Phillips, Ltd., of Charlton, Kent, for wires, cables, land and submarine telegraph material, insulators and searchlights; Messrs. Hathorn, Davy & Co., Ltd., of Leeds, for pumping machinery; Waygood-Otis, Ltd., of London, for electric, hydraulic, and band-power lifts; Messrs. F. Reddaway & Co., Ltd., of Manchester, for camel's hair and cotton belting, rubber goods and hose; Messrs. Belliss and Morcom, Ltd., of Birmingham, for high-speed enclosed vertical paraffin engines; Messrs. J. W. Brooks & Co., Ltd., of Lowestoft, for marine motors and motor-boats; Messrs. Henry Williams, Ltd., of Darlington, for manual signalling apparatus; Messrs. Knight, Bevan and Sturge, of London, for the "pyramid" brand of Portland cement; for the "Perfecta" Seamless Steel Tube and Conduit Company, Ltd., of Birmingham, for steel-armoured conduits and fittings; Messrs. Chance Bros. & Co., Ltd., of Birmingham, for portable searchlights and signalling lamps; the Crittall Manufacturing Company, Ltd., of London, for metal windows, casements and steel sashes; the Leeds Meter Company, Ltd., of Leeds, for water meters of all descriptions; Messrs. J. and E.



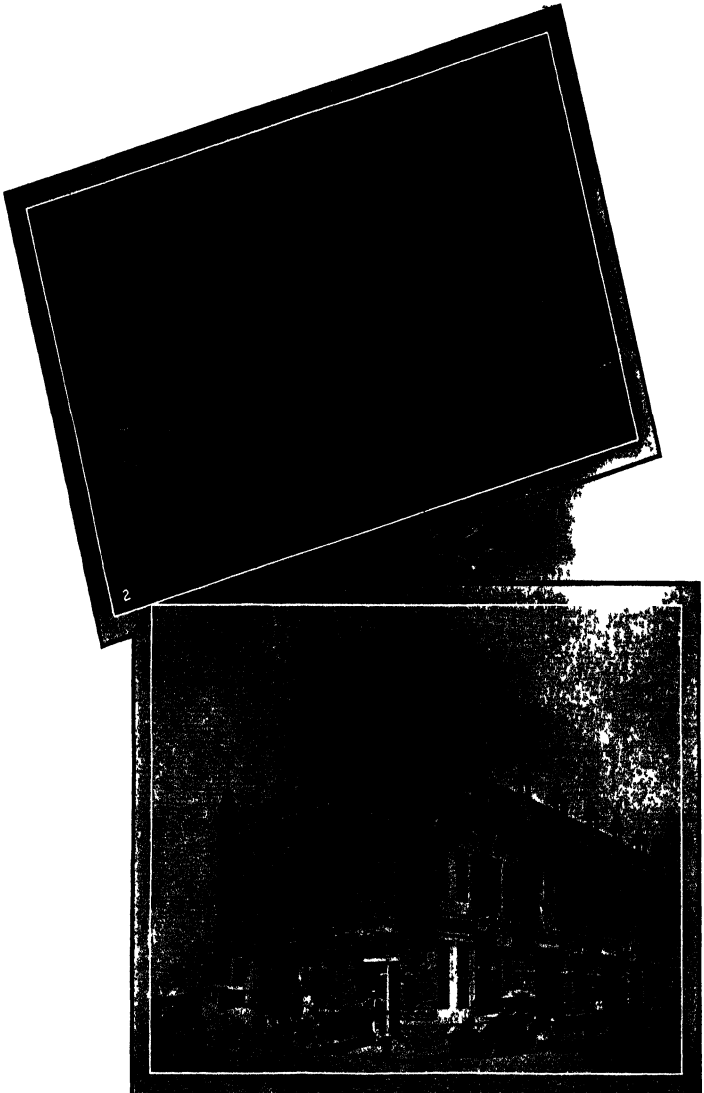
WESTERN INDIA BRICK COMPANY, LTD. (TURNER, MORRISON & CO., LTD.).

1. General View of Kilns and Machine Sheds. 2. Bradley and Craven's Brick Press (Semi-Plastic Process).



TURNER, HOARE & CO., LTD.

1. Old Premises at 11, Elphinstone Circle. 2. New Building on Parel Road.



THE BOMBAY MOTOR CAR COMPANY, LTD. (AGENTS—TURNER, HOARE & CO., LTD.)

1 New Building at Apollo Bunder 2 Interior of Bombay Motor Car Company's Building.

Hall, Ltd., of Dartford, for refrigerating and cold storage plant; the British Pneumatic Railway Signal Company, Ltd., of London, for automatic signalling and interlocking machinery and plant; the Martinit Slate and Sheet Company, of London, for "Martinit" asbestos, cement, slates and sheets; Messrs. Petters, Ltd., of Yeovil, for stationary and portable oil engines; Messrs. Priestman Bros., Ltd., of London, for dredging machinery and appliances; Messrs. Boving & Co., Ltd., of London, for hydraulic machinery and turbine pumps; Messrs. Dennis Bros., Ltd., of Guildford, for motor fire engines; the Ammonia Company, of Australia (Sydney); Messrs. A. R. Tattersall & Co., the Pulsometer Company, Ltd., and Messrs. Frederick Brady & Co.

The telegraphic address of the company is "Endeavour," Bombay.

THE BOMBAY MOTOR CAR COMPANY, LTD.

(Agents: Turner, Hoare & Co., Ltd.)

It is unlikely that there is any city in the East which has shown a greater readiness than Bombay to adopt motor vehicles of all descriptions, not alone for use in the ordinary course of business, but also as a means of enjoyment in private life. Rapid transit of goods, as well as quick conveyance of passengers, is an absolute necessity in the hurry of the twentieth century, and the inhabitants of the city, by their purchase of an immense number of cars and cycles, have shown that they are firm believers in the "new order of things." Taxis are almost daily replacing the slow and frequently ramshackle *gharry*, and even an office *jaun*—the last of its kind—may soon be accommodated with a place in a museum of curiosities.

The Bombay Motor Car Company, Ltd., were pioneers of the motor industry in India, and even in Afghanistan, to which country they have despatched a fleet of motor vehicles which is probably greater in number than any other in the East.

The company's garage and showrooms are situated on the Apollo Bunder, and they are the only motor agents and engineers occupying premises among the leading hotels, clubs, and leading commercial houses of Bombay. The general works are at Parel, in the premises of their agents, Messrs. Turner, Hoare and Company, Ltd.

The company are sole agents for "Commer," "Daimler," "Rover" and "Peugeot" cars, for several of the most modern types of motor-cycles, and for every description of spare parts and accessories.

Mr. Pat Stewart, M.I.A.E., has for the past thirteen years had the direct supervision of this branch of the business of Messrs. Turner, Hoare & Co., Ltd., of Bombay, and his capable management is highly appreciated by motorists.

The telegraphic address of the company is "Chalo," Bombay.

VOLKART BROTHERS.

This Swiss firm started business in 1851 simultaneously at Winterthur in Switzerland and at Bombay. There is a London branch at 96-98 Leadenhall Street, E.C., and other offices were opened in 1857 at Colombo (Ceylon); in 1859 at Cochin (Malabar coast); in 1861 at Karachi; in 1876 at Tellicherry (Malabar coast); in 1877 at Tuticorin; and in 1878 at Madras. The firm have about forty buying agencies all over India, and they employ a large staff of Europeans and Indians.

Messrs. Volkart Brothers are chiefly interested in the export of raw cotton, and they have always taken an active interest in the development and improvement of this, one of India's chief productions. In addition to cotton, they export grain, oil-seeds, raw hides, copra, coir yarn, coffee, pepper, and other spices, together with essential oils. They also import sugar, metals, and manufactured goods.

They are, further, agents for the following fire and marine insurance companies, namely: The Northern Assurance Company, Ltd., the Alliance Assurance Company, Ltd., the Law Union and Rock Insurance Company, Ltd., the London and Lancashire Life and General Assurance Association, Ltd., the Helvetia Swiss Fire Insurance Company, the Baloise Fire Insurance Company, the Batavia Sea and Fire Insurance Company, Ltd., the London and Lancashire Fire Insurance Company, Ltd. (marine), and the Union Insurance Society of Canton, Ltd. (for Karachi only).

At Karachi and Tuticorin the firm are agents of the Asiatic Steam Navigation Company, Ltd., and at the former port they also represent the Bombay and Persia Steam Navigation Company, Ltd.

Messrs. Volkart Brothers' Bombay offices are at 1 Rampart Row, while those at Karachi are in McLeod Road.

The Volkarts' United Press Company, Ltd., a joint stock company registered at Bombay, with a paid-up capital of 8½ lakhs of rupees and reserves totalling 9½ lakhs, was started in the year 1872 by Messrs. Volkart Brothers, who are the secretaries and treasurers.

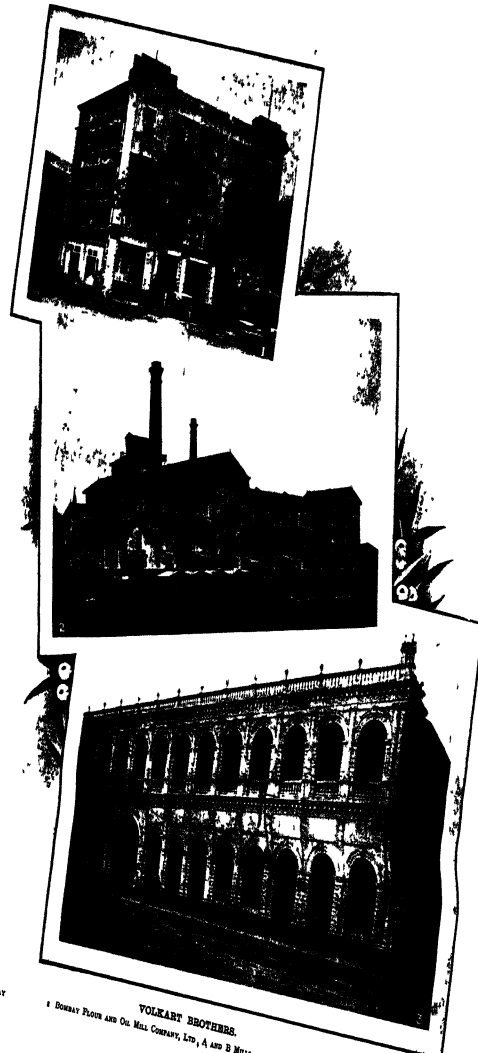
This company own cotton presses at Dhulia, Amraoti, Khamgaon, Nagpur, Multan, Raichur, Guntakul, Guntur, Nandyal, Tuticorin, and Coimbatore, and ginning factories at Khamgaon, Nagpur, Multan, Raichur Guntakul, Virudupatti, Nalatinputur, and Udamalpet.

The Bombay Flour and Oil Mill Company, Ltd., of which Messrs. Volkart Brothers have been the agents since 1900, have a capital of Rs. 3,60,000, and reserves amounting to 14 lakhs. The company own two flour mills and one oil mill situated in Bombay, the products of which are not only well known all over India, but are also exported in large quantities to other countries.

MR. N. N. WADIA

This gentleman, son of the late Mr. Nowrosjee N. Wadia, C.I.E., was born on the 30th May, 1873, and he made such satisfactory progress with his studies at St. Xavier's College, Bombay, that at the comparatively early age of seventeen years he was fourth on the "pass" list of the matriculation examination, the total number of those who satisfied the examiners on that occasion being 1,100.

Mr. Wadia, conscious of the responsibilities resting upon him as head of the firm of Messrs. Nowrosjee Wadia & Sons, resolved in the year 1898 that in future he would proceed annually to England in order to keep in touch with manufacturing agency business, and during these visits, namely in 1901, he was constituted a member of the Institute of Mechanical Engineers. Mr. Wadia's advice and assistance were in constant demand in India, and the firm made a feature of undertaking contracts for the complete construction and equipment of mills in Bombay and elsewhere. Among these may be mentioned a loom shed for the Crescent Mills Company, Ltd. (agents, Messrs. Currimbhoy Ebrahim & Co.), the entire erection and installation of machinery and plant for the Fazulbhoy Mills, Ltd., and the Pearl Mills, Ltd., a loom shed for the Laxmi Cotton Mills at Sholapur, and the construction and equipment of the Vishnu Cotton Mills at the same place, the last two concerns



2 Office, Bombay

VOLKART BROTHERS.

1 Bombay Flour and Oil Mill Company, Ltd., A and B Mills at Mazagon.

3 Office Premises, Karachi

VOLKART BROTHERS.

1. Interior of Oil Mill. 2. Volkart's United Press Company, Ltd., Ginning Factory at Nagpur, C.P. 3. Cotton Press at Nagpur.
4. Hide Godowns and Press, Karachi.

being under the agency of the Bombay Company, Ltd. In 1906 the firm designed and built the Spring Mills as an adjunct of the Bombay Dyeing and Manufacturing Company, Ltd., equipping them with 31,000 spindles and 600 looms, but since work was actually commenced in 1908 there has been such an expansion of trade that the plant now consists of 48,348 spindles and 1,672 looms.

The firm are at the present time erecting for Messrs. Currimbhoy Ebrahim & Co., the Premier Mills, which will be the first of their kind in India to deal with cotton waste.

A provident fund for the benefit of employees has been established in connection with each mill managed by the firm, while at the Spring Mills they have quite recently erected, at a cost of Rs. 5,00,000, workmen's dwellings, containing 600 rooms, which are let at nominal rents.

Notwithstanding the numerous enterprises in which Mr. N. N. Wadia is concerned, this gentleman has taken a lively interest in social and charitable matters affecting the welfare of the inhabitants of Bombay, and it may be added that for the past seven years he has been a trustee of the cathedral in that city.

Mr. Wadia with his family went on a further visit to England in October 1916 in the ss. *Arabia*, which was torpedoed during the voyage, but fortunately all passengers were rescued. At the urgent request of the Government of India he returned in 1917 in order to become a member of the Indian Cotton Committee, which was then taking evidence and making investigations upon the important question of securing increased production of long-stapled cotton suitable alike for Lancashire mills and for the requirements of Indian mills generally.

Mr. Wadia resides at "Strachey House," in Pedder Road, when in Bombay, and at "Sunnymead," Chislehurst, in Kent, when in England.

THE WALLACE FLOUR MILL.

About thirty years ago this mill, belonging to the Oriental Oil and Flour Manufacturing Company, Ltd., was an unprofitable undertaking, in consequence of the severe competition of the Bombay Oil and Flour Mill Company, Ltd., which at that time held an almost impregnable position in the flour trade in north-western India. Following upon a voluntary liquidation of the concern, the premises were offered for sale by auction, and a Mr. Vissanji Khimji, a creditor of the company, who took part in the bidding with the object of securing as much money as possible for himself and other shareholders, unexpectedly found that he had been declared to be the purchaser.

Mr. Vissanji had for more than twenty years previously been connected with Messrs. Wallace & Co., merchants, of Bombay, as their principal agent and broker in connection with the buying of cotton, wheat, seeds, and other produce. He was, however, a stranger to the actual milling business, and the collapse of so many ventures had created a lack of confidence in buyers of flour which doubtless acted as a deterrent against the establishment of new undertakings.

Mr. Vissanji realized that he would have to encounter a bitter warfare against opposing forces, but he was the fortunate possessor of indomitable perseverance, and therefore he decided that he would reopen the mill, confident in his ability to win success.

The substitution of rollers in place of stones for grinding wheat had just then come into favour, and Mr. Vissanji refitted his mill with an entirely new roller plant, manufactured by Messrs. Thomas Robinson & Son, Ltd., of Rochdale, England.

From the very onset he encountered great opposition from shipping and railway companies, the former refusing to accept consignments of his flour, and the latter declining to grant him concessions in rates which were made to other competitors. Determined not to be daunted, he chartered a steamer for the purpose of transporting 5,000 bags of flour to Mauritius, and this bold stroke, supported by a declaration of his intention to place the whole matter of rates before the Government, was followed by offers from the carrying companies above mentioned to place him on the same footing as other millers.

Mr. Vissanji sent his own representatives to the principal markets in Sind and the Punjab to purchase wheat of the finest quality, and he opened agencies for the sale of flour in important centres throughout India as well as in Colombo, Mauritius, and other places. The business increased rapidly, with the result that first one seaport and then others were ready to deal with the Wallace mill products, thus necessitating the extension of the output from ten sacks per hour to fifteen.

Mr. George May, an expert miller, served the firm for about thirteen years, and under his skilful control the mill achieved a high reputation, the flour—known as "Anchor" brand—being said to be the best in the market to-day and the greatest in demand, not only in India but also in Aden, Zanzibar, Mauritius, Mombasa, Colombo, and many other African and Red Sea ports.

The mill is kept in work throughout the day and night, and it is proposed at an early date to increase the hourly output to twenty-five sacks.

Agencies for the purchase of wheat, under personal supervision, have been established throughout the north-western portion of India, chiefly at Karachi, Delhi, Kasur, Fazilka, and other places, although cargoes are occasionally imported from Australia, and nearly all fine and low grades of flour known to English millers are produced at the "Wallace."

The mill is equipped with plant for washing grain; it has a silo installation (the only one of its kind in India), with a capacity of 120,000 bushels; and it has electric and sprinkler appliances and fittings.

The eminently successful position which has been attained by this mill is due chiefly to the personal efforts of Mr. Vissanji, who was well known for his tenacity of purpose, his strict business habits, and his consistently straightforward conduct in all transactions.

Born in the year 1845, he belonged by caste to the small community of Bhattias, who are famous in the annals of commercial enterprise in India. He was a trusted and honoured friend of Messrs. Wallace & Co. from 1865 until his death in May 1916, and it was owing to his deep regard for them that the mill is known by the name of "Wallace."

The title of Rao Bahadur was conferred upon Mr. Vissanji by the Government of India in recognition of the noble work performed by him in connection with the first outbreak of plague in the Bombay Presidency many years ago. Unlike a large number of Indian gentleman, he remained in the city of Bombay and spared neither pains nor money in his endeavour to alleviate the misery and suffering which fell with such severity, especially upon the poorer classes. He permitted his own residence to be used as a temporary ward for the inoculation of patients, and each morning he traversed the city in order that he might convey to hospital or segregation camp any persons who had during the night been

WALLACE FLOUR MILL COMPANY

2 Vissanji Khimji 2 Mathuradas Vissanji 3 Mill 4 Karsondas Vissanji 5 Vithaldas Kanji

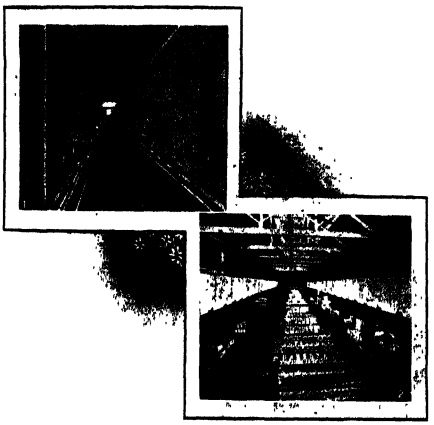
stricken down with this fell disease. During years of famine the Rao Bahadur distributed immense quantities of clothing and food, and in some instances whole villages were supported by him. In a quiet and unobtrusive manner he gave away considerable sums of money for the feeding of the destitute and the education of children of needy parents, and by trust settlements he has provided for the continuance of this philanthropic work after his death. The Rao Bahadur was honoured by his appointment as representative of the Government of Bombay in the Municipal Council of the city, and he was a Justice of the Peace and an Hon. Magistrate until the time of his death.

Mr. Vissanji was succeeded in the proprietorship of the milling business by his two sons, Mr. Mathuradas and Mr. Karsondas, and by his grandnephew, Mr. Vithaldas Kanji (trading as Vissanji, Sons & Co.), who are worthy of praise for their loyal support of the allies during the late war by placing the major portion of the products of their mill at the disposal of the Government.

The offices of the firm are situated at 3 Wallace Street, Fort, Bombay, and the mill is at Chickalwady, Tardeo, in the same city, while the telegraphic address is "Filter."

WATSON'S HOTEL.

When this hotel was erected, between the years 1867-9, by Mr. John Watson, formerly of Castle Carrock in Cumberland, England, it was a famous landmark for masters of vessels entering Bombay harbour, as it was practically the only building of a pretentious size on the Esplanade of the beautiful city now known as the "Gateway of India." It is a handsome structure, five stories in height, and it is noteworthy that nearly all of the building materials were imported from England, the red stone plinth and the bases of the columns being obtained direct from Penrith, in the above-mentioned country.



WILKINSON, HEYWOOD AND CLARK.

1. Varnish Maturing Tanks. 2. No. 1 Varnish Filling House.

It is probable that 90 per cent. of the persons who take up their residence at hotels regard the situation or locality as the first consideration, and if "Watson's" be judged by this standard it may claim premier honours, as it faces the sea and is the principal object of interest in the popular neighbourhood of the Fort, the Esplanade, the Apollo Pier, and the Colaba Causeway, all of which are intersected by finely made roads, while it is within a short distance from several railway stations, and the leading banks and commercial houses.

It contains about 130 rooms, giving accommodation for nearly two hundred persons, and electric lights, fans, lifts, bells, and telephones have been installed throughout the building. Dining, sitting, and drawing rooms and a large lounge are most comfortably furnished in a style which compels admiration, and the numerous bedrooms leave nothing to be desired in the way of cleanliness. The billiard-room, fitted with first-class tables, is a favourite resort for visitors, and many notable contests between brilliant exponents of the game have been decided there.

Notwithstanding what has been said already with regard to the situation of an hotel being a *sine qua non*, it must be admitted that there are many travellers who appear to pay greater homage to the king of the kitchen than they do to any other employee or, possibly, even to the landlord himself. Such epicures as these, however, need not have any heart-rending fears as they enter their names in "Watson's" books, seeing that the *cuisine* is under the able management of French and Italian *chefs*, and that the greatest possible care and skill are exercised in the purchase of meat, flour, vegetables, and other commodities.

The staff of servants has been specially selected, and the close supervision of Mr. D. N. Masters, M.C.A. (London), the managing partner, is a guarantee that patrons will at all times be accorded respectful treatment, and that every endeavour will be made to meet their wishes in any matter.

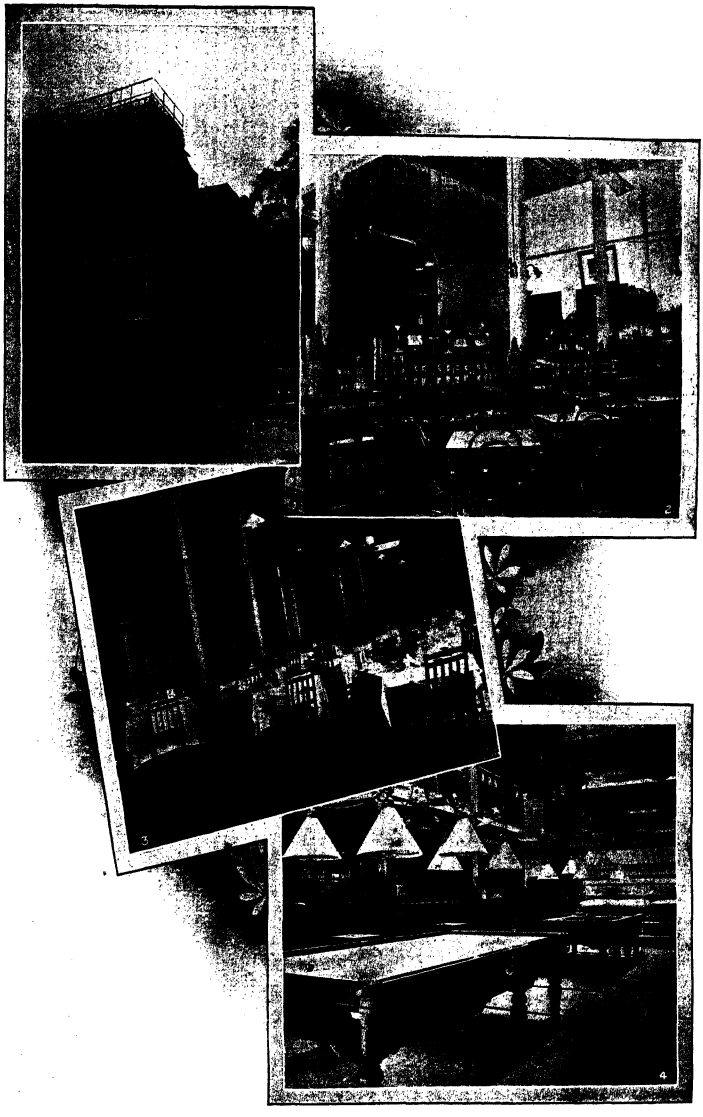
Hotel porters meet all steamers and trains arriving in Bombay for the purpose of rendering assistance to passengers in the removal of their luggage.

An important development of "Watson's" took place recently when a spacious restaurant was opened on the ground floor of the hotel, and this has now become a select rendezvous for luncheons, teas, and dinners, as well as for light refreshments at all hours.

The other partners are Messrs. A. Framji, M. R. Patel, and A. J. D'Souza, and the telegraphic address is "Watshotel," Bombay.

WILKINSON, HEYWOOD & CLARK, LTD.

The largest manufacturers in England of paints and varnishes are Messrs. Wilkinson, Heywood & Clark, Ltd., whose factories are situated in London, Liverpool, and West Drayton. Their business was established in the year 1770, and in the ordinary course of development their goods were placed upon the Indian market, but it was observed that they



WATSON'S ESPLANADE HOTEL.

1. Frontage of Watson's Hotel. 2. Restaurant and Confectionery. 3. Dining Hall. 4. Billiard and Bar Rooms.

were adversely affected by the varying climatic conditions of this country, and with the object of overcoming this drawback they opened a branch in Bombay in 1882, when all importations of the firm's manufactures were thoroughly tested in a practical manner. A succession of trials resulted in certain alterations being made in the composition of the ingredients, and the firm have since that time been able to turn out the particular class of goods best suited to withstand the variable seasons of India. An outstanding feature of the home works is a laboratory in which experiments and tests are conducted by specially trained chemists, and all products are submitted to a rigid examination by an expert staff in this department before they are allowed to be sent away from the premises. Varnishes and other goods have been supplied in large quantities to all the principal railway companies in India, and special preparations are now being issued for use on motor cars and other vehicles of a similar nature.

The firm placed their works and their services at the disposal of the Imperial Government on the outbreak of war, and they have succeeded in producing special time-saving paints and varnishes which have been applied to a very large proportion of the immense output of shells.

The firm are sole agents in Bombay and Hyderabad (Deccan) for the sale of turpentine and rosin made by the Forest Department of the Government of India, and these goods—produced after experiments extending over several years—are equal in quality to those imported from England and America. The distilleries at Bhowali and Jallo have been unable to keep pace with the demands of the country, and a large factory is now being constructed at Barielly, in which it is anticipated that a sufficient quantity of those articles will be forthcoming to meet the requirements of the whole of India. This Government industry has been of incalculable benefit to the country during the period of restricted imports.

The telegraphic address of the firm is "Myotomy," Bombay.

WESTERN INDIA TRANSPORT COMPANY, LTD.

1. Motor Garage and Workshop. 2. A Portion of the Repair Workshop. 3. Motor Lorries.

THE WESTERN INDIA TRANSPORT COMPANY.

In the year 1913, Mr. S. F. R. Vicajie, who possessed a limited number of motor lorries, established himself in business in Bombay as a contractor for the removal of all kinds of commercial goods, as well as luggage and other personal property. He traded under the name of the Western India Transport Company, and quickly had the satisfaction of finding that his promptitude in executing orders entrusted to him, coupled with reasonable charges, earned for him the confidence of a large circle of patrons in that important city.

On the outbreak of the Great War the company became transport contractors to His Imperial Majesty's Government, and until the cessation of hostilities they were engaged solely in the performance of Government work. This naturally caused the business to expand very rapidly, and to-day the company claim that their operations—which are partially connected with military services—are equal to those of any four other concerns of a similar character in Bombay.

The company have extensive workshops under the management of an expert European engineer, together with other premises in Mangalore Street, Ballard Pier, and as practical automobile and electrical engineers they make a special

feature of carrying out repairs to all descriptions of motor vehicles.

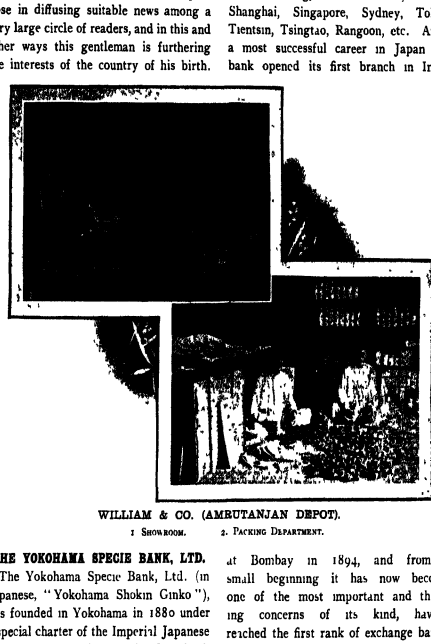
A well-selected stock of spare parts and accessories is always kept on hand, and petrol and oil may be obtained at the stores at any time during the day or night. Mr. Vicajie has made frequent visits to Europe, in the course of which he has made himself thoroughly acquainted with every branch of modern engineering. The works are under the immediate control of the proprietor, who has in his employ a large staff of competent men, and branches have been established at Bangalore, in the Madras Presidency, and at Dhulia, in the district of Khandesh, near Bombay.

WILLIAM & CO.

The proprietor of this firm, Mr. K. Nageswara Rao, was born about fifty years ago at a village in the district of Kistna, in the Madras Presidency. After passing through the usual course of study at the University of Madras, he commenced his business life, but it was not until 1898 that he established the undertaking which has in later years made his name famous in India, and even in distant countries. He conceived the idea of manufacturing a balm of great healing qualities, and he placed it upon the market in Bombay under the name of "Amrutanjan," but progress was slow during the first ten years owing to lack of necessary capital. Encouraged, however, by the practical support of a generous public, he persevered in his efforts, with the result that hundreds of thousands of tins of the remedy are now sold annually. The balm is prepared from costly drugs, and although it is made up and neatly packed at considerable expense, the proprietor is able to fix the selling price at so low a figure that it can easily be obtained by the poorest in the land.

In the year 1908, which witnessed the commencement of a decade of successful working of the "Amrutanjan Depôt," Mr. Nageswara Rao launched the *Andhra Patrika*, an illustrated weekly newspaper published in the Telugu language. It was issued from a printing office in Bombay—which is not in Telugu territory—but notwithstanding this fact the journal very quickly secured a large circulation. Six years later the proprietor decided to make the city of Madras the place of publication in order that the paper might be of greater service to the Andhra people, who are nearly twenty-four millions in number, and at the same time arrangements were made for a daily, instead of a weekly, issue.

Mr. Nageswara Rao generously appropriates the profits made upon sales of "Amrutanjan" to the maintenance of his newspaper, which is serving a useful purpose in diffusing suitable news among a very large circle of readers, and in this and other ways this gentleman is furthering the interests of the country of his birth.



WILLIAM & CO. (AMRUTANJAN DEPOT).
1 Showroom. 2. Packing Department.

THE YOKOHAMA SPECIE BANK, LTD.

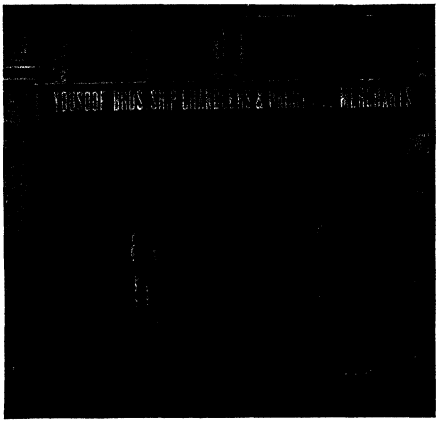
The Yokohama Specie Bank, Ltd. (in Japanese, "Yokohama Shokin Ginko"), was founded in Yokohama in 1880 under a special charter of the Imperial Japanese Government, and it was the first bank in Japan to commence foreign exchange business. The bank has now a subscribed capital of Yen 48,000,000, a paid-up capital of Yen 42,000,000, with reserves amounting to Yen 23,100,000. The management of the bank is under the control of a board of directors consisting of some of the most prominent men of the mercantile community of Japan. From its latest published report it appears that the bank made a net profit in the six months ended 30th June, 1917, of Yen 4,946,757, out of which a dividend at the rate of 12 per cent. per annum was paid to the shareholders, a rate which has been steadily maintained for several years past. The business and activities of the bank are spread all over the world, and it has its branches in almost all the most important towns and centres of business, including Bombay, Calcutta, Changchun, Chinan, Dairen, Fengtien, Hankow, Harbin, Hongkong, Honolulu, Kaiyiuan, Kobe, London, Los Angeles, Lyons, Nagasaki, Newchwang, New York, Osaka, Peking, San Francisco, Seatle, Shanghai, Singapore, Sydney, Tokio, Tientsin, Tsingtao, Rangoon, etc. After a most successful career in Japan the bank opened its first branch in India at Bombay in 1894, and from a small beginning it has now become one of the most important and thriving concerns of its kind, having reached the first rank of exchange banks in this country. With the expansion of its business in India, another branch was opened in Calcutta in 1911, and a third branch was started in Rangoon in 1918. The Bombay office is situated at Hornby Road, Fort, in the centre of the business quarter of the city, and has been for the past seven years under the able management of Mr. N. Igarashi.

YOUSOOF BROTHERS.

When this firm was established in Bombay in the year 1907, a very modest beginning was made by the partners as commission agents and suppliers of goods of a general character to customers in the *mofussil*.

Careful habits, strict attention to

details, and an unconquerable spirit of perseverance caused such an expansion of the business that in January 1917 the present premises in Nagdevi Street were opened, and the firm boldly proclaimed themselves as railway contractors, ship-chandlers, dealers in gin and mill stores, and hardware merchants.



YOUSOOF BROTHERS.
PREMISES.

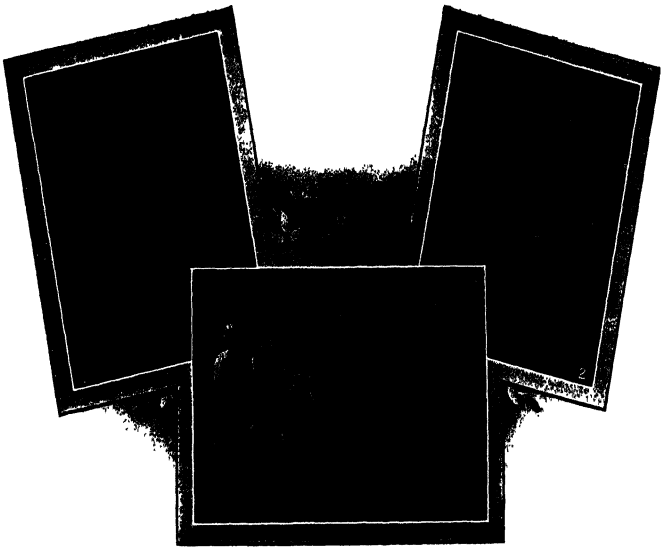
All goods are imported, through leading indenting firms, from Great Britain and America, and large stocks are carried of metals, hardware, machinery, ironmongery, mining, engineering, and building tools, stores for ships, railways, and mills, all kinds of pipe fittings, sluice valves, brass and gun-metal cocks, paints, oils, beltings, india-rubber goods, hose, flax canvas, pulley blocks, manila and wire ropes, and other sundries.

Messrs. Yousoof Brothers are now carrying out contracts with railway companies, Government Public Works Departments, and the Bombay Port Trust, and the mere fact of their having been entrusted with important commissions by such high authorities amply proves that they are capable men of business and that the esteem in which they are held is of no mean order.

The partners are Messrs. Yousoof Ali, general manager and supervisor of correspondence and contract departments; Tyebjee, manager of sales; and Kamrudin, orders department.

The firm have extensive godowns in which large stocks of goods can be stored.

PARSI TOWERS OF SILENCE.
Photo by Clifton & Co.



1. KOLI WOMAN. 2. BHIL WOMAN (Note the Ornaments). 3. GIPSIES, KARACHI.

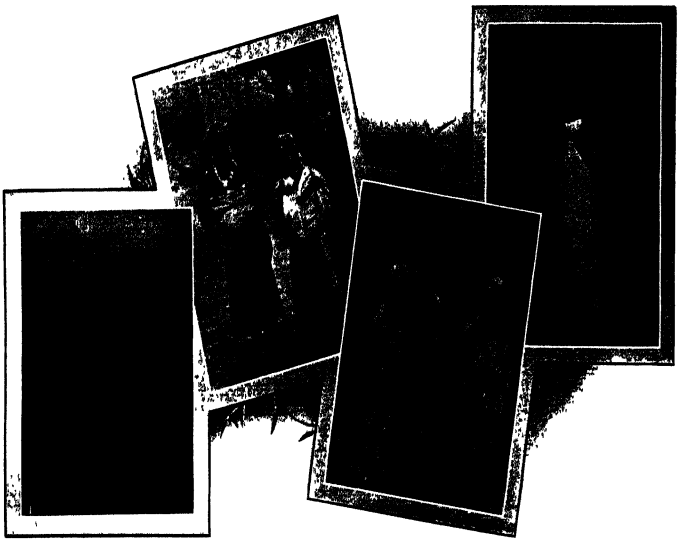
THE NATIVE RACES OF THE BOMBAY PRESIDENCY

By OTTO ROTHFELD, I.C.S., F.R.G.S., Author of "Indian Dust," "Life and its Puppets," "With Pen and Rifle in Kishtwar," Etc.

FOR the study of mankind and its divisions by class and people no country in India is so fruitful as the Bombay Presidency. Its long coast-line and many harbours have, from the earliest days, made it accessible to foreigners from across the seas, while the inhabitants themselves soon became navigators, voyaged to southern archipelagoes, and founded colonies in Java and Ceylon. The earliest records show Greek ships trading with the Bombay coast, and no doubt Greek sailors, like those of other nations, had a wife in every port and left children of mixed parentage behind. Again Sind, the northernmost but separated province of the Presidency, was in all recorded time exposed to irruptions from the Persian plains and became, sooner and more completely than other parts of India, a field for Mussulman conquest and proselytism. Gujarat, with the peninsula of Kathiawad, was readily swept by wave after wave of Scythian raiders. It bears to this day the name of that Gurjarra, or Gujar, tribe whose memory has also been preserved in Gujjar Khan and Gujarat and Gujranwalla of the Punjab. In that province, those people who still bear the name of Gujar are now a mere broken clan of wandering herdsmen: in the Bombay Presidency there is no single sect or caste which calls itself by any peculiar prescription merely Gujar, but many castes add this further style to the name of their occupation or other designation, as being entitled to claim a purer, less mixed, descent from the conquering hordes. Thus the Vanias (traders) and the Sonis (goldsmiths) have each a distinct section known as Gujar Vanias or Gujar Sonis, which does not marry into other sections of the same occupational caste. Further, the mass of the land-holding peasantry, the so-called Patidars and Kunbis, are certainly of Gujar origin; and it is hardly an exaggeration to say that the forms, the complexion, the thoughts, habits, and manners of all the Gujarat peoples have been mainly shaped and moulded by this Scythian ancestry. The changes wrought in the life and characteristics of the peoples of Gujarat by the Scythian tribes are at the least as profound and as extensive as in Northern France were the results of the Frankish conquests and their settlements.

In Khandesh, formerly a province by itself, now comprising within the Bombay Presidency the districts of East and West Khandesh with parts of the Nasik district,

a similar, though a less complete, change followed the coming of a kindred Scythian tribe, known in Sanskrit letters as Abhira, or remodelled, north of the Vindhya range, all the outworn polities of so-called Aryan India, and whose permanent political legacy has been the supremacy of the Rajput fighting clans. The Province of Gujarat, thus inspired by a vivifying foreign influence, is now in point of civilization and especially in that fruit of good culture, the graceful power of its women, undoubtedly the happiest country in the Indian continent.



1. A BHIL FAMILY. 2. DHOWGRY WOMAN. 3. DHOWGRY AND GADDY TYPES. 4. THE BABY'S CRADLE.

and nowadays as Ahir. Here also no tribe is left with the name of Ahir alone and without qualification. But many castes, called after and formed upon some main occupation of the members of the sept, have their Ahir section; and it is interesting to note that while they will not marry into other sections of the same caste, they will often choose brides from the Ahir sections of other castes. In Kathiawad, on the other hand, one finds a separate caste of Ahirs surviving as petty cultivators and as herdsmen, much in the same way as some of the Gujars have survived as a separate caste in the Punjab.

Generally speaking it may be said that the people of Gujarat are of mixed descent, in which the underlying strain is no doubt the earlier darker Indian race, which it is convenient to call Dravidian, if by the use of that name no particular theory of early origins is to be understood. But the dominating element has undoubtedly been that of those energetic Scythian, Hunnish, or Turkish tribes, with their Caucasian admixture which broke up

South of this rich province, the Mahratta nationality stretches from the coast over the mountain-barrier of the Ghats across the arid plains of the Bombay Deccan. In the ordinary Indian sense, these Mahrattas are hardly a caste. Originally the name seems to have been applied rather to those who belonged to a national confederacy or league formed by the peasantry of the land, who, from their occupation, were called Kunbis, or cultivators. Within the league, it would seem, ordinary distinctions of caste or sub-caste were swept away or absorbed. There remained, after all, the national community of the Kunbis or Mahrattas; but with them and above, in separation, to guide, control, and also to exploit, remained also the priestly caste of Brahmans. These Deccani Brahmans are clerics virtually in the old English sense, men invested with privileges of clergy, not necessarily themselves priests, but able to read and write, with free access to the scriptures, dependent for their livelihood on their pen and on their brains. Again, below the confederated peasantry, there remained certain depressed castes, the Mahars for instance, and the Mangs, the residue perhaps of some once-conquered or rebellious people, reduced to be Helots in the victorious republic. The few members of occupational castes who remain outside of the principal community are rather exceptions which prove the genuine Indian rule. But as the Mahratta confederacy, under the grasping sway of its clerics, gained in power and territory, the leading families assumed the peculiar distinction of the name for themselves alone. To their humbler followers and companions they refused any title except the old familiar name of Kunbi. In spite of their efforts, however, the distinction has never quite crystallized into the rigid facets of true caste. The Mahratta and the Kunbi still know themselves one at heart, and a steady ebb and flow from one to the other

section keeps fresh the confluence of their national life

Further south, where the Bombay Presidency marches with Madras, the Kanarese-speaking districts contain much the same elements of race and caste as are found in the neighbouring province With the exception of some Brahmans of the coast, who are obviously immigrants from across the sea, the inhabitants belong to the dark race which held India before even the Aryans came and many centuries before the northern peoples were transformed by the vast Scythian invasion Their ethnography belongs rather to the Madras than to the Bombay Presidency They are orthodox in the extreme, and the caste system is stronger and more rigid than in other districts of Bombay But it is of interest to note the existence, in the Dharwar and Belgaum districts in particular, of the numerous and powerful sect of Lingayats Some seven hundred years ago, a large part of the population of this tract revolted against that tyranny of the clerical families which was the keystone of traditional Hinduism. They formed a new dissenting sect, they abjured the observance of the sacred rites and ceremonies imposed by the priesthood, they proclaimed the absolute equality of men, and they preserved from their former faith only the immemorial worship of the male organ of procreation, the symbol of the eternal life-force But as the centuries passed, they began, as is usual in India to create hereditary disqualifications out of the inequalities which belong naturally to mankind and to give up their abstract preference for fraternity Hence these dissenters now present the interesting spectacle of a sect divided into isolated septs, marked off by barriers hardly less rigid, though unsanctified, than the orthodox Hindu castes This tendency is in fact natural in Southern India Its force can be measured by the fact that on the coast even the Roman Catholics have preserved the caste system in spite of Christianity And not merely in the south, but in most parts of India the social hindrances to marriage with persons of other rank, occupation or descent are hardly less efficient among Mussulmans than the stark vetoes of caste tribunals among Hindus

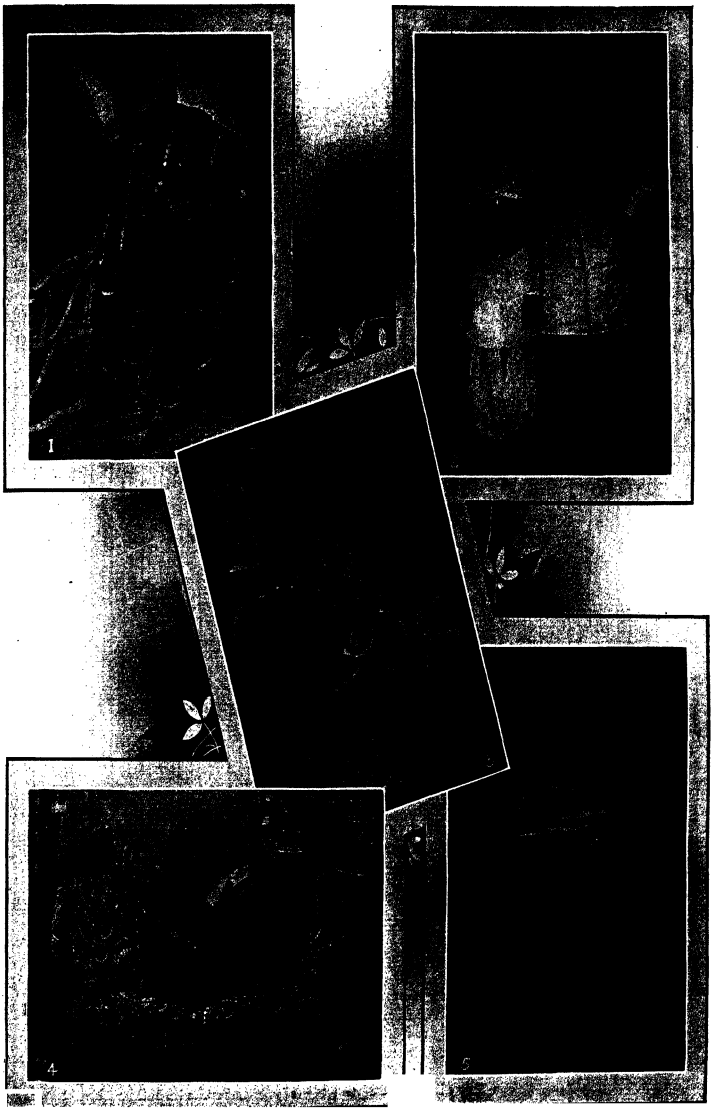
In rank among the peoples or races of the Presidency, undoubtedly the foremost are the Rajput tribes, if by rank is meant anything such as the word implies in Europe These tribes, that is to say, constitute the gentry of the country, families of historic descent, solidly based upon the holding of landed estates, won in the first instance by the sword, with the traditions of a fighting chivalry They have the thoughts and instincts of a class of gentlemen, exercised in power and political weight fond of sport social eminently courteous, easy and comfortable in their manners, with a high code of aristocratic honour, ready to make the best of life and to snatch what enjoyments they can from the world Their princes and high nobility are perhaps a little too apt to be spoilt by luxury and the temptations of wine and women, while all classes yield more than they should to the spurious excitement of opium, for at all social gatherings and meetings draughts of opium must be drunk, like a glass of wine in a friend s house in Europe, on pain of giving offence But they are fine, gallant gentlemen in most cases, splendid horsemen, fond of shooting thoroughly natural

1. BHIL (PANCH MAHALS) 2 BHILS (REWA KANTHA AGENCY).
3. ABORIGINAL TRIBE (NAIKDAS) AT THE RUINS OF CHAMPANER.

and human, whom it is a pleasure to meet and to know. Their women, strictly veiled in most cases and confined to *zananas*, are charming and beautiful. It is they who are the heroines of Indian life and of Indian story. Among the poorer Rajput gentry, where the line between the gentleman and the peasant is worn rather thin and the claim to nobility is based on descent rather than on actual possessions and circumstance, and restrictions on the freedom of women exist in little but name, the women are healthier and happier. In recent years, however, some of the chiefs have also reverted or advanced to freer ways, and a lady of the highest rank may occasionally be seen unveiled at a public banquet or a great social function. In the Bombay Presidency the Rajput tribes are almost entirely confined to Gujarat, and are at their strongest in the peninsula of Kathiawad. The rulers of most of the States which compose that peninsula are Rajputs, who, in spite of fanciful genealogies that trace their descent from the ancient Kshatriyas of Aryan India, are really the representatives of the leaders of various Scythian hordes. Their organization is feudal and tribal, and resists the attempts of those who would pour it into the Hindu mould of caste. In marriage the one stringent rule is that they must mate outside of their own tribe, though in southern Gujarat, where the Rajputs are fast degenerating into a cultivating peasantry, the Solankhi clan is now, in a rather shamefaced and half-hearted way, giving up the tribal rule and substituting for it the usual Hindu custom of marrying within the sept or caste division. Within the clan the relation of chief to clansmen greatly resembles the custom of the Scottish highlands in the eighteenth century. The chief has great power, not encumbered by written law, and his word is accepted with unfailing respect; yet the obedience is that of children to a father, or of freemen to a chosen leader and the head of a common family. They are filled with the thought – not always true in fact, but true at least in fiction that they are of one blood, equals by descent and nobility, but born in a world in which it is given to one to command on behalf of all and to others to obey for the good of the common line. In addition to the independent chiefs of Rajput descent, there are in all the British districts of Gujarat a number of Rajput noblemen, who bear the title of *Thakors*, or *Talugdars*. In some cases these are Mussulmans in religion by the forced conversion of their ancestors; but their domestic usages, their rules of marriage, and their law of succession still follow the Rajput custom, in spite of centuries of Islam. They look upon themselves and are regarded by others as Rajputs, though by a sort of accident they repeat the need of the one God, in place of worshipping at the shrines of Krishna and Ganesh. In the social progress of the Presidency the value of the Rajput tribes is that which in all countries derives from the existence of a class of landed gentlemen with a warlike history, the value of a fine ideal for the everyday purposes of our world of action.

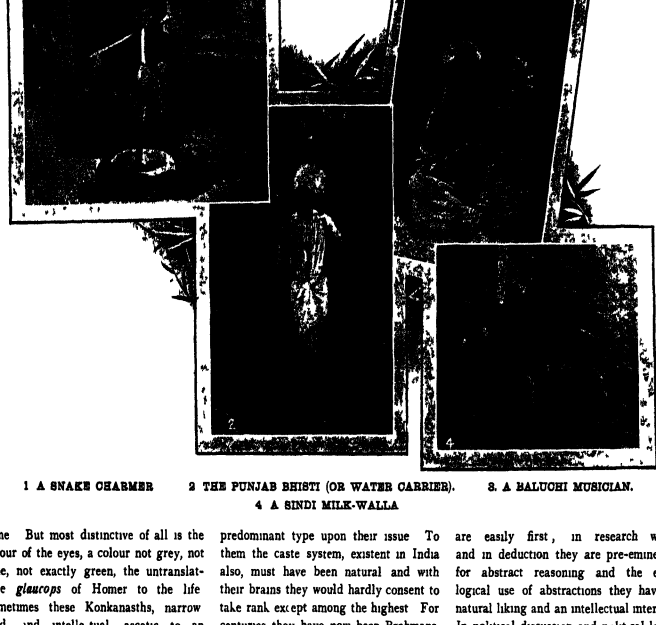
But though the Rajputs come first in point of rank in the European sense of the word, there is another and essentially Indian sense in which they must yield place to the Brahman. To speak of Brahmans as priests is misleading; for only a small proportion of Brahmans, and those the least esteemed, perform the actual functions of a priesthood or officiate in the service of the gods. Their social significance can perhaps be most easily grasped by understanding what in the Middle Ages was meant by clerks or clerics. When every one else was ignorant of letters, they alone had knowledge of the written word; they alone were permitted access to the classic scriptures; and thereby they derived privileges, even of immunity from death, for themselves alone. In India the Brahman had far-reaching privileges of clergy, and in particular their lives were spared, whatever their offence. But by introducing restrictions upon marriage within all classes, and making the privileges of clergy hereditary, they came to constitute, in the Indian way, a separate caste, or group of castes, hierarchically pure, and in point of sanctity and protection above all others. Thus, even a mendicant Brahman, who flatters the Rajput chief for his daily bread or does not disdain a panderer's trade has, by right of his place in the hierarchy, a purity so superior that the chief must do him ritual obeisance, and that the Rajput's touch would pollute his food and water. Broadly speaking, as they now are, the Brahmans of the Presidency form a professional middle class, an *intelligenzia*, fortified by this hereditary privilege of clergy. They are the lawyers, doctors, teachers, civil servants, and clerks of modern India. A few have risen to the control of States and are ruling chiefs; but even in their families, the traditions of thought and the usages of life are still those that we in Europe associate with a middle class. It is true there are no *zananas* and no *pardah*, but their women are usually shy and are in practice precluded from anything like easy intercourse with men outside of their own family circle.

The caste divisions of Brahmans are innumerable, and in every case it must be remembered that the essence of a caste division is the forbiddal to marry outside the sub-caste into any other division. By tradition there are in Gujarat alone eighty-four Brahman castes, no member of any of which can marry into a family of any other Brahman class. But the census enumeration showed that the number had actually swollen to ninety-three. In the Mahratta country the Brahman castes are less numerous, and the principal three, Konkanasth, Deshasth, and Karhadas are now beginning in principle, and in some actual cases, to allow marriage into each others' families. The tradition and the hypothesis of the orthodox Indian student of sociology is of course that all Brahmans are the descendants of the original Aryans. The fact, however, is very different. The two leading sub-castes in the Presidency, and the most interesting among them, have actually no claim whatever to Aryan descent. In Gujarat the most exalted and proudest of the Brahmans are the Nagars, who do not even add the title of Brahman, but call themselves simply Nagar. They are a class of men of great practical ability, statesmen and administrators, of unusual personal beauty, and of charming manners. Their social development and their mental attainments are much above the level of their country, and in their solemn mansions in the quiet lanes of Ahmedabad, heavily decorated with fine wood-carvings, one can actually find a society in many ways like that of the Italian cities at the time of the Renaissance. Many a Nagar lady has the charm, the beauty, and the education of some of the noble *donne* of Boccaccio. Yet the Nagars are certainly of Scythian-Turkish descent, perhaps the descendants of a class of priests in the invading armies. They were purified at a historic fire-sacrifice on Mount Abu, and were received as a new caste of Brahmans into the Aryan Brahmanical system. Again, in the Mahratta nation, the intellectual leaders have for some centuries been the Konkanasth, or Chitpawan Brahmans.



1. A SINDI (MAHOMEDAN) LADY. 2. PUNJABI WOMEN. 3. SIND (HINDU) WOMAN.
4. MARATHI LADY. 5. A PUNJAB (MAHOMEDAN) GIRL.

See a Konkanasth in any gathering of Indians, and it cannot escape you for a minute that here is a foreigner who, dressed however he be, is not of true Indian blood It is not merely the dead skin, different from the fresh golden or whaten tint of those Indians who come of Scythian descent The fine straight nose has a different line, the set of the jaw, sometimes degenerated by inbre d- ing to a projecting imbecility, is different, the very shape of the skull is not the same But most distinctive of all is the colour of the eyes, a colour not grey, not blue, not exactly green, the untranslat- able *glaucops* of Homer to the life Sometimes these Konkanasths, narrow cold and intellectual ascetic to an inhuman degree, doctrinaire theorists and theoretical revolutionaries skilled reasoners in abstractions and bloodless philosophers, are not a little like Robes- pierres of a new world and in their eyes lives Robespierre's "sea-green in- corruptible." Homer's colour of the sea is in the colour of their eyes, the cold grey-greenish sea of a cold sunless day It is right that the sea should have marked its reflection in their eyes, for it is by the sea-route that these Brahmans came to India Tradition upholds the fact, and their very images are still portrayed in Egypt on the frescoes of the tombs of the sailor-kings From the coasts of the Red Sea their ancestors must have sailed for India in those ships which at the earliest recorded dates came to trade in the southern ports Liking the country and its wealth, they must have remained to settle, brought their own women perhaps, certainly imprinted a predominant type upon their issue To them the caste system, existent in India also, must have been natural and with their brains they would hardly consent to take rank except among the highest For centuries they have now been Brahmans, and for two centuries they have been in the first rank among Brahmans, while the beauty and distinction of their features prove their steadfastness in keeping the breed pure of all intermixture Their ascetism and the stern repression that they exercise upon their women must have made the chances of admixture much less than usual The men have sometimes fertilized other races, and in the coast villages where they prevail one may find members of other castes, so-called Gujar Banias for instance, who show occasion- ally the distinctive type or colour of the Konkanasth Brahman But the women have remained cold and chaste, centred on the hearth at home and the wor- ship of the temple gods, and they have preserved the original strain in all its purity through the centuries In the realms of pure thought the Konkanasth have been the leaders of modern India In philosophy they are easily first, in research work and in deduction they are pre-eminent, for abstract reasoning and the easy logical use of abstractions they have a natural liking and an intellectual interest In political discussion and political lead- ing they are tireless and talented, but dangerous, reasoners, for they follow the deductions of abstract thought to the extreme, with little or no feeling for prac- tical needs and emotional values They are rationalists, and idealists, always and all the time, though, like all men, they may be unconsciously swayed by the sophistry of passion, they allow little room for the sensual and the actual, for pleasures and sensations, and for the



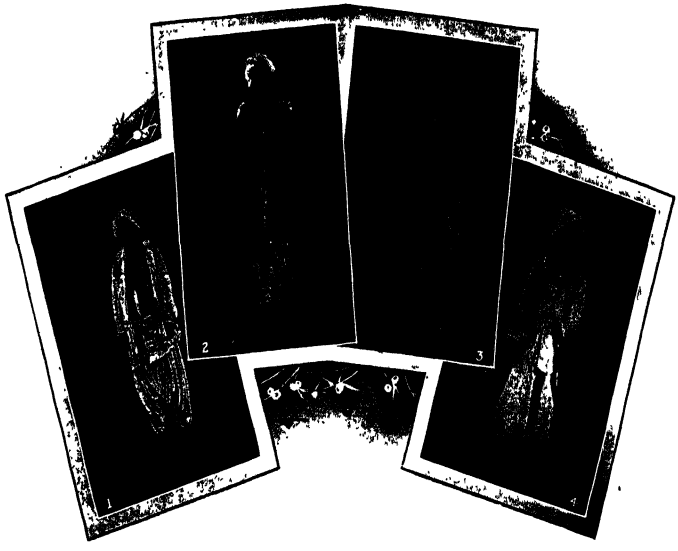
1 A SNAKE CHARMER 2 THE PUNJAB BHISTI (OR WATER CARRIER). 3. A MALUCHI MUSICIAN. 4 A SINDI MILK-WALLA

emotions and desires of the concrete human being.

The other leading Brahman caste of the Presidency, the Deshasth Brahmans of the Mahratta nationality, seem in the main to be of Dravidian descent, the word "Dravidian" being again used without any too definite implication. Some, it may be, can claim a remote tinge of Aryan blood, from the few Aryan priests that entered and leavened the first dark dough of the South. In the main, however, their physical type and their history —or want of it—show clearly enough that they are a fusion of the earlier native stock.

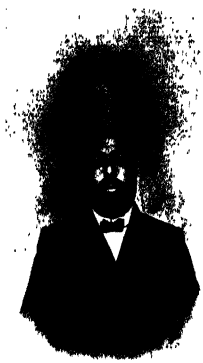
It will therefore appear that of the higher social ranks of the Bombay Presidency none have any authentic claim to pure Aryan descent. One probable exception, however, exists in Gujarat in the small but influential caste of Brahma Kshatriyas. These have an intimate connection with the Gangetic Valley, and it seems probable that, as their name betokens and their traditions claim, they are the descendants of the original Aryan Kshatriyas, the warrior caste of the old polities overthrown by the Scythians, who saved themselves from destruction in the Brahman revival by assuming the habits and partly the name of the successful caste. Now they are a professional class, mainly employed in the administration, where they make talented and energetic officials.

In lower social grades there is again little or no trace left of the Aryan, even in the occupational castes. But in the Bombay Presidency the strongest sections of the lower classes are all of the type of tribal communities. From the point of view of ethnology at any rate the most interesting are the vast and various tribes who all bear the name of Koli. In physique, in custom, manners, and in occupation, these tribes vary to an immense extent one from each other. They extend within the Presidency from Kathiawad to the borders of Central India, and are found even in Sind and the neighbouring States; they are the main element of the rural population in Southern Gujarat; in the hills of the Northern Ghauts they are wild tribes; and on the coast, both north and south of Bombay, they are fishers. In Kathiawad and in some other parts of Gujarat they are very close to the Rajputs, and there are in every generation recurring cases in which Koli chiefs or landowners have got themselves accepted as Rajputs, and have married into authentic Rajput families, or where, on the other hand, Rajput settlements have dwindled to the rank of Kolis. In other places the line between the Koli and the wilder aboriginal tribes of the Bhils is shadowy and imperceptible. It is clear that the Koli tribes have only recently found a place in the Hindu social system and been accepted as Hindus; and in the case of the fishermen Son-Kolis of the coast the tradition of their conversion and assimilation to Hinduism is precise, and the event is dated 250 years ago. How wild hill-tribes or caterans of the Gujarat plains ever threw off a section to be fishermen is a difficult problem; but both tradition and physical resemblance compel the belief that these fishermen have only in the last two or three centuries turned to the sea. The conversion, however, of some of the communal Scandinavian pastoral tribes of Sweden into the particularist fishermen and small cultivators of Norway may present an analogy. At



1. A BALUCHI HINDU. 2. BALUCHI FARMER. 3. A SHERANI PATHAN. 4. MASORI BUGHTI BALUCH.

the present moment one cannot say more than that the probability is that the Kolis are a collection of tribes based on some early stock of Western India, in which



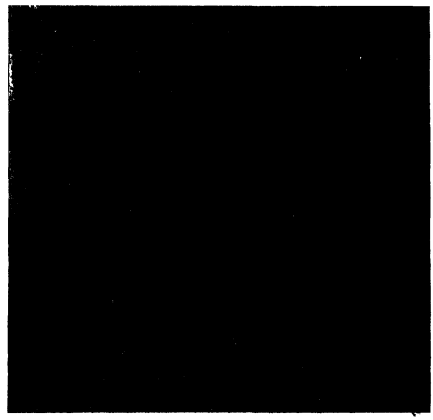
A MAN FROM SIND.

have amalgamated on the one side masses of the Scythian soldiery whose officers and chosen men became Rajputs, and on the other side a certain number of still more primitive tribes like the Bhils. The prevailing Koli strain at any rate is of a pleasing people, cheery, good-humoured, frank and free, natural in domestic morals, rather thriftless, and with a spirit of adventure that is too apt to turn to crime like robbery and dacoity, but adaptable, courageous, and progressive. If they can be protected from Brahman repression and given fitting outlets and uses for their adventurous spirits, they should form a very valuable ingredient in the national life of Western India.

The Bhil tribes, though not unmixed in their various elements, are more homogenous in race than the Kolis. They were, as far as one can trace, the earliest inhabitants of Western India. But conquest and oppression drove those remnants who resisted slaughter or absorption into the forest fastnesses and the hills. They are now pre-eminently wild tribes, huntsmen who do a little rough cultivation, but live mainly on what they shoot with their bows and arrows, and on the produce of the forest. Where Hindu civilization has encroached upon their settlements and surrounded them, they have rapidly degenerated to a thriftless, drunken, and servile class. Where they have been protected by the forests, by difficulties of communication, or by their own numbers, they have the virtues and faults of wild men of the woods. They are cheerful to an astonishing degree, full of laughter as few Indians laugh, truthful, honest, and faithful. Their women are sturdy and free-spoken; and their moral code is easy, natural, and wholesome. Before marriage a woman may have lovers and children; after marriage they are usually faithful; but when fidelity is difficult divorce is easy and fairly adjusted. The Bhils are fearless in the forest and face the panther without a tremor, and track the tiger through the densest thickets. Twenty years ago the Bhil was sharply differentiated from the Hindu social organism, and firmly rejected the very name of Hindu. Now, the extraordinarily rapid spread of Brahman proselytism is fast bringing the Bhil tribe into the fold of Hindu caste and Hindu custom.

The Bombay Presidency, in addition to its Hindu or Hinduized tribes and castes, has also a considerable Mussulman population, roughly one-sixth of the whole. But in the main the Mussulmans are the descendants of Hindu converts, and, as a rule, they have fallen into divisions which do not in practice allow marriage with one another. Legally, of course, the distinction between such divisions and those of the Hindus is considerable; but in actual fact it is clear that the national spirit has prevailed over Mussulman law and teaching. Even the prohibition of re-marriage of widows is enforced in many Mussulman communities, though it is directly opposed to the commandments of the Koran; and in this respect, curiously enough, the worst offenders are the Sayyads, who claim, not without reason, to be the descendants of the Prophet's family. In Bombay, one of the principal sects is that of the Khojas, rich and enterprising traders, who are still largely governed by Hindu law and are followers of H.H. the Aga Khan, the descendant of "The Shaikh al-Jabbal," "The Old Man of the Mountains."

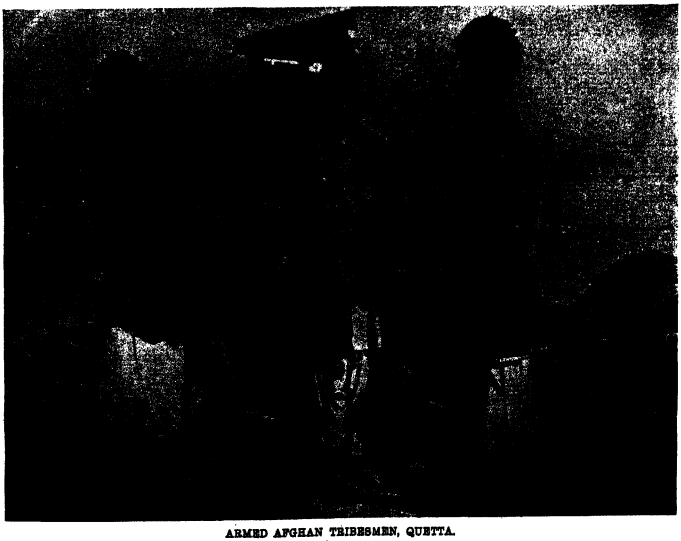
Curiosities of anthropology are of course plentifully to be found in a Presidency which is so rich a museum of races and peoples as Bombay, but their interest is more for the student than for those who wish to know the value and significance of the peoples of Western India as they now are. Such a curiosity is the prevalence of the levirate among the Kathis and Kolis of Kathiawar. Among them, on the death of an elder brother the younger brother has the right or duty of having the other's widow. Among some Kolis there are even traces still surviving of the wife being shared by the younger brothers during her husband's lifetime; and throughout Gujarat



MINSTRELS.

the custom of veiling the face before the husband's elder—but not before his younger—brothers is doubtless symbolic of such a custom, formerly prevalent and perhaps imported from Scythia. More curious is it to find that the Daudi Bohoras in Gujarat indulge in female circumcision, a custom probably copied by them from Africa or Arabia. Perhaps the oddest of all these curiosities is the practice of the *couvade* by the Koravas of the Dharwar district. There, when a woman's time is near, her husband goes to bed, is fed on chicken and spiced mutton, treated as a patient and rubbed with oil. So he lies, while his wife is confined, and he bears the vicarious treatment till she is again able to rise and go out.

In general it is important to remember that caste is fluid and constantly changing, though its analysis must show it as it were fixed and stationary. Even the racial constituents of many castes are constantly changing, sometimes through economic circumstances, dearth of marriageable women, adultery, or assimilation into other communities. Nearly every close observer, who has watched communities in a limited area for twenty years or more, can quote cases in which a caste has from the operation of one or other of such causes completely changed its character and constituents. Customs, again, change with great rapidity. In Western India one of the most fatal of such changes has been that the prohibition to widows of re-marrying has spread in recent years to many castes, which formerly never dreamt of interfering. It is no exaggeration to say that in the Bombay Presidency many millions of women are now doomed to life-long widowhood who, twenty years ago, would have been free to marry again at their will and pleasure. The action of the law-courts, introduced under British rule, has also on occasions been seriously detrimental by limiting the free action of tribal or caste custom. Our courts in general lean to a rigid application of Brahman law to all cases between Hindus, whatever their caste or custom. They forget, in the usual spirit of the lawyer, that the rules laid down by clerics for themselves were not meant to apply to men of other professions, and are blind to the even more important fact that caste customs are not a finished code but a changing, living growth of the people's will expressing itself through self-determined rules and tribunals. Hence, wherever an established and defined tribal custom of long standing cannot be clearly proved—among illiterate persons an impossible task—the Courts of British India stringently apply the artificial law of the Brahman, however unnatural it may be in itself or ill-adapted to the needs and environment of the tribe in question. Apart from this bias, the Courts have all the prejudice of the Bar, the most exclusive of trade unions, and are intensely jealous of their jurisdiction. They have in consequence done their utmost to smash the rival authority of the people's caste tribunals. These principles have in recent years done the most serious hurt to the womanhood of the Bombay Presidency, and no review of the native races of that territory can be complete without noticing a lowering of the position of their women, forced on them from outside by the action of the British Courts. For those women in their vast numbers, who had a traditional right to divorce on due cause shown and proved to their own people, have now been denied this refuge by decree of the Bombay High Court. The Court has gone even further, and has actually imprisoned a woman who, rightly divorced, re-married according to caste custom and rule.



ARMED AFGHAN TRIBESMEN, QUETTA.

THE UNITED PROVINCES

EARLY HISTORY

By ARNOLD WRIGHT

THE United Provinces are historically the most interesting part of India. They largely comprise within their extensive limits the classic Middle India in which Indian civilization was cradled, and which was the home of her greatest traditions and the centre from which sprang the influences which have moulded and coloured her religious life. Here, in the eastern districts, Buddha spent his early life, and from hence radiated that wonderful religious system which still, twenty-four centuries after his death, claims more adherents than any other faith. The strongholds of Buddhism today are in existence in other countries, but in the stupas and monasteries and other characteristic relics which are to be found in the province we have an impressive reminder of the time when the teachings of "the Most Perfect One" were a living and vital force to the myriad peoples who inhabited these fertile lands.

Before the memory of the living Buddha had grown dim a newer force had appeared on the Indian scene, destined also in its way to place an indelible stamp on the framework of human life in these provinces. This was the invasion in the fourth century B.C. of Alexander, whose legions, pouring through the north-western passes, descended upon the plains of the sub-continent, subduing the existing principalities and establishing new forms of government and introducing customs and ideals which were profoundly to change the current of Indian civilization. The fascinating story of the Greek domination of India need not be followed here. Suffice it for our purpose to take up the narrative at the point where Chandragupta, an Indian from the Gangetic Valley, having made an alliance with Alexander's lieutenant, Seleukos Nikator, and espoused his daughter, established an empire which stretched from the Hindu Kosh to the Bay of Bengal, with its capital at the modern Patna. Chandragupta's grandson and successor was the famous Asoka, whose edicts, inscribed on pillars and rocks, have survived the vicissitudes of time and weather to attest the real greatness of this early Indian ruler. In the United Provinces alone three of these inscriptions have been found, the most interesting of them being the rock edicts of Kalsi, in Dehra Dun, which mention by name the contemporary kings of Syria, Egypt, Cyrene, and Epirus, and fix the date of Asoka's coronation at 270 or 269 B.C. Asoka's government was organized on progressive lines. There was a regular land system, roads were constructed, and pillars at regular intervals marked the distances, and the capital city was administered by a body of thirty members.

The great dynasty which Chandragupta founded was not long-lived. It appears to have been followed at a period anterior to the Christian Era by a number of kingdoms of which four exercised sway within the United Provinces, two of them being ruled by Hindoo and the other two by Buddhist princes. Thereafter in the changing scene of this Middle India we see the gradual rise to power of the Sahas or Scythians, who invaded India about the middle of the second century. Next we find in the ascendant about the fourth century a great Hindu kingdom which, commencing in Magadha or Behar, spread far and wide. The third king of this dynasty, who assumed the historic name of Chandra Gupta, reigned, commencing in the year A.D. 320, over an empire which extended from the Sutlej on the west to Central Bengal on the east, and from Oudh on the north to Central India on the south. For one hundred and fifty years this dynasty exercised a power which in its palmiest days was recognized by nine kings of Northern India, the rulers of Eastern Bengal, twelve kings of the Deccan, and numerous tribes in Central India and Rajputana. This era was the golden age of Hinduism. The Hindu religion was widely diffused, the characteristic literature of the faith was vitalized, and a great impetus was given to the study and development of Sanscrit, the language of the ancient Aryan race, from which the higher castes sprung. Fa Hian, the Chinese writer who visited India at the beginning of the fifth century, gives a very interesting picture of the peaceful and progressive state of this Gupta empire. But it did not long survive the period to which his record refers. About the end of the fifth century it had lost its cohesion, and soon afterwards the incursions of the Ephthalites or White

Huns brought about its final downfall. There followed an era of constant warfare in which the Huns competed with local princes for ascendancy, the chief contestants being the Mankharis, the Guptas of the diminished kingdom of Magadha, and the rulers of Malwa. Victory was finally adjudged to Siladitya, of Malwa, but his triumph was short-lived, his armies being defeated by Thanesar, a Punjab king who was connected by marriage with both the Mankharis and the Guptas. With its seat at Kanauj, this northern dynasty wielded power for a good many years, historians recognizing in it the first great kingdom of the modern Rajputs.

In 1018 and successive years the famous Mahmud of Ghazni, with his hordes, erupted into India, penetrating to Kanauj, pillaging the country and leaving a train of desolation behind. This was the beginning of the era of Mahomedan conquest, which lasted until the Mogul Empire was destroyed in comparatively modern times. Mahmud's lieutenants in various centres exercised a limited power until 1152 when the Afghans of Ghor overthrew the Ghaznivide dynasty and themselves essayed the task of plundering the unfortunate Indian provinces. In 1186 Mahomed of Ghor entered upon a campaign having for its object the permanent conquest of territory. He met with fierce and often successful opposition from the brave Rajputs, but in 1193 the invaders, profiting by disunion amongst their foes occupied Delhi, and in the following year overthrew the Hindu monarch of Kanauj, driving the Rajputs into the confines of the Eastern desert, where they re-established themselves in proud defiance of their remorseless foes. Benares and Gwalior marked the limits of Mahomed of Ghor's own advance, but his general, Bakhtiyar Khilji, conquered Behar in 1199 and Lower Bengal down to the Delta in 1203. "On the approach of the Mussulmans," says Sir W. W. Hunter in *The Indian Empire*, "the Brahmans advised Lakshman Sen the King of Bengal, to remove his residence from Nadiya to some more distant city. But the prince, an old man of eighty, could not make up his mind until the Afghan general had seized the capital, and burst into the palace one day while his Majesty was at dinner. The monarch slipped out by a back door, without having time to put on his shoes, and fled to Puri, in Orissa, where he spent the remaining days in the service of Jagannath."

On the death of Mahomed of Ghor his principal lieutenant, Kutab-ud-din, who started life as a Turkish slave, proclaimed himself sovereign of India and established what is known in history as the Slave dynasty, which lasted from 1206 to 1290. This line was followed by the Khiljis, and in the second prince of this house, Ala-ud-din, was produced a prince who left his mark on India by conquering the Deccan and founding on a firm basis the Mahomedan sway in Southern India. He reigned until 1316. On his death power passed into the hands of Khusru Khan, a low-caste renegade Hindu, who, after a fevered interval marked by murder and rapine, passed away, and with him went the Khilji dynasty. Then followed the dominance of the Tughlak dynasty, founded by Ghiyas-ud-din Tughlak, a Turki slave, and produced in Mahomed bin Tughlak one of the greatest of the numerous oppressors of India. His son, Firuz Tughlak, was a sovereign of a different stamp. His rule was a successful, and on the whole, progressive one. He constructed public works, established hospitals, and prosecuted important irrigation schemes, one of which, the old Jumna Canal, still attests the greatness of his conceptions. After his death the power fell into the hands of weak rulers who were unable to withstand the Mogul hosts under Timur or Tamerlane, which in 1398 descended into India from the Afghan passes. For a time the dynasty lingered on, but it was a mere shadow of its old self, and when it flickered out in 1414 it left India in a welter of anarchy. In 1450 the Afghan line of Lodi was founded and exercised a limited authority until 1526, when a further Mogul invasion of India under Baber created new conditions out of which arose the Mogul Empire.

Before Baber appeared upon the scene the capital had been removed from Delhi to Agra, which with an interval during which the old conditions prevailed continued as the chief seat of power until the reign of Shah Jehan, when the capital was again established at Delhi. Baber had to fight two memorable battles, one in 1526 at Panipat, where he defeated Ibrahim Lodi, and the other in 1527 at Fatehpur Sikri, near Agra, where he gained a decisive victory over the local power. On his death in 1530 he ruled over an Empire which stretched from Central Asia to the borders of the Gangetic delta in Lower Bengal. His son and successor, Humayan, went near to losing all that his father had gained, but on his death after striking vicissitudes India, in 1556, passed under the rule of the great Akhbar, who, by consummate statesmanship, consolidated the Mahomedan power and created a dominion which before it passed away was to rival in glory the greatest empires of the world. Twenty years after he came to the throne the whole of Bengal passed under his sway, and thenceforth until the advent of the British it was ruled by Mahomedan viceroys.

Many traces of Akhbar's ever-memorable reign are to be found in the United Provinces. Fatehpur Sikri was founded by him with the intention that it should be the capital of his empire. He was dissuaded from carrying out this scheme, but his affection for the place led him to embellish it with many beautiful buildings. Agra was also greatly beautified by his hand. He built the majestic fort in 1566, and his master hand is seen in some of the other edifices which still grace this city, though the most famous of them, the glorious Taj Mahal and the exquisite Pearl Mosque, within the Fort, belong to the later period of Shah Jehan's reign. Akhbar was succeeded in 1605 by his favourite son Selim, better known as Jehangir. This prince's reign was remarkable from the fact that it witnessed the first landing of the English in India for trade purposes, and the first contact made between the authority of the insignificant little island of the West and the mighty potentate who ruled absolutely over the greater part of the sub-continent. Here in 1611 came William Hawkins, a humble suppliant on behalf of the East India Company, for trading privileges. Here came, a few years later, Sir Thomas Roe as Ambassador of James I to invoke the Mogul's friendship and secure, if possible, a treaty imposing commercial rights. Failure was largely written on these efforts, but the English representatives had some notable experiences, and established relations with the court which were of great value in the furtherance of the aims which the East India Company had before it. The Mogul power reached its zenith in the reign of Jehangir's son and successor, Shah Jehan, and Agra grew in magnificence until the day came towards the end of the same reign when Imperial caprice dictated the removal of the capital to Delhi.

Throughout this period and the century which followed, the United Provinces were the scene of many striking events associated with the struggle which was

proceeding between the Mahratta forces and the decaying power of the Moguls. These episodes form part of the general history of India and call for no lengthened reference here. Nor need we deal with the operations of the British armies under Lake and Wellesley, which, as Kaye says in his well-known work, "broke the Mahratta power on the banks of the Jumna and the plains of Berar," and brought the North-Western Provinces under the subjection of the same British who ruled in the Carnatic, the Deccan, and Bengal, and had established themselves in the priestly city of Benares. What more directly concerns the present narrative is the administration which followed upon the conquest. In the first instance the Government was entrusted to Lord Wellesley's brother, Henry Wellesley, a piece of nepotism which did not escape censorious comment at the time. Wellesley, however, proved a very efficient first administrator, and speedily got to work on the problems associated with his charge, the most important of which was the settlement of the revenue on a proper basis. In the first instance the Oudh districts only were administered, but eventually the great tract of country between the Jumna and the Ganges was brought into the account and the responsibilities of the British officials were to that degree extended. As Kaye shows, the burden placed upon the mostly young officials' shoulders was greater than they were able to bear. In the settlement, owing to the ignorance of the British and the trickery practised upon unsuspecting proprietors by Indian officials from Bengal, much injustice was done to the original owners of the soil, who often were dispossessed without their realizing the causes which had brought disaster upon them. Kaye states that actually one-half of the Cawnpore and Allahabad districts passed into the hands of men of the class indicated from outside. "Thus," he says, "were all the estates in the country passing away, one by one, from the hands of the ancient proprietors, who stood bewildered, confused, dismayed, scarcely knowing by what strange juggle they were suddenly, but almost imperceptibly, deprived of their rights. Many, as their descendants related, died of a broken heart. Others, less capable of silent endurance—high-caste and high-spirited Rajputs—stung by this authoritative injustice, took the law into their own hands, and boldly asserted their rights—their rights of centuries of possession—in the teeth of the upstart claimant who had been yesterday installed by the fall of the Government hammer, or the juggle of a fraudulent Dewan. Acts of open violence—even midnight murders—were committed under a sense of the intolerable wrong." No doubt the difficulties were enormous. Still, to quote Kaye: "We found that a great variety of tenures had been recognized by the native governments, prior to the cession of the provinces; and we took what we found without considering whether we were adopting indigenous institutions, or merely the corrupt growth of usurpation and abuse. We were not answerable for the fruits of disorganization and misrule, which came ripe into our hands; nor could we obviate the necessary evils of that worst of all transition states—the transition of a people from one government to another." Eventually what is known as the Putteedaree Settlement was arranged—that is a settlement made with the "Putteedars" or sharers of estates, and the provinces started on their career under British rule with a well-defined system which at least did justice to the varied interests involved.

Meanwhile the increasing difficulty of administering the large area which had come under the control of the Bengal Government from Calcutta led to proposals for the formation of a separate Presidency. As early as 1808 a scheme was put forward with this object, but nothing came of the suggestion at that time, and it was not until 1829 that any definite move was made. In that year a finance committee, appointed by the supreme Government, presented a report strongly recommending the division. Lord William Bentinck, the then Governor-General, resolutely opposed the proposal, holding that if a change was to be made it should take the form of the removal of the supreme Government to the North-West Provinces and the delegation of Bengal business to local authorities. His views, however, failed to find acceptance at home, and when the bill for the renewal of the Company's charter passed in 1833, it embodied a scheme for the formation of a fourth Presidency, with its seat at Agra. Eventually the project was revised, and in the place of the larger Government designed in the Charter Act, a subordinate administration, with a lieutenant-governor at its head, came into being.

The new division, the North-West Provinces as it was termed, made good progress in the years immediately succeeding the creation of the Government. When British rule had been operative for a half-century, Kaye drew a graphic picture of the results that had been achieved. "In no part of India," he wrote, "are the signs of progress so great and cheering. There is a freshness, a vigour, a healthy robust youth, as it were, apparent everywhere in the administration of these provinces. The physical improvement of the country, and the moral improvement of the people, are advancing under our eyes, with a rapidity which would fill the bygone generation of Indian administrators with as much astonishment as the ancient race of soldiers would experience at the sight of the magnificent dimensions of our Indian Empire."

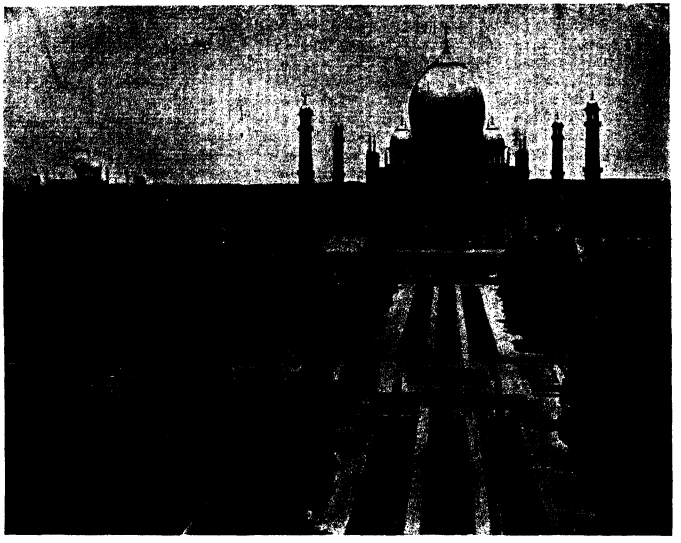
Material changes went hand in hand with the moral improvement. Irrigation was promoted, and in the Eastern Jumna, the Ganges, and other canals we have a noble series of works which were a fitting prelude to the splendid system which exists to-day. The great trunk road, stretching from Calcutta to Delhi, a distance of 887 miles, was another product of this period. Constructed in large part before the era of railways in India, it was of immense service in promoting the welfare of the new province.

Unhappily, while the spirit of improvement was most active and assuming new and beneficent forms, the great Mutiny breaking out at Meerut in the north speedily involved in its malign influence a large part of the territory. The events of that terrible time are too well known to require any extensive treatment in this sketch. It is only necessary to recall the circumstances which made Cawnpore one of the great centres of the uprising. When the Mutiny broke out there resided at Bithur, not far from the city, the heir of the last of the Mahratta Peshwas, a young prince named Dundhu Panth, but more familiarly known as the Nana Sahib. On the 6th June, 1857, the sepoys, influenced by the course of events in the north, mutinied. They were probably incited to this action by Nana Sahib, who, though he had openly professed his loyalty, had secretly shown a bitter enmity to the British because of the discontinuance of the pension which had been paid to his predecessor. Placing himself at the head of the mutinous troops, Nana Sahib caused himself to be proclaimed as Peshwa of the Mahrattas. The British, after the rising, took up a position in an ill-chosen entrenched camp, and there gallantly withstood the assaults

of the large and rapidly increasing force which had gathered under the Nana Sahib's banner. With failing supplies and an Indian summer at its height, the position of the besieged soon became serious, and after sustaining a siege of nineteen days, the British entered into an arrangement with the treacherous Nana Sahib by which they should evacuate the camp under a safe conduct, which was to hold good as far as Allahabad. On the 27th June, in keeping with this compact, the troops, to the number of 450, embarked on boats on the Ganges, but they had no sooner done so than a decimating fire was opened upon them from the river bank. So effective was the fire and so dire the confusion caused by it that only a single boat escaped down the river, and of the entire garrison only four lived to tell the story of the tragic events. Meanwhile the women and children, to the number of 125, who by a refinement of cruelty had been preserved from the fate of the soldiers and male civilians, were herded together in a single building, and there subjected to indescribable horrors. At length, when cruelty had been sated, and the avenging army of Sir Henry Havelock was at hand, they were indiscriminately put to the sword and their bodies cast into a well. We need not trace further the events of that ever-memorable period. They are familiar as household words to every one interested in India, and are a part of the general history of the country. It is only necessary to say that the revolt for a time practically wiped out British rule in the Province, and that a good many years elapsed before the administration was running on its old peaceful and progressive lines.

In later and happier times the North-West Provinces have partaken to the full of the prosperity which has marked the history of British India. Delhi, Agra, and Cawnpore have become busy centres, hives of industry in which the aptitudes of the people are being revealed in manufacturing enterprises conducted on Western lines. This new movement, so promising for India's future, is likely to grow as the years pass by. The Upper Provinces, with their centralized position, their command of raw materials, and their highly intelligent population, occupy a unique position for industrial work, and their present position is probably only a faint foreshadowing of the commercial greatness which will be theirs in years to come. Most assuredly they have a great future whether as a political entity or as a territory which is taking its part in supplying the world's markets with necessary commodities.

A word or two may be said in conclusion to explain the present nomenclature of the provinces, which is rather puzzling to those who have not closely followed the course of modern Indian history. Until 1877 the distinction between the North-West Provinces and Oudh was maintained, and each had a separate administration—the provinces a lieutenant-governor and Oudh a chief commissioner. In that year the offices were combined in the same person, and the way was paved for the change made in 1902, when the entire territory was re-named the United Provinces.



THE TAJ MAHAL, AGRA.
Photo by G.I.P. Rly. Co.

THE UNITED PROVINCES

DESCRIPTIVE

THE provinces are bounded on the north by Tibet; on the east and north-east by Nepal; on the south by States of the Central India Agency, and the Saugor district of the Central Provinces; and on the west by the States of Gwalior, Dholpur, and Baharatpur, and by the Province of the Punjab.

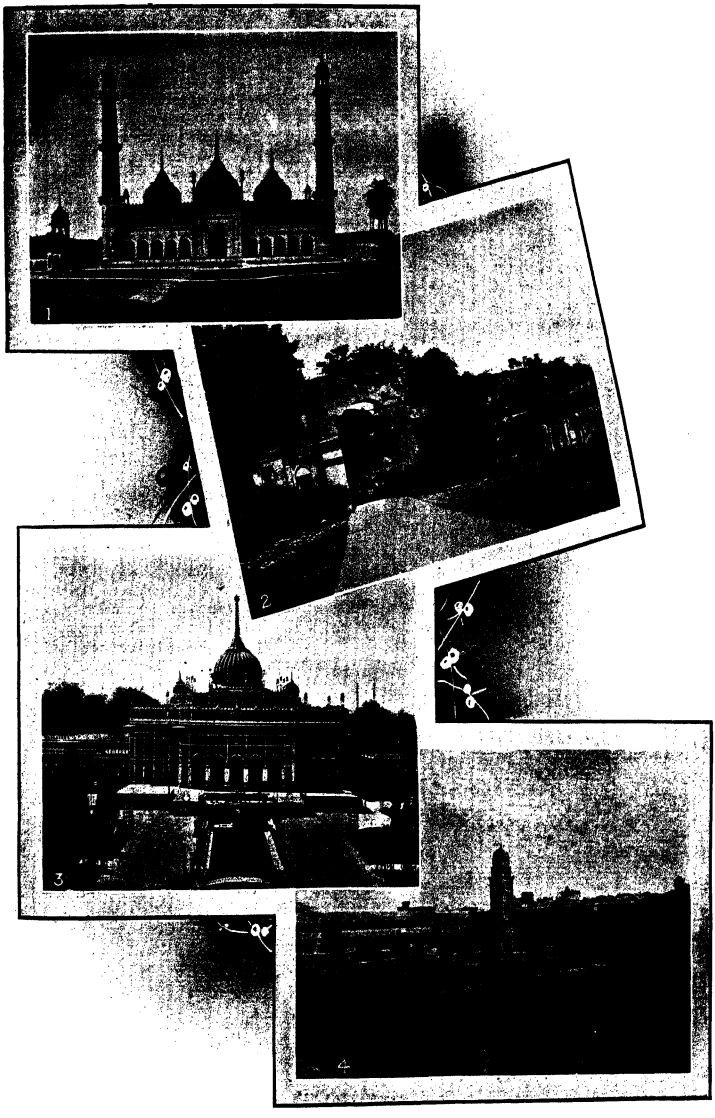
The total area of the territory (including the Native States of Rampur and Tehri (or Garwhal), and the independent State of Benares, is 112,346 square miles in extent, and the inhabitants were 48,014,080 in number at the census of 1911.

The physical features of the provinces present considerable variety, three distinct tracts being noticeable. In the extreme north are portions of the Himalaya mountains, and the sub-montane area, in which cultivation is only possible where there is sufficient depth of soil, which takes its character from the rocks from which it is formed; in the south are the broken hills of the Vindhyan range; and between these limits is the extremely fertile plain of the Ganges Valley, which is almost entirely occupied by highly cultivated fields.

The principal river is the Ganges, which is personified in "Ganga," or "the river," eldest daughter of Himavat, the "lord of snow," and it is alleged that the stream was induced by the deities to descend from heaven, and that in its descent fell upon Siva. The river rises in a region of snowy peaks in the State of Tehri, where it is known as the Bhagiratha; it appears in the eastern portion of the provinces, on its junction with the Gogra; at Hardwar it gives off the head-waters of the great Ganges canal; it then flows in a south-easterly direction through the provinces, touching Allahabad, Benares, and other cities, after which it enters the Presidency of Bengal, and eventually finds its way into the Bay of Bengal in two streams called the Megna and Hooghly. The Jumna is the main tributary of the Ganges, rising in the same neighbourhood, but it enters the western plains of the provinces at Fyzabad, near which town it forms the source of the eastern and western Jumna canals. The Gogra is a great river in the Province of Oudh, and it, and the Gumti and Ramganga, are largely drawn upon for supplies of water for irrigation purposes.

The annual rainfall varies from about 55 inches on the hills to 25 or 30 inches in the division of Agra, but the fear of drought resulting in failure of harvests is minimized to a great extent by the establishment of sound systems of irrigation.

Soils, too, differ greatly in the several divisions of the provinces, but local cultivators classify them as clay, loam, sand, and gravel. Speaking generally, the greater portion of the country stretching from the Himalayas in the north to the River Jumna on the south and west is composed of alluvium washed down from the slopes of the lofty mountains on the



1. THE GREAT IMAMBARA, LUCKNOW.
2. THE BAILEY GUARD GATE, LUCKNOW.
3. PALACE OF LIGHTS, LUCKNOW.
4. AMINABAD BAGH, BENARES.

1, 4, 5. Photos by G.I.P. Rly. Co.

northern border. Seeing that more than 70 per cent. of the population are either entirely or partly dependent for a livelihood upon some form of agriculture, it follows that the cultivation of the land is the most important industrial enterprise.

A good form of tillage can be carried on in nearly every part of the provinces, excepting in the Bhabar, a strip of land in the extreme north, some 20 miles in width, but this area is being improved, and regularity of crops is being secured by means of irrigation. The principal canals for providing artificial supplies of water are those known as the Upper and Lower Ganges, depending upon the Ganges river; and the Eastern Jumna and Agra canals relying upon the River Jumna.

The principal crops are rice, wheat, maize, barley, linseed, cotton, oilseeds, millet, and sugar-cane, and it may be of interest to quote a few figures extracted from a recent Government report published by the Department of Land Records and Agriculture relating to the cultivation of two of the above. The total area under wheat alone, and of wheat mixed with barley and gram, amounted to 6,763,590 acres, the yield from pure wheat crops was estimated at 2,433,200 tons; and the return from mixed sowings was placed at 627,850 tons, making an aggregate of 3,061,050 tons. Rice was grown upon 7,132,672 acres, and it was expected that the produce would not be less than 2,660,000 tons.

The Department of Agriculture is rendering assistance to occupiers by the establishment of experimental and demonstration farms under the management of expert agriculturists, and the one at Cawnpore has rendered conspicuous service in giving practical lessons in improved methods of preparing the soil, in the use of modern machinery, in the various systems of cropping, the use of manures, the selection of pure seed, and in the adoption of a less wasteful method of garnering the harvest.

The chief vegetables grown are: egg-plants, cabbages, cauliflowers, carrots, garlic, onions, and radishes, while in orchards—which are greatly increasing in number—one sees melons, mangoes, guavas, plantains, figs, oranges, citrons, and limes.

Protected, leased, and reserved forests cover an area of about 14,000 square miles, and for administrative purposes they are divided into three forest circles, each of which is in charge of a conservator, sub-divisions being supervised by assistant conservators and rangers.

The forests are situated in the district of Dehra Dun, in tracts leased from the Tehra State, and on the higher hills of the district of Kumaon. The trees on high altitudes ranging from 6,000 to 10,000 feet include deodar, blue pine, spruce, silver fir, yew, maple, and others, while those found at lower elevations are oak, *sal*, *khair*, *sisu*, and bamboo.

The provinces are not rich in minerals, but much has still to be done in the way of exploitation. Iron, copper, and limestone are found in Himalayan districts, but the difficulty of mining these substances, and the high cost of transport, cause the output to be limited to the quantity required for local use. Stone for building purposes is quarried in several districts, but especially in Mirzapur, Agra, Muttra, and Bundelkhand; while granite is obtained in Banda and Mirzapur, and gold is occasionally found by washing in some of the hill districts.

The comparatively small area given up to forests is sufficient to account for the scarcity of large game in any other tracts than those bordering upon the Bhabar and the Siwaliks, or the sub-montane ranges of the Himalayas, in which wild elephants are occasionally met with and tigers are fairly common. Wild buffaloes are periodically sighted in the district of Gorakhpur, and leopards are not strangers in nearly every district. Visitors to the plains are sambhur, barking deer, four-horned and spotted deer, musk deer, and wild goats; and black bears inhabit the divisions of Kumaon, Mirzapur, and Bundelkhand. During the cold-weather months sportsmen will find a plentiful supply of several species of duck and geese, as well as snipe, partridge, quail, bustard, plover, and sand-grouse.

Industrial enterprises have greatly increased in number and value during the past twenty-five years, and although mills equipped with modern machinery and plant have been erected in various cities and towns, it will be found that in nearly every village the ginning, spinning, and weaving of cotton by hand-power is carried on in the homes of the people.

Important weaving enterprises at the present time are conducted in the district of Azamgarh, where a very large number of looms are constantly at work, but other important centres are at Fyzabad, Aligarh, Etah, Muzaffarnagar, and Saharanpur, although the woollen mills at Cawnpore are the largest of their kind in India. The city of Benares is largely interested in the weaving of silk, embroidery in silk and cotton on muslin, and in gold; while the fame of Mirzapur cotton and woollen carpets has reached nearly every corner of the globe. Personal ornaments and trinkets of great variety and fine workmanship, such as necklaces, bangles, rings, tiaras, brooches, and anklets, are manufactured of gold and silver at Benares, Lucknow, and other places, while enamelling on gold and silver, and carving in wood or ivory, are arts in which the skilled artisans of the provinces are past masters.

The chief centre, however, of European and Indian industrial enterprise is Cawnpore, where there are woollen and cotton mills, engineering works, tanneries, flour mills, sugar and brush factories, and distilleries, but other cities and towns of considerable commercial importance are Allahabad, Agra, Meerut, Aligarh, Hathras, Moradabad, Bareilly, and Ghazipur. A considerable quantity of wheat, raw cotton, oilseeds, hides, sugar, molasses, and other agricultural as well as general produce, is exported from the provinces, and the chief imports include metals, English and Indian cotton goods, salt, spices, hardware, and manufactured articles of great variety. In addition, profitable business relationships have been established between the provinces and Nepal and Tibet.

The provinces are so well served by railway facilities that there is not a single district which is not affected by them. The most important main lines are the East Indian and the Oudh and Rohilkhand Railway Companies, which traverse the whole of the country, running parallel with the great rivers from the north and carrying the major portion of the commercial traffic, which is carried on chiefly with Calcutta and other cities and towns in the Presidency of Bengal. The former of these systems sends off from Allahabad its Jubbulpore section, thus forming direct communication between Calcutta and the north, and it has a continuation to Karachi, Peshawar, and other places in the north-west. It provides an especially good service for the districts of Mirzapur, Benares, Fatehpur, Cawnpore, Ghazipur, Etawah, Agra, Muttra, Aligarh, Bundelkhand, and Meerut, penetrating them with either main or branch sections. The Oudh and Rohilkhand Railway, commencing at Moghal Sarai on the East Indian Railway, at a distance of 419 miles

from Calcutta, and 10 miles from the city of Benares, has main-line connections with the districts of Benares, Mirzapur, Jaunpur, Partabgarh, Rae Bareli, Lucknow, Hardoi, Shahjahanpur, Bareilly, Moradabad, Saharanpur, and the State of Rampur. It has also branches and cross sections linking it with the East India and other important systems.

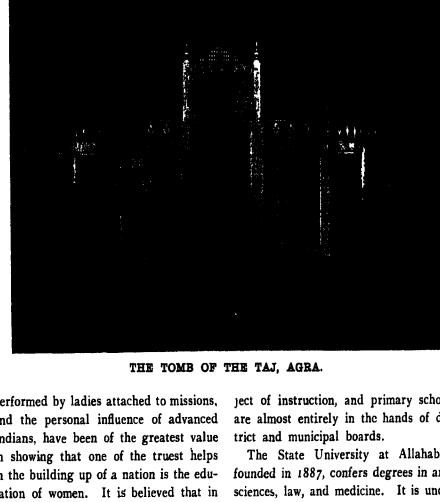
Archæological relics in the provinces are as numerous as they are varied in character, but it is impossible to fix an epoch of which they were the products until the third century B.C., when the Buddhist King Asoka placed some of his famous inscriptions upon rocks or pillars in certain districts. Within the fort at Allahabad, for instance, is a stone pillar nearly 30 feet in height, upon which the rulers inscribed facts connected with wars and other historical events which occurred during his reign from 269 to 231 B.C., and it is asserted that in every portion of the provinces—with the exception of districts on the Himalayan border—one may find relics of Buddhism, such as coins, seals, fragments of buildings, and ornaments.

During the course of excavations made in the district of Muttra, there were found remains of Jain temples and sculptures, many of which bear semi-decipherable inscriptions showing that they belong to the first or second century of the Christian era.

Authentic relics of a purely Hindu character cannot be traced to an earlier period than the Gupta dynasty, which was founded about the year 320 A.D., but a large number, particularly of inscribed stones, coins, and copper plates, have been discovered in nearly every division.

When the Mahommedans had obtained power over almost the whole of Northern and Central India, between the eighth and twelfth centuries, they demolished Hindu temples or converted them into mosques, and traces of such destroyed shrines have been found at Ajodyha, Benares, Muttra, Kanauj, and other places. Memorials of the Mahommedan period, consisting chiefly of mosques and tombs, are scattered widely over the provinces, the oldest of these being at Budaun, which appears to have been built in the early part of the thirteenth century.

Good progress has been made in recent years by the Department of Education, controlled by the Director of Public Instruction, in securing more active co-operation from parents in the somewhat difficult work of instilling into the minds of the young a desire to receive instruction, and a potent factor in attaining so desirable a result has been the example set by students, who have gained great success in the higher branches of learning. Notwithstanding this fact, however, it is a matter for regret that there is still widespread disinclination to seek education of a primary character, as well as of instruction for females. This indifference with regard to the training of girls is due to deeply-rooted prejudice, which is not easily overcome, but the Government has had the satisfaction of noticing in recent years that the excellent work



THE TOMB OF THE TAJ, AGRA.

performed by ladies attached to missions, and the personal influence of advanced Indians, have been of the greatest value in showing that one of the truest helps in the building up of a nation is the education of women. It is believed that in or about the year 1790 a college was founded at Agra "to cultivate the laws, literature, and religion of the Hindus," and that several schools were established between the years 1825 and 1835, but these were concerned chiefly in imparting instruction in Eastern languages. The introduction of English into the curriculum was in 1835 recommended in a famous minute issued by Lord William Cavendish Bentinck, Governor-General of India, at the suggestion, and under the inspiration, of Lord Macaulay, but little progress was achieved until 1854, when a Department of Education was formed.

Grants in aid are given to a considerable number of schools, but the major portion of the teaching institutions are entirely maintained by the Government. A recent departmental report stated there were in the provinces some 12,000 schools in towns and villages, which were attended by nearly 600,000 pupils.

Secondary schools are divided into two classes, namely, "high" and "middle," and the English language is taught in the former of these up to the standard of university and schools final examinations. "Middle" schools are graded upon the inclusion or absence of English as a subject of instruction, and primary schools are almost entirely in the hands of district and municipal boards.

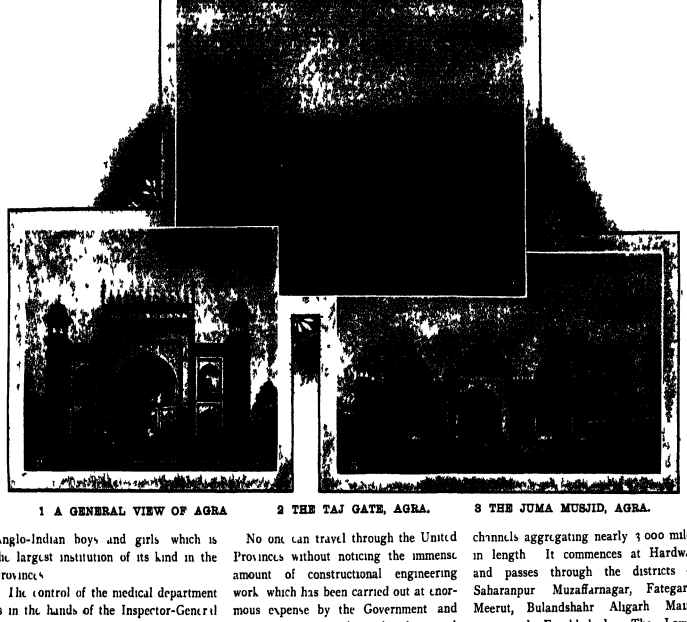
The State University at Allahabad, founded in 1887, confers degrees in arts, sciences, law, and medicine. It is under the control of a chancellor (who is usually the lieutenant-governor of the provinces), a vice-chancellor, and seventy-five ordinary and four *ex-officio* fellows.

Among the other most important teaching institutions are the Muir College at Allahabad, in which special classes are held for the study of the Persian and Arabic languages; the Mahommedan Anglo-Oriental College, at Aligarh; St. John's College, at Agra; Canning College, at Lucknow; Queen's College, at Benares; the Meerut College; the Woodstock College, at Mussoorie; the Agra College; Christ Church College,

at Cawnpore, the Bareilly College, and King George's Medical College, at Lucknow, while at the last-named city is the Martinière school for European and

and towns, while the Thomasson Hospital at Agra, and the Balrampur Hospital at Lucknow, are reserved for the treatment of Indian patients

Marquis of Dalhousie, Governor-General of India in the year 1854 Its main stream extends for a distance of more than 650 miles, and it has distributing



1 A GENERAL VIEW OF AGRA 2 THE TAJ GATE, AGRA. 3 THE JUMA MUSJID, AGRA.

Anglo-Indian boys and girls which is the largest institution of its kind in the provinces

The control of the medical department is in the hands of the Inspector-General of civil hospitals but a civil surgeon is responsible for rendering assistance in each of the forty-eight districts of the provinces while about eighty-three responsible for rendering assistance in dispensaries scattered throughout the country Lady doctors and nurses are carrying on an excellent work in visiting and giving treatment to *purdanashin* women

The principal medical institutions are the Ramsay Hospital for Europeans at Naini Tal which was erected in 1892 at a cost of more than Rs 2 50,000, one-half of which sum was contributed from Government funds, King George's Hospital at Lucknow, to which is attached King George's Medical College, exceptionally well equipped in every respect, the Colvin Hospital, at Allahabad, and Lady Dufferin Hospitals in several cities

No one can travel through the United Provinces without noticing the immense amount of constructional engineering work which has been carried out at enormous expense by the Government and it is not surprising to learn that the annual expenditure amounts in a normal year to about Rs 1,60 00 000 (160 lakhs) The Public Works department is divided into two branches namely, (*a*) buildings roads and railways, and (*b*) irrigation each branch being administered by a chief engineer who is also a secretary to the Government Subordinate to that official are seven superintendent and thirty executive engineers, who are respectively in charge of circles and divisions arranged in such a manner as to facilitate the execution of the various works of the department Among the important works completed by the department are no fewer than ten systems of canals all of which have been constructed since the great famine of 1837–8 The Upper Ganges canal designed by Sir Probyn Cautley, R E, was opened by the

channels aggregating nearly 3 000 miles in length It commences at Hardwar and passes through the districts of Saharanpur Muzaffarnagar, Fategarh, Meerut, Bulandshahr Aligarh Mainpuri and Farukhabad The Lower Ganges canal, a southward extension of the former begins at Narora on the border of the district of Aligarh Other waterways include the Eastern Jumna canal with 130 miles of main stream and 625 miles of distributing channels, the Agra canal 75 miles in length, and the Dehra Dun canals, running 67 miles The most important works of a similar character which have been constructed during the past quarter of a century are the Betwa canal, the Fatehpur branch of the Lower Ganges canal, and the Mat branch of the main Ganges canal

During the period just mentioned, the department has metalled a large number of existing roads, has made new ones, built and repaired bridges, and erected numerous public buildings, including Government House and secretariat offices

at Naini Tal, Courts of Justice, hospitals, colleges, and other structures.

The head of the administration of the provinces is the lieutenant-governor, and public business is transacted through the secretariat, which comprises the chief secretary, who controls the revenue, appointments, general administration, political and forest departments; the judicial secretary, who has conduct of work in the judicial, medical, police, education, and sanitation departments; and the financial secretary, in charge of the financial, local self-government, miscellaneous, and separate revenue departments.

In addition to these officials, there are the two secretaries already referred to as chief engineers of the Public Works department.

The provinces are divided for administration purposes into ten divisions under commissioners, and these areas contain forty-eight British districts, presided over by an officer who is termed a collector and magistrate in Agra, and a deputy commissioner and magistrate in Oudh and Kumaon.

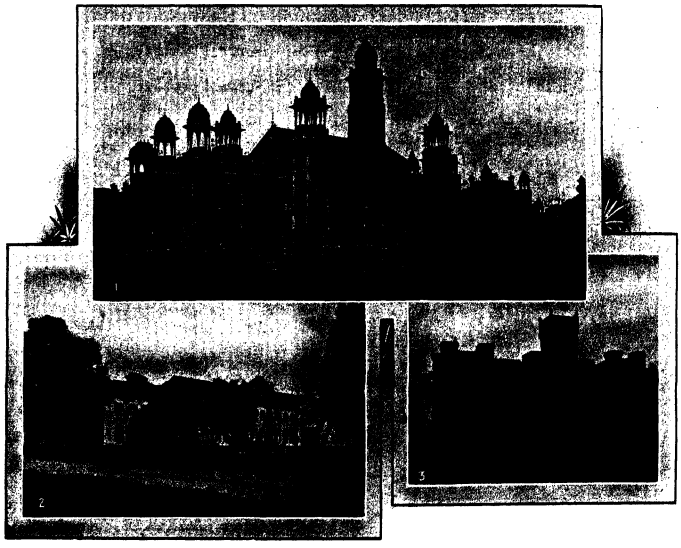
Revenue derived from land is obtained usually by one of the following three processes, namely, (*a*) distribution of threshed grain; (*b*) appraisement of standing crops; and (*c*) cash payments. The first two of these are open to serious objections. With regard to (*a*), there are frequent delays owing to claims put forward by village officials and others on account of vested interests; the landlord usually receiving one-third, two-fifths, or even a half of the entire bulk; and in the second case the value of a standing crop may be estimated at a much higher figure than the produce may be worth after it is reaped, seeing that in the interval storms may have caused damage, or thefts may have taken place. For these and other reasons the Government has endeavoured to universalize the system of cash payment.

Civil and criminal cases are heard in the Province of Agra by the High Court of Justice sitting at Allahabad, in the Province of Oudh by the Judicial Commissioner's Court at Lucknow, and these are also final Courts of Appeal. The Allahabad bench comprises a chief justice and six puisne judges, while in Agra there are a judicial commissioner and two additional commissioners. There are also about thirty district and additional district judges, two-thirds of whom are stationed in the Province of Agra.

Limited powers of local government are granted to district and municipal boards, and the Government, recognizing the valuable work done by these authorities, is usually prepared to extend this system of control. There are nearly one hundred municipalities dealing with such questions as lighting, general improvements in towns, the repair of roads, drainage, water supply and sanitation, while district boards are concerned chiefly with the levying of local rates upon landowners.

It has already been mentioned in the foregoing notes that practically the whole area of the United Provinces enjoys exceptionally good railway facilities, especially by the systems of the Oudh and Rohilkhand and East Indian Companies. The former of these, taken over by the State in January 1889, has extended its permanent way by main and branch lines to a total distance of nearly 1,800 miles.

It commences at Moghul Sarai—where it joins the East Indian Railway at a dis-



1. LAW COLLEGE, ALLAHABAD. 2. HIGH COURT, ALLAHABAD. 3. EWING CHRISTIAN COLLEGE, ALLAHABAD.
Photos by Vishwarharma.

tance of 419 miles from Calcutta, and 10 miles from the city of Benares—and its main line runs in a north-westerly direction to Saharanpur, a distance of 519 miles.

After leaving the junction the train passes over the Dufferin Bridge, which crosses the Ganges by seven spans of 350 and 18 feet, and in the course of its long journey to the north it stops first at Benares, which, to Hindus, is the most sacred spot on earth. The line continues to Lucknow, which teems with places of historical and geological interest, and is also the site of the offices, workshops, and stores department of the company. The greater portion of the route of about 100 miles from Lucknow until the district of Shahjahanpur is reached consists of a fertile level plain, which is for the most part cultivated by small proprietors, and it gradually ascends towards the higher level of the land below the Himalayas. There are not any towns of greater importance than trading centres for the various districts, and among them are Sandila (30 miles from Lucknow) where two battles were fought during the Sepoy Mutiny of 1857 8; and Shahabad, formerly a great city, but now in ruins. The traveller shortly afterwards enters the district of Bareilly, and the first town to be noted is Fatehganj, or "mart of victory," containing memorials of British officers and Rohilla chiefs, which were erected about the year 1795. The city of Bareilly was for a long period a frontier stronghold of the Moghul power, and the remains of an old fort are worthy of a visit. Moradabad, about 50 miles further to the north-west, is the centre of a rich district in the Gangetic Valley. In the district of Bijnaur is Najibabad, 460 miles from Moghul Sarai a town founded by the Nawab, who in 1755 built the fine square stone fort of Pathangarh, about one mile distant in an easterly direction. Lying to the north-west of Bijnaur is the district of Muzaffarnagar, which formerly belonged to the Pandava kingdom and was subsequently under Prithwi Raja, the Chauhan ruler of Delhi. Saharanpur, the northern terminus, is the junction with other railways, leading to several famous hill stations and health resorts.

The Lucknow to Cawnpore branch line, 42 miles in length, was opened in the year 1867, and it is one of the most important sections on the company's main system, as the last-named city is a rapidly-increasing centre of manufactures enjoying railway connections with all the chief cities and towns of India. On the Benares-Lucknow loop are the Allahabad-Fyzabad and Allahabad-Jaunpur branches, which form an irregular triangle embracing the towns of Allahabad, Jaunpur, Zafarabad, Shahganj, Akbarpur, Fyzabad, Sultanpur, and Partabgarh; the first named of these being the capital of the United Provinces, while the remainder are thriving marts for the disposal of agricultural products and general merchandise.

The Chandhausi-Aligarh branch on the Bareilly-Moradabad loop opens up the fertile districts of Aligarh, through which the Ganges canal runs from north to south, and it enables visitors to see the famous old fort at Aligarh at an elevation of 740 feet, which was successfully stormed by Lord Lake in 1803. Chandausi, 28 miles south of Moradabad, is noted for its extensive deposits of lime and for its busy sugar markets. The section which connects Allahabad with Cawnpore, via Rae Bareli, passes through the district of Partabgarh, whose chief town of the same name is noted for its famous fort, built by Raja Partab Singh, in the year 1617. Upon entering the district of Rae Bareli, a magnificent view is obtained of one of the most beautifully-wooded plains in the provinces, and at the head-quarters town of the same name are the five forts of Ibrahim Shah, of Jaunpur, and the palace and tomb of Jahan Khan who served under the Emperor Aurangzeb, as well as several mosques. Daryabad, 15 miles distant on the south side of the town of Rae Bareli, is the place where the Mussalmans defeated the Bhars. Curving to the west, the line is laid through the district of Unao, in which many battles were fought during the Mutiny, particularly at the town of Unao, where Sir Henry Havelock gained his first victory in July 1857. This place is nine miles east of Cawnpore, near which city are two bridges over the Ganges, each of which has twenty-five spans of 100 feet.

Other fine bridges thrown across the Ganges include the "Curzon" bridge at Allahabad, with fifteen spans of 200 feet; the Rajghat bridge, thirty-three spans of 80 feet; the Garmukhtesar bridge, eleven spans of 200 feet; and the Balawal bridge, eleven spans of 250 feet. The Gumti river is crossed in five places, the longest bridge, with eighteen spans of 82 feet, being near Jaunpur. On the main line between Bareilly and Saharanpur there are several other bridges, the two principal ones being at Ramgunga, ten spans of 200 feet; and at Solani, eleven spans of 150 feet. These measurements are taken from a *Railway Gazette* of the year 1913.

Shortly after leaving Calcutta the main line of the East Indian Railway Company is divided into two portions, which run parallel with, although usually at a considerable distance from, each other, but they unite again on reaching Moghul Sarai, just within the border of the United Provinces.

Journeying in a westerly direction, the train enters the district of Mirzapore, the largest and most southerly in the provinces, which stretches from the Vindhya range to the Kaimoor mountains, between which is a plateau about 700 feet in height. The chief town is Mirzapore, on the bank of the Ganges, 45 miles from Benares. Skirting the southern border of the provinces, passengers travel with an almost continuous view of the great Jumna, over which at a distance of about three miles before arriving at Allahabad this huge stream is crossed by a bridge composed of fourteen spans of 200 feet and three of 30 feet. After leaving the last-named city, the capital of the provinces, the line takes the train into the district of Fatehpur, a portion of the Gangetic plain, which became a British possession in 1801. From Allahabad to Cawnpore the distance is 120 miles, and from Cawnpore to Etawah 86 miles. Shikohabad, 35 miles further to the west, is the junction station of a branch line to Farukhabad, a distance of about 65 miles, which was constructed in 1906–7. The first station upon this section to be noticed is Mainpuri, the head-quarters of the district of the same name, which was regarded as a border between the rival Mussalman powers of Delhi and Jaunpur in the early part of the sixteenth century. It was occupied by the Emperor Baber in 1526, and was ceded to the British in 1801. In the district of Farukhabad is Kanauj, the ancient capital of the great Aryan kingdom of the Guptas, which came to an end in the year 1018. The old city is denoted by extensive ruins some ten miles in circumference. At Tundla junction, 22 miles from Shikohabad, there is a branch line 15 miles in length direct to the city of Agra.

Aligarh, an important manufacturing town, 48 miles from Tundla on the main line to Delhi, is worthy of a visit on account of its fine old fort, which adjoins

the ancient native city of Koil. In the district of Bulandshahr, to the north of Aligarh, is Khurja junction, whence a branch line proceeds to Hapur, while the main section is completed at the city of Delhi, although it is connected there with the Delhi-Ambala-Kalka and the Kalka-Simla systems.

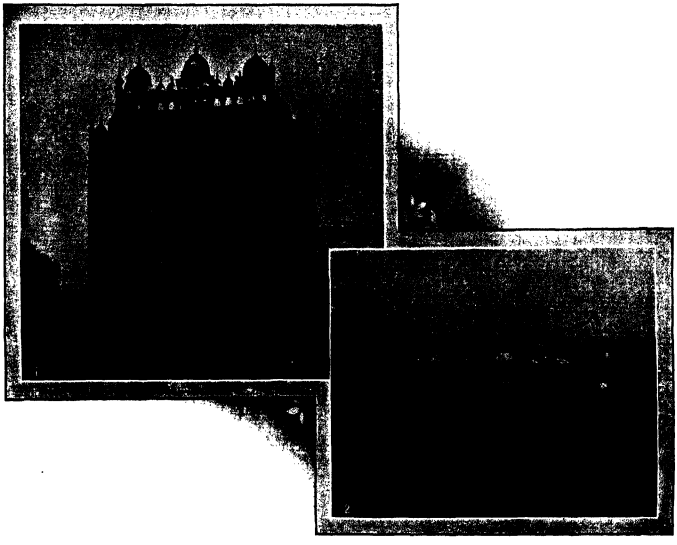
At Naini junction, near Allahabad, the main line proceeds in a southwardly direction, through the district of Banda, when it enters the territory known as the Central India States Agency.

direct communication with Bombay, Calcutta, and other important commercial centres. The city is known to Hindus by the name of Priyag or Prag, meaning "the place of sacrifice," and it is held in great reverence by them as it is the meeting-place of the sacred Rivers Ganges, Jumna, and Saraswati.

Considerable interest attaches to the fort, which stands at the point of confluence between the above-named rivers, and which was built by the Emperor Akbar in the year 1575. In 1801 it was

December and January, but it is said that at the Kumbh Mela, held every twelfth year, the devotees are not less than a million in number.

Lord Canning, Governor-General of India, took up his residence in Allahabad about the year 1858, and made it the centre of provincial administration. That event signalized a considerable development in commercial activities, and a period of increased prosperity was marked by the construction of a number of imposing public and private buildings.



1. GATE OF VICTORY, FATEHPUR-SIKRI. 2. AKBAR'S TOMB, SIKANDRA.

Photos by G.I.P. Ry. Co.

It should be mentioned here that information respecting several of the above-mentioned cities and towns will be found in the remainder of these notes.

The following is a short description of some of the principal cities, towns, and other places of interest in the provinces.

ALLAHABAD, the head-quarters of the Lieutenant-Governor and the Government of the United Provinces, is situated between the rivers Ganges and Jumna, and has a population of about 170,000 inhabitants. The position of the city on the East Indian Railway Company's system at its junction with the Oudh and Rohilkhand Company's line gives it

ceded to the British, but during the Mutiny of 1857 a regiment of native soldiers stationed there massacred its officers, as well as a number of Europeans, prior to the arrival of General Neill, who succeeded in restoring order and in regaining possession of the stronghold. Within the gate of the fort is a stone pillar, about 30 feet in height, erected by the Buddhist king, Asoka, about 240 B.C. Just below the fort is an extensive plain, upon which some 250,000 Hindu pilgrims assemble for worship and the celebration of ceremonial rites during the Magh Mela, or religious fair, held annually in the month of

Among these may be mentioned Government House, several Government offices, the Bar library, district courts, the Anglican and Roman Catholic cathedrals, and several churches and colleges. Near to the railway station is Khusru Bagh ("garden"), which contains the mausoleum of Khusru, son of Jehangir, and conveniently situated for the benefit of the inhabitants is the Alfred Park, opened in 1870 in honour of the visit of His Royal Highness the late Duke of Edinburgh.

Allahabad is not famous for any particular manufacturing or industrial enterprises, but it is a mart of considerable

importance, exporting large quantities of grain and oilseeds, and importing sugar, *ghee*, piece-goods, metals, and other merchandise.

Although the city is not a great trading centre, it has the distinction of holding the premier position in the provinces with regard to the number and high standards of its teaching institutions. At the head of the list is the Allahabad University, which is followed by the European High School the Modern High School, the Muir Central College (having up-to-date physical and chemical laboratories), the City Anglo-Vernacular High School, the Girls' High School, the Government High School, St. Joseph's Collegiate High School, and the Kayastha Pathshala, which has college as well as school classes attended by about four hundred students.

Many of the streets are somewhat narrow, but in the civil lines and cantonments on the northern side of the city the thoroughfares are broad and straight while in the suburb of Daraganj, extending along the river front, are the fine mansions of modern architecture of wealthy merchants and other residents. Reference must also be made to the magnificent bridge over the Jumna, 3,235 feet in length, which includes fourteen spans of 200 feet and three of 30 feet.

Allahabad is 514 miles distant from Calcutta, and 844 miles from Bombay.

BENARES.—"What Rome is to the Roman Catholics, or what Mecca is to Mahommedans, that, or more, is Benares to Hindus. It is the most sacred city of Hinduism, the stronghold of Brahmanism, the seat of Sanskrit learning, the home of Indian philosophy."

Benares is a city of great antiquity, frequent references being made to it in the *Mahabharata* and the *Ramayana*, while it is recorded in history that Chinese travellers visited it in the seventh century and observed "twenty Hindu temples and a gigantic copper image of Siva." The city is built on the northern bank of the River Ganges, which is regarded as sacred during the whole of its course, but its efficacy in giving purification from sins is said to be greatly enhanced as it passes the numerous bathing *ghats* and temples, which attract thousands of pilgrims from all parts of India. The most important shrine is the one dedicated to Siva, who, in the form of Bisheshwar—this being the name of the temple—is reverenced as the spiritual monarch of the city. Three others, almost as sacred as Bisheshwar, are Bhaironath, Annapurna, and Durga, all of which are said to have been built by the Mahrattas in the seventeenth century. There are also a large number of sacred *ghats* and tanks whose waters are believed to be a certain cure for many diseases, and also to secure immunity from the power of evil spirits.

The majority of the streets are little better than winding alleys, lined on either side with temples and dealers' shops, and one can only obtain a really fine view of the exquisite charm, beauty, and variety in architecture of the sacred edifices by sailing in a boat along the crescent-shaped bend of the river immediately opposite the city. The chief modern buildings are the town hall, a noble structure erected at the cost of the Maharaja of Vizianagram; the mint; the Prince of Wales's Hospital; the Government and Central Hindu Colleges; and several Government offices. The observatory, built by Raja Jai Singh, of Jaipur, in the year 1693, near the Man Mandir *ghat*, is worthy of a visit, and the towering mass of Aurangzeb's tomb, standing on a steep cliff over the Panchganga *ghat*, is the most conspicuous object in the city.

Benares has for many centuries been renowned for its manufacture of ornamental brassware silks, and shawls embroidered with gold and silver, jewellery, embroidered cloth, and lacquered wooden toys, but the greater portion of the wealth brought into the city is obtained by supplying pilgrims with agricultural and other produce for their sustenance during their visits to the holy shrines and the sacred river.

Benares has a railway station on the Oudh and Rohilkhand Company's system about 10 miles distant from its junction with the East Indian Railway Company's main chord line at Moghal Serai, and it is about 476 miles distant from Calcutta.

It has a population of more than 200,000 inhabitants.

CAWNPORE will always be held in veneration as the scene of several of the most terrible episodes in the Indian Mutiny of 1857. Visitors are directed to the site of the well into which British officers, women, and children were treacherously thrown on the approach of Havelock's force, after they had surrendered on the distinct promise of protection. The well is now surmounted by a handsome marble figure of the Angel of the Resurrection (by Marochetti), and the monument raised in memory of the victims is enclosed in beautifully kept gardens, some fifty acres in extent.

Cawnpore, the head-quarters of the district of the same name, is situated on the right bank of the River Ganges, about 120 miles above its junction with the Jumna at Allahabad. The insignificant village of little more than a century ago has become the most important trade centre in Upper India, and this remarkable transformation is entirely due to British capital and influence. The cantonment and civil lines extend for several miles along the river, while the native quarter stretches inland in a south-westwardly direction.

Cawnpore is a junction station of the Oudh and Rohilkhand, Bombay-Baroda and Central India, the East Indian, the Great Indian Peninsula, and the Bengal and North-Western Railway Companies' systems, and a perfect network of sidings connect these lines with the principal factories in the city. Large quantities of cotton, oilseeds, saltpetre, food grains, and raw products of all kinds, are received in or despatched from the city, and during the past thirty-five or forty years numerous factories have sprung up for the manufacture of cotton, woollen and leather goods, flour, sugar, brushes, and other products.

The Elgin Mills Company, Ltd., was formed in the year 1869, and since that date there have been established the Muir Mills Company, Ltd., the Cawnpore Cotton Mills Company, Ltd., the Victoria Mills Company, Ltd., the Cawnpore Hydraulic Press Association, Baijnath Juggi Lal's Ginning Factory and Oil Mills, Brushware Limited, the Empire Engineering Company, Ltd., the Cawnpore Oil Mills Company and Ginning Factory, the Cawnpore Sugar Works, Ltd., the Army Boot and Equipment Factory, the North-West Tannery Company, the Cawnpore Woollen Mills Company, Ltd., and many others of a similar character.

Cawnpore is a comparatively modern city, and therefore it does not contain a number of historically interesting buildings as, for instance, Agra or Benares, but much has been done by the municipality since its formation in 1861 in the way of improving the general appearance of the city. Visitors should, however, take notice of the Memorial Church, the Club, St. Catherine's Hospital, Queen's Park, the Memorial Gardens, and the increasing number of fine European

structures of a business or residential character.

The commercial status of Cawnpore may be gauged from the fact that the Upper India Chamber of Commerce was founded in the city in 1889, and the further circumstance that at the present time its roll of members contains the names of practically every European company or firm of any standing in the provinces or the Punjab. The chief educational institutions are the Government Agricultural College, Christ Church College, the Technological Institute, and the Government school of dyeing and printing.

LUCKNOW.—The mere utterance of the name of this city brings forcibly to mind the gallant defence of the Residency during the Mutiny of 1857–8, and visitors now look with reverence upon the picturesque eminence, with its memorial cross, marking the spot where the gallant Henry Lawrence and 2,000 heroic men and women, victims of the rebel troops, are buried. Attention is directed to the bailey guard gate at the entrance to the Residency; the Taravalla Kothi, where massacres took place; to the place where General Neill fell on his way to the relief of the city; and to the tomb of General Havelock, in the Alambagh, on the Cawnpore road.

There are several traditions in existence regarding the early history of Lucknow, but it is clear that after being under the sway of Moghul emperors in the sixteenth century, it came into prominence when Saadat Khan founded the Oudh kingdom about the year 1730. During the time of the fourth Nawab the city entered upon an era of almost unlimited wealth, and this ruler erected a number of bridges across the river, and constructed several magnificent buildings, including the Imambara, the beautiful palace which afterwards became the Residency, and other remarkably fine edifices. Subsequent Nawabs attempted to eclipse all their predecessors in the art of spending money in the most reckless manner, but Wazid Ali Shah (1847–56), the last king of Oudh, was so extravagant and so unsuitable in other ways for his position that the territory was annexed by the British. The enchanting view of Lucknow, which is obtained from a distance, is somewhat spoiled by a closer acquaintance with the crowded narrow streets and the lack of solidity in the buildings. Visitors should, however, see the Jama Masjid, the mosque of Mahomed Ali Shah; the great Imambara; the Husainabad, or "palace of lights"; the clock tower of Moorish design, 220 feet in height; the Macchi Bawan, or "fish palace"; and Wingfield Park, one of the most beautiful in India. At the same time relics of the Mutiny should not be overlooked, for one may gaze upon a mound of earth covering all that remains of the old Residency; shattered walls of buildings in which the besieged took refuge; and the beautiful cenotaphs of the victims.

The city covers a large area on the southern side of the River Gumti, and it occupies fourth place as regards size in India, having a population of 260,000 inhabitants.

Lucknow is the chief city in the Province of Oudh, and the present Lieutenant-Governor of the United Provinces has a residence beyond the civil station on its eastern border.

It is the junction of several branches of the Oudh and Rohilkhand Railway system, with stations on the Great Indian Peninsula and the East Indian Railway Companies' lines, and it is 619 miles distant from Calcutta.

AGRA.—However closely Agra may be associated with the history of the great Moghul Empire, it will always be known to the world at large as the city in which stands the famous Taj Mahal, "that dream in marble," erected between the years 1631 and 1648, by the Emperor Shah Jehan, the most magnificent of all the royal builders of India, as the tomb of his wife, Arjamand Banu Begum, who is styled in history as Mumtaz Mahal, or "exalted of the palace."

This ancient city, founded about the year 1566 by the Emperor Akbar, was the recognised capital of the Moghul Empire for nearly one hundred years, and it occupied a site on the eastern bank of the River Jumna, many of its ruins being still in existence.

Modern Agra is one of the cleanest and most solidly-constructed towns in India; its roads are wide and well kept, and it contains a large number of substantial private residences in addition to several first-class hotels, banks, a club, judicial revenue, and other offices, a cathedral, churches, the Agra and other colleges and schools, the Lady Dufferin Hospital, and the Agra Medical School. A large trade is carried on in cotton, sugar, salt, grain, tobacco, timber, oilseeds, and other produce, while it is justly celebrated for its excellent work in the carving of stone, its inlaid mosaics, and for the manufacture of gold and silver embroideries, and woollen and cotton carpets.

In referring to the chief sights of the city, priority of place must of necessity be given to the famous Taj Mahal. This celebrated mausoleum has been well described as "representing the most highly elaborated stage of ornamentation, the stage at which the architect ends and the jeweller begins. In colour and design its interior may rank first in the world for purely decorative workmanship, while the perfect symmetry of its exterior, and the aerial grace of its domes and minarets, impress the mind of the beholder in a manner never to be forgotten."

After passing through the principal gateway, one emerges into an octagonal hall, and thence to a double flight of white marble steps which lead to a garden forty-two acres in extent, and surrounded by high walls. The structure of the Taj Mahal is built upon a marble platform, 26½ feet in height and 343 feet square, at each corner of which is a minaret rising to 162 feet above the level of the ground, and the mausoleum in the centre of the platform is 186 feet in length and 33 feet in width. The tombs of Shah Jehan and his wife are surrounded by white marble screens beautifully inlaid with precious stones. Owing to the fact that the materials for the building were contributed it would be difficult to give the probable amount of the total cost of the undertaking, but the bill for labour alone has been estimated at a sum between £200,000 and £600,000.

Outside of the fort is the Jama Masjid, or cathedral mosque, constructed between 1644 and 1650 by Jahan-Ara Begum, daughter of the Emperor Shah Jehan, at a cost of about Rs.5,00,000. The mausoleum of Itimad-ud-daula, the Prime Minister of Jehangir, contains the tombs of himself, his wife, and several members of his family. This building is a study in oriental architecture, but one must not omit to refer to the exquisitely beautiful pierced marble screens on the four sides of the principal hall.

The real defence of Agra centres in the Fort, which was entirely reconstructed by the Emperor Akbar. The building of the defence wall, a mile in length along a bank of the River Jumna, was commenced in the year 1567 and was completed in 1575. There are three entrance gates, namely, the Delhi gate, the Water gate and the Amar Singh gate. Within the Fort are a number of historically

interesting places, of which a brief description may be given.

The Moti Masjid, or "Pearl Mosque," described by Fergusson in his *History of India and Eastern Architecture* as "one of the purest and most elegant buildings of its class to be found anywhere." The internal portion of the structure, measuring 155 feet square, is of the purest white marble and special notice should be taken of the beautiful sculptured panels and marble lattice-work screens. The mosque was built by Shan Jehan in 1648 at a cost of about Rs. 3,00,000.

The Nagina Masjid, or the "Gem Mosque," built of pure white marble, was erected by the Emperor Aurangzeb, and was reserved for the exclusive use of the ladies of his palace.

The Diwan-i-am, or "Hall of public audience," was the theatre in which Court ceremonials were held, and the Diwan-i-Khas, the "Hall of private audience," overlooking the river, is beautifully carved in white marble and inlaid with a variety of floral patterns. Passing through the Anguri Bagh, or vinery, entrance is obtained to Jehangir's palace, which was the residence of that Emperor's favourite Hindu wife, Jodh Bai.

Other very beautiful places include the Khas Mahal, or "Royal Females' Palace," constructed in white marble, and beautifully carved and ornamented with an almost countless number of precious stones; the marble thrones on a terrace overlooking the river; the Pachisi, or "chess-board" a large court in which it is said that the Emperor Akbar and his wife were in the habit of playing the game of chess with living figures.

Agra is the head-quarters of the district and division of the same name, and junction station between the East Indian Great Indian Peninsula, the Bombay-Baroda and Central India, and the Agra-Delhi chord railway systems.

The inhabitants, at the census of 1911 were about 186,000 in number. The city is 790 miles distant from Calcutta, 277 miles from Allahabad, and 140 miles from Delhi.

ALIGARH, the administrative head-quarters of the district of the same name, forms, together with the Fort, a suburb of the ancient native city of Koil, which lies on the western side of the East Indian Railway, while Aligarh is on the eastern side. Aligarh is the junction of the East Indian and Oudh and Rohilkhand Railway systems, and during the past half-century it has become a busy manufacturing centre, being noted throughout India for its excellent locks, keys, and despatch and other boxes. Artistic pottery-ware is also made, and dried meat is exported to Burma.

Several centuries ago Koil was considered to be of considerable strategical importance as its position gave it dominance over roads leading to Delhi, Agra, and other centres of government in the days of the Mahrattas, Afghans, Rohillas, and other fighting races who clamoured for ascendance in northern India. The district was on this account selected by several rival factions after the death of Aurangzeb as the battle-ground for the establishment of supremacy. The Fort was in 1803 attacked by Lord Lake, and after a stern resistance it passed into the hands of the British.

The district is exceedingly fertile, and an extensive trade is carried on in cotton, *ghee*, pulses, wheat, oilseeds, saltpetre and piece goods. The most prominent modern structure is the magnificent clock tower in the civil station, which was unveiled by the Lieutenant-Governor of the North-Western Provinces in August 1893.

The cause of education received a great impetus when the late Sir Saiyad Ahmed Khan Bahadur established a school, which has developed into the Mahomedan Anglo-Oriental College. This fine building includes five quadrangles of quarters for students a splendid hall, hospital, and other modern accessories. It is affiliated with the University at Allahabad, and its students, numbering about 700 in the college and 600 in the school, are drawn from every part of India, as well as from Burma, Persia, Arabia, Somaliland, Uganda, Cape Colony, Mauritius, and other far distant places.

Aligarh is 825 miles from Calcutta, and its inhabitants are about 65,000 in number.

MUTTRA, a very ancient city on the right bank of the Jumna, in the division of Agra, is the junction station of the Great Indian and the Bombay-Baroda and Central India Railway systems, and it is about 85 miles distant from Delhi and 868 miles from Bombay.

Its antiquity is proved by the fact that Pliny, who died in A.D. 113, referred to it in his writings under the name of "Methora," and that Ptolemy, who was a literary force in the middle of the second century, spoke of the city as the "Madoura of the gods." The city would claim little attention to-day if it were not the centre of a portion of the district of Muttra, known as Braj Mandal, the birthplace of Krishna, who is said to be the incarnation of Vishnu. Hindus therefore view the locality with great reverence, and pay visits to temples, woods, groves, hills, and wells, which silently speak to them of the deity. Among these is Mahaban, an old town where the babe Krishna is alleged to have been exchanged by a nurse for another infant in order to escape the wrath of the giant Kans, uncle of Krishna, who had decreed the child's death. Brindaban, a holy city lying about five miles to the north of Muttra, had several holy temples and bathing *ghats*, while at the village of Gokal Vishnu is said to have descended to earth in the form of Krishna. Interesting relics, including coins, have been discovered which prove that Hindu Rajas ruled in Muttra in the second century B.C., and that about two hundred years later the city was a stronghold of Buddhism and Jainism. Very valuable archæological remains are found in great profusion in and around Muttra, among which are the ruins of a fine old fort near which was the observatory, erected early in the eighteenth century by Maharaja Sawai Jai Singh of Jaipur; traces of Buddhist mosques of the fourth and fifth centuries; and the tomb of the Emperor Aurangzeb, which was built about the year 1665.

An exceedingly picturesque view of the city is obtained from the river; on the bank are numerous bathing *ghats*, crowded every morning with worshippers; and behind them are fine stone-built houses standing on terraces rising tier upon tier from the base of the hills. Muttra passed into the hands of the British in 1803, when it was formed into a cantonment, and since that date an increasing commercial activity has prevailed. It exports a large quantity of grain and cotton, and receives, in return, piece goods, sugar, metals, and cloth, while paper, brass images, and other articles are manufactured.

The city is situated about thirty-five miles distant north-west by west from Agra.

ETAWAH, the chief town of the district of Etawah, is situated on the eastern side of the River Jumna, and about a mile distant from the station of the same name on the East Indian Railway, and about seventy miles from the city of Agra. History shows that the district was origi-

1. THE LANKA TEMPLE, KALPI
2 PANCH MAHAL, FATEHPUR SIKRI.
3 THE FORT, JHANSI.
4 BRIDGE AT AGRA, NEAR JHANSI.

Photos by G I P Rly Co

nally inhabited by predatory tribes who were a terror among themselves as well as to their neighbours; it was invaded by Mahommedans in the eleventh and fifteenth centuries; the famous Babar, founder of the Moghul Empire, annexed it, together with the city, about one hundred years later; and it was ceded to the British in 1801.

The town is situated among ravines on the bank of the Jumna, and the civil station contains a number of handsome modern buildings, including magistrate's courts, collector's offices, and the Hume High School, while other places of interest are the ruins of a fort, or Hindu temple, with a massive front resembling the great mosques of Jaunpur, and several other very fine shrines.

A large trade is carried on in grain, indigo, cotton, *ghee*, oilseeds, and other agricultural produce and the principal mart for the sale of these goods is in a spacious square in the centre of the town.

Etawah has more than usually good facilities for the transfer of merchandise, as the railway traverses the whole district, and there are more than 60 miles of good hard roads and about 600 miles of others which are still unmetalled. The inhabitants are about 43,000 in number.

MEERUT.—The district of which Meerut is the capital city will always be historically important as the place where the opening scenes of the Indian Mutiny took place, and it is worthy of notice that a mere handful of Europeans succeeded in holding the cantonments and in keeping in order the immediately surrounding neighbourhood. The city of Meerut is of considerable antiquity, but it was not of great importance until the year 1806, when it became a great military centre and a thriving commercial city. It is now the head-quarters of the Meerut division of the Northern Army.

Situated almost in the centre of the district, Meerut is noted for its large trade in gram, *ghee*, sweetstuffs, soap, glycerine, candles, card-boxes, tin canisters, and other goods. The most important fair in the district is held at Meerut in March-April in each year, and some 50,000 people attend for the observance of certain religious ceremonies. On the northern side of the city are the cantonments, in which there are many fine dwelling-houses belonging to Europeans, while other imposing structures include Government offices, several churches, the Meerut College, and a number of schools. There may also be seen the very old Baleshwar Nath and Maheshwar temples; the Jama Masjid, built about the year 1019; a mausoleum, erected in 1194 by Kutb-ud-din; and the Suraj Kund, or tank, constructed early in the eighteenth century.

The North-Western Railway Company have a station at Meerut, which is 41 miles and 308 miles distant respectively from Delhi and Lahore, and it has a population of about 116,000 inhabitants.

FATEHPUR SIKRI, a town situated about twenty-three miles distant in a south-westerly direction from Agra, stood in the same relationship to the Moghul Court in the time of Akbar as Windsor Castle does to the Royal House of England at the present day.

It is said that the town was founded by the Emperor Akbar in the year 1569 in order to commemorate the birth of an heir, whose advent had been foretold by the Saint Shaikh Salim Chrishti who lived at the village of Sikri. The son was named Selim, in honour of the saint, and he succeeded to the Moghul throne under the name of Jehangir. It was the intention of Akbar to make the proposed city—which was to be named Fatehpur—the official head-quarters of his Empire, and he accordingly erected a large number of magnificent buildings, but it was afterwards abandoned in favour of Delhi. The site of Fatehpur Sikri is still encircled by the ruins of a wall, five miles in circumference, and it contains a number of most interesting relics of the glory of its early days. Proceeding from the highest part of the modern town, visitors ascend a flight of steps in order to see the great mosque one of the most beautiful in India, measuring 350 by 440 feet. In the courtyard may be seen a magnificently-carved white marble shrine containing the tomb of Shaikh Salim Chrishti; the large palace of Jodh Bai, the Rajput wife of Akbar; the Diwan-i-am, or "hall of public audience," 368 feet in length and 180 feet in width; the Diwan-i-Khas, or "hall of private audience" standing in a quadrangle 756 feet in length and 272 feet in breadth; a palace called the "Golden House," built by Akbar for Mariam, his Portuguese wife; the Nagina Mosque, or "Gem Mosque," and many other equally interesting relics.

AJODYHA, originally the capital of the kingdom of Kosala, belonging to the Surajbans or Solar race of kings, is now marked by ruins covered with jungle. After the death of the last Solar king, the huge city, which is said to have covered an area of 96 square miles, became a wilderness, but King Vikramaditya, in the year 57 B.C., succeeded in tracing the outlines of a considerable number of the principal buildings. The Emperor Babar and Aurangzeb erected mosques, but these are now in ruins. In modern Ajodyha there are more than thirty temples dedicated to Siva, and about sixty-three others erected in honour of Vishnu, to which many thousands of pilgrims repair annually.

The town, which is in the district of Fyzabad, is 120 miles distant from Moghul Sarai, and 130 miles from the city of Cawnpore, while the station of Ajodyha is on the Oudh and Rohilkhand railway.

MORADABAD, a city of 81,000 inhabitants, was founded in or about the year 1625 by Rustam Khan, Governor of Kathur, who named it after Prince Murad Baksh, son of the Emperor Shah Jehan. It is situated on the eastern bank of the River Ramganga, overlooking which is a fort built by Rustam Khan, and among other interesting structures are the handsome Jama Masjid, erected in 1634, the municipal hall, a literary institute, judicial and revenue offices Government high and other schools, and the Bishop Parker Memorial High School for boys. It is known that Moradabad was a busy trading centre as far back as the seventh century, and it now imports large quantities of grain, *ghee*, sugar, wheat, oil, rice, oilseeds, and slaughter animals; while it is also famous for metal work of all kinds, but principally for inlaid specimens of brass and tin as well as for the manufacture of chintz and cotton cloth.

The district of Moradabad, of which the city is the head-quarters, was part of Rohilkhand about the year 1740, but when the Rohillas lost their power some thirty-five years afterwards, the territory passed to the Nawab of Oudh, and in 1801 was ceded to the British.

Moradabad is on the Oudh and Rohilkhand Railway, and a junction with several branch sections, while it is 10 miles distant from the border of the State of Rampur, and 120 miles from Saharanpur.

HARDWAR is a very ancient town in the division of Meerut, and there is no place in India which attracts a greater number of Hindu pilgrims during special ceremonial periods. Considerable controversy has taken place up to the present

time as to whether the name of the town is derived from Hari-dwara or "Vishnu's Gate," or Hara-dwara, meaning "Siva's Gate," but apart from differences of opinion on this point it is sufficient to know that Hardwar, built on the bank of the Ganges river at a spot where the river descends through the gorge of the Siwaliks, has for centuries past been sacred to all Hindus. Very many pilgrims assemble there for the celebration of rites at the "Saravanath," "Mayadevi," and other temples, but the chief festival is that which takes place at the Har-ki-pari *ghat*, in the stone wall of which there is an indentation said to have been caused by the impression of Vishnu's foot. There is, however, a ceremonial of special interest (known as Kumbha Mela), which takes place every twelfth year, when the planet Jupiter is in Aquarius. This is attended by an enormous crowd of worshippers, although the number has decreased in recent years.

Hardwar is less than 50 miles distant from Saharanpur, on the Oudh and Rohilkhand Railway Company's system.

KANAUJ, in the district of Farukhabad, is one of the most ancient capitals in the world, dating from exceedingly early times, when the territory, under the rule of the Kings of Kanauj, comprised a large portion of the whole of India. It was a portion of the Gupta possessions in the fifth century, and during subsequent periods it was subject in succession to the Maukharis, Raghuvansis, Rathores, while it belonged to the Nawabs of Oudh prior to its cession to the British.

Kanauj is a station on the Bombay-Baroda and Central India Railway, and is situated on the west bank of the Kali Nadi river, about four miles from its junction with the Ganges, which formerly flowed beneath the walls of the town.

Most interesting ruins may be seen in Kanauj and the surrounding neighbourhood, while the bank of the river is studded for many miles with only partially-explored temples and other buildings. Among those which are in a tolerable state of repair are the shrine of Raja Apaipal, the tombs of Bala Pir and his son, who were religious teachers in the time of the Emperor Jehangir, and the beautiful Jama Masjid. The town is about 50 miles distant from Cawnpore.

JAUNPUR, in the division of Benares, and the administrative head-quarters of the district of Jaunpur, was founded by Firoz Shah Tughlak, who was convinced of the suitability of the site for an important commercial centre, and who began the work of construction in the year 1359. He further arranged for the protection of the new town by the erection of a fort, consisting of an irregular quadrangular building enclosed by a strong stone wall, the materials being obtained principally from old temples. At a subsequent date it fell into the hands of the Emperor Akbar, and it was transferred to the British in 1775, together with the Province of Benares, of which it formed a part. The town is rich in memorials of the old rulers of Jaunpur, and many traces are found of vast Hindu temples and Mahommedan mosques, as, for instance, the Atala Masjid, built in 1408, the Jama Masjid or great mosque of Husain Shah (1480), with its massive domed gateway and grand façade 84 feet in height; and the Turkish baths, built by Ibrahim, Sultan of Jaunpur, during the fifteenth century.

The district of Jaunpur is a rich and well-cultivated portion of the Gangetic plain, and therefore the merchants and dealers of Jaunpur and other neighbouring towns are engaged largely in the sale of agricultural produce; minor industries include the manufacture of indigo, the distillation of perfumes, and the making of *papier-mache* articles such as writing-cases, trays, boxes, and cigar-cases.

The town is situated on the left bank of the River Gumti, and is 46 miles distant from Moghul Sarai, and 164 miles from the city of Lucknow, on the Oudh and Rohilkhand Railway.

MIRZAPORE, the head-quarters of the district of Mirzapore, was formerly one of the largest marts in Upper India for the sale of grain, cotton, shellac, and other produce, but even to-day, with the extension of railway facilities in the neighbourhood and the consequent establishment of other markets, it is still an important trading centre. The city is the seat of a very thriving industry in the manufacture of articles of brass for domestic purposes; and it has several factories for the preparation of shellac and the spinning of cotton; while it is justly famous for its hand-made woollen and cotton carpets, which are sent to almost every part of the world.

Large quantities of excellent stone are quarried, and this fact accounts for the substantial masonry buildings in the city. In addition to a considerable number of interesting old temples and mosques, there is a celebrated shrine of Vindhyeshwar, at Bindhachal, quite near to the city, as well as extensive ruins of a very ancient city.

Mirzapore is a station on the East Indian Railway system, and it has a population of nearly 33,000 inhabitants.

GHAZIPUR, 64 miles distant from Benares, and the head-quarters of the district of the same name, was founded by Malik-us-Sadad Ghazi about the year 1330, and it is visited chiefly on account of the antiquity of the town and the number of interesting old ruins to be found there. The most conspicuous of these is the walls of a palace called the Chahal Situn, or "forty pillars"; and the tombs of the founder and of Pahar Khan, governor of the district in the year 1580. It was here that the Marquis of Cornwallis, Governor-General of India, died in the year 1805, and a domed building covering his marble statue (by Flaxman) marks his grave.

The town is situated on the left bank of the River Ganges, and it has a station on a branch of the Bengal and North-Western Railway Company's line, while it is connected by steam ferry with a terminus of a section of the East Indian Railway system. It is a good trading centre, but its chief industry is the distillation of perfumes, chiefly from roses, which are largely cultivated.

JHANSI is the chief town in the district of the same name, which is part of the Bundelkhand hill plateau, and its beautiful artificial lakes lend a fine charm to the scenery, which is not excelled by any other portion of the provinces. The city was founded by Bir Singh Deo, Raja of Orchha, who also constructed a fort there in the year 1613. Jhanisi was held by the Bundelas and the Mahrattas until 1766, when the British obtained possession. The district was seriously affected by the Mutiny, and shortly afterwards the city—together with an extensive tract of territory—was assigned to the State of Gwalior, but in 1866 the whole area was transferred to the British.

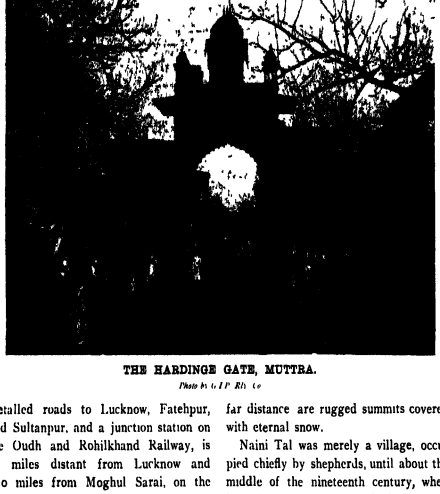
Excellent road and railway facilities are enjoyed by the inhabitants of the district, seeing that it has more than 1,300 miles of good roads, one-fourth of which are metalled, and that main lines and branches of railways radiate in six different directions from the chief city.

The city is very prettily built round the fort, which crowns hills of rocks, and it contains a large number of very substantial buildings of a public and private character, in addition to several small modern temples. It is an important

centre for the collection and distribution of all kinds of agricultural produce, and many of the residents are engaged in the manufacture of brassware, articles of silk, rugs, blankets, and other goods. The large engineering workshops of the Great Indian Peninsula Railway Company at Jhansi find constant employment for nearly 3,000 hands.

It may be added that the whole of the district is exceedingly rich in archæological remains of the Chandel period, such as temples and tombs.

RAE BARELI, at the terminus of good



THE HARDINGE GATE, MUTTRA.
Photo by A. H. Rix, Co

metalled roads to Lucknow, Fatehpur, and Sultanpur, and a junction station on the Oudh and Rohilkhand Railway, is 48 miles distant from Lucknow and 150 miles from Moghul Sarai, on the south-eastern border of the provinces. The principal attractions are the five forts built by Ibrahim Shah, of Jaunpur, and a curious feature connected with one of these is that it was constructed with brick two feet in length, one foot in thickness, and a foot and a half in width. The palace and tomb of Jahan Khan may be seen at the suburb of Jahanabad, which was founded by him.

The town, with a population of about 16,000 inhabitants, has increased rapidly as a commercial centre since it obtained railway facilities in the year 1893, and its special industries include the weaving of cotton cloths and muslins.

NAINI TAL, a hill station in the district of Kumaon, and most picturesquely situated at an altitude of 6,409 feet, is actually built upon the bank of a very beautiful lake in the valley of the Gogar range of the outer Himalayas. The lake is 4,700 feet in length and 1,520 feet in width, while its surface is 6,350 feet above the level of the sea. The steep hillsides, rising abruptly to peaks 9,000 feet in height, are covered with luxuriant forest trees, and from any one of the numerous residences a magnificent view is obtained of the rich plains spreading out on the southern side, while on the north, in the far distance are rugged summits covered with eternal snow.

Naini Tal was merely a village, occupied chiefly by shepherds, until about the middle of the nineteenth century, when its salubrious climate made it a health resort for Europeans, but shortly after that date it became, and still is, the summer head-quarters of the Government of the United Provinces.

The town is reached by tonga from the station at Kathgodam, on the Rohilkhand-Kumaon Railway.

SHAHJAHANPUR, an important town with station on the Oudh and Rohilkhand Railway, is about 768 miles and 987 miles distant respectively from Calcutta and Bombay.

It was founded about 1645–50 during the reign of the Emperor Shahjahan, and it is now the administrative head-quarters of the district of the same name, its inhabitants being about 75,000 in number.

Sugar is the chief manufactured article, and a considerable quantity of modern machinery has recently been imported for this industry and for the distillation of rum, for which there is a good demand in nearly every part of India.

There are few modern buildings of importance, and the only relics of ancient rulers are the remains of an old fort destroyed shortly after the Mutiny, and a few mosques and tombs, the latter including that of Bahadur Khan, one of the founders of the town.

RAMPUR, the capital of the Native State of Rampur and the residence of its ruler, is situated on the left bank of the River Kosila, about 18 miles distant in an easterly direction from the city of Moradabad.

It is a thriving commercial centre, and it is famous for its manufacture of the beautiful damask known as *Khes*, of fine pottery-ware, sword-blades, and cutlery.

Among the principal buildings are the Jama Masjid, the Khursid Manzil, and an imposing mosque; while within the old fort is a court in which are palaces and other structures.

The inhabitants are nearly 75,000 in number.

FARUKHABAD, the largest town in the district of Farukhabad, is a station on the East Indian Railway, about 769 miles distant from Calcutta. The civil and military head-quarters of the district are at Fategarh, a town situated about eight miles in an easterly direction.

Farukhabad was founded in the year 1714 by Nawab Mahomed Khan, and was named after the Emperor Farukh Siyar. About three miles from the town is a mud fort, occupied as a residence by the Nawab of Farukhabad during the Sepoy Mutiny.

A few industries are carried on, such as the making of brass and copper vessels and gold lace, while the workmanship in calico printing is highly commendable.

DEHRA DUN is the chief town of the district of the same name, which consists of a series of beautiful valleys marked by a wealth of grand scenery. These valleys are situated between the Sewalik (Sivas) hills and the Himalayas. Massive rocks of great height lie on the northern side of the Dun, into which the mighty Ganges and Jumna sweep to lower plains in torrents which fall fully 20 feet in the course of a mile. The district

appears to have been originally occupied by Banjara traders, and it was subsequently held by Rohillas, and then by the Gurkhas, from whom it was wrested by the British in 1815.

In the town may be seen the temple of Guru Ram Rai, built about the year 1690, together with the tomb of the Guru, in which his bed is still preserved.

Dehra Dun is the head-quarters of the district officials during the winter months, and its trade is practically confined to providing other hill stations with provisions and goods of various kinds. The principal building is the Government Forest Research Institute and College, which contains a remarkably fine collection of forest products and models of mechanical devices used in general forestry.

KALINJAR, in the district of Banda, is celebrated for its fine old fort built seven or eight centuries ago during the Chandel dynasty, upon a hill at an elevation of 1,230 feet. The summit of the rock is a plateau about four miles in circumference, to which access is gained by flights of steps, and visitors who make the ascent are well rewarded by seeing remains of temples caves, carvings, and inscriptions At the base of the hill are many old tombs and temples, some of which bear inscriptions showing that they were erected before the famous fortress. The antiquity of Kalinjar is proved by the fact that in the *Mahabharata* it is referred to as "a famous city," and further that "whoever bathes in the lake of the gods, the local place of pilgrimage, is as meritorious as he who bestows in charity one thousand cows."

Kalinjar is 33 miles distant in a southerly direction from Banda, and 18 miles from Badausa station, on a branch of the Great Indian Peninsula Railway.

ROORKEE, in the district of Saharanpur, and about 22 miles distant from its chief town of the same name, was only a small village when proposals were approved for the construction of the Upper Ganges canal. Workshops were opened, classes in engineering were started, and in 1848 the teaching institution developed into the "Thomasson" Civil Engineering College, so named after the founder, who was Lieutenant-Governor of the provinces from 1843 to 1853. The branches of study now include civil engineering, pure and applied mathematics, survey and drawing, electrical engineering and physics, chemistry, mechanical engineering, and photo-mechanical press. The college is so popular that accommodation cannot be found for all applicants for admission, and its laboratories and workshops are well equipped with all modern appliances.

The village of rather more than half a century has become a prosperous town of nearly 14,000 inhabitants.

ETAH, 9 miles distant from the River Kali, is said to have been founded nearly six hundred years ago by a Chauhan Rajput, descended from Raja Prithwi, of Delhi. The district of which Etah is the chief town was, during the Buddhist era, peopled by a number of lawless tribes, and even during the Mutiny it was overrun by rebels, but after British authority was imposed in 1858 there arose a feeling of security which resulted in the establishment of a considerable amount of trade.

SHAHABAD, in the district of Hardoi, was founded in 1677 by Nawab Diler Khan, an officer serving under the Emperor Shahjahan, who was directed to lead an army to Shahjahanpur, 15 miles distant, to quell a disturbance which had arisen in the district. Diler Khan also erected the fine Jama Masjid, and the beautiful palace named Bari Deorhi, of which there are now only two gateways still in existence. He was buried at Shahabad, but his tomb is crumbling to decay.

There is a daily market in the town for the sale of grain, sugar, and other produce, and its inhabitants are about 23,000 in number.

GORAKHPUR, on the left bank of the River Rapti, and a station on the Bengal and North-Western Railway system, is about 506 miles distant from Calcutta, and has more than 64,000 inhabitants.

It is the chief town of the district of the same name, which formerly belonged to the Kosala Kingdom, of which Ajodyha was the capital, and it is now one of the principal commercial centres in the northern portion of the provinces. In the early part of the seventeenth century it was occupied by Mahommedans, but they were replaced by Hindus, who held it for more than one hundred years, until it was included in the Oudh kingdom, ultimately passing into British hands.

The city is practically a cluster of a large number of village sites, and it presents a picturesque view, with its well-cultivated gardens and small holdings.

ALMORA, the chief town in the district of Kumaon, on the northern border of the province, is situated on the crest of a rocky hill at an altitude of nearly 6,000 feet above the level of the sea. It became the capital of the Chand Rajas in the sixteenth century, but in 1744 it was plundered by Mahommedans employed by the Rohillas. It was subsequently held by the Gurkhas, but after their complete defeat in 1815 at Sitoli, a few miles distant from the town, the

VISIT OF MRS. ANNIE BESANT TO ALLAHABAD.
Photo by Vishwanatarama

1. ST. PETER'S COLLEGE, AGRA.
2. THE ROMAN CATHOLIC CATHEDRAL, AGRA.
3. AKBARI GIRJA, OR AKBAR'S CHURCH.
4. MARTYRS' CHAPEL IN THE OLD CEMETERY, AGRA.

whole of the district of Kumaon was ceded to the British.

The trade of the town consists chiefly in collecting and distributing agricultural and other produce of the plains, as well as imported goods of a general character It has a population of about 9,000 inhabitants

MAZAFFARNAGAR, with a population of about 24,000 inhabitants, is situated on the main road between Meerut and Hardwar, and is the head-quarters of the district of the same name The town, built upon high ground, contains a number of fine buildings, including the town hall, several good schools, the offices of the district staff, and hospitals for men and women

AMROHA, 20 miles distant from the city of Moradabad, has a station on a branch of the Oudh and Rohilkhand, and its inhabitants were found at a recent date to be about 40,000 in number The earliest authentic historical reference to the town relates to the year 1266, when Ghiyas-ud-din Balban arrived there for the purpose of crushing a rebellion which had arisen in the district.

It was a thriving trade centre to the close of the thirteenth century, but after that date it lost much of its commercial importance, although cloth is still manufactured and fine pottery ware is made in large quantities

There are more than one hundred mosques in the town, and the Jama Masjid, one of the oldest buildings, contains the tomb of Shaikh Saddu, a former attendant at the mosque The inhabitants are about 40,000 in number

MAHOBA, the old capital of the Chandel dynasty, is picturesquely situated on the bank of the Madan Sagar lake, which was constructed by Madan Varma, the fifteenth Chandel king Ancient architectural relics are numerous, not only in the town, but also in the neighbourhood, but the greatest attractions for visitors are the islands in the various lakes, which are studded thickly with pillars, sculptures of figures and ruins of temples, carved out of the solid rock On all sides of the lakes one sees picturesque temples perched on rocky eminences, and the old fortress, almost entirely in ruins, affords a magnificent view of the surrounding country and its wealth of beautiful scenery

The town stands on the main road leading from Cawnpore to Saugor, and it is about 80 miles distant from Jhansi, on the Great Indian Peninsula Railway

MUSSOORIE, in the district of Dehra Dun, is a summer retreat at an altitude of 7430 feet, which is greatly favoured by Europeans who desire to escape from the stifling heat of cities at lower elevations The town is built on a ridge of the Outer Himalayas among most delightful and varied scenery, and it forms a municipality with Landour, which for nearly a hundred years has been a convalescent station for the military

Excellent educational institutions have been established for the children of Europeans and Anglo-Indians, there being nine schools for boys and five others for girls

1 THE MONKEY TEMPLE, BENARES 2 QUEEN'S COLLEGE, BENARES. 3 HINDU COLLEGE, BENARES

1 3 Photo by J. Isles

THE AGRA MARBLE WORKS COMPANY.

The proprietor of the Agra Marble Works Company, Pundit Shiam Lall, F R S A, whose imposing building is in Drummond Road, one of the principal thoroughfares in Agra, was born in that

city in the year 1873, and after receiving a liberal education at Ujjain, he took up the profession of civil engineering in 1894, practising in the States of Gwalior and Bhopal in the Central India Agency, and in the State of Bharatpur in Rajputana. The Pundit, however, had an inherent bent towards decorative sculptural work, and in order to gratify his ambition he, in 1909, founded the Agra Marble Works Company.

The premises, consisting of a handsome double-storied structure, in which are showrooms (the largest of their kind in India) and workshops, are centrally situated in the city, being only a short distance from the principal banks, hotels, and the chief business and private houses.

The Pundit's experience as an architect and civil engineer was of inestimable value to him in the development of his new career, and his sculpturing work is said to have caused a revival of the old inlaid marble industry for which Agra had in the past been famous, but which had in more recent years been dying a gradual death. The ordinary business of the marble works, too, has grown very rapidly.

Immense slabs of marble are obtained from the celebrated beds of Makrana in Rajputana, and the Pundit executes most subtle designs in miniature as well as full-sized artistic devices of every conceivable kind.

The beauty of these productions has been recognized by royal houses and native rulers throughout India, while tourists passing through the country find the Agra Marble Works one of the chief attractions in a place so highly renowned for its wonderful works of art.

Pundit Shiam Lall is now (1917) engaged on a unique piece of sculpture, based upon an original idea, which is to represent, upon a slab of marble measuring about 3 feet by 4 feet, the founders of all the principal religions of the world. This device is nearing completion, and will eventually be placed in a temple at Kailas on a *ghat* on the bank of the sacred River Jumna, and about five miles distant from Agra. Adjoining the shrine—which is to be named "The Temple of God"—will be the private residence of the Pundit, to which it is his intention to retire in the course of a few years with the object of devoting himself to the "simple life," which is one of the stages enjoined in Hindu mythology.

It may be explained here that there are four of these stages, namely: (1) "Bramchari Ashram," meaning the attainment of worldly knowledge or period of education; (2) "Garshtha Ashram," fulfilling the marriage life; (3) "Banaprast Ashram," the acquirement of spiritual knowledge; and, at the age of fifty years, (4) "Sanyas Ashram," signifying retirement from the world and entire dedication to the Almighty.

The Pundit's dwelling-house, to be known as "Shiamkoti," will contain his own private rooms, together with separate quarters for his guests, and land will be reserved for the cultivation of a garden and the keeping of cows, the products of which will be sufficient for the modest needs of a retired couple. The retired life will be solely devoted to public good and spiritual devotions and meditations.

Several rajas, ruling chiefs, and other prominent Hindus have already erected houses on the *ghat*, and it is confidently anticipated that in the near future there will have been established a small colony of devotees, devoid of religious prejudices, and dwelling together in unity of purpose. It is expected that the Pundit's temple and carvings will prove a great attraction for others who arrive at the age when worldly cares and responsibilities are cast on one side in favour of a life of piety and seclusion.

Although an orthodox Hindu, Pundit Shiam Lall is a thoroughly enlightened gentleman, possessing an excellent knowledge of the English language, and he entertains broadminded views and has no bigotry or prejudices to mar his friendship with others who do not profess a belief in his own creed. He is always in the forefront with his donations to deserving cases of public charity, and he has contributed most liberally to the University at Benares as well as to the Imperial War Fund.

THE ALLAHABAD BANK, LTD.

This is one of the foremost banks of India, and it is the leading one in the United Provinces of Agra and Oudh. It was started in 1865 at Allahabad with a small capital of three lakhs of rupees, and not long after its establishment its business began to develop steadily. The shareholders were fortunate in being able to receive a first dividend as early as the year 1867, when it was distributed at the rate of seven per cent., but this amount was increased to twelve per cent. in 1875. It is noteworthy that the bank has not only been paying a good dividend, but it has also built up a reserve fund year by year. This stood at five lakhs of rupees in 1895 against the bank's then capital of four lakhs of rupees, carrying a dividend of fifteen per cent. since 1877.

The bank's continued progress, coupled with a clean bill of health at the hands of its auditors from year to year, soon earned public confidence and support, which continued to increase, with the result that extensions became necessary. Branches were opened at Cawnpore and Jhansi in 1888, and at Lucknow in 1889. The working capital, which at that time stood at Rs. 64 lakhs, had risen to about 1½ crores by 1895, when the bank opened a branch at Calcutta, and another in the year following at Delhi.

Many *taluqdars* of Oudh were then in the hands of small moneylenders to whom they had to pay exorbitant rates of interest, and the encumbrances threatened the loss of their properties. The bank came to their rescue by granting loans at moderate rates of interest, and many who thereby saved their *taluqas* are still grateful for the assistance given. The bank has also for some time past had transactions with the Government Court of Wards, and in this connection its operations have been very beneficial to the landed gentry of Upper India as well as advantageous to itself.

The deposits continued to increase, and in 1902 it was deemed advisable to enlarge the bank's capital still further, and it was thereupon doubled, the distribution of profits remaining unimpaired, and the reserve fund continuing to grow. In 1905 an office was opened at Amritsar.

The bank has always held a high position in public esteem, and its shares are considered one of the best banking investments in India. In 1907 the capital was raised to Rs. 20 lakhs, and the reserve fund stood at Rs. 28 lakhs in 1908, when offices were opened in quick succession at Meerut, Nagpur, Moradabad, Chandausi, Sitapur, and Benares. The people of these cities who had been dealing with the bank for years past were thus given much greater facilities which led to further development of the company's business. One cause of the prosperity of the bank has been the hearty co-operation of its European and Indian employees, some of the latter of whom were placed in charge of its sub-offices, superior supervision remaining in the hands of European officers. The bank's dividend was increased to eighteen per cent. in 1908, and this rate has since been maintained.

AGRA MARBLE WORKS.

1. Exterior View. 2. Interior of Showrooms. 3. Alabaster Lamp. 4. Dado and Flooring (Marble). 5. Miscellaneous Marble Articles.

ALLAHABAD BANK, LTD.

1 Lucknow Branch 2 Head Office, Allahabad 3 Calcutta Office. 4. Branch Office, Cawnpore.

ALLAHABAD GLASS WORKS.

1 The Factory 2 Jumna Bridge, Allahabad 3 Raja Narain. 4. Jugmal Raja, Proprietor.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

In 1910 Mr. Rutherford Deans, the bank's general manager, who had held office for a long period of forty-five years, passed away, and was succeeded by Mr. Henry Vost, who had been Mr. Deans' colleague for about twenty-two years. The bank continued its policy of building up its reserve fund year by year and of developing its resources. With the further expansion of business it became necessary to open a branch at Bombay in 1911. A great crisis in the banking history of India occurred in 1913, but this company avoided speculations which were ruinous to many similar institutions, and instead of being compelled to retrench it continued to prosper. It extended its operations into the new province of Behar and Orissa in 1914, when a branch was opened at Bankipore. Its capital was raised in the same year to Rs. 30 lakhs, the amount at which it now stands. It has Rs. 45,00,000 and Rs. 4,20,000 in its reserve funds, and its deposits are about Rs. 5,500,00,000.

Offices of the bank were opened at Mussoorie, Fyzabad, and Rai Bareli in 1917, and business is now carried on at Allahabad (head office); branches at—Bombay, Bankipore, Bareilly, Calcutta, Cawnpore, Delhi, Jhansi, Jubbulpore, Lucknow, Meerut, Mussoorie, Nagpur, and Naini Tal; and sub-agencies at—City Office, Allahabad, Amritsar, Aminabad Park, Lucknow, Benares City, Chandausi, Fyzabad, Hathras, City Office, Lucknow, Lyallpur, Moradabad, Rai-Bareli, and Sitapur.

The bank has a strong directorate in the persons of Mr. W. Wallach, barrister-at-law; Mr. A. E. Ryves, barrister-at-law; the Hon. Raja Sir Rampal Singh, K.C.I.E., an influential *taluqdar* of Oudh; Mr. S. T. Weston, the general manager of the *Pioneer* Press; Mr. Henry Vost, the manager; and Babu Madan Mohan, an experienced officer who was for forty-five years in the service of the bank.

The prosperity achieved by the Allahabad Bank has been the result of careful banking of a legitimate character, the directors having always strenuously discountenanced plausible proposals of a risky nature. Its progress has been steady, each year marking an increase in the bank's resources, and this reflects great credit on its staff, both European and Indian. Should there be a continuance of the policy which the bank has always followed, it is believed that many good and prosperous years are in store for it in the future.

THE ALLAHABAD GLASS WORKS

The proprietor of the Allahabad Glass Works, Mr. Jagmal Raja, did not enter into the business of manufacturing glass with any settled predilection for a career of that kind in the same way as a youth, keen on solving knotty problems, would probably become a lawyer, or another, fond of drawing or erecting toy houses and bridges, might develop into an architect or an engineer, he was simply drawn into it, in fact, he was practically gratifying a personal whim. But this is anticipating.

Jagmal Raja was born in the year 1889 at Nayher, in the district of Bhuj, in the native State of Cutch, which is under the political superintendence of the Bombay Government, his father, Mr. Raja Narayan, being an influential member of the community *Panchayat*. The latter entered into various contracts for railway works in the United Provinces, and the son, who had completed his educational studies, assisted his father in the construction of the Jumna bridge at Agra for the East Indian Railway Company, and the Sone bridge on the Grand Chord section of the same company's western system.

This was an excellent training for Jagman, as his experience was gained under the guidance of one who possessed exceptional qualifications in works of that character, and be it said that the youth made the best use of his opportunities.

In 1908 Mr. Jagmal Raja commenced business on his own account as a railway contractor, undertaking the construction of bridges, buildings, tunnels, cuttings, permanent ways, banks, and stone, ballast, and other works.

During that year he completed the stupendous work of erecting the Izat bridge over the River Ganges, at Allahabad, on the Bengal and North-Western Railway system, which comprised no fewer than 40 spans, each of 150 feet in length, or a total of about 2,000 yards. Several other works of considerable magnitude were successfully carried out by him, as, for instance, the doubling of the width of the Jumna bridge of the East Indian Railway at Allahabad.

It was in 1911 that, "for the sake of variety," as Mr. Jagmal Raja has expressed it, he took over the lease of the Naini Glassworks, then in a moribund condition, but he was greatly influenced in taking this step by a desire to encourage the disappointed directors and to render some pecuniary assistance to the concern. These well-meant endeavours, however, were not rewarded by the success which they deserved, and in 1914 Mr. Jagmal Raja started the Allahabad Glass Works at Naini and threw heart and soul into the venture with the laudable desire of making it the premier factory of its kind in India.

The plant in the works includes one large tank furnace and two others, and the average daily output is about 1,500 maunds (80 lb.) of glass, the principal items being bottles, phials, lamp chimneys, and globes, in short, all kinds of hollow glassware.

The capital invested in the business is of the value of about 5 lakhs of rupees, and the undertaking has proved to be so successful that its products are sent to nearly all parts of India.

THE ALLAHABAD MILLING CO., LTD.

This company was registered on April 14, 1904, with a capital of Rs. 3,00,000, all of which has been fully paid up. The first board of directors comprised Messrs. B. E. O'Conor and A. H. C. Hamilton, barristers-at-law, of Allahabad, and Mr. J. Strachan, a retired locomotive superintendent of the East Indian Railway Company, the last-named being a gentleman of considerable wealth, and possessing very great influence in commercial circles in India. The objects of the company were to erect mills in Allahabad and elsewhere, and to carry on business as millers, manufacturers, warehousemen, refiners, distillers, and dealers and commission agents, trading in grain, seeds, flour, foodstuffs, sugar, oil, and other merchandise and produce.

The articles of association confer wide powers of discretion with regard to the nature and extent of the company's business, but up to the present time operations have been restricted to the milling of wheat and the sale of products therefrom. An excellent site was obtained for the mill near to the cantonments and the city at Allahabad, and the building has been equipped with machinery and plant of the latest and most approved type, while a private siding connecting the premises with the East Indian Railway affords special facilities for quick inward and outward transport.

Milling was commenced with a plant having an hourly grinding capacity of ten sacks of flour, but the rapid growth of business has necessitated an increase of

the output of twenty sacks, while a subsidiary mill has been started for the manufacture of *atta* at the rate of five sacks an hour.

Owing to the consistently high-class quality of the products of the mills the company have secured a widely increasing number of private customers, but the military authorities have even from the commencement of the enterprise made extensive yearly purchases, and during the Great War they took practically the whole of the output.

The present directors are Messrs. B. E. O'Conor and A. H. C. Hamilton, and the manager and secretary are Messrs. R. Robson and W. A. Roberts respectively, while the telegraphic address of the company is "Milling," Allahabad.

ALLAHABAD MILLING COMPANY, LTD.
EXTERIOR VIEW.

THE ALIGARH DAIRY FARM

Bearing in mind the importance of the dairying industry not merely as a great national asset, but as one which has a direct influence upon the general health of the community at large, it is a remarkable fact that it has not hitherto received in India a tithe of the consideration which it deserves. Municipal and other local governing bodies have been guilty of gross neglect by closing their eyes to insanitary stables, the sale of impure milk and other products of the dairy, and the presence, in a herd, of cows affected with serious diseases communicable, and frequently fatal, to human beings.

It is therefore refreshing to inspect such a thoroughly up-to-date undertaking as the Aligarh Dairy Farm, where the breeding and feeding of cattle, the elimination of unhealthy cows after veterinary examination, the sterilization of milk, the disinfection of buildings and utensils, and other practices absolutely essential to purity of supplies, are matters to which the strictest possible attention is paid by the owner, Mr. Edward Keventer. This gentleman, who is the pioneer of modern dairying in India, arrived in this country in the year 1890 as the representative of the Dairy Supply Company, Ltd., of London, in connection with an exhibition of Alfa-Laval cream separators, which had caused a complete revolution in the dairying industry in other parts of the world since their invention about a dozen years previously.

After completing his engagement with the above-named company, Mr. Keventer joined the Agricultural Department of the Government of the United Provinces of Agra and Oudh (then known as the North-West Provinces of Agra and Oudh), and was stationed at Aligarh, where a Government experimental farm had been established in 1891. A small dairy was started in connection with the farm, and butter was then manufactured, for the first time in India, on a commercial basis.

In 1894 the farm and dairy were leased at an annual rent to Mr. Keventer, and five years later he purchased the whole concern from the Government of India. From 300 to 400 head of cattle are usually kept at Aligarh, while at Senchal farm, near Darjeeling, Ballygunge farm, near Calcutta, Keventer's farm at Delhi, and the Taradevi farm near Simla, the total number varies between 500 and 600.

The products of the dairies are butter, cheese, and sterilized milk supplied in sealed bottles, while mustard oil is also manufactured at Aligarh, and depôts for the sale of the above have been established at Calcutta, Delhi, Simla, Karachi, and Darjeeling, together with agencies in other large towns and hill stations. At head-quarters as well as at all branches there is a greater demand than can be met for daily supplies of fresh and sterilized milk, butter in packets or tins, and cream cheese, and ice-chests are provided for the cool storage of all these goods.

The Aligarh dairy, with its numerous creameries, is capable of dealing with 30,000 lb. of milk daily, and it is exceedingly interesting to watch the various processes of manufacture, which are conducted on the most scientifically hygienic principles that have been evolved.

If Mr. Keventer were asked to mention essential factors in successful dairying, he would probably say: "Healthy cows, judicious feeding, most scrupulous cleanliness of buildings, pails, and other utensils, and the placing of commodities upon the market in a really attractive manner."

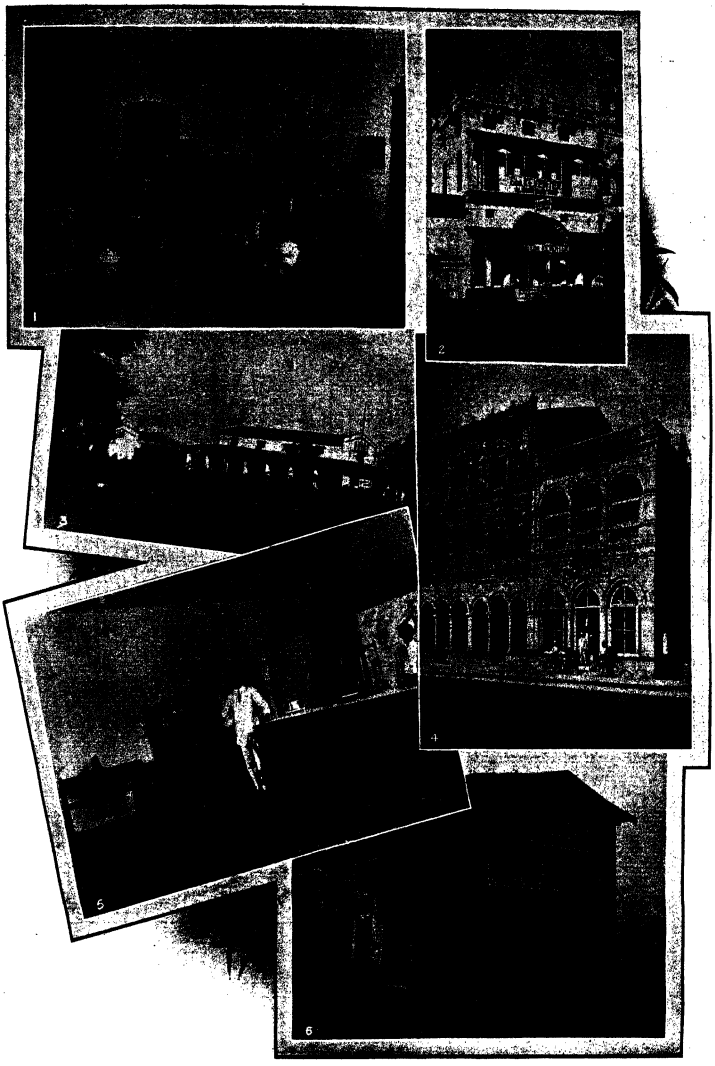
Cream separators of the latest Alfa-Laval type are used exclusively in the dairy and creameries, and other plant in general use includes two steam engines of 6 h.p. and 12 h.p. respectively, two Cornish boilers each of 12 h.p., and a Linde ammonia refrigerating plant capable of giving a daily supply of one ton of ice for use in packing butter and cheese and in providing a cold storage room for the dairy.

Tins in which butter and cream is packed for despatch are made upon the premises; grain-crushers and chaff-cutters are worked by steam power; and mustard oil, pressed from the purest seed by hydraulic power, is prepared for market; while the cake residue is utilized for feeding the cattle.

As Agent for the Dairy Supply Company, Ltd., of London, Mr. Keventer has

EDWARD KEVENTER (ALIGARH DAIRY FARM).

1. The Aligarh Dairy
2. Cowshed at Aligarh.
3. Montgomery Cow, Yield 21½ Pints Daily, 3rd Calving.
4. The Farm at Tara Devi
5. Hissar Cow, Yield 26 Pints Daily, 4th Calving.



EDWARD KEVENTER (ALIGARH DAIRY FARM).

1. Display of Alfa-Laval Cream Separators. 2. Aligarh Dairy Farm Premises at Kashmir Gate, Delhi.
3. Farm Bungalow and Dairy Building at Princess' Road, Delhi. 4. Karachi Premises. 5. Interior, Karachi Premises.
6. Dairy Shop, The Mall, Simla.

1 Portion of Lime Pits

2 Part View of Base Stores

3 A Corner of the Tan Pits

4 A Portion of the Hide Stores

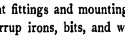
ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO., LTD.)

a very large sale for Alfa-Laval separators, "Pasteurizers," coolers, milk and cream vessels of all descriptions, milk testers and other dairy appliances, and a good stock of such articles may be seen at Aligarh, Calcutta, and Karachi.

It must surely be a source of gratification to progressive men in India to learn that Indians in considerable numbers are ready to discard primitive methods of manufacture, whether it be of cloth or cream, and that with regard to dairying they frequently undertake railway journeys of hundreds of miles in order to visit the Aligarh farm for the purpose of becoming acquainted with the actual working of separators and other kindred machinery which they are anxious to purchase.

Further than that, they obtain from Mr. Keventer practical advice as to the manner in which they should start and conduct a dairy business of a profitable character.

Constant employment is found at Aligarh and at branches for ten Europeans, more than eighty educated Indians, and nearly eight hundred ordinary Indian labourers. Many medals and certificates have been awarded to Mr. Keventer's products at exhibitions, and the proprietor has had the honour of receiving appointments as purveyor to His Majesty the King-Emperor, King George V; the Right Hon. Baron Hardinge, of Penshurst, G.C.I.E., G.C.S.I.; the Right Hon. the Earl of Elgin, P.C.; the Right Hon. the Earl of Minto, P.C.; and a number of other notable personages.



ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO., LTD.)

This well-known factory (of which the proprietors are Messrs. Cooper Allen & Co., Ltd.) was established at Cawnpore in 1881, and since that date it has developed to such an extent that at the present time it holds the unique distinction of being almost the only concern of its kind in the world turning out boots, equipment, harness, and other goods from leather tanned and curried on the premises.

The business carried on is that of tanners, curriers, manufacturers of boots, shoes, equipment, polishes, and various other sundries.

The buildings are situated on the banks of the River Ganges, and occupy an area of over 37 acres, the floor space being 19,500 square feet in extent.

The staff consists of seventy-five Europeans, and remunerative employment is provided for approximately five thousand Indians.

Until quite recently the daily output of the tannery was 1,800 hides, but an additional tannery has been erected which yields another 1,200, making a total of 3,000 hides per day. The other departments are known as: (1) Currier's shop with scouring and finishing branches; (2) handsewn boot department; (3) machine boot department; (4) cutting department; (5) closing department; (6) "Flex" boot and shoe department; (7) equipment department, for the manufacture of saddlery, accoutrements, gaiters, and military harness; (8) polish department, for making dubbing and blacking for boots and momrogan for equipment; (9) workshop, brassfoundry for making equipment fittings and mountings, saddle trees, stirrup irons, bits, and which contains an installation of dynamos for supplying electric power to departments; (10) mill siding, with broad-gauge railway, for the receipt and dispatch of goods.

Machinery of the most up-to-date type has been installed, and some idea of the magnitude of the whole concern may be gained from the fact that in one department alone, namely, that of footwear, as many as 5,600 pairs of boots are turned out daily.

The company had succeeded in building up a very large retail business in connection with this branch, but during the prevalence of the Great War this was entirely closed, and the resources of the factory were taken over by Government for the manufacture of Army requirements.

All boots for Government are removed from the factory to a Government office on the company's premises, where they are submitted to examination by qualified officials.

An important and praiseworthy feature of the management is the company's model village, called "Allengunj," in which three thousand workpeople reside with their families in nine hundred separate quarters. All children under fourteen years of age are required to attend the company's school, where they are taught, under Government supervision, reading, writing, and simple arithmetic in the Vernacular, and where they are also put through a course of physical training.

Comfortable and commodious quarters are provided for the European staff both within and outside the factory compound, and everything is done by the company to make the home life of their assistants as pleasant as possible. There is an excellent social club and library attached to the factory, which is greatly appreciated by the employees, and which provides abundant recreation for all who care to make use of it.

The factory has its own dispensary, from which medical attendance and medicines are supplied free to the workers and their families.

The company is under the management of Sir Logie P. Watson, who is the managing director, and he is assisted by two other directors, namely, Mr. Charles T. Allen and Mr. Alfred C. Prince.

Telegraphic address: "Equipment," Cawnpore.

BADAL RAM LACHMI NARAIN.

The indigenous herbs and spices of India have been recognized throughout the world from time immemorial, and the inhabitants of the country have manifested extraordinary skill in preparing large numbers of these for prophylactic, sedative, curative, and other purposes.

Other species have been introduced from time to time, and the people seem to have shown an equal aptitude for converting such imports into various commodities for which a ready market has been found.

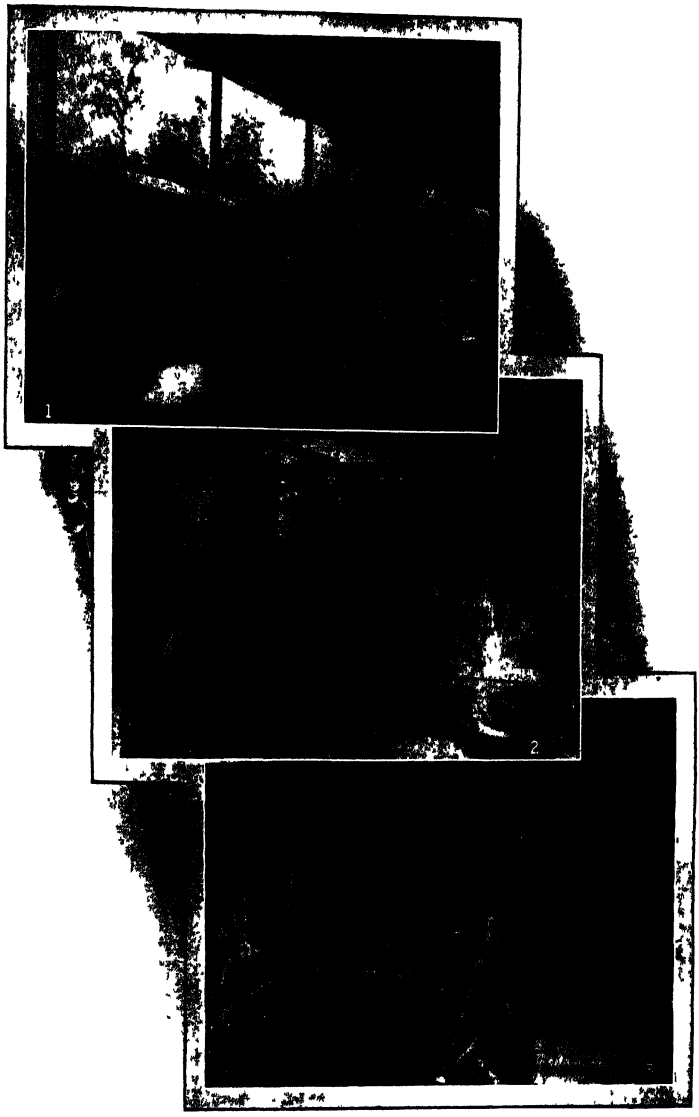
The tobacco plant, for instance, was brought to India by the Portuguese about the year 1600, and two kinds of the plant *nicotiana* are now found in nearly every part of the continent. The East India Company inaugurated experiments in connection with its cultivation and the subsequent curing of the leaves, and since that time various descriptions of tobacco and its numerous derivatives have been before the public.

The merchant whose name appears at the head of these notes is the owner of a factory and stores at Benares, and the various products of his works are renowned in practically every part of the world.

His principal manufactures comprise *kashi surti*, *zarda*, tobacco, snuff, *kimam*, *elachi*, and various kinds of *pan masala*. *Zarda* is made up in black, red, or yellow colours; high-class *pan masala*, always pure, genuine, and fresh, is prepared with or without tobacco; snuff of different qualities varies in price from 10 annas

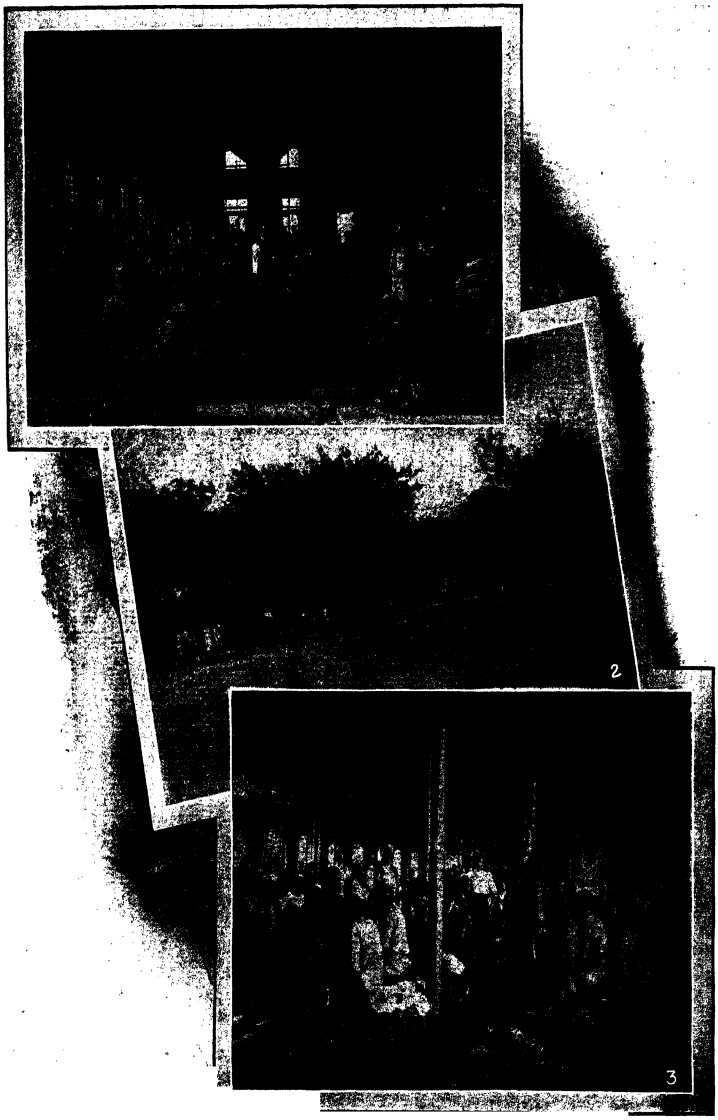
ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO., LTD.).

1. Office 2. Club. 3. Portion of Quarters.



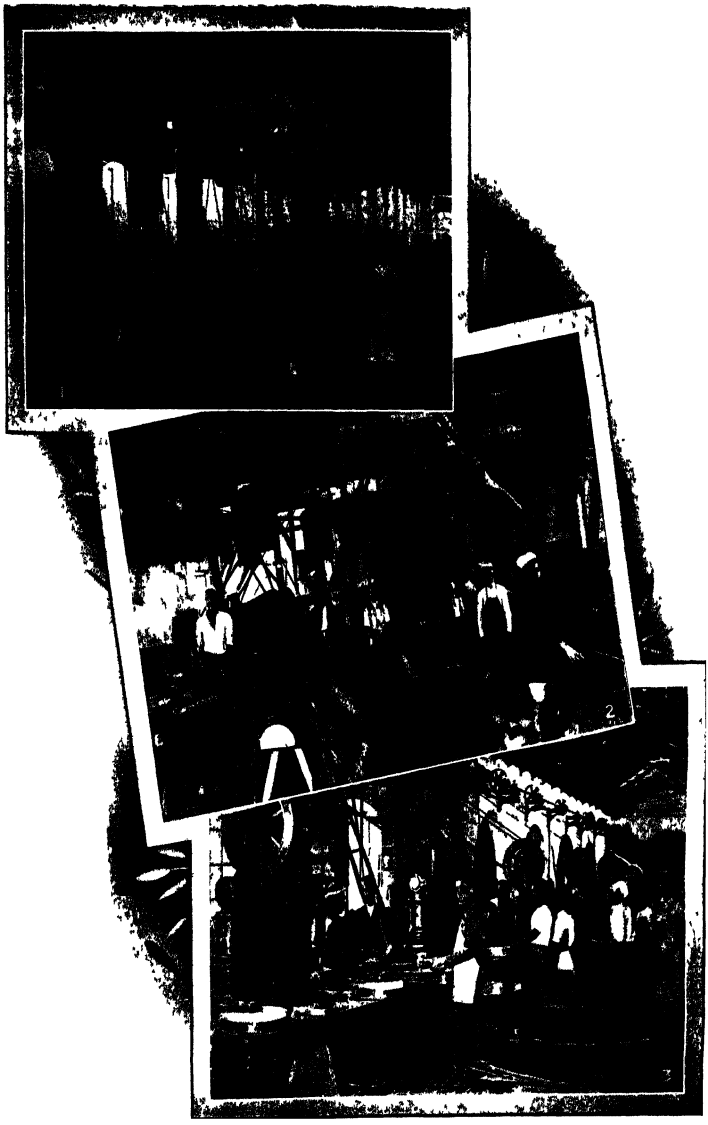
ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO, LTD).

1 Dispatches from Railway Siding. 2. Shaving 3. Scouring and Currying.



ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO., LTD.).

1.-Part View of Equipment Department. 2. A View in the Modern Village. 3. Hand-Sewing.



ARMY BOOT AND EQUIPMENT FACTORY (COOPER ALLEN & CO, LTD).

1. Machine Boot Department 2 Sole Department 3 Cutting Department.

BADAL RAM LACHMI NARAIN.

1. Badal Ram (Proprietor) 2 Lakshmi Narain 3 Gold and Silver Medals. 4. First Class Certificate. 5. Factory.

BALNATH JUGGILAL.

1 Front View of Mill. 2 General View of Mill. 3 Centrifugal Machines

to 80 rupees for 2 lb weight, and tobaccos of several descriptions may be obtained at rates ranging from 2 annas to Rs 80 per lb

All products are guaranteed to be rich in flavour, of full strength, and of first-class quality, and medals and certificates have been awarded for them at exhibitions held in Benares, Calcutta, Allahabad, Nagpur, Lahore, Dhubri, Sultanpur, Uttapura, Chandernagore, Hooghly, and other important centres in India.

BAIJNATH JUGGILAL.

The firm whose name appears at the head of these notes are primarily bankers and general merchants, but they also carry on an extensive business as owners of mills, importers, and commission agents

At Cawnpore, Baijnath Juggilal deal largely in yarn and piece goods, and they also have cotton-ginning and pressing factories, in addition to a sugar mill The piece-goods trade in India is represented by an enormous annual turnover, and this factories are also worked at Karwi, Ait, Etawah, and Madhoganj, in the United Provinces of Agra and Oudh, and in the cities of Calcutta and Agra the firm are commission agents for the sale of piece goods and yarn

Baijnath Juggilal are proprietors of two cotton presses carried on under the style of the Cawnpore Hydraulic Press Association The capital of the concern is Rs 1,25,000 in 125 fully paid shares of Rs 1,000

BALAJEE & CO

1 Factory—Hand Loom 2 Partners and Assistants

The business was established about the year 1893, and a very extensive trade is carried on in the factory at Misirpokhra, at the offices in New Street, Chowk, Benares, in the stores at Kunjgali Gate, Chowk, and at a branch shop, 144 Harrison Road, Calcutta, the last-named being under the management of Lachmi Naram, the proprietor's eldest son, while *mofussil* orders are promptly dispatched by parcels post Orders to be executed by rail or steamer are not attended to without some advance The firm welcome applications for agencies, and they are always ready to forward samples together with full particulars as to conditions of sale

is accounted for by the fact that, until the introduction of machinery not many years ago, the hand-weaving of thin linen cloth, almost universally worn by Indians, was wholly inadequate to meet the huge demand for it

The sugar factory is equipped with modern machinery, and the refining process is therefore carried out by entirely new methods which do not clash with the prejudices of Hindus as was the case in comparatively recent times when animal charcoal was used during the course of manufacture It is anticipated that, if a sufficient supply of cane can be depended upon, there is a great future for the sugar industry in India Ginning and pressing

They are also owners of the Baijnath Juggilal's Ginning Factory and Oil Mills, near Karwi station, in the district of Banda, in the United Provinces, which contain 40 ginning and 48 oil presses respectively The registered offices are at the firm's address in Cawnpore

BALAJEE & CO.

Several years have passed since this business was established in Benares with the object of manufacturing and supplying silk goods of various patterns and designs suitable for markets in the Madras Presidency and other parts of

India, as well as in Ceylon, Burma, and the Straits Settlements.

The steady progress already made is an excellent augury for the firm gaining and maintaining a leading place among exporters of silk in the locality in which it is established. Excellent silk fabrics of first-class texture and splendid workmanship are turned out by the firm's looms, and these goods have not only secured a great reputation from a very large circle of patrons, but they have been awarded a considerable number of Certificates of Merit at exhibitions, in addition to a gold medal presented by the Government of His Highness the Maharaja of Mysore. The business is being managed by Messrs. K. A. Gopala Iyer and S. Narasinga Row, formerly of Madras, and these gentlemen, with their wide experience in the manufacture of silk, are most diligent in their efforts to ensure a high standard of quality.

The firm are prepared at all times to supply other Benares specialities, such as brassware, toys, and other Indian fancy goods for exportation to Europe or America, and they welcome correspondence from business houses as well as private individuals in connection with this matter.

Messrs. Balajee & Company are assisted financially by Babu Jugul Kishore, the managing proprietor of Messrs. Jugul Kishore Brothers, who are sole agents for the import of gold thread from Messrs. Henry Miereux & Company, of Lyons, France. Babu Jugul Kishore is also the owner of two brick-fields, and lime and *soorki* steam mills, and he further supplies large quantities of stores of various descriptions to the army authorities, electrical water-works, the motor and engineering department of the Native State of Benares, which is under the political superintendence of the Government of the United Provinces of Agra and Oudh.

THE BARAON RAJ.

Raja Ragho Prasad Narain Singh, Rai Bahadur, *rais taluqdar*, and Special Magistrate for the *tahsil* of Karchana, in the district of Allahabad, is one of the leading and influential *rais* among the landed aristocracy in the United Provinces. He is the present head of the Baraon Raj family, and is a very popular gentleman, much liked and respected by the Government and the general public. By his ability and public career he has become one of the few prominent *raises* of provincial importance in the country.

The Baraon Raj owns in whole or in part some four hundred villages, and pays about Rs. 80,000 annually as Government revenue. It has estates in almost all the nine *tahsils* of Allahabad, and is the leading aristocratic house in the Perganna Arail or Karchana *tahsil*. Being easily accessible to all, ready to be of use to those approaching him in times of need, and not indifferent towards public movements, the Raja is much respected by the inhabitants of the district. He has been made a Rai Bahadur, a Special Magistrate, and a Raja as well, by virtue of his public services and of the great influence he commands in important circles. He was invited to the Delhi Durbar in 1911, his father and grandfather having been similarly honoured on previous occasions, and he has served the public in various positions, such as a member and vice-chairman of the District Board, Allahabad; as member of committee of various famine and other charitable funds and associations; as a delegate to the Cattle and Agricultural Conference and the Sugar Industry Conference during the Lieutenant-Governorship of Sir John Hewett, K.C.S.I., in 1907. He was, further, a member of the Board of Agriculture and Female Education Committee, and of the Dufferin Hospital Fund, and others. He organized the Colvin Hospital Financing Fund, and as its honorary general secretary was able to raise some Rs. 75,000 for its maintenance, he himself subscribing Rs. 5,000. As honorary general secretary, he organized the Allahabad District Exhibition on a grand scale in 1908, and succeeded in financing a large and permanent iron shed in connection with it. He started a sugar factory as a rural industry at his residence at Baraon at a cost of some Rs. 15,000 to himself, but it did not thrive owing to a shortage of the sugar-cane area in his part of the district. He takes great interest in agricultural improvements, and on his estates he has, with the help of Government *taccawi* loans to the extent of Rs. 100,000, been able to build about a hundred masonry wells, to repair scores of them, and to sink and re-excavate more than twenty large and small tanks and ponds. These irrigational improvements are maintained steadily. The largest tank re-excavated—about 600 feet square—is at Baraon, the work having been carried out at a cost of Rs. 15,000. Originally a celebrated ancestor of his, called the pious-souled Ram Bhichhuk Singh, caused it to be excavated, and its water is still, as before, given to the tenants free of charge for irrigation purposes, although its re-excavation cost such a large sum of money.

The Raja has on his own account inaugurated a demonstration farm at Baraon, which is under the supervision and guidance of the Department of Agriculture of the United Provinces, and he is now about to start several depots for the distribution of selected seeds to cultivators. In order to suit his own convenience, and to facilitate trade in Baraon market, he has caused a road of a mile in length to be made and metalled. Only recently he provided the Colvin Hospital with a nice tuberculosis ward, costing some Rs. 12,000, and his judicious charities, both large and small, have frequently been referred to by the Lieutenant-Governors of the provinces in their Durbar and Council speeches.

The Raja's most appreciable public act has been the organization of a provincial institution for the landed aristocracy of the Province of Agra, called "The Agra Province Zemindars' Association," Allahabad. For more than two decades the community remained, to the great regret of all concerned, without a provincial organization of its own. Many attempts in this direction had been made in previous years, and even Government sympathy and encouragement had been extended, but they failed in spite of the fact that the landowners naturally possessed great influence and resources in the country. Raja Ragho Prasad Narain Singh, encouraged by the present Lieutenant-Governor of the Province, His Honour Sir James Meston, K.C.S.I., with great perseverance and zeal, succeeded, once for all, in creating the above Association, his many friends and compeers in the community gladly helping and joining him readily in the task. The Raja Saheb is the Honorary General Secretary of the institution, which now claims almost all Rajas, Nawabs, and other noblemen of the province as its members, and it has during these three years of its existence succeeded in giving abundant proof of the value of its work. His Honour the Lieutenant-Governor, His Highness the Nawab of Rampur, and His Highness the Maharaja Bahadur of Durbhanga, are its patrons. Its head-quarters, to be named "The Meston Mansions," are being built in Allahabad, the capital of the Provinces.

THE BARAON RAJ.

1. The Gate 2. The Raghavendra Temple 3 The Baraon Raj Pal 4. Family Group.

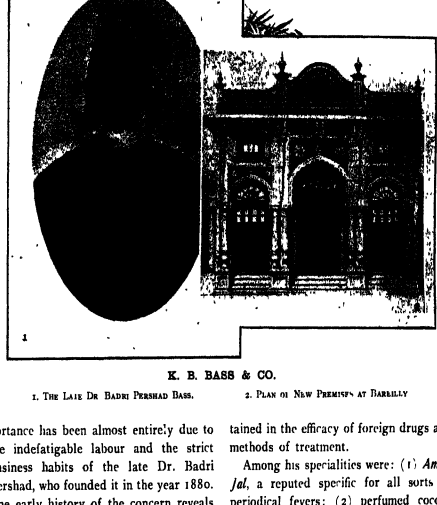
The many loyal services of the Raja during the late war are not less noteworthy—nay, they rather require special mention. By his own energetic initiation and example, he inspired the whole of the United Provinces with zeal and resolution in the matter of supplying army and labour recruits for the Government. He has furnished more than three hundred of these at his own cost, besides utilizing the whole force and weight of the above Association to set the ball rolling. In this connection he has, up to now, advanced and spent nearly Rs. 50,000 (or £3 000) to help the various war movements in the country. He has regularly subscribed from the very commencement Rs. 200 per month to the United Provinces Ladies' Association, as well as large sums annually to the local St. John's Red Cross Society.

The Raja's direct cousin and co-sharer, Kunwar Sarju Prasad Singh, resides with him, and has three sons, all of whom are minors. He is much given to literary pursuits, and to the Hindu science of medicine. He distributes gratis to the poor costly medicines of the value of thousands of rupees every year, and he supervises the affairs of the grand temple of Sri Raghvendraji at Baraon, as well as the estate affairs. The heir apparent of the Raja is Kunwar Venktesh Prasad Narain Singh, a minor, and there are two other sons, all of whom are studying under Dr. J. J. Ghose, D.Lit. and Mrs. Ghose, M.A., of the Modern High School, Allahabad.

This sketch cannot be concluded without a reference to the Raja's grandfather, the late Thakur, Ajodhya Bakhsh Singh, who during the days of mutuny in 1857 fought on the side of the Government against the rebels, being at the head of a retinue of his own, five hundred strong. He also rendered other services to the Government, for which he was rewarded with robes of honour and grants of free villages as a mark of honour and respect due to his loyalty. Similarly at a later date the present Raja's father, the late Rai Mahabir Prasad Narain Singh Bahadur, followed in the footsteps of the Thakur Ajodhya, and was a leading man of his time among the aristocracy of the Province. For his public acts and charities he was created a Rai Bahadur, and was recommended by the local authorities for a Rajaship, but owing to his untimely death he could not enjoy that honour, which was destined to devolve upon his worthy son, the present Raja of Baraon. As a mark of special honour to this loyal house, its members have always been considered as free from the operations of the Arms Act from its very inauguration.

K. B. BASS & CO.

Almost in the heart of the town of Bareilly, in the Rohilkhand division of the United Provinces, are the premises of Messrs. K. B. Bass & Co., the well-known chemists and druggists. The rise and growth of the firm to its present importance has been almost entirely due to the indefatigable labour and the strict business habits of the late Dr. Badri Pershad, who founded it in the year 1880. The early history of the concern reveals a continuous struggle against unforeseen difficulties with which all pioneer undertakings have to contend over and above those which are incidental to the business itself. The greatest obstacle which the doctor had to encounter was the promulgation and popularization of allopathic treatment in opposition to the Ayurvedic or the Yunani systems of medicine. People accustomed to indigeneous treatment had little or no faith in allopathy, to which they only resorted as a last measure when all efforts under other methods had been found to be unavailing. Moreover, the cost of allopathic treatment was too great for poor persons, but kindness and sympathy for his suffering countrymen induced the doctor to distribute medicines free of charge to the poor. The result was that within a few years the firm came to be known throughout the length and breadth of the district. People from the remotest parts flocked to the doctor for help, and his name became a household word in Bareilly, where he died in 1916, at the age of sixty, after engaging in practice for thirty-six years. Through his remarkable efforts, aroused by his commiseration for the poor and needy, a more general belief was entertained in the efficacy of foreign drugs and methods of treatment.



K. B. BASS & CO.

1. The Late Dr Badri Pershad Bass. 2. Plan of New Premises at Bareilly

Among his specialities were: (1) *Amrit Jal*, a reputed specific for all sorts of periodical fevers; (2) perfumed cocoanut oil remarkable for its power to promote the growth and lustre of the hair; (3) *surti*, a preparation of tobacco suitable for chewing with betel; and (4) *Dadruhar*, a remedy for all kinds of skin diseases, especially ringworm and kindred ailments.

In point of freshness and quality of drugs and chemicals imported from Europe, America, and Japan, the firm stands foremost in the Provinces, and it is to-day a central depot for the wholesale and retail distribution of medicines and other stores throughout a very extensive area in these provinces. A qualified compounder is employed to dispense prescriptions under the guidance and

direction of Dr. B. K. Mukerjee, the consulting physician and surgeon attached to the firm.

Messrs. K. B. Bass & Co. have also secured a valuable connection in the sale of photographic materials, and they have recently established the Rohilkhand Seed Stores, where a splendid assortment of all kinds of agricultural and horticultural seeds is kept.

The firm also owns a steam printing press—the premier one of its kind in the Rohilkhand division—which is patronized chiefly by Government, municipal, and railway authorities. The present proprietors of the business, Messrs. Kunj Behary Lall and Lachman Pershad, have added greatly to the firm's reputation by their industry and adherence to sound business principles. Owing to the largely increasing turnover of the business, the premises of the firm have recently proved to be inadequate for the storage of the stock necessary for so important an undertaking, and therefore Messrs. K. B. Bass & Co. are now making extensive additions to the building, which will result in their having one of the finest and most imposing structures in the bazar of Bareilly.

BEGG, SUTHERLAND & CO.

This firm, though not always trading under its present title, is probably the oldest mercantile house in Cawnpore. There are no records as to what date their predecessors in the business commenced trading, but old partnership deeds in the possession of the firm show that John Kirk & Co. were established as merchants at Cawnpore prior to 1842. The name of the firm was subsequently altered to Bathgate, Campbell & Co., and in 1856 it became Begg, Christie & Co., both Mr. David Begg and Mr. Henry Christie having been partners in the earlier firm. Mr. Christie and all his family were killed in the Cawnpore massacre in 1857. In the 'sixties the name of the firm was again changed to Begg, Maxwell & Co., and it is interesting to note that in those days the firm was closely connected with the Elgin Cotton Mills, founded by Mr. Hugh Maxwell (partner in Begg, Maxwell & Co.), a business connection which ceased in 1872, to be revived, however, more than forty years later, when Mr. Ralph Maxwell, son of the late Hugh Maxwell, once again entrusted the management of the Elgin Mills affairs to the firm. In 1872 the name of the firm was changed to Begg, Sutherland & Co., its present title, and the business up to 1894 was mainly confined to that of indigo seed and country produce merchants, though large experiments in the growing and curing of tobacco at the Government farm at Gazipore were carried out by the firm for some years. In 1894 the firm launched an enterprise under the title of the Cawnpore Sugar Works, Ltd., which was the first pure-process sugar refinery established in Northern India. This concern passed through many vicissitudes in the early part of its career, but in recent years it has entered upon a period of remarkable prosperity, and can now boast, in addition to the original refinery, two cane sugar factories and two large distilleries.

Undismayed by the fate of the pioneer sugar undertaking in Behar, the India Developments, Ltd., the firm launched the Champaran Sugar Company, Ltd., in the year 1905, and later the Ryam Sugar Company, Ltd., the shares of both of which stand at a considerable premium.

The firm are also local managers for the Indian Electric Supply and Traction Company, Ltd., the first electrical enterprise of its kind established outside the Presidency towns.

The firm also count amongst their agencies a brush-making concern under the title of Brushware, Ltd.

BRUSHWARE, LTD.

The business now carried on by this company was established as a private concern in the year 1887, but in 1892 it was acquired by the Cawnpore Brush Company, Ltd., whose style was changed to Brushware, Ltd., in 1909.

The factory is situated in Civil Lines, Cawnpore, and the registered office of the company is at 123-1 Halsey Road, in the same city.

The company manufacture a very large variety of brushes, ranging from small ones for cleaning decanters and other glassware to brooms 36 inches in length for sweeping floors. The productions include brushes of all kinds suitable for household use, flour and cotton mills, breweries, motor-cars and cycles, dairies, stables, military contingents, printing offices, municipalities, railways, ship chandlers, and other purposes of a public or private character. The greater portion of the wood used is of Indian growth, but for the finer classes of brushware satin and other woods are imported. Of the other kinds of material used the most important are bristles, fibre, and hair. The Indian pig bristle is remarkable for its strength and wearing qualities, though bristles from China and Europe are of a finer quality and more attractive in appearance. The latter qualities are used for varnish, sash-tool, and all classes of paint brushes.

The best quality of fibre, known as Mexican, is imported from Mexico, and is chiefly used for scrubbing brushes. African bass is imported for the manufacture of drain brooms, while whisk from Southern India is used for mane and tail and other brushes. India supplies the factory with its entire requirements of cow hair, but a large quantity is exported to other countries for the manufacture of brushes.

The company have their own sawmills as well as a complete equipment of planing, turning, moulding, trimming, drilling, and filling machines. A nailing machine for making flat varnish brushes has recently been installed in order to meet the large demand for this class of brush, which has hitherto been supplied from abroad.

The company have for many years made a special feature of refilling ebony, silver, and wooden-backed brushes, and have established a high reputation for the excellence of their work in this department.

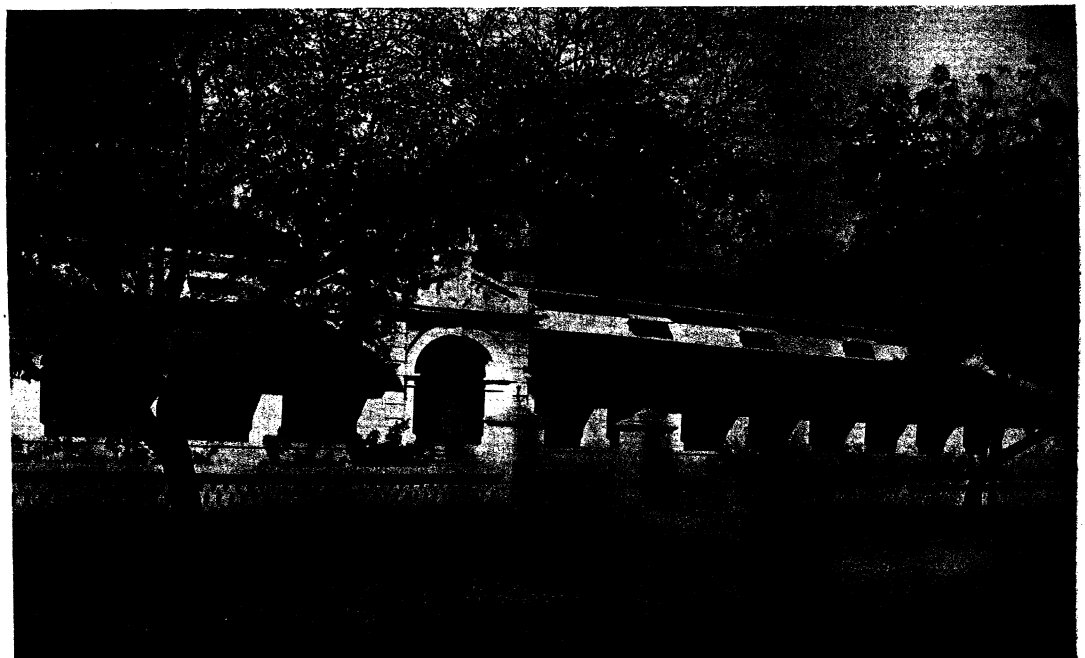
The bulk of the factory's production is absorbed by the several Government consuming departments, railways, and municipalities, but a large trade has been built up in brushes for domestic purposes, of which the factory is always well stocked.

Many medals and diplomas have been awarded to the company, but mention of the following will suffice: The only prize for brushes at the Punjab Sanitary Exhibition of 1893-4; a gold medal at the Bombay Industrial Exhibition, 1904; a gold medal and first-class certificate at the Indian Industrial and Agricultural Exhibition, Calcutta, 1906; a medal at the Jorhat Industrial Exhibition, 1907; and a gold medal at the United Provinces Exhibition, Allahabad, 1910–11.

The managing agents are Messrs. Begg, Sutherland & Co., of Cawnpore.

H. BYREN & CO.

The city of Benares has for hundreds of years been famous for its beautifully made brassware, so dearly prized in the "Old Country," for the skill of its inhabitants in artistically carving articles



BEGG, SUTHERLAND & CO.

OFFICE OF MESSRS. BEGG, SUTHERLAND & CO.

BRUSHWARE, LTD (REGG, SUTHERLAND & CO).

1. Finishing and General Machinery
2. Interior Showing Boring and Slogging Machines.
3. Set Hands and Saw Mills.
4. Drafting Hands.

in wood and ivory, and for the manufacture of silk goods of almost every description.

Visitors to this ancient city, the most sacred place on earth in the eyes of Hindus, find endless attractions in the numerous temples of great historical interest, but they are irresistibly drawn towards stores and shops in which are displayed for sale some of the choicest specimens of clever workmanship to be found in the whole of India.

One of the most notable of these establishments is the "National Silk Warehouse," situated in Benares Cantonment, belonging to Mr. J. C. Banerjee, for whom Messrs. H. Byren & Co. are managing agents.

The latter are wholesale and retail silk merchants, and manufacturers of silk for suitings, ladies' costumes, Singalese and Burmese *loongies* Ceylon *sarongs* and *comboys*, *saris* for Indian ladies, *chadars* for Indian gentlemen, and for many other garments of distinctly Oriental types.

The business was established in the year 1900, and although it is still in its infancy, it has already grown to considerable dimensions owing primarily to the excellent quality of the wares kept in stock, and partly to the tact and ability of the managing agents.

THE CAWNPORE COTTON MILLS COMPANY, LTD.

This company was formed in the year 1882 and now has a capital of Rs. 30,00,000, made up of 20,000 ordinary shares of Rs. 50 each, 10,000 7 per cent. preference shares of Rs. 100 each, and 10,000 8 per cent. preference shares of Rs. 100 each. The present directors are Messrs. H. M. Davies (chairman), A. W. Lilley, A. Butterworth, and W. G. Conner; and the secretary is Mr. B. R. Briscoe. London agents of the company are Messrs. Allen Bros. & Co., of 14 Devonshire Square, Bishopsgate, E.C.

The company are owners of mills at Juhi and Coupergunge, near Cawnpore, the factory at the former place having been started in the year 1912, and at the latter about the year 1882.

A special feature of the Juhi factory is the making of *dhurries*, or carpets, of all sizes, and tents, and no fewer than six thousand of the latter have been turned out in twelve months, the greater proportion being required for Government purposes. It may be added that for the Coronation Durbar held at Delhi in 1911, the company made all the camp tents required by the Government of India for the accommodation of guests.

At Juhi the company gin their own cotton (a process, by the way, which is not as a rule carried out in spinning and weaving mills). There are 27,000 spindles in this factory, and the plant, which is of the latest improved type, is contained in the main portion of the Juhi Mill, which consists of a four-storied building.

The Juhi property is 26 acres in extent, and in addition to the mill there are very fine quarters for the European staff and Indian workmen, as well as godowns, stores, and sheds.

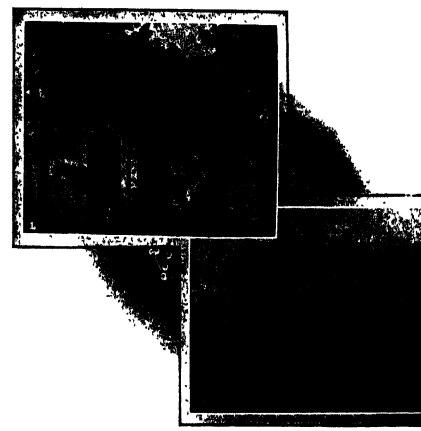
The company employ seven Europeans and about thirteen hundred Indians at the Juhi factory.

The Coupergunge premises cover an area of 22 acres, and they comprise five separate mills in one group, two of which are four stories in height, while the remaining three have two floors.

The mills contain 1,000 looms and 78,000 spindles; there is a large dyeing and bleaching plant; the weaving shed is 250 ft. in length by 200 ft. in width; trolley lines are laid throughout the whole of the buildings and private sidings connect the factory with the adjoining railway.

Every process of manufacture, from spinning the yarn to completing the finished articles, is conducted with thoroughly up-to-date plant capable of turning out about 30,000 yards of material daily, the output including towels, shirtings, blankets, tablecloths, napery of various kinds, sheetings, suitings, drills, and khaki twills.

The company export all classes of goods, under the trade name of "Kakomi," to South and East Africa, Egypt, Australia, and the Federated Malay States, while their own travellers visit every part of India.



II. BYREN & CO.

1. Front View of Premises, Station Road, Benares Cantonment. 2. Proprietor's Residence.

The employees comprise sixteen Europeans and 2,700 Indians.

Agencies have been established at Naya Sarak, Delhi; Oxford House, Simla; Chowk, Allahabad; Nechibagh, Benares City; The Mall, Cawnpore; Hazratgunj, Lucknow; and at 30 Chowringhee, in Calcutta.

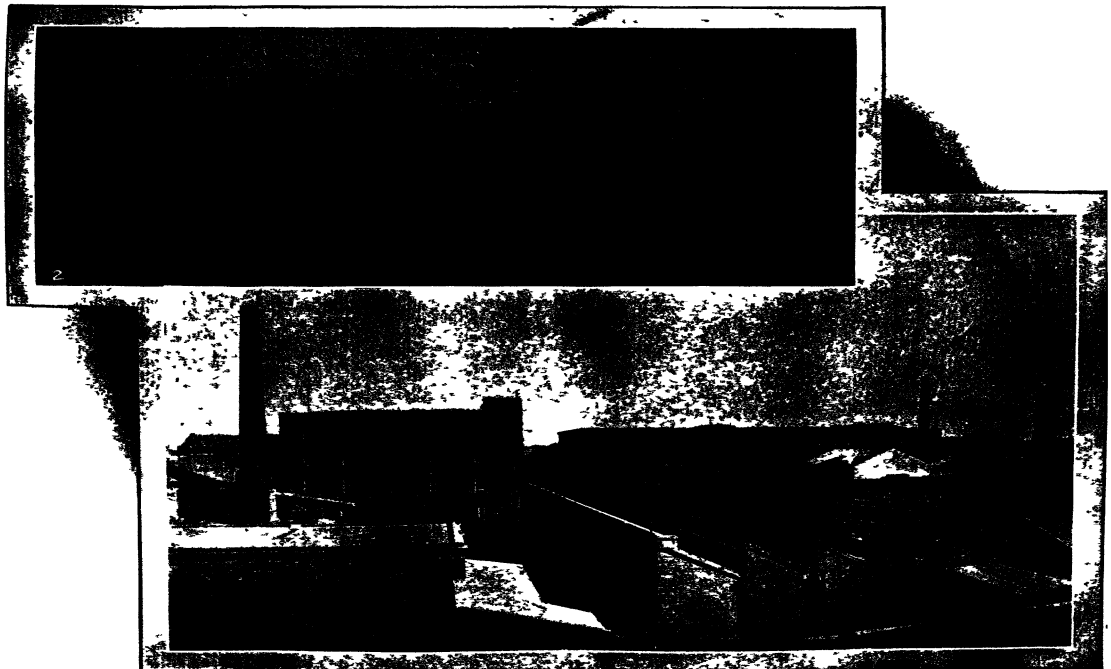
The two mills are under the management of Mr. C. O'Malley.

THE CAWNPORE SUGAR WORKS, LTD.

The company was established in the year 1894 as a sugar refinery for the treatment of the lower grades of Indian-made raw sugars, a cardinal feature of the scheme being the production of a sugar which would be acceptable to Hindu caste principles. The company commenced its career with a capital of

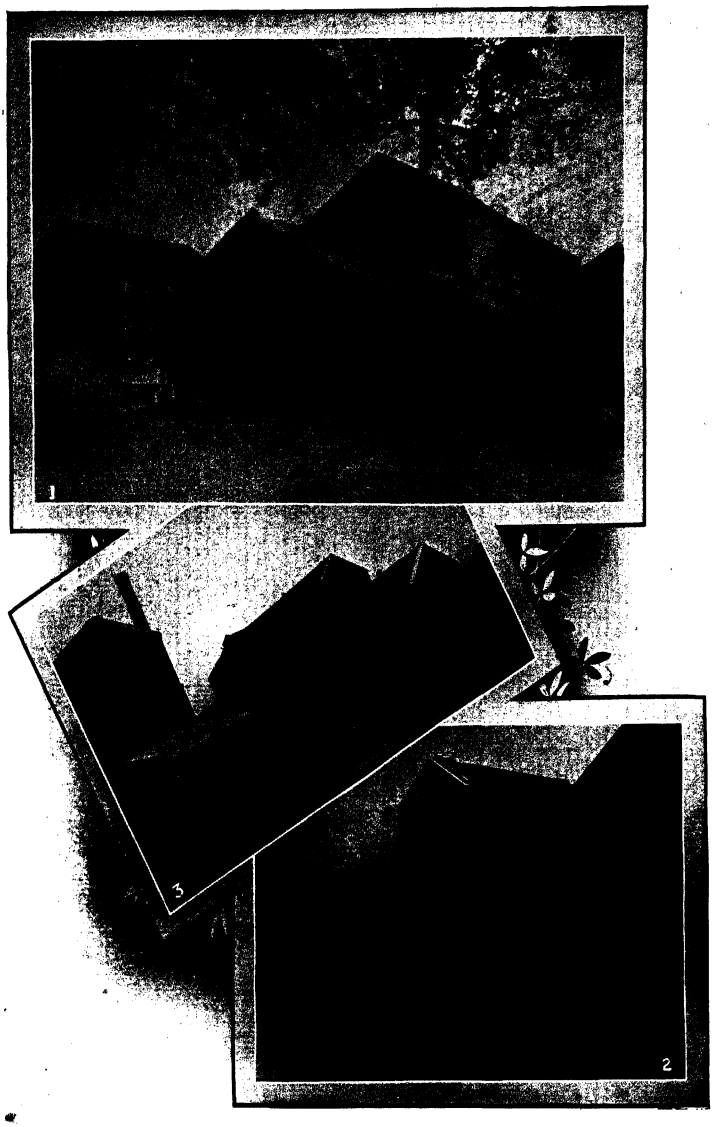
CAWNPORE COTTON MILLS COMPANY, LTD

1. A Preparatory Process. 2. The Weaving Shed 3. One of the Tent Workrooms 4. Tents Awaiting Inspection.



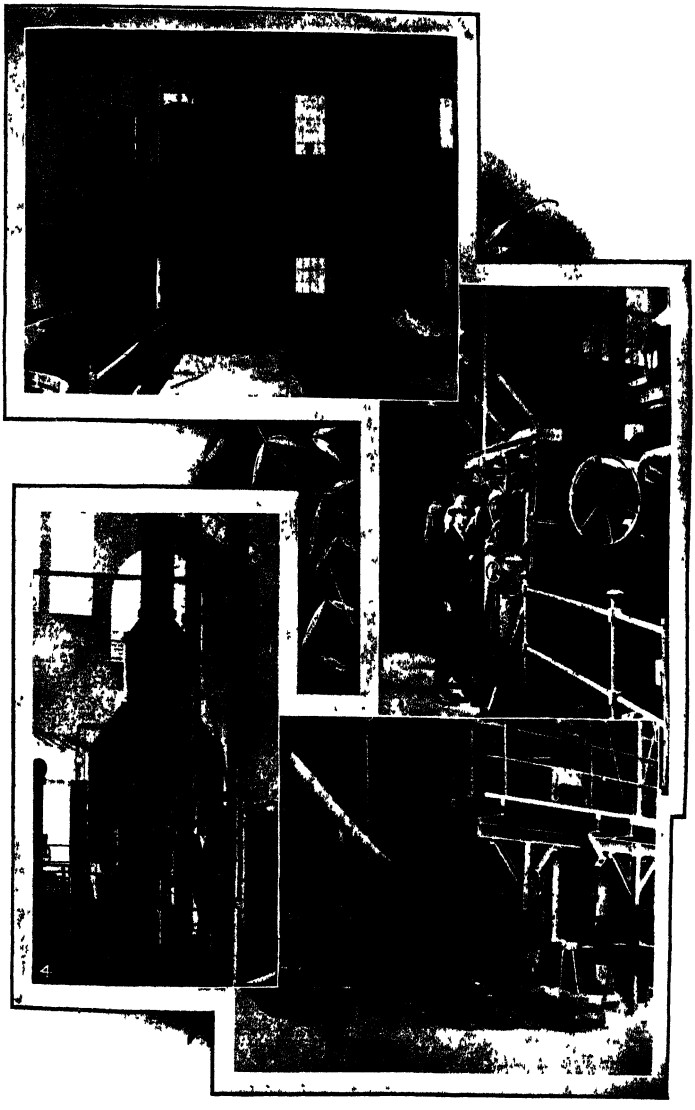
CAWNPORE COTTON MILLS COMPANY, LTD.

1 A Group of Mills 2 Another Group of the Kakomi Factories.



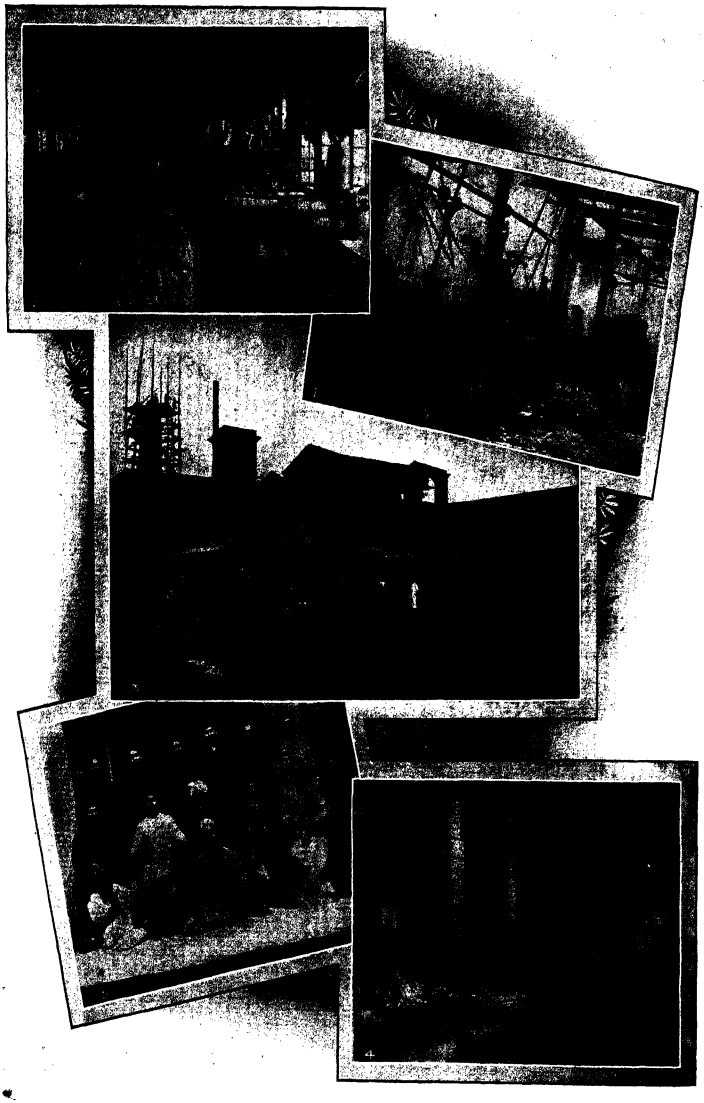
THE CAWNPORE SUGAR WORKS, LTD. (BEGG, SUTHERLAND & CO.).

1. Factory Compound. 2. Unloading Gur. 3. General View of Factory and Distillery.



THE CAWNPORE SUGAR WORKS, LTD. (BEGG, SUTHERLAND & CO.).

1 Interior of Distillery 2 Centrifugal Machines. 3. Drying and Crushing Plant 4 Evaporating Pans.



THE CAWNPORE TANNERY.

1. Portion of Machinery Department. 2. Portion of Tanning House and Currier Shop. 3. General View.
4. Portion of Lime House. 5. Staff Group.

Rs. 6,00,000 divided into ordinary shares of Rs. 100 each, which has since been increased to Rs. 15,00,000. The original works at Cawnpore have been greatly enlarged, and two factories for the manufacture of sugar direct from cane and two large distilleries have been added. The company's productive capacity has grown in a corresponding degree, and now stands at 2,35,000 *maunds* of sugar and 9,00,000 London proof gallons of alcohol annually.

The company is under the management of Messrs. Begg, Sutherland & Co., of Cawnpore.

THE CAWNPORE TANNERY.

The Cawnpore Tannery was established in the year 1896 by the late Mr. A. H. Creet, who conducted it with a considerable amount of success for a period of about eight years, when he disposed of it to Mr. William Stork, this gentleman continuing it, with Hafiz Abdul Karim and Hafiz Mohamed Halim as his partners, under the style of Stork, Halim & Co. Mr. Stork retired from the firm in 1907, his interest in the business being purchased by the remaining partners, who are to-day recognized as the leading hide merchants in Delhi and Cawnpore respectively. This honourable position has been gained by conspicuously fair dealings, which have made their names well known in the hide trade of Upper India.

Contracts have recently been entered into for the supply of meat to British troops and of hides to the Ordnance Department, while the firm handle large quantities of hides and skins for Indian and foreign markets.

The calls upon the time of the individual partners in discharging those obligations left few opportunities for proper supervision of the tannery, although the benefit of their advice was frequently sought, and with the view of having more constant control by a specially interested person, they admitted to a managing partnership Mr. M. Dildar Khan, whose close personal attention to the working of the factory was soon manifested in a very considerable increase in the turnover.

Ever on the alert to discover any likely opening for the further development of the concern, Mr. Khan soon realized that the best interests of the firm would be secured by concentrating attention entirely upon the tanning and subsequent sale of leather, but in order to carry out this plan it was necessary to close the department for the manufacture of various kinds of leather goods.

This new procedure was at once adopted, and the marvellous extension of the business was a high compliment to the wisdom of Mr. Khan's proposal.

So marked was the advance that it became necessary to enlarge the buildings and increase the quantity of machinery and plant. The firm thereupon purchased a large plot of land adjoining their own property, and erected fine brick buildings to take the place of the tiled-roof barracks then being used.

The machinery in the factory is driven by steam power obtained from a double set of engines and boilers, and it comprises disintegrators for grinding bark, machines for splitting, glazing, staking, fluffing, shaving, embossing, pressing, setting, and other purposes. About the same time as the expansion of business commenced the firm was desirous of appointing an expert with European training in the tanning of leather, but they were not able to meet with any really suitable candidate till 1913, when Syed Faiyaz Uddin, the holder of a Government scholarship, was chosen for the position. Under the guidance of this gentleman there has been a very noticeable improvement in the quality of the tanned leather, and indeed of the average monthly output.

The management of the office is vested in Mr. Mohamed Nazir, a son of Mr. Hafiz Mohamed Halim, who has already shown that he is a worthy follower of his father in his steady business habits and in his amiability of disposition in his dealings with subordinates and others.

THE CAWNPORE WOOLLEN MILLS COMPANY, LTD.

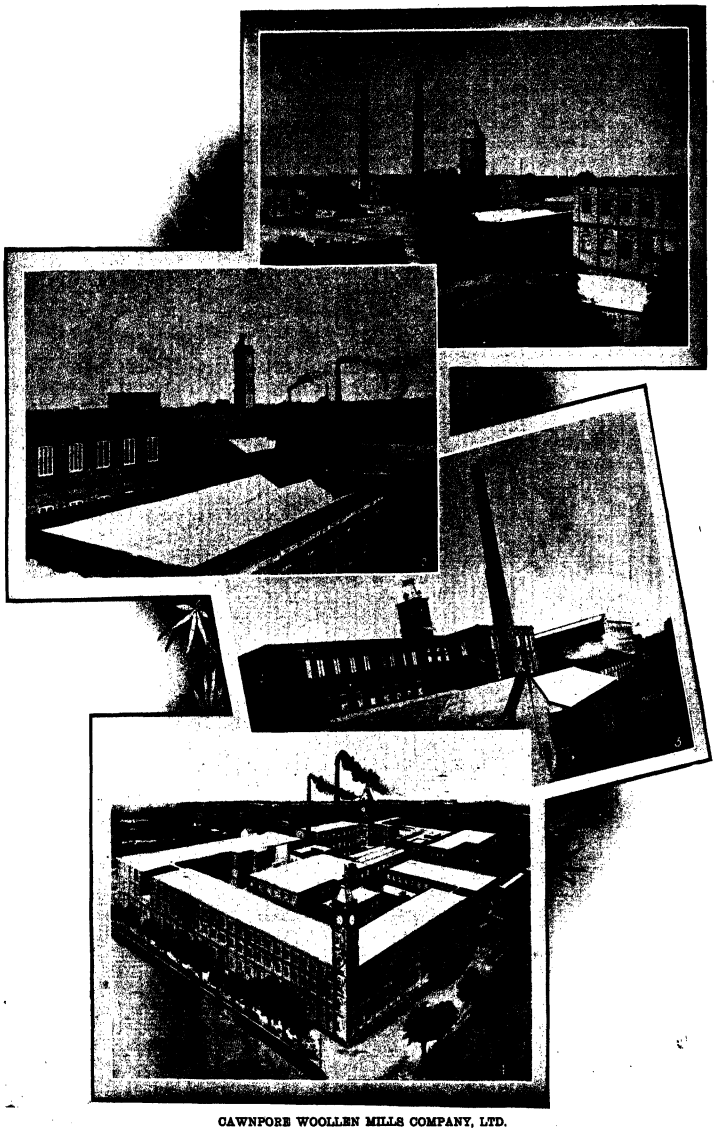
These mills, founded in 1876, were at first equipped mainly for the manufacture of blankets, and from small beginnings has arisen the present huge factory, making pure woollen goods of every description, and giving employment to upwards of four thousand Indians and a large staff of European overseers. This transformation is due to the foresight, tireless energy, and unremitting care of the manager, Sir Alexander McRobert, LL.D., during the thirty-three years in which he has directed the company's policy. The name "Lalimli" (the trade mark of the company) is known throughout India and the East as a synonym for first-class quality, and as a guarantee that wool, and wool only, has been used in the manufacture of the material so marked. The present paid-up capital of the company is Rs. 75,00,000.

The raw wool for "Lalimli" is produced in India itself, and is also imported over its northern and western land boundaries as well as from Australia. On arrival at the factory, which possesses its own railway siding, the wool is classified, and then scoured until it is thoroughly clean.

At this stage it becomes necessary to differentiate between wool for manufacture into worsteds and that intended for woollens. The fibres composing the yarn in worsted fabrics lie more or less in parallel form, but they are not so in the yarn of woollen materials. The result is that the worsted yarn is smooth, even, and wirelike as contrasted with the rough, hairy appearance of the woollen. For this reason also long-stapled wools are more suitable for the worsted, and short-stapled wools for the woollen department.

In the manufacture of worsted materials the next stage after scouring is the process of "carding," in which the wool is fed between large cylinders and smaller rollers (both covered with wire teeth) moving in the same or different directions at various speeds. The result is that the fibres are separated and made roughly parallel, and the sliver from the last cylinder is gathered together and wound up into a loose ball. A series of these balls then pass through gill boxes in order to render the fibres more parallel, and then on to the balling machine, the product issuing from the balling machine ready for the "comb." During the operation of combing, in which the fibres are further straightened out, the short fibres of the wool are literally combed out, while the long ones pass forward continually in the form of a loose rope of wool.

On coming from the comb several of these ropes of wool are passed through a series of gill boxes, and are finally wound into a ball known as "top." So far no trace of twist has been given to the wool, and before this is done the sliver from the "top" is reduced in thickness, which is, still without giving any twist, effected in a series of "drawing boxes" by passing the "top" between rollers travelling at different speeds. In a subsequent process, however, it receives a slight amount of twist, and issues forth as a loosely twisted strand or "roving," which is further re-



CAWNPORE WOOLLEN MILLS COMPANY, LTD.

1. General View, Looking West. 2. General View, Looking East. 3. General View, Showing Railway Siding.
4. A General View of the Mills.

CAWNPORE WOOLLEN MILLS COMPANY, LTD.

1 Finishing Department 2 Tailoring Department 3 Mule Spinning. 4 Combing. 5 Worsted—Winding and Doubling

CAWNPORE WOOLLEN MILLS COMPANY, LTD.

1. A Corner of the Settlement from Lalimli Hospital
2 Warehouse
3 Automatic Sock Knitters.
4 Hand Looms.
5 Power Looms
6 Entrance, Lalimli Settlement

duced in thickness and receives greater twist on spinning frames. Several threads may be twisted together. The yarn is then passed through the processes preliminary to weaving. Two types of thread are distinguished in any cloth, namely, warp and weft threads, the former running along the length, the latter across the breadth of the material. Yarn to be used as weft is wound on bobbins or pirns, which are placed in the shuttles. Warp threads, on the other hand, are wound on the weaver's beam by the warping mill. Each individual thread of the hundreds, nay thousands, of threads on a beam is passed through the healds and reed in the subsequent operations of healding and sleying before the warp is ready for the loom. By the "heald motions" of the loom different sets of threads are raised and lowered in turn, and the shuttle containing the weft thread which traverses the warp is thus allowed to pass above some and below other threads, thus forming the cloth.

Reference may now be made to the raw material for woollens. The woollen carding machine, like the worsted, is also composed of wire-covered cylinders and rollers, but the wool is delivered in a broad sheet which, by means of what is known as a "condenser," is broken up into fine slivers, and consolidated by being rubbed between two leather sheets. These slivers are wound on a long "bobbin," and thence are sent to the woollen mule. This marvellous machine automatically unwinds a portion of sliver, stretches it, twists it into yarn, and finally winds the latter on to paper tubes on the spindles.

The woollen yarn is then ready for use as warp or weft, and the subsequent operations in preparing for weaving, and in weaving, are the same as in the case of worsted yarns.

All "pieces," as the lengths of woven cloth are called, are carefully examined, and flaws are rectified before being finished. Scarcely any two types of material require the same style of finishing. Some simply require to be washed clean; others need to be heavily milled or shrunk, a process in which the material is run through a milling machine, being moistened with soap and then friction applied under pressure. Lastly the finished cloth is examined, ticketed, and warehoused in readiness for dispatch.

All dyeing of materials—whether in the raw wool, the "top," yarn, or the piece—is done in the company's extensive department specially equipped for this purpose.

In addition to the manufacture of cloth, the Cawnpore Woollen Mills have a hosiery department, fitted with the latest types of machinery for the production of jerseys and sweaters of all descriptions, scarves, Balaclava caps, underwear, stockings, and socks. Several thousand jerseys are turned out weekly as well as a similar number of pairs of socks daily. There is, further, a large tailoring department under efficient European supervision, where "Lalimli" materials are made up in the latest styles.

The Cawnpore Woollen Mills have established agencies throughout India, including Calcutta, Simla, Allahabad, Benares, Delhi, and Nagpur, as well as at Baghdad in Arabia, and in Persia. In these places there are to be found stocks of all the company's manufactures, such as flannels, overcoatings, broadcloths, *puttoos*, serges, worsted coatings, *shikar* cloths, blankets, Tartan travelling rugs, lohis of every colour, and hosiery goods.

The company do not overlook the social welfare of their employees, as they have built, for the use of the European members of the staff and their friends, a club which is equipped for both indoor and outdoor games, and in which there is a well selected library. For the benefit of the native employees there is a model village, the popularity of which is evidenced by there scarcely ever being a single house vacant. Schools and hospitals have been erected for the instruction and medical treatment of the three to four thousand inhabitants, while there is a free dispensary in charge of a doctor appointed by the company. The various sections of the village have practical self-government through their representatives on the village *panchayat*, and it may be said that there is a very pleasing absence of crime in the settlement.

A. H. CREET & CO.

Cawnpore is a large and important manufacturing and distributing city in the United Provinces of Agra and Oudh, and it has been famous commercially for a very considerable time for its leather industry. One of the pioneers of the leather business in Cawnpore was the firm of Messrs. A. H. Creet & Co., who not only devoted their energy to manufacturing leather goods, but also owned and controlled that large concern known as the "Cawnpore Steam Tannery and Factory." The city has in recent years rapidly become a great centre for cotton and woollens, and to-day it has numerous mills of vast dimensions. Cawnpore and Bombay are quickly making India one of the greatest cotton manufacturing countries in the world.

The founder of the above-named firm was Mr. A. H. Creet, an Armenian, born on April 9, 1857, in Julfa, Ispahan, in Persia. Young Creet migrated from his birthplace in 1874, his destination being India. As Bombay did not appeal to the newcomer, he left for the interior, and settled at Lucknow as jeweller. He seems to have had ample opportunities of making money there, as he soon prospered, and as he had decided to settle down in the country, he duly became naturalized.

In or about the year 1880 or 1881, Mr. Creet disposed of his jewellery business and arrived at Cawnpore, where he commenced dealing in leather goods under the name and style of A. H. Creet & Co. The untiring energy and straightforwardness of the founder of the firm soon raised the enterprise to a prominent position in commercial circles, and his ability to finance his customers, coupled with his excellent judgment as a purchaser of stock-in-trade, enabled him to write "success" as an addendum to the balance-sheet of each succeeding year. Mr. Creet, being a shrewd man of business, subsequently directed his attention to the possibility of manufacturing, in India, goods which were then being made up in Europe from raw materials sent from this country for that purpose. Naturally enough Mr. Creet grasped the fact that enormous quantities of hides and skins were sent across the seas to be returned to India in the form of harness, saddlery, boots, shoes, bags, and other articles, and he further realized that at his very doors there was a practically unlimited supply of necessary tanning substances. Further consideration of this question led Mr. Creet to establish a tannery, under the name of "The Cawnpore Steam Tannery and Factory." This branch of the business soon became the most important undertaking Mr. Creet had ever contemplated, and it naturally gave him all the chances of exercising the business aptitude for which his heart craved. He seized every opportunity and developed it to the fullest extent, with the result that he soon became a merchant king.

Mr. Creet had three sons, namely: Leo. A. H. Creet, R. A. H. Creet, and Ralli Creet, all of whom are British-born subjects.

It is now necessary to give some specific particulars relating to the present activities of this well-known firm.

In describing the multifarious activities of the firm, it will be advisable to begin with the factory and tannery, as they are the source whence a considerable portion of their stock is derived.

The tannery at Bananapurwa, a suburb of Cawnpore, is most conveniently situated near to the hide and skin market, and all work is performed there under competent European supervision.

Hides and skins are first soaked and thoroughly washed with the object of removing all dirt; they are next steeped in a solution of lime until all hair, wool, or flesh is scraped away; all traces of lime are then obliterated; they are then put into tubs or pits containing cassia bark; and after water for cleansing purposes has been applied liberally, they are oiled and subsequently dried. After the various tanning and currying processes have been completed, the rolls of leather are transferred to the factory adjacent to head-quarter buildings in the civil lines, in Cawnpore.

The firm have established a great reputation for ammunition boots suitable for the army, police, and volunteers, as well as for saddlery, harness, and leather goods of all kinds.

The machinery was originally designed and built by Mr. L. Charter (formerly of the noted firm of Messrs. Maudsley, Son and Field, Westminster Road, London, and afterwards of the Government Army Equipment Factory at Cawnpore), who followed the best styles then in use in England and America, but at the same time he made certain alterations which were regarded as necessary for different conditions in India. All the plant is now up-to-date in every respect, and the employees are men who know their work and perform it in such a manner that Messrs. Creet & Co. are able to guarantee neatness, durability, and promptitude in despatch.

Their main premises consist of a handsome block of buildings in the civil lines, Cawnpore, in which there are suitable offices, together with stores, which are fitted with a remarkable variety of every description of goods.

Messrs. Creet & Co. have been awarded medals and diplomas at various exhibitions, but the most convincing proof of the excellence of their goods is found in the fact that customers of old standing continue to trade with the firm, and that new ones express their determination to become regular purchasers. Goods have at different times been supplied to a very large number of army regiments and police head-quarters, as well as the leading Maharajas and other noblemen in India.

The magnitude of the firm's operations led them to open a branch office in Calcutta, and although Mr. A. H. Creet laid the foundation of this enterprise, the major portion of the credit for its very successful development is due to his second son, Mr. R. A. H. Creet, who, at the time of its inception, had already gained considerable experience in commercial undertakings through his having been associated with his father in his various operations. Mr. R. A. H. Creet was possessed of youthful energy and great business tact, and with the view of putting his progressive ideas into practice, he commenced a shipping agency in connection with the export and import of goods of a general character. It was not long afterwards that he obtained an appointment for the firm as shipping agents recognized and duly registered as such by His Majesty's collector of customs at Calcutta.

Only a few years later the firm—on the initiation of Mr. R. A. H. Creet—began to export on their own account all kinds of Indian produce, and to import merchandise of various descriptions from abroad, and it is remarkably creditable for him to have secured business connections of great importance for his firm in England, Europe, America, and the Far East, in such a short period.

The principal items of exports to England, America, and even the Far East, now include: raw hides, myrabolams, shellac, rape, mustard and other seeds, tamarinds, saltpetre, sandal-wood, and coco-nut and other oils; while the imports comprise wines and spirits of first-class quality from English and French markets, hardware, all kinds of metals, chemicals (light and heavy), matches, paper, finished leather, and a large assortment of requisites for business concerns in India. Java arrack, which is somewhat inferior to and considerably less expensive than foreign spirits, is also shipped to this country in large quantities by the firm in order to meet a demand which has recently arisen for it for commercial purposes on methylation, as well as rectified for consumption.

Messrs. Creet & Co. are sole agents for the Indian Distillery Company, Anwargunj, Cawnpore, and in recent years they have secured a great reputation for its products in almost every part of India.

Mr. Leo A. H. Creet, who is in supreme control in Cawnpore, is agent for Messrs. Joseph Crosfield & Sons, Ltd., Messrs. Mackenzie Lyall & Co., Messrs. M. McGinley & Co., Messrs. Archer & Co., Ltd., and the Great Eastern Life Insurance Company, Ltd.

It may be added that about twenty years ago Mr. A. H. Creet became the owner—through his banking operations—of about 51½ acres of land almost in the centre of the commercial area of Cawnpore.

This property—known as the Gwaltoli Estate—and now in the hands of his representatives, is rectangular in form, and is bounded on the north by a metalled road, which separates it from the premises of the Elgin Mills, Ltd., the Muir Mills Company, Ltd, and Messrs. Cooper Allen & Co, Ltd., on the east by another metalled road; on the west by the *imambara* of Nizam-ud-daula; and on the south by another metalled road, connecting it with the Gwaltoli bazar.

The value of the property is greatly enhanced by a siding which the East Indian Railway Company constructed in 1895 from their railway to factories and mills in the vicinity.

Reference has already been made to the extraordinarily rapid growth in the number of manufacturing and industrial concerns in Cawnpore during the past two or three decades, and consequently numerous houses have been built for the accommodation of workpeople, who have been attracted there, but the immense progress of the city, which has just been referred to, makes it clear that there is even greater need to-day for residential bungalows than at any previous time. There is a great scarcity of substantial residences for commercial magnates, of neat bungalows for ordinary men of business, and of suitable quarters for those employed solely in manual labour.

Complaints have frequently been made that there is no land available for building purposes in Cawnpore, and to a certain extent that is true, but here, in the heart of the city and in the centre of the milling district, is an admirable

site of fifty acres upon which factories or general business houses could be erected, or upon which provision could be made for the requirements of the whole of the overcrowded portion of the inhabitants of the city

A most profitable investment could be obtained by the formation of a building syndicate prepared to inaugurate other industrial enterprises, or to provide suitable homes for all who need them, and it is believed that this important project will be energetically taken up in the near future

The Calcutta offices are at 8/2 Hastings Street, and the telegraphic addresses are 'Kreteha," 'Calcutta, and "Creet," Cawnpore

THE HON RAJA CHANDRA CHUR SINGH

THE HON. RAJA CHANDRA CHUR SINGH, BAHADUR.

The family history of the Hon Raja Chandra Chur Singh, Bahadur, shows that he belongs to the Kanpuria clan of the great Kshatriya race, who during the Brahmanic or Epic Age (1300 to 800 B C) appeared in newly-formed territorial states in the Gangetic Valley and proved themselves to be the cream of the Aryan invaders of India He is the son of the late Raja Jugmohan Singh, Bahadur, C I E, who, in recognition of valuable services rendered to the Government during a severe famine, received grants of several villages in the district of Rae Bareili, in the United Provinces of Agra and Oudh, the whole property now being known as the Atra-Chandapur estate

The present Raja (whose title is an hereditary one) was born in 1878, and was educated in the English language at the Colvin Taluqdars' school at Lucknow, but he also possesses a thorough knowledge of the Hindi, Urdu, Sanskrit, Persian, and Arabic tongues His accomplishments, and the excellent manner in which he has made use of them, were at an early age recognized by the Government, who appointed him to be an Honorary *Munsiff* and a Magistrate of the second class To the Raja belongs the honour of being the first landowner in the Provinces to establish an agricultural farm to be worked upon comparatively modern principles, and it was he who took the lead in overcoming the prejudice against the cultivation of sugarcane among Kanpurias by planting it extensively on his own estate This experiment was eminently successful, and the praiseworthy example thus set has been followed by a considerable number of other persons in the district

The Raja has become an exceedingly popular man, not merely on account of his courteous behaviour, benevolent disposition, and kindly consideration for others, but also by his progressive opinions, which are stoutly advocated in

J. N. COCOLAS & CO.

1. View, Showing Half of the Ginning Factory. 2. View from Office, Showing Part of the Ginning Factory and Godowns.
3. Godowns, Boiler House, Engine Room, and Press House.

the Provincial Legislative Council, to which assembly he was elected as a member on behalf of the *taluqdars* of Oudh. He is, further, a keen all-round sportsman, and with a rifle in his hands he has few equals in hitting his mark.

J. N. COCOLAS & CO.

This firm was established in the year 1907, commencing with a cotton factory containing 48 double roller gins and a pressing plant. The mark "I.N.K." soon became recognized as standing for reliability, and the demand for this firm's productions has necessitated the increase of gins to 90, the number now in use.

The business of the firm is still being extended, and arrangements have been completed for the opening of a factory with 64 gins and a pressing plant at Kanauj, in the district of Farukhabad, in the division of Allahabad, in the United Provinces of Agra and Oudh. It was expected that this would be in working order before the publication of this work.

The bulk of the raw cotton is grown in the United Provinces, and the output of the factory is supplied chiefly to local mills, although a certain quantity is sent to Calcutta and Bombay.

The firm's offices are in Cawnpore, and their telegraphic address is "Vamvax, Cawnpore"

EDULJEE & CO.

1. Carriage Erecting Shop. 2. Corner of Motor Garage and Machine Shop.
3 The Exchange Showrooms.

EDULJEE & CO.

This firm of motor engineers, carriage builders, harness and furniture merchants, was established at Lucknow in the year 1868 by Mr. Eduljee Rustomjee Parakh, who started his business life at a very early age on the paltry wage of Rs. 15 per month. Possessed of energy and determined character, however, he speedily made his way in commercial circles, gaining the approbation of a large number of patrons. The undertaking was greatly extended by his assiduous attention to the requirements of his customers, and it was he who constructed the large workshops, sheds and other buildings occupied by the firm to-day. The present proprietor is his grandson, Mr. Eduljee Hormusla Parakh, who was educated at Dulwich College, in England, and who received his training in motor engineering at the famous "Sunbeam" works in the Old Country.

A great reputation has been obtained by the firm for their carriages and carts of all descriptions, among which may be mentioned landaus, phætons, *tongas*, district carts, bamboo carts, buggies, governess cars and *rickshaws*, all of which are built and finished in first-class style. A special feature is made of "Eduljee's" bamboo two-seated carts, which are smart and neat in appearance, substantially built in wood and ironwork, properly balanced, and fitted with all latest improvements. These carts are well-known throughout India, and have also been supplied to customers in Australia, Ceylon, Penang, Singapore, Aden, Hongkong and Great Britain.

Messrs. Eduljee & Co. are sole agents for "Sunbeam," "Rover," Hupmobile, and other motor-cars; Hillman and Calcott's light cars; and "Sunbeam" motor cycles; as well as for Dunlop tyres. A large stock is kept of oils and all motor accessories, and the firm are owners of the largest motor garage in the United Provinces. This building is equipped with excellent machinery, tools, and appliances, and all repairs to motor-cars are carried out under expert English automobile engineers, and are thoroughly tested before the vehicles are returned to their owners, with the result that work done in this department is guaranteed to give complete satisfaction.

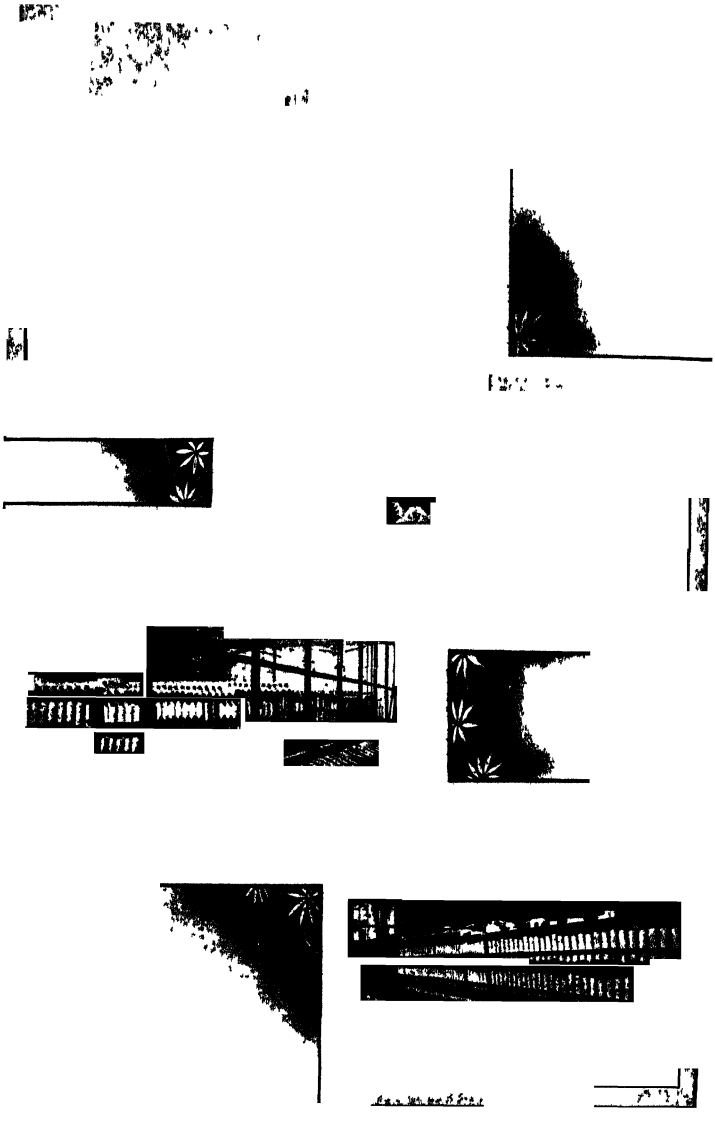
Messrs. Eduljee & Co. have received hundreds of letters from constituents testifying to the high-class quality of their carriages, carts, and cars, the writers including magistrates, civil surgeons, engineers, commissioners of districts, and others.

The firm are the only builders of carriages and carts in Lucknow who have been awarded first-class medals and certificates in open competitions.

Their showrooms are at the Exchange, Lucknow, and their factory is in the Civil Lines in the same city.

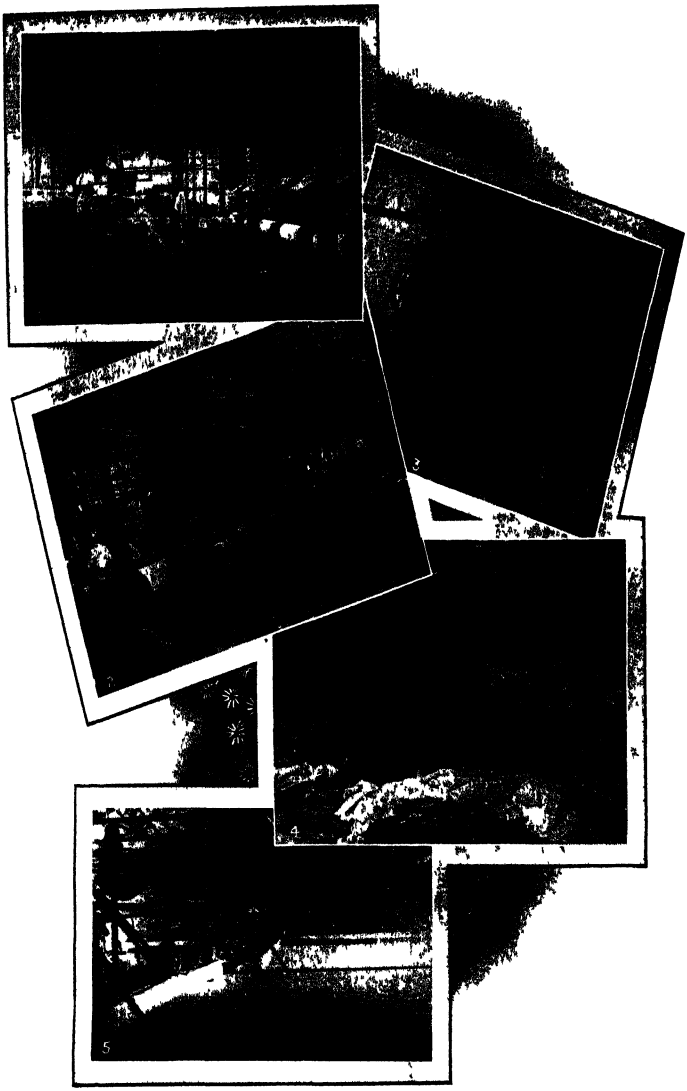
THE ELGIN MILLS COMPANY, LTD.

This undertaking, the parent of the Cawnpore group of cotton mills, first commenced operations in the year 1864, rising from the ashes of an enterprise trading under the title of the "Cawnpore Cotton Committee," which went into liquidation in that year. It remained a private concern until the year 1900, when the proprietors formed themselves into a private company, which blossomed forth in the year 1912 as a fully fledged public company with a capital of Rs. 32,00,000. Unlike cotton mills in other countries, which confine their efforts to the production of a few particular descriptions of yarn or cloth, the Elgin Mills count



ELGIN MILLS, LIMITED (EBGG, SUTHERLAND AND CO)

1, No 2 and Part of No 1 Mills 2 Tents Pitched for Ordnance Department's Inspection 3 Carding Room 4 Spinning Room



ELGIN MILLS, LIMITED (BEGG, SUTHERLAND & CO.).

1 Carding Room 2 Main Weaving Shed 3 A Corner of Bleaching House 4 Tent Making 5 Duriie Making.

amongst its manufactures a bewildering number of articles, ranging from a bundle of ordinary grey yarn to a fully equipped tent.

The company's plant comprises 43,000 spindles and 724 looms, with a complete bleaching and dyeing equipment. Separate sections deal with tent-making, rope-making, and the manufacture of cotton carpets and floor cloth. The company have a large connection with the various consuming departments of Government for a wide range of their manufactures, especially tents, of which they may be safely termed the premier manufacturers in India.

The company have recently installed plant for the manufacture of medical cotton wool and bandage cloth, and the demand for these articles, which has arisen during the year, has taxed the company's resources to the utmost.

The company, which employs a staff of seventeen Europeans and some three thousand Indians, is under the management of Messrs. Begg, Sutherland & Co., of Cawnpore.

THE EMPIRE ENGINEERING COMPANY, LTD.

This firm was founded in the year 1897 by Mr. Gavin S. Jones, and it clearly presents one example of the great foresight of this gentleman, with whom the manufacturing industry of Cawnpore is so intimately associated.

Before entering into any survey of this establishment, we would particularly draw attention to the fact that at the time of its inception the plant had to be devised in very strict accordance with the elementary conceptions of the available Indian labour in connection with engineering tools. The tools and plant have had to be replaced and improved from year to year with progress closely co-ordinating with the gradually increasing mechanical skill of the workmen.

The works cover an area of over six acres of land, and consistent with the multifarious nature of the engineering requirements of an important manufacturing district, every contingency in engineering works is provided for in the iron and brass foundries, the blacksmiths, machine, drilling, structural, sawmilling, and galvanizing shops. The whole of the plant is electrically driven by British Westinghouse motors, the power for which is derived from the central generating station. The staff consists of six Europeans, and from six to seven hundred Indians, under the control of the joint managing directorship of Mr. T. Gavin Jones (a son of the founder) and Mr. David Macbeth, A.M.I.E.E. The foundry consists of three ample bays, each devoted to its particular size and weight of castings. There are two cupolas, one of 10 tons capacity, the other of 4 tons capacity. Although not yet erected, provision is made for a high-power electric traversing and travelling overhead crane, and the existing hand cranes are to be used for the lighter work only. This spacious foundry was evidently occupied to the fullest extent of its capacity. The blacksmith shop occupies an extensive portion of the whole works, and is equipped with some one hundred open hearth forges, steam and mechanical hammers, and—what is quite exceptional—a complete battery of four "Brett's" steam drop hammers and a pair of belt-driven stamp hammers.

The work turned out in this blacksmiths' shop is of the usual varied description, from the heaviest forged crankshafts to the smallest welding of a chain link. In connection with the work of this shop, it is particularly noticeable that the Indian blacksmith is a hard worker, and the quality of the work both in hand and steam forging is really exceptionally fine.

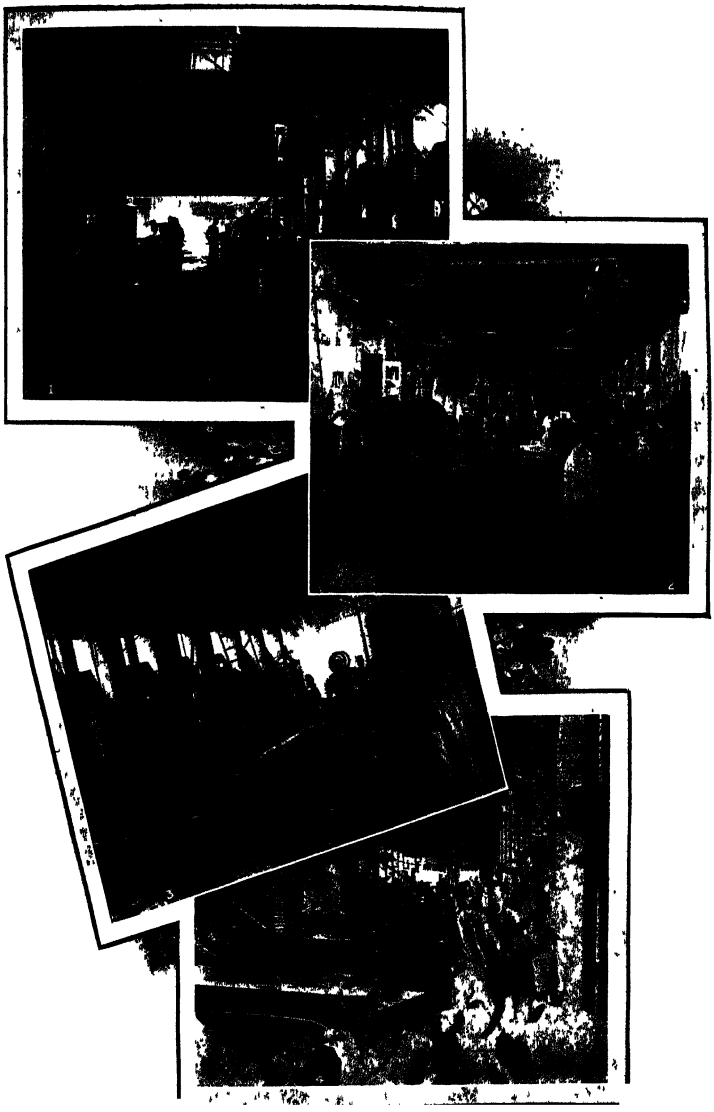
The machine shop is fitted with numerous lathes in sizes varying from a large twenty-five foot bed-lathe to the smallest lathes, suitable for the heaviest work and the small delicate work which it is occasionally necessary to carry out. There is a large heavy planing machine and other smaller planers, slotting, surfacing, and gear-cutting machines. The drilling shop occupies half of one of the large bays and is fitted with lines of radial and high speed vertical drills of every description, also lines of high-speed bench drills. In this shop all cutting and screwing is carried out. The structural shop is of ample floor expanse with the usual heavy shearing and punching machines capable of carrying out fairly large structural work, of which there are many examples in the compounds of the various mills in Cawnpore, but the large portion of this class of engineering work is of the lighter description of which we saw many examples under construction, such as tanks, foot-bridges, and sheds. The sawmill occupies one complete bay, which includes the carpenters', patternmaking, and wheelmaking shops, and is most interestingly equipped with modern plant of sawing, planing, morticing, and turning machinery. An ingenious type of wheel spoke and handle-turning machine is employed in this shop.

The general work of the firm is of a very varied character, and obviously a high standard of workmanship has been attained in the general manufacture of plant and in repair work for the industries of the Province. Quite a large portion of the work is devoted exclusively to the outturn of municipal and general sanitary requirements. The workmanship in the various watering, refuse, and other carts, coupled with the ingenuity of design, is the first in India. Well-boring and other boring tools constitute a very special item in the products of the firm, who are certainly in the very forefront of this work, so important to India. They have succeeded, by the means of Brownlie's patent tube-well, in bringing enormous quantities of water to the surface for irrigation and general uses. The Government of India has accepted the signal achievement, and now have several boring departments at work putting down these tube-wells as quickly as they can be manufactured. The War effort in so far as this firm is concerned is exhibited in the marvellous adaptability of the plant as a whole to the making of the numerous requirements of the director of munitions. The plant, tools, and general arrangements were, of course, admirably suited to turn out hundreds of army transport carts, of which many hundreds have been made at shortest notice, but this cannot be said of the manifold other requirements. Plant laid down, as we have already pointed out, to suit the mechanical standard of the moment, cannot suddenly be set to the minutely accurate work of shell manufacture, but, nevertheless, forges, hammers, machines, and foundries have been unreservedly placed at the disposal of Government's requirements. The ways and means devised to meet the occasion and the incessant work have enabled this firm to turn out hundreds of thousands of fittings, even to the smallest brass buckles, required with such urgency during this greatest of all demands.

In addition to fulfilling the requirements of Government, the firm have been confronted with the problem of meeting the necessary requirements of their regular constituents, and have been able in a creditable way to cope with the abnormal situation.

EMPIRE ENGINEERING COMPANY, LTD.

1. End View of Foundry. 2. Another View of Foundry. 3. Brass Foundry.



EMPIRE ENGINEERING COMPANY, LTD.

1 Smiths' Shop, Bolt and Nut Machines. 2. Small Machine Shop. 3 Smiths' Shop, Drop Hammers. 4 Saw Mill.

FRAMROZ & CO.

1. Bangle-Making Factory. 2. Showroom. 3. Stock Room. 4. Framroz N. Katrak. 5. Byramji R. Khori.

B. FRAMROZ & CO.

The wearing of bangles is a form of adornment which is adopted by women and children in practically every portion of the world, but the variety of these articles in any country is as complex as are the physical features of the inhabitants.

Westerners are familiar with plain or richly ornamented and jewelled designs, chiefly in gold and silver, while in India and other Eastern lands one sees equally artistic and costly decorations, as well as others made of thin wire of some valuable metal, glass, and other substances.

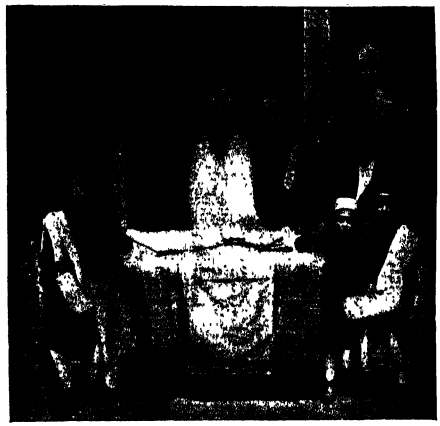
It is, however, to the making of glass bangles that consideration is now given, and it is worthy of note that notwithstanding the time-honoured reputation of India for its artistic work of various kinds, these articles made in "fast" colours were imported from Austria until a few years ago. The only firm in this vast land now manufacturing this particular class of goods is that of Messrs. B. Framroz & Co., of Firozabad, in the district of Agra, whose factory is turning out hundreds of thousands of them in different qualities and designs for wholesale shipment to every port in India and Arabia, to New Zealand, and to the United States of America.

Messrs. B. Framroz & Co. (the partnership comprises two partners—Messrs. Framroz N. Katrak and Byramji R. Khori —who are experts in glass-work) established their business in the year 1907, and at that time they manufactured glass on their own account, but they have been recently purchasing the crude material locally. The latter is passed on to workmen to be re-smelted and shaped according to required designs. Molten glass is taken upon the end of a rod and by a rotary motion it becomes a ring, which, placed in a mould and spun round until a perfect circle, without joints, is formed. Colours are so thoroughly burned into the glass that it is impossible to remove them, and this practice is followed, not only in the making of bangles but in fashioning letters for signboards and other similar purposes.

About two years ago the firm started an entirely new industry as far as India is concerned, which consists of the gilding of monograms on tumblers, cups, plates, and other articles, and this branch of their business has already become an important adjunct.

The factory contains eight furnaces, at each of which from twenty-five to thirty hands can be employed. All work performed by the full staff of about 250 individuals is done entirely by hand, and is paid for on the "piece-work" system, but any competent man, together with an assistant, can earn substantial wages, as by exercising diligence he can turn out from one thousand to two thousand bangles daily.

Messrs. B. Framroz & Co. have always received the highest praise whenever they have sent samples of their productions to exhibitions, and they have on various occasions had medals awarded to them, as, for instance, at Mysore in Southern India in 1913, in the Pudukkottai State in the Madras Presidency in 1914, and in the Baroda State in 1916.



HAJI TAJ MAHOMED HAJI WARIS MAHOMED & CO.
PROPRIETOR AND SONS.

HAJI TAJ MAHOMED HAJI WARIS MAHOMED & CO.

This firm of Benares silk and lace cloth merchants was established in the year 1810, and it is the largest and oldest of its kind in this historic city. During this long perod of more than a hundred years there has been a gradually increasing turnover, and this growth is undoubtedly due to the fact that the firm have always insisted upon supplying only the best quality of goods and by fixing prices at the lowest possible figures compatible with a high standard of excellence. All kinds of lace and silk cloth, together with *Kasi* silk, suitable alike for Europeans and Indians, are prepared, and the firm not only carry a large stock of made-up articles, but are also ready at the shortest notice to execute orders according to any designs submitted to them.

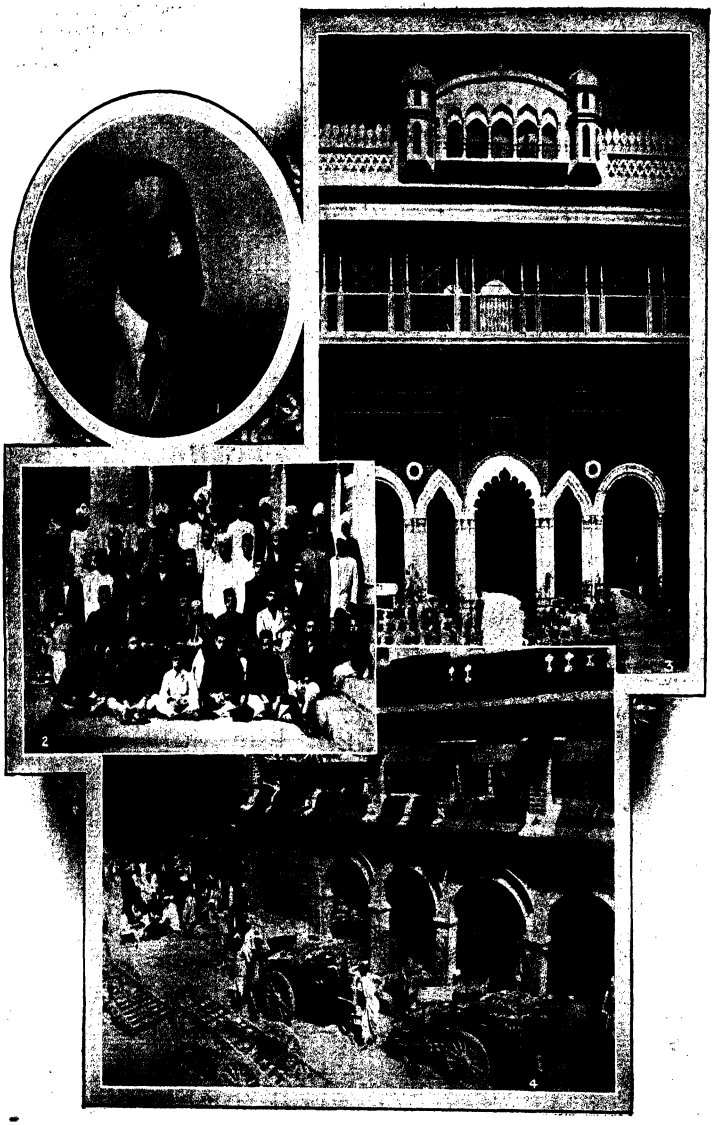
Mention may be made of *saris* of all colours and of excellent workmanship, *dawanies* and *dupattas* of various patterns and shades, white and coloured cotton and silk turbans, scarves, *ravikas*, tablecloths, muslins, ladies' gowns and kinkhabs and a large assortment of other goods of a similar character, while a large sale has been established in gold and silverware such as howdahs, tables, couches, and other household requisites.

Extensive dealings are carried on with customers in Calcutta, Bombay, Madras, Delhi, Bangalore, Mysore, Hyderabad, and in many other places throughout India, Burma, and Ceylon.

The head of the firm is Haji Abdur Rahman, who has five sons and nephews, all of whom take an active part in the business.

H. M. HALIM.

The subject of this sketch—Hafiz Mohamed Halim—is one of the best



H. M. HALIM.

1. H. M. Halim. 2. Office Staff. 3. Office Building. 4. Godown.

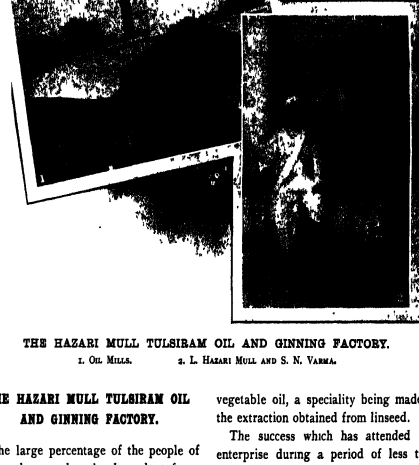
known and most respected business men in Cawnpore, and his irreproachable conduct in public and private life has gained for him a number of coveted honours, such as Rais of Sirhind and Bassi, honorary magistrate and municipal commissioner of Cawnpore, and recognized *Kursi Nashin*, thereby entitled to receive invitations and occupy seats of honour on occasions of State Durbars and ceremonies. Mr. Halim was born in the year 1867 in the Native State of Patiala, the largest and most important Sikh State under the political control of the Punjab Government, and at a comparatively early age he was taken to Delhi, where he received an all-round, practical education suitable for any one destined for a commercial career. Upon the completion of his studies he naturally looked to his father, H. M. Abdul Rahim, to guide him in the development of his business character, and to assist him in obtaining a favourable start in life.

This tuition from his parent, who was a rising merchant at the time, proved to be of immense value to him, and in the year 1896 he established a business on his own account at Cawnpore for the purpose of dealing in skins and hides. The concern began to grow surely but steadily, and to-day the proprietor finds employment for five hundred hands in his godowns alone.

In 1911 Mr. Halim contracted to meet all requirements for raw hides for the Government harness and saddlery factory at Cawnpore, and he is also concerned in an undertaking to supply meat to the Government supply and transport corps. In these two instances the contractor has had the highest praise bestowed upon him by the authorities for the thoroughly satisfactory manner in which the duties have been carried out.

Mr. Halim is, further, a partner in the Cawnpore tannery, an establishment which is sending leather of the very finest quality to all parts of India, and he also holds interests in The Kasur and Sirhind Ginning Factories, and in the Lahore Tannery. This gentleman's head offices are at Cawnpore, but he has important agencies at Bombay, Madras, Calcutta, Delhi, Ajmere, Agra, Lucknow, Benares, Jhansi, Saharanpur, Ludhiana, Jullundur, Amritsar, Lahore, Peshawar, Meerut, Bareilly, Shahjahanpur, Moradabad, Allahabad, Jaunpur, Patna, Muzaffergarh, and Durbhanga, while his foreign business connections are rapidly increasing in Europe and America.

Mr. Halim's activities are of a many-sided nature; as an enterprising merchant of strictly upright conduct he can be pointed to as an example; he readily associates himself with public functions; his private social life is unimpeachable; and his benevolent spirit is manifested in the generous assistance given by him to charitable institutions as well as to needy persons.



THE HAZARI MULL TULSIRAM OIL AND GINNING FACTORY.
1. Oil Mills. 2. L. Hazari Mull and S. N. Varma.

THE HAZARI MULL TULSIRAM OIL AND GINNING FACTORY.

The large percentage of the people of India who are directly dependent for a livelihood upon purely agricultural pursuits has, it is said, become less in recent years, but one must not forget that thousands of those formerly classed as "sons of the soil" are now engaged in new industries in which various products of the land are being manufactured into foodstuffs for mankind as well as domestic animals, and also into a variety of goods used in general trading.

In order to illustrate this, reference may be made to the cultivation of oil-seeds—highly nitrogenous crops and therefore exceedingly beneficial in rotation—which until a comparatively recent date were not compelled to return one-half of their natural values.

Factories have been erected throughout India for crushing seeds for purposes of food, and numbers of presses are now fully employed in extracting oil for domestic and other requirements.

One of these, established in the year 1915 at Becongunj, Cawnpore, and owned by Mr. L. Hazari Mull, of the firm of Messrs. Hazari Mull Tulsiram, is equipped with 124 oil presses for dealing with mustard, *til*, and mahwa seeds, in fact, the proprietor is able to prepare any kind of vegetable oil, a speciality being made of the extraction obtained from linseed.

The success which has attended this enterprise during a period of less than two years is an earnest of still greater prosperity.

A considerable quantity of cotton is grown in the United Provinces, and Mr. Hazari Mull, in order to be abreast of the times, has erected in his oil factory forty double gins for the ginning of that commodity.

A brass and iron foundry, in which castings of all sizes or shapes can be made, has recently been inaugurated, and a large and increasing business is carried on by Mr. Hazari Mull as a cotton and yarn merchant, an exporter and importer of general merchandise, and as a banker and commission agent.

A branch establishment has been opened at Calcutta, and the telegraphic addresses are "Rani Sattee" in that city and at Cawnpore.

The manager of the factory is Mr. Shambhoonath Varma, who is the founder of the mill.

G. E. HODGES & CO.

Men who succeed in business are those who are quick to see and avail themselves of opportunities which are, in the majority of instances, entirely unnoticed by others. The Great War has produced thousands of such men, and manufacturing or industrial concerns founded by them have become firmly established within the course of a few years.

This fact is well illustrated by the extensive undertakings now being successfully carried on by Messrs. G. E. Hodges & Co., of Cawnpore, Bombay, and Calcutta, as Government contractors, manufacturers, and general merchants. Mr. Hodges arrived in India in 1907 and became an assistant in a commercial house, thereby gaining experience which has been of the utmost value to him in the business which he founded in 1914 by taking over the Cawnpore Dhal Works.

It was not long before the young firm realized that the vast requirements of the military authorities gave them a chance of extending their operations, and they accordingly prepared themselves to undertake army contracts for the supply of various kinds of goods. Their initial venture in this direction was the manufacture of 100,000 pairs of braces, and the exceedingly satisfactory manner in which this order was executed paved the way for more important commissions. They next turned their attention to the production of numdahs for pack saddles, *sola*, or pith, topees, razors, knives, forks, spoons, and other canteen kit. This extension of their connection was speedily followed by a contract to deliver 500,000 yards of mosquito-netting for the use of the troops, in addition to hospital equipment, boots, shoes, buttons, badges of brass and other metals, shaving brushes, blankets, putties, socks, and a miscellaneous assortment of other requirements for the army.

Messrs. Hodges & Co. employ about 5,000 hands under competent European overseers, and their powers of organization and control are so thorough that they have recently supplied, at extremely short notice, no fewer than a thousand gross of English and Indian cotton reels, and they have the greatest confidence in their ability to meet any order, however large, with which they may be entrusted.

The firm are also exporting considerable quantities of castor, cotton, and *mahua* seeds.

It may be mentioned that Mr. Hodges has for many years past been an enthusiastic volunteer.

THE INDIAN ELECTRIC SUPPLY AND TRACTION COMPANY, LTD.

This company was formed in 1905 to take over licences granted by Government for the working of tramways and the supply of electricity within the municipal, cantonment, and district board areas of Cawnpore. The term of all the licences is forty-two years.

The tramways began operations in March 1907, and the supply of electricity was first given on December 25, 1906.

Tramway System.—This is a metre gauge line with a total route length of three and a half miles, running from the two principal railway stations through the centre of the city to the Law Courts and the chief bathing *ghat* on the banks of the Ganges.

The construction is of the usual standard type with overhead trolley wires, the cars being of the open type with cross seats and side entrances. About three million passengers are carried annually, but on festival days the number carried is very much above the average, as many as eighteen thousand having been carried in one day.

A special feature of the tramways is the system of fares, which has been adopted after experience with other schedules. The whole length of the route is divided into six stages, for each of which the fare is one pice (one farthing), and a distance of three miles may be travelled for 1½ annas (three halfpence).

Electricity Supply. This was at first given only to the Civil Lines part of the station, and the consumption of electricity progressed at a very slow rate. During the years 1909 to 1911 extensions by means of overhead wires into the native city and to cantonments, together with a reduction of the charges for power purposes, resulted in rapid increases in the connections, which at the present time are equivalent to 86,000 33-watt lamps, or 2,834 kilowatts. A large proportion of these connections is for power purposes.

A feature in connection with the power supply is the large number of small flour mills distributed throughout the town and frequently fitted in one of the lower rooms of a dwelling-house. These mills consist of a motor from 7½ to 15 h.p., driving one or two mills with horizontal stones, and the material treated consists largely of wheat purchased by the local inhabitants and brought to the mills to be ground in the presence of the customer. There are about seventy of these mills, with motors of a total capacity of 615 h.p.

In addition to this the majority of the large mills take a supply of electricity for power and lighting purposes. Within a short time the whole of the streets and alleys of the town will be lighted by electricity, about two thousand lamps being required for this purpose.

The generating plant of the company includes seven generating sets, consisting of Messrs. Belliss and Morcom's engines, coupled to dynamos made by Messrs. Crompton & Co. and Messrs. Siemens Bros., with a total capacity of 2,170 k.w. Steam is generated by six water-tube boilers made by the "Stirling" Boiler Company. Extensions to the plant are now in progress.

The supply to consumers is by means of direct current at 225 and 450 volts.

The company is under the management of Messrs. Begg, Sutherland & Co., Cawnpore.

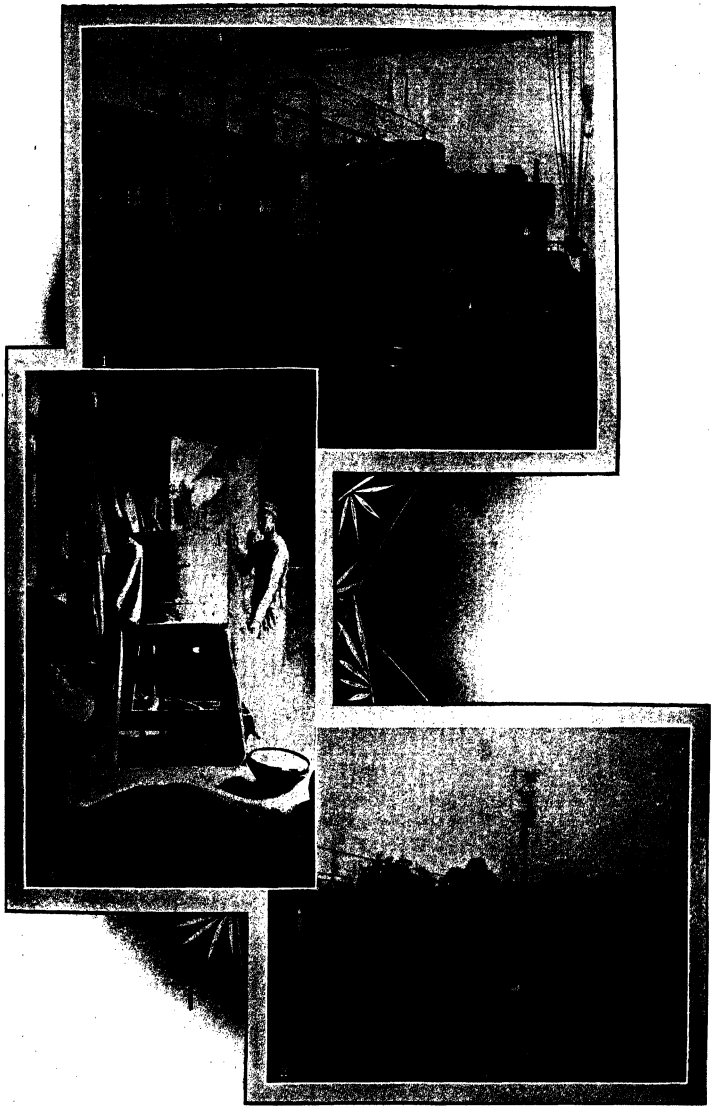
THE "JOB" PRESS

A successful business is not attained in the twinkling of an eye, just as a conjurer appears to produce something out of nothing; it must in the first instance be established on a sound foundation, it requires practical experience and persistent effort on the part of the owner, and it is absolutely essential that the commodity which is to be offered to patrons shall be above suspicion with regard to quality.

These qualifications were in evidence when the "Job" Press was started in Cawnpore about a quarter of a century ago, and the business has been managed so satisfactorily that it is to-day regarded as a prompt and recognized exponent of the subtle art of printing in all its varied types and colourings.

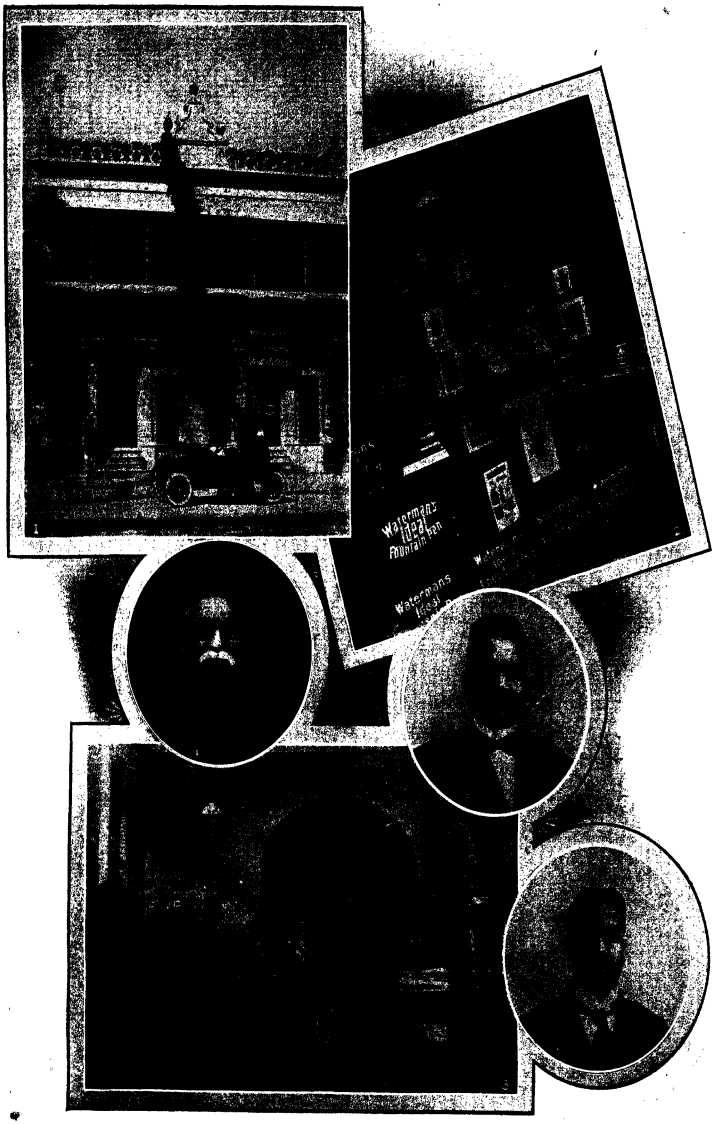
The proprietor might have announced to the world that his motto was "patient yet ambitious," but he did nothing of the kind, preferring rather to let his work speak for itself, as it has done.

It is almost needless to say that machinery and plant of an up-to-date description was installed, and special care was taken to secure competent workmen



THE INDIAN ELECTRIC SUPPLY AND TRACTION COMPANY, LTD. (BEGG, SUTHERLAND & CO.).

1. Interior of Engine Room. 2. Tramway-Car Shed. 3. Electrically Driven Flour Mill.



THE "JOB" PRESS.

1. Exterior View of Shop. 2. Interior. 3. A Portion of the Workshops. 4. The Late B. Shyamsunder Lal Khanna, Proprietor.
5. S. K. Khanna, Manager. 6. I. B. Bhattacharya, Assistant Manager.

who were always desirous of associating themselves with the high ideals which their employer had placed before him.

On account of the rapid increase of orders in all branches, the proprietor in 1912 constructed a separate building to which the workshops were transferred, and the success which has followed is unmistakable evidence that the confidence given by the public has not been misplaced.

The stationery department—situated in a handsome building on The Mall, in Cawnpore—is well stocked with a splendid assortment of business and ordinary writing papers, envelopes, books of accounts, and a choice selection of fancy goods.

The sanguine hopes of success connected with the inauguration of the business have been fully realized, but a very large proportion of the credit for attaining them is due to the untiring efforts of the manager, Mr. S. K. Khanna, who has been most assiduous in the supervision of his staff and in giving the utmost attention and civility to his numerous customers.

A. JOHN & CO.

The city of Agra, founded in 1566 by the Emperor Akbar, was for more than one hundred years afterwards the seat of the magnificent courts of himself and his successors, Jehangir and Shah Jehan, and it retained much of its prestige until the Moghul dynasty ceased to be a power in India. Thirty years ago it had its historic associations with departed glories, but its importance as a city of influence had vanished, and its attractions as far as the outside world was concerned were dependent entirely upon its noble monuments and tombs of unparalleled beauty. A considerable trade was carried on in timber, sugar, grain, oil seeds, stone, and other produce, and a large area of the surrounding land was being profitably cultivated with cotton, but it had no manufactures or industries worthy of the name.

The first step taken in the establishment of real industrialism occurred when a number of business men began to ponder over the somewhat curious fact that the fertility of the district enabled occupiers to reap abundant crops of diverse character—especially cotton—but that produce which was not consumed in its raw state was sent to other parts of India, or even abroad, to be manufactured into necessaries of life. A suggestion was made that a beginning should be made with cotton by opening a spinning factory locally, and thus give a home market to cultivators and at the same time cause considerable sums of money to be paid as wages, which must ultimately be circulated for the benefit of the city.

After the proposal had been fully considered, a syndicate was formed about the year 1887 for the formation of the Agra Spinning and Weaving Mills Company, Ltd. The promoters realized that the uneventful lives of the inhabitants of the city and neighbourhood were not likely to be stirred into sudden activities by the mere issue of a prospectus, however favourable that might be, but they naturally looked for far greater support than was accorded. Spinning was commenced on a small scale, but it was soon manifest that growers of cotton clung, like limpets to a rock, to their accustomed methods of disposing of their produce, and the mills suffered accordingly. Other difficulties had to be faced from time to time, and the company dragged out a spiritless existence for nearly three years, when a combination of distressing circumstances drove them to the verge of liquidation.

It was at this juncture that the firm of Messrs. A. John & Co., of Agra, came to the assistance of the Mills Company, and thereby laid the foundation of one of the largest milling enterprises in Northern India.

Before proceeding with the history of the Agra Spinning and Weaving Mills it is necessary to insert a few words regarding Messrs. John & Co. The founder of the firm was Anthony John, a diamond merchant of Greece, who arrived in India in 1801, and after serving for some time with British expeditionary forces in this country he established himself in business as a dealer in precious stones at Agra, although he had trading relations with several other centres in the north. This gentleman subsequently became a general merchant, but he continued to make a special feature of the diamond branch. Upon his death he was succeeded by his second son, Nicholas Anthony John, who very considerably advanced the interests of the firm, which, by the way, was then known as A. John & Co. Nicholas followed his father's example in attaching himself to the British Army, and served as an artilleryman during the mutiny of 1857. He subsequently continued his prosperous mercantile career until 1891, when he died, leaving nine children, to whom he bequeathed his business.

Mr. (now Sir Edwin) John was thereupon requested by his brothers to undertake the position of head of the firm, and it was in this capacity that his attention was directed to the parlous condition of the Agra Mills Company, already referred to, and he became so convinced of the possibilities of cotton milling in Agra that he determined to devote his energies and great abilities to the task of making the mills yield a remunerative return for invested capital.

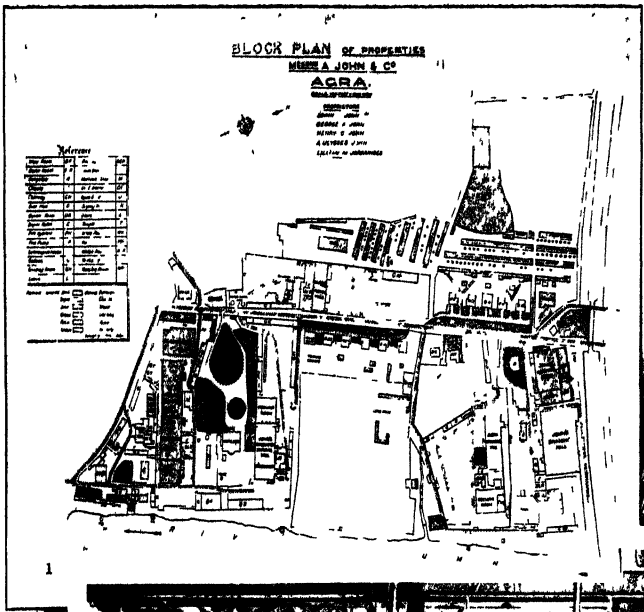
Messrs. John & Co. then took over the whole of the affairs of the Agra Spinning and Weaving Company, and after thoroughly overhauling the mills and machinery by controlling in a business-like manner the general working of the concern, they were rewarded with success in the difficult task to which they had committed themselves.

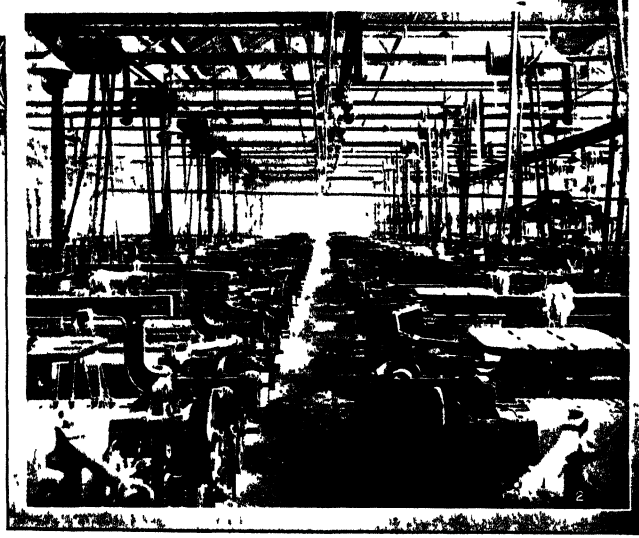
It should be borne in mind that the firm had not previously been greatly interested in milling operations of any kind, and, indeed, were without any special knowledge of the textile industry, as they had been engaged in building up their general merchants' business at a very rapid rate, therefore they are deserving of the greatest credit in laying a solid foundation-stone for the large number of industrial enterprises for which Agra has since become famous.

A serious fire occurred in the mill premises in the year 1900, but Messrs. John & Co. in a measure welcomed this outbreak, as it afforded them a much-needed opportunity of replacing obsolete machinery by modernized plant of a far greater capacity.

The equipment of the mill now includes fourteen thousand spindles, and the prosperous state of the undertaking, inaugurated so efficiently by the firm, has continued to the present time.

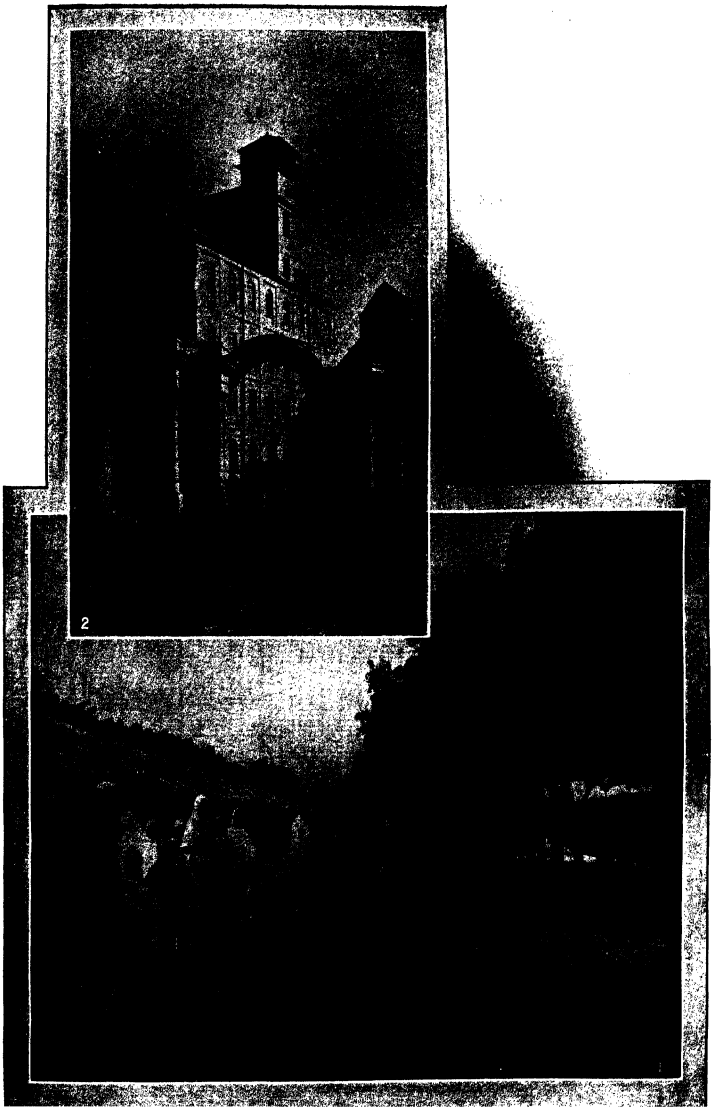
When Messrs. John & Co. entered heart and soul into the milling of cotton they became increasingly impressed with the idea that there should not be any insurmountable difficulties in establishing other factories for dealing with the products of the district, and they accordingly submitted the project to a searching investigation as to the particular manner in which their energies should be directed. An important question to be considered was the selection of a suitable site for the buildings, one which would possess facilities for the transport of raw





A. JOHN & CO.

1. Plan of Properties. 2. Interior of Weaving Mill.

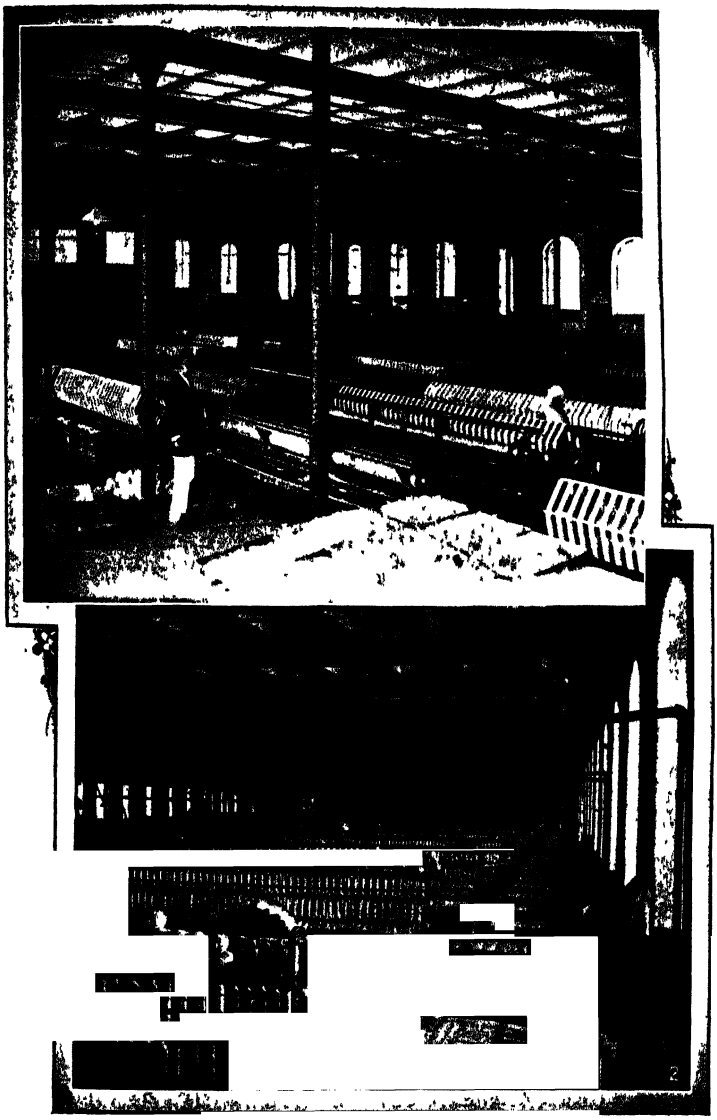


A. JOHN & CO.

1. Labourers' Village. 2. View of Flour Mill from Gate.

A. JOHN & CO.

1. Blow Room, No. 4 Mill. 2. Engine Room, No. 4 Mill.



A. JOHN & CO.

2. Reeling Room, No. 4 Mill. 1. Spinning Room, No. 4 Mill.

materials and manufactured goods to and from the mills. Eventually they secured an excellent piece of land, some 80 acres in extent, upon the banks of the river Jumna, and at the present time that large area, which then consisted of open fields, has been literally transformed into a thriving model village, teeming with a population of about eight thousand persons, three thousand of whom are employed in the various mills which have been erected and are being worked by this progressive firm. The position of Agra to-day as a flourishing industrial centre of the United Provinces is due to the far-sighted policy, the genius of initiative, and the indomitable perseverance of Messrs. John & Co.

In 1896 they opened John's Spinning Mill, a handsome building in which have been installed about eighteen thousand spindles, driven by machinery of an approved modern type, and four years later they fitted a shed with four hundred looms, which are now employed in making *dessootee* for military purposes. Messrs. John & Co. contracted to hand over to the Army the total output of this kind of cloth, but owing to difficulties in connection with labour they can supply only one-half of the possible output, as workmen earn sufficient money in one day to enable them to absent themselves on the two following days. They also established other spinning and weaving mills on the same land, and in doing this they centralized in Agra operations which had previously been carried on at Delhi and other places. The total daily output of the mills is about eighty bales, each of which is 500 lb. in weight.

Messrs. John & Co. have also erected a remarkably fine four-storied flour mill, with an imposing tower, which is meeting a growing demand for flour, bran, *atta*, and other products of wheat. The firm, with that thoroughness as regards details which is so characteristic of them, have installed up-to-date machinery and plant, comprising purifiers, scalpers, centrifugals, separators, graders, scouring and washing machines, drying apparatus, and dust collectors. This mill to-day is daily turning out about 1,200 maunds, mostly for Mesopotamia. When oatmeal could not be imported this firm at once brought out a splendid substitute called Agroats, and they were given a diploma for it at the Bombay Exhibition. Agroats is much cheaper than oatmeal, and has come to stay, being a lighter food, and therefore more suitable for consumption in the summer months.

Another commodity of which Agra stood greatly in need some fifteen years ago was a regular supply of ice, and here again Messrs. John & Co. showed their business capabilities by installing suitable machinery, which is now turning out a daily quantity of about 15 tons for hospitals, military requirements, clubs, hotels, and private consumers.

The firm have extensive workshops in which competent men carry out repairs of all kinds to buildings or any portion of the machinery.

This collection of factories is an excellent tribute to the enterprise of the firm, and particularly of Sir Edwin John, who was the moving spirit in the establishment of the mills, and who has by his strong personality and great abilities controlled them with such remarkable success.

Any one approaching the mills might observe tall chimneys indicative of the presence of manufacturing concerns, but they could not form an idea of the magnitude of the operations carried on there with such precision. Still less would the visitor be prepared for a charming model village which the firm have so thoughtfully provided for their workpeople and their dependents.

In the first place one notices an abundance of fine shady trees, broad and well-kept streets, beautiful green lawns, sheltered walks, and gardens of the choicest flowers. Attractive bungalows have been erected for the general manager (Mr. H. Lyon Scott) and the European staff, while there are no fewer than six hundred admirable huts for native employees and their families. There is an abundant supply of good water and sanitary appliances, and the utmost cleanliness is observable in every part of the village.

The firm realize the immense advantage of having their workmen comfortably housed in desirable quarters away from frequently unhealthy villages, and the people themselves are quite alive to the fact that they are in much more satisfactory surroundings than many thousands of their fellow-men. But the firm have done more than provide homes for their men: a school has been opened for the education of half-timers and the children of the village; a club has been provided for recreation and instruction; and a dispensary, controlled by a fully qualified official, is regarded by the people as one of their greatest boons.

The present active partners of the firm are Sir Edwin John, Messrs. George A. John and A. Ulysses John (Captain and A.D.C. to Lieutenant-General Barrett), while Mr. H. C. John and Mrs. Jordanidis are financially interested in the various undertakings.

A few words of a personal character may perhaps be added regarding the senior partner. Sir Edwin has shown that he is possessed of remarkable administrative ability in commercial matters; he has a perfect genius for grasping possibilities; and while he has been a tower of strength to his own firm, he has at the same time raised Agra from the position of an easy-going city with historical associations to an important industrial and manufacturing centre.

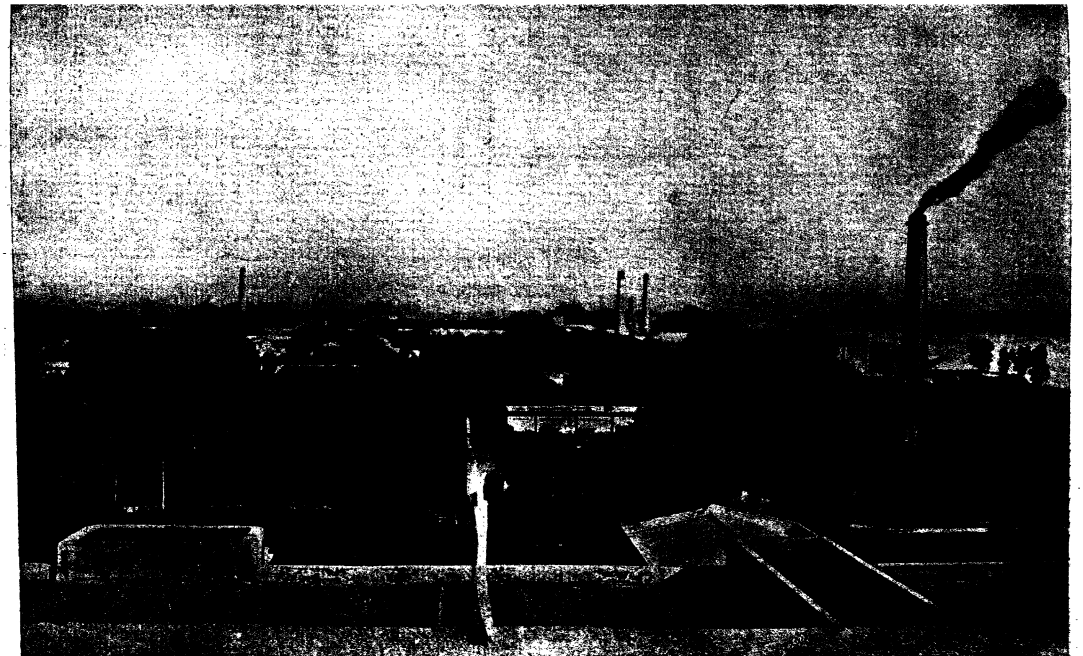
Sir Edwin's high qualities have been recognized by his selection for positions of honour and trust in Government and municipal service, such as secretary and treasurer of funds during two periods of famine. He has on two occasions been received in audience by His Holiness the Pope, to whom he owes the honour of knighthood.

JWALAPERSHAD & SONS

Of the well-known workers in general metal military goods in the Aligarh district there is no firm with a greater reputation for high-class productions than that of Messrs. Jwalapershad & Sons, proprietors of the Military General Metal Factory at Aligarh, but while they so richly deserve the esteem of the public which they have gained in this particular line of business, they make a special feature of supplying various classes of goods to meet the requirements of Government, military police, and railway authorities. Included in these manufactures are brass and white metal clasps, shoulder and turban badges, monograms, crown stars, infantry whistles, spurs, spoons, forks, gun-oil bottles, water bottles, canvas kit bags, carriage locks and keys, padlocks, and many other articles.

Consistently good workmanship, coupled with comparatively low prices, has secured for Messrs. Jwalapershad & Sons the fullest confidence of their numerous patrons, and the execution of orders for goods, which are received daily in increasing numbers, enforces steady hard work upon the three hundred hands who are employed in the factory.

Babu Jwalapershad commenced business in 1906, and in less than a dozen



A. JOHN & CO.
BIRD'S-EYE VIEW OF PROPERTY.

years he has, by patiently plodding his way, brought the firm into a distinguished position among commercial enterprises in North-Western India.

It should be remarked here that Babu Jwalapershad had very slight educational advantages, in fact, he did not know a single word of English when he began trading, whereas at the present time he can converse intelligently, and write legibly in that language, and is able to deal with any clerical duties which may be placed before him.

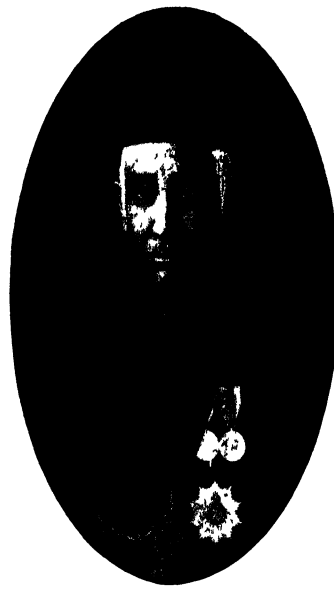
His family consists of his wife and two sons and two daughters The eldest son, Pirbhu Dyal, now fourteen years of age, attends the Dharamsamaj Patshala, and it is intended that he shall join his father in the established business, bringing into the concern a bright and intelligent disposition, coupled with the advantages of a good education and progressive ideas upon commercial matters.

Simbhu Dyal, the younger son of five years, has not at present revealed any special proclivities, but he gives promise of a vigorous future

Babu Jwalapershad, though an orthodox Hindu, is liberal-minded and also liberal-hearted, as his substantial contributions to the war fund and other charities clearly prove He is the type of Indian with whom Western civilized nationalities are not only charmed but of whom most pleasant reminiscences are carried away.

JWALAPERSHAD AND SONS.

1. Interior of Workshop. 2 Jwalapershad and Sons.



THE HON. RAJAH SIR RAMPAL SINGH, K C I E, OF KURRI-SUDAULI

THE KURRI-SUDAULI RAJ.

The Kurri-Sudauli House, which has played so important a part in the history of Baiswara, is the head of the Naihasta branch of the great Tilok Chandi Bais clan of Rajputs The present chief, the Hon Raja Sir Rampal Singh, K C I.E, the *taluqdar* of Kurri-Sudauli, in the district of Rai Bareli, in the United Provinces of Agra and Oudh, was adopted by Raja Hindpal Singh when he was only twelve months old, and on the 9th June, 1875, when eight years of age, he became proprietor of the estate on the death of his adoptive father. The management of the Raj was vested in the Court of Wards during the minority of the Raja, who was educated at the Mahommedan Anglo-Oriental College, Aligarh, where he passed the first Arts Examination of the Calcutta University. He assumed control of his properties in 1887, and throughout the past thirty years he has continued to take a keen interest in the general welfare of his people.

The Raja was subsequently appointed an Honorary Magistrate of the second class, as well as an Honorary Munsiff and

a Fellow of the Allahabad University, and the duties attaching to these responsible positions have been performed with exceptional ability, while the Imperial Government recognized his public services in 1904 by conferring upon him a Companionship of the Indian Empire.

After serving the local Government for a number of years as a Member of Council, the Raja was honoured by being elected to a seat upon the Imperial Legislative Council, where he has constantly striven his utmost to secure the adoption of measures calculated to promote the social and moral well-being of his countrymen, and as a leading member of the British Indian Association of Oudh his efforts for the welfare of his brother *taluqdars* have been widely appreciated. The Rajput community of India regard him as one of its leaders, and he is Vice-President of the *Kshattriya Upkarini Mahasabha*. His devotion to the cause of sound progress has been acknowledged by his selection as President of all-India, as well as Provincial Social Conferences, and in 1917 he was raised to the dignity of a Knight Commander of the Most Eminent Order of the Indian Empire.

The title of Raja is an hereditary one, and the high esteem in which the Chief is held can only be due to his estimable personal characteristics and to the worthy manner in which the best traditions of an ancient and honoured house are maintained.

LALA KHUNNI LALL.

An excellent illustration of the power of heredity in the manifestation of distinctive qualities in mental vigour as well as in philanthropic tendencies is afforded by a perusal of the life history of the well-known banker and zemindar, Lala Khunni Lall, of Beharipur, in the district of Bareilly. His father, the late Lala Kanahai Lall, belonged to an honoured *Agarwal Vaish* family of Bareilly, and although he did not inherit wealth, or succeed to a flourishing business concern, he had grit in him, and this invaluable possession of determination, backed up by a stern resolution to adhere closely to upright principles of conduct, was the impelling force which eventually raised him to a foremost position among financial magnates and landed proprietors in the United Provinces. At an early age he began to trade in goods of a general character. Subsequently he made arrangements to act as banker for his clients. By these means he greatly extended the area of his operations. At a later date he undertook contracts for the performance of almost any class of work, or the supply of various descriptions of merchandise, and thus it followed that he became the owner of a large quantity of property, consisting of whole villages, land, and houses, all of which—together with the banking business—devolved at his death, on the 19th May, 1906, upon his only son, Lala Khunni Lall.

Lala Kanahai Lall rendered admirable service to the British Government during the Indian Mutiny, and events in his private life marked him as one who, while fearlessly doing his duty as a commercial man and as a citizen, had a large heart which was ever ready to respond to the needs of less fortunate individuals. He contributed a handsome amount towards the erection and maintenance of the Bareilly College, and at a later period of life he set aside a large sum of money for the foundation of a *dharamsala* in a suitable bungalow. This project had not been actually completed at the time of his death, but his son Lala Khunni Lall has loyally carried out the intentions of his father.

Meritorious acts performed by Lala Kanahai Lall were the dedication of two shops and a house for the upkeep of a Hindu temple near to his private residence, the building of a *dharamsala* near the Ramegunga Ferry at Kohni village, in the Aonla *tahsil*, in the district of Bareilly, and subsequently endowing it with the income of his landed property in the village of Babia. During periods of famine, and even when there has been a partial scarcity, he has generally provided food for needy persons irrespective of caste or creed. In July 1905 he endowed another Hindu temple at Gungapur by the gift of three shops to provide revenue for the benefit of Sanskrit scholars.

Lala Khunni Lall was born in the year 1860, and as soon as his education was completed he associated himself with his father in business matters, and as a matter of fact, his active co-operation contributed in no small degree to the great wealth which has been achieved.

It was a source of sincerest regret to this gentleman that he had no heir to succeed him, and therefore on the 9th May, 1912, he adopted Brijmohan Lall (the son of his wife's brother, Kishenlal), the function being attended by the most elaborate ceremonies.

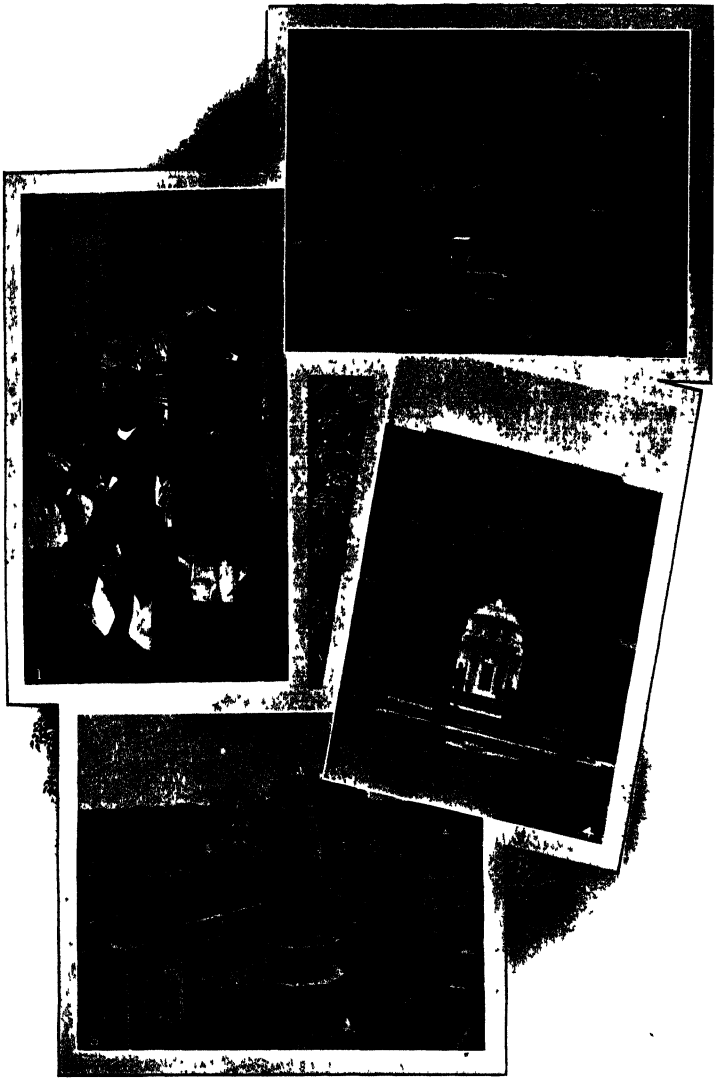
Owing to indifferent health Lala Khunni Lall has not been able to allow his prospective heir to go abroad for his education, but the latter is being specially trained in order that he may at an early date relieve his foster-father of a considerable proportion of the heavy responsibilities of the huge undertaking in which the latter is concerned.

Lala Khunni Lall is imbued with the same generous spirit as that which was so prominent in the character of his late father, and his public and private charitable gifts have been both numerous and valuable. For example, on the occasion of the opening of a temple within the before-mentioned *dharamsala* (which, by the way, cost him Rs. 1,00,000), this gentleman provided a huge feast for the residents of Bareilly, and it is worthy of notice that the caste or creed of a guest was a matter of total indifference to the donor. A *sada bart*, in connection with the *dharamsala*, for the daily feeding of poor people, is also maintained at his cost. In the year 1907 Lala Khunni Lall was informed that the *gowshala*, or home for cows, at Pilhibit, was in financial difficulties, and he generously came to the rescue by giving a portion of his village, "Pakaria Bijoypur," intending that free pasturage should be provided for dumb cattle. He also contributed a sum of Rs. 2,000 towards the Hindu University at Benares, and when troops for the European War were leaving Bareilly he entertained the men at his Civil and Military Hotel Buildings in the latter city. Further than this, he provided the Saraswati *vidyalay* at Ahrola with a bungalow for the benefit of the school, and also gave a handsome donation for the upkeep of the King Edward Memorial School at Bareilly.

MAHADEO PRASAD JAYASWAL.

The minor products of the forests of India comprise fibres, grasses, drugs, spices, gums, resins, rubber, and many other substances, and several of these are of such commercial value that, according to comparatively recent Government statistics, a sum of nearly Rs. 100,00,000 is annually realized by the sale of them. Lac is one of these products, and as shellac—which is manufactured from it—has in recent years been used in a far greater number of ways than formerly, it has become a most important item in commercial transactions.

A wholesale dealer in shellac, whose



KHUNNI LALL.

1. Lala Khunni Lali and His Adopted Son, Brijmohan Lall. 2 L. Kanahai Lall's Dharmsala. 3 Interior Dharmsala.
4. Main Gate Under Construction.

name is well known upon the markets in Europe and America as well as India, is Mr. Mahadeo Prasad Jayaswal, of Narghat, in the city of Mirzapur, who commenced business in this line about forty years ago. He purchases lac in various parts of the Presidency of Bengal, the Province of Bihar and Orissa, and the Central Provinces, and in his factory at Narghat, Mirzapur, which was erected at a cost of Rs. 50,000, he employs about 250 men in manufacturing shellac, which is disposed of in large quantities to regular purchasers in Calcutta, London, New York, and other leading centres of industry.

It will be understood that Mr. Jayaswal's products are of superior quality when it is stated that he was awarded a gold medal for shellac at the Industrial and Agricultural Exhibition held at Benares in 1905; and a certificate of merit, together with a silver medal, at the United Provinces Exhibition at Allahabad in 1910. He is the originator of the stamped button and tongue lacs, and his brands are very well known in American, Continental, and English markets.

Mr. Jayaswal also deals largely in the famous hand-made woollen Mirzapur carpets, which have secured a high reputation for beauty, quality, and durability in practically every part of the civilized world; and he further digs out of mines and sells a considerable quantity of corundum stones, which are used in the manufacture of artistic jewellery and ornaments.

Mr. Jayaswal's business grew so rapidly that he found it necessary to open branch manufacturing establishments at Jhalda, in the district of Manbhum, in the Province of Bihar and Orissa, and at Wyndhamganj, in the district of Mirzapur. He is also the owner of land and buildings in Mirzapur, Jhalda, and Calcutta.

Mr. Jayaswal's eldest son, Mr. K. P. Jayaswal, M.A., barrister-at-law, is now engaged in legal practice at the Bihar and Orissa High Court at Patna; Mr. G. P. Singh Jayaswal, the second son, is the owner of mica mines at Kodarma, in the district of Hazaribagh, and is employed in working them; and Mr. Umesh Singh Jawaswal, the third in the family, is now studying mechanical engineering in England. There are also three sons of minor age.

MAHADEO PRASAD JAYASWAL.

1. Factory. 2. Shellac Manufacturing Department.

MAHOMED YAKOOB KHAN & SONS

Comparatively young men of the present day are old enough to remember the effects caused by the introduction of machinery in the manufacture of all classes of goods, and although it is generally admitted that the innovation has been attended by the most beneficial results, there still remain many enterprising firms who to-day are reluctant to dispense with manual labour in their workshops.

It is only natural that a very large number of Indians should belong to the latter class, as they are employed to a very great extent in the production of articles of various kinds which are artistically carved, superbly ornamented, or beautifully embroidered, and it is essential that delicate work of this description should be entrusted only to persons who, by heredity or training, or perhaps both, are skilled in handicrafts.

Manual labour is the outstanding feature of the important furniture-making

establishment of Messrs. Mahomed Yakoob Khan & Sons, of Bareilly, which was founded in the year 1870 by Mahomed Yakoob Khan. The present managing proprietor is that gentleman's eldest son, Mahomed Idris Khan, who from his boyhood received a thorough course of instruction in the art of manufacturing high-class household appointments. The only machinery in the whole of the premises is a steam engine, which is required for drying green timber obtained from Government forests in the United Provinces and Nepal. The wood is seasoned for some years before any portion of it is used in the shops, and therefore the firm have the utmost confidence in guaranteeing the durability of all goods despatched from their works. A large and varied stock of all kinds of furniture and upholstering materials is kept on hand, and as the proprietors are expert designers, they can at the shortest possible notice supply samples of their workmanship to intending purchasers.

Sons hold appointments as suppliers to the Government of the United Provinces, His Highness the Maharaja of Gwalior, His Highness the Nawab of Rampur, and to a large number of other notabilities in India, and they have, further, obtained gold medals and certificates for the excellence of their displays at the following exhibitions, namely: Benares in 1905, Bareilly in 1908, and the United Provinces in 1910–11.

Workmen are trained by the firm's experts in every branch of work, but particularly in painting in various colours, this being one of the most ancient Indian arts, carried on almost exclusively in Bareilly from historic times. This speciality has been greatly admired throughout the country by hundreds of connoisseurs, including the commander-in-chief of His Majesty's forces, who extended his patronage to the firm by placing an order with them.

Messrs. Yakoob Khan & Sons have for some time past realized that they were most desirable site within the civil lines in Bareilly, upon which they intend to erect up-to-date workshops, extensive warehouses, and showrooms in which their excellent productions can be seen to advantage.

About 400 hands are employed by the firm.

MAHOMED YAKOOB KHAN AND SONS.

1. Mahomed Idris Khan, Managing Proprietor. 2. Part of Showroom. 3. Portion of Timber Yard. 4. Working in the Nepal Forests.

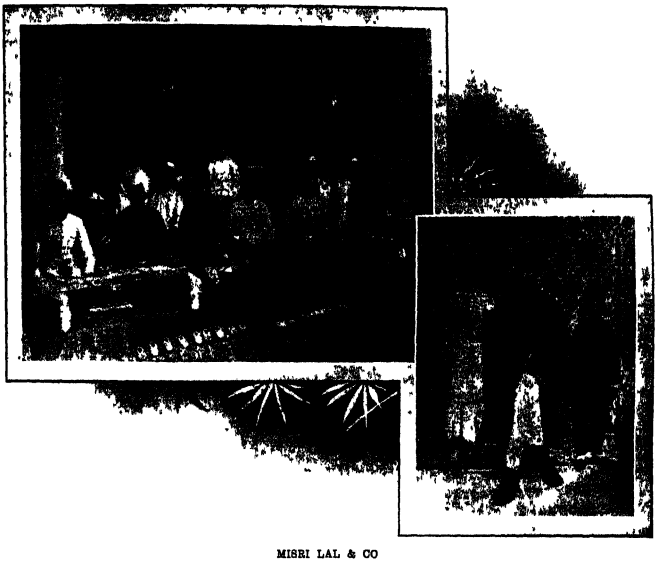
MISRI LAL & CO.

The district or city of Aligarh, in the Agra division of the United Provinces of Agra and Oudh, is noted for its fine metal work and the manufacture of locks and keys. Facts connected with the origin of this industry are worthy of record.

Long before the invention of padlocks such as are now in common use throughout the world, there was in India a kind of lock, without levers, which was opened or closed by the action of a long iron key, shaped like a nail, with its head placed foremost into the lock. These productions were, however, of little value in securing

Palaces belonging to several Indian chiefs have been furnished throughout, and Messrs. Mahomed Yakoob Khan & urgently in need of more suitable premises, and with the object of attaining this end they have recently purchased a safety, and the great need for an improved type was being considered by Government officials, bankers, and others, a few years

previous to the Mutiny, when P Chuni Lal Jha arrived in Aligarh from his native place in the district of Darbhanga, in the



MISRI LAL & CO

1 Workshop 2 Misri Lal Jha and Sons

Province of Behar and Orissa The newcomer forthwith began to make moulds and do other preparatory work according to plans designed by himself, but while employed in this manner a postal workshop was opened by the Government of India at Aligarh, and the first superintendent in charge, having inspected P Chuni Lal Jha s diagrams and specifications, was so pleased with him that he took over all his materials and plans, and appointed him to the position of contractor to the shops, in which he had more scope for the development of his inventive genius. Success attended his efforts, locks ultimately being made which gained the approbation of Government officials as well as of the general public. These were somewhat on the pattern of the well-known "Chubb s" lock of the present day, and after further improvements had been effected they increased in popularity, with the result that Aligarh is now annually turning out many thousands of high-class brass, iron, and galvanized iron locks, which are despatched to all parts of India

P Chuni Lal Jha continued as contractor to the postal workshops for about thirty years, but during that period he established a factory on his own account in which models of locks were made for submission to the superintendent of the Government concern His son, P Misri Lal Jha, became an expert in the business under the capable training of his father, and succeeded as contractor to the Government on the death of the latter He also obtained a larger and more up-to-date plant and employed more hands, with the result that he was able to manufacture a much larger number of locks of superior quality

P Misri Lal Jha is now carrying on the factory under the original name of the firm, and is supplying various Government departments, railway companies, and the general public with locks, steel trunks, boxes, badges, brooches, hollow uniform buttons, punches, keys, cash safes, and a large number of other metal-ware goods

THE MUIR MILLS COMPANY, LTD.

The directors of this company are Mr T Smith (managing), and Messrs C May Arrindell Walter Parry, and T Gavin Jones, and the capital consists of Rs 30,00 000 in 60 000 shares of Rs 50 (30,000 ordinary and 30,000 6 per cent preference) fully paid up The preference shares were distributed as bonus to shareholders in 1900

The company was established in Cawnpore in the year 1874 and in their three mills an extensive business (which is well known throughout India as well as in Great Britain) is carried on by them as manufacturers of every description of cotton cloths, yarns, tents, *dhurries*, *jarashes*, and canvas requisites of all kinds

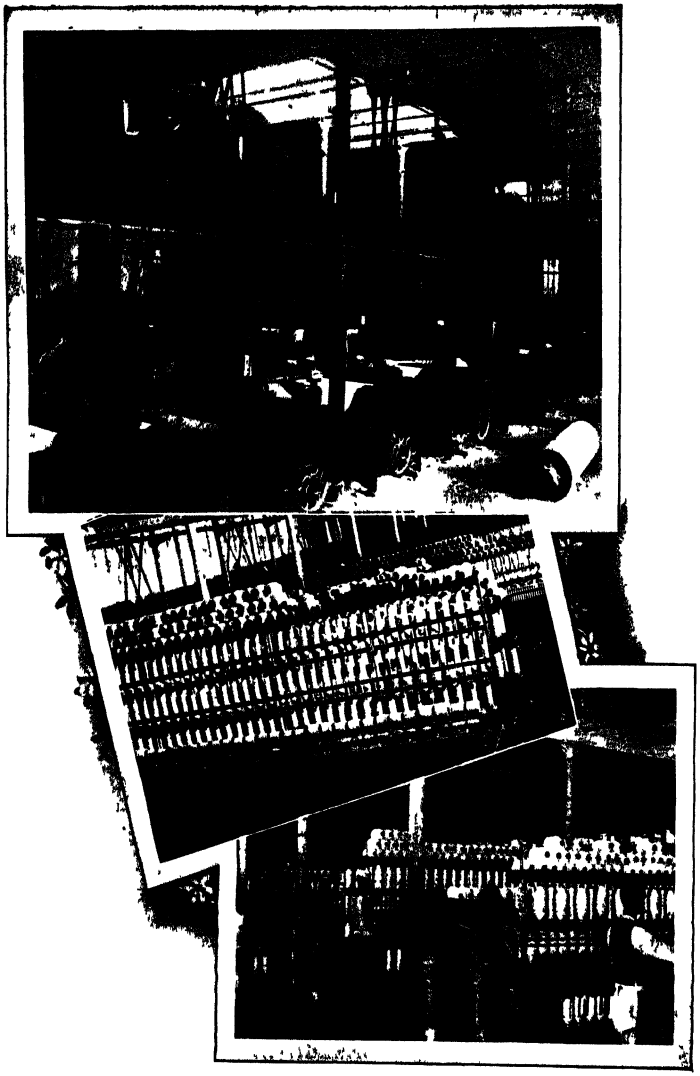
When consignments of raw cotton arrive at the mills they are carefully sorted and stacked according to their various types until they are removed to undergo the different processes of manufacture After the cotton has been passed through blowers, it is placed in carding, drawing, twisting, and winding machines, all of which have been constructed on

MUIR MILLS COMPANY, LTD.

1. No. 1 Mills. 2. Part of the Tent-Pitching Ground. 3. Some Muir Manufactures.

MUIR MILLS COMPANY, LTD.

1. Tent Making. 2. A Corner of the Dye House. 3. In the Bleaching Room.



MUIR MILLS COMPANY, LTD

1. A Corner of the Weaving Shed 2. Spinning Room 3. In the Carding Room

thoroughly up-to-date principles, and are driven by a steam engine of 1,800 h p

The plant includes 73,988 spindles and 1,561 looms The total area of the company's property is some 35 acres in extent All dyeing and bleaching is done on the premises with modern machinery the work being in charge of an expert official In 1916 the company made important improvements in the machinery in this department

The company have contracts with the army authorities for the supply of khaki and similar engagements have been entered into with various Government departments to provide uniforms and other sundries for their servants A walk through the premises reveals the variety of the company s manufactures, which include khaki and coloured drills, striped and other twills for shirts and sleeping suits, Turkish, honeycomb and huckaback towels with fast-coloured red or blue headings, tablecloth– bleached and calendered —serviettes, bed-sheets, mattresses pillow cases, counterpanes, horse-clothing, *dhurries*, purdahs, jute carpeting putties, cords for riding breeches, khaki webbing flax canvas, paulins of varying sizes complete with eyelets, waterproof cloths, valises, military kit bags, dark blue tennis screens white cricket screens flannels, blankets grey jerseys, buttons, haversacks awnings, bags, and other canvas requisites

A thoroughly modern rope-making plant has been erected in the mills, and selections can be made by customers from white cotton rope of any circumference from one inch to three inches, coloured cotton ropes in various patterns, white log lines, ratlines, and other descriptions of cordages

In addition to their weaving and spinning mills, which are among the largest in India, the Muir Mills Company have separate departments and workshops for the manufacture of tents of all descriptions of best materials, skilfully made up by experienced workmen, and these include double or single-poled regulation tents, hill tents, Swiss cottage tents, general service tents, stable tents, Kashmir tents, bell tents, officers' tents, durbar tents, mess tents, marquees, dwelling tents, and a host of others made up in various designs

The company have also their own engineering, foundry, and carpenters' shops, and these are busily employed

Trolley lines have been laid in all parts of the mills, appliances for the extinction of fires have been distributed in all buildings and the company's own sidings connect the premises with the local railway system

The grounds are tastefully laid out, and excellent quarters for the manager and the staff have been constructed

Mr T Smith, the managing director was for a number of years a director of the company before he assumed control early in 1915

Employment is found for more than thirty Europeans and three thousand Indians

Manufactured goods from these mills have been awarded gold and silver medals at the Calcutta International Exhibition, and at Sydney, Melbourne, the Netherlands, and at many important centres in India

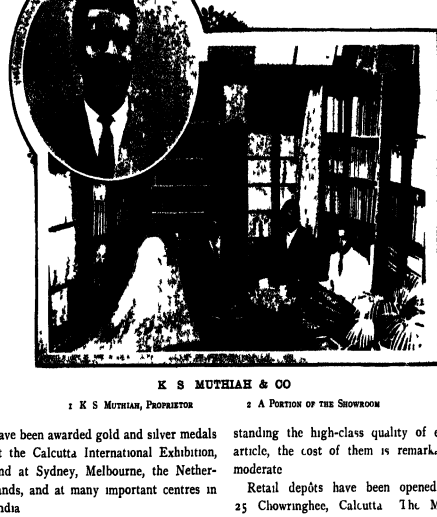
Numerous letters of approval of goods have been addressed to the company by hundreds of customers, but a reference to a few of these will suffice

The tents supplied to the *Coldstream* Guards at Ramhill Barracks, Aldershot, England, "are quite satisfactory', the superintendent of the tent department, Bhopal State, "inspected the tents manufactured by the Muir Mills Company and found them very good , Mr Mani Ram, *Farashkana Kamdar* of Baroda, said ' the committee has approved of seventy-four *tents lately supplied, and have found them* exact to our special specifications, and neatly made , Lord Shaftesbury, writing from Belfast Castle in Ireland, said that ' the tents have been a complete success, and have been very much admired ", the officer-in-charge State Stores, Gwalior, deposed that "the Swiss cottage tents *dhurries* and canvas chairs are found to my entire satisfaction and other letters refer in terms of the highest praise to *dhurries* ground sheets bath towels, ropes horse-clothing, sheets tablecloths uniforms and suitings

The company fearlessly challenge comparison of their products with those of any other manufacturers and notwithstanding the high-class quality of each article, the cost of them is remarkably moderate

Retail depôts have been opened at 25 Chowringhee, Calcutta The Mall, Lahore, at Kashmir Gate, Delhi and at The Mall Cawnpore

The telegraphic address of the company is Muir, Cawnpore



K S MUTHIAH & CO

1 K S Muthiah, Proprietor 2 A Portion of the Showroom

K. S. MUTHIAH & CO.

Benares is known throughout the world for its magnificent embroideries, silks, and brass and silverware, and one of the finest collections of these incomparable goods in that city may be seen at the Silk House " of Messrs K S Muthiah & Co , of *212 Agast Kunda, Dasasumedha Road* The proprietor of the concern, Mr K. S. Muthiah, was born in the year 1874 at

Kalakad, in the district of Tinnevelly, in Southern India, and in 1901 he established himself in business in Benares, dealing in embroideries, brocades, silks, cloth, lace scarves, silk *saris* and *chadders*, handkerchiefs, *kottadi saris*, *ravikas*, of the finest texture, silk *lungas* especially designed for Burma ladies, voile silk, *patloo mundoos*, embroidery caps, satin *dasani*, Kashmir shawls, and a choice assortment of fancy brass and silver articles, all of which are sold at remarkably reasonable prices

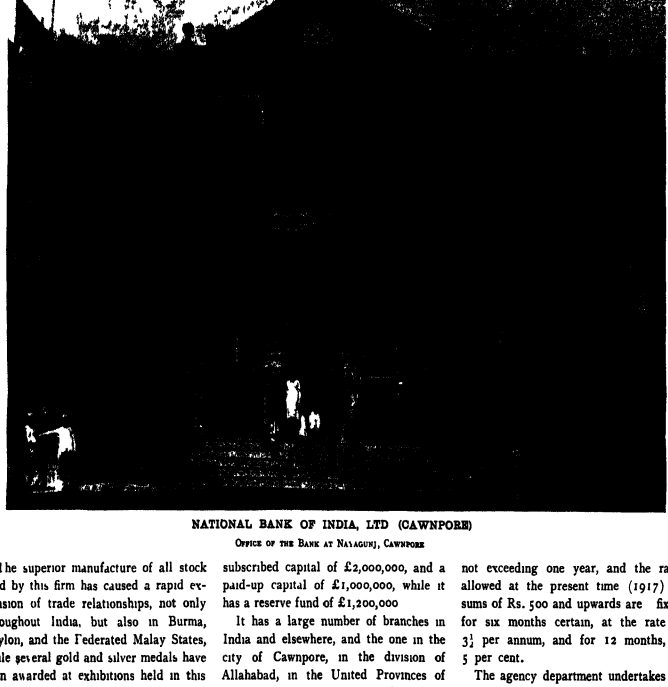
are courteously welcomed by the proprietor, who, with a desire to be of the utmost assistance to them, has prepared for their guidance a most useful handbook entitled, "Smiling Benares"

THE NATIONAL BANK OF INDIA, LTD. (CAWNPORE).

This bank was incorporated in the United Kingdom under the English Companies' Act of March 23, 1866, with a

(*inter alia*) buys and collects bills of exchange in all parts of the world at current rates, and grants draft payable on demand in London or provincial towns in England, Scotland, and Ireland, as well as upon its branches and agencies. It also issues at the exchange of the day letters of credit for the use of travellers, and remits money by telegraph to London, Australia, and to all its branches

Deposits are received for fixed periods



NATIONAL BANK OF INDIA, LTD (CAWNPORE)

OFFICE OF THE BANK AT NAYAGUNJ, CAWNPORE

The superior manufacture of all stock held by this firm has caused a rapid expansion of trade relationships, not only throughout India, but also in Burma, Ceylon, and the Federated Malay States, while several gold and silver medals have been awarded at exhibitions held in this country

A large number of testimonials testifying to the excellent quality of Messrs Muthiah & Co 's goods have also been received from High Court judges and other notabilities

Visitors to Benares are naturally attracted to the "Silk House," where they

subscribed capital of £2,000,000, and a paid-up capital of £1,000,000, while it has a reserve fund of £1,200,000

It has a large number of branches in India and elsewhere, and the one in the city of Cawnpore, in the division of Allahabad, in the United Provinces of Agra and Oudh, was established on January 6, 1896 The premises include the fine two-storied bank and a number of large godowns for the storage of piece goods and yarn, and they are most conveniently situated in the heart of the busy bazaar of this historic city.

In its exchange business the bank

not exceeding one year, and the rates allowed at the present time (1917) on sums of Rs. 500 and upwards are fixed, for six months certain, at the rate of 3½ per annum, and for 12 months, at 5 per cent.

The agency department undertakes on behalf of its constituents the safe custody of shares, title-deeds, and other securities, at ¼ per cent. commission on their nominal value, except in cases where a special value is placed on them by the depositor. Dividends and interest are collected, and Government paper and all descriptions of stocks are purchased and

sold, the commission on such transactions being ¼ per cent. of the amount invested or realized.

Interest at the rate of 2 per cent. per annum is allowed on daily balances at credit of accounts from Rs. 1,000 to Rs. 1,00,000, but special rates are granted on large amounts deposited for short periods during the busy season between the 1st of October and the 30th of April.

The head offices of the bank are at 26 Bishopsgate, London, E.C., and branches have been opened at Calcutta, Bombay, Madras, Karachi, Delhi, Amritsar, Lahore, Tuticorin, Cochin, and Chittagong in India; at Rangoon and Mandalay in Burma; at Camp and Steamer Point, Aden; at Colombo, Kandy, and Newera-Eliya in Ceylon; at Zanzibar, Mombasa, Nairobi, Nakuru, Kisumu, Tanga, and Dar-es-Salam in East Africa; and at Kampala, Entebbe, and Jinja in Uganda; while agents have been appointed throughout the world.

Mr. John Parker is the manager of the bank at Cawnpore.

THE NORTH-WEST TANNERY COMPANY, LTD.

This well-known concern is situated on the banks of the River Ganges, in Cawnpore, and gives daily employment to more than a thousand men; the grounds cover an area of about 24 acres, and the buildings include a very fine four-storied factory, four enormous bays of tan pits, several sets of staff quarters for European employees, accommodation for workmen and their families, together with spacious offices and departments.

Their business is that of tanners, curriers, manufacturers of boots, shoes, harness, saddlery, military equipment, machine belting, trunks, bags, and travelling requisites of every description.

The company has been in existence for nearly thirty years, and its manufactures have gained a unique reputation for strength, durability and finish. These goods, being made in India by persons who have an intimate knowledge of Indian conditions and requirements, are very often superior to the same class of articles made by leading manufacturers in England, in spite of the fact that they are offered at lower prices.

With such a wealth of productions it is difficult to get an idea of their variety and scope unless the company's catalogues and lists are studied. These can always be obtained free on application, but the undernoted information will be of general interest.

The tanning and currying of leather is conducted on a system identical with that followed by the leading tanners and curriers in England, and all the methods and appliances are of the most modern description known to the trade. The leather, consequently, is as good as the English material in appearance and for durability, and is entirely free from the offensive odour which is so characteristic a feature of the usual Indian tanned leather. The company specialize in the dressing of crocodile, alligator, sambhar, and other skins, and have opened a taxidermy department where customers can rely on having every want met.

The manufacturing departments are, broadly speaking, three in number: (1) The boot and shoe department, where the popular demands of a medium class trade are catered for, resulting in the sale of about 30,000 pairs monthly, this quantity being by far the largest out-turn for this class of goods in India or the East.

(2) The saddlery and equipment department, in which all leather goods pertaining to the horse or the stable, or to the equipment of man or animal, is made, from the Rs. 40 set of single brass-mounted harness to the Rs. 10,000 gold-mounted postillion harness for Viceroy or Indian chief, and from spur-straps to the full-dress equipment of the British cavalry officer.

(3) The bag and trunk department, where Gladstone, brief, and kit bags, suit, dressing, attaché and gun cases, cartridge and golf bags, in fact, where every conceivable article for travelling or sport is turned out in large quantities, proving the immense popularity of the company's manufactures.

Each department is under a skilled British foreman, assisted by specially trained Indian *mistries* and workmen. Great care and attention is given to strength and finish, and as no goods are issued without being subjected to a most searching examination and test, they can always be relied upon.

For the convenience of the public there are well-established depôts for the distribution and sale of the company's goods in Calcutta, Benares, Lucknow, Simla, and Karachi, where customers can get first-hand evidence of the company's prowess.

The public is assisted by the issue of a booklet (free on request), giving hints on the temporary treatment of skins prior to sending them to be properly dressed into leather, together with suggestions as to how they may be utilized in the best manner for bags, boxes, and other articles.

The company invite inquiries for their catalogues, containing illustrations and full particulars of their productions, and are always prepared to submit quotations for any special style of harness, saddlery, or travelling requisite.

Their telegraphic address is "Leather, Cawnpore."

PUNDIT HIRA LAL JHA.

Aligarh is at the present time an important centre for the manufacture of locks, and in its factories, which are the outcome of the establishment in that place of a Government postal workshop, a very large number of skilled workmen find employment. It is learned from ancestors of the families now residing in the town, that two hundred years ago there was not a single factory or an industrial enterprise of the kind now seen there in abundance.

The demand of the public for locks was met by the making of a very crude article, which, by the way, has long since ceased to exist, whose imperfections were so palpable that the cry for new inventions resulted about sixty years ago in the opening of the Government postal workshop above referred to.

Pundit Uttam Chand Jha, a Zemindar and predecessor of Pundit Hira Lal Jha, succeeded in securing a contract as a lock-maker in the shops, and during sixty years of service he made considerable improvements in the pattern of locks then in vogue, but he became more and more convinced that the style of manufacture adopted in the workshops of Europe should as far as possible be followed in India. This idea was carried out, and the splendid results ultimately achieved led to the training of hundreds of men as expert manufacturers of locks. The locks of many descriptions which are made in the factory of Pundit Hira Lal Jha are excellent illustrations of skilled workmanship, but want of space forbids a description of more than two of them.

The "Rundle" pattern police lock is cast in one solid piece, with extra heading, with "Barton" pattern keys in duplicate (a specially improved design), and with from four to six levers fitted with an arrangement which prevents the withdrawal of the key until the lock has been closed. This practical device is a

NORTH-WEST TANNERY COMPANY, LTD.

1. Front View of Factory. 2. Portion of Back View of Factory.

NORTH-WEST TANNERY COMPANY, LTD.

Portion of Lime House. 2. Portion of Boot Department. 3. Harness and Saddle Department. 4. Bag and Trunk Department.
5. Display of Crocodile Travelling Goods.

GENEALOGICAL TABLE

PUNDIT RAGHUNATH JHA
PUNDIT GOKUL JHA
PUNDIT GOVIND JHA
PUNDIT KESHAV JHA
PUNDIT CHAIT RAM JHA

PUNDIT UTTAM CHAND JHA

SHREE PUNDIT HIRA LAL JHA
SHREE PUNDIT TEEKA RAM JHA
SHREE PUNDIT RAM DYAL JHA

PUNDIT CHUNI LAL JHA

SHREE PUNDIT ANGAL LAL JHA
SHREE PUNDIT NISRI LAL JHA
SHREE PUNDIT RAM SAROOP

PUNDIT HIRA LAL JHA.

1 P. HIRA LAL JHA AND SONS. 2. WORKSHOP. 3 GENEALOGICAL TABLE.

sure safeguard against the lock being allowed to remain open.

The invisible "shackle" safety lock is the first of its kind to be manufactured in India, and its special feature is that the shackle cannot possibly be seen by anyone, and thus a burglar cannot tamper with it even by the finest instrument in his possession The box is cast in one solid piece, without any joints, and this arrangement is a check against the picking out of the case

The keys belonging to these locks deserve mention, as they are made according to a design suggested to the proprietor by Lieutenant-Colonel Barton, one of his staunch patrons They are very strong, and heavier than is usual, and the number boldly engraved upon the handles corresponds with that upon the locks, thus facilitating the selection of the correct key even in a dim light

Pundit Hira Lal Jha is a practical maker of locks in his own factory, which is under his personal supervision, and he is a regular supplier to the educational, forest, revenue, postal, jail police, and other Government departments, as well as to the military authorities, Indian railways and rulers of native states He also imports English stores and materials of various kinds, and he has occasionally furnished Government departments with some of these goods to the value of Rs 1,50,000 in a single month

The ancestors of Pundit Hira Lal Jha were residents in the village of Magrauli, in the Darbhanga Raj, in the Province of Behar and Orissa They are Mythal Brahmans, and they were presented with a *jagir* by His Highness the Maharaja

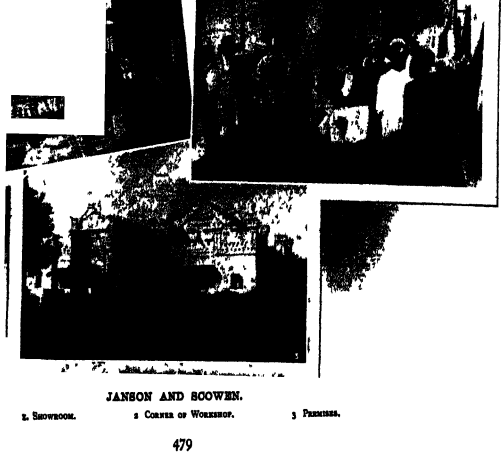
HAJI ABDUL GAFOOR KADIR BUX & CO.

India has suffered along with other countries from the effects of the Great War, but on the other hand she has awakened from her lethargy, and has not been slow in developing her own vast resources, greatly to her own benefit as well as to the advantage of other nations too. One might refer, by way of example, to the hide, skin and leather trade, which is, perhaps, one of the most important in India if agricultural operations be excepted, and in this particular line of business the history of the foundation and development of the important firm of Haji Abdul Gafoor Kadir Bux of Pechbag, Cawnpore, is worthy of notice

There is no mart in India which can approach Cawnpore in the quantity and value of the business carried on there in exporting hides and skins of the best quality, and in importing finished leather from Europe and America

In the year 1862, when Cawnpore was little more than a country depôt for the collection of the above-named commodities, Mr. Abdul Gafoor realized that this small town would, in the future play an important part in supplying the world's demands for hides and skins, and he accordingly left his native village on the Ganges, in the district of Allahabad, migrating to Cawnpore, where he established the firm with which his name is connected.

Mr Abdul Gafoor possessed two essential qualifications for the conduct of business, namely, capability and integrity, and it was not long before he put these virtues to such good use that he secured a most enviable reputation for his firm Dressed and raw hides and skins were gathered together at depôts throughout India and forwarded to Cawnpore preparatory to their exportation to Europe and America, where they realized very satisfactory prices



JANSON AND SCOWEN.

1. Showroom. 2 Corner of Workshop. 3 Premises.

H. ABDUL GAFOOR S. KADIR BUX & CO.

1. Haji Abdul Gafoor (Founder), 2. Exporting Godown (Eidgah) 3. Import Godown (Fish Bagh). 4. Offices. 5. Staff Group.

The efficient manner in which the firm conducted the very large business which by their persistent energy they had developed, led Messrs. Schroeder Smidt & Co., of Calcutta, in the year 1881, to appoint Mr. Abdul Gafoor as their sole representative for their extensive buying and selling operation in hides and skins in Cawnpore. It may be mentioned that the Calcutta firm just referred to were at that time the largest purchasers in India of hides and skins for the German and Austrian markets.

This relationship between the two firms continued until the year 1903, when Mr. Abdul Gafoor, a devout Mahommedan, went on a pilgrimage to Mecca. During this period of more than twenty years, the volume of trade passing through the Cawnpore mart increased annually at a rapid rate, largely through the transactions of Mr. Gafoor, who had, on his appointment, established buying agencies throughout the whole of northern India, and who had also introduced improved methods of curing skins.

It was the intention of Mr. Gafoor, on his return from the holy city, the birthplace of the Prophet Mahomet, to retire from business life and enjoy a well-earned rest in the home of his childhood; but he had barely severed his connection with Messrs. Schroeder Smidt & Co. when he was, somewhat reluctantly, persuaded by Messrs. Assmann & Co. to give personal supervision to their immense buying operations at Cawnpore, and subsequently he acted in a similar capacity for Messrs. Ralli Brothers, of Calcutta.

Haji Abdul Gafoor is a true type of a successful man of business who literally carved his own way from obscurity to an honoured position in the commercial life of Cawnpore, and he has for many years taken a leading part in social, religious, and philanthropic movements in that city.

The characteristics of probity and perseverance which have been so signally manifested in the career of this gentleman are possessed in a similar degree by his son, Mr. Mahomed Hanif, who received a sound education in English and other languages, who was trained in the business by his father, and who is now the active partner in the firm.

In 1907 the latter began to buy and sell hides and skins at Cawnpore for Messrs. Smidt, Sanders & Co. (Messrs. George Smidt & Co., of Bremen), the successors of Messrs. Schroeder Smidt & Co., who were at that time a prominent factor in the trade; but when the war of 1914 practically severed Germany and Austria from the markets of the world, Haji Abdul Gafoor and his son established themselves in a new business under the style of Haji Abdul Gafoor Kadir Bux. The firm began to specialize in methods of dry-salting hides, and their vast experience in this direction, coupled with their ability to command and manage labour, enables them to cure and preserve skins as well as hides in a manner calculated to meet existing demands of European and American merchants.

The attention of the partners is not confined alone to handling raw hides and skins, as they are also the largest dealers in the neighbourhood in bones, horse-hair, hoofs, and horns.

In view of the termination of the war, and a revival of trade generally, Messrs. Haji Abdul Gafoor Kadir Bux are confident that their successful association with the trade for a period of fifty-six years, and their ability to supply exactly what is wanted to-day in the leather trade, will very materially assist them in entering into new business connections in all quarters of the globe.

THE RAMCHAND GURSAHAIMAL COTTON MILLS COMPANY, LTD.

This company, owning cotton-spinning mills at Lucknow, is the outcome of a private concern which was established in the year 1905. The business was formed into a limited liability company about five years later with a capital of Rs. 5,00,000 made up of 5,000 shares of Rs. 100, the directors being S. R. Khanna, Esq. (managing director), Vikarumajit Singh, Deenanath, Hazarimal, Rai Kanhaiya Lal Bahadur, Nandan Pershad, Behari Lal, Harcharandas, and Madan Mohan.

The great progress which has been made since the registration of the company is due in a very large measure to their having equipped the mills with thoroughly up-to-date plant for spinning and doubling cotton, but at the same time the strict supervision of workmen, of the machinery, and of the manner in which the raw material is handled, is a factor of no little importance.

The yarn produced in the mills is unrivalled, as regards quality, in the whole of the United Provinces, and this is attested by the fact that the output commands a higher price in the market than the products of larger concerns of a similar character.

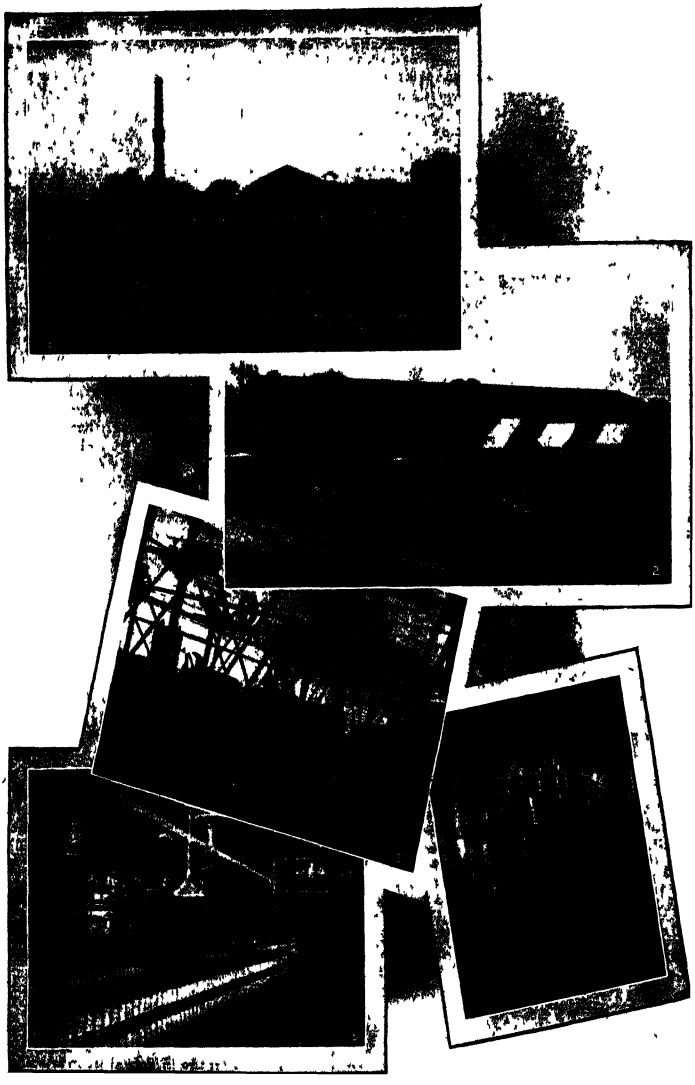
There are 8,256 spindles in the mills, which are constantly at work throughout the year.

The manufacture of tents and durries is an important branch of work, and, as it is carried on under the control of an expert European superintendent who has had more than thirty years' experience in the work, it follows that the goods turned out from the mills are eagerly sought after by purchasers who are determined to have the best that can be made.

The telegraphic address of the company is "Gursahai, Lucknow."

THE ROOKHUR GHAT COMPANY, LTD.

Among the numerous industrial enterprises which have been inaugurated or developed on modern lines in India during the past sixty years is the manufacture of shellac. It may not be presumptuous to explain here that lac, the raw product, is produced by the females of the lac insect, which affix themselves to the more or less tender twigs of certain tropical trees; they then suck out the resinous sap, and by a process of chemical digestion, transform the exudation into lac, with which they proceed to build around themselves cells prior to bringing forth their young. When the latter are hatched, they are like red dust, and they easily swarm out through the minute pores of the maternal cells, and are taken by the feet of birds and other means to the twigs of other trees of the same species, where they commence again the production of lac in the same way as their mothers did before them. The propagation of lac is also considerably helped by the jungle people who, just before swarming time, tie twigs of lac to bare trees of the same species, upon the twigs of which the young insects, when they swarm, affix themselves. But the maternal insects which, by swarming time, have grown larger and have secreted a red liquid nourishment for their young, representing the lac dye of commerce, never emerge alive from their cells, for these cells are their tombs. Each crop takes six months to mature, and therefore there are two crops every year. At the time of collection the twigs are broken off and dried when the insects die, and the lac that remains is termed stick-lac. The lac has to be removed from the stick, and must then be ground in stone handmills, so as to break up the cells and to allow the dye secretions to be thoroughly washed out of them, when, after further dry cleaning from extraneous accretions,



THE RAMCHAND GURSAHAIMAL COTTON MILLS COMPANY, LTD.

1. General View of the Mill. 2 Reeling Room and Tents. 3. Card Room. 4 Side View of Preparing Room.
5 Spinning Room.

THE ROOKHUR GHAT COMPANY, LTD. (KILBURN & CO.).

1. Grinding and Sifting Lac. 2. Washing Seed Lac. 3 Roasting Shellac. 4. Packing and Picking Shellac.

the resulting product is called seed-lac. Shellac is seed-lac after it has been melted and otherwise prepared, and it is used in the manufacture of varnishes, sealing wax, and other articles of a commercial character.

A factory which is now turning out large quantities of this valuable commodity is the one belonging to the Rookhur Ghat Company, Ltd., at Mirzapur, in the division of Benares, in the United Provinces of Agra and Oudh, and the history

SHAHGUNJ SHOE FACTORY.
S. Musi Reza and Managers.

of its inception and progress is not without interest.

It appears that in 1859 Messrs. Howard Brothers, who owned the estate of Rookhur Ghat, at Mirzapur, carried on an extensive business as proprietors of a bullock train to the Central Provinces. They also dealt largely in indigo seed, which they supplied to planters, and they also bought cotton and other country produce on commission for their constituents at Calcutta. In those days lac used for dyeing purposes was practically the principal product at the "Bariya Ghat," the "Narghat," and other factories at Mirzapur, shellac being regarded more or less as a bye-product only, its principal use being in the manufacture of lac bangles for the Indian women. In the year 1860 it was discovered that shellac could be utilized in various profitable ways, and its value in the market began to increase rapidly. A Calcutta merchant commissioned Messrs. Howard Brothers to purchase the product for him, and in consequence of this order so great a strain was placed upon the factories at Mirzapur that it was practically impossible for them to manufacture the required quantity. At this juncture it was ascertained that a dyeing factory existed on the Rookhur Ghat estate, and a local shellac contractor lost no time in becoming tenant of it under Messrs. Howard Brothers, in order that he might be able to fulfil his obligations to them for the delivery of shellac, which they had agreed to purchase from him. Shortly after this time the contractor died without leaving any one with the necessary experience for carrying on his work, but as Messrs. Howard Brothers had an assistant, Mr. J. C. Sibold, who had mastered the details of manufacture, and had made himself thoroughly acquainted with the value of individual parcels of the raw material, they decided to continue the working of the factory until the then existing contract had been completed. The demand for shellac became greater month by month, and Messrs. Howard Brothers had no hesitation in taking over the factory on their own account, and placing it under the capable management of Mr. Sibold.

At that time, 1860–1, the equipment of the building consisted of only six fires, and if all these were kept alight regularly the monthly output did not exceed sixty chests of shellac.

The productive power of the factory was steadily increased, and in 1873 the works passed into the hands of Messrs. Schoene, Kilburn & Co., the predecessors of Messrs. Kilburn & Co., of Calcutta, the present managing agents. Some five or six years later the introduction of aniline dyes struck the death-knell of lac as an ingredient in the manufacture of substances for dyeing purposes, and as a consequence the Rookhur Ghat concern was carried on with the sole object of producing shellac.

In 1905 the undertaking was converted into a private joint-stock company, under the name of "The Rookhur Ghat Company, Ltd.," and they purchased the "Bariya Ghat" and "Narghat" factories belonging to Messrs. Jardine, Skinner & Co., of Calcutta, all three concerns being amalgamated under the name given at the head of these notes.

The whole of the Rookhur Ghat estate is now given up to the manufacture of shellac, for which there is an excellent market in Europe and elsewhere, and the rate of progress made by the company since its formation may be gauged from the fact that the present output of shellac necessitates the constant use of no fewer than eighty-eight fires.

It should be added that the old-established trade marks belonging to the original owners of the factories are still retained by the Rookhur Ghat Company, Ltd.

SHAHGUNJ SHOE FACTORY.

Between thirty and forty years ago there were in Agra only two shops for the sale of boots and shoes, but such has been the industrial development of the city that there are now more than a hundred such stores, and about the same number of buildings in which those goods are manufactured. Mr. Seyd Musi Reza, who is now one of the foremost tradesmen in

Agra, as well as an honorary magistrate and municipal commissioner, thoroughly mastered the art of bootmaking while still a young man, and in 1880 he commenced a small business in this line, but his practical knowledge and strict personal attention to the wishes of his customers have given him a leading position among the successful commercial men in the city. In the wholesale department a large stock is carried of all kinds of first-class boots and shoes for ladies and gentlemen, and these are distributed in all parts of India, but particularly in the Punjab, the United Provinces, and the Presidency of Bengal.

A tannery was established about the year 1907, but after being temporarily closed it will be re-opened again very shortly. Leather is at present being purchased in several districts in India as well as in Europe, and this is passed into the factory to be made up into glacé brown and black, or white and brown canvas boots and shoes.

The factory, known as the Shahgunj Shoe Factory, comprises fitting, lasting, sewing, finishing, and other departments, in which are two machines for sewing soles, two for splitting purposes, one sole and heel cutter, one for pressing soles, one for bending and riveting cardboard boxes, one for paring and shaving, another for polishing, and several others for making eyelet holes, the whole of the plant being driven by an oil engine. There are also five Singer sewing machines for sewing boot "uppers" with thread supplied by Messrs. Williams, Barber & Co.

Medals have been awarded for efficiency and style of workmanship, and for general excellence and durability of goods shown at Allahabad and other exhibitions.

The proprietor employs about a hundred hands under the personal supervision of himself and his sons, and his plant is now capable of turning out from 100 to 125 pairs of boots or shoes daily.

J. SHAPOORJEE & CO.

1. Portion of Showroom. 2. Exterior View.

J. SHAPOORJEE & CO.

The life history of Jamshedjee Shapoorjee, the founder of this firm, reads like a romance, but while there are romances of various kinds the one now under notice is a tale of a young boy being practically thrown upon an unsympathetic world, destitute of almost any knowledge of *Guzerathi*—his mother-tongue—and deprived of the fostering care of devoted parents. At the tender age of eleven or twelve this future merchant began to eke out a precarious existence as a jobber—he could scarcely be termed a commercial traveller, for a sum of two rupees a month. He tramped the country districts near Allahabad when there were very few railways, hawking his boxes from place to place, but, young as he was, he never lost heart nor confidence in himself, one of the grandest traits in a person's character. He visited military cantonments, and, by exemplary patience and perseverance, coupled with severely thrifty habits, he succeeded so well that in a few years he was able to secure a small stock-in-trade of boxes, and to commence business on his own account in a village-like portion of Allahabad, as it was in those days.

In such a manner did Jamshedjee in the year 1874 establish the firm of J. Shapoorjee & Co., when he placed his foot on the bottom rung of the commercial ladder, towards the top of which he steadily ascended. Difficulties were but a spur to greater energy, but above all his innate persevering spirit never failed him.

It was not long before the small and out-of-the-way place of business proved too small, and with a much larger stock of goods he packed up his traps and opened a more convenient store at 7 Albert Road, in Allahabad It might be said here that the palatial premises occupied by the firm to-day were erected on the same site.

On the death of Jamshedjee, his property, money, and the goodwill of a lucrative business were left to his three sons, who agreed to the following division, namely. the eldest of the trio, Mr T. J civilian and military residents in the neighbourhood, and, indeed, there are few houses in the vicinity in which the name of Shapoorjee is not well known

The proprietor is ably assisted by his three sons, all of whom have already shown that the capable business characteristics of their father and grandfather have been inherited by them.

THE SHRI RAMESHWAR FLOUR MILLS.

In the important town of Bareilly there is no more respected citizen than Lala ture was so well managed, and proved to be so successful, that he shortly afterwards became the owner of two other factories, one of these known as the Krishna Mills at Bareilly, in which the ginning of cotton and the manufacture of sugar is extensively carried on, and the other, the Rambhausey Flour Mills, at Shahjahanpur, which is named after his younger son

The conduct of all these undertakings has been marked by a thoroughness as regards detail work which one would expect from a proprietor who has sound

SHRI RAMESHWAR FLOUR MILLS.

1 Lala Ferinjee Lall 2 Shri Rameshwar Flour Mills

Shapoorjee, took over the Allahabad premises and business; the second in age was given the branch establishment at Naini Tal; and the third, a rising barrister in Allahabad, received a financial share.

Mr. Shapoorjee, trading in the name of the original firm, carries on business as a general merchant, dealer in wines and spirits, and cabinetmaker, but he has recently set up an excellent steam plant for the manufacture of aerated waters, which have gained a high reputation not only in Allahabad but also throughout the United Provinces of Agra and Oudh

The firm's patrons include the leading Ferinjee Lall, who has achieved a high reputation for his sterling business qualities, and for his readiness to support any public organization which has for its object the promotion of the welfare of the general community. He commenced his commercial career by dealing in grain and seeds of all descriptions, and after spending more than twenty years in this particular line, he turned his attention to the milling industry, for which his past experience was calculated to be of the greatest assistance to him.

In the year 1911 he established the Shri Rameshwar Flour Mills, and this venbusiness instincts, and the satisfactory results which have followed are due to his untiring energy and his practical knowledge of the ways of the mercantile world.

Apart from the onerous responsibilities of being the controlling power of these mills Lala Ferinjee Lall holds a leading position in extensive commercial dealings with such well-known firms as Messrs Ralli Brothers, Louis Dreyfus & Co, Clement Robson & Co, and Satrais & Co., his annual turnover in this branch alone now amounting to many lakhs of rupees.

With the view of further developing

this department he has established numerous agencies and sub-agencies in the principal centres of the United Provinces.

In addition to the above he is now engaged in fulfilling contracts for supplying the Government with various requirements for war purposes.

This gentleman is a member of the Bareilly Municipal Board, where he has discharged his duties in such a manner as to win the full confidence and respect of the inhabitants, and he has not only contributed liberally to various war funds, but has also welcomed opportunities in other directions for giving expression to his loyalty to the throne.

Lala Ferinjee Lall has amassed a large amount of money, but he realizes that the possession of wealth entails corresponding responsibilities, and in putting his belief into practice he takes a delight in bestowing charitable gifts, but these donations are always made with a wise discretion. In other words he regards his fortune as a sacred trust reposed in him, and he never allows personal prejudice to clash with his convictions. The *Gowshala* at Bareilly, and the Saraswati Vidyala at Ahrola (Bareilly), started by his friend, B. Prem Narain Saksena, are two institutions in which he takes an especial interest.

Lala Ferinjee Lall is fortunate in having induced his above-named friend to assist him in the supervision and management of his large business concerns.

THE TIRBENI DESHI SUGAR WORKS.

This factory was started in the year 1909 under the name of the Prayag Sugar Company, Ltd., but owing to certain disadvantageous circumstances it was carried on for about a year without prospect of success, when the whole concern was sold by public auction to Lala Kanhaiya Lal, the present managing proprietor.

This gentleman soon discovered that improvements in machinery and in methods of manufacture were absolutely necessary, and he forthwith took steps to remedy this unsatisfactory state of affairs, his first act being the importation of thoroughly up-to-date plant from Glasgow.

The whole work of reconstruction and reorganization has been productive of the best results, and the jaggery, now obtained from Bihar and certain districts in the United Provinces, is refined to such whiteness and is so much appreciated by purchasers that the demand greatly exceeds the output of the works.

It must be borne in mind that some modern methods of manufacture of sugar are abhorrent to Indians owing to the use of certain ingredients which are violently opposed to the traditions and caste prejudices of the native population of this country, and therefore Lala Kanhaiya Lal has guarded against any possibility of offending his Indian customers in this respect by arranging that each bag of sugar issued from the works shall contain the following certificate :—

" Certified that the contents of this bag is the production of this mill, and is pure Indian sugar, absolutely free from any ingredient objectionable to Hindu caste and religion.—(Signed) A. BENI PRASAD, Manager, Tirbeni Deshi Sugar Works, Naini, Allahabad."

The business has grown rapidly, and branches have now been established in Calcutta, Bombay, Cawnpore, Agra, Muttra, Hyderabad, Madras, Allahabad, Amritsar, and other places in India.

The proprietor resides at Jausi, most attractively situated on the left bank of the River Ganges, where the inhabitants have been witnesses of the great benevolence of Lala Kanhaiya Lal, a trait in his character well illustrated by his gift of a *dharamsala*, where alms are always granted to poor and deserving people.

The works are situated at Naini, a railway station picturesquely situated near the right bank of the Jumna river, in the district of Allahabad.

The telegraphic address of the works is " Madho," Naini.

THE UNION INDIAN SUGAR MILLS COMPANY, LTD.

This company, formed in 1907, was established for the purpose of producing an absolutely pure *swadeshi* sugar for consumption by Indians. It is not many years since bone charcoal was commonly used in the process of refining, but the strongly pronounced prejudice of the indigenous races of India against a commodity which was prepared with the aid of animal substances was clearly demonstrated by the absolute refusal of the people to purchase any of the sugar.

Modern machinery and improved methods of manufacture which dispense with materials which conflict with caste principles have in recent years been adopted, and it is now evident that, provided a good supply of cane can be depended upon, a new industry of a profitable character will have been added to those already in existence in India.

The Union Indian Sugar Mills Company, Ltd., are proprietors of an up-to-date factory at Gutiyha, near Cawnpore, and adjacent to the Rawatpore station on the Bombay-Baroda and Central India Railway Company's system, in which constant employment is found for about five hundred hands.

The company guarantee that nothing but pure lime is used in refining, and the mills have now a daily output of some 20 tons of sugar, which is of a high-class quality.

The plant has been considerably enlarged since the opening of the factory, and the company make a point of introducing any newly invented machinery calculated to maintain the excellence of their products.

Not more than a quarter of a mile distant from the mills the company have recently erected a large block of dwelling-houses, in which the majority of the operatives are provided with comfortable quarters.

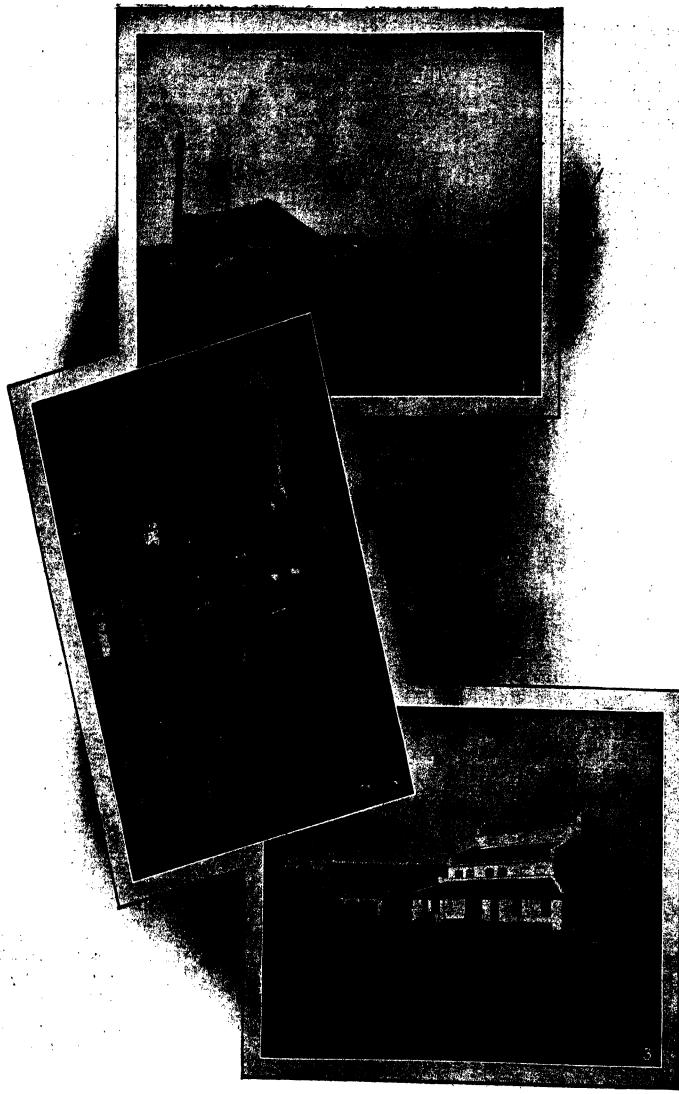
The postal address of the company is Nawabganj, Cawnpore, and the registered telegraphic address is " Lucky."

THE UNITED PROVINCES TANNERY COMPANY.

There is scarcely a single industry in any part of the civilized world which has not been prejudicially affected by the European War, but the greatly increased demand for leather suitable for harness, boots, and other military equipment has produced enormous activity in the tanning of hides and skins.

The moving spirit of the company is Mr. M. A. Wasay, who in 1904 commenced business in Cawnpore, dealing in raw hides and skins. He, however, subsequently entered into partnership with Mr. H. Nabi Buksh, and the firm (trading as H. Nabi Buksh and Wasay) were in 1910 appointed sole purchasing agents, in Upper India and the Punjab, on behalf of Messrs. Wuttow, Guttman & Co.

That arrangement was continued until the outbreak of the European war, when the firm began to export goods on their own account alone, but in 1915 they were selected as sole agents for Messrs. Cohen Brothers and Fuchs, for whom they bought about 150,000 buffalo and 300,000 cow hides during the succeeding twelve months.

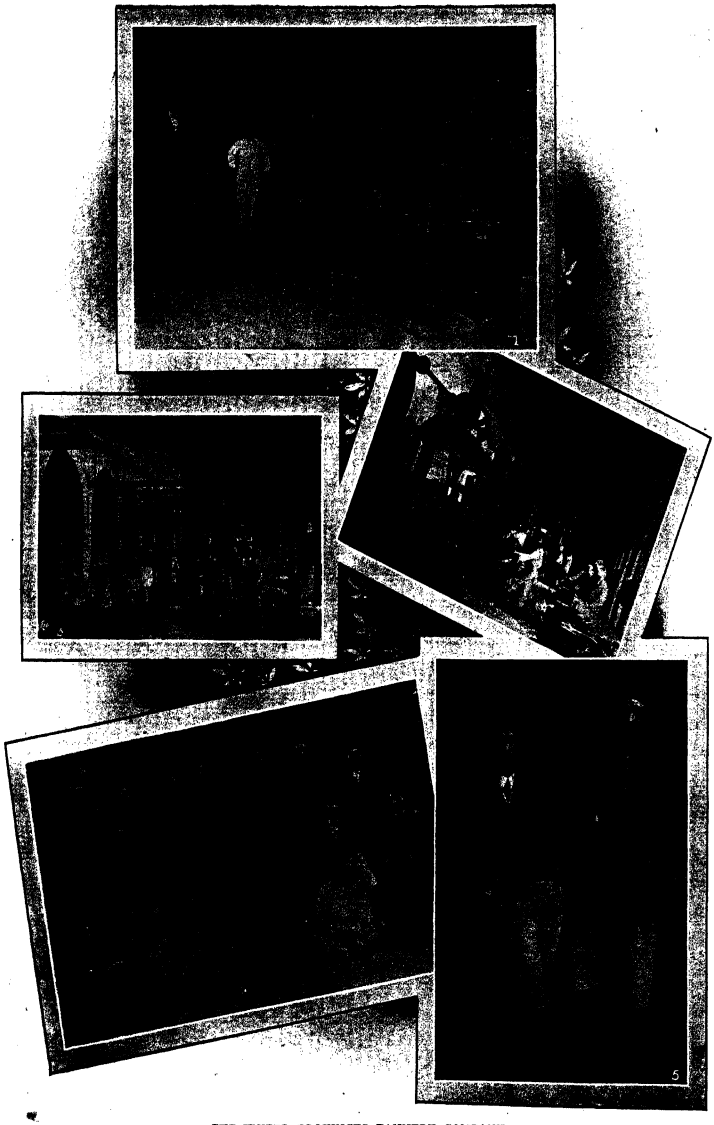


TIRHENI DESHI SUGAR WORKS.

1. General View of the Works. 2. Interior. Exterior View.

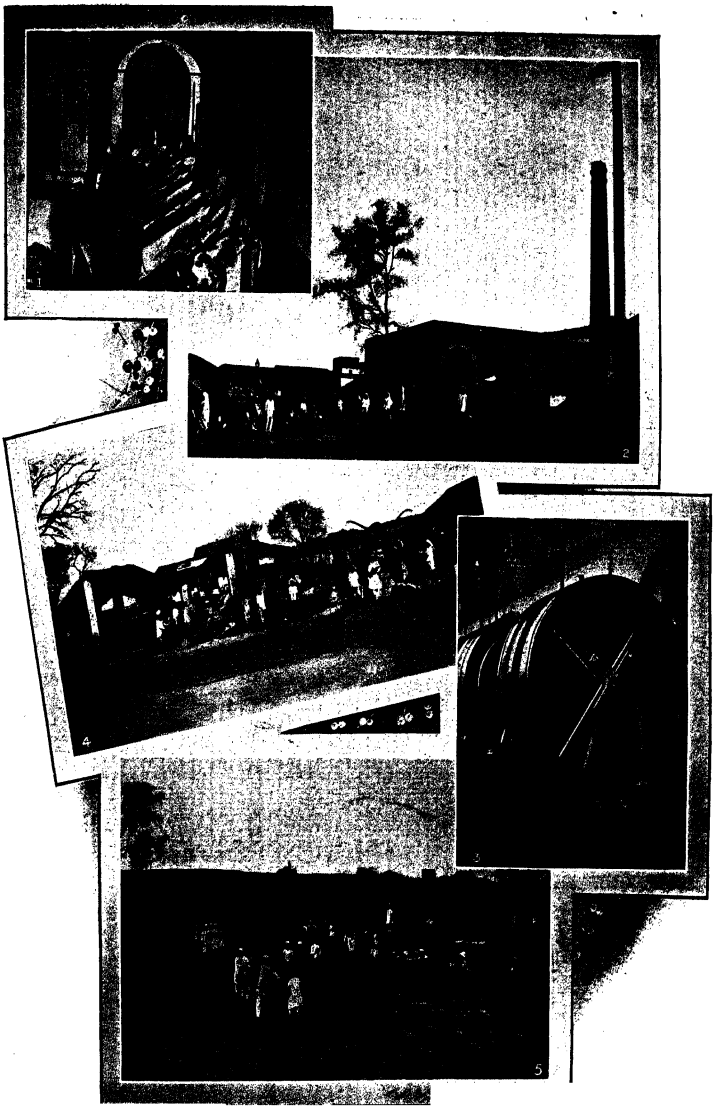
THE UNION INDIAN SUGAR MILLS CO., LTD.

1. General View of Mill. 2. Manager's Bungalow. 3. Centrifugal Machines. 4. Vacuum Pans.



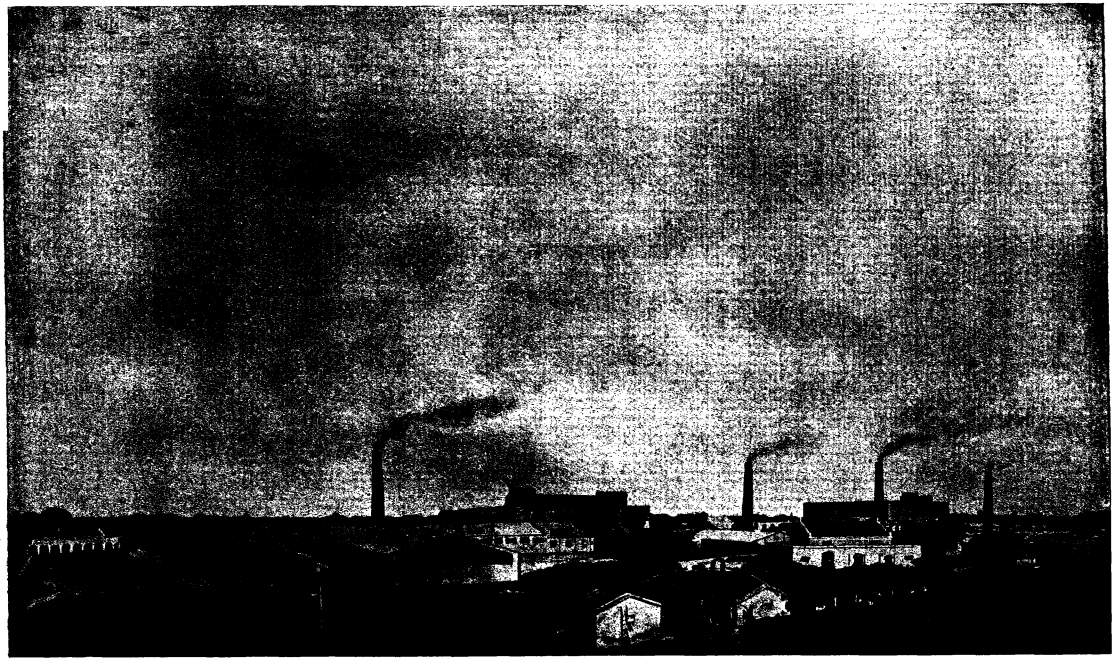
THE UNITED PROVINCES TANNERY COMPANY.

1. English Shed. 2. Portion of Machinery. 3. Portion of Curriers' Shop 4. Staff Group. 5. H. Nabi Bukhsh and M. A. Wasay.



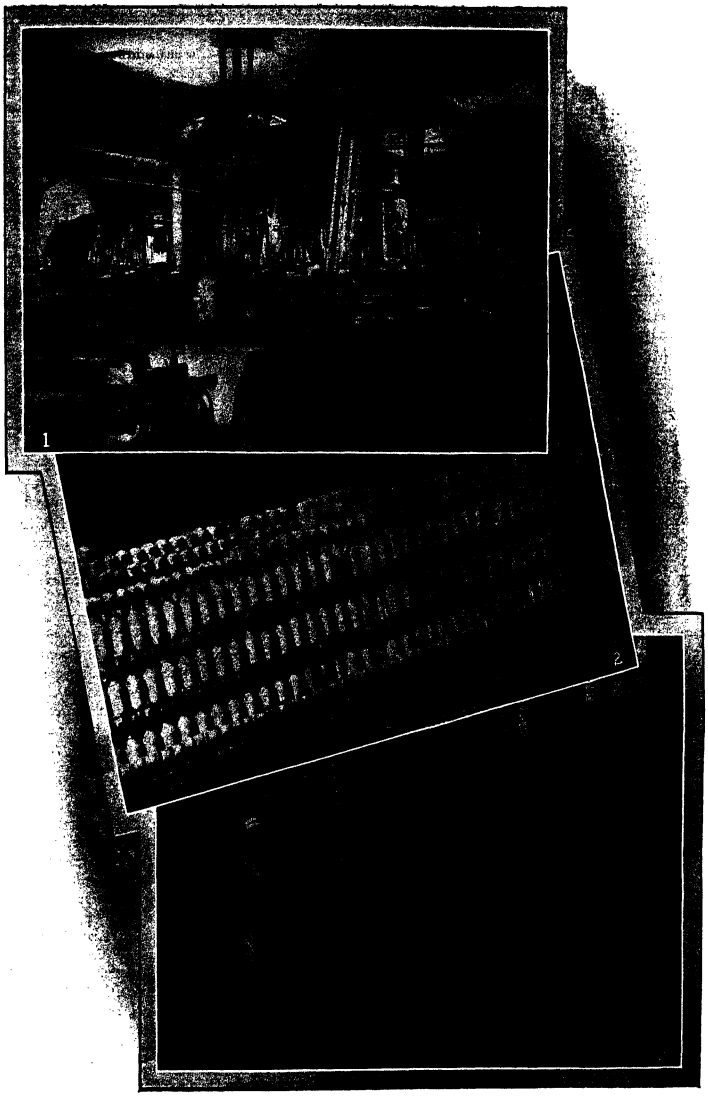
THE UNITED PROVINCES TANNERY COMPANY.

1. Portion of Lime House. 2. General View of Factory. 3. Drums. 4. Trimming Department. 5. Baling and Assorting.



THE VICTORIA MILLS COMPANY, LTD.

VIEW OF MILL PREMISES.



THE VICTORIA MILLS COMPANY, LTD.

1. Interior of Weaving Shed. 2. A Mule Spinning Room. 3. Mill Engine.

During the early portion of the year 1916 there was a consensus of opinion amongst the members of the firm mentioned and those of the firm of Messrs. Mohammed Ismail Brothers, also of Cawnpore, that under the altered condition of affairs in Europe it would be desirable to establish a tannery in that city, and they accordingly amalgamated their interests and formed the United Provinces Tannery Company, the foundation stone of the factory being laid subsequently at Jajmow, about two miles distant from the cantonment in Cawnpore.

While the buildings were being erected the company arranged for the importation of first-class machinery from England and America, and the processes of tanning were actually commenced in the month of March 1916.

The company further engaged the services of a tanning expert who had gained great experience in England and Japan, and the new venture developed remarkably quickly under his supervision.

All kinds of hides and skins are tanned, and the factory is now dealing daily with 100 buffalo hides, 150 cow hides, and 50 sheep and deer skins.

The various processes of tanning, including splitting, fleshing, shaving, slaking, and glazing, are carried out on separate machines driven by a 200-h.p. steam engine.

The currying and finishing branch is accommodated in a hall 250 feet in length and 60 feet in breadth, and all kinds of leather and skins are tanned and completed according to modern European methods, the products being sent to all important towns in Northern India, Bengal, Assam, and Burma.

The factory is situated in a very large compound on a bank of the River Ganges, beyond the borders of the municipality of Cawnpore, and it is divided into three portions as follows: No. 1 contains the offices of the company, together with showrooms and stores; No. 2 consists of the factory with other buildings for the storage of hides, skins, bark, and other raw materials; and No. 3, facing the river, is devoted to quarters for employees.

About 450 hands are employed in separate departments in the tannery, working under experienced foremen, and the latter are subject to the supreme control of the European expert already referred to.

The management of the company has been placed in the hands of Mr. M. A. Rafay, who has a large staff of assistants.

THE VICTORIA MILLS COMPANY, LTD.

This company is the outcome of a small weaving concern established by Mr. Atherton West in Cawnpore more than thirty years ago, and since its inception it has steadily been extended, until now there are five mills, consisting of three single-storied buildings, one with three stories, and another with four floors, which contain 60,000 mule and 40,000 ring spindles, and there are also three large weaving sheds containing 1,300 looms. The company are spinners and weavers of cloth and manufacturers of tents, durries, and other goods.

About one-half of the cotton, which is purchased locally and in the Deccan, is made into yarn for the Indian markets, and the remainder is woven into cloth required chiefly for the native bazaar trade in the United Provinces, the North-Western districts, and in native States.

This cloth is sent out in various qualities and in different sizes up to 48 inches in width and 72 yards in length. Modern machinery and plant has been installed throughout the premises, which cover an area of more than 27 acres, and comprise the five mills, quarters for the staff, offices, three weaving sheds, bundling and baling rooms, a dye house, a department for tents and durries, retail warehouse, foundry, engineers' shops for the company's own work, and a number of large godowns and other sheds for the storage of raw material as well as products.

Every precaution has been taken for the prevention of outbreaks of fire by the fixing of Grinnell sprinklers, by sliding doors in the various buildings, and also by a 40,000-gallon pump coupled to several hydrants, while there are in addition four smaller pumps which are always available in case of necessity. There is an excellent water supply available in all parts of the premises.

The company have their own dynamos for the electric lighting of the mills, and they employ fourteen European assistants and about three thousand natives.

The authorized capital of the company is Rs. 26,00,000, made up of 12,000 ordinary shares of Rs. 100 each, fully paid; 6,000 6 per cent. preference shares of Rs. 100 each, fully paid; and 8,000 8 per cent. preference shares of Rs. 100, upon each of which is paid Rs. 50, showing the capital actually issued to be Rs. 22,00,000. The thirty-ninth report of the directors, together with a balance sheet of accounts for the year ended on March 31, 1916, was presented to the shareholders of the company at their annual meeting on April 26th in that year, and the following particulars have been extracted therefrom.

After payment of an interim dividend for the half-year ended September 30, 1915, of Rs. 5 per share on ordinary shares, Rs. 3 per share on the 6 per cent. preference shares, and 4 per cent. for the half-year on the amount paid up of the 8 per cent. preference shares, and after providing for depreciation, renewal fund, and for equalization of dividend fund, there remained an available balance of Rs. 1,31,650-15-3, which it was recommended should be disposed of as follows: (*a*) payment of Rs. 5 per share dividend on ordinary shares for the half-year ended March 31, 1916, making 10 per cent. for the year, Rs. 60,000; (*b*) payment of Rs. 3 per share on the 6 per cent. preference shares for Rs. 18,000; (*c*) payment of 4 per cent. on the amount paid up on the 8 per cent. preference shares, Rs. 16,000; and (*d*) leaving a balance to be carried forward of Rs. 37,650.

The total capital subscribed by the shareholders is 22 lakhs of rupees, and they have received back in dividends more than 36 lakhs. The company's property account stands at 25¾ lakhs; there are 14 lakhs to the credit of reserve funds, and depreciation has been written off buildings and machinery to the extent of nearly 26 lakhs.

The registered offices of the company are at Gwaltoli, Cawnpore, and the directors are Messrs. Atherton West, B. West, Alwyn West, W. T. Clerke, Dr. M. N. Ganguli, and Mr. A. A. Black, M.A. The manager is Mr. Bertram West, the secretary is Mr. A. A. Black, and the mill manager is Mr. Alwyn West.

THE RISE AND PROGRESS OF CAWNPORE

By the Late GAVIN S. JONES (about 1906).

IN 1778 Cawnpore was, for the first time, occupied by a British force with the object of overawing the Nawab of Lucknow. It was then a small village with between 2,000 or 3,000 inhabitants, situated in the Doab, on the right bank of the Ganges, 40 miles from Lucknow, the capital of Oudh. Three-and-twenty years later it became a British possession, and was permanently occupied. The "Pax Britannica," which spread with the permanent occupation, attracted traders to settle in Cawnpore, which, under the protection of the British Government, rapidly developed in commercial importance. Being favourably situated for trade, it speedily became a thriving centre of commerce. European and Indian merchants, bankers, indigo planters, and traders flocked to the place and established business connections in the surrounding country. Planters built indigo factories in the district, European merchants established agencies for the purchase of agricultural produce and distribution of British manufactured goods, and traders and army contractors prospered and laid the foundation of the present city, displacing the mud huts that had sprung up since the occupation with substantial masonry buildings.

In February 1856, the misrule and anarchy that prevailed in Oudh led to the annexation of the province, and Cawnpore received a further progressive impetus. The population was augmented by migrations from Lucknow of numerous traders and craftsmen, who could no longer thrive on the bounty of the King of Oudh's Court, with its numberless Nawabs, retainers, and parasites.

The occupation of Lucknow and the establishment of stable British Government brought peace and security to life and property, and Cawnpore advanced with rapid strides, its commercial importance expanding and increasing in proportion.

The humble *chamars*, the chief labouring population of Cawnpore, were the first to benefit by the British occupation; being of low caste and exceedingly poor, they served as menials in the British camp; they also followed their hereditary trade of tanners and workers in leather, whence their name "chamhars" (leather workers); and they supplied the sepoys and camp followers and natives generally with shoes. In course of time, in alliance with the butchers, they established an extensive trade with Europeans in hides, and goat and sheep skins.

In progress of time the *chamars* improved in tanning and leather work, and they manufactured a variety of articles which were a creditable imitation of English productions, and acquired a reputation which was wider than local.

The splendid Grand Trunk road made by the British, which extended from Calcutta to Cawnpore, advanced with the extension of British conquests to Delhi, thence through the Punjab to Peshawar, the extreme north-west frontier station, at the entrance of the famous Khybar pass, the gateway of Central Asia, and became the highway of commerce. Government bullock-trains, country vehicles, and the passenger *Dak gharries*, flourished. The rapid development of trade outstripped the means of transport by road, and the slow and unsafe country boat by river. Steam navigation of the Ganges was established between Calcutta and Allahabad in order to relieve the congestion, and in 1857 Cawnpore attained a high level of commercial prosperity. The large number of troops cantoned there, the civil European residents, and the enormous volume of trade passing through, had augmented the population fifty-fold within half a century. It was then that the great Mutiny broke out, and like a tornado it swept through the country, spreading devastation and ruin throughout the land. The stability of the British *Raj* received a violent shock, and its existence trembled in the balance till Delhi fell and broke the back of the rebellion. The outbreak wiped out of existence the Europeans, both civil and military, and merchants, planters, missionaries, and others scattered throughout British possessions, perished with the rulers. The treachery, ruthless murders, and wholesale massacres perpetrated by the misguided rebels, "staggered humanity," and reduced the country to a state of wild anarchy. All Government was at an end, plunder and destruction of both foes and friends alike became rampant, and trade for the time being was extinguished. Who has not read the terrible story of the massacre of Cawnpore, the heroic defence of Lucknow, and the gallant capture of Delhi, and has not been thrilled with horror, wonder, and emotion?

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

On the advance of the immortal Havelock, the re-occupation of Cawnpore, and the subsequent relief of Lucknow by Sir Colin Campbell, the district quickly quieted down and resumed its wonted peaceful appearance with the astonishing rapidity of a calm after a storm, while European settlers followed in the wake of the army and filled up the gaps created by the massacre with incredible rapidity. Commercial activity was resumed immediately the avenging army took the field and advanced forward, and but for the ruined aspect of the bungalows, a stranger seeing Cawnpore could not have realized that a terrible revolution had so recently convulsed and devastated the country.

In 1865 the East Indian Railway was completed to Cawnpore and linked it with Calcutta, thus giving an enormous impetus to the expansion and prosperity of the first-named city. Safe, speedy, and cheap transport at once changed the course of the flow of trade from the roads and river channels to the railway. The trade in cotton, grain, and oil seeds produced in the rich soil of Bundelkhund deserted the port of Kalpi on the Jumna and passed through Cawnpore; Farrukhabad, through which the trade of Rohilkhand passed down the Ganges, likewise yielded to the superior advantages of Cawnpore; and Oudh, the "garden of India," abandoned the waterway of the Ghogra for the ironway of Cawnpore. The Grand Trunk road saw no more the interminable strings of thousands of carts that conveyed the merchandise of the Doab to Allahabad for shipment by steamers to the port of Calcutta.

The Civil War in the United States of America in 1863 proved of signal portent to India, and the reflex of that conflict laid the foundation of the industrial development of Cawnpore. The trade in cotton during the continuance of that war was completely disorganized owing to the blockading of the ports of the Southern States, which created a severe cotton famine in Lancashire, and the price of the staple rose to unprecedented heights and produced a boom in India that enriched alike the merchant and the producer "beyond the dreams of avarice." Cawnpore was flooded with countless bales of cotton that poured from Bundelkhund, Rohilkhand, Oudh, and the Doab in huge streams, beyond the carrying capacity of the railway. The roads in the city were piled high above the house-tops, completely blocking the way. To relieve the congestion, the embarrassed authorities were compelled to provide storage away from the market, and the aid of the military was called into requisition to clear away and level the mud huts that had sprung up promiscuously on cantonment lands in the vicinity of the railway station. Elephants were employed to push down the frail mud walls, and to level the ground where the piles of bales quickly grew into mountains of cotton on the broad flat level plain, which took months for the railway to transport.

During this great crisis the price of cotton was forced up to an unheard-of level, and manufactured goods advanced in sympathy. Some enterprising residents saw the advantage that would accrue if the raw material were manufactured on the spot, and a company was formed to establish a cotton mill.

The commissariat officer, with whom the idea originated, gained the support of his confrères in Lucknow and other places, even to distant Madras, and he, with their aid and the co-operation of their wealthy contractors and commissariat *gomasthas*, subscribed the capital, and the foundation of the first cotton mill was laid in Upper India. The leading European merchants and business men joined the scheme, lending their powerful support, and they were elected directors and formed a strong board that enlisted public confidence. The company was registered in 1865 amidst great enthusiasm, and was named after the reigning Viceroy, Lord Elgin.

The services of a civil engineer (the author), with expert knowledge of the manufacture of cotton, was engaged in England to build the mill and manage the business of the company. The industry was launched under the happiest auspices, but, unfortunately, the misdirected zeal of the commissariat officers dominated the board, and the dual control prejudicially affected the interests of the company, ending eventually in the resignation of the board and the manager. The rules of the service prohibited the commissariat officers from serving as directors, but, nothing daunted, they organized among themselves a "managing committee," and assumed all the prerogatives and powers of a legally constituted board. An engineer of the P.W.D. replaced the expert engineer and manager, and a complete breakdown was the result. The managing committee, trained in the traditions of the commissariat, were impatient and dissatisfied with the progress of the buildings, and arbitrarily removed the contractors for breach of contract for having exceeded the stipulated limit of time. The contractors sued the company for wrongful dismissal, and proved to the satisfaction of the court that the delay arose owing to the neglect of the company's engineers to supply working drawings in terms of the contract, and the company had to pay damages to the tune of Rs. 40,000. This, coupled with extravagant waste of the company's funds, speedily dissipated the working capital, and before six months had expired the P.W.D. engineer retired and reverted to his legitimate duties, leaving the hopelessly impoverished company in liquidation. The liquidator, discovering that the Act empowered him to work the mills in the interests of the company, made spasmodic attempts to run the concern, which failed from lack of credit and funds and the want of expert knowledge of the business, ending at length in bringing the mills under the auctioneer's hammer. At the sale the only bidder was the former chairman, Mr. H. Maxwell, who became the fortunate owner of the mills, with ten thousand spindles and a hundred looms, at one-third of their cost.

The late manager (the author), at whose instigation the purchase was effected, was reinstated in charge, and in less than twelve months the mills developed into a flourishing concern, and firmly established the success of the industry. At the end of that brief period circumstances transpired which caused the manager to sever his connection with the owner, and he started the "Muir Mills Company, Ltd.," which soon demonstrated the profits to be made from the development of the cotton industry, and other mills grew apace in Cawnpore, Agra, Delhi, Mirzapore, and other places. The hundred thousand spindles and two thousand looms have multiplied tenfold, and numbers of industries have sprung up which have enriched Cawnpore and made it a busy hive of industry in Northern India. The early adoption by the cotton mills in Cawnpore of the practice of adding to spinning and weaving the manufacture of tents, uniforms, equipment for the army, police, and other services, has been the means of rendering signal service to the Government in every way, and especially in equipping expeditions engaged in frontier operations in Afghanistan, Somaliland, the Transvaal, China, and other oversea wars.

When the Muir Mills were finally established, the founder directed his attention to the manufacture of wool, an

industry that for climatic reasons had been overlooked, and he experimentally started a small mill with a single mule and two power looms, primarily for the manufacture of the coarse country wool into blankets, policemen's great-coats, and horse clothing, for which there was a large demand.

It is hardly necessary to enter into the details of the vicissitudes through which the infant industry passed and the pecuniary losses the pioneers sustained before financial success rewarded their labours. A little Government aid and patronage in its early struggling career would have saved years of valuable time and pecuniary loss, but this assistance was not forthcoming, and the pioneers had to bear the whole burden of proving their faith and eventually establishing the industry on a sound basis. Owing to the energy, enterprise, and business capacity of the manager of the mill, Mr. (now Sir) Alexander McRobert, who came to India soon after the inception of the undertaking by the founder, they have, in the process of time, successfully developed the production of higher qualities of material of fine texture from the renowned fleeces of Thibet and the imported superior wools of Australia. Their operations now embrace a countless variety of goods, formerly imported from Europe, such as superior blankets, plaids, serges, tweeds, materials for military uniforms, in short, every description of article made of wool, and the mill has proved of incalculable value to the Government and the country. From this successful enterprise sprang the New Egerton Woollen Mills at Dhariwal, which also flourished under the able direction of Sir Alexander McRobert. A steady trade in wool, which had no previous existence, is now established with Thibet, and large quantities are shipped from Australia direct to the mills.

Almost coincident with the occupation of Cawnpore in 1801, the *chamars*, as mentioned before, settled down to their hereditary trade of tanning and manufacturing leather, in order to meet the wants of the Sepoys and camp followers of shoes and other requirements. In process of time they improved the quality of their productions, and secured wide public patronage all over India. The trade was conducted in a primitive fashion; each family set apart a corner of their mud huts, from the roof of which they hung skins sewn into bags filled with chopped babool bark and water; the pressure of the water forced the tanning into the skin and converted it, in the brief space of a week or ten days, into passable leather, which they either worked up themselves or sold in the market to manufacturers who had small workshops in the city. These industrious people, the despised of the population, not only contrived to meet local demands, but extended their operations by successfully imitating English-made manufactures, thus widening their field of operations, and traders from Calcutta and other parts of India established agencies at Cawnpore, and army contractors did a thriving business in equipments known as "half mountings."

In 1857, when the Mutiny was at its worst, the British troops experienced great difficulties in procuring supplies of harness and saddlery for the army in the field owing to the loss and destruction of reserve stocks in arsenals that had fallen into the hands of the rebels, and also to the great delay in obtaining supplies from home by way of the Cape. Under pressing necessity, it occurred to a young artillery officer, gifted with commercial instinct and a practical turn of mind, that the leather made in Cawnpore might be improved and utilized to meet the emergency. He brought the matter to the notice of Government, and obtained sanction to give the experiment a trial. The idea was eagerly approved, and Captain John Stewart was authorized to put his scheme into execution. Soldiers who had worked in tanyards in England were sought out to supply expert knowledge; the commissariat cattle were slaughtered for the troops; and abundant babool bark (*Acacia arabica*)—to be obtained for the trouble of gathering—furnished the raw materials for a start. A corner in the extensive earthwork thrown up by General Havelock for the protection of his small garrison and the bridge of boats that spanned the Ganges, was allotted to Captain Stewart in which to prosecute his experiments. The vacant houses within the defences accommodated the European staff and workshops, and the sloping bank of the river provided a convenient location for the tan pits, which were made mostly of wood. Imperfectly-tanned hides sold in the bazaar were procured and re-soaked in tannin with the object of obtaining a speedy output, whilst the freshly-slaughtered hides were treated by the slow English process.

Thus originated a great industry, and in 1863 was laid the permanent foundation of the present extensive "Harness and Saddlery Factory," a concern which, from so small a nucleus, has grown to gigantic proportions, embracing in its operations the equipment of the entire British Army in India, besides troops engaged in operations overseas. The quality of the leather and manufactured articles is equal to the products of English tanyards. To Captain John Stewart is, therefore, due the credit of having been the founder of the first leather factory established in Cawnpore. The extensive entrenchments, no longer required for defensive purposes, were given over to him entirely for the extension of the works, and he had the satisfaction before he retired of seeing the whole of the vast area occupied with well-built tan-pits and workshops, giving employment to many thousands of Indians and a large staff of Europeans, with immense benefit and economy to Government. The success of this enterprise afterwards gave birth to the sister establishment, the "Army Boot Factory" (Messrs. Cooper, Allen & Co.), which was planned and built by the author, at whose suggestion Mr. (now Sir) William Cooper and Sir George Allen founded and established the business, and with energy and enterprise developed the industry to its present extensive proportions. The success of this undertaking led to the establishment of the "North-West Tannery Company," and other smaller tanneries. One is tempted here to touch upon the extraordinary idiosyncrasies of Government in neglecting to bestow some mark of appreciation and recognition of the great and invaluable service rendered by the founder of the great industry. The success achieved by him paved the way for vast economies and untold benefit to the Government and the country, yet he was allowed to retire in his old age, after a lengthened period of strenuous and invaluable service, with nothing more than his bare pension. It is no exaggeration to say that he saved the Government and the country hundreds of lakhs of rupees, that he built up works that provide Government with indispensable equipment, and established an industry of enormous benefit to the people generally. The founders of the leather factory earned princely fortunes, and have, rightly so, been the recipients of the honour of knighthood, but the original founder of the industry left the shores of India a poor Scotch laird, with no more than the slender pension of his rank (which, under any circumstances, would have been due to

him), and his great services entirely unrecognized and unrewarded. In 1896 the author was persuaded by a prominent member of the Cawnpore Chamber of Commerce to return to Cawnpore after an absence of nearly ten years of retirement, to help him to carry out a large tannery and leather manufacturing project, but from various causes the scheme was never launched. Subsequently a German, who had rented one of the tanneries, discovered the secrets and value of the business, and with the aid of German capital, laid out very extensive works in Cawnpore, but expansion soon overtook their financial resources, and as the business was mismanaged and developed in a most extravagant manner, the Bank of Bengal had to foreclose, and the German firm went into liquidation. The property was acquired by Messrs. Cooper, Allen & Co., the owners of the Army Boot Factory. It is an anomaly to see the vast quantities of raw hides and skins which pass through Cawnpore for export to Europe and America, to be re-imported in the manufactured state, when they can be profitably tanned and manufactured locally. There is a fine future for the leather industry in India, where the climate is suitable and raw materials abundant.

In the early seventies of the past century the Government, realizing the necessity of supplying British soldiers with pure wheaten flour, instead of that provided by the commissariat contractor, which was ground by low-caste women in filthy hovels in the slums of the city, built a steam flour-mill in the cantonments of Cawnpore. The superiority of the flour was at once manifested, and its purity removed a serious source of danger to the health of the men. In course of time this mill became the parent of a widespread industry. The introduction of the automatic roller milling process and modern milling machinery removed the prejudice of the Hindus to the use of machine-ground flour, their objection to the old method of washing the wheat to remove impurities and soften the grain, and the handling of the flour by low-caste workmen, being that in the eyes of rigid Hindus the produce was rendered unfit for their use. The roller mills removed these objections, as the wheat, from start to finish, even to the operation of bagging the flour, was accomplished untouched by polluting hands. The process also permitted the employment of less skilled high-caste operatives, and the sanction of the *Pandits* having been obtained to the use of the flour by the Hindus, the people readily followed the lead of priests and took the flour extensively. The beautiful pure flour found rapid and wide favour, and created a demand that firmly established the success of the industry. Mills have since sprung up and multiplied in Cawnpore, Agra, Delhi, and elsewhere, bidding fair to supersede the ancient and universal hand-mills of the East that have done duty for unknown centuries.

When the jute mills in Calcutta were earning fabulous dividends, some enterprising spirits were moved to plant the industry in Cawnpore, relying for their requirements of raw material upon the Province of Oudh, where jute is largely grown, and prices are lower than in Bengal. The capital required was eagerly subscribed, and the foundations of the only jute mill built outside of Bengal were laid in Cawnpore amidst great enthusiasm. Unfortunately for the company, when manufacturing was started, the optimism of the founders was considerably damped, as they discovered that the locally-produced jute was of inferior quality, and they had therefore to fall back upon Calcutta for their supplies. This necessity placed the venture at a disadvantage with their rivals, and a fall in prices of the finished article, due to overproduction, was severely felt by the local mill, and the company succumbed to the losses that ensued. Some Indians bought up the concern at a low figure, but failed to make a success of the industry in face of the competition from Calcutta.

The manufacture of chemicals is represented at Cawnpore by a branch of a well-known firm in Bengal, who carry on the business, silently and steadily developing their factory as the demand increases.

A "Brush Factory," once a thriving little business which met the demands of the trade and prospered, tempted the cupidity of a German, who started a rival workshop with cheap German machinery. The results proved disastrous to both, as the Teuton succumbed to the keen competition, and left the pioneers in a crippled state. The German factory was bought by Indians, who relied on cheap management to give them the advantage over the older factory, but as in the case of the jute mills, their expectations have not been realized, and both continue to suffer from unhealthy competition.

The refining of crude sugar (*gur*), produced in the country, at an early period attracted the attention of commercial men in Cawnpore, and the new process, which dispensed with the use of animal charcoal in the process of refining, opened up the prospect of the establishment of a thriving business. The one obstacle to success was the prejudice of the Hindus to use sugar refined with animal matter, but as that would be removed by the adoption of the new method, a field of industry of great promise was opened up. Some enterprising Europeans were quick to perceive the advantage of the scheme, and they lost no time in availing themselves of it. A company was formed, which was well supported by Indians, and the works were erected on the outskirts of the city, close to the sugar bazaar. The industry was started under most favourable auspices, and with exceptional advantages, Cawnpore being the central mart in the province for the raw material produced in Oudh and the Doab. To further assure the Hindus, high-caste men were employed as operatives, for on the patronage of the Hindus, who formed the bulk of the population, depended the financial success of the company.

Every precaution was adopted to prevent their prejudices being aroused. The refined sugar produced was accepted by the people locally, but as the increase of consumption proved slow, the output had to be restricted. The company was, in consequence, subjected to a severe and unexpected strain, and Government patronage for the use of the sugar having been refused, the cheap German beet sugar was preferred. The company struggled on for several years with an annually recurring loss, but still hoping that the consumption amongst the population would increase, until at length the Government were induced to use their cane sugar in place of the German beet rival. The refinery thenceforth sprung into prosperity, and as Hindus have gradually learnt to appreciate the sugar, the demand has outstripped the production, with the result that the company has prospered, fulfilling the expectation of the founders.

This success has won the confidence of Indians, and they have ventured to erect refineries of their own in Unao and elsewhere.

On his return to India in 1896, the author was surprised at the remarkable progress made in Cawnpore during his absence, in the short space of ten years. The railway companies had transformed the aspect of the city beyond recognition;

THE RISE AND PROGRESS OF CAWNPORE

the broken plain in the south-western suburbs, covered with unsightly brick-fields and *pazawahs* (native kilns) that disfigured the landscape, had been levelled and the site converted into goods depôts and extensive sheds; and, to further enlarge the area and complete the accommodation, the Ganges canal, which divided the land, was arched over to meet the demands of the growing trade and traffic that had developed. The miserable huts that fringed the city and added to its squalor and unhealthiness had disappeared, and the East Indian Railway sidings were extended to the thriving mills and factories north of the city, giving the whole place a lively air of activity and progress. The electric tram-line and lighting system then in process of construction (1906) promised to give the finishing touch to the transformation that had taken place during the previous forty years. The ravages of plague in the city gave the municipal fathers the valuable opportunity to clear away the squalid congestion of huts and mud houses and to open up wide roads and thoroughfares, giving light and air to the crowded filthy pestiferous slums where disease and death revelled. The mills and great factories had advanced a step further and built model villages for their employés in the suburbs, where sanitation was maintained and cholera and plague found no place. During the severe visitation of plague in Cawnpore in 1903, when the city was almost decimated, the model villages enjoyed complete immunity, a convincing proof of the value of sanitation, free ventilation, and a plentiful supply of pure water. The commercial and industrial activity reflected its influence on the life of the natives, and it had infused in them a spirit of emulation, and sharpened their intelligence, the fruit of which was manifested in enterprises which were once exclusively the work of Europeans. Scores of cotton-ginning factories and baling presses were entirely owned and managed by them, unaided by the formerly indispensable Englishman. Their management, however, had not always proved the success they had hoped for. Their inexperience and inveterate habit of doing things cheaply, had led them into serious blunders that cost them dearly. In the midst of all this activity and progressive enterprise, it was singular to observe that Cawnpore possessed no facilities for repairs of engines and machinery, the mills being dependent on the workshops of Bombay and Calcutta, excepting for trifling casualties, which were attended to locally.

That state of affairs was so contrary to experience in other manufacturing centres, where the indispensable workshop came into existence simultaneously with the establishment of settlements and industrial works, that the author endeavoured to remedy the anomaly and started the Empire Engineering Company, Ltd., in a central position convenient to the mills. These workshops, like so many enterprises in Cawnpore, had to face many difficulties and trials in the early stages of development, but the future is full of promise. The works have made steady progress, and have grown to be the largest and most up-to-date in Upper India, and there is every prospect of the expansion being maintained.

The capital invested in the great and thriving industries of Cawnpore is very considerable, probably exceeding two millions sterling, irrespective of the countless lakhs invested in trade and commerce. The wealth and population of the citizens have advanced with the prosperity of its industries, and the wages of the working people have increased within the last decade from 50 per cent. to 100 per cent. The advent and spread of plague has been a great misfortune to Cawnpore, and its industries have felt the effect very severely, as thousands of operatives have fled and thousands have perished, nevertheless the flow of prosperity continues. A currency office is in course of erection, and a central telegraph office is to be located in a suitable position. The army chaplain is about to erect a commodious soldiers' institute, and it is whispered that the High Court is likely to find a place here. This latter consummation must, however, be relegated to the unknown future, as local interest in Allahabad is too strong to be overlooked, and the expense of the removal is a factor to be considered. Lucknow has asserted her claims to the honour of being the capital of the province, but the claims of central Cawnpore far outweigh the sentimental and doubtful advantages of Lucknow.

The five great railways that have established termini at Cawnpore, connecting it with the ports of Bombay and Calcutta, have contributed to centralize and concentrate the commercial advantages of the place, and the old split-up routes, by slow and unsafe channels that flowed down the Jumna, the Ganges, and the Ghagra, have been completely abandoned in favour of Cawnpore. To the intelligence and enterprise of the European community, and the foresight of the local Chamber of Commerce, must be credited no small share in the forces that have lifted Cawnpore to the high level it has attained. The Chamber early recognized the objectionable effect of the maintenance of the Octroi duty, which has been such a hindrance to the free exchange of commodities and a fruitful source of oppression by native subordinates who collected the obnoxious tax. They therefore substituted a system of "terminal charges," which ensures easy collection of amounts by the railway companies and the municipality, and has permanently removed illegal extortion and loss to traders.

The leading position which the commercial community of Cawnpore has secured, and the high estimation in which the Chamber of Commerce is held, are of great benefit to the inhabitants generally, but especially to those who are engaged in trade relationship with the outside world.

The remarkable rise and progress of Cawnpore, and the advance in the intelligence and enterprise of Indians, have naturally given rise to speculation as to the future destiny of the people of India; will they eventually rise to the level of European civilization? and will the teeming population and cheap labour become formidable rivals to the manufacturers of Europe and usurp the markets of the East? Commerce will flourish when production is abundant and cheap, yet the resources of the country are great, and signs are not wanting that India is bound to take a leading place in the workshops of the world, a formidable rival of the great industrial nations of the West.

THE CATHOLIC MISSION, AGRA

NOTES CONTRIBUTED BY THE VERY REV. FATHER H. NORMAN, D.D., RECTOR, ST. PETER'S COLLEGE

AGRA abounds in historical buildings, and its Taj-Mahal, "so pure, so gloriously perfect," its Fort, and its mausoleum of the renowned Akbar, all help to keep alive its former glories and interesting history. Agra has also some old Christian monuments and a history of missionary enterprise by the Roman Catholics which is worthy of note. It is recorded that some Jesuit Fathers first found their way to Agra in the time of Akbar, having been invited from Goa by this monarch in order that he might hear from the lips of able exponents the teachings of the Christian faith. The first mission, composed of three Jesuit priests, and headed by Father Rudolf Acquaviva (son of the Duke of Arragon and Atria), arrived at Agra, or rather at Fatehpur Sikri, where the Emperor then was, on February 28, 1580, after a journey of three months. The missionaries were immediately on arrival allowed an audience of the Emperor, who received them very cordially and kept them in conversation until two o'clock on the following morning. When he had dismissed them to their lodgings, he sent after them plates full of gold mohurs for their acceptance, but they courteously declined the present.

On the following day the Fathers were again admitted to audience in the magnificent Diwan-i-Khas, and they carried with them as a present to Akbar the new Royal Polyglot Bible of Plantyn, printed for Philip II (1569–72), and magnificently bound in seven volumes. Akbar accepted this valuable present with great respect. Taking off his head-dress he kissed the volumes and placed them on his head one after another, but showed greater reverence for those containing the Gospels. The books were then, by his order, carefully placed in his private chamber.

The priests, who were full of Christian ardour, then wanted to preach the Gospel, and as Akbar was eager for instruction, it was arranged that he should attend on Saturdays to hear Father Acquaviva. The Emperor took with him his famous Vizier, Abul Fazal, and certain learned divines who might argue with the Jesuit before an assembly of the doctors of all religions; but, as Dr. Hunter remarks, "the Christian priest is given the best of the argument," and no reasoning stood against him. One of the results of Father Acquaviva's success was that Akbar removed all restrictions against the conversion of Mahomedans to the Christian faith, and, among others, Akbar's son, Murad, joined the Church.

Akbar himself took kindly to the Fathers, making a friend and counsellor of Father Acquaviva, and he seemed favourably inclined towards the Christian religion. He paid respectful visits to the chapel of the Jesuits at Fatehpur Sikri, and later built them a church at Agra at his own expense. He was, however, never baptized, and Father Acquaviva was recalled to Goa in 1583.

A second Jesuit mission, headed by Father Xavier, a man of noble birth like Acquaviva, arrived in 1595. This was a permanent mission, and was destined with varying vicissitudes to endure to the present day, though the Jesuits have long since ceased to hold charge, and the mission has for more than a hundred years been controlled and manned by the Capuchins.

Jehangir, Akbar's son, favoured the Christians even more than his father, and during his reign three Mahomedan princes were baptized, receiving the names of Phillipo, Carlo, and Henrico. The occasion of the baptism of these princes, in 1609, was marked by a gorgeous pageant, that wound its way through the streets of Agra to the Jesuit church. All the European residents of the town—some sixty in number—Portuguese, Venetians, Poles, Armenians and Englishmen, took part in the function, and were mounted on horseback and arrayed, Oriental-like, in purple and gold brocade. Captain Hawkins was there carrying "St. George, his flag, for the honour of England," and the young princes followed behind mounted on elephants.

Akbar was not a baptized Christian, but he was a good and sincere man; and he was not only the first Mahomedan sovereign who sent for Catholic priests to his kingdom, but he even favoured them. Jehangir, his son, showed consideration to the priests even yet more than Akbar, and it was doubtless Christian influence that softened his fiery nature and engendered in him those ideas of justice and patriotism for which he was remarkable. It is stated that he "adorned his rosary with figures of Christ and the Virgin Mary," and that he desired to see a Catholic priest when dying. Shahjahan was also attached to the Catholic religion, and Aurangzeb, bigot though he was, exempted the Catholic priests and their congregations

THE CATHOLIC MISSION, AGRA

at Agra from the *jezia*, or poll-tax, levied on all non-Moslems. Furrukhseyer also favoured the Catholics, and through the influence of the priests this Emperor gave a kindly reception to the English embassy sent to Delhi in 1715 by Mr. Hodges, the Governor of Calcutta. Original *sanads* prove that Shah Alum endowed lands rent free to the mission, and the Maharattas, during their supremacy, also made grants to the mission. During all the Mogul rule the Catholic mission was, indeed, "regarded with an enlightened interest, and certainly without disfavour, by the Delhi Court" (Hunter's *Indian Empire*).

A cruel persecution was waged by Shahjahan against a certain section of the Christians, namely, the Portuguese of Bengal, who had been accused of piracy, and some 4,000 of whom were removed as prisoners to Agra, and sold as slaves or left to linger in loathsome prisons if they did not abjure their faith. Two Portuguese secular priests fell martyrs for their faith during this persecution; yet the Jesuits remained unmolested with their flocks at Agra, which showed that the Emperor was not wholly against the Christians. The persecution lasted two years, and ceased in 1634, when Father D'Silva, who had been cast before infuriated elephants at the Agra Fort for the sport of the Mogul Court, returned from the arena unharmed, and the Emperor, willing to see in this the protection of God, granted freedom again to the prisoners from Hooghly.

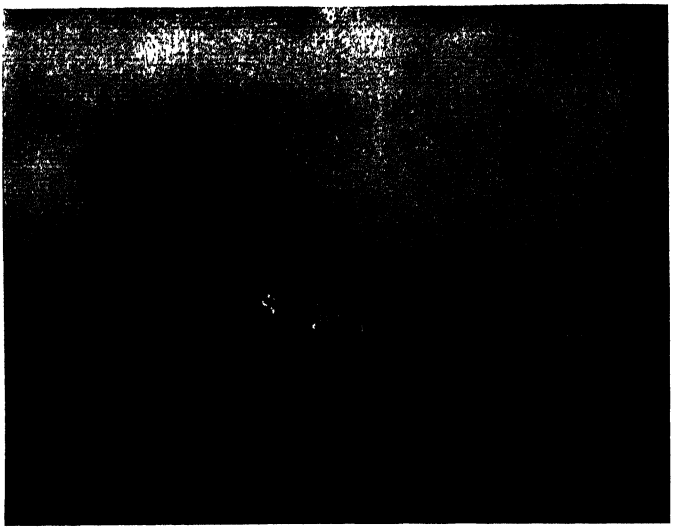
In addition to a church, the Jesuits had also a college at Agra. The latter was founded in 1617 by a rich Armenian named Mirza Zulkarnen, who was Governor for the Moguls of the Province of Sambhar. To prevent any possible confiscation of the college funds Zulkarnen invested these outside the Mogul Empire, and acquired some landed properties at Parel, in Bombay, the rents of which were for the support of what was known as the "Agra College." But by some mistake, it seems, these rents did not reach Agra from the time of the transfer of Bombay to the English by the Portuguese; and on Zulkarnen's estate to-day stands, it is believed, the "Parel Government House and Ground." The Agra Jesuit College was "an imposing building which was remarkable for its architectural beauty, even in a city of famous buildings." This college was subsequently destroyed by the Mahrattas, when it ceased to exist; and in 1823 the building is described as being in a "dilapidated condition." In 1846 another college was built—the present St. Peter's College—the foundation stone of which was laid by Captain Fitzsimon, a grand-nephew of Daniel O'Connell. Among the rectors, or principals, of the old Jesuit College was Father Henry Roth, S.J., who died at Agra on June 20, 1668, and lies buried in the "Old Cemetery," and who is, perhaps, the first known European Sanskrit scholar and the first to introduce a grammar of that language into Europe (cf. Max Müller, *Lectures on the Science of Language*).

The "Old Cemetery" is perhaps the most ancient Christian graveyard in Asia, and it is now a Government-protected monument in which there are many interesting graves. The early Jesuit missionaries, with some other fathers, are buried at one end in a mausoleum known as the "Martyrs' Chapel," a place so called because it contains the remains of Fathers D'Anhaya and Garcia—the one a Portuguese and the other an Indian-Portuguese priest—both of whom died for their faith under Shahjahan, after enduring cruel sufferings in prison. The "Martyrs' Chapel" is a vaulted building surmounted by a cross, and has the appearance of a chapel. It is also known as "Padre Santoos' Chapel," because among those buried within it is Father Marcus Antonius Santucci, an Italian Jesuit, who was renowned for his virtues and holy life. Some thirty-four priests in all are interred in this "chapel," and the inscriptions on their tombstones having become largely defaced with age, the Government Archæological Department has restored their reading and has had them transcribed on two marble slabs, which have been let into the walls of the chapel, and has added the following inscription: "To the sacred memory of these men, the pioneers of the Catholic cause in Northern India, this tablet is erected by the Government of the United Provinces," 1914. This cemetery has Armenian and Portuguese graves dating from the beginning of the seventeenth century; it has also the graves of John Hessing, of the infamous Walter Reinhard, and of the Italian Jeronimo Veronco, who died at Lahore in 1640, and is the reputed builder or architect of the Taj. There is also an early English grave, which bears the following inscription: "Here lies John Mildenhall, Englishman, who left London in 1599, and travelling to India, through Persia, reached Agra in 1603 and spoke with the Emperor Akbar. On a second visit in 1614 he fell ill at Lahore, died at Ajmere, and was buried here through the good offices of Thomas Kerridge, merchant. R.I.P."

Of the old Jesuit church, it is not known how much at present remains; but a tablet speaks of its restoration in 1769 by Walter Reinhard, and another tablet mentions a restoration (or extension) in 1835 by Col. John Baptist Filose, of the Gwalior service. This "restored" church is known to the Indian Christians as the *Akbari Girja*, or Akbar's church, and tradition points to its early origin.

The present cathedral church, which is alongside the old church, is of Italian style, and was built in 1849. In its vicinity are the Archbishop's house, the convent schools for European and Indian girls, and St. Peter's College, as also the settlement of the Roman Catholic Indian Christians, all which places together comprise what is known as "Padri tola," or the "place of the priests."

In the Archbishop's archives are preserved several old *firmans* and *sanads*, granted to the Catholic missionaries by Mogul and later rulers, and conceding to them certain privileges and grants of land. But much of the donated land has since passed into other hands owing to the troublous times that Agra has known, and owing to the inability of the missionaries, due to weak links in their succession, to maintain what was theirs by deed of gift of their early patrons.



BOMBAY-POONA EXPRESS RUNNING INTO BOMBAY.

RAILWAYS

THE BOMBAY, BARODA, AND CENTRAL INDIA RAILWAY

THE Bombay, Baroda and Central India Railway was incorporated by Act of Parliament in England in the year 1855, with the object of connecting the western coast of India—and particularly the port of Surat—with Ahmedabad and other inland districts. Surat was a flourishing port hundreds of years ago—before King Charles II handed over Bombay to the East India Company, but the possibilities of the island loomed so largely in the minds of the British settlers that they induced the company to make an order in the year 1686 for the transfer of the seat of Government in Western India from Surat to Bombay, which was declared to be the "seat of the power and trade of the English nation in the East Indies." Even after that date the town of Surat maintained a thriving trade, and in 1856 a contract was entered into with the East India Company for the construction of a line from Surat to Banda and Ahmedabad. Shortly after that date Ahmedabad was connected with Viramgam and Wadhwan, and before the close of the year 1877 a section had been constructed between Anand and Godhra. The Rajputana-Malwa State Railway was in 1885 handed over, under the authority of the Secretary of State, to the Bombay, Baroda and Central India Railway Company, to be worked by them, this transaction resulting in the addition of a very large mileage.

The agreement of 1855 contained a clause giving the option of purchase, according to certain conditions by the Secretary of State, of the company's line at the expiration of ninety-nine years. This power was exercised by the Government, and on January 1, 1906, the company was reconstructed and the Secretary of State transferred to the new company the Bombay, Baroda and Central India Railway, the Rajputana-Malwa, the Godhra-Ratlam, and other subsidiary lines, all of which were to be worked by the lately formed company.

According to the administration report of the Government of India for the year 1917–18, the lines comprised in the system of the Bombay-Baroda and Central India Company comprised the following, constructed on the 5′ 6″ gauge principle, namely: the Bombay, Baroda and Central India Railway, 1,008·30 miles; the Nagda-Ujjain Railway, 32·506 miles; the Petlad-Cambay Railway (Anand-Tarapur section), 21·416 miles; the Petlad-Cambay Railway (Tarapur-Cambay section), 12·355 miles; the Tapti Valley Railway, 155·724 miles; on the 3′ $3\frac{3}{8}$″ principle the Bombay, Baroda and Central India Railway, 1,827·601 miles; the Ahmedabad-Dholka Railway, 33·540 miles; the Ahmedabad-Parantij Railway, 88·700 miles; the Gaekwar's Mehsana Railway, 162·628 miles; the Jaipur Railway, 122·210 miles; the Palanpur-Deesa Railway,

17·28 miles; the Vijapur Kalol-Kadi Railway, 46·110 miles; and on the 2′ 6″ principle, the Gaekwar's Dabhoi Railway, 209·692 miles; the Kosamba-Zankhvav Railway, 26·274 miles; the Rajpipla Railway, 39·244 miles; the Billimora-Kalamba Railway, 34·925; the Broach-Jambusar Branch Railway, 29·691 miles; and the Petlad-Vaso Railway, 19·247 miles; making a total of 3,870·774 miles.

The main line is laid with 69 lb. double-headed, 82 lb. bull-headed, and 90 lb. flat-footed steel rails on creosoted Australian pine and oval pot sleepers.

The branches are laid chiefly with 69 lb. double-headed, and 48 lb., 50 lb. and 75 lb. flat-footed steel rails on oval pot and wooden sleepers.

The main line—that is, the one originally sanctioned—extends from Colaba (Bombay) to Viramgam, 36 miles on the western side of Ahmedabad, the total distance being 350 miles. In the course of construction in this part of the country it was found necessary to build a number of bridges, including the North Bassein bridge, 4,313 feet in length; the South Bassein, 1,563 feet; the South Vaiturni, 1,250 feet; the North Vaiturni, 1,438 feet; the North Purna, 1,070 feet; the Chumbal, 1,652 feet; the Nerbudda, 4,687 feet; and the Tapti bridge, 1,875 feet. Bridges of importance on the metre-gauge system span the Jumna, near Agra Fort, 2,427 feet in length; the Nerbudda, near Mortakka, 2,836 feet; and the Jumna, near Muttra cantonment; while the chief tunnels are Mhow Ghat No. 3, which is 344 feet in length, and Mhow Ghat No. 4, 622 feet.

During the year 1917–18, the company carried more than 67,568,000 passengers on main and other lines, while the goods traffic reached a total weight of 7,611,000 tons. The chief classes of merchandise included wheat, other grains, raw cotton, metals, piece goods, oilseeds, salt, and sugar.

The company's line traverses a considerable portion of the chief business and residential parts of Bombay and its important suburbs, and since a severe outbreak of plague some twenty years ago, a large number of wealthy inhabitants of the city have built residences for themselves at attractive places on the seacoast, 25 miles, or even more, distant from Bombay.

The principal towns on the company's lines include Dadar, Surat, Broach, Baroda, Ratlam, Kotah, Muttra, Delhi, Ahmedabad, Viramgam, Ujjain, Wadhwan, Ajmer, Jaipur, Neemuch, Indore, Mhow and Khandwa, Agra, Cawnpore, Abu.

During the course of a year no fewer than 6,651,000 goods-trains miles are covered; the longest run for an engine is on the Ratlam-Gangapur section of the Nagda-Muttra Railway, a distance of 273 miles, and this journey is accomplished in 8 hours 23 minutes.

The first type of broad-gauge engine weighed about 31 tons, while the heaviest type now running turns the scale at 71 tons, and the figures for the metre-gauge lines are respectively 20 and 34 tons.

The southern terminus of the line is at Colaba, a district in the city of Bombay, and trains proceeding in a northerly direction parallel with the sea-coast arrive at Borivli (Dysur), which place enjoys no little popularity owing to its proximity to the famous Kennery caves, no fewer than a hundred having been built by the Buddhists as far back as the ninth century, on their expulsion from Karlee. A magnificent view of Bombay, Bassein and the Indian Ocean can be had from various points of the hill summit. The caves of Montpoinsur and ruins of a Jesuit monastery near the station also attract a large number of Roman Catholics. The station is 24 miles distant from Bombay. Then the traveller will notice Virar, 39 miles distant from Bombay, which is connected by a good metalled road with the town and port of Agashi in the Bassein subdivision of the Thana district. Here are an old Portuguese school and the large temple of Bhavani Shankar, which was built in the year 1691. Agashi enjoys a large trade with Bombay in plantains and leaves of the betel-nut tree.

Udvada, 115 miles distant from Bombay and four miles from the village of the same name, is inhabited almost entirely by Parsis, who have a magnificent fire temple, said to be the oldest in India. Crowds of Parsis visit the place twice yearly for worship and thanksgiving, and eight large furnished bungalows are provided for their free accommodation.

Navsari, 149 miles distant from Bombay, is the headquarters of the Parsi priesthood, and one of the fire-temples here enjoys the distinction of being the *alma mater* for all the young *mobeds* (priests) from Bombay and other places, who are sent for confirmation.

At the 165th milestone is Kankra Khari, a junction station, whence an extension of the main line is laid in an easterly direction to Amalner, a small town in the district of Khandesh, in the Bombay Presidency, which is noted for its old fort, a portion of which is used as a grain mart, although the ruins of some of the old structure may still be seen.

Two miles to the north of Kankra Khari is Surat, which was the leading commercial port and city on the western coast of India for many years before the island of Bombay was transferred to the East India Company, and which, during the reign of the Emperor Akbar (1556–1605), was referred to as "the mart of India." The town enjoyed large trading transactions with places on the Persian Gulf and elsewhere. An old castle, now used as Government offices, is the chief archæological attraction, but visitors will be interested in the artistic carvings on several mosques, Parsi fire temples, and other handsome Hindu shrines. The city is largely engaged in the cotton trade, many spinning and weaving mills having been erected; but some of the inhabitants are still employed in the manufacture of cloth. Surat is 167 miles distant from Bombay.

The next stopping-place of interest is Broach, 204 miles distant from Bombay, a town of great commercial importance, chiefly in the export of cotton from Gujarat, and naturally the opening of the railway signalized the establishment of some of the most flourishing mills in the Presidency. Hindus hold this place in high repute, and Sakaltirth ("purifying spot") on the Nerbudda, ten miles distant, where a large fair is held for five days, is resorted to by crowds of people, who also are curious to behold the wonderful banyan tree, "Kabir Wad," which is capable of sheltering 10,000 men and is said to have grown out of Kabir's toothpick.

After a further journey of about a couple of hours, the train arrives at Baroda, which is the chief centre and capital of the non-tributary state (in direct political relationship with the Government of India), which includes all territories of His Highness the Gaekwar in Gujarat. The city has a population of nearly a million inhabitants, and the Gujarati and Marathi languages are spoken. It is 248 miles distant from Bombay and 602 miles from Delhi; good waiting and refreshment rooms, with sleeping accommodation, being provided

at the station, in addition to a *dharmsala* and a travellers' bungalow in the camp, about a mile distant.

A visit should be made to the Nazarbagh Palace, the more modern Makanpura Palace, the college, courts of justice, the Countess of Dufferin Hospital, and the "Rajamahal" Palace, costing 45 lakhs of rupees. Of the many Hindu temples the chief are Vithal Mandvi, the Swami Narayan Mandvi, and that of Khandoba *Baulis*, or circular wells, constructed 500 years ago, with galleried apartments, should also be seen.

Application may be made to view the regalia of Baroda, which the Maharaja dons on State occasions, and among these is a diamond collar of 500 stones of great size. Three years were occupied in making the State pearl carpet, which cost Rs. 30,00,000.

From Baroda there are two lines, one proceeding to the north-west to Ahmedabad and Viramgam, with a metre-gauge section to Delhi, while the other route is a continuance of the broad-gauge system, which also leads to Delhi.

Reference is now made to the former of these two routes.

Near to the 274th milestone is Boriavi, which is 1¼ miles from Vurtal, where there is a monastery and temple dedicated to Krishna, which were founded in 1810 by an ascetic, Sahajanand Swami, and two fairs are held annually in honour of the founder and his father respectively.

Ahmedabad, a junction station of the company, with the Rajputana-Malwa, the Great Indian Peninsula (Dhond-Manmad section), and the Ahmedabad-Prantij Railways, is the headquarters of the district of Ahmedabad, in the Bombay Presidency. Ahmedabad is 310 miles distant from Bombay and 539 miles from Delhi. Not only is it one of the chief manufacturing towns in India, but it ranks first among the cities of Gujarat, and is one of the most picturesque and artistic places in the Presidency. Of the numerous mosques and tombs, the most interesting and beautiful are the Jama Masjid, the Rani Sipri mosque, rightly styled the "Gem of Ahmedabad," and Haibatkhan's mosque, which presents elements of Hindu and Mahomedan architecture. No less than twenty-four fairs are held here annually, and there are upwards of 120 Jain temples.

About 340 miles from Bombay one notices the town of Palanpur, the headquarters of the native state of the same name situated in the north-western portion of Gujarat. The state is 1,766 square miles in extent, and its chief products, namely, rice, wheat and other cereals, and sugar-cane, are disposed of in the capital town.

Travelling in a north-easterly direction, the train reaches Abu Road station, which is 425 miles distant from Bombay and 424 miles from Delhi, Mount Abu being reached by a tonga service. It is a sanitarium, and the summer headquarters of the Governor-General's agent. Situated at an elevation of 4,500 feet above the sea-level (the highest peak, Guru Sikra, being 5,600 feet), the hill has an exceedingly healthy climate, the daily temperature throughout the year being only 69 and the average rainfall not more than 60 inches. The Jains have magnificent temples here, and Abu is a celebrated place of pilgrimage.

The next place of importance is Marwar, a junction station 528 miles from Bombay, connected with Jodhpur, the capital of the State of Marwar, usually referred to as Jodhpur Marwar. This is the largest of all Rajputana states, having an area of nearly 35,000 square miles. The city was founded by Rao Jodha in the year 1549, and it is built on the slopes of sandstone hills, and is surrounded by massive walls, six miles in length, pierced by seventy gates.

Ajmer, the centre of the Rajputana transport trade, is on the Rajputana-Malwa Railway, and is the junction with the Malwa section of the Bombay-Baroda and Central India Railway, 615 miles from Bombay and 235 miles from Delhi. Ajmer is the headquarters of the district of the same name and also of the officials of the Rajputana-Malwa Railway. Large administrative offices, locomotive and carriage and wagon shops, are situated about a mile distant from the station.

Mosques, pavilions, temples and shrines adorn this city of great antiquity and celebrity, while more modern specimens of architecture, such as the very handsome edifice intended for the education of the princes of Rajputana styled the Mayo College, speak of up-to-date interest.

A metre-gauge branch line extends in a southerly direction from Ajmer to Ratlam on the broad-gauge section. Between these junctions there is the station of Chitorgarh, which serves the State of Udaipur, or Mewar, whose capital, Udaipur, "city of sunrise," is most prettily situated on a ridge at an elevation of 2,060 feet. Udaipur was founded by Udai Singh about the year 1568. The city was besieged by Mahrattas in 1769, and it was only saved by the chivalry and diplomacy of the Diwan, Umrachand Barwa. Udaipur is 69 miles distant from Chitorgarh, on the Udaipur-Chitorgarh branch of the Bombay-Baroda and Central India Railway.

From Phulera, about 660 miles from Bombay, a branch line is laid to Jaipur, the junction of the Rajputana-Malwa Railway with the Jaipur State Railway to Madhopur; it is 699 miles from Bombay and 191 miles from Delhi. It is one of the most beautiful and interesting cities in India. The fountains, cypresses, palms and flowering shrubs in the palace garden, with a series of terraces and alcoves, are extremely rich and striking in appearance.

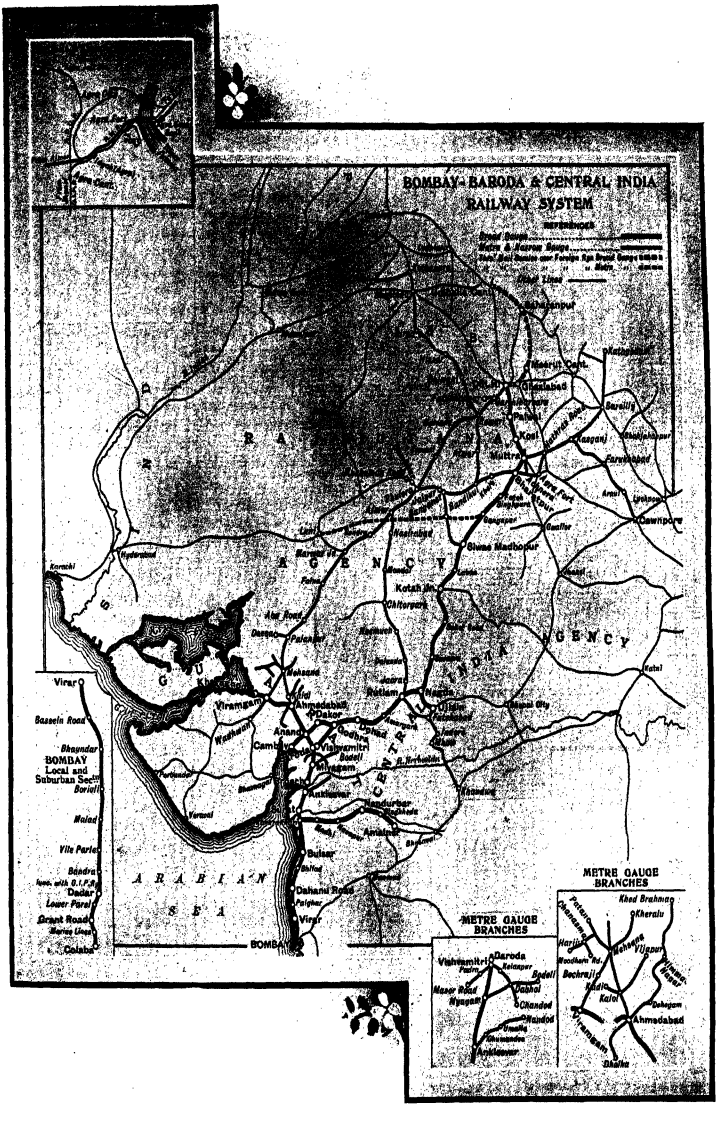
The late Maharaja, from designs by Dr. De Fabeek, had the finest gardens laid out at a cost of four lakhs, and here are the Mayo Hospital and the Albert Hall, designed by Colonel Jacob, C.I.E., containing the collections of the Jaipur museum. Other objects of interest are the school of art, observatory, mint and "Palace of the Winds" (Hawah Mahal).

The town of Amber, the old capital, offers many attractions, and in the small temple a daily sacrifice of a goat in lieu of the ancient human offering is still maintained. Permission may also be secured to visit Jaipur Palace, its stables, as well as the Albert Hall and Museum in the Rai-Newas garden, where a band plays weekly, the School of Industrial Art, the Gulta Pass, with tanks and temples, the collection of tigers in the City College, and Central Jail.

Rewari, in the district of Gurgaon, which lies on the southern portion of the Punjab plain, is the chief commercial depôt between the Rajputana States and the Province of the Punjab.

It is an old Hindu town, famous for its ruins of the Gokalgarh fort, formerly in the possession of semi-independent Rajas.

A branch line leads from Rewari to Alwar, 98 miles distant from Delhi and 792 miles from Bombay, and is the capital of the Alwar State, in Rajputana. It is overlooked by a magnificent fort 1,200 feet in height, and is surrounded by gardens and very fine trees. Many interesting sights attract the visitor, among which are the various palaces, the cenotaph of Maharao Rajah Sewai Bakhtawar



THE BOMBAY-BARODA AND CENTRAL INDIA RAILWAY SYSTEM.

(With acknowledgments to the "Railway Gazette.")

Singh Bahadur, a famous library with its rare and valuable ancient manuscripts and scrolls, the armoury, the residence of His Highness the Maharaja, numerous temples, high schools and other handsome buildings.

A further journey of 50 miles enables the traveller to reach Delhi, whose history is related elsewhere in this volume.

Returning to Baroda, the junction of bifurcation of the main line, the route is in an east-north-easterly direction to Ratlam, the capital of the native state of the same name in the Central India States agency. The town of Ratlam, at an elevation of 1,577 feet, is remarkably well laid out, and is further noted for its great cleanliness. The principal products of the State, cotton, wheat, maize and opium, are disposed of in the mart of the capital. From Ratlam a journey may be made by a branch line to Indore, which is 542 miles distant from Delhi and 374 miles from Bombay, and it is the chief town of the Indore State and capital of Holkar's territories, situated on the left bank of the Kan river. The city itself is of modern date, enjoying an elevation of 2,000 feet, and being the residence of the Maharaja and also the seat of Government, where the Resident lives in a substantial stone edifice in a beautiful park, through which the river flows. Within the jurisdiction of the British Residency is situated also the Rajkumar College, where the young chiefs of Malwa are educated.

Ujjain is in the Gwalior State, and forms the headquarters of the Malwa division, being situated on the bank of the River Sipra. After many vicissitudes Ujjain fell into the hands of Scindia, and was the capital until 1810, when Dawlot Rao Scindia transferred his residence to Gwalior.

The ruins of the old city, destroyed by earthquake, may be seen on the eastern side of the present city.

Its chief trade consists in importation of European fabrics and in the export of opium. A cotton press, ginning and weaving mills, testify to industrial activities. The Maharaja of Gwalior's palace is two miles distant from the station, which is the terminus of the Bhopal-Ujjain Railway, and the junction between the broad and metre gauge systems of the Bombay-Baroda and Central India Railway.

Further along is Kotah, the chief town of the native state of Kotah, situated on the right bank of the River Chambal. There is nothing of great architectural importance in the state, but industrial enterprises, such as the weaving of cotton, and the making of embroidered trappings for elephants and horses and of silver ornaments and artistic vessels, are worthy of special notice. The railway station is 572 miles distant from Bombay.

A journey of some length takes the train to Bharatpur junction, the capital of the Rajputana State of Bharatpur, 877 miles from Calcutta and 815 miles from Bombay, named after Bharut, well known in Hindu mythology. It is the chief town of the State of Rajputana, on the Rajputana-Malwa Railway, and has a strong fortress, which is historically interesting, it having been besieged by Lords Lake and Combermere in 1805 and 1827. A fair is held here annually, which attracts many thousands of persons. The town is celebrated for its manufacture of very fine bangles. Not far to the east is Agra Fort, where there are connections which lead to the important States of Gwalior, Dholpur, and Jhansi, as well as a metro-gauge section to Jaipur, Alwar, and other states.

Agra, an exceedingly handsome city on the River Jumna, about 140 miles distant from Delhi, is known throughout the world for the famous Taj Mahal, the mausoleum of Arjmand Banu Begam, wife of the Emperor Shah Jehan. A detailed description of this marvellously beautiful marble edifice may be found on another page in connection with the history of the United Provinces of Agra and Oudh.

Delhi, apart from its ruins, being the capital of India, is also a junction station for the Bombay-Baroda, the East Indian, the Oudh and Rohilkhand, and the Great Indian Peninsula Railway, and is physically the commercial centre of Northern India. Further information regarding the city will be found elsewhere in this volume.

Dadar, a junction of the Bombay, Baroda and Central India and the Great Indian Peninsula Railways, is an important station for interchanges. It is six miles distant from the Victoria Terminus at Bombay, and eight miles from Colaba. The pottery works and two *makra* gardens claim attention, while woollen mills and dyeing factories give it some commercial value.

Dakor, 289 miles distant from Colaba (via Anand junction), is about 20 miles distant from the walled town of Kapadwanj, where soap, glass and leather jars for *ghee* (clarified butter) are manufactured. In the vicinity the hot springs of Lasundra, slightly sulphurous, with a maximum temperature of 115 degrees, and believed to be efficacious in skin troubles, share attention with Jain temples and many Mussalman mosques and tombs.

Kashganj is a junction for Soron, a place of great antiquity and frequented by Hindu pilgrims, who bathe in the Burhganga river, which forms an immense pool dotted with handsome temples and *ghats*. It is 153 miles distant from Cawnpore by the Acknera branch of the Bombay-Baroda and Central India Railway.

Muttra is a junction of the Great Indian Peninsula and Bombay-Baroda and Central India Railways, 868 miles from Bombay and 89 miles from Delhi by the Great Indian Peninsula Railway. It is noted historically as having been attacked by Mahmud of Ghazni in 1017, and by Sikandar Lodi in 1500, when great harm was done to shrines and temples. This town was the centre of the Buddhist faith in A.D. 400.

Muttra is a very ancient city on the right bank of the Jumna river and one of the most sacred places of Hindu pilgrimage in the United Provinces, and is the birth-place of Krishna, who is believed to be the incarnation of Vishnu. It commands the greatest reverence and devotion. Six miles distant is the town of Mahaban, celebrated as the place where in his infancy Krishna was brought by his nurse and exchanged with the newly-born daughter of Jasoda, wife of Nanda, to save him from death, which had been resolved upon by Krishna's uncle, the giant Kans. In Nanda's palace are the churn in which the foster-mother made butter and a place in the wall where the sportive milkmaids hid Krishna's flute. The hall where the child grew up is a place of worship for Hindu mothers for purification after childbirth, and is therefore called Chhathi Palna, or six days' worship.

Brindaban, the holy city (five miles distant), contains numerous temples, and thousands of pilgrims visit Govind-Dewan Gopinath and the temple of Seths, which are most famous.

The chief exports are cotton ropes and printed cloth, and Muttra can boast of a flour and some cotton mills.

The company also have a through mail service over foreign railways, which commences at Delhi and embraces Meerut cantonment, Saharanpur, Ambala cantonment, Bhatinda, Kotkapura, Ferozepur cantonment, Lahore, Wazirabad, Rawalpindi, and Peshawar cantonment.

THE GREAT INDIAN PENINSULA RAILWAY

THE Indian Empire, with an area of one and three-quarters of a million square miles in extent, embracing a population of 315 million people, and not a single mile of railway! This is not, of course, a true statement as regards to-day, but how difficult it is to form even a mental picture of it as an actual fact less than seventy years ago.

It is true that there were the mighty waterways, chiefly in the Bengal Presidency, but the usual means of transport of goods or conveyance of passengers were clumsy bullock-carts, the oscillating camel, and the pack-animal, all of which followed tracks in the forests made very largely by wild beasts. Old-fashioned vessels visited ports around the whole of the extensive coast-line, but the journey from inland places to the sea was beset by innumerable difficulties. Mountains and rivers had to be crossed; mile after mile of waterless Indian desert, with its hot sand, had to be traversed under the scorching rays of an eastern sun; it was necessary for convoys to be armed in order to protect merchandise from the attacks of wily marauders; and no little danger was encountered owing to the density of the jungle, in which lurked the tiger, elephant, panther, and many other species of fauna which, especially in those days, were a terror to human beings.

Railways were an accomplished fact in England and elsewhere long before the idea of introducing them into India took practical form, and one can only wonder why this matter, of such vital importance to a country, was delayed for so long a time.

Certain proposals with regard to construction work were made, in 1840, to Lord Ellenborough, Governor-General of India at that time, but he frankly discouraged them, and it was not until 1849 that a guarantee of five per cent. was given by the directors of the East India Company for the making of two short experimental lines, commencing respectively at Bombay and Calcutta.

The Earl of Dalhousie then became Governor-General, and he gave the greatest possible encouragement to progressive works; he was virtually the father of Indian railways and telegraphs, and he greatly extended the number of canals. His Excellency issued a minute to the directors of the East India Company in which he referred to the vast size of the country and the great danger to the British Government, as well as to the loyal population of India herself, by the overwhelming difficulty of moving troops from place to place in the event of rebellion. He continued: "Great tracts of territory are teeming with produce, which we cannot transport, and new markets could be opened under circumstances which would defy the foresight of the wisest to estimate their probable value or calculate their future extent." He went on to urge that "a system of railways will certainly and rapidly beget in India the same spirit of enterprise, the same increase of produce, the same discovery of latent forces, and the same multiplication of national wealth as have marked the extension and improvement of communications in the kingdoms of the Western world."

Plans were accordingly prepared for a line extending from Bombay in a northerly direction to Thana, a distance of about 21 miles, and it was to be called the "Bombay Great Eastern Railway." The initial difficulties included the problem of crossing the Sion Marsh, for it must be remembered that, in those days, Bombay consisted of a cluster of islands which were nothing better than low-lying flats and swamps, and it was accordingly proposed "that the line should be floated upon large hurdles formed of mangrove bushes, while the embankment should be constructed of alternate layers of mud and hurdles." The Bombay Government appointed a committee to consider the details of the scheme submitted, and their report roused the enthusiasm of the inhabitants of the capital city, who, at a public meeting in April 1845, formed the "Inland Railway Association," which was empowered "to promote enquiries into the applicability of railway communication to the western side of India." Activity and progress were not, however, words pregnant with meaning to the members of the association, and the proposed railway appeared to have very little chance of being completed within any reasonable period of time. It was fortunate, therefore, that while the project was in a quiescent state in India there were men of energy in England who were so convinced of the necessity for railway facilities in this vast resourceful country that, with the co-operation of the directors of the East India Company, an Act of Parliament was passed at Westminster under which the "Great Indian Peninsula Railway Company" was incorporated. This took place on August 1, 1849. The capital was fixed at £500,000, but a proviso was inserted in the deed of transfer from the East India Company which empowered the newly formed company to increase the above-named sum to £1,000,000 if the permanent way could be extended beyond Kalyan, 33 miles distant from Bombay.

The contract for the first section, as far as Thana, was entrusted to Messrs. Faviell and Fowler, English contractors with vast experience, who occasionally employed as many as 10,000 Indians upon constructional work.

It was doubted whether the characteristic indolence, ignorance, and inherent prejudice against innovations of any kind, common to Indian labourers, would hamper the progress of the work, but it was soon evident that under European supervision these men were quick to realize what was required of them, and that they readily made themselves acquainted with the use of mechanical appliances. The greatest curiosity was manifested by the workmen when the locomotive named "Falkland" was employed in the transport of ballast from one place to another.

It may be interesting to give here a quotation from the *Bombay Quarterly Review*, which stated that the apathy of the natives "changed to eager curiosity and delight as they witnessed the wonderful performance of that fleet and powerful engine. The daily scene became a perfect fair; natives of all castes assembled in thousands to witness the new monster, and the occasion was regarded by them as one of rejoicing and of extraordinary interest and attraction."

The Bombay-Thana section was at last completed, and the formal opening was fixed for April 16, 1853. On the eventful day, which was destined to usher in a new era for the commercial, agricultural, and other interests, not only of the Bombay Presidency, but of the whole of India, the platform at Bombay was packed with an enthusiastic crowd of European ladies and gentlemen, and a large number of Indian gentlemen as well.

"A vast throng of people congregated also on each side of the line, from the starting-point to the end of the journey," and, according to local chroniclers, these included "inhabitants of Bombay proper,

and the neighbouring country, people from Scinde, Kabul, Central Asia, the Persian Gulf, Arabia, and the east coast of Africa."

A special train, consisting of a State saloon, occupied by Sir William Yardley

THE GREAT INDIAN PENINSULA RAILWAY.
(With acknowledgments to the "Railway Gazette.")

(then Chief Justice of Bombay) and Lady Yardley, together with a number of other eminent persons, and fourteen first, second, and third-class carriages, was in readiness, and as soon as the guests had taken their seats the order to start was given, whereupon a salute was fired from the ramparts of Fort St. George.

Engineers had, in the meantime, been pushing forward the survey and subsequent construction work of the extension of the line to Kalyan, but this portion of the railway presented far greater difficulties, owing to the wild physical aspects of the country, in which viaducts had to be erected, tunnels to be excavated, and foundations of structures had to be sunk far below the surface owing to the immense quantities of sand and water in the substratum.

Beyond the station at Thana, the train crosses the river which separates Salsette from the mainland, and, after a journey of a few miles, it enters the first tunnel ever constructed in India. The scenery in this neighbourhood is exceedingly beautiful, but for the remainder of the journey to Kalyan the country is of a more open character. A remarkable feat of engineering skill was performed by laying tracks over the Western Ghats, which attain an average height of about 1,800 feet, and while no fewer than fourteen different possible routes were surveyed, experts expressed the opinion that the mountain passes of Thul and Bhor were the most suitable for the extension of the line to Khandesh and Poona, in north-easterly and south-easterly directions respectively, the railway to the last-named town being projected with the view of ultimately forming a connection with a system to the Madras Presidency.

The *Railway Gazette* of November 1913 gives the following particulars regarding the most important of the engineering works in constructing the lines over the Bhor and Thul Ghats.

The length of the Bhor section from Polasdhari to Lonaola is 15 miles, and the total ascent is 1,836 feet, while the maximum gradient is 1 in 37. No fewer than twenty-five tunnels have been excavated, the length of some of these being as follows: 1,305 feet, costing Rs. 1,73,649; 1,027 feet, Rs. 1,50,352; 768 feet, Rs. 2,09,783; 853 feet, Rs. 1,13,907; 828 feet, Rs. 1,12,982; 825 feet, Rs. 1,08,677; and others, ranging from 97 to 590 feet.

The Thul Ghat route rises 927 feet in a distance of ten miles, and it has ten tunnels: one of 1,629 feet, costing Rs. 3,90,394; another one, 1,461 feet, Rs. 1,77,255; 1,247 feet, Rs. 1,52,325; 714 feet, Rs. 1,15,170; together with six others, measuring from 90 feet to 780 feet in length.

The ascent of the latter ghat commences at Varsind, a village on the southern side of the village of Kasara, where the track is laid at an altitude of about 930 feet. After crossing the Kasara *nullah* the route is laid over rough ground for a distance of nearly two miles, when the train crosses the Thul Ghat road and enters a tunnel above the Mussoba Khind. Shortly after this the traveller will notice a tunnel, 462 yards in length, cut through a mountain, which proved to be one of the most formidable obstacles on the section with which the engineers had to contend. A very deep and wild ravine at the head of the Ehegaum *nullah* is then crossed by a viaduct 250 yards in length and 200 feet above the valley, and in ascending to the top of the incline the railway passes along the western flank

of the ravine at the head of the Beena *nullah*, until it reaches the level plain on the western side of Igatpuri.

In referring to the construction of the Bhor Ghat, the engineer in charge stated that the springs which were found in the vicinity of the railway were quite insufficient to afford a constant supply of water for drinking purposes for the exceedingly large number of workpeople employed, and it became necessary to keep as many as 1,500 bullocks employed solely for the purpose of meeting all requirements in this direction.

During the year 1859–60 two outbreaks of cholera were so severe that work was almost entirely stopped, a very large number of labourers returning to their homes, but on the disappearance of the epidemic practically all of the men returned to their former employment. The line to the top of the Bhor and Thul Ghats is laid with section rails of 100 lb., resting upon wooden sleepers, while cast-iron pot sleepers are principally used in the section extending in a northerly direction from the Thul Ghat.

The Thul and Bhor Ghat routes were respectively completed on January 1, 1865, and April 21, 1863, but the laying of the permanent way in districts beyond these altitudes has been synchronously proceeding apace, with the result that by the end of the year 1861 the line had been completed as far as Shegaon on the north and Sholapur on the south. The former of these two extensions paved the way for the opening up of the vast cotton growing districts in Western India, which have been productive of such immense wealth, of valuable coal and iron fields, and of the enormous tracts of land in Central and Northern India, upon which excellent crops of wheat and other cereals are grown.

It would be practically impossible to give readers any adequate idea of the supreme difficulties which confronted the engineers of the company in making certain portions of the projected lines, but one might refer to the section which was to reach as far as Jubbulpore, 615 miles distant from Bombay, on the main north-eastern line. These obstacles were especially serious between Bhusawal and Jubbulpore (a length of 339 miles), where work had to be performed among the deadly jungles of Nimari and Asseer, and where many tributaries of the important River Nerbudda had to be crossed. For instance, it was found when building necessary bridges that beneath the surface rich soil, sand and water extended to a great depth, and there were interlying layers of conglomerate, or natural concrete, of adamantine hardness, which, while being too thin to serve as secure foundation, offered great obstacles to the progress of the work. Again, cholera, small-pox, and other diseases prevalent in the Nerbada valley, caused a very heavy mortality among the labourers, but the promoters, having grasped the handles of the railway plough, were not the men to turn back and start on a new furrow.

It is recorded that the three termini at Nagpur (519 miles from Bombay), Raichur (442 miles), and Jubbulpore (615 miles), were respectively reached on February 20, 1867, May 1, 1871, and March 7, 1870.

On the last-named date the Jubbulpore line was opened in the presence of His Royal Highness the late Duke of Edinburgh; His Excellency the Viceroy, the Earl of Mayo, K.P.; His Excellency the Commander-in-Chief; His Excellency Sir Seymour Vesey-Fitzgerald, Governor of Bombay; and a large number of ruling princes and other Indian as well as European gentlemen. A silver key connected the newly-laid rails at Jubbulpore with the permanent way of the East Indian Railway Company, and the Viceroy, having struck it with a hammer, declared: "The communication between Bombay and Calcutta is now open."

About fourteen months later—that is, May 1871—the extension in a south-eastwardly direction to Raichur effected a junction with the Madras and Southern Mahrattas Railway, and thus brought the city of Madras into direct communication with Bombay on the western side of India.

The *Great Indian Peninsula Railway Magazine*, published in September 1918, gives the following particulars regarding branch railways, which were then opened for traffic under the working of the company now under notice: "The Amraoti State Railway, on February 16, 1871; the Rajputana-Malwa (Holkar) State Railway, at Khandwa, on February 1, 1874; the Wardha Coal State Railway, at Wardha, on the same date; the Dhond and Manmad State Railways, at Dhond and Manmad; the Guaranteed State Railway of the Nizam of Hyderabad, at Wadi, on January 1, 1879; the Nagpur-Chhattisgarh State Railway (now the Bengal-Nagpur Railway), at Nagpur, on April 6, 1880; the Bhupal State Railway (afterwards the Indian Midland Railway), at Itarsi, on June 1, 1882; the Southern Mahratta Railways at Hotgi and Poona, on August 1, 1884, and October 4, 1890, respectively; the Barsi Light Railway at Barsi Road, on March 1, 1879; and the Hyderabad-Godavery Valley State Railway, at Manmad, all of which lines, including siding accommodation, amounted at the close of the nineteenth century to a length of approximately 230 miles, which, added to the length of the Great Indian Peninsula proper, gave a total of nearly 2,240 miles under administration by the company."

Reference may now be made to the establishment of headquarters, in which officials were to control the working of the network of railways which, even at the beginning of the twentieth century, had been pushed over mountain and river, through forest and jungle, into the very heart of India. Bombay had been linked with the rich tea, coffee, and other estates in the Madras Presidency; it was in direct communication with the city and port of Madras; it was opening up a regular service of goods and passengers trains with the "second city in the empire" on the east coast, where it obtained freightage accommodation with Burma and the Far East; and its iron and steel tentacles had stretched through the Central Provinces, the native states of Rajputana and Central India, and the Punjab, until they embraced Delhi, the revived capital of India.

The first Indian headquarters of the company were opened on Bombay Green, now known as the Elphinstone Circle; in 1866 they were situated at Byculla; other offices were located at Mazagon, in historic buildings of the Bombay of earlier days; but in March 1886 all the departmental offices, excepting those of the locomotive department, were transferred to the imposing pile of buildings at Bori Bunder. This handsome block, which includes the "Victoria" station, has been described by a competent judge as "the finest modern building in India, and as a terminal which is unsurpassed throughout the whole world in point of beauty."

The work of construction of the offices alone was commenced in the year 1878, under the control of Mr. Frederick W. Stevens, the architect, and the cost amounted to Rs. 16,35,562, while the amount expended on the station, excluding the track, was Rs. 10,40,248, this important work having been carried out under the supervision of Mr. T. W. Pearson, district engineer. The formal

opening of this building, which was named the "Victoria Terminus," in honour of Her Majesty the late Queen-Empress Victoria, took place on June 21, 1887.

The Great Indian Peninsula Railway comprises the line formerly owned by the old Guaranteed Company, in amalgamation with that of the late Indian Midland Railway Company (now known as the Midland section), and it is made up of: the Great Indian Peninsula Railway, 5′ 6″ gauge, with an open length of 2,484 miles and 163 miles under construction; the Agra-Delhi Chord Railway, 5′ 6″ gauge, 125½ miles in length; the Baran-Kotah Railway, 5′ 6″ gauge, 40 miles; the Bhopal-Itarsa Railway, 5′ 6″ gauge, 56 miles; the Bhopal-Ujjain Railway, 5′ 6″ gauge, 113 miles; the Baria-Gooner-Baran Railway, 5′ 6″ gauge, 145 miles; the Murtajapur-Ellichpur Railway, 2′ 6″ gauge, 47 miles; the Dhond-Baramati Railway, 2′ 6″ gauge, 27 miles; the Matharan Light Railway, 2′ 0″ gauge, 13 miles; and the Murtajapur-Yeotmal Railway, 2′ 6″ gauge, 70 miles; making a grand total of 3,026 miles of open lines and more than 260 miles under construction.

The Guaranteed Company's Railway was purchased by the State in 1900, when all contracts then subsisting between the Secretary of State and that Company were determined, and a new Great Indian Peninsula Railway Company was formed. The purchase price was £40,781,568, payable up to August 17, 1948, in the form of a terminable annuity of £1,268,516.

The contract between the Secretary of State and the Indian Midland Railway Company, dated October 22, 1885, was determined by the State on December 31, 1910, but that did not substantially affect the carrying out of the agreement between the Secretary of State and the Great Indian Peninsula Railway Company, dated December 21, 1900, the effect of which was that the railways formerly known as the "Indian Midland Railway system" should form part of the undertaking worked by the Company for so long as that contract remained in force.

Nor were the arrangements subsisting at the date of the termination of the Indian Midland Railway Company's contract for working the native state branches of that company's line disturbed in any way by the termination of that company's contract, the necessary alterations, whereby the Government became a party thereto instead of the Indian Midland Railway Company, having been made in the working agreements relating to such branches.

Running powers have been acquired over a distance of about 60 miles on the Bombay-Baroda and Central India, the East Indian, the Bengal-Nagpur, and the Oudh and Rohilkhand Railways. The principal main route of the company's system extends from Bombay to Delhi, where connection is established with: (1) the East Indian Railway Company's line for Simla and other places; (2) the North-Western Railway for stations in the Punjab, including Karachi, the rapidly-growing port on the north-west coast of India, and the North-West Frontier Province; (3) the Oudh and Rohilkhand Railway; and (4) the Bombay-Baroda and Central India Railway Company's line, known as the Rajputana-Malwa Railway.

The principal merchandise carried under the heading of "goods traffic" comprises cotton, grain, seeds, and coal, and other minerals.

With the object of illustrating the rapid growth of the railway up to the year 1914, when the commencement of the Great War not only prevented extension of the permanent way, but also caused a serious dislocation of trade throughout the world, the following figures, extracted from authorized statements, are given.

In the year 1904 the total number of miles worked was 2,865, and in 1904 the distance had been increased to more than 3,000 miles. The receipts from passenger service in the first-named year were Rs. 1,76,26,619 and in 1904 they had reached the large amount of Rs. 2,74,99,854, while the returns upon goods traffic for the same years respectively were Rs. 4,45,98,326 and Rs. 5,44,78,950. The number of miles covered by passenger trains showed an advance from seven and a quarter million miles to nearly eleven million miles. Statistics of this nature prove conclusively that the territory through which the line passes is exceedingly wealthy, and that full advantage is being taken of the facilities afforded for the conveyance of passengers, as well as the transport of merchandise and general produce.

On the outbreak of the Great War, the officials of the company threw themselves heartily into practical support of the cause of the Allies, and they not only parted with many of their colleagues, who were accepted for field service, but they also rendered most valuable assistance in manufacturing munitions of war, and in other ways contributing to the success which was ultimately gained.

A report issued by the company on its six months' working, from September 1914 to March 1915, showed that "694 special troop-trains were run on the railway, of which number 285 were exclusively Great Indian Peninsula trains, the remainder belonging to other companies."

Nearly 140 of the company's employees in the locomotive department worked in the dockyard at Bombay in fitting up ships for the accommodation of troops, orders were executed for the Indian marine in the Parel workshops; the carriage and wagon departments constructed 9,450 stalls for horses and mules on transports; and after requirements in the early part of the war had to some extent been met, the company's workshops and workers were employed in making shells, bayonets, rifle stocks, fittings for artillery wagons and other necessary articles.

The chief workshops of the company are situated at Parel, about five miles in a northwardly direction from Bombay, to which place they were in the year 1878 transferred from Byculla. The whole of the works cover an area of 1,880,000 square feet, and the most important shops are the following:

The smiths' shop and forge cover an area of 68,400 square feet, the former is provided with fifty hearths' steam-hammers of 30 cwt., 20 cwt., 15 cwt., four of 12 cwt., and two of 7½ cwt., hydraulic spring buckle press; three Horsfall's patent machines for making bolts, from a diameter of three-eighths of an inch to an inch and half, direct from the bar with one heat, and two jigging hammers for forming square, circular, or other pattern ends on rods or bars. The forge is equipped with natural draught, created by a chimney-stack 120 feet in height, which supplies two faggoting furnaces and twenty-four smiths' hearths, these furnaces being constructed beneath old locomotive boilers, which work at a pressure of 100 lb. per square inch and supply the necessary steam blast.

The iron foundry contains two cupolas, and the daily output closely approaches seven tons in weight; the pattern shop, fitted with high-speed wood-working machinery, the power being derived from a horizontal engine and boiler; the brass foundry has twelve furnaces, and an output of about two tons daily; the tin-smiths' shop is concerned mainly with the

supply of lamps, trays for axles, box lubricating pads, and a large variety of tin articles, but an electroplating plant has been installed here for depositing silver on lamp reflectors; the coppersmiths' and tube shops are used for making, setting, and brazing copper pipes for locomotive and stationary plant; and five brazing furnaces are continuously at work for tubes and for copper-piping.

The machine-shop occupies an area of 80,000 square feet, and it is well equipped with machinery of a suitable modern type, including four single and one duplex vertical boring machines, special planing, boring and drilling machines designed expressly to deal expeditiously with renewal cylinders which are cast in India. There are also two Franklin air compressors, each of which has a capacity of 600 cubic feet of free air per minute, delivered at a pressure of 80 to 100 lb. per square inch.

A most important department is the laboratory, in which excellent plant is installed for testing machines and chains, and it may be added that all the latter, collected from every section of the company's system, are periodically tested to double the strength required for their ordinary working loads. Oil tests are also undertaken by machines which record the flashing-point and adhesiveness of each consignment supplied to the locomotive and carriage departments for lubricating and other purposes.

The company's carriage and wagon department is situated at Matunga, within the boundaries of the city of Bombay, and nearly seven miles distant from the Victoria terminus. The site of the workshops, about 80 acres in extent, abuts upon three lines of railway, and therefore ample facilities are obtained for the arrival or despatch of rolling-stock.

Nearly all of the shops, eight in number, are of practically the same dimensions, namely, 480 feet in length by 240 feet in width, and they have been constructed according to designs which are best adapted for securing thorough ventilation coupled with an ample supply of pure air.

Workshop No. 1 contains a saw-mill, together with up-to-date mortising, planing, tenoning, and other machinery; No. 2 has facilities for working simultaneously upon fifty or more bodies of carriages or wagons; the men in No. 3 are employed in affixing internal fittings, and in painting exteriors; No. 4 contains lathes for repairing wheels and axles; milling, hydraulic shearing, and punching machines and presses; and several bays set apart for workers in tin and copper, the lighting of trains, charging of cells, and repairs to dynamos, fans, and other necessary work of a similar character. No. 5 is devoted to the building and riveting of underframes; repairs to carriages are carried out in No. 6, in which there are two 25-ton cranes for hoisting heavy weights, with special beams and claws; No. 7 is occupied by the forge and foundry. The former of these has furnaces fired by gas, for welding and heating springs; a 100-ton hydraulic forging press, and machines for making and testing springs. The foundry is fitted with two cast-iron cupolas of 3-ton capacity, in addition to machines and plant for moulding and casting brass. Wagons are repaired in No. 8, in which 10-ton electric cranes have been fixed.

A pit, 800 feet in length, has been provided, on which the height of buffers and vacuum brake gear are tested.

The locomotive and carriage workshops, formerly belonging to the Indian Midland Railway Company, are situated at Jhansi, an important station in the United Provinces of Agra and Oudh, but on the amalgamation of that company with the Great Indian Peninsula Railway Company, the administrative officers were removed to the headquarters of the last-mentioned company at Bombay, while the works have been considerably extended in order to meet increasing requirements. The shops were opened in the year 1895, and they comprise three main buildings covering an area of 2,150,000 square feet, and the whole block is enclosed by a masonry wall, some 8 feet in height.

The principal buildings include the following: the erecting shop, 56,000 square feet in extent, consists of three bays, each of which is 40 feet in length, 40 feet in width, and 42 feet in height. A steam-driven traverser, 30 feet in width, with rails laid 18 inches below the surface of the ground, has been constructed in the centre, and two 50-ton overhead travelling cranes have been provided. This shop is capable of dealing simultaneously with nearly 50 engines.

The machine shop covers a space of 43,000 square feet, and the whole of the excellent machinery was selected expressly with the object of dealing promptly and efficiently with the huge amount of repairing work incidental to the maintenance of an extensive railway system. There are machines for milling, profiling, for dressing piston-rods and other purposes, together with automatic lathes for the manufacture of copper stays and steel and iron bolts and studs direct from the bar. The boiler shop can accommodate 20 locomotive and stationary boilers; its furnace deals with plates 9 feet in length and 6 feet in width; and the plant comprises a plate edge-planing machine, a band saw, and rolls for flat or corrugated plates.

The smiths' shops and forges are equipped with 98 hearths and 14 steam-hammers, the draught being supplied by a blower driven by steam. There are also machines for punching, shearing, and swaging machines, together with others for making bolts and rivets.

The brass and iron foundries are 28,220 square feet in extent, and they are fitted with two cupolas for iron and four for brass, and the average monthly output is about 75 tons of iron and 11 tons of brass.

Turning to the power house it may be stated that in the boiler room there are two pairs of Babcock and Wilcox water-tube boilers, which give a pressure of 200 lb. to the square inch, have a heating surface of 1,827 square feet, and a fire-grate area of 44 square feet. These boilers are fitted with super-heaters, which add from 100 degrees to 120 degrees of super-heat. The main flue measures 36 feet by 5 feet by 4 feet, and two induced draught Sirocco fans, driven by electricity, are installed on the main flue. The chimney, 162 feet in height from the ground, and 5 feet in diameter, is constructed of steel plates, seven-sixteenths of an inch in thickness at the base and a quarter of an inch at the top.

The pump-room is 1,486 square feet in extent, and it contains two treble-barrel feed pumps, one 3-throw air pump, and one centrifugal pump, for circulating water in the condenser, which is of the evaporator type.

The engine-room contains three triple-expansion high-speed engines by Messrs. Belliss and Morcon, which are directly coupled to continuous-current generators, supplied by the Lancashire Dynamo and Motor Company, Ltd., each giving 250 k.w. at 250 volts when running at 375 revolutions per minute, with steam pressure of 150 lb. to the square inch at the stop-valve of the engine. There is also a motor generator set by Messrs. Siemens Brothers, London, capable of supplying three-phase current of 50 periods at 440 volts, but this number is

increased in the works up to 3,100 for transmission over two and three-quarter miles of overhead line to the Great Indian Peninsula Railway waterworks at Guddia, where it is reduced to 440 volts for the purpose of driving the pump motors, which supply water to the works and to the quarters of the company's officials. Two air compressors, driven by steam, are installed in the power house for working pneumatic tools in the workshops, and these have an output of 500 cubic feet of free air per minute. They are designed to work at 180 lb. per square inch when running at 350 revolutions every minute. The engine-room is served by a 5-ton overhead travelling crane.

The switch-board, manufactured by the British Thomson-Houston Company, Ltd., of Rugby, is mounted on a platform above the floor of the engine-room, and consists of four white Sicilian marble generator panels, two battery and booster panels, and nine feeder panels, erected on a tubular iron frame.

Repairs are carried out in the basement, which is fitted with a small crane, and a hoist with a lifting capacity of 5 cwt. for conveying batteries to the battery-room on the top storey.

The principal towns on the various lines controlled by the company are as follows :

KALYAN, the junction of the north-eastern and south-eastern sections of the main line to the north, which is a very ancient seaport in the Thana Collectorate of the Bombay Presidency. A very considerable commercial trade was carried on with various places on the Persian Gulf until the rise of Bombay, and it still possesses a few stone quarries and brick kilns, while a number of the inhabitants obtain a living by fishing in its fine creeks, but otherwise there are not any industries of any importance. It is about 34 miles distant from Bombay.

NASIK, in the central division of the Bombay Presidency, is one of the most sacred cities of Western India, and its numerous buildings, including a large number of temples and shrines, occupy sites on both banks of the Godavari. It is believed locally that this river proceeds by an underground course from the same source as the Ganges, and that pilgrims bathing in its waters may be cleansed from their blackest sins. The temple called "Panchavati," constructed beneath five banyan-trees standing on the eastern side of the river, is visited by worshippers from all portions of Western India. The very ancient temple of Siva, and the exceedingly handsome one dedicated to Bala Ram, are worthy of a visit.

From a commercial point of view, Nasik is unimportant, although a very extensive trade is carried on in copper and brass articles, while it has earned a reputation for its fine grapes and other fruit, in addition to a large variety of first-class vegetables.

MANMAD, 162 miles distant from Bombay, is the junction station of the Dhond and Manmad branch line. The town is interesting from the fact that it possesses some old forts and temples, together with a palace built by the famous Ahalya Rai Holkar. The fort of Ankai-Tankia stands fully 800 feet above the level of the sea, and in ascending one notices remarkable old Hindu caves and temples. Two other forts in the vicinity are those known as Indrai Wadi and Rajdar Wadi, while on the southern side of the railway station there is an isolated hill, upon which is a curious natural obelisk of trap rock, more than 80 feet in height, which is known to the people as Ram Gulhni.

JALGAON is the most important trading centre in the district of Khandesh, it possessing several cotton presses, large cotton, spinning and weaving factories, while large quantities of cotton and manufactured goods are exported annually. On the eastern side of the town is the Girna river, which is crossed by a viaduct, and about two miles distant is the large Mehruni lake. The famous caves of Ajunta, with fine fresco paintings, said to have been executed nearly 2,000 years ago, are easily reached from this station. The town is 260 miles distant from Bombay.

After travelling a few miles further the train reaches Bhusaval, at which junction a branch line runs in an easterly direction to Khamgaon, Amraoti, Badnera, Wardha, and Nagpur, the capital of the Central Provinces.

AMRAOTI, the headquarters of the district of Amraoti, in the Province of Berar, is a very important centre of the cotton trade, several cotton presses and mills having been erected there. The town is famous for its Amba temple of Bhawani, or Kali, but there are several other shrines worthy of notice. Amraoti is 419 miles distant from Bombay, and has a population of about 34,000 inhabitants.

NAGPUR, the capital of the Central Provinces, with a population of about 101,000 persons, is situated in a very prettily wooded portion of the district of the same name. Its industrial enterprises consist of cotton mills and ginning and pressing factories, but it is the centre of a rich agricultural district, and therefore the products of cultivation are of excellent quality. Nagpur oranges, which are of an exceptionally luscious flavour, are exported in large quantities. Nagpur is the junction of the Great Indian Peninsula and the Bengal-Nagpur Railway, and it is 701 miles and 520 miles distant respectively from Calcutta and Bombay. Returning to the junction at Bhusaval and proceeding in a northerly direction, one notices Khandwa (353 miles from Bombay), which is the junction for the State of Indore and the British Province of Ajmer-Merwara. The scenery in the vicinity is made more beautiful by the vagaries of the Nerbudda river, which alternately is precipitated in a wild torrent over dark rocks, and again lies in deep silent pools surrounded by rich vegetation. Tradition relates that devotees were formerly in the habit of throwing themselves from the high rocks into the river in the hope of gaining immortality. The town is a busy centre of industries, such as the ginning and spinning of cotton.

The next important station is BIR, where a branch line takes the traveller to Jubbulpore, the junction of the Great Indian Peninsula and the East Indian Railway systems. The town is very prettily laid out, being surrounded by lakes, gardens, and woods, but visitors will doubtless be attracted to the marble rocks at Bheraghat, 9 miles from Jubbulpore, where the Nerbudda river, confined by precipitous rocks to a width of 100 feet, falls in cascades in such a manner as to earn for it the name of the "misty shoot." Jubbulpore (101,000 inhabitants) is 616 miles distant from Bombay and 763 miles from Calcutta. Proceeding due north from Bir, the train reaches BHOPAL, the capital of the Bhopal State, which is 6,860 square miles in extent.

The city has a quaint appearance, with its irregular streets and lofty houses with balconies and verandahs, but there are numerous objects of interest to be seen.

From Bhopal there is a branch line to UJJAIN, the ancient capital of Malwa, and one of the seven sacred cities of Hindus. Ujjain is in the State of Gwalior, and the modern city is situated to the west of the old one, which was destroyed by earthquake, although its ruins are still visible. The palace of His Highness the Maharaja

of Gwalior is two miles distant from the railway station, which is 220 miles from Bombay.

A branch line runs from Bina, on the main section, to KOTAH, the capital of the State of the same name, situated in Rajputana and containing an area of 5,684 square miles. The next town of importance further to the north is JHANSI, where workshops belonging to the Great Indian Peninsula Railway Company are situated. From Jhansi a line, 136 miles in length, is constructed to CAWNPORE, one of the most important commercial towns in Northern India. The horrors connected with the Mutiny of 1857 seemed to reach their zenith at Cawnpore, and there are many places in the town which will appeal with singular interest to visitors. The town possesses a considerable number of cotton and flour mills, leather factories, ginning and pressing factories, and several other flourishing industrial enterprises. Cawnpore is 633 miles distant from Calcutta and 839 miles from Bombay.

From Jhansi it is only a short journey to GWALIOR, the capital of the dominions of His Highness the Maharaja of Gwalior. The old city is renowned for its fine old fortress of sandstone, lying at an elevation of more than 1,100 feet and covering an area of 2,000 acres. The fort contains the Hindu palace of Raja Man Singh, Jain temples and caves in which are colossal stone figures, some of which are more than 50 feet in length.

The modern capital, LASHKAR, is an imposing city, which has grown to be a thriving commercial and industrial centre. A few miles further to the north is Dholpur, the capital of the state of the same name in the Rajputana States Agency. The older portion of the town is said to have been built in the eleventh century by Raja Dholan Deo. Chief interest will be found in a visit to a mosque built by the Emperor Shah Jehan, in 1636, which is surrounded by a mausoleum.

DHOLPUR is 804 miles distant from Bombay by the Great Indian Peninsula Railway, and 34 in a southerly direction from Agra.

AGRA, in the United Provinces of Agra and Oudh, is celebrated throughout the world for its wonderful mausoleum, known as the Taj Mahal, which was erected in 1648 by the Emperor Shah Jehan as the tomb of his wife, Arjmand Rani Begam, but known in history as Mumtaj Mahal. Other features of interest include the fortress of Akbar, the Moti Masjid, or "pearl mosque," the Jama Masjid, the Shiah Mahal, and the tomb of Akbar. The city, constructed principally with stone, is noted for its remarkably clean and wide streets, but it is also important as a depôt for the sale of grain and sugar, and for its beautiful stone carvings. Agra is the junction station of the Great Indian Peninsula, the East Indian, the Bombay-Baroda and Central India and the Agra-Delhi chord railways. The city is built on the right bank of the River Jumna, and it is 139 miles distant from Delhi.

MUTTRA, 30 miles distant from Agra, is an ancient city which contains relics of the Buddhists, in whose possession it seems to have been early in the fifth century. It is reported to have been the birthplace of Krishna, who was regarded as the incarnation of Vishnu, and the city is therefore held in sacred reverence by Hindus.

At the present time Muttra contains cotton and flour mills, and its inhabitants are also engaged in exporting considerable quantities of cotton goods, ropes, and agricultural produce.

Eighty-nine miles further to the north is DELHI, the terminus of the main section, and the new capital of the Indian Empire, of which a detailed account is given on another page. In order to complete this bird's-eye view of the towns served by the railway, one must make a new start at Bombay and travel in a south-easterly direction to POONA, 119 miles distant.

The city is situated near the confluence of the Mula and Mutha rivers, and is actually on the right bank of the latter stream.

Sightseers will doubtless pay a visit to the Parbati temple, erected on a hill of the same name, but there are many handsome buildings in the city, such as Government House, the Council Hall, the Civil Engineering and Deccan Colleges, the Sassoon Hospital, and the large military station at Kirkee.

The principal industries of Poona are the manufacture of silk cloth, brocades, metal ware, and pottery.

The terminus on this section of the railway is at Raichur, 350 miles north-west of Madras, and 443 miles south-east of Bombay. It was an ancient capital of the Bijapur kingdom, and the principal feature of interest is the old fort, from which a very extensive view of the surrounding country may be obtained.

NORTH-WESTERN RAILWAY

THE North-Western Railway was formed on January 1, 1886, by the amalgamation of the following three railway systems, namely: (1) the Sind-Punjab-Delhi Railway, (2) the Punjab Northern State Railway, and (3) the Indus Valley State Railway, the lines on that date covering a length of 1,873 miles.

Extensions in all directions have been made continuously since that time, and the administration now control and work over 5,000 miles of railway.

The original cost of construction was exceedingly heavy owing to the fact that the waterless deserts of Northern India were entirely unproductive, and therefore contributed nothing whatever in the shape of materials for the permanent way nor of food crops suitable for man or beast.

The patience of the directors was fully tested during the first few years of the railway's existence, but increased trade followed the opening up of districts, and as a consequence the annual receipts grew at a rapid rate.

Before referring to the routes covered by the various systems, mention should be made of the important workshops and the rolling stock belonging to the railway.

Particulars of these have been kindly furnished by the agent, at Lahore, of the North-Western Railway.

The principal locomotive workshops of the railway are situated at Moghalpura, near Lahore, and they were brought into use in 1914. There are also smaller workshops at Karachi, Sukkur, Rawalpindi, Multan, Quetta, Saharanpur and Kalka, but these contain no features of special interest, those at the four last-named stations being quite small. The workshops at Kalka deal only with the Kalka-Simla Railway, while those at Moghalpura and the six other places are

together capable of keeping about 1,350 running engines in repair without working overtime, and between 9,000 and 10,000 men are employed in them. Owing to the increasing traffic and the larger number of locomotives in use, it is impossible to cope with the needed repairs, even by working for longer hours than usual, and therefore further accommodation is being provided.

There are now 1,448 locomotives of a gauge of 5 feet 6 inches on the various lines, and in addition to these there are 78 locomotives of 2 feet 6 inches gauge for working the narrow gauge lines.

Three steamer ferries are controlled by the railway, namely, at Dera Ghazi Khan, Dera Ismail Khan, and Mari-Kalabagh. The two former are worked by the railway for the civil department, and the last is the railway ferry connecting the main line with the Kalabagh-Bannu Railway. Stern-wheel paddle steamers of shallow draught are used for working these ferries, flats and barges being requisitioned when necessary to assist in carrying goods.

Bengal coal is used generally, about 9,00,000 tons being consumed annually, but oil fuel is also burned in locomotives on the Karachi section. Extensive trials, lasting for several years, were started in 1913, to determine the best method of burning this fuel, and, when these had been completed, it was decided to adopt this plan with all engines, including those used in shunting in the district just referred to.

The yard in which the locomotive shops are situated covers an area of 4,873,475 square feet, or 111·9 acres, and it is surrounded by a brick wall 9 feet in height. About 15 acres are roofed, and the cost of the works was about Rs. 52,00,000.

The shops are built on either side of a traverser pit 45 feet in width, extending 1,160 feet due north and south, in which is an electrically-driven traverser.

The advantages of this arrangement are that wagons can be quickly distributed to various points, turntables are unnecessary, and wagons or locomotives to be sent into shops are simply shunted on to the traverser and moved opposite the shops in which they are to be placed; and the shops, being laid out on each side of the traverser pit, can easily be extended.

The shops accommodate 80 locomotives, giving an outturn of 36 repaired engines per mensem.

All the shops are lighted by puttyless glazing on the north side of the roof trusses, which are constructed on the saw-tooth principle, with the result that a good light is always obtained, but the rays of the sun never at any time shine directly into the shops.

Immediately on the right, on entering the works yard, is the paint shop, a single-storeyed building, 24 feet in height from floor level to roof trusses, and it has two bays, measuring 200 feet by 43 feet, each of which contains a pit to hold three engines and tenders.

Next to the paint shop is a building, 537 feet 4 inches by 703 feet, divided into 12 bays, forming the following shops: tender shop, 2 bays; erecting shop, 3 bays; fitting shop, 1 bay; light and heavy machine shops, 3 bays; wheel shop, 1 bay; millwright shop, ¾ bay; tool shop, ¼ bay; and brass-finishers' shop 1 bay.

The tender shop is completely equipped with pneumatic plant, power being obtained from a central compressor station. Benches and vices for fitters are arranged along the side wall and between the columns supporting the roof trusses. Each bay is provided with two 40-ton capacity overhead electric cranes.

In the erecting shop are two pits, 496 ft. in length by 4 ft. 3 in. in width by 2 ft. 9 in. in depth, extending the full length of the bays. Between them is a 5 ft. 6 in. gauge line, extending through the shop, on which all locomotives are brought into or taken out of the building. There are also three pits, each 45 ft. in length by 4 ft. 3 in. in width by 2 ft. 9 in. in depth, at equal distances apart, on each of these lines, for final fettling.

The fitting shop has a 1-ton electric walking crane, travelling on a single rail along the centre of the shop, and serving the fitters' benches on either side.

The light machine shop is equipped with 226 machines (drills, shapers, millers, lathes and grinders), all the shafting is suspended from overhead cross-girders, and the motors are placed above them.

The heavy machine shop contains 66 machines (planers and slotters), each driven independently by an electric motor, with the exception of seven old radial drilling machines, which are grouped and belt-driven by one motor. All machines required for turning out cylinders and other heavy work are in this shop.

There are 37 machines in the wheel shop, including wheel lathes, tyre borers and others, all of which are driven independently by means of electric motors, with the exception of three old tyre-boring lathes, four tyre-drilling machines, and the two hydraulic pumps that supply the power to the two wheel presses, all of which are grouped and driven by one motor. This shop is equipped with two 10-ton electric overhead travelling cranes at a height of 22 feet from floor level.

The millwrights' shop occupies a space 402 feet in length by 55 feet in width, but as there is no exceptionally heavy work to be done there it has only been equipped with a 10-ton pivoting hand pillar crane.

The tool shop is screened off on all sides by expanded metal 12 feet in height for the purpose of preventing unauthorized persons from entering it, and it is completely equipped with forging hammers, tool-smith's hearths, and hardening furnaces required to make and repair all classes of metal-cutting tools.

The brass-finishers' shop is also similarly screened off from departments in order to prevent thefts of brass.

Near to the finishing shop is the iron and brass foundry, a single-storeyed building with 20 ft. verandahs and divided into four bays. The iron foundry proper consists of three bays, each 228 ft. by 43 ft., while the fourth bay forms the brass foundry, 148 ft. 10½ in. by 41 ft. 10½ in., which is partitioned from the iron foundry by a brick wall surmounted by a screen of expanded metal reaching to the roof trusses. Four cupolas, with internal diameters of 4 feet, having a capacity of 20 tons of metal, have been erected in the iron foundry.

The pattern shop, immediately in the rear of the iron foundry, is a single-storeyed building consisting of two bays, each 119 ft. 3 in. by 43 ft., with a 20 ft. verandah on the north side, and it is completely equipped with wood-working machines.

The pattern shop store is a double-storeyed building, each floor measuring 89 ft. by 41 ft., in which all patterns not in use are stored.

This shed has been built of fireproof material as far as possible, and has been placed at a considerable distance from the pattern shop with the object of minimizing losses in the event of an outbreak of fire in either building.

The blacksmiths' shop, opposite the iron foundry and on the east side of the

traverser pit, is an open shed consisting of three bays, each 364 ft. 6 in. by 45 ft., with verandahs, 15 ft. in width, on all sides.

Next to the tyre furnaces, in the same bay, is the heavy forge. This is equipped with four faggoting furnaces, on the top of each of which is a Cornish boiler heated by the waste gases from the furnace, which is used for working steam hammers.

The bolt shop is in the middle bay, occupying a space of 95 ft. by 45 ft. This is fully equipped with machines for the manufacture of nuts, bolts and rivets.

In the third bay is the springmaker's shop, which is fully equipped with the necessary machinery, furnaces, and other requirements for the manufacture and repair of all classes of springs. The remaining portions of each bay are utilized as the general smithy, and they contain 102 smiths' hearths, arranged in pairs on either side of the bays, the necessary steam and pneumatic hammers being placed in the centre.

Next in order comes the copper and tinsmiths' shop, used for repairing copper pipes and brass boiler tubes.

The boiler shop is used entirely for repairing boilers, and is fully equipped with hydraulic and pneumatic plant required for the riveting, caulking, chipping, bending, flanging and machining of boiler plates.

The shops have been designed to keep 800 running engines in repair, but by working overtime this number can be increased to 1,100 engines. Light repairs are done in engine sheds, a wheel lathe and a few light machines being provided for this purpose at all important sheds.

The staff employed in the locomotive department at the close of the financial year 1918–19, consisted of 34 officers, 575 Europeans and Anglo-Indians, 23 Parsis and 23,706 Indians, making a grand total of 24,338 men.

The erection of the carriage and wagon shops at Moghalpura was commenced in 1906 and was completed in 1910. The walled-in area comprises 192 acres, of which 22½ acres are roofed, and the cost of buildings and permanent way, including gas factory, aeroplane timber-seasoning shed, aeroplane construction shops, oil factory and seed storage shed (the latter are under erection), is estimated at Rs. 55,00,000, and the expenditure upon machinery and equipment will be approximately Rs. 22,40,000.

There are also district carriage and wagon workshops at Rawalpindi, Sukkur, and Karachi, employing a total of 2,620 men.

The aggregate staff employed in the carriage and wagon department at the close of the financial year 1918–19 comprised 13,154 men, consisting of 12 officers, 192 European and Anglo-Indians, and 12,950 Indians.

The total rolling stock on the line is 5,539 units of coaching stock and 31,555 units of goods stock, 81·33 per cent. of the latter being fitted with vacuum brake.

The average working strength of the shops is 6,200 men, and the premises are divided into two main branches, one comprising shops for dealing with timber and construction and the finishing and repairing of carriages, while the other comprises shops for work in iron and steel and the construction of carriage underframes and wagons and for general repairs.

The shops for dealing with timber are in the following sequence from the log yard, namely: sawmill, scantling shed, planing shop, marking-off and template shop, wood-machine shop, carriage-building shop, cabinet, finishing, and carriage-repairing shops.

The shops of the iron and steel department are in the following order: steel underframe and wagon-building shops, smithy, foundry, fitting, tin and brass shops, vacuum-brake forge shop, gas and water-fitting shop, machine and tool shop, steel underframe and wagon-repairing shop, millwright and motor shop, wheel shop, carriage and wagon-lifting shop.

All of these are fully equipped with modern machinery and plant, but only a comparatively brief reference can be made to the subject.

The general progress of all work commences from the east end of the premises and gradually passes from shop to shop in a westwardly direction.

The saw mill is provided with six 5-ton capacity overhead electric cranes, two horizontal log-sawing machines, and one 42-inch vertical log-frame sawing machine for breaking up logs into slabs and planks, together with the necessary saws for recutting into scantlings, panels and match-boarding.

The planing shop has the following equipment, namely: two large four-cutter planing, moulding and match-boarding machines, with a capacity up to 16 in. by 8 in., and these are used for bottoms, sides, end bars, cant and light rails, doors and intermediate pillars and heavy framework and flooring-boards. There are also four small four-cutter moulding, light match-boarding, and other planing and squaring machines.

The work dealt with in the cabinet shop is the manufacture of, and repairs to furniture, trolleys, benches, waiting-room equipment, cell boxes, trailers for the Royal Air Force, and general carpentry. The electric shop is provided with the following machines: 1 dynamo-testing arm, 3 turning lathes, 2 high-speed drilling machines, and 1 emery grinding machine.

Adjoining the electric shed is the battery charging-room, which is fitted up with two sets of electrically-driven generators.

The aeroplane shop occupies one full bay on the south of the building shop, and it is employed for the construction of and repairs to aeroplanes.

The paint, trimming and polishing shops are in one building, which consists of nine bays of 55 feet span and 288 feet in length; and adjoining the paint shop is the paint-grinding mill and horse-hair teasing room.

In the iron and steel department, it is noticed that the underframe repair shop consists of two bays of 43 feet span and 243 feet in length, is equipped with overhead crane roadways with a span of 39 feet 8 inches and having a total length of 324 feet, with one 5-ton electric crane in each bay.

On the north and south sides of the building there are verandahs, which provide space for some 26 machines, which include drills, saws, plate-bending and panel-shearing, and other machines, together with one travelling steam-crane of 7-ton capacity.

The smiths' shop comprises five bays, and is equipped with seven locomotive type boilers (four of which are placed on the top of the faggoting furnaces) and one "Babcock and Wilcox" water-tube boiler, which supplies steam to the air compressor in a separate room at the south-east corner of the building. The electrically-driven hydraulic pumps are also in this room, and the accumulator is situated outside for supplying pressure at 1,500 lb. per square inch to the hydraulic presses and riveting machines.

In one building, comprising seven bays, each of 43 feet span, the length being 189 feet, are the iron machine shop, fitting shop, brass foundry, pattern shop, tool shop, vacuum-brake shop, tinkers' shop, and the brass machine shop.

The first of these is equipped with some

76 machines, which include 17 vertical drilling machines and 23 screw-cutting and surfacing lathes, the fitting shop is provided with fitters' benches and vices, emery grinding machines, and small electric sensitive drilling machines.

The tool shop, 189 feet in length, is equipped with about 36 machines, which include milling machines, lathes and grinders, and one 15-cwt. steam-hammer and a gas hardening furnace.

The wheel-turning shop has two 3-ton overhead electric cranes and the following machinery: 3 journal turning lathes, 12 wheel-turning lathes, 4 axle-turning lathes, and other necessary plant, such as pneumatic hammers for fastening tyres, wheel-presses, pumps, and other accessories. Underframes and bogies received from England are erected for passenger stock only in this shop, which is equipped with one 3-ton overhead electric crane of 39 feet 8 inches span, one compressed air receiver and 8 rivet-heating furnaces.

In the millwrights' shop are lathes, slotting, and drilling machines; the motor-car repair shop is equipped with vulcanizing plant; and the lifting shop is provided with two 10-ton cranes, one of 2½ tons, one of 15 tons, and two of 20 tons.

The timber-drying shed is a building consisting of two bays, each of 30 feet span by 260 feet in length, and it is provided with venetian windows and doors, giving ample ventilation for the seasoning of timber used for the construction and repair of aeroplanes.

The works for producing oil-gas for trains and for the lighting of stations consist of 3 large bays containing 12 benches of retorts, linked up to 3 condensing, purifying and scrubbing plants with four gasometers, each of 1,000 cubic feet capacity, to receive the gas at low pressure, from which it passes to one of six compressors, the steam for the latter being supplied by 6 vertical boilers. There are 16 fixed h.p. gas-holders of 80,000 cubic feet capacity having a high-pressure main leading to Lahore station, which is about a mile and a half distant from the factory, and where it is joined to various branches leading to individual platforms.

The average daily output is 80,000 cubic feet, which not only serves Lahore but also branch-line trains by means of travelling gas-holders.

The castor-oil mill, oil storage tanks, and a shed for the storage of castor-oil seeds, are in course of erection.

The mill building will consist of three bays of 33 feet span and a length of 83 feet, and it is being equipped with machinery manufactured in the carriage and locomotive shops for the purpose of crushing seed, pressing oil, clarifying kettles, and other work, while arrangements have been made for three concrete low-level storage tanks, aggregating 500 tons, and steel overhead tanks of 100 tons capacity for filling travelling oil-tanks by gravity.

The castor-oil mill and the storage shed will eventually be fitted with conveyers and elevators.

The sub-stores building gives accommodation for all duplicate parts, brass and iron fittings, bolts and nuts, screws, upholstery, and other consumable stores, and the surrounding yard is used for the storage of wheels and axles, and of carriages and wagons arriving on indents from home.

Some most astonishing feats of engineering have been accomplished in India, and one has only to travel over the North-Western Railway system to witness the remarkable skill which has been displayed in cutting through solid masses of huge mountains, and in bridging rivers, gullies and chasms of fearsome depth. Let reference be made to some of these marvellous works.

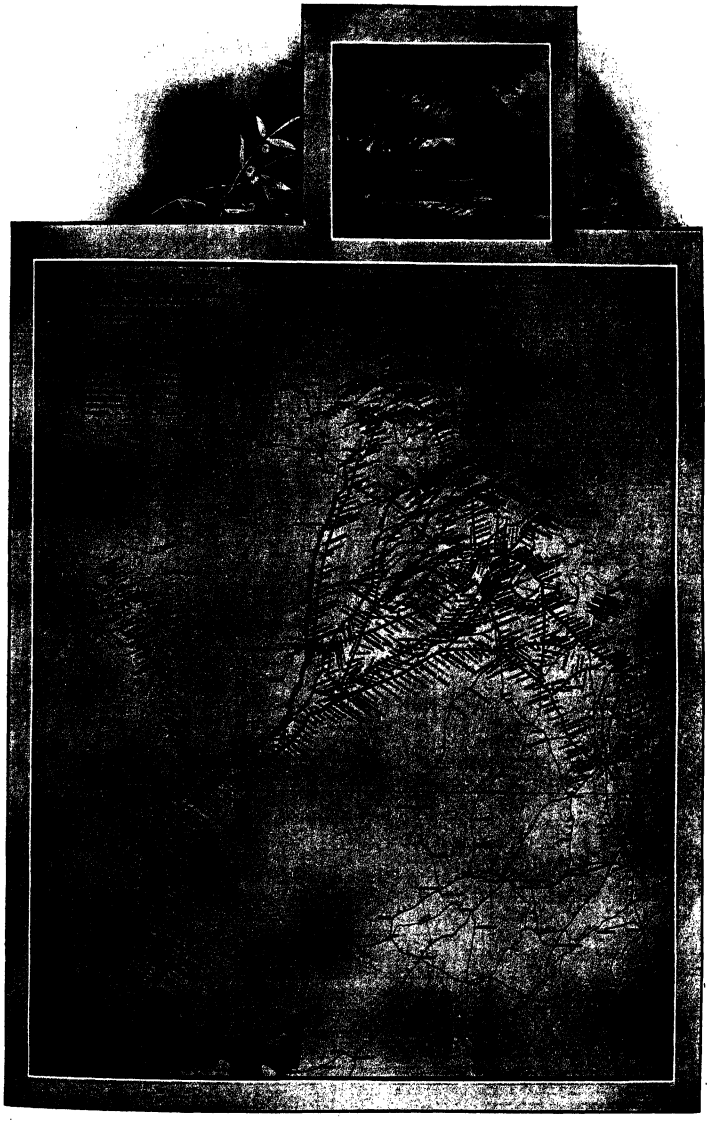
The North-Western Railway has a greater mileage in the Punjab than in any other province, and as the name Punjab denotes "the land of the five rivers," it might be expected that there would be a number of large fine bridges to be constructed. There are eighteen of these bridges on this railway, the cost of which was upwards of Rs. 108,00,000. Four of these are built across the River Indus, three over the Sutlej, three over the Chenab, and two over the Jhelum, and the question of bridging the Indus a fifth time at Mari is now under consideration. The largest of these bridges is that which carries the main line of the railway northwards at Jhelum, over the river of the same name, and it is only two hundred yards short of a mile in length, consisting of fifty spans of 90 feet. Other bridges of over half a mile in length are the Alexandra bridge, at Wazirabad, over the River Chenab, the famous Kaiser-i-Hind bridge, near Ferozepur, the bridge carrying the Sind-Sagar branch of the railway over the Chenab at Shershah, and the Jhelum at Chak Nizam, the Empress bridge at Adamwahan carrying the main line of the railway from Karachi to the Punjab, this last-named bridge consisting of sixteen spans of 250 feet. Proposals have been put forward for reducing the waterway of this bridge by half and utilizing the surplus girders in doubling the line over the river, obviating the present bottle-neck single line which has to bear the heavy traffic. Were it not for the Great War this work would have been finished, but it will be some years before funds can now be found to carry it out.

The most famous bridge of all on the railway, if not in India, is the Lansdowne bridge at Sukkur, built by the late Sir F. E. Robertson to the designs of the late Sir Alexander Rendell, over the Indus in 1889, the main cantilever span of which is nearly 800 feet in length, while the total cost was upwards of two hundred thousand pounds sterling. Another very important bridge is that over the Indus at Attock, dividing the Punjab from the North-West Frontier Province, which consists of five water spans, two of 300 feet and three of 250 feet. The railway is carried on the top of the girders, with the Grand Trunk Road from Calcutta to Peshawar underneath.

Tunnels are regarded as "important" in railway circles in India if they have cost as much as Rs. 1,50,000, and upon this standard the North-Western Railway can claim attention, as there are on the whole system no fewer than twenty-seven upon which greater sums of money have been expended.

These tunnels are found chiefly in Baluchistan, to the north of Sibi, on the lines in the Quetta district, upon what is known as the Mari-Attock Railway, east of the Indus, and on the main line between Jhelum and Nowshera. The most important tunnels northwards of Sibi are the Khojak tunnel between Shelabagh and Sanzal, and the Panir tunnel, at the bottom of the Mushkaf-Bolan Pass. The former, which is the largest tunnel in India, is a little less than two and a half miles in length, and it cost about £4,50,000. Work was commenced in April 1888, and the tunnel was opened in September 1891. A large portion of this tunnel is on the heavy up-grade of 1 in 40.

The Panir tunnel pierces the range known as the Panir bund, and separates the Mushkaf Vale from the Bolan; it is 3,210 feet in length; construction work was commenced in November 1892, and was finished in May 1895; and the cost was £80,000.



MAP OF THE NORTH-WESTERN RAILWAY.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

From a scenic and engineering point of view, the lines in the Quetta district far surpass any other broad-gauge lines on the whole system, and the Sind-Peshin Railway, from Sibi to Sharigh and Bostan, eclipses all others. Between Dirgi and Mangi stations the famous Karez tunnel exists, in which the railway burrows close to the surface of the mountain. The reason for this unique method of construction was adopted owing to a fear that an ordinary cutting or opening would intercept the heavy rainfall, that slips of stones might occur over the smooth slope, and also that a serious disturbance of rocky strata might result. Following the Karez tunnel comes the famous Chapar Rift bridge, consisting of a single span of 150 feet at a height of 234 feet above the bed of the river.

The Quetta area, in which all these tunnels are situated, is almost entirely a *ghât* district, the steepest gradient being 1 in 25, necessitating heavy banking engines to work mail trains up the inclines, in addition to a very powerful type of train-engine.

It has already been stated that the North-Western Railway's main lines and branches extend for a distance of over 5,000 miles, and therefore one will be prepared to find a great diversity in the scenery of so large a tract of country. There are miles upon miles of arid desert land which would never yield a payable crop of anything were it not for the large irrigation schemes already in existence or in course of construction; then, on the section between Lahore and Peshawar, may be witnessed some of the prettiest scenery in India; while in Baluchistan and on the north-west frontier there is the rugged grandeur of mountain passes intersected by verdant valleys.

All travellers in India make it their business to visit Lahore, one of its most ancient cities, the capital of the Punjab, and the headquarters of the North-Western Railway. Its foundation is generally connected with the second century of the Christian Era, but there are no direct evidences of its importance until about 500 years later, when it was the capital of a great kingdom in Northern India. Chief interest now centres in a number of very beautiful mosques and shrines, but other attractions include the Central Museum, St. James's Church (formerly the tomb of Anarkali, a favourite slave girl in the time of the Emperor Akbar), the numerous historic gates through which entry to the city is obtained, the Shalimar gardens, and the exceedingly handsome tomb of the Emperor Jehangir.

Leaving the railway station at Lahore in a northernly direction for a distance of 40 miles, one arrives at the town of Gujranwala, the birthplace and first capital of Maharaja Ranjit Singh, the "lion of the Punjab." After travelling for a few miles further, the train enters the district of Gujrat, a well-wooded sub-Himalayan tract between the Chenab and Jhelum rivers, the chief town of the same name being the site of the victory of Lord Gough in 1849, when the power of the Sikhs was practically broken. The next town of importance is Jhelum (103 miles from Lahore), very prettily situated on the northern bank of the Jhelum river, and noted for its large trade in timber, obtained from the Kashmir forests.

About 174 miles from Lahore the large cantonment of Rawalpindi is reached. The district was placed under General John Nicholson during the Mutiny of 1857, and a monument to the memory of that gallant leader may be seen near Sang Jani railway station, a few miles distant from the town of Rawalpindi. A little further to the north is the town of Attock, where there is a fine girder bridge over the Indus, and its fort, overhanging the river and opposite the place where that stream is joined by the Kabul river, was built by the Emperor Akbar about the year 1580. The scenery in the neighbourhood, and especially near the banks of the river, is remarkably fine. Some 25 miles after passing the Nowshera cantonment the train reaches Peshawar, a city of nearly 100,000 inhabitants, situated on the left bank of the Bara river, and 10 miles from Jamrud Fort, at the mouth of the Khyber Pass, which is the great northern route between India and Afghanistan.

Returning to Lahore, and entering a train bound in a south-easterly direction for Delhi, the traveller will notice Amritsar, a city of 153,000 inhabitants, famous for its sacred tank surrounding the "Golden" temple, and for its carpets, which have gained a reputation in every part of the world.

About 80 miles from Lahore is Jullunder, a town of great antiquity, which was the capital of a territory of considerable extent, owned by Rajputs.

After passing Phillour, where the Sutlej is crossed by a long girder bridge, the train reaches Ludhiana, a thriving commercial and industrial centre, famous chiefly for its work in ivory, including the making of billiard-balls. Near to the station at Sirhind are ruins of a very ancient city, which must have had an area of several square miles, but which was destroyed by the Sikhs when they became possessors of the country between the Sutlej and Jumna rivers. One of the most important cities in the eastern portion of the Punjab is Ambala, which is 184 miles distant from Lahore, and has a population of about 80,000 inhabitants. It is said to have been founded in the fourteenth century, but the modern portion contains fine buildings, and good roads of considerable width. A branch line runs in an eastwardly direction from Ambala to the hill station of Simla. About 50 miles further south is Saharanpur, in the United Provinces of Agra and Oudh, where the North-Western Railway is joined by the Oudh and Rohilkhand system.

The fine botanical gardens, established in 1817, are well worthy of a visit. About 12 miles distant on the north-western side of Meerut is Sardhana, in which there is a fine Roman Catholic Cathedral, said to be a miniature copy of the renowned St. Peter's at Rome. It was built by a Kashmir dancing girl, who became very rich and owned vast estates in the neighbourhood, all of which lapsed to the Crown in the year 1836.

Almost the next station on the line is Meerut (117,000), the chief city of the district in which the Mutiny of 1857 commenced. Meerut was of some importance in the third century before the Christian Era, during the reign of the Buddhist Emperor, Asoka, and at the present day may be seen several Mussulman tombs and mosques, as well as a number of temples. Among these may be mentioned the Baleshwar Nath temple, which is probably the oldest in the district. A brisk trade is carried on in cereals, *ghee*, sweetstuffs, and artistic wood and metal work. Meerut is 41 miles distant from Delhi, and 308 miles from Lahore. Delhi, the present capital of the Indian Empire, is then reached. The railway station is the junction of the North-Western, the Bombay-Baroda and Central India, the East Indian, the Oudh and Rohilkhand, and the Great Indian Peninsula systems. Full particulars respecting this interesting city will be found on another page.

Another busy main-line route is the one which stretches from Karachi, the quickly-growing seaport of Northern India, across

the highly-cultivated districts of the Punjab, in an easterly direction as far as Delhi. Vast improvements are being effected in the harbour and in dock and wharfage accommodation at Karachi, and an immense quantity of wheat and other agricultural produce is now being exported to Europe and elsewhere.

About 100 miles in a north-easterly direction from Karachi the train passes over a very fine girder bridge, which spans the river Indus, near the town of Kotri, and almost immediately afterwards the traveller arrives at Hyderabad, the former capital of the Province of Sind. The old city contains a fort, with arsenal, palaces, and tombs of Mirs of Sind, while the fort was the site of the ancient town of Nerankoli, which was founded in 1768 by Ghulam Shah, a tributary of the Durwani Ruler of Afghanistan.

Some remarkably fine scenery is in evidence near the Indus river, in the neighbourhood of Sukkur, 330 miles distant from Karachi. Near the five hundredth milestone from Karachi is Samasata, a junction of some importance, and this place may be said to be the starting-point of a perfect network of branch lines, owned and worked by the North-Western Railway. If Samasata be taken as the base of a large pear-shaped territory, it will be found that the whole area is exceedingly well provided with railway facilities. The main line, continuing from the above-named junction, proceeds in an easterly direction, cutting through the great Indian desert, and passing stations at Bahawal Nagar, MacLeod Gunj, and Bhatinda junction, thence in a more southerly course to Jind, the capital of the State of Jind, then to Rhotak, and lastly to Delhi.

Returning to Samasata, it is noticed that after less than an hour's ride the train reaches Lodhran, a junction whence branches are opened in northerly, north-easterly, and easterly directions to a considerable number of commercial centres. Taking a northerly course, one reaches Multan, a city of great antiquity and of religious as well as historic importance, it containing a large number of famous Mahomedan shrines. The tomb of Rukn-ud-din, 100 feet in height and visible from a distance of 14 miles, together with the ruined temple of the Narasingh *avatar* of Vishnu, should not be overlooked by visitors. Multan is famous for its beautiful glazed pottery, enamel work, and the making of silver ornaments, and cotton and woollen carpets. The present city, having a population of about 100,000 inhabitants, is 207 miles distant from Lahore. This line extends as far as Jamrud, the fort at the entrance to the Khyber pass, and to Kohat, chief town and cantonment in the district of Kohat, 37 miles distant in a southerly direction from Peshawar. From Lodhran a section runs due east, through fertile tracts, to Pak Pattan, in the district of Montgomery, containing noted shrines; to Kasur, in the division of Lahore, and thence to the terminus at Amritsar. A third section from Lodhran proceeds as far as Shorkot Road, where it is divided into three branches, and the most important of these serves the large wheat-producing area known as the Lyallpur Colony.

Events which happened in the seventies of last century led to the determination of the Government to proceed as quickly as possible with the construction of railways on the frontier and within the boundaries of British Baluchistan. In addition to the tremendous difficulties which had to be encountered in connection with constructional work in a country largely intersected by mountains, ravines and rivers, the engineers were most seriously handicapped by a shortage of labour owing to outbreaks of cholera and other plagues.

Passengers journeying towards the Baluchistan frontier travel from Karachi on the main line of the North-Western Railway for 318 miles, as far as the junction at Ruk. Proceeding in a north-westerly direction, the train traverses the waterless region called the "Put," arriving at Sibi, 450 miles from Karachi. This place was of very little significance prior to the introduction of the railway, but at the present time it is a thriving commercial town and the headquarters of several Government officials. The main line of 5 ft. 6 in. gauge is divided at Sibi into two separate sections, both of which unite again at Bostan junction, 585 miles distant from Karachi by one route, and 559 miles by the other. These branch systems are known as the Sind-Pishin and the Mushkaf-Bolan Railways. Leaving Bostan, which is 20 miles beyond Quetta on the Bolan route, the line is carried over the Pishin plateau to Gulistan, thence to the famous Khojak tunnel, and on to New Chaman, on the frontier, and only 74 miles on the India side of Kandahar.

About three years ago work was started on a line of 5 ft. 6 in. gauge, running in a westerly direction from Nushki into Persia.

The total length is about 361 miles; a section of 13 miles, from Nushki to Ahmedwal, was opened for traffic on April 4, 1919; a length of 102 miles, from Ahmedwal to Dalbandin, was similarly completed on October 1st following; and the construction of the remaining portion of the line will, it is expected, be finished at an early date.

The line is practically a surface one throughout, there being no rivers to be spanned by bridges. The rainfall is slight, and the climate varies from intense heat in the summer to great cold in the winter. The country through which the railway runs is liable to frequent and severe dust storms.

The line passes through Ahmedwal, Dalbandin, Yakmach, Alamreg, Mirjawa to Duzdap, with a short branch to Juzzak.

Among information regarding the working of the North-Western Railway recently published by the Administration, there is a statement showing that the average annual quantity of goods carried during the previous five years amounted to 4,532,754 tons, the principal traffic being in grain (chiefly wheat) and seeds of all descriptions, the weight of the latter averaging 2,313,071 tons.

THE CENTRAL PROVINCES

EARLY HISTORY

By ARNOLD WRIGHT

A WILD and rugged country, sparsely inhabited and lying well away from the great avenues of traffic which from time immemorial have endowed other parts of India with wealth and trade and population, the Central Provinces have a more modern history than almost any other part of the sub-continent. The term modern is used in the sense of known, for doubtless here as elsewhere in this ancient region, the country has a past which goes very far back in the annals of the world. The period when the territory first emerges into the light is not more remote than three centuries ago, at or about the time when the English first made their contact with Indian life. At that juncture it was presented as Gondwana, a great unexplored region of inaccessible mountains and impenetrable forests, inhabited by a savage race known as the Gonds, from whom it derived its name. But that it had earlier and more civilized characteristics is patent from the inscriptions and coins which have been discovered from time to time within its limits, and from the fact that one of Asoka's famous rock edicts exists at Rupnath, in Jubbulpore.

Leaving aside these fragmentary evidences of a past in which the Central Provinces had its share, if a slight one, in the life of India, we may take up the story of the Gond kingdoms as they are revealed in the pages of Ferishta. Rajput in origin, they had a chequered and isolated existence until about the end of the seventeenth century, when Bakht Buland, the chief of a Gond principality, after a visit paid to Delhi, set on foot a scheme of development of his territories on more or less civilized lines. Inviting to his aid a number of Hindu artificers, he built on what, for his day, were imposing lines, the city of Nagpur, which, in the reign of his successor, became the capital of the state. This Deogarh kingdom extended over the modern districts of Betul, Chindwara, Nagpur, and portions of Seoni, Bhandara, and Balaghat. Another Gond dynasty had its seat at Chanda, in the south of the province, and that it must have been of some importance may be gathered from the circumstance that when its chief visited Delhi in or about the sixteenth century he was represented as an independent prince with an army of 1,000 cavalry and 40,000 infantry. A third principality exercised dominion over districts comprising Saugor, Damoh, and possibly Bhopal, the Nerbudda Valley, and Mandla and Seoni, on the Satpura highlands.

At the outset the Mogul Empire had but slight ties with these Gond kingdoms, but as the sixteenth century advanced garrisons were established in various outlying parts of the provinces in the north-west. The Mogul emperors, however, never sought to extend their relations with these distant states. They were content to accept their nominal allegiance, and with it possibly an inconsiderable tribute. On the break-up of the Mogul Empire the Central Provinces became involved in the strife which spread over a great part of India owing to the raids of the Mahrattas. The Gond chiefs were able to put up but a feeble resistance to the remorseless invaders, and a Mahratta ascendency, commencing in 1733 with the invasion of Bundelkhand, was established before the eighteenth century was half gone. In 1743 Raghuji Bhonsla, of Berar, installed himself at Nagpur, retaining the Gond prince in nominal power. In 1751 he effected the conquest of the Deogarh territories of Chanda and Chhattisgarh. Raghuji died in 1755, and was succeeded by his son Janoji, who enlarged and consolidated the Nagpur kingdom.

For a time the Nagpur Mahrattas appear to have been independent of the Peshwa at Poona, but consequent upon his defeat by a combination of the Nizam's and the Peshwa's forces in 1769, Janoji was compelled to accept the Peshwa's suzerainty and agree to attend him in person with a contingent of 6,000 men whenever called upon, besides paying an annual tribute of five lakhs. Janoji was succeeded by Mudhoji, an enterprising chief who enlarged the Nagpur territory by securing from the Poona court the cession of Mandla and the Upper Nerbudda Valley in return for a payment of 27 lakhs. Later, in 1796–8, the same prince acquired Hoshangabad and the greater part of Saugor and Damoh. Mudhoji's successor was Raghuji II., a prince who figured as one of the most important of the group of Mahrattas who had risen to power on the fall of the Mogul Empire. His territory included practically the whole of the existing Central Provinces and Berar, and embraced besides Orissa and some of the

Chota Nagpur States. He had a revenue of about a crore of rupees and maintained an army of 18,000 horse and 25,000 infantry, and had besides 4,000 Arabs in his pay. Associated with this force was a train of artillery of about 90 guns. "Up to 1803," says the writer in the *Gazetteer of India*, from which the bulk of the facts in this article are drawn, "the Mahratta administration was on the whole successful. The Bhonslas, at least the first four of them, were military chiefs with the habits of rough soldiers, connected by blood and by constant familiar intercourse with all their principal officers. Descended from the class of cultivators, they ever favoured and fostered that order, and though rapacious were seldom cruel to the people. Of Janoji, the successor of Raghuji I., it is recorded that the king did not spare himself, being referred to in the smallest as well as the greatest matters of state; nor did any inconvenience or delay to the public service arise from this system, for even when not sitting actually in Durbar the Raja was always accessible to any person who had business to propound to him."

These were the halcyon days of Mahratta dominion in the Central Provinces. The time now arrived when the region became seriously involved in the struggle then proceeding between the British and the Mahrattas. It was unfortunate that at this early nineteenth-century period the succession to the Nagpur *gadi* or throne devolved upon the imbecile son of Raghuji II., who was neither mentally nor physically capable of upholding the interests of his dynasty. This afflicted youth, as was only to be expected, became a mark for the intrigue of designing individuals, and he had not been long in possession of his shadowy power before he was murdered by the well-known Mudhoji, otherwise Appa Sahib. In the same year, 1816, the British secured a treaty of alliance with the Nagpur State, the instrument providing for the maintenance of a subsidiary force within the limits of the state. This concession was reluctantly made, and when in 1818 war broke out between the British and the Peshwa, Appa Sahib showed himself in his true colours by accepting an embassy and title from the latter. The incident was accepted in its full significance by the British. Instant preparations were made for hostilities which they knew they would soon have to meet. At the time the subsidiary force at Nagpur was considerably below strength. It consisted of two weak regiments of Madras infantry, three troops of Bengal cavalry, and four six-pounder guns. With such a small body the only possible *rôle* was a defensive one. Consequently the military commander posted it in a strong position at Sitabaldi and awaited developments, which were not long in coming. On the night of November 26th the force was attacked by the Nagpur State army, numbering 18,000 men and 36 guns. Repeated attacks were gallantly repulsed, but eventually an explosion occurring in an ammunition cart and throwing the troops into confusion, a portion of the position occupied was carried by the enemy. Elated by this success the Nagpur force renewed the attack with redoubled vigour, and things began to look very critical. At this moment the cavalry commander formed up his force near the Residency, at a point below the hill which was occupied by the British, and charged the enemy with such dash that a small battery was captured. At this success the British infantry rallied, and the enemy were driven off from the part of the field which they occupied in the earlier retreat of the British. A second cavalry charge brought complete victory. But it had been won at a great price, for of the small force engaged about one-third were either killed or wounded. After the fight the British received reinforcements, and upon the strength of these the Resident, Mr. (afterwards Sir Richard) Jenkins, demanded the disbandment of the Nagpur army. Appa Sahib submitted, but his army held aloof, and on December 16th another battle was fought, resulting in the complete defeat of the Mahrattas with the loss of the whole of their camp with 40 elephants, 41 guns in battery, and 23 in a neighbouring *depôt*. In consequence of these engagements the remaining portion of Berar was ceded to the Nizam, and the territories of the Nerbudda Valley were appropriated by the British. Subsequently Appa Sahib was reinstated on the throne, but he had not been long in power before he was discovered at his old work of intrigue, and the British removed him, placing a grandson of Raghuji II. on the throne. In the meantime the territory was administered by Sir Richard Jenkins, a capable official whose intimate knowledge of local conditions was of great advantage in the then disturbed condition of the country. Under his strong rule the country slowly recovered from the effects of misrule and war, and when Sir Richard Jenkins retired in 1830 he was able to hand over a prosperous and contented state. The principles he introduced were followed with a greater or less measure of success until the death of the reigning prince in 1853.

Raghuji left no successors, and the Government of India applied the much-criticized principle of lapse, declaring that as there were no legitimate heirs to the throne the state territory became British. This action on the part of the over-ruling power is widely regarded as one of the causes of the Mutiny which broke out four years later. However that may have been, the Central Provinces were the scene of some notable fighting in that memorable conflict. At an early stage the native regiments at Saugor rebelled, and in a short time all trace of British rule had been obliterated in that district, as well as the adjoining one of Damoh, save that a British garrison maintained a precarious existence in the fort and town of Saugor. In August 1857, in sympathy with the disaffected movements now proceeding at many centres, the Jubbulpore garrison revolted, but their power of mischief was circumscribed by the timely arrival of a Madras column, which served to keep the outbreak within its original limits, though it could not accomplish much against the rebels actually in the field. At different times later there were isolated disturbances in various parts of the provinces, and it was not until 1858 that any serious attempt could be made to restore British rule. The duty of re-establishing authority then devolved upon the gallant Sir Hugh Rose, one of the greatest commanders the Mutiny produced. Marching through Saugor early in the year named, Rose took the forts of Rahatgarh and Garhakota, and defeated the insurgents in a number of engagements. Thenceforward the restoration of order became an easy matter. A formidable rising concerted at Nagpur was promptly nipped in the bud by the vigilance of the civil authorities, aided by Madras troops from Kamptee, and there were isolated disturbances in various quarters. But these were merely the dying efforts of a great conflagration. The population, once assured of the maintenance of British rule, soon settled down, and the provinces entered upon a new era of prosperity, in which they have witnessed a great extension of economic enterprise.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

One of the earliest outcomes of the period immediately following the Mutiny was the settlement of the provinces on a more suitable administrative basis. In the opening years of the nineteenth century the Saugor and Nerbudda territories were placed under the administration of an Agent to the Governor-General. When the North-West Provinces were constituted in 1835 the Saugor and Nerbudda territories were included in them. Later, owing to serious disturbances known as the Bandela rising, in which two landholders in the Saugor district rose in rebellion and did a good deal of mischief before they were suppressed, the territory was again placed under the political control of the Agent to the Governor-General. The system still was not found to work satisfactorily, and once more the Government of the North-West Provinces were placed in control. There were, however, so many practical difficulties in the way of administering these two isolated pieces of territory in the centre of India that the Government decided to create a new province, and so in 1861 the Central Provinces came into existence.

The modern history of the Provinces will be related in articles which follow.

BATHING GHAT, HARDWAR.
Photo by B.B. & C.I. Rly. Co.

THE CENTRAL PROVINCES

DESCRIPTION AND MODERN HISTORY

THE administration of the provinces is in the hands of a chief commissioner, with head-quarters at Nagpur, who is the controlling revenue and executive authority. Subordinate to him are the chief secretary, the legal secretary, the secretary of the Public Works department (building and roads branch). The official heads of departments include the director of agriculture and industries, the commissioner of excise, and superintendent of stamps and stationery, the commissioner of settlements and director of land records, the inspector-general of civil hospitals, the chief conservator of forests, the inspector-general of police, and the director of public instruction.

The provinces are divided for the purposes of administration into five separate parts, each of which is controlled by a commissioner, and they are as follows: (*a*) the division of Nagpur, comprising the districts of Nagpur, Bhandara, Wardha, Chanda, and Balaghat; (*b*) the division of Jubbulpore, with the districts of Jubbulpore, Saugor, Damoh, Seoni, and Mandla; (*c*) the division of Nerbudda, with the districts of Hoshangabad, Nimar, Narsinghpur, Betul, and Chhindwara; (*d*) the division of Chhattisgarh, which includes the districts of Raipur, Bilaspur, and Drug; and the division of Berar, with the districts of Amraoti, Yeotmal, Akola, and Buldana. The provinces have a total area of about 113,281 square miles, of which 82,093 square miles are British territory, the remainder being held by feudatory chiefs, and they are bounded on the north and north-west by the states of the Central India Agency, and a small portion of the United Provinces of Agra and Oudh; on the west by the Native States of Bhopal and Indore, and by the Khandesh district of Bombay; on the south by the dominions of His Exalted Highness the Nizam of Hyderabad (Deccan); and on the east by the Presidency of Madras and the Province of Behar and Orissa.

The whole country consists of tracts of uplands with intervening valleys; in the northern portion is the Vindhyan plateau, with an irregular rocky surface at an elevation of nearly 2,000 feet; further to the south is the valley of the Nerbudda river, about 200 miles in length and 20 miles in breadth, famous for its excellent crops of wheat; to the south of this valley is the Satpura plateau, composed chiefly of forest-covered hills at an elevation of about 2,000 feet, and upon which are the districts of Balaghat, Seoni, Mandla, Chhindwara, and Betul; on the eastern and southern sides of the Satpuras is the great Nagpur plain, formed by the Wardha and Wainganga valleys, in which are the districts of Nagpur, Wardha, Chanda, and Bhandara, all of these being noted for the production of remarkably fine cotton; and in easterly direction is the Chhattisgarh plain, with fertile soil, yielding large quantities of rice and other cereals.

In the extreme south and south-east of the provinces is the Satpura range of hills, the source of the River Nerbudda, which has a course of about 200 miles through the "Marble Rocks," in the district of Jubbulpore, and, after passing the Vindhyas, it enters the Gulf of Cambay. The Mahanadi, from its source in the Bastar hills, flows in a southwardly direction past Sambalpur and Cuttack, and finally finds an outlet, in a mighty stream, into the Bay of Bengal.

The Godavari river skirts the south-western border of the provinces, but its tributaries, the Wardha, Wainganga, and Indravati, play an important part in the cultivation of a large portion of the territory.

The bare facts given above of the physical aspects of mountain and plateau, of rocky fastnesses and fertile valleys, would never lead anyone to dream of the beauty of the scenery in various parts of the provinces. Were it possible to stand on a lofty eminence and take a bird's-eye view of the whole area, one would be charmed with the rugged peaks of the Satpura range covered with forest trees, whose dark-green foliage blends so harmoniously with the lighter shades of wheat and other crops, which are cultivated on lower levels and also for a considerable distance up the slopes of the hills, as well as with the park-like appearance of pasture lands dotted about with clumps of noble trees surrounding the homesteads of thrifty occupiers. The prominent feature in a view of this kind would be variety, and it is that very variety which contrasts so favourably with the monotony of the extensive plains in other parts of India.

The foundation of the Central Provinces through annexations, by the voluntary gathering together of tribes who migrated there from various places, and by the action of chiefs of petty states who had been compelled to seek new homes for themselves, either prior to, or

at the time of the Mutiny of 1857–8, naturally led to the establishment of a community of various races, somewhat complex as regards ancestry, occupations, religious creeds, and languages.

The Gonds, who have already been mentioned as inhabitants of early days, are still found in great numbers; Brahmans, Rajputs, and Kyasths are landowners, and other races include Khonds, Korkus, Mahrattas, Dangis, and Lodhis.

The population in the area under British administration, at the census of 1911, consisted of nearly 14,000,000 persons, and of 2,200,000 resident in the feudatory states, nearly 75 per cent. of the aggregate total of these obtaining a livelihood as landowners, tenants, or agricultural labourers.

A well-organized department of agriculture, equipped with a thoroughly efficient staff of practical experts, is performing work of incalculable value in furthering the science of cultivation, but it is noticed that there is still a considerable amount of reluctance shown by occupiers with regard to the acquisition of a clearer knowledge of the characteristics of different soils, and of the means to be employed for bringing them into, and maintaining them in, a consistently higher state of fertility.

Soils vary greatly in constitution, from the heavy black type in the Nerbudda valley and the Satpura plateau in the north-west, to the light sandy soils in the eastern and south-eastern districts; but there is one feature common to nearly all districts, namely, that practically all the available land will respond readily to judicious treatment.

Rice, the most important crop, is grown upon about 25 per cent. of the tilled area, the principal districts of production being Balaghat, Bandara, and Chanda in the Nagpur division, and Raipur in the division of Chhattisgarh; wheat, occupying 15 per cent. of the land, is next in order of quantity sown, and the area placed under cotton is increasing in size annually owing to the prosperous state of the market, which creates a much greater demand. The remaining principal products are millets, pulses, maize, oilseeds, chillies, ginger, and turmeric, while an area of 230 square miles is devoted to the cultivation of vegetables, fruit, and condiments of various kinds, including 30 square miles of land planted with sugar-cane.

The forest department of the Government is under the direction of a chief conservator, who controls the work of assistant and deputy conservators, rangers, and guards, and the area over which they have supervision extends to about 44,000 square miles, divided as follows: nearly 19,000 square miles of Government forests, about 10,000 square miles in the hands of *Zemindars*, and the remainder in the feudatory states. The principal trees are teakwood, which occasionally attains a height of 100 feet and a girth of 6 feet; *sal* (*Shorea robusta*), usually met with in the eastern portion of the provinces; Indian redwood, satinwood, ebony, red cedar, cottonwood, bamboo, and a large number of others, which are conspicuous for the richness of their verdure and the exquisite beauty of their flowers. The value of the minor products of forests is considerable, as they include lac, honey, gum, flowers, fruit, seeds, roots and the horns and hides of animals found dead in the heavy undergrowth.

The comparatively recent constitution of the provinces is in no respect more forcibly illustrated than in the undeveloped state of industries and manufactures, excepting in certain places, such as the city of Nagpur, for instance, which enjoy good railway facilities. The old village handicrafts of weaving, dyeing, and working in gold, silver, brass, copper, and other metals, are slowly but surely being superseded by mechanical aid, and there is no more certain sign than this of an awakening on the part of the people to the necessity for keeping abreast of the times in order to acquire a share in the industrial advance now being made throughout the whole of India.

One may, however, still see silk, cotton, and cloth being woven by hand, leather and metals being made up into useful or ornamental goods, and various kinds of articles being carved from wood, but the tall chimneys of factories and mills tell of the firm establishment of modern industrial enterprises. The Empress Mills, owned by the Central India Spinning, Weaving and Manufacturing Company, Ltd., were erected about the year 1877, and since that date many other mills and factories for ginning, pressing, spinning, and weaving have been built in various important centres in the provinces. There is also considerable activity in the manufacture of beer, matches, bricks, tiles, pottery, glassware, and other goods.

The chief exports include grain, oilseeds, raw cotton, yarn, hand-woven silk-bordered cloths, cotton seeds, hides and skins, while imports comprise cotton piece goods, salt, sugar, metals, provisions, and oils.

Prior to the opening in the year 1867 of the first railways in the provinces, namely, from Bhusaval to Nagpur and from Jubbulpore to Allahabad, a considerable portion of the area was occupied by forests so dense that cultivators experienced the greatest difficulties in transporting their produce to even the few markets which were then open to them.

There were only a few main roads, and they were not always free from the unwelcome attentions of parties of marauders, but at the present time the provinces are served by the systems of the Great Indian Peninsula, the Indian Midland, the Bombay-Baroda and Central India, the East Indian, and the Bengal-Nagpur Railway Companies, and by a large number of "feeder" lines, which have penetrated regions which were formerly cut off from the outside world.

Remarkable progress has been made in the construction of metalled and other roads during the past twenty years, these being maintained or controlled by the Government and district boards.

An Act of Parliament, passed in the year 1865, and amended at subsequent dates, provides for the establishment of municipal government, Nagpur being the first town to take advantage of the privilege. The principle of local control seems to have been appreciated by the inhabitants of the provinces, as nearly sixty towns had been constituted municipalities before the year 1881. District council and local boards have also been formed, their duties being connected chiefly with the questions of sanitation and rural education, and one of the main sources of their income is the collection of octroi, although considerable sums of money are derived from taxes on houses, and water and other rates.

Public interest in the question of education has only recently been manifested to any appreciable extent, and it has been up-hill work for all concerned in the matter to secure the success which has been achieved during the past quarter of a century.

A department of education was formed in the year 1862, its duties being confined chiefly to giving instruction to, and training teachers, the management of certain colleges, and the inspection of schools in rural areas, which were as far as possible controlled by local governing bodies. The principal educational insti-

tutions in the provinces are the Morris and Hislop Colleges at Nagpur, and the Government College at Jubbulpore.

Instruction of a special character is imparted at the Government Agricultural College at Nagpur, the Rajkumar College at Raipur (which is intended for the sons of feudatory chiefs), a school for engineering at Jubbulpore, and in a number of industrial schools, the majority of which are under the control of Protestant or Catholic missions.

Owing to the very extensive area of dense forests in the provinces, it is not surprising that the territory is greatly favoured by sportsmen, who are able to meet with almost every kind of animal and bird usually found in India. Wild elephants are occasionally seen in some of the feudatory states; the graceful tiger and leopard, the pride of the Indian jungle, are fairly common in many districts; the wild buffalo and bison are less plentiful, but it is possible to find them on the upper slopes of the Satpura range; while the sambhar, spotted deer, barking deer, nilghai, the four-horned antelope, and herds of black buck are found almost everywhere. The catalogue of land and water birds is a long one, and it includes almost every species ranging from the bustard and florican to the small quail and partridge, together with a large variety of waterfowl.

The appreciation shown by the people of the provinces of the beneficent action of the Government in providing and maintaining hospitals and dispensaries is evidenced by the following facts and figures: Medical aid was first given in the year 1861, and twenty years later there were eighty-one civil hospitals and dispensaries, and in 1902 this number had been increased to 113. Again, treatment was given to 4,355 patients in 1881 and to 6,298 in 1902; the in-patients for these two years were respectively 335 and 472; the expenditure on establishments was Rs. 60,066 and Rs. 96,303; and the cost of medicines and food and the maintenance of buildings amounted to Rs. 43,946 and Rs. 1,11,967. The principal medical institutions are the Mayo Memorial Hospital at Nagpur, the Victoria Hospital at Jubbulpore, the Lady Dufferin Hospital at Nagpur and Raipur, and the Lady Elgin Hospital at Jubbulpore. The progress made during the periods just mentioned has been more than maintained since 1902, and at the present time the people not only make the fullest use of these privileges, but they have also manifested a readiness to submit themselves to vaccination as a preventive against small-pox and other maladies. Control is vested in the Inspector-General of civil hospitals and a sanitary commissioner.

Subordinate to the Government of the provinces are fifteen feudatory states, ruled by hereditary chiefs, who enjoy considerable administrative powers under the control of the chief commissioner, whose authority is required before sentences of death can be carried out.

The states occupy an area of 31,188 square miles, and have a population of about 2,200,000 inhabitants. The largest state is Bastar, which is more than 13,000 square miles in extent. The aggregate amount of tribute paid annually to the Government is about Rs. 2,50,000, and the gross revenue reaches a sum of more than Rs. 25,00,000.

Nagpur, the official head-quarters of the chief commissioner and the Government of the Central Provinces and Berar, is 520 miles distant from Bombay by the Great Indian Peninsula Railway, and 700 miles from Calcutta by the Bengal-Nagpur system.

Nagpur formerly belonged to the Gond Kingdom of Deogarh, whose most illustrious ruler, Bakht Buland, founded the city in the year 1700; and it subsequently became the capital of the Bhonsla Rajas, one of whom erected a very beautiful palace, which was burned down in 1864.

The city is prettily situated on the River Nag, and at its northern and western sides are several low hills, the civil station of Sitabaldi, and the hill fort of the same name, which was built in 1818.

NAGPUR is the leading industrial and commercial centre in the provinces, especially in connection with its extensive cotton trade carried on with Bombay. The "Empress" mills, erected in Nagpur in 1877, and equipped with nearly 1,500 looms and 67,000 spindles, were the first of their kind in the provinces, and they have been followed by the Swadeshi and many other mills, and cotton ginning and pressing factories in various parts of the country.

Although the introduction of machinery has greatly decreased the number of industrial enterprises carried on by manual labour, there are still a few of some importance in which all work is done by hand, such as the weaving of cotton and cotton cloth bordered with silk and ornamented with gold and silver lace, and the making of artistic jewellery and useful household articles.

Nagpur oranges are celebrated throughout the whole of India for their excellent quality, very large quantities being consigned to Bombay, Calcutta, Delhi, and other large cities. There are several fine lakes and tanks in the vicinity of the city, and a plentiful supply of water is derived from them for the use of the inhabitants as well as for the beautiful private and public gardens, the latter including the Telinkheri, the Maharajbagh, and the Paldi Karadi. These well-kept places of recreation and enjoyment and the remains of the old palace are memorials of the progressive rule of the Bhonsla dynasty. There are not any remains of great archæological interest, but a number of fine sculptures and slabs of stone bearing inscriptions have been discovered and have now been placed in the museum. The handsome building of the town hall is one of the finest of the modern structures, and there are also the Morris College, which prepares students for degrees in Arts and Law; the Hislop College, teaching up to the Arts standard; the Government School of Handicrafts; the Victoria College of Science; three aided high schools; several middle schools, and nearly fifty primary ones.

The Government department of agriculture maintains a model farm at Nagpur for experimental and research work, and connected with it is a school for giving instruction in the principles of scientific agriculture.

A visit might well be paid to the central jail, in which prisoners are engaged in various kinds of industrial work, such as the weaving of cloth, the making of household requisites in wood and cane, and in printing and binding. The printing workshops are equipped with thirty presses of various sizes, and they prepare all forms and registers for use in Government offices, as many as ten million sheets being turned out annually.

The inhabitants were about 101,000 in number at the census of 1911.

JUBBULPORE, the chief town and cantonment of the district of the same name, is situated in a rocky hollow, surrounded by hills, at an elevation of about 1,300 feet, and it is 616 miles distant from Bombay by the Great Indian Peninsula Railway and 784 miles from Calcutta by the East Indian Railway, these two systems uniting at this point. The earliest historical references to the town are dated

about the year 1780, when the Mahrattas made it their head-quarters on their annexation of that portion of the provinces, and it now contains the Government offices of the commissioner of the division of Jubbulpore, the judicial, revenue, public works (provincial branch), and other departments.

Jubbulpore is a thriving commercial and industrial centre, containing spinning and weaving mills, pottery works, a brewery, an ice factory, oil and flour mills, and the workshops of the Great Indian Peninsula Railway Company. It is also an important receiving centre for grain and other produce grown in the neighbourhood, and a considerable number of its inhabitants find lucrative employment in stone-cutting, the weaving of cloth, the manufacture of brassware, in making images from marble, which is plentiful near the town, and in cutting buttons, studs, and ornaments from agate pebbles.

Among other public buildings worthy of notice are the Government College, a training college for teachers, and Christ Church High School for boys. The Thuggee jail is interesting from an industrial point of view, as the inmates manufacture tents and carpets of superior quality and excellent workmanship, which meet with a ready sale even in remote parts of India. Within a few miles from Jubbulpore is Garha, an old capital of the Gonds, with its fine ancient "keep" built on granite rocks.

Nine miles distant in a south-westerly direction from Jubbulpore is BHERAGHAT, a picturesque village surrounded by some of the most delightful scenery in India. Here may be seen the "Dhuan-dhar" (misty shoot), or Marble Rocks, as they are popularly called, where the Nerbudda river, confined to about a hundred yards in width, flows for nearly two miles through a beautiful white limestone channel, above which are marble bluffs rising to a height of about 120 feet.

There is a local legend to the effect that this gorge was made by Indra for the escape of accumulated water on higher levels, and that certain indentations upon the rocks were caused by the feet of the elephant belonging to the deity. Bheraghat is three miles distant from Mirganj station, on the Great Indian Peninsula Railway.

BURHANPUR, on the River Tapti, in the district of Nimar, was formerly an important city, surrounded by a masonry wall, and having four principal gates. The present enclosed area is not more than about two miles in length and half a mile in width, but discoveries of ruins outside the wall prove that the city must at one time have been fully five square miles in extent. It was founded in the year 1400 by the first king of the Faruki dynasty of Khandesh, and several of his successors resided there and built mosques, which can still be seen by visitors. The Jama Masjid and the Bibi Masjid belong to that period—the former of these, erected by Ali Khan in 1588, being a fine structure beautifully decorated with stone carvings. The dimensions and magnificence of the royal palace may be imagined by the sight of the lofty halls, which remain to this day. Among other interesting objects are a fine Turkish bath with marble floors, which was constructed for the ladies of the palace, and several tombs, including that of Shah Nawab Khan, whose daughter married the Emperor Shajehan.

Burhanpur is now a municipal town of about 33,000 inhabitants, many of whom are engaged in the manufacture of silk cloth embroidered with gold and silver lace, and of gold wire. Cotton and other produce is exported in considerable quantities, and mills and factories for ginning, pressing, and spinning cotton have been erected within the town as well as in the near neighbourhood.

Burhanpur is 310 miles distant from Bombay.

CHANDA, the chief town in the district of Chanda, is surrounded by walls ten feet in thickness and having a circuit of more than five miles. It is beautifully situated between the Jharpat and Virai rivers, with exquisite natural scenery on all sides. The town is famous on account of its walls, monoliths, citadel, temples, and tombs of the kings of the Gond dynasty, of which it was an ancient capital. In the vicinity of Chanda are numerous temples and recumbent figures of Hindu deities, the latter being carved out of solid rock and measuring 15 feet to 21 feet in length.

The inhabitants of Chanda, about 20,000 in number, are engaged chiefly in agricultural and pastoral pursuits, although there is considerable activity in the weaving of silk and cotton and the manufacture of gold and silver ornaments.

RAMTEK, containing a population of about 8,000 inhabitants, and 24 miles distant in a northerly direction from the city of Nagpur, is built at the base of a hill, 500 feet in height, upon which is a temple dedicated to Rama or Vishnu. There are several other temples—some of a modern character—as well as nearly thirty tanks, in the vicinity of the hill, and therefore the latter has for many years been a sacred place of pilgrimage for Hindu worshippers. A large festival, held annually in an adjoining village, attracts about 50,000 devotees.

AMRAOTI, the largest and most important commercial town in the division of Berar, has attained its present dimensions since its foundation near the end of the eighteenth century.

It is the head-quarters of the Commissioner of the division of Berar, and it contains a number of Government buildings, Hindu and Mahommedan High schools, and several other schools of a primary or secondary character.

Amraoti is the principal cotton mart in Berar, and it possesses eleven cotton ginning and nineteen cotton pressing factories, while a thriving trade is carried on in general merchandise and agricultural produce. It is famous for its Amba temple of Bhawani, or Kali, which is believed to have been built in the ninth or tenth century. The town is surrounded by a strong stone wall ranging in height from 20 feet to 24 feet, with a circumference of more than two miles, and it has a population of about 34,000 inhabitants.

Amraoti is a station on the Great Indian Peninsula Railway, and is 420 miles distant from Bombay.

NARNALA is a hill fort at an altitude of 3,161 feet, near Chikalda, in the district of Amraoti, and it extends for several miles, enclosing a considerable number of very fine ruins of Jain and Mahommedan temples.

BHANDAK.—The numerous ruins of ancient temples, sculptures, tanks, forts, and palaces point to the fact that an extensive and important city existed several hundreds of years ago upon the site of the present town of Bhandak, which is about 15 miles distant in a north-westerly direction from Chanda, and 12 miles from Wardha, a station on the Great Indian Peninsula Railway.

Buddhist rock caves of a remarkable character may be seen at Bhandak. One of these, cut in a straight line in the side of a massive rock, extends for a distance of 70 feet from the entrance, and at the extreme end is a huge statue of Buddha. Two other galleries run at right angles from the main one, and each of these has a similar shrine and sculptured figure of the deity. Inscriptions on the walls of

these passages suggest that the work of construction took place in the second or third century of the Christian Era.

Other caves, also containing statues, may be seen in hills at Gaorara, Dewala, and Winjhasani, all of which are not further than two or three miles distant from Bhandak.

ASIRGARH is the name of a fort built on the ridge of a mountainous range which divides the two river valleys which comprise the district of Nimar. The fort, covering an area of about sixty acres at an altitude of 2,300 feet, was formerly a stronghold of the Chauhan Rajputs, and was subsequently held by the Feruki kings of Khandesh, but at the close of the sixteenth century it was besieged by the Emperor Akbar, who only succeeded in capturing it after an extended struggle.

The British stormed and secured possession of the fort in 1803, and although they retired from it shortly afterwards, they again laid siege to it (1819), driving out the occupants after fierce fighting, which lasted for about twenty days.

ELLICHPUR, 32 miles distant from Amraoti, is referred to in ancient writings as "one of the famous cities of the Deccan."

Early in the fourteenth century it, with the division of Berar, was brought under the rule of the Mahommedans, and from 1490 to 1570 it was the capital of that territory. Although Ellichpur was deprived of much of its wealth when it ceased to be the chief city in Berar in the middle of the eighteenth century, it remained a historically interesting place by reason of its extensive ruins of palaces, tombs, and mosques of rulers of the country, as well as of the famous burial shrine of Dalla Rahman, built by one of the Bahmani kings more than four hundred years ago.

KHANDWA, the head-quarters of the district of Nimar, is evidently a town of considerable antiquity, but little of an authentic nature is known of its history until the end of the twelfth century, when it was a famous place of worship for the Jains, whose temples were adorned with finely carved woodwork, sculptured stone pillars, and other ornamentations, which may now be seen as portions of modern buildings. Khandwa is situated at the junction of two main roads connecting the northern and western portions of India with the Deccan, and on that account it has been a centre of commercial activity for several centuries. Khandwa is in the centre of the rich cotton producing area in Nimar, and it possesses several ginning and pressing factories, in addition to oil mills and other industrial enterprises. It is built at an elevation of more than 1,000 feet above sea level, and it is 353 miles distant from Bombay on the Great Indian Peninsula Railway.

RAIPUR, the head-quarters of the commissioner of the Chhattisgarh division since the year 1818, is said to have been built in the early portion of the nineteenth century. Its chief attraction is the fine old fort, constructed about the year 1460, within which are numerous temples as well as many Hindu relics of considerable archæological interest, while in the vicinity are two large tanks.

Raipur is the principal centre of the grain trade in the provinces, and many of its inhabitants are employed in the weaving of cloth, the manufacture of gold and silver ornaments, lacquering on wood, and the making of brass utensils for household purposes.

The town is 513 miles distant from Calcutta by the Bengal-Nagpur Railway system, and it has a population of about 20,000 persons.

SAUGOR, the chief town of the district of the same name, derives its name from a fine oval lake, four miles in circumference, on the north-western border of which it is picturesquely situated, at an altitude of nearly 2,000 feet.

The ancient fort, six acres in extent, said to have been constructed by the Mahrattas, was held by a mere handful of British troops against repeated attacks by rebels during the Mutiny of 1857.

The chief industries are the manufacture of gold and silver ornaments, the weaving of cloth, the making of brass vessels, and the pressing of oilseeds.

SEONI, the principal town in the district of Seoni, was founded about the year 1770 by the Pathan Governor of Chhapata, and it is the centre of one of the most beautiful and fertile plateaux of the Satpura range. A large trade is carried on in cotton, grain, and other agricultural produce, and it has a few minor industries, the chief of which is the weaving of cloth. Seoni is situated on the main road between Nagpur and Jubulpore, from which places respectively it is 79 miles and 86 miles distant.

UMRER, 29 miles from the city of Nagpur in a south-easterly direction, is famous for its manufacture of very fine cotton cloth with silk borders, and of white loincloths with red borders, the threads being dyed with lac.

It has also an old fort, constructed by the Mahrattas, and a temple with walls 17 feet in thickness, which is said to have been built by Raja Karm Sala, of Chanda, during the sixteenth century.

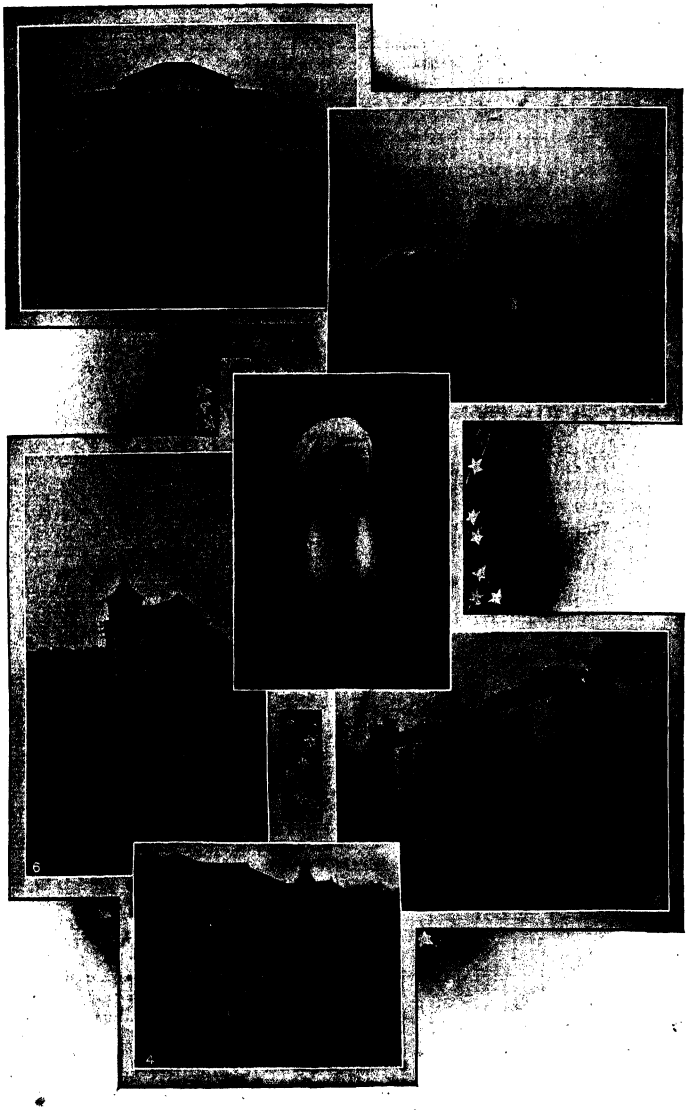
KHAN BAHADUR H. M. MALAK.

The founder of the Mehdi Bag Institution at Nagpur, in the Central Provinces, was the late Mr. Malak, a self-made man who had no scholastic attainments, and was totally ignorant of the A B C of his own creed or of the usages or religious and social customs of the sect in which he was born, as his parents did not take rank in the class of *Mullas, Moulvies,* and others who aspire to the title of being alone fit to impart religious knowledge and instruction to such as are not born in the purple.

The late Mr. Malak's father, known by the name of Jivabhoy, was a merchant doing business in oil, paint, and varnishes in Bombay. His mother tongue was Gujrati, and not Arabic, in which all religious literature of the community is written. The late Mr. Malak gave up his business and started the mission after having been in contact with the present Mr. Malak, some three years after the death of his father.

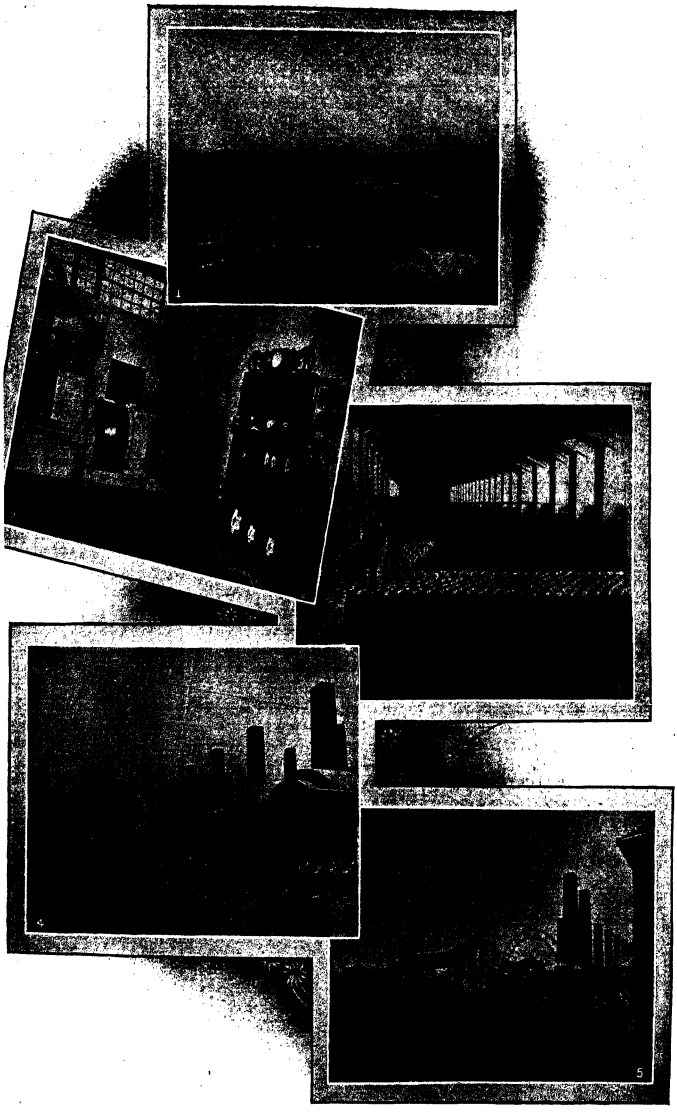
Both these Malaks of congenial temperament claim spiritual communion with those exalted agencies which contribute to spiritual improvement, advancement, and the uplifting of the human race, and with whose help and inspiration they started the mission, which embraces a community known by the name of Dawoodi Bohras. The late Mr. Malak, after the Institution was founded, controlled the mission work for a period of about nine years, but ere he died he left his work solely to the present Khan Bahadur, H. M. Malak, as a fitting successor, and with whom he had for some time been associated.

Both the Malaks had very little religious instruction from others; in fact, the first Mr. Malak had, as has been indicated, almost none, and their remarkable spiritual gifts are attributed by their followers solely to inspiration, and the extraordinary ease with which they solved knotty and complicated problems pertaining to religion is reckoned as marvellous. The first Malak Saheb had a firm conviction, also shared by the present Malak, that all saints and prophets from the time



KHAN BAHADUR H. M. MALAK.

1. Khan Bahadur Hajee M. Malak. 2. Malak Villa, Umrer, Dist. Nagpur. 3. Tomb of the Late Mr. Malak, Kasare-e-Malaki, Mandi Bagh, Nagpur.
4. Mandi Bagh Shop, Itwara Headquarters, Nagpur. 5. Iwan-e-Badabi Mandi Bagh Nagpur. 6. Malak Manzil, Craddock Town, Nagpur.



BURN & CO.'S POTTERY WORKS.

1. Bird's-eye View of the Works. 2. Electric Power Plant. 3. No. 2 Pipe Shed. 4. Some of the Kilns. 5. Entrance.

of Adam downwards were similarly gifted with natural inspiration. This wonderful gift is believed to save them from erring, and their freedom from conceit and ostentation is entirely due to an entire absence of self-consciousness on their part which gains for them unsolicited recognition without arrogating to themselves anything supposed to be extraordinary. Nor do they consider that they confer any favour by sharing their cult with others; on the contrary, they believe themselves to be benefited by a reflex blessing.

These being regarded as significant and unique qualifications in the leader of a community, say a Guru (i.e. a spiritual guide), they hold that only those can aspire to attain salvation easily who are so blessed as to secure such guides, who in the exact sense are regarded as true servants of the Almighty, inasmuch as they are mainly instrumental in the mental raising and edification of the masses.

This society, which was commenced on a very small scale, came into existence in 1891. Its great expansion to its present proportions is entirely attributed to the sublime spiritual principles inculcated, and in support of them its venerable head has incessantly been preaching doctrines which are acknowledged by every existing religion, and which naturally tend to give the Institution a unique tone and an unchallenged position amongst establishments of its class.

Doctrines which improve the mental standard and distinctly revolutionize the spiritual status of human beings, and demonstrate that persons of ordinary calibre may attain saintly culture and distinction, and show how an errant man can be transferred into a pious one, are, it is claimed, exemplified by their tenets.

The present head of the Mehdi Bagh Institution holds that there is truth in all religions, and is of a firm opinion that truth will triumph in the end, and that there will be one common religion and universal brotherhood in the near future.

This Institution, though open to all castes, at present contains members from one class only. It is, however, earnestly hoped that, with the full support of the co-workers, it will not be long before the heads of the society will be generally recognized as fit expounders of these high themes, principles, and ideals, to all classes of people, and that their example will cause humanity at large to strive to attain spiritual advancement, which is the only desirable goal in life. The doctrines inculcated at the Institute, the ideals laid before its members, and the work done by it, will be evident to minds of noble aspirations and an unsullied desire for the elevation of the soul.

The Institution is similar to a colony, having a mosque and several residential buildings, with gardens and compound attached to each, also a large area of land under cultivation. This arrangement serves manifold purposes. The land under cultivation, the shops and other businesses (including gardening, carpentering, trading, and general industrial work), help in the training of members as well as being a source of income for the maintenance of the Institution. The latter is founded on the system of a commonwealth, members boarding and living together. The Institution has a school for the education of children of its members, and it has also provided a charitable dispensary, not only for the use of its own people but also for others who may desire treatment. The latter is under the guidance of Dr. Liva-e-Haq Abbasali, L.M. and S. of the Medical College, Bombay. This gentleman received his diploma in the year 1889, and after practising for about three years in that city he joined the Institution, in which he at once commenced honorary work in relieving suffering persons.

Dr. Liva-e-Haq Abbasali has been nominated as a *Dayee* and successor to Mr. Malak, the present head of the Institution.

As the property is common to all (save that no member becomes a co-sharer or owner of any property or income derived therefrom), the heirs and children of the head of the Institution cannot claim any share as a separate heritage. It is a common property to be utilized for the purposes particularly defined, the head of the Institution being vested with full authority and power for its use and disposal exactly as if he were the sole owner.

BURN & CO., LTD.

Every village in India has from time immemorial had its potter making various kinds of earthenware articles for general household use, and not a few of these men have become adepts in fashioning vessels and jars in beautiful designs and embellished with choice decorative work. But India is also not without up-to-date pottery works, and a visit paid to "The Potteries" at Jubbulpore, in the Central Provinces, where the East Indian and Great Indian Railway systems conjoin, will show that Indian ceramic art is thoroughly progressive.

The works are the property of Messrs. Burn & Co., Ltd., proprietors of the widely known Howrah Iron Works, near Calcutta, and were established in the year 1891.

Excellent clay is obtained in the neighbourhood of The Potteries, and the company are now manufacturing large quantities of firebricks of all descriptions, stoneware piping, flooring and roofing tiles, ordinary building bricks, and tesselated tiles, together with terra-cotta statuary, vases, capitols, cornices, scrolls, linings, and beadings in great variety.

Pipes for drainage and other purposes are thoroughly tested upon removal from the kilns, and it will be interesting to notice at this juncture the results of certain special tests made at Jubbulpore in the presence of a committee of experts appointed by the Government of India. The pipes put on trial were tested to bursting pressure: Six 6-inch pipes made in England burst at pressures between 100 and 140 lb. to the square inch, while six from the Jubbulpore potteries required pressure ranging from 150 to 200 lb. Six others of 12-inch diameter gave the following totals: English, 315 lb.; Jubbulpore, 730 lb.

Crushing tests were then applied, and the undermentioned figures denote the total weight in pounds at the time of fracture:

Six 6-inch pipes from Jubbulpore were crushed at 23,468 lb., an average of 4,747 lb.; and the English specimens gave a total of 17,642 lb., or an average of 2940·3 lb. Twelve-inch pipes showed: Jubbulpore, 30,417 lb., averaging 5,069·5 lb.; and English, 20,832 lb., or 3,472 lb. for each of the six.

From this it will be seen that Messrs. Burn & Co. have clearly demonstrated the superiority of the Jubbulpore production.

The factory is being worked at its utmost capacity in order to meet the extraordinary demands made upon it, and incontrovertible evidence of the high-class character of the company's products is seen in the fact that premier honours have been awarded to Jubbulpore exhibits at the Nagpur, Allahabad, Lahore, Navsari, and other exhibitions.

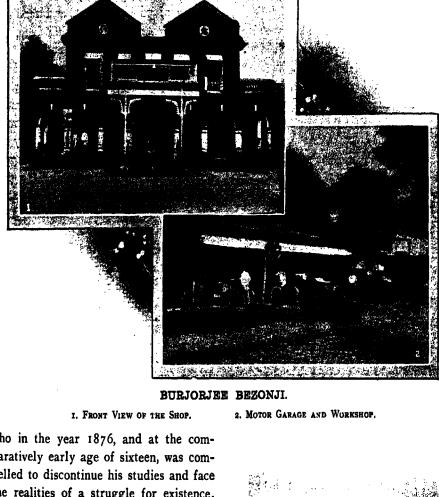
BURJORJEE BEZONJEE.

Necessity is a stern law, but it is not infrequently a blessing in disguise. It

stimulates a man to exertion of faculties which may have hitherto lain dormant; in other words, it proves the metal of which he is made.

An illustration of this fact may be seen in the life history of Burjorjee Bezonjee, who in the year 1876, and at the comparatively early age of sixteen, was compelled to discontinue his studies and face the realities of a struggle for existence. He became an apprentice to Mr. Pestonjee Framjee, of Bombay, to learn the art of making clocks and watches. He belonged to a race, however, who are characteristically enterprising, and although he commenced work on the modest wage of five rupees a month, he put his shoulder to the wheel and determined to succeed. He was thrown more and more upon his own resources in the following year by the death of his father, but his employer shortly afterwards recognized the diligent manner in which the youth discharged his duties by raising his salary to Rs. 15.

A wider field and a greater scope for his talents was presented to young Bezonjee in 1880, when Messrs. Cursetje Cowasjee, of Bombay, employed him to attend to chronometers on the railway sections between that city and Nagpur and Jubbulpore stations. The experience thus gained enabled him to start in business on his own account in Nagpur, in the Central Provinces, in the year 1884. But the beginning was a modest one, as his capital did not exceed the sum of Rs. 300. Steady progress was made, and two years later a welcome addition was made to his income by his appointment as watchmaker for employees on a railway in the division of Chatisgarh.



BURJORJEE BEZONJI.

1. Front View of the Shop. 2. Motor Garage and Workshop.

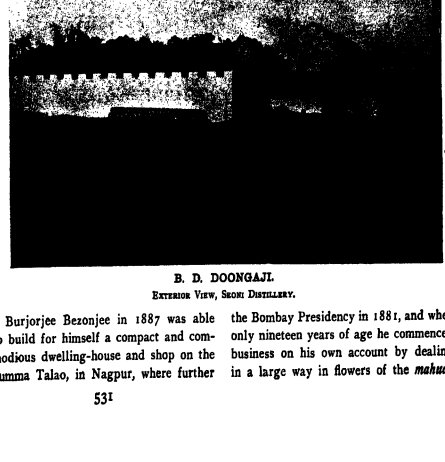
Burjorjee Bezonjee in 1887 was able to build for himself a compact and commodious dwelling-house and shop on the Jumma Talao, in Nagpur, where further success attended his efforts, and still by assiduously devoting himself to the business, and finding those premises too small, he, after twenty years, erected and became the owner of the fine double-storied premises in Kingsway, in the Civil Station in the same city, which the firm now occupy.

In order to keep abreast of the times he extended his business operations in 1895 by importing cycles by the best-known English makers. He is assisted by his two elder sons (a third being yet at school), and the senior of these, Sorabjee Burjorjee, having shown marked and special aptitude in dealing with motor-cars and machinery connected with them, he in 1912 established a garage, in which he is ably assisted by these young men in general management and in the repairs department.

Strict personal attention to details and promptitude in the carrying out of orders have been distinguishing features of Mr. Burjorjee's career, and have undoubtedly enabled him to secure so large a number of regular customers in civil and military circles.

BYRAMJI D. DOONGAJI.

The subject of these notes was born at Broach in the Northern Division of the Bombay Presidency in 1881, and when only nineteen years of age he commenced business on his own account by dealing in a large way in flowers of the *mahua*-



B. D. DOONGAJI.

Exterior View, Seoni Distillery.

tree (*Bassia latifolia*) from which country liquor is distilled. He was naturally of an energetic temperament, and possessing besides keen business instincts, it is not surprising that he formed a resolution to have a share in the distillation of spirit and to become a regular supplier of this commodity.

One of the systems of the traffic in liquor then in force in the Central Provinces was known as the central or *Sadr* distillery, which was maintained for disposal of the spirit within a given radius from the head-quarters, and in 1902 Mr. Doongaji obtained a contract with the local government to act as manufacturer and vendor in the district of Narsinghpur. This venture met with success, and in 1909 he secured the distillery at Seoni, the chief town in the district of the same name in the Central Provinces. The building was designed and constructed in an admirable manner, and it was equipped with a thoroughly up-to-date plant, thus making it a perfect model of what a distillery should be.

Mr. Doongaji toiled hard in order to develop his business connections, and by his own efforts he has obtained a leading position among the distillers and vendors of liquors in the Provinces. His head offices are at Kamptee in the Nagpur division, and he has established branches at Broach, and at Rajnandgaon in the Raipur District of the Central Provinces.

He carries on a large trade in *mahua* flowers and grain.

KHAN BAHADUR BYRAMJI PESTONJI.

This gentleman is the grandson of a Parsi, Seth Ruttonji Jamshedji Chargaji, who, as far back as the latter part of the eighteenth century, was an integral, though modest, factor in the industrial economics of India, as owner of one hundred local looms for the manufacture of silk of a certain unique quality and standard, of the length of *chargaji*, or four yards, a designation which was adopted as a family surname, in accordance with a recognized custom in the Parsi community.

In those commercially halcyon days indigenous products commanded due recognition, and the demand for various costly and ordinary productions being great, much respect was accorded to Seth Pestonji Ruttonji, his son, for the zeal and application with which he fostered and extended the industry. When the invasion by the foreign markets, and their cheap imitations of the Indian product, caused a decline in the profits accruing from his silk industry, Seth Pestonji realized the necessity for establishing a general business in goods of oversea manufacture.

Khan Bahadur Byramji Pestonji, the son of the last-named gentleman, was born at Neemuch, in Central India, in 1872. After prosecuting his studies at one of the local schools, he migrated in 1889 to Nagpur, in the Central Provinces, with his father, to whom he became right-hand man, displaying a marked degree of aptitude and zeal in all business concerns. To widen the scope for his talents and energy, he, of his own initiative, launched out intelligently in fresh directions, and thus, while still on the threshold of life, he is engaged in working large forests and supplying sleepers for railways. He undertook and successfully completed several railway projects, and was awarded gold and silver medals at exhibitions for the excellence of work turned out from his extensive cabinet and coach works at Nagpur.

The Russo-Japanese War gave Khan Bahadur Byramji an opportunity to develop the manganese industry, and he is now the owner of several manganese, coal, and other mining concessions in the Central Provinces and the Gangpur State of Behar and Orissa. In addition to the above, he works the largest mines of the Central Provinces Prospecting Syndicate, Ltd., and the Tata Iron and Steel Company, Ltd., two of the most extensive mining concerns in India. His operations demand the regular employ of labour to the extent of more than 10,000 hands, giving an output of 40,000 tons of manganese and iron ore per month, and these several concerns, which are under the direct supervision of mining experts and an efficient staff, are slowly but quietly contributing to the industrial regeneration of the country. In this connection it is of special interest to note that Khan Bahadur Byramji is one of the few men in India who believe in giving adequate remuneration for the high standard of work which they demand from their staff.

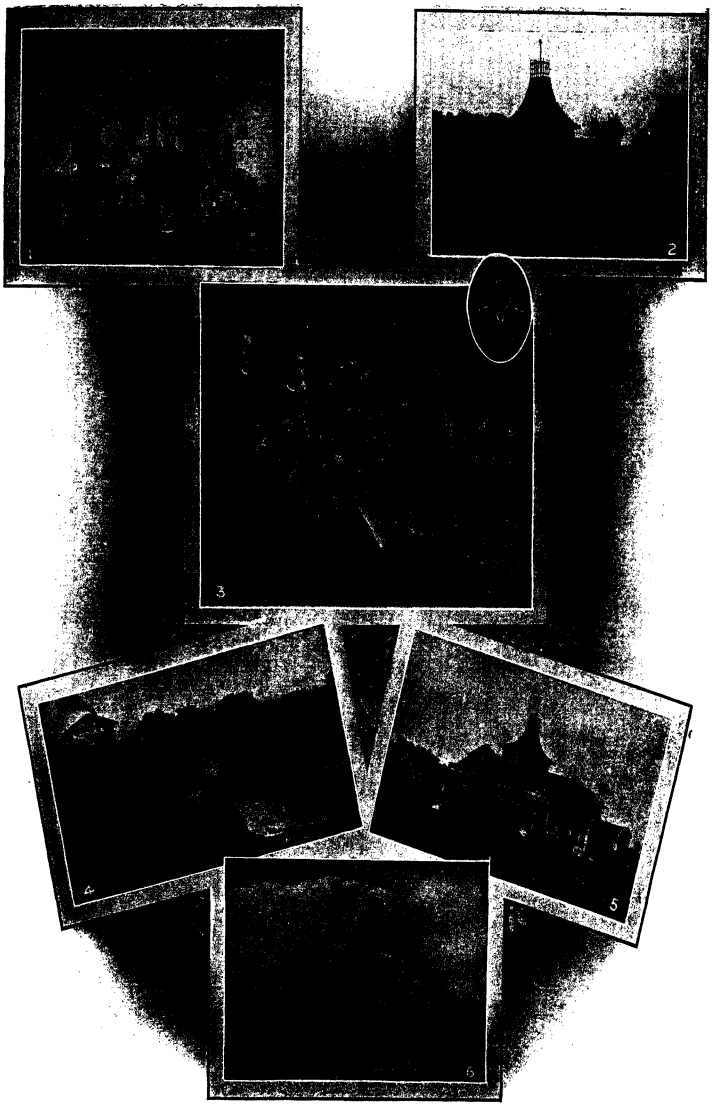
Being a large exporter of minerals, Khan Bahadur Byramji naturally desired to make investigations for himself in European markets, and he therefore started upon a long and detailed tour of Europe in 1911, where he came into contact with some of the leading business men and experts on the Continent.

A business established by him at Raipur is still carried on by his brothers, whose extensive building and timber contracts are eloquent of the family instinct.

Apart from his business career, Khan Bahadur Byramji has been unsparing in his devotion to, and zeal for, the public weal, and as a Municipal Commissioner, and first-class Bench Honorary Magistrate, in the Raipur and Nagpur Divisions of the Central Provinces, his concern for matters of public interest, and readiness to participate in all desirable functions, despite his own engrossing and manifold occupations, have naturally made him a *persona grata* equally with the Government and the general public. Among many instances of his efforts to promote the welfare of his fellow-men, it may not be out of place to mention the Nagpur Telankheri Dairy Scheme, and it is a particularly gratifying theme, as he has associated with it the name of his noble wife, whose kindly heart and deep concern for enfeebled infants spurred her husband on to establish an enterprise which has become a pattern dairying institution.

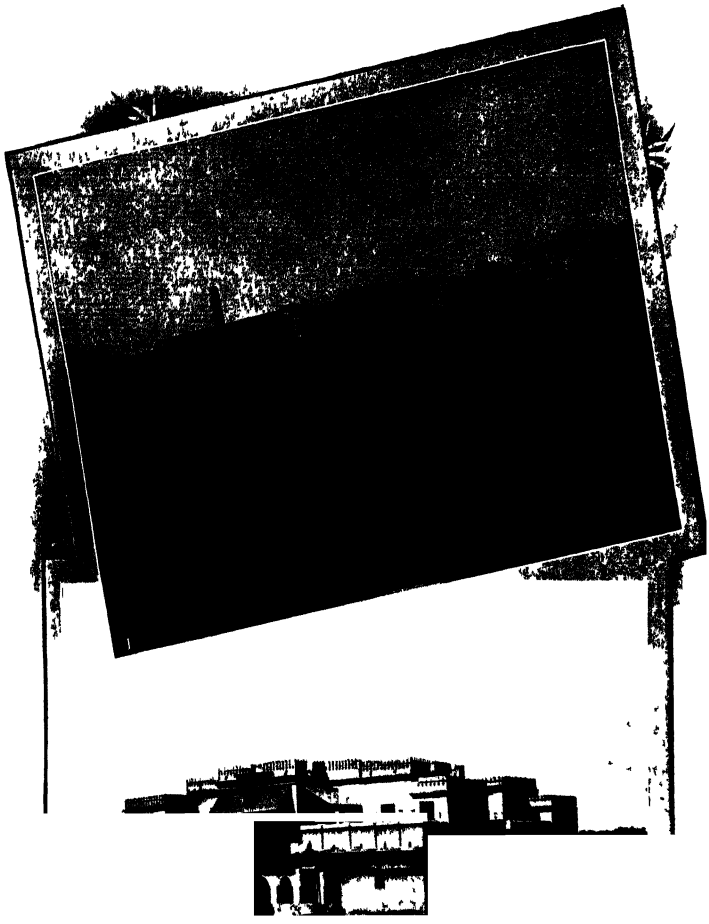
Khan Bahadur Byramji is not one to allow deserving funds to be neglected, or cases of real poverty to go unassisted, while he is a generous contributor to public funds. In the latter connection mention may be made of his handsome contribution to the Imperial War Fund (of which he was the Joint Secretary for the Central Provinces Central Fund), and to his prompt payment of a substantial sum every month to the various war relief funds. Notwithstanding these instances of benevolence, he has not forgotten his own community, who constantly participate in his philanthropy, and in order to meet the long-cherished desire of his wife, he has endowed a much needed prayer hall at the Parsi cemetery at Nagpur. The respect with which he is held by his co-religionists is evidenced by his being regularly elected Secretary of the Parsi "Anjuman" of Nagpur and Kamptee. While leaving Raipur, where he resided for twelve years, he, in order to commemorate his citizenship, built and presented a public library, called "The Anand Samaj Byramji Library." At Balaghat also, the centre of his manganese mining activities, he endowed a fully equipped school, which was recently inaugurated by Sir Benjamin Robertson, K.C.S.I., K.C.M.G., the popular Chief Commissioner of the Central Provinces and Berar.

Khan Bahadur Byramji and his wife had the honour of being invited to the Delhi Coronation Durbar, held on December



KHAN BAHADUR BYRAMJI PESTONJI.

1. Interior of Drawing Room Shirin Lodge. 2. Kumi Cottage. 3. Family Group. 4. Aulajheri Manganese Mines.
, Barman Hall. 6. Doll Villa.



CHATURVEDI MADAN MOHAN PANDEY.

1. Lime Kilns. 2. Bungalow.

12, 1911, and he is a recipient of the Durbar medal. They also had the honour to be present in London on the occasion of the coronation of their Imperial Majesties King George V and Queen Mary.

Khan Bahadur Byramji Pestonji has vast landed properties in the Raipur district of the Chhattisgarh Division, and he also owns several bungalows and houses in Nagpur, among which may be mentioned, Shirin Lodge, an imposing structure called after his wife, Bahman Hall, Doll Villa, and Kumi Cottage, birthday gifts to his son and two daughters.

Owing to the Khan Bahadur's local business connections at Bombay, where he is popularly known as "Nagpurwalla," he is compelled to reside for a certain portion of each year in that city, in which he is the owner of a magnificent building at Cuffe Parade.

Khan Bahadur Byramji is a prominent Freemason, a member of the Central Provinces and Berar Mining Association, and an Associate of the Geological and Mining Institute of India. His personal charm of manner, unstudied courtesy, and unstinted kindliness, are widely appreciated, and thus keen satisfaction was given to his many friends when in the New Year of 1915 the well-merited title of "Khan Bahadur" was bestowed upon him in recognition of his public usefulness. As he is still in the heyday of life and prime of vigour, it may safely be anticipated that he is destined to be the recipient of still further honours.

CHATURVEDI MADAN MOHAN PANDEY

In or about the year 1876 a *Mathoor* Brahman, named Chaturvedi Chaturbhuj Pandey, left Muttra, in the United Provinces of Agra and Oudh, and took up his residence at Sehora, in the Central Provinces, where he obtained an appointment in the police force as chief constable. Such a position imposes upon a man a very great responsibility, but especially was this the case some forty years ago, when there was considerably more lawlessness in India than there is to-day. His career during twenty-three years' service was marked by constant devotion to duty, and he was generally regarded by his superior officers as well as by the general public as one of the smartest men in his department. Some time before his death in 1912 his shrewd business qualifications prompted him to raise a sufficient sum of money to become mortgagee over fourteen villages, but for private reasons the security was drawn up in favour of his youngest brother, Chaturvedi Bhugwandas Pandey, and his eldest son, Chaturvedi Madan Mohan Pandey. Upon the completion of this transaction he established a lime factory at Murwara, in the district of Jubbulpore, and that business is to-day known as the Choube Chaturbhuj Mani Ram Pandey Lime Works.

Chaturbhuj Pandey was so assiduous in his supervision of the lime works that it was not long before he was able to redeem the mortgage and thus become sole owner of the whole property, which was then estimated to be worth about Rs. 2,00,000.

About the time of the commencement of these works, Chaturbhuj Pandey rendered assistance to his brother Bhugwandas Pandey in order that he might more efficiently prosecute his calling as a *Zemindar*.

At his death he left four sons, namely, Chaturvedi Madan Mohan Pandey, Chaturvedi Maniram Pandey, Chaturvedi Bhairanath Pandey, and Chaturvedi Brijmohun Pandey, together with two daughters.

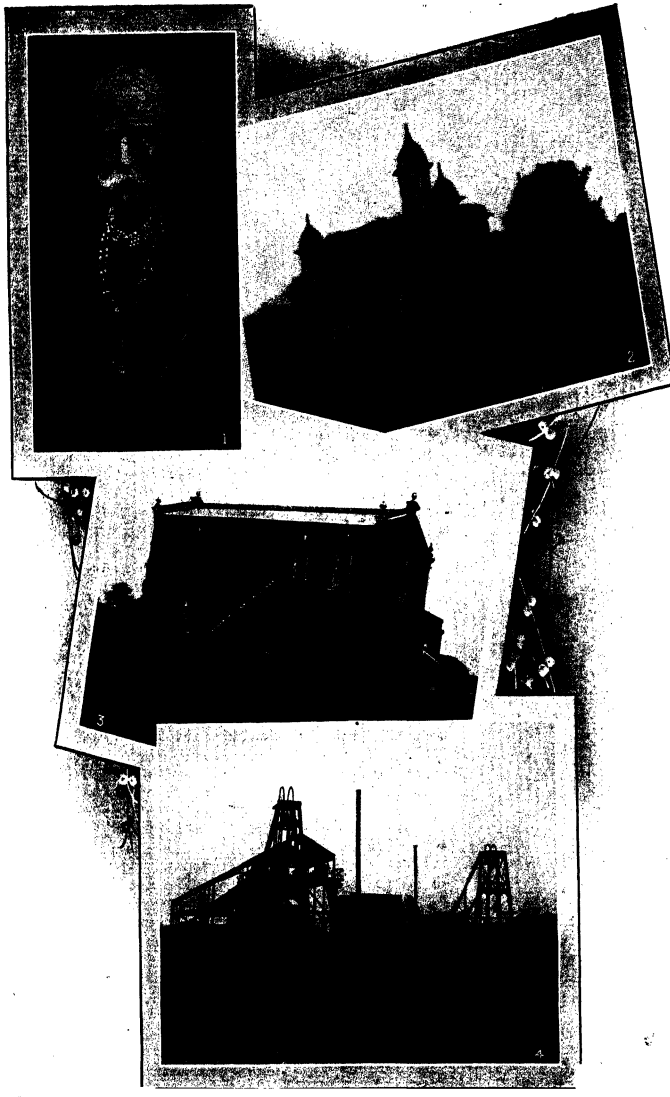
The first-named son took over the business concern, and he was equally as successful in management as his late father had been, with the result that he was able to extend his operations to other industries such as the manufacturing of shellac, and the undertaking of contracts in connection with forests and the cutting of timber. He is also a well-known banker, and is a busy man in every sense of the word, but his energy is not confined merely to the acquisition of wealth, as he spends much time and a considerable amount of money with the object of ameliorating the condition of the residents upon his property, and of others with whom his business activities bring him into contact.

Chaturvedi Madan Mohan Pandey is an undergraduate of the Allahabad University, having passed in the second division, and has always been a consistent supporter of education for the people. His uncle, Chaturvedi Dinanath Pandey, lives with his four sons at Chakardharpur, in the district of Singhbhum, in the Province of Behar and Orissa, and they are largely engaged in Government contracts for the supply of *sabay* grass.

THE HON. DEWAN BAHADUR SIR KASTURCHAND DAGA, K.C.I.E., OF THE FIRM OF BANSILAL ABIRCHAND.

Among men of the Central Provinces who have helped to make history, and in some measure the history of India, during the past twenty-five years, the name of the Honourable Dewan Bahadur Sir Kasturchand Daga occupies no mean place. Belonging to the well-known millionaire house of Rai Bahadur Abirchand Daga, the young financier, who was destined to take such a prominent part in the modern commercial history of India, was born in the year 1855, and received his vernacular and English training and education at an early age in order that he might be fitted for the highest duties of life. His father died when he was quite a young man, and the responsibility and the burdens of a large banking house fell on him, a task with which he grappled with such consummate ability and forethought that he distinguished himself at an early age as a great financial expert. During his father's lifetime the firm of Bansilal Abirchand had banking houses in Nagpur and other important towns in the Provinces, but Sir Kasturchand Daga considerably extended the business, and established similarly large concerns in almost all the important cities of India. He was extremely industrious and clear-headed, although cautious, and by dint of industry and wise investments he increased his family's fortunes, with the result that at the present time the firm of Rai Bahadur Bansilal Abirchand is one of the leading Indian banking houses in India.

Sir Kasturchand Daga was a capable and shrewd banker and a good business man, and though endowed with fabulous wealth he did not neglect the smallest details of his everyday duties. He was a man of many-sided activities, owning cotton mills and gin and pressing factories in the Central Provinces. He was also chairman of the Nagpur Electric Light and Power Company, Ltd., he was an indefatigable member of the Cantonment Committee of Kamptee, a life member of the Imperial Institute in India, life councillor of the Dufferin Hospital Fund, member of the Central Provinces Legislative Council, and was connected with many important organizations of an industrial and social character in the Central Provinces and other parts of India. He, with his friend and coadjutor, the Honourable Mr. M. B. Dadabhoy, C.I.E., started collieries in the



THE HON. DEWAN BAHADUR SIR KASTURCHAND DAGA, K.C.I.E., OF THE FIRM OF BANSILAL ABIRCHAND.

1. The Hon. Dewan Bahadur Sir Kasturchand Daga, K.C.I.E. 2. Sir Kasturchand Pavilion. 3. Nagpur District Cotton Gin and Press Syndicate.
4. Ballarpur Colliery.

Chanda and Yeotmal districts of the Central Provinces and Berar which will permanently remain a monument of his sagacity, his business acumen, and his great desire to advance the industrial progress of his country. He further owned, with Mr. Dadabhoy, some of the largest and best conducted manganese mines in the Provinces.

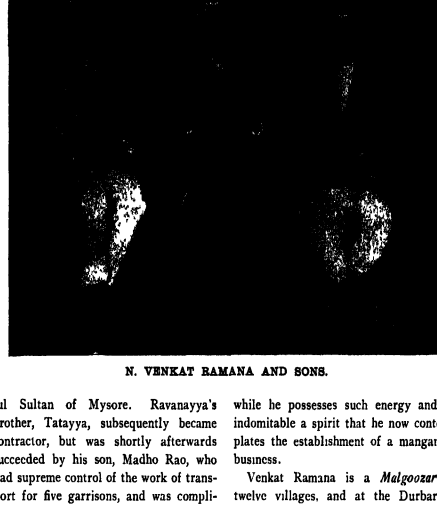
Sir Kasturchand Daga died on January 21, 1917. He was, without doubt, the most popular and the most respected citizen of the Central Provinces, as his amiable disposition, his unfailing courtesy, and his religious and truly Hindu instincts earned for him not only the esteem and regard of his countrymen, but also won the affection and respect of the European community of the Provinces and elsewhere in India. His life has many object lessons for the young; it is an example to men born in wealthy families, teaching them how useful one may be to the community to which he belongs, and at the same time render service to the general public by his own industry, devotion, and duty. It also teaches that the aim of life is rather to work for the progress and advancement of the general good than to seek personal happiness, and that a man's claim to the high opinion of his countrymen is based upon his efforts to promote such good.

The worthy knight's charities were numerous and of a catholic nature, and he was the kindest and most beneficent of mankind. He also constructed, or contributed most liberally towards, works of public utility in Bikaner, Nagpur, and other parts of India, these including banks, wells, markets, pavilions, and *dharamsalas*, and the Craddock Market and Kasturchand's pavilion in Nagpur are special instances of his liberality. He was exempted from the operations of the Arms Act, and from personal attendance in Civil Courts, and also from payment of customs duty in the Bikaner State. He was made Rai Bahadur in 1887; Dewan Bahadur in 1903; he received the Kaiser-i-Hind silver medal in 1898; a C.I.E. was conferred on him in 1909, and a K.C.I.E. in 1911 at the Delhi Durbar, to which he was invited. He also received medals in the Durbars of 1903 and 1911. His eldest son, Bisesardass Daga, is also a Rai Bahadur and a holder of a second-class *Tazim* from the Bikaner State. And last, but not least, he is a deeply religious and conscientious man, and it may truly be said of him, "He puts his conscience into his work, into his words, and into his every action."

N. VENKAT RAMANA.

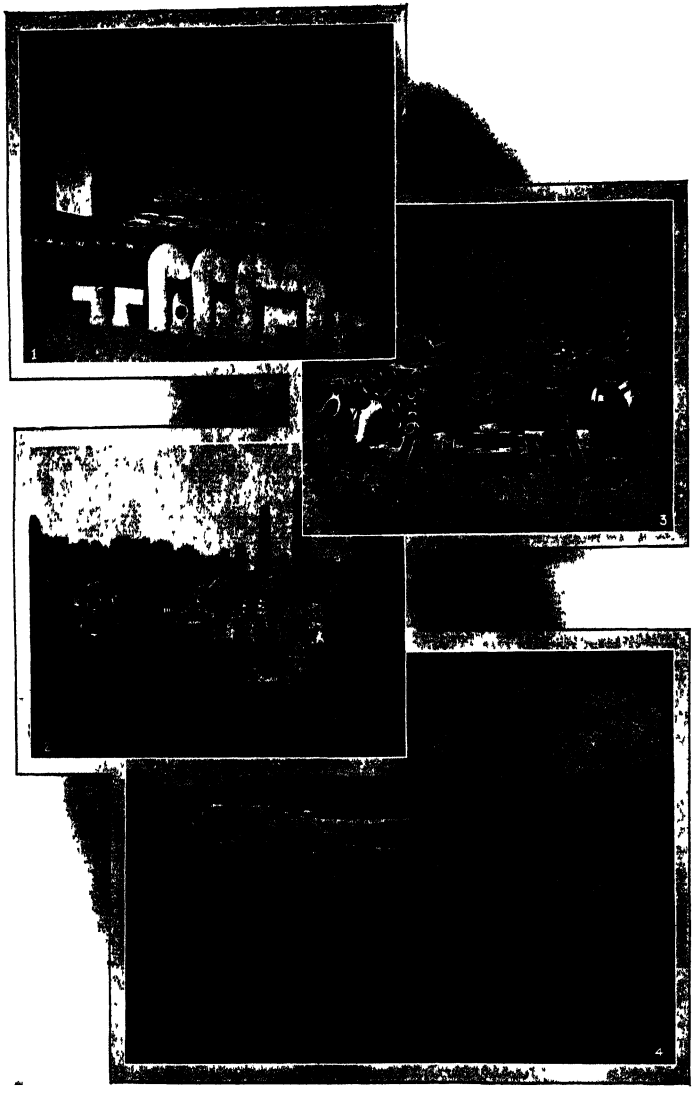
A reference to the historical family records of this well-known honorary magistrate, zemindar, and merchant of Katni in the district of Jubbulpore in the Central Provinces, shows that his great-grandfather—Narla Ravanayya—rendered invaluable aid to the British cause in 1793, when he most successfully discharged the duties of transport contractor to Lord Wellesley at the time of the British defeat of Tipu, the powerful Sultan of Mysore. Ravanayya's brother, Tatayya, subsequently became contractor, but was shortly afterwards succeeded by his son, Madho Rao, who had supreme control of the work of transport for five garrisons, and was complimented on the fact that he "had the honour to serve so distinguished a soldier as Sir Hugh Rose in the relief of Saugor, and also during the mutiny campaign of 1857." Madho Rao died in 1863, and was followed by Tatayya, honorary magistrate of Saugor, and N. Venkat Ramana, honorary magistrate of Katni, succeeded to the estates of N. Venkanna in 1875.

Venkat Ramana was born in the year 1855, and while still young in years manifested keen business instincts, one of the earliest positions of importance and responsibility held by him being the managership of the Olpherts Paint Works, which he occupied for a period of eighteen years. At a later date he became a contractor, and carried out extensive works for Public Works Departments and private individuals, and special mention should be made of the remarkably fine buildings of the Katni Cement and Pottery Works Company, which were erected by him. This gentleman is, further, the owner of a lime factory, and has an interest in minerals and mineral paints, including an ochre mine in Central India, which is exploited under the family name of "Narlwar Brothers," while he possesses such energy and so indomitable a spirit that he now contemplates the establishment of a manganese business.



N. VENKAT RAMANA AND SONS.

Venkat Ramana is a *Malgoozar* of twelve villages, and at the Durbar of 1903 he was highly eulogized for the excellent condition of his estate, and for the very efficient manner in which he controlled it. He was during the same ceremony complimented for the great assistance rendered by him during the severe famines of 1903 and 1911, help which had been gratefully acknowledged by Messrs. J. P. Hewett and R. H. Craddock, two Chief Commissioners of the Central Provinces. Venkat Ramana has been Vice-President of the Murwara Municipality since April 1916, and as an honorary magistrate he has earned un-



"PERFECT" POTTERY COMPANY, LTD.

1. Pipe Finishing Shed. 2. Kilns. 3. Display of Manufactures. 4. Bird's eye View.

qualified praise for his painstaking investigation, his patience, and the justice marking his decisions. His high ideals and straightforward principles are strong characteristics, and it may be well said of him that he nobly upholds the traditional loyalty and liberality of an honoured family.

THE "PERFECT" POTTERY WORKS, LTD.

These works, situated at Jubbulpore, were inaugurated by the late Raja Goculdas, an Indian gentleman of great energy in matters of business, and a philanthropist, with whom were associated his nephew, Diwan Bahadur Bullubhdas, and his son, Rai Bahadur Jiwandas.

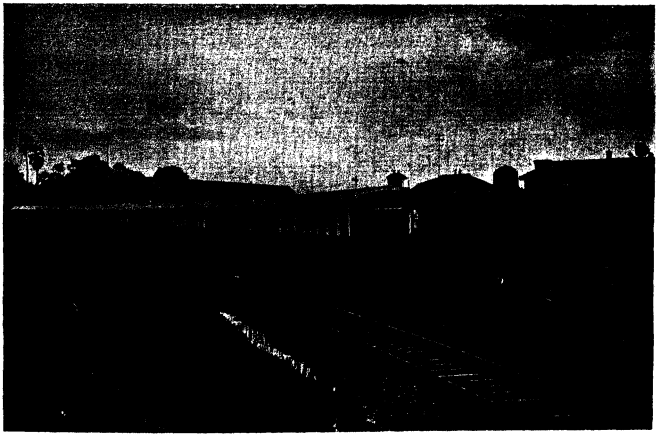
Manufacturing was commenced in the year 1904 when a limited liability company was formed. From that time onward the steadily increasing demands from various public and private sources have enabled the company to write "success" in capital letters on the balance sheet of each year's activities, and the results afford abundant evidence of the high standard of quality attained by the various products.

The company are now manufacturing, *inter alia*: seating blocks, flue covers, cupola bricks for blast and "still" furnaces, glazed stoneware drainage and sewerage pipes, together with roofing and flooring tiles, and they have recently arranged to make white enamelled fire-clay sanitary ware.

The art of making pottery in India is as old as the hills, and probably no other domestic industry has been so universally practised, but since the introduction of high-class ware from European countries, modern machinery has been imported, and the handiwork of earlier days is gradually being replaced, excepting in the making of ordinary vessels for drinking or cooking purposes.

Gold and silver medals have been gained by the company at various exhibitions in India, and these honours are a tribute to the fostering care of Mr. J. Reid, the manager of the works, and of the skill of the expert staff controlled by him.

A passing reference should be made to the good services of the late Mr. A. Rose, who was manager from the foundation of the works until his death in December 1908. His zealous business habits, his devotion to the welfare of the company, and his sociable characteristics not only contributed in a large measure to the expansion of the business, but also endeared him to all with whom he came in contact who now cherish his memory. Mr. Reid has, however, more than filled up the gap caused by Mr. Rose's death. His management has brought the works to an even higher plane of efficiency.



G.I.P. MAIN LINE TRAIN.

THE PROGRESS OF AGRICULTURE

By HAROLD H. MANN, D.Sc., Director of Agriculture, Bombay.

THE north-western and central section of India, including in this definition the whole of Bombay, the United and Central Provinces, Punjab, Kashmir and the tremendous area of native states contained within those boundaries, furnishes, in many respects, as widely diverse a tract as it is possible to conceive in a tropical country. Without counting the position of the Himalayan region, which not only includes Kashmir, but also much other territory within the boundaries of that great mountain barrier, the territory named contains a very large part of the great alluvial plain of North India, from that populated by the teeming millions of the middle Ganges to the deserts of Sind and Rajputana, where the few inhabitants wander over a vast expanse of country, finding very sparse herbage for feeding their camels, sheep, and goats. It includes, too, the hill and plateau tracts of Central India, which form the boundary between the north and the great peninsula area of the Deccan; and, finally, within its boundaries is found almost all the black cotton soil area of India, the virtues of which have been trumpeted abroad wherever tropical agriculture has been mentioned.

There is, in fact, over this vast area but one unifying feature. Its climate differs widely from the damp and steamy heat of the plains of Bengal and Assam. It is equally unlike the tropical evenness of temperature and luxuriance of vegetation, which have made South India and Ceylon the proverbial country of the lotus eaters. But all over the area with which we are dealing there is a hard climate. The rainfall varies from practically nothing in Sind to a very heavy one of a hundred inches on the west coast of India, and even more on the western *ghats*—but, all over, this rainfall is received in a short season. Often it spreads over only three months, and almost always it is included within five months. And for the rest of the year the country is dry—absolutely dry. This is the characteristic climate of the greater part of India, the climate on which its agriculture depends, and hence this latter demands a laborious type of work, and renders impossible really intensive farming without irrigation.

The area includes, too, the great famine tracts of India, where the rainfall may, and not unfrequently does, go down to one-third of the normal in any year, and where agriculture is at all times a "gamble" in rain. In a year when the rain fails and famine supervenes, the cultivators of the land see over huge areas, at one fell swoop, their crops lost, their cattle largely disappeared, and their livelihood gone, while they themselves would likewise die but for the import of food from more favoured areas in other parts of India. Usually such famines are small, but in some years like 1877, 1896, 1899, or 1918, the drought was so widespread as to include within its boundaries a very large proportion of the area now under discussion.

This being the case, it will be seen that the only real safeguard which can change agriculture from a gambling speculation into an ordinary business risk, is the extension of irrigation. Some of the areas, like Sind, could have no agriculture without irrigation, for there no less than ninety-six per cent. of the land on which anything is grown is supplied with irrigation water. But apart from such absolutely desert areas, the value of irrigation water is so great in increasing produce and making a return certain, that it has led to the harnessing of the great rivers of north India until, in the case of the Indus, millions of acres are irrigated from it, while in the course of a few years arrangements will be made by which very little of its water will ever reach the sea. It has also led to the damming-up of the supplies of water from rain in the Western *ghats*, so that as much as possible of the land in the Deccan may receive water, and, besides, to the use of underground water from wells and other sources for irrigation purposes to an extent hardly conceivable on any other continent. On the whole, it may be said that the irrigation systems in the part of India now under consideration are by far the most extensive in the world, and that the area covered and the produce grown by the various methods of irrigation employed make the combined results of Egypt, Mesopotamia, Australia, and America as nothing in comparison. And yet the great part of the cultivated area is still grown with unwatered crops, and must always be, for the water available could not cover even one-fourth the area for which it is required, and to much of the land, water, even if it were available, could never be carried.

Land Systems.—The people inhabiting this huge tract are very variable indeed, and the systems under which they hold their land and carry on their culti-

vation differ to an equal extent. In North India, the Punjab, the United Provinces, Central India, Rajputana, and a part of the Central Provinces, there is essentially a country of landlords and tenants, a land of large or moderate sized estates. In the Bombay Presidency, and a part of the Central Provinces on the other hand, there is a country of peasant proprietors, mostly cultivating their own land, and generally divided into what are becoming, generation by generation, increasingly small patches. All over, Government is assumed to be the ultimate owner of the land, and to have the right to demand, whether from the landlord or direct from the peasant, a definite land assessment, the amount of which it revises after every thirty years or other fixed period. This revision is termed a "settlement," and takes place after very careful inquiry into the economic conditions of the tract dealt with. The land assessment is based on the idea that the government has a right to a fixed share of the value of the gross produce of the land, but the actual share taken has varied from time to time.

But the land-holder under Government is nowhere a tenant-at-will, except in some of the less advanced native states. Whether he be himself a landlord, or *zemindar*, letting out his land to tenants, or a cultivator who ploughs his holding himself, he has almost always complete ownership of the soil, and can even transfer it to others, always subject to the payment of the land assessment.[1] This ownership passes to his sons, and, under Indian custom, land must be divided among the sons of the holder. The result has been that in most parts of Northern, Central, and Western India, the areas held by each land-holder have become progressively smaller, and in many cases very scattered, so that at present many holdings exist which are unable to support a man and his family. The resulting problem of the increasing poverty of the individual villager or individual *zemindar*, is one which is occupying the very serious attention of governments and social students alike.

INDEBTEDNESS.—This position—the direct result of the social system prevailing—is complicated by the very general tendency of the agricultural population to become increasingly involved in debt, generally incurred in the mortgage security of their land. People engaged in agriculture, in every country, must have loan money at their command—the very nature of the agricultural industry necessitates this. But where the extreme uncertainty of the climate introduces a greater element of risk than is customary in such transactions, it means that the rate of interest is likely to be high, and, moreover, a single bad drought may lead to an indebtedness which can hardly be cleared off in a lifetime. In fact, almost the whole of the agricultural population is heavily indebted, and the result has been a general tendency for the actual ownership of the soil to pass out of the hands of those responsible for its cultivation, into those of a purely commercial class, most frequently the class of Rajputana merchants known as Marwaris. These form the worst class of absentee landowners, in that their sole interest is to obtain an income from the land, and who are without any further interest in it. Every Government in Northern and Western India has been faced with this problem, and its seriousness is shown by the enormous increase in the landless proletariat classes shown in recent census figures. Sometimes an attempt has been made to meet it by creating an organization for revising contracts between cultivators and money-lenders, and with legal powers to do so. Sometimes rights of alienation of land to non-cultivators have been restricted. Sometimes new tenures have been created, compelling the owner to cultivate his own land himself and causing him to forfeit it if he ceases to do so. All of these methods have had some effect, but all have resulted in restricted credit to the farmers, and so their ultimate value is at least problematical. On the other hand, the development of co-operative credit societies all over the above-mentioned areas has been a real advance and a feature of the last ten years. They bid fair to solve the problem of rural finance in India, though it still remains to be seen how far they will stand the test of a really serious failure of crops or of famine.

In this connection, one cannot help referring to what is, perhaps, a unique method of finance of rural improvements by Government under the name of *takavi* or *tagai*. Under this system any landowning cultivator may apply to the local authorities for an advance of money to carry out a genuine permanent improvement, such as the digging of a well, the building of an embankment, the levelling of a piece of land, or a work of a similar character. The matter is investigated, and if it is found that the improvement is desirable, and if the land is good enough security for the advance, the money is advanced at 6¼ per cent. interest, and has to be paid off in a limited number of years. The advance is a first charge on the land, and can be recovered by the local authority, if necessary, by sale of the land itself without any regular suit. But the existence of this system has been a great boon in many parts of India on account of loans being obtainable when an ordinary financier would never advance money, and on account of the interest being rather less than half that customary in ordinary transactions.

In considering Indian agriculture, the first thing to recognize is that the cultivators are generally men with hardly any capital except their land, possibly a pair or two of bullocks, and a few implements. Without a full realization of this fact it is difficult to understand many of the difficulties with which the advance of agriculture in the country is faced. Capital being small or non-existent, work has to be carried on with the cheapest form of implements, and often with very inferior animal power. If any money is obtained, it is most frequently invested in better cattle, and thereafter in gold or silver. The value of good cattle is realized, that of good implements is not, as a rule.

INDIAN CATTLE.—But though the value of good cattle is realized, and in spite of the existence of some exceedingly fine breeds, the general standard of cattle in the country is very low. It must be remembered, of course, that Indian cattle are bred essentially for draught. The production of meat does not, to say the least, interest an Indian breeder, and the production of milk is of quite secondary importance. And as a result, in an ordinary village herd little attention is paid to any but the young male stock, and to those actually in use for draught. There is generally enough grazing land (which can be used in common by the village herd, even when it only consists of the stubbles of crops) to keep cattle alive, and in most districts the cattle get little more food than they can find, except, perhaps, some *jowar* straw. But the bullocks, at any rate when in work, are better treated, receive additional food, and are generally in good condition. Breeding is usually, however, absolutely uncontrolled, and the result is a generally lower standard, even among the working

[1] A non-alienable tenure has been recently introduced in the Punjab, Sind, and a few other places, but the area affected is small and need hardly be considered further here.

animals, than there need be. Poor feeding among the breeding stock, and indiscriminate breeding, are bound to result in a low grade of animals, and they have done so. The lowest quality is usually found in the rice tracts, where the feeding is generally worse, but the main standard is low.

Many of the breeds are, however, good. The "Hansi" bullock of the Punjab, the "Malwa" of Central India, the "Kankrej" of Northern Gujarat, the "Krishna Valley" of the Deccan, and the "Amrit Mahal" from Mysore, found in the south of the Bombay Presidency, are all magnificent animals, and with each breed there is an area, often small, where they are carefully bred, and where the people take an immense pride in their animals. These areas are, with the maintenance of high-class herds by Government and other public authorities, the hope of the future. They supply stud bulls, under reasonable conditions, over very large areas now, and will do so far more extensively in the future.

In a country where milk and its products form such an important part of the diet of the people, it might have been expected that more attention would have been given to the rearing of good dairy animals. But this aspect of cattle breeding has been generally neglected, because of the existence of the buffalo, which, at present, is essentially the dairying animal of India, and is bred as such over large tracts of Rajputana, the Punjab, Central India, and Northern Gujarat. This enormous animal, perhaps the best type of which is from the Punjab and is known as the Delhi buffalo, has the advantage of feeding more coarsely than the cow, of giving a greater quantity of milk than the average Indian cow, and of giving milk much richer in fat than any cow. As a result milk bought in India is usually buffalo milk, and butter is generally buffalo butter. The latter has the advantage in a hot country of being harder than butter made from cow's milk, and it is hence not so liable to melt. But, though so big and very powerful, the buffalo is not of much use for draught purposes, nor is it suitable for agricultural purposes, except, perhaps, in connection with rice cultivation. The he-buffaloes are, therefore, rarely reared, and the economic objection to keeping one type of animal for draught which is little used for milk, and another for milk, which is rarely used for draught, is a very strong one, and in recent years a good deal of opinion has arisen in favour of so developing, if possible, the good milking breeds of Indian cattle, or even crossing them with European breeds, so as to obtain cattle of first-class quality both for draught and for milk.

Considerable success has been attained in both directions. Three or four Indian breeds have proved themselves of great value for both purposes. The Montgomery ("Hansi") breed of the Punjab, the Sind or Karachi breed, the "Gir" breed of Kathiawar, and, rather unexpectedly, the famous "Kankrej" breed of Gujarat have all, under careful breeding, proved themselves good milkers, capable of yielding five to six thousand pounds of milk per annum. Cross-breeding of these types with Ayrshire bulls have given cows of exceptionally high milk-yielding capacity, but the sensitiveness of the cross-bred stock to the many diseases, like foot and mouth, and rinderpest, which are rampant in the country, render their future a matter of some uncertainty.

But dairying at present chiefly depends on the buffalo, and has only been developed to a very limited extent apart from the production of milk for purely local purposes in the villages, and the collection of milking animals in or near the large towns. In one section a large dairying industry has, however, grown up. This is in Northern Gujarat, where the keeping of buffaloes for the production of milk and the separation and sale of cream has become the principal industry of the country-side. Everyone has his milking animals. Every village has its separator, and the merchants and butter manufacturers of Bombay, Ahmedabad, or other more local centres buy the cream and prepare the butter, which now goes not only all over India, but also to most of the countries of the Orient.

The ordinary butter of the country is, however, the so-called *ghee* or clarified butter, obtained by melting the butter obtained in the ordinary way, and so removing water and impurities. This, consisting as it does of almost pure butter fat, keeps longer than ordinary butter in the hot Indian climate, and may, in fact, be retained for years without deterioration. It does not possess, of course, the appearance or the pleasant taste which appeals to the European eye and palate, but it is, nevertheless, the material which, now and for a long time to come, will be prepared from milk even in the most remote parts of the country, and is the form in which milk fat, to by far the greatest extent, appears on the market.

SHEEP AND GOATS.—Other agricultural animals besides cattle and buffaloes are little considered over most of the area under notice, though, as a matter of fact, goats are found in large numbers everywhere, and sheep are kept in large numbers in the drier parts of the country. So far as goats are concerned, little study has been given to them, and, in fact, really little is known about them. Some of the long-haired breeds of the outer Himalayas are large and handsome, and those bred in parts of the Punjab, Rajputana, and Sind are almost equal to them. Over the rest of the country they are poor and small, but they are exceedingly hardy, capable of living on almost any food, and it is remarkable how well they look at the end of a long draught, when almost every other kind of animal starves. Goats are of value for their meat and milk, and in North India for their hair. Indian mutton is generally goat-flesh, and many castes which would never touch beef, eat this freely. As milkers, Indian goats are usually poor, though breeding would undoubtedly improve them, and some good milking breeds do occur in Gujarat.

There are a number of breeds of Indian sheep, but it cannot be said that any of them are of first-class quality, either from the point of view of mutton or of wool. The so-called "Dumba" or fat-tailed sheep of the north-west frontier districts is perhaps one of the largest and best types, but it is rather a curiosity than anything else. Little has been done as yet to improve Indian sheep. There is plenty of opening for improvement, nevertheless, for the sheep found over the greater part of the Indian plains are very small, and give a fleece which generally weighs less than a pound and a half. The matter will probably command more attention in the future than hitherto, and as the number of sheep in British India exceeds twenty millions, the very great importance of the problem can be realized.

It would appear natural here to speak of the breeds and character of Indian horses, but in an article on Indian agriculture such a discussion is not relevant. While there are famous Indian breeds in the Punjab, Rajputana, Kathiawar, and the Deccan—types of horses whose speed and endurance are for ever enshrined in Mahratta and Rajput history—they are never used for agricultural purposes, and

their breeding is only a minor occupation and hobby of the wealthier landowners and farmers.

AGRICULTURAL IMPLEMENTS.—It has been said that any spare capital which an Indian cultivator possesses is usually invested in cattle, and that if any still remains, it will be most probably laid out in gold or silver ornaments. Rarely, indeed, is anything more than the veriest minimum spent on implements, and those used at present are of a very simple, very cheap, and not very efficient character. Their cheapness is their chief advantage. A second is that they can be put together entirely from local resources, and, when broken, they can be mended on the spot—a very important matter when, as in India, distances are great, mechanics are few, and repair centres are very far off. But in spite of all this, in no line of agricultural improvement has more progress been made in the last few years than in the introduction of improved implements over nearly all the area with which we are dealing.

The ordinary plough of an Indian cultivator is not really what is generally understood by a plough at all. It does not turn the soil over, and is merely a means of loosening it to a depth which varies with the soil and the crop to be grown. In general, these ploughs consist of a wooden frame shod with an iron point, which is dragged through the soil. Where alluvial or light soil prevails, the instrument is small; where a heavy clay (like the black cotton soil of the Deccan) is found, it may be a large instrument demanding seven or even eight pairs of bullocks to work it. The heavy plough of Sholapur, in the Bombay Presidency, is probably the heaviest cultivating implement in the world. But all are simple, easily put together, easily repaired, and not very efficient, even for what they pretend to do. To replace them, however, demands very close study of the local conditions and the purpose in view, but when a more efficient and reasonably cheap implement appears on the scene, everywhere, from the Punjab to Bombay, it is welcomed, and in many areas such ploughs have almost entirely replaced those used even up to a few years ago.

The ordinary harrow of the cultivators in India, though cheap, is usually relatively far more efficient than the plough. It occurs in various forms, but is usually worth study even by those from more advanced countries. So far as seed distribution is concerned, broad-casting still prevails over very large parts of Northern and Western India, and even a very crude seed-drill is generally preferable to this method. Where seed-drills are used, however, they consist of a timber of tines, behind each of which is a hole, connected by a bamboo tube, into which the driver feeds the seed by hand. The general result is unsatisfactory. I do not remember ever to have seen a field of cotton so sown with less than twenty per cent. of blank spaces, but the way in which it makes the weeding of a crop easier justifies its use. Most seed-drills hitherto offered from Europe and America are too large and complicated for the bulk of Indian cultivators, though there is a field for their introduction among the large landowners and farmers of the Punjab.

Crops are still generally reaped with a sickle, though reaping machines have been introduced and are used extensively in the Punjab. But the long laborious process of cutting by hand is still most widely used, and this is almost necessarily so where holdings are as small as is the case over much of the area. When cut, grain is still almost universally threshed under the feet of bullocks, though a thresher, termed a *norag*, consisting of a number of iron discs arranged vertically in separate rows, is employed in the south as a means of threshing *bajri*, by dragging it over the heaped heads of grain. European threshing machines for wheat have been introduced into the Punjab, and are there largely used, but the irrigation agriculture of the Punjab is on a larger scale of farming than that in most of Northern and Western India.

The wind is still the almost universal winnower. A tray is made of basket-work, and the mixed grain and chaff is shaken from it, from a height of about six feet, in a gentle breeze. The separation is good, but the process is slow.

CROPS.—The staple food crops of Northern, Central, and Western India are *jowar*, *bajri*, wheat, and rice, and their importance is in this order. One is so accustomed to think of rice as the main cereal crop of India that its place here is unexpected. But except in the tracts of very heavy rainfall, as along the west coast, or where the amount of irrigation water available is very great, rice yields place to the other crops.

Jowar, or great millet (*Sorghum vulgare*), is far and away the most important of these, and is grown over the whole of the area under discussion, except where the rainfall is exceptionally heavy. *Jowar* needs comparatively little moisture, about as little as maize, which tends to replace it on light soils and in hilly tracts like the lower Himalayas. Some types are suited to the *kharif*, or rainy season, being usually sown in June, ripening in October or November; others only grow well in the autumn (*rabi*) season, being sown on soil already thoroughly saturated with water, when it ripens with little additional rain. The varieties suited to each season cannot usually be interchanged.

When well grown, *jowar* is truly a magnificent crop, standing twelve to fourteen feet in height in the field, each stalk crowned with the large, oval earhead containing the grain. The yield of grain may go as high as 1,500 pounds per acre, while the straw, or *kadbi*, may amount to two tons per acre also. These are high yields, and are not reached except in very favourable seasons, or under irrigation, and on very good land. The average crop does not probably amount to one-third of the above amount.

The crop is sown on land well prepared with the plough and country harrow, and, if possible, well manured, and the seed drilled in rows at a distance of two feet or more apart. Little attention, except for weeding, is required afterwards, and in from four to five months the crop is ready. It is usually cut near the ground, with a sickle, though in districts where fodder is abundant the crop may be cut high, and the whole or part of the straw left standing in the fields. Generally, however, the straw is extremely valuable, and over enormous areas of Western and Northern India it is the principal fodder of the cattle. Unlike the straw of most other grain crops, it loses comparatively little in value with the ripening of the ears, and, though coarse and needing careful chaffing to obtain its full value, it is perhaps the most important cattle fodder in India.

Jowar is often, and now to an increasing extent, grown for fodder, being cut when the grain has just formed, and being either fed when green to cattle or is converted into silage. For this purpose it is grown much closer than above described, and enormous yields of green fodder can be obtained, particularly under irrigation, amounting in many cases to from fifteen to twenty thousand pounds per acre.

Although *jowar*, or great millet, is the greatest crop of Northern and Western India, yet on land which is too light for its successful cultivation, or on which for

any reason it does not flourish in the *kharif* season (June to September), *bajri*, or spiked millet (*Pennisetum typhoideum*) is grown, and certainly stands second among the food crops of Western if not of Northern India. Even in the latter there are very large areas where *bajri* is grown in the rains for food, and wheat is cultivated in the following autumn as a crop for sale.

Bajri is a much poorer crop than *jowar*, and is not cultivated nearly so largely anywhere else in the world. It neither grows so high nor does it yield so much as the latter, and a yield of 600 pounds of grain per acre and one thousand pounds of straw would be considered as decidedly good. But then it is usually grown on the poorer and lighter soils, and while it can flourish with very little rain or other source of water, if this is well distributed throughout its growth, it is seriously damaged by continued rain at any time, and especially when the ears are forming. Other millets are of minor importance, though several of them are grown extensively, particularly in regions of high rainfall or on land too poor to grow rice.

India is one of the great producers of wheat in the world, and in normal times is one of the largest sources of the world's supply. Nearly all this wheat is produced in the area we are considering, as it rapidly disappears in the warmer climate of the south, and the wetter conditions of Bengal. In considering this, the greatest cereal crop of the world, it must never be forgotten that it is essentially a crop of the warmer and drier parts of the temperate zone, and that hence, in India, it is a crop essentially of the dry season and the cold weather. Where the rainfall is high, it disappears; where the winter months are semi-tropical, it is likewise not cultivated.

But in spite of these limitations, India cultivates more than 31,000 square miles of wheat. The area varies from season to season, especially of that portion of the crop which depends on rain-water and is grown without irrigation. In no crop have recent improvements been greater than in the case of wheat. New types of seed have been produced and introduced by the Government agricultural departments, which enables the yield to be increased by a considerable proportion, and systems of cultivation are now being adopted which will at the same time increase the yield and reduce the amount of irrigation water required.

In Central and Western India, wheat is usually grown without irrigation on the deep moisture-holding black soil. The tillage is usually careful, for wheat is recognized as a profitable crop. A light dressing of cattle manure is given, and a month later, in October, the wheat is sown, the seeding being heavy—in fact, up to 100 pounds per acre. A good average crop yields 800 pounds per acre, but large areas do not reach this amount.

In Northern India the crop cannot be grown with any certainty without irrigation, but with this latter it is cultivated to an enormous extent, on canal or well water, in the deep alluvial plains. Careful tillage is needed to secure a good crop of irrigated wheat. The land is prepared between August and October, a dressing of manure being applied in September. Sowing begins in the middle of October, and generally is done by means of a seed tube attached to the ordinary country plough. The crop takes five months to mature, and has usually in the past been considered to need an application of water every month unless the winter rains are more than ordinarily favourable. Irrigated wheat yields generally twelve hundred pounds of grain or more per acre.

Wheat is nearly always reaped by a sickle or pulled up. It can be threshed almost at once, and this is done, almost universally, under the feet of bullocks. A few threshing machines have been used in the Punjab, and there is a very large future for them in that province. The grain is easily winnowed in the hot winds that blow in April. The straw and chaff afford a fair fodder, and have become one of the main foods of the cattle in the wheat tracts of India.

The fourth great cereal crop is rice, but in the part of India now under consideration it is relatively of minor importance, though the area under the crop is nevertheless very great. The United Provinces have 11,000 square miles, and Bombay 4,000 square miles under rice.

Rice is grown everywhere in embanked fields in which water can be retained. Level or nearly level beds are necessary, because rain or irrigation water must be impounded and kept at a height which should vary as the crop grows. The best soils are, however, those through which water can percolate freely, and over which it flows slowly. Unless it receives much silt with the irrigation water, rice requires liberal manuring if a good crop is to be obtained. In places, green manuring with a crop of *sann* hemp (*Crotolaria juncea*) is practised, and everywhere cattle manure is used if it is available.

Rice is sown in three ways—broadcast, by drill, and by transplanting from a seed-bed where it has been sown broadcast. As a rule the first method is practised on inferior soils or where labour is scarce. Rice is drilled into the ground in some districts in Bombay, but the method is not common. The third method is by far the most usual, is less risky, and needs very much less seed per acre.

The seed-beds are highly manured, sheep or goat droppings being often used. In many parts of Western India a thick layer of cowdung, brushwood, leaves, or grass is burnt on the land intended for the seed-bed before putting in the seed—a process termed *rab*, which results in much greater vigour of the seedlings. The latter can be transplanted in five or six weeks into beds, prepared by ploughing them into a puddle in a field already flooded with water. About four seedlings are generally planted together, though it is now proved that, with many varieties, the planting of a single seedling will give equally good results. In a week the seedlings are fully rooted, and regain a healthy green colour, and thereafter the growth goes on without check, if only sufficient running water is available.

The seed is almost invariably sown in June. Early crops ripen in September and October, and late varieties in November and December. The crop is cut with a sickle, and is threshed under the feet of bullocks. The straw makes poor fodder, and hence the cattle of rice-growing tracts are generally inferior. The yield of a good average transplanted crop is about 2,400 pounds per acre. Broadcast or drilled rice yields much less.

India is particularly rich in pulse crops. They are grown everywhere in the greatest variety, but two or three only will be referred to here. Of these, the first is *gram*, or chickpea (*Cicer arietinum*), which is grown on about 12,000 square miles of land every year in the part of India with which we are dealing. It is, in fact, one of the main food crops of the country, being grown in the cold weather, generally without irrigation, either alone or mixed with wheat or barley.

The second great pulse crop is pigeon-pea (*Cajanus indicus*), called *arhar* or *tur*, in various parts of Northern and Western India. It is grown in every province

mixed with other crops, with *jowar, bajri,* cotton, and with many others. Its long taproot enables it to withstand drought and to obtain its nutriment from the subsoil. It spreads out and grows freely after the crop, with which it is mixed, has been removed, and nearly all the leaves fall as the plants ripen, thus enriching the surface soil.

It will be noticed that it is a very common practice in India to grow mixed crops, a striking example of this being the case of the pulse just referred to. It is probable that this serves the purpose filled elsewhere by rotations, and it is, without doubt, a successful and profitable method, which has done more to uphold the fertility of Indian soils than any other practice. There is another reason for this. Owing to the variability of the Indian seasons the cultivator is, at sowing time, most uncertain as to the prospects of his crops, and experience proves that the risk of total failure in an unfavourable year is reduced by growing a mixed crop. If the pulse fails the cereal may succeed, and *vice versa*. These reasons are probably at the bottom of the partiality of Indian cultivators for mixed crops, which, indeed, are found more frequently than perhaps in any other country in the world.

After the cereals and pulses, which form the staple food of the people, perhaps the class of crops which ranks next in importance is that of oilseeds. India is pre-eminently the source of these for the supply of the world. Linseed, sesamum, rapeseed, castor, groundnuts, poppy seed, and numerous others furnish a material proportion of the oil required for the industries of the West. Of these, linseed occupies over five thousand square miles of land. The plant, identical with that used for producing flax in Europe, is never grown for that crop in India. It is only grown in the autumn, and hence in the cooler part of the year. It grows easily, but is an exhausting crop and also a somewhat precarious one, as it is almost always sown on unirrigated land. A good crop will yield five hundred pounds of seed per acre.

An even more extensively grown crop is *sesamum*, or jinjelly, which occupies 6,600 square miles every year. It grows both in the rains and in the autumn, and is generally grown mixed with other crops. Of the other oilseeds, rape seed is largely produced in the Punjab, the United Provinces, and in Sind. Castor seed is extensively grown in Gujarat, in the Bombay Presidency. Groundnuts, though still most largely grown in Madras, are increasing largely as a crop in Western India, while poppy seed—a diminishing production since opium ceased to be exported—is produced in the United Provinces, Central India, and Gujarat.

The great sugar-cane producing area of India lies in that part under notice. And it is not always realized that India is the greatest producer of sugar from sugar-cane among the countries of the world. The consumption is, however, so enormous that, in spite of this fact, it is also a great sugar-importing country, and inasmuch as sugar can at present be produced more cheaply in Java, Mauritius, and several other parts of the tropical world, the area under sugar-cane has hitherto tended to remain stationary or has declined. The sugar-cane area in India is about 3,500 square miles. Of this, 1,700 square miles are in the United Provinces and 500 square miles in the Punjab.

A very large number of varieties of sugar-cane are cultivated in India. They may be grouped into (*a*) thick juicy soft kinds, which require very liberal cultivation and irrigation; and (*b*) the thin, hard, less juicy kinds which require less water and less manure, but which give a very much smaller outturn. It is commonly called a twelve months' crop, and is usually planted in February or March. It is propagated by means of sets, that is to say, by cut pieces of cane. For successful growth, the soil has to be deeply and carefully prepared, and the sets must be planted either in pits or in furrows. The crop requires constant attention during its early growth. Constant weeding is needed, and digging between the rows is advantageous. As the crop grows, the canes must be supported by earthing up. An extra spreading of manure is then often given, oil-cakes being its most usual form, though sulphate of ammonia is now taking their place.

It is somewhat difficult to judge accurately when sugar-cane is ripe for sugar-making, and it is usually tested by a trial boiling. Most of the Indian cane is used to make crude sugar (*gur*), which is prepared by boiling the juice on the holding of the cultivators. The cane is cut and then crushed in bullock mills, but iron mills have in recent years almost entirely replaced the wooden ones formerly used. The juice is then boiled in a shallow iron pan, over a furnace built of mud, the dry leaves and crushed cane being used as fuel. There is a very large demand for the crude product so obtained, and it forms the ordinary cooking sugar of the country. But there has always been a demand also for a more refined product, and this has been prepared for many generations in the United Provinces. The extension of sugar-making on a factory scale has been slow, but is progressing, and several hundred sugar factories are now working in North India.

In the north of India, twenty tons of cane per acre is considered a good crop, and an outturn of one and a half to two tons of crude sugar (*gur*) per acre is obtained. In Western India the crop is grown far more intensively, is much more highly manured, and a very large amount of money is spent on it. Hence a much larger yield of product is obtained, and thirty-five to forty tons of cane or six to eight thousand pounds of *gur* per acre is a normal yield.

COTTON.—Any account of the crops of Northern, Central, and Western India must leave a very important place to be occupied by cotton, for it is the most important "money" crop of a very large part of this area, and between six and seven thousand square miles are under this crop every year. Indian cotton has a bad reputation on the world's markets, and it is undoubtedly generally inferior to that grown in the United States, and still more markedly to that produced in Egypt. This inferiority is, perhaps, inevitable, on account of condition of climate and soil, but a great deal has been done in recent years to improve the quality of the Indian staple, and it is possible that in a few years Indian cotton may occupy a very different position on the market from that which it fills at present.

There are two essentially different types of Indian cotton, from an agricultural point of view. The first type takes eight months to ripen, and is only suited for districts which have deep retentive soils or a long rainy season, or in which irrigation is available. This type gives cotton of fairly good quality, but it would usually fail in the north of India. The second type only requires four months to mature, and is much more widely grown. On the whole, this type produces cotton which is short and coarse, but which is pure white in colour. The proportion of lint to seed in this type is usually high, and the plants are hardy.

There is hence a great temptation to sow the second type of cotton rather than the first, so long as there is a demand for the coarse, short-stapled variety, and its cultivation has tended to increase in recent years. All attempts to introduce exotic cottons have failed except in a few localized areas, though recently American varieties bid fair to be a great success on the irrigated tracts of North India.

In peninsular India, the most suitable soil for cotton is the famous "black cotton soil," which is a deep dense clay, but the alluvial soils of the north give larger plants and a greater outturn than the black soils in any part of India. In the backward tracts, like Sind, cotton is sown broadcast on land carelessly prepared, and it receives little weeding, but in the best cotton areas the cultivation is most careful, reaching its highest form in the Broach and Surat districts of Bombay. There the land is most laboriously prepared, and the seed is sown in rows twenty inches apart. Careful weeding is carried on, and the crop ripens in January, while picking continues until March.

Indian cotton is nearly always sold by the cultivators as seed-cotton, the ginning being arranged for by the purchaser. Ginning factories now exist all over the cotton-growing districts, and, after ginning, by far the largest part of the cotton is sent to Bombay as the principal Indian market, while the seed is chiefly used for cattle-feeding. Direct buying of cotton for the Cawnpore, Ahmedabad, and other up-country mills from the producing centres is increasing, but Bombay remains the focus of the cotton trade of the country.

OTHER CROPS.—There are a number of other crops with which it would be necessary to deal in a list which had any pretensions to completeness. Tobacco is one of these, for it is an important one in parts of Western and Northern India, though the chief centres of its cultivation are in Bengal and Madras. I will restrict myself, however, to mentioning two crops, formerly of great importance, which are now tending gradually to disappear. These are the poppy for opium, and the indigo plant for the famous blue dye.

The poppy was formerly extensively cultivated, chiefly to provide opium for export, in the various states of Central India and in the Ganges Valley, and it was one of the richest crops, and, at the same time, one of the most difficult to grow among those favoured by cultivators. Seed sown in October on land very carefully prepared, irrigated frequently, and highly manured, yields on the average about twenty pounds of opium per acre, and it also gives about 250 pounds of seed per acre.

The method of obtaining the opium is peculiar, and of great interest. "Poppies are ready to yield opium when the capsules become a light brown colour, and are then somewhat hard. In order to collect the drug, the capsules are scratched with a three-bladed instrument. Deep scratches are made in the capsules in the evenings, only one part of it being lanced at a time. The operation is repeated five to eight times at intervals of two days, and the work is very laborious. The morning after the lancing operation, a gummy juice is found exuding from the cuts. This is crude opium, which is collected and stored in earthen jars until the whole produce is obtained."

But the great days of poppy cultivation have passed away with the disappearance of the China trade. The area is now restricted, the land is given up to other crops, and soon, probably, the cultivation of the poppy will be of a very limited character.

The production of indigo is another industry which has been threatened with extinction, but which now shows promise of revival under the strong stimulus of the Great War. It has long been grown very widely, but it has tended in recent times to become concentrated in certain areas in Behar, in the United Provinces, and in the Punjab. The production of indigo was formerly largely in the hands of European planters, but this community has now much declined in importance.

There are many varieties of indigo in India, but there has been a tendency to replace all of them with a type obtained from Natal, especially after it has been acclimatized in Java. This is grown preferably on the deep alluvial soils of the Ganges Valley, on land manured with indigo refuse (*sith*) or artificial manures. The seed is put in at the beginning of the rains or after irrigation water has been applied, but it cannot stand heavy downpours of rain, and resowing is often necessary.

The crop is cut when in flower, and the whole plants are carried away to a vat, where they are soaked for twenty-four hours with water. This extracts the indigo-producing substance (*indican*), and on thoroughly mixing the extracted liquor with air, by beating in a vat specially arranged for the purpose, the blue indigo is produced. It can be separated by first boiling the liquid, and then by passing it through large cloth filters. From twenty to twenty-five pounds of indigo per acre from a single cutting of plant is considered a good crop.

GARDEN CULTIVATION.—The garden cultivation of India, whether concerned with the production of vegetables or of fruit, is of very special interest, and though generally capable of enormous improvement, it has features which make it worthy of study. India produces large numbers of vegetables, which are regularly cultivated here, but which are more or less curiosities elsewhere. Pulses and beans are very numerous, gourds and cucumbers are not less so; and the egg-plant (*brinjal*) is one of the most common of Indian vegetables. The large arum (*Colocasia*) is grown almost everywhere round cities where water and sewage are in abundance. Yams are cultivated extensively in Gujarat, and leafy vegetables (*sags*) are grown in very great variety.

One of the most curious and yet one of the most intensive forms of garden cultivation is that of *pan*, or betel-leaf, a climbing pepper, the leaves of which are universally used for chewing. This plant is grown wherever abundant irrigation water is available. The gardens are so shaded, either by the trees up which the creepers climb, or by artificial means, that the plants grow in semi-darkness. The cost of establishing a garden will run to far more than a thousand rupees per acre, but the demand for betel-leaf is so general and so keen that it is a most profitable speculation.

Fruits are many, and of the most varied kinds. The Himalayas, and also the hills of the North-West Frontier Province, have proved themselves capable of producing first-class apples, pears, peaches, and almost every other European fruit. On the plains, the glory of India is the mango, which is found at its best in Western India, south of Bombay, and is a magnificent specimen of fruit. It is found everywhere, but varies very much in quality, although a good mango will always realize its full value. The mango-tree is a large, somewhat slow-growing, tree, but it lends itself easily to grafting, and many thousands of acres of the best-grafted trees have been planted in recent years in many districts.

Indian oranges, lemons, and limes are very widely grown, and the best among them are very good indeed. Nagpur oranges have a special reputation, but the general average quality of oranges in the country is low. Grapes are grown on the North-West Frontier and in the Deccan. In the latter area the industry is now reviving, after having almost disappeared as a result of vine mildew. The guava (*Psidium guyava*) is one of the commonest fruits, but they are almost always of low quality. The papaya (*Carica papaya*) grows everywhere. There are few kinds of tropical fruits which are not found in India. On the whole, little has been done toward their improvement, but there is a vast field in this direction.

AGRICULTURAL IMPROVEMENT.—The general impression which one gets in a review of agriculture in Northern, Central, and Western India is the immense scope for improvement that it presents. Even in dry land agriculture, where all cultivation is and must be a gamble with rain, there is very great possibility of making the crops more secure by selecting varieties suitable for special conditions, and by improvements in tillage. On the other hand, on irrigated lands one feels that almost anything is possible. And yet, with many brilliant exceptions, the general standard of cultivation is low. This has been realized, and as a result great sums have been spent in recent years on the establishment and maintenance of agricultural departments in every province in India, and of agricultural colleges in many of them. Much more will be required than has yet been done in these directions, but a good beginning has been made.

The head-quarters of agricultural research work in India is at Pusa, in Behar, where a magnificent institute has been erected for the purpose, but similar institutes on a less lavish scale are found in the Punjab, in the United Provinces, in Bombay, and in the Central Provinces. These institutes are usually also colleges where the highest training in agriculture and its associated sciences is given. This education is becoming increasingly popular, though progress is slow, but in certain parts, at any rate, the effect of the investigations made and the training given can be seen over very large tracts of country. The education of the farmers themselves in their own industry is in a much less advanced condition, but agricultural schools, entirely conducted in the vernacular of the tract in which they are situated, have been extensively developed in Bombay, and to a less extent in some other parts of the country.

These developments are an indication of a change in the attitude of the governing authorities of the country towards agriculture. Although the importance of the land revenue as a source of public income, and the tremendous inroads on the national wealth caused by famine, had shown very clearly the close relationship between Government and the cultivation of the land, it was a long time before the authorities overcame the prejudice against taking any active part in the agricultural development of the country. This attitude has not even yet entirely disappeared. But since the report of the Famine Commission of 1880, the duty of Government in this direction has been realized to a much greater extent. And, if it is realized, there seems to be no limit to what may be done. One has visions, not at all impossible of becoming actual fact, of a country from which famine will have disappeared, even if droughts still continue to take place; of people who are able to become world-suppliers of articles which they scarcely send into trade at all at present; and of land producing far more than is now conceived possible in the wildest dreams of the cultivators.

THE PUNJAB

EARLY HISTORY

By ARNOLD WRIGHT

THE Punjab—"the land of the five rivers"—is something more than a geographical expression. It is the home of one of the manliest and most warlike of the races of India. Indeed, it is entirely in association with the Sikh race that the Punjab, as such, has come into fame. Its earlier history is merely a part of the great patchwork of Indian history, with its variegated dynasties and its alternations of Hindu and Mahommedan ascendancy, and its tribal feuds and religious animosities. In other parts of the work the story of the earlier Northern India has been told, and it would be superfluous to go over the ground again. Our interest really commences with the rise of the Sikhs as a religious force. That was not until the sixteenth century, when the death-knell of many dynasties had already been sounded in what is now the Punjab.

The founder of the Sikh religion was Nanak Shah, a pious Hindu reformer born near Lahore in 1469. Nanak headed a crusade against what he regarded as the errors of the orthodox religion. He preached the abolition of caste, the unity of the godhead, and the obligation of leading a pure life. He was, in a sense, an Indian Martin Luther, imbued with a fiery zeal and waging a destructive war against the laxity and corruption of his time. At the time of his death, a considerable body of adherents in Northern India had embraced his principles, and the work he had set his mind to was carried forward by successors, who, under the designation of *guru* or apostle, laid the firm foundations of the new faith. There were ten of these *gurus* until 1708, when, on the death of Govind Singh, the last of the number, the succession stopped. By this time the Sikhs had become numerically a powerful body, and were making a distinct advance towards the position they now occupy as one of the great members of the Indian family of races. They had already attracted to themselves the unwelcome attentions of the Mahommedan rulers, who hated their zeal for a faith which was not their own, and feared the growth so near their principal seat of power of a community even then of no mean military potentiality. Terrible persecutions maintained through a long series of years were the lot of these hapless followers of Nanak, but in spite of it all they held unflinchingly to their faith, surviving the downfall of the Mogul empire, as a scattered people welded together by the common tie of religious belief. Their splendid military qualities, which had been held in check by the oppressive Mogul rule, now found an opening, and, joining with the Mahrattas in the scramble for the territory of the Mogul power, they established, under their own sirdars or chiefs, a number of petty principalities. Gradually there came into being in the Sikh confederacy a great new power, with its capital at Lahore.

The real founder of the Sikh kingdom was Ranjit Singh, a soldier of fortune, who was born in 1780. A man of fine physique and indomitable courage, he early made his influence felt amongst the hardy races who, at the end of the eighteenth century, were struggling for the mastery in Northern India. When he was only twenty he obtained from the Afghan Ameer the office of governor of Lahore. The governor in those days often became the independent prince, and it was so with Ranjit Singh. He had not been long in office before he was actively working for a personal ascendancy based on the fanaticism and military capacity of the Sikhs. Under his guidance a powerful army was formed, "which," as Sir William Hunter remarks in his *Imperial India*, "has had no parallel since the 'Ironsides' of Cromwell." With this weapon he carved out his kingdom, extending his conquests south to Mooltan, west to Peshawar, and north to Kashmir. He would have pushed his possessions eastward also if he had not been brought up against the British power at the Sutlej, whither it had been carried by the successful campaign of 1804. There was a period when it seemed that the new-formed Sikh power would try conclusions with its sturdy hosts even against the disciplined forces of the paramount authority in India. While "the Lion of the Punjab," as he had come to be known, was carrying his forays across the Sutlej, the Government of India sent Theophilus Metcalfe, then a young man of twenty-three, on a mission to Lahore to conclude a treaty of alliance and defence in view of a threatened French invasion of India by way of Persia and Afghanistan. The danger of this onslaught from Central Asia passed, if it ever existed, but Metcalfe was retained in the Punjab to secure an understanding with Ranjit as to the limits within which

his ambition should have play. The Sikh chieftain proved a very difficult subject to handle, and more than once the negotiations seemed likely to end in disaster; but with infinite patience Metcalfe stuck to his task, and eventually, at the end of six months' effort, secured the signature of a treaty which was honourably kept by Ranjit Singh throughout the remainder of his days.

On Ranjit Singh's death a condition of great confusion arose in the Sikh kingdom. The old chief having left no successor, there was a scramble for power between rival generals and ministers, with intriguing queens in the background. The *Khalsa*, or central committee of Generals, was the centre of what there was of authority. A purely military body, it cared little for the arts of peace, and its actions from the first were aggressive and even provocative. Its thirst for military glory had been whetted by the disaster to the British forces in Afghanistan in 1842, when an army of 4,000 fighting men and 12,000 camp followers perished miserably in the passes during a winter retreat from Kabul. This evidence of British weakness, as it appeared, offered an opening for wiping off old scores and extending Sikh power on the lines originally marked out by Ranjit Singh. There was much to support this view in the then troubled situation, but the directors of Sikh policy perpetrated the bad blunder of preparing for their trial of strength with the British by dismissing the European officers who had trained their levies and vesting the supreme military commands in elective committees of five, then known as *panchayets*, but which would be better understood to-day under the familiar designation *soviets*. Still, it was a truly formidable army which was ultimately mustered, numbering 60,000 men with 150 guns. Crossing the Sutlej in 1845, this host advanced with the utmost confidence into British territory. It was met by a fine army, commanded by Sir Hugh Gough, the commander-in-chief of the day, and in quick succession, within a period of three weeks, four pitched battles were fought, at Moodkee, Firozshahr, Aliwal, and Sobraon. There were anxious moments during the conflict, but at length the tide of battle was decisively turned against the Sikhs, and they were driven to surrender Lahore to the conquerors. A protectorate of the province was established, and Dhuleep Singh, an infant son of Ranjit, was placed upon the throne. Amongst the conditions enforced in the final treaty were the surrender to the British of the Jalandhar Doab, or territory between the Sutlej and the Ravi, and the limitation of the Sikh army to a specified number.

After the war, Henry Lawrence, then a major, was appointed Resident at Lahore, to assist the Council of Regency, and his brother John, afterwards Lord Lawrence, was placed in charge of the Jalandhar Doab and the adjacent hill territories. Peace seemed to be well assured. The people were docile and apparently so well reconciled to the changed conditions that, as Colonel Malleson puts it in his sketch of Lord Lawrence's career, "the wonderful spectacle was presented of a few British officers riding over the country re-surveying and re-assessing the lands, attended only by a few native horsemen supplied by the Punjab itself." But it was a deceitful calm. While the British were, as they imagined, easily consolidating their victory, the Sikh Durbar was secretly engaged in plotting for the restoration of the Maharanee and the complete expulsion of the British from their country. Their plans were favoured by the circumstance that Major Lawrence, believing matters to be running smoothly in his new charge, took the opportunity of securing a well-earned leave to England at the end of 1847. In the following year the conspiracy against the British came to a head. The signal for the outbreak was given by the treacherous murder, at Multan, of Messrs. Agnew and Anderson, who had been despatched on a mission to a Sikh chieftain in that locality. Lieutenant (afterwards Sir Herbert) Edwardes made a gallant and not unsuccessful effort to avert the rising; but his measures for various reasons were not promptly seconded by the authorities, and soon the whole of the Punjab was once more aflame. The Khalsa army, in a short time, was once more in being in all its old strength, thirsting to measure swords again with the British. The first clash came on January 13, 1849, on the memorable field of Chillianwala. It was a desperate and stubbornly-contested battle, in which the British lost 2,400 officers and men, besides four guns and the colours of three regiments. Only by a very narrow margin was disaster averted, and in the anxiety which the grave position of affairs naturally excited, Sir Charles Napier, the conqueror of Sind, was summoned from England to take supreme command of the company's armies in India. But before the famous old soldier could arrive in India, Lord Gough had retrieved the situation by inflicting at Gujrat a crushing defeat on the Sikh army. The victory was so overwhelming that the Sikhs never again appeared in arms against the British. They accepted with resignation the proclamation (dated March 29, 1849) annexing the Punjab and the consequent arrangement by which the young Maharaja Dhulip Singh was placed under British guardianship and sent to England, to end his days as a country gentleman in Norfolk—the owner of broad acres which in later years became a famous resort of aristocratic English sportsmen.

The settlement of the Punjab after the war was entrusted to a board of administration, with Sir Henry Lawrence as president and John Lawrence and an able civilian named Mansel as members. "The board commenced their operations," says Malleson, "by dividing the newly-acquired territory into circles, at first four in number, but afterwards increased to five, each under a commissioner and the usual staff of subordinate officers. They then set about the various measures demanding immediate attention. These were, the protection of eight hundred miles of frontier within a few miles of hardy and fanatical tribes, who, in one sense of the expression, 'feared neither God nor regarded man'; the maintenance of internal peace; the re-organization of the administrative system; the reform of the system of taxation and of excise; the raising of a police force; the establishment of civil discipline; the repression of violent crime; the freedom of commerce, the fostering of agriculture, the development of the national resources; and last—but perhaps the most important of all, and entirely dependent on the nature of the new system, and the spirit in which it might be accepted by the people—the foundation of a national life, different to the life of the past, all over the country." Nobly and energetically did the little band of British officials carry the work out. "Out of the Sikhs themselves a frontier force was formed, which is justly considered the *élite* of the native army of India; which has distinguished itself in a hundred fights on the frontier; which was faithful among the faithless, and the soldiers of which emulated their British comrades in the terrible days of 1857; which has borne the British flag triumphantly in China and Abyssinia," and which, it may be added, splendidly dis-

tinguished itself in many bloody encounters, in the West as well as in the East, in the Great War. "Internal peace was maintained by a general disarmament, by raising an effective police from among the people themselves, but mainly by bringing justice to the doors of the people, by giving them, in exchange for their old feudal system, terribly oppressive to the poor, a system which made all men equal before the law. The incidence of taxation was made lighter, whilst it was scarcely less productive. The lands of the various districts were surveyed and assessed on an equitable system. Trade was made free, and the incidence of the excise greatly lessened. Jails were built. A simple code of justice was introduced. Roads were made, and great works begun upon canals. So great, so serious, and so sensible to the people were the reforms effected, that when, on February 4, 1853, the board was dissolved, its members made over to their successor a people the great mass of whom had in very deed changed their 'swords into ploughshares, and their spears into pruning-hooks': who from having been the most martial, the most independent, and the most turbulent of all the races south of the great ranges to the north, dictating the law even to their own sovereigns, had become the most peaceable, the most pliable, the most contented."

When the Punjab board was dissolved, John Lawrence was appointed chief commissioner, and in that capacity carried forward the great work that had been so auspiciously and successfully begun. For five years he laboured at this work with a single-minded devotion to duty and a breadth of outlook beyond all praise. When the storm broke over India in 1857, the reward of this enlightened and capable administration was reaped in the absolute peacefulness of the conquered province. While not very far away at Delhi the British were fighting for their very existence in India, the Punjab was so tranquil that Lawrence was able to send troops to aid the sorely tried British forces in the area of conflict. His indefatigable work in organizing reinforcements and strengthening and confirming the Sikh chiefs in their loyalty to the British was, without doubt, a decisive factor in the struggle. In a real sense he was "the saviour of India." But it was a very close thing. Had Delhi not fallen when it did, the Punjab would almost certainly have risen, and a situation of the utmost peril for the British in India would have been created. The measure of his influence may be taken by an anecdote which Malleson vouches for. Impatient at the slow progress made by our troops, and strongly impressed with the idea that the fate of the empire depended upon the early fall of Delhi, Lawrence said one day to Raja Tej Singh, the most influential of all the Punjab chiefs, "I think I ought to go there myself." Tej Singh looked at him for a few minutes, and then said with emphasis: "Sahib, send the best men you have, or any number of them, but don't go yourself. So long as you stay here all will be well, but the moment you turn your back no one can say what devilry may not take place." Truly, to re-echo the words of Malleson, Sir John Lawrence, of the Punjab, must ever stand out as one of the foremost characters of Anglo-Indian history—as the self-made, hard-headed, strong-willed, conscientious, consistent man, who, tried in all circumstances, was found equal in all.

If the Mutiny was the turning-point of British-Indian history, it was peculiarly the commencement of a new and prosperous era in the annals of the Punjab. In the sixty years which have lapsed since the mighty convulsion, the province has progressed without a real check, until to-day it is one of the most prosperous parts of the whole sub-continent, taking its full share in the development of the new India that is rising steadily above the horizon.

HUMAYON'S TOMB DELHI.
Photo by G I P Pty Co

THE PUNJAB

DESCRIPTION AND MODERN HISTORY

THE Province of the Punjab was annexed by the British in 1849, and the territory was at first governed by a Board of Administration, but it was at a later date placed under the control of a Chief Commissioner, who was afterwards superseded by a Lieutenant-Governor

Since the days of the Mutiny, the history of the Province may be defined as a period of unrestricted progress The construction of railways has proceeded apace, gigantic schemes of irrigation have been successfully carried through, and under British protection manufacturing and industrial enterprises have been firmly established

The native states under the Government of the Punjab (34 in number) cover an area of 36,532 square miles, and the inhabitants are about 4,300,000 in number

The largest of these states is that of Bahawalpur, which is 15,000 square miles in extent The territory consists roughly of a strip 300 miles in length by about 40 miles in width one-third of the total area is a portion of the Indian desert another third is capable of cultivation when irrigation is possible and the remainder consists of fertile soil in the valley watered by the Sutlej, Chenab, and Indus rivers The ruling Nawabs claim descent from the Abbasid Khalifs of Egypt, and their family came into prominence on the breaking up of the Durrani Empire, when they asserted their independence, which, within their territories, was secured by treaty with the British in 1833 The present ruler, H H the Nawab Haji Sadiq Mahomed V, is a minor, and the administration of the State is in the hands of a Council of Regency The chief town, Bahawalpur, encircled by a wall, was founded in the year 1748, and it is the seat of manufacture of fine silk

CHAMBA is an exceedingly picturesque state, practically surrounded by towering mountains Its northern border extends to the State of Kashmir, and on the east are lofty snow-clad peaks and glaciers The state is very mountainous, its ranges rising from 3,000 feet to more than 20,000 feet above the level of the sea, and it is therefore a paradise for the hunter of large and small game The rulers belong to the Suryavansi line of Rajputs, and it is said that the family was founded about the middle of the sixth century The state comprises an area of 3,216 square miles, and the inhabitants—the majority of whom are Hindus—are about 135,000 in number His Highness the Raja, Sir Bhuri Singh Bahadur, K C S I, C I E, is an exceedingly intelligent ruler, and is indefatigable in his efforts to develop the resources of the state, with the object of making his subjects more prosperous and increasingly contented in their homes Chamba, the principal town, is a very pretty little place, situated on the right bank of the River Ravi, and among its numerous temples the one dedicated to

Lakshman Narayan, dating from the tenth century, is the most important

JIND, the largest of the three Phulkian

only chief in India who personally led his own troops on the actual field of battle He was mentioned in despatches

been gained, to a very considerable extent, by the tact, wisdom, and forceful character of the Maharaja himself The

1 THE KUTUB MINAR AND IRON PILLAR, DELHI
2 THE JUMMA MUSJID, DELHI SHOWING MAHOMEDANS AT PRAYER
Photo by M I Shivgan Chand

states, was constituted a separate principality about the year 1760, when Raja Gajpal Singh greatly distinguished himself during Mahomedan invasions The state has an area of 1,268 square miles is divided into three distinct tracts, and agricultural pursuits provide the means of livelihood for nearly 70 per cent of the people At the census of 1911 the inhabitants were 270,000 in number three-fourths of whom were Hindus Excellent crops are grown, comprising wheat, maize, cotton barley, and pulses and great attention is paid to the breeding of cattle and camels

H.H the Maharaja of Jhind, Sir Ranbir Singh Bahadur K C S I, succeeded his grandfather, H H Sir Raghbir Singh, G C S I, in the year 1887 It might be mentioned that Raja Sarup Singh, who occupied the *gadi* in the middle of the nineteenth century, rendered most efficient aid to the British during the second Sikh war, and also during the Mutiny of 1857, he being the

by General Wilson for his gallant conduct in the capture of Delhi, and in 1863 he had the honoured title of G C S I bestowed upon him The present Maharaja is no less loyal than his predecessors, and in the administration of state affairs he has no superior H H is deeply interested in the development of industrial enterprises, and it is mainly through his instrumentality that cotton-ginning factories and flour mills have been erected

KAPURTHALA is a Sikh state, 652 square miles in extent, but H H the Maharaja is also the possessor of other territories of equal extent in the Province of Oudh and in the United Provinces a considerable portion of which was conferred upon an ancestor for signal services rendered during the Sepoy Mutiny The house of Kapurthala has for many years been famous for its unswerving loyalty to the throne Kapurthala is regarded as one of the most progressive states in the Punjab, but this honourable position has

inhabitants, about 320,000 in number, comprise Mahomedans, 60 per cent , Hindus 30 per cent , and Sikhs, 10 per cent The ruling family have taken the name of Ahluwalia from the village of Ahlu in the Doab, which was the ancestral home of the founder of their race

PATIALA —This state, which became a separate principality in the middle of the eighteenth century, lies chiefly on the plains on the northern side of the River Sutlej, but it also comprises hilly regions in the neighbourhood of Simla The area of the state extends to about 5,412 square miles, and more than sixty per cent of the inhabitants, numbering 1,400,000 are dependent upon some form of agriculture for their means of subsistence Rent of land is rarely paid in cash, the system of one-third of the produce being taken by the occupant forming an acceptable basis of arrangement

The present ruler, H H the Maharaja Sir Rhupindar Singh Bahadur, G.C.I.E.,

is a distinguished sportsman, cricket being his favourite game, and the efficiency of his administration is a natural sequence of a sound education and careful training for the high responsibilities of the ruler of a state. Patiala has for a long period been noted for its sincere loyalty to the British, and in 1912, when the Viceroy, H.E. Lord Hardinge, visited the state, he made use of the following words at a banquet given in his honour: "I need not remind some of those present that on no less than four occasions during the past half-century, Patiala has offered her troops for active service, and twice they actually went to the front, and there maintained exemplary discipline and proved themselves to be excellent soldiers." Patiala, the capital of the state, was built about the year 1762.

SIRMOOR is a hilly state in the neighbourhood of the Himalayas, and about one-third of its total area of 1,198 square miles consists of dense forests. A comparatively small portion of the land is cultivated, but good crops are raised of wheat, rice, maize, sugar-cane, tobacco, and other produce. The original rulers belonged to the Solar dynasty, but definite particulars of the early history of the state is somewhat obscure. The present ruler, H.H. the Raja Sir Amar Prakash Bahadur, K.C.S.I., was born in the year 1887, and in 1911 was invested with full administrative powers by His Honour Sir Louis Dane, Lieutenant-Governor of the Punjab.

The original capital was at Sirmoor, a village now in ruins, but it was subsequently transferred to Nahan, where the chiefs have resided since the year 1621. Nahan is only a small town, but a large trade is carried on in all kinds of produce, the chief exports being cereals and timber, and the principal imports include cloth goods of English and Indian manufacture, sugar, salt, and other articles for general household purposes. With the object of encouraging industrialism, an iron foundry was started at Nahan in the year 1867, but as the products were not able to compete with imported goods, the premises were converted into a factory for the making of machines for crushing sugar-cane, and the venture has met with great success. A large number of hands are employed in that undertaking, while many others are engaged in manufacturing blankets, coarse cotton-cloth, wooden utensils, and cane furniture.

NABHA.—The history of the state is bound up with that of Patiala and Jind, the two other Phulkian principalities, but it may be regarded as a separate area of administration from the year 1763, when Hamir Singh became the first Raja. The present ruler, H.H. the Maharaja Ripudaman Singh Bahadur, who was born in the year 1883, has had the inestimable advantage of a first-class education; he was carefully trained by his late father in the intricacies of state government, and his extensive travels in England, as well as India, have fitted him admirably for his high position.

The state enjoys excellent means of communication, as the main section as well as three branches of the North-Western Railway traverse a considerable portion of the state. This fact accounts for the opening of several good markets, which are important centres for the disposal of the large quantity of agricultural produce which is grown. Fully fifty per

1. TOMB OF MIZAM-UD-DIN, DELHI. *Photo by M. L. Shugan Chand.*

2. A GLIMPSE OF THE PEARL MOSQUE, DELHI. *Photo by G.I.P. Ry. Co.*

3. GOLDEN MOSQUE, DELHI. *Photo by M. L. Shugan Chand.*

cent. of the people are engaged in agricultural pursuits, and a considerable number are employed in the manufacture of carpets, while others find work in the ginning and pressing of cotton. The state has an area of 966 square miles, and the inhabitants are nearly 250,000 in number.

FARIDKOT.—This state, of 643 square miles in extent, is situated near the British district of Ferozepur, in the division of Jullundur. The rulers belong to the Sidhu-Barar clan of Jats, and their connection with the state dates from the time of the Emperor Akbar (1556 1605), and the present chief is H.H. the Raja Brij Indar Singh Bahadur, who succeeded to the *gadi* when not quite ten years of age. The territory is a level plain of sandy soil, of which about one-half is capable, under irrigation from the Sirhind canal, of producing really profitable crops, while the remaining portion is of low fertility. The administration of the state by a Council of Regency is of a very high order, and many measures of useful reforms and progress have been carried out in such a manner as to win the approval of the Government of India. The inhabitants are about 120,000 in number, and the majority of them obtain a livelihood by the cultivation of land, as there are not any industrial enterprises of any importance, but the people are contented with their lot, and His Highness, on assumption of powers of rulership, will be surrounded by loyal and happy spirits.

Among the geographical and political changes which took place at the time of the Coronation Durbar at Delhi in 1911, was the transference of the capital of India from Calcutta to Delhi, and the establishment of a separate province, under a chief commissioner, of which the imperial city was to be the headquarters. This act reduced the area of the Punjab to about 135,880 square miles. The Punjab, or the "Land of Five Waters," received its name from the fact that the territory is practically surrounded by the Jhelum, Ravi, Beas, Chenab, and Sutlej rivers.

The Punjab is a vast alluvial plain, although the north-eastern portion includes a section of the Himalayas, and the Aravali range runs along the south-eastern border, ending with the famous "Ridge" at Delhi. There are mountainous heights near Murree, and on the extreme west are the Sulaiman mountains, which divide the province from Afghanistan, the highest peak in this chain being Takht-i-Sulaiman, 11,295 feet. There is a legend to the effect that King Solomon was in the habit of causing himself to be transported by *genii* to a ledge of rock, ten feet below the summit of this peak, in order that he might enjoy the cool evening breezes. Pilgrims still make the arduous ascent with the object of visiting the shrine at the top.

2. CHANDNI CHOWK AND THE CLOCK TOWER, DELHI.
Photo by J. F. Peter

The principal river is the Indus, which has a course to the Arabian Sea of 1,800 miles, and drains some 380,000 square miles of land. The remainder include the Jhelum, which rises on the north-eastern border of the Kashmir Valley; the Chenab, the Ravi, which, after a course of 450 miles, joins the Chenab at a point about 50 miles to the north of Multan; the Sutlej; the Kabul; and others of minor importance.

The northern portion of the province comprises the Himalayan tract of more

1. THE SCALES OF JUSTICE, DELHI. 2. JEHANGIR'S TOMB, DELHI. 3. THE KING'S BATH, DELHI.

Photos by M. L. Shugan Chand

4. THE THRONE, DELHI.

Photo by G. I. P. Rly. Co.

than 20,000 square miles, and to the south is the Salt Range, which is rugged in character and enjoys so slight a rainfall that a continuance of dry weather may easily be the forerunner of severe drought and possibly famine. The eastern plains, some 35,000 square miles in extent, have a more favourable rainfall, and this fact has doubtless led to the growth of commercial towns and cities, such as Lahore and Amritsar. On the western plains, with an area of about 60,000 square miles, being at Khandi, and also by the Upper Chenab canal, with head works at Mangla. The Jhelum colony receives its water supply from the Jhelum river, and the Montgomery colony is irrigated by the Lower Bari Doab and Ravi rivers.

The climate is exceedingly hot during the summer months, but in winter, when sharp frosts are experienced, the atmosphere is bright and invigorating. The census of 1911 showed that the total population comprised 24,187,750 persons, including nearly 30,000 trans-frontier Baluchis, but after the extension of the Delhi Province the total was reduced to 23,807,750. About sixty per cent. of the people earn a livelihood by engaging in agricultural pursuits, and five-sixths of these are peasant proprietors. Some 9,000,000 acres of land are cropped with wheat, which, in a normal season, returns a yield of nearly 3,000,000 tons. Other crops include barley, maize, rice, oilseeds, millets, and cotton of the short-stapled type known as "Bengals."

Agricultural livestock, according to the quinquennial census taken by the Government of India in 1914, comprised 4,589,061 bulls and bullocks, 3,669,089 cows, 562,600 male buffaloes, 2,627,082 cow buffaloes, 4,041,250 young stock of both sexes of the foregoing classes, 4,676,899 sheep, 4,431,837 goats, 427,515 horses and ponies, 34,000 mules, 701,820 asses, and 308,679 camels.

The Agricultural College at Lyallpur is doing excellent work in training young Indians in the science and practice of agriculture, and the diploma course covers a period of four years, divided into two equal parts. The teaching staff includes a principal; professors of agriculture, chemistry, and botany; an assistant professor of entomology; agricultural experts in various districts; an agricultural engineer; and other able officials. Agricultural farms have been established at Lyallpur, Gundarpur, Hansi, and Sargodha, as adjuncts to the theoretical training of students in the college. Research work is also carried on for the ultimate benefit of holders of land in various parts of the province, such as, for example, by the economic botanist, who is engaged in endeavouring to raise the standard of wheat grown in the Punjab. Special attention is being

1. THE FORT, DELHI. 2. THE LAHORE GATE, DELHI. 3. THE KASHMIR GATE, DELHI.

Photo by M. L. Shugan Chand.

cultivation of the land is almost entirely dependent upon artificial supplies of water. Here it may be mentioned that the Lower Chenab canal irrigates nearly 2,000,000 acres of land; the Lower Jhelum canal serves about 400,000 acres, and the Lower Bari Doab canal affords aid to almost a similar area. Colonies have been established in the regions of these canals, and it is a remarkable fact that the settlers, who were largely of the nomadic class, have become expert agriculturists, and are raising crops equal in quality to those of any other part of India.

The Chenab colony is irrigated by the Lower Chenab canal, the head works

directed to the production of strong strains able to remain erect in the face of wind and rain—in short, of a plant which will, as far as possible, be immune against the ravages of rust, and will yield grain of a superior quality for milling purposes. Experiments are made in testing different types of grain; investigations are conducted as to the composition and classification of soils; the relative values of manures, the germination and selection of seeds, and the cross-

shows that 8,000,000 acres were watered from canals, 3,600,000 acres from wells, and 160,000 acres from other sources.

The administration of government is carried on under a Lieutenant-Governor, who is appointed by the Governor-General of India, and official business is transacted through the chief, revenue, and financial secretaries. There are also secretaries for the irrigation, public buildings, and roads branches of the Public Works Department.

former derive the major portion of their funds from taxes on lands, and the latter obtain funds from local taxation and Government grants, while the powers devolving upon the two boards comprise the expenditure of money upon sanitary matters, roads, dispensaries, vaccination, general improvements, and other matters.

The cause of education has, for a long period, held an important position in the administration of the province, but especially good progress has been made

1. A GENERAL VIEW OF MURREE. 2. A GENERAL VIEW OF [illegible]

Photo by J. P. Peters

ing of various types of cotton and wheat, while instruction is given to farmers by College agricultural assistants in improved methods of cultivation, the use of modern implements, and in numerous other practices so essential to profitable arable farming.

The establishment of systems of irrigation of land in the Punjab is one of the most important undertakings that could have been conceived for the development of the agricultural and industrial resources of this rich province, and of a total cropped area of 26,000,000 acres, no fewer than some 12,000,000 are under some form of irrigation. A recently published Government return

Subordinate to the Lieutenant-Governor are five commissioners over the divisions of Ambala, Jullundur, Lahore, Rawalpindi, and Multan, and these officials have control over deputy commissioners, each of whom is in charge of one of the twenty-eight districts into which the province is divided. Included among the chief heads of departments are the Financial Commissioners, the Director of Public Instruction, the Director of Agriculture and Industries, the Inspector-General of Police, the Inspector-General of Prisons, the Inspector-General of Hospitals, and the Conservator of Forests.

Control over local areas is exercised by district boards and municipalities. The

during the past fifteen or twenty years. The Director of Public Instruction, the head of the department concerned, has the assistance of an Inspector of Schools in each of the five divisions, as well as subordinate officers in each district, and excellent supervision is kept over the various institutions which have been established. The list of these commences with the University of the Punjab, at Lahore, in which there are faculties in connection with Oriental studies, Arts, Law, Science, and Medicine; there are nine Arts colleges at Lahore, Lyallpur, Sialkot, and elsewhere; eight industrial schools are maintained by district boards or municipalities, and to these must be

added the Law, Medical, and Veterinary Colleges at Lahore; the Agricultural College at Lyallpur; and St. Stephen's College at Delhi, as well as other colleges in the States of Patiala and Bahawalpur, all of which are affiliated with the University. The primary schools for boys and girls are respectively 3,430 and 640 in number. There are also about 250 middle schools, 105 high schools for boys and 18 for girls, while instruction in special subjects is given to boys in 32 institutions and to girls in 25 others. The total number of pupils of all grades is approximately 276,500 boys and 37,000 girls

LAHORE, the capital of the Punjab, is situated about one mile distant from the River Ravi, which formerly flowed beneath its very walls, and is about 840 feet above the level of the sea. It was originally surrounded by a high wall with a circuit of 16 miles, built by Akbar Khan about the end of the sixteenth century, but the modern walls, constructed at the beginning of the nineteenth century, have a circumference of only three miles. The city, it is believed, was founded about the year A.D. 200, and its history is closely connected with almost every phase of Mahomedan rule in India, but at the same time it is clear that at a very early period it was the capital city of a Hindu principality. Lahore was plundered several times between the seventh and fourteenth centuries by the rulers of various dynasties, whose objective was supremacy in Northern India, and early in the fifteenth century the city was captured by an Afghan chief, from whom it was wrested by Babar, who erected a royal residence there on his foundation of the Moghul Empire. About 1765 the Sikhs held sway over the city, and thirty years later Maharaja Ranjit Singh became "King of Lahore," but from the time of his death in 1839, the vast kingdom over which he ruled was continually being torn asunder by members of his own family, until the British—whose territories had been invaded by descendants of Ranjit Singh—fought several battles with the disputants for the throne, which resulted in the annexation of the whole of the Punjab in the year 1846.

THE GOLDEN TEMPLE, AMRITSAR.

Photo by T. T. Peters.

The reigns of the Emperors Babar, Humayon, Akbar, Jehangir (the royal architect), and others of the Moghul period, witnessed the construction of a number of magnificent shrines, mosques, and other buildings, and the making of several very beautiful gardens, which at the present day are the pride of the inhabitants of the city.

Visitors will be charmed by a visit to the Hazuri Bagh, near to the Delhi Gate, in which are a fine marble pavilion and the tomb of Maharaja Ranjit Singh. In the central portion of this building is a raised platform made of stone, upon which is a marble representation of a lotus flower, which is surrounded by eleven smaller ones. The chief flower rests upon the place in which are deposited the ashes of the Maharaja, and the remainder cover the remains of the four wives and seven slave girls, who sacrificed their lives upon his funeral pyre. Wazir Khan's mosque, also near the Delhi Gate, was built about the year 1634, and it is remarkable chiefly for the beautiful inlaid pottery work which forms the mural decorations. Near the Roshnai Gate is the shrine of Arjun Mull, the Sikh leader who compiled the "Granth," the principal portion of the Sikh Scriptures.

On the southern side of the city is the civil station of Anarkali, this name being given, by the way, to a favourite slave girl of the Emperor Akbar, who suspected her of returning a smile from his own son Jehangir, and thereupon ordered her to be buried alive. At Anarkali may be seen the gun "Zamzamah," a huge piece of ordnance made in India in the year 1761, which was used by the Afghan Ahmed Shah in the battle of Panipat, and was left at Lahore because it was far too cumbersome to be taken to Kabul.

Lahore has a masterpiece in architecture in the tomb of Jehangir, but well worthy of notice are the palaces of the same emperor and of Shahjehan, the pearl mosque, the Jama Masjid, the gardens of Shalamar, the imperial mosque of Aurungzeb, the Punjab University, the University Senate Hall containing the Oriental College, the Art and Engineering College, the Central Museum, various Government offices, the Lawrence Gardens containing Lawrence and Montgomery Halls, and the Zoological Gardens.

Government House, situated on the Mall, was originally the tomb of Mahomed Kasim Khan, a cousin of the Emperor Akbar.

The railway station on the North-Western system is a somewhat curious building, as it was designed in such a manner that it could be quickly converted into a fort in the event of trouble arising.

The railway workshops cover an area of more than 126 acres, and excellent accommodation has been provided for the 2,000 or more employees in the way of substantial dwelling-houses, library, billiard-room, theatre, swimming-bath, and recreation grounds. Shrines of famous Mahomedan saints may be seen in various parts of the city, the most famous being those of Mian Mir, Shah Mahomed Gaur, Madho Lal Hussain, and Data Ganj Baksh.

Lahore is 349 miles distant from Delhi, 1,306 miles from Bombay, and rather more than 1,200 miles from Calcutta, and at the census of 1911 it had a population of about 228,000 inhabitants.

Situated about 37 miles by the North-Western Railway system, and travelling in a south-easterly direction, is AMRITSAR, the chief town of the district of the same name, and the principal centre of commerce in that part of India lying to the north of Delhi.

The word Amritsar is derived from Amrita Saras, or "Pool of Immortality," and the city was founded in the year 1574 by Ram Das, a noted Sikh leader, upon a site granted by the Emperor Akbar. tank is the seven-storeyed tower of Baba Atl, built more than a hundred years ago, in honour of a son of Guru Har Gobind, and on the north-west side of the city is the fort of Govindgarh, which was built by Ranjit Singh at the commencement of the nineteenth century.

There are other places in the city which are worthy of notice, such as the Town Hall, the Santook Sar Tank, the Hall Bazaar, and the City Gardens.

Amritsar is the centre of a thriving trade in general produce, carried on between Central Asia and India, but it is especially noted for its woollen carpets and silk shawls, their excellent quality having been rewarded by the bestowal of a gold medal at an Industrial Exhibition in Paris.

The inhabitants are about 153,000 in number.

SIMLA, in the division of Ambala, in the Punjab, and the summer residence of the officials of the Government of India, is situated on a spur of the Central Himalaya hills at an elevation of 7,084 feet.

The scenery in Simla and the neighbourhood is exceedingly beautiful; the surrounding hills are clothed with deodars and rhododendrons; and a magnificent view is obtained from its fine Mall of the Simla Hill States and plains with their tortuous rivers.

The town has a population of about 15,000 persons, although the number necessarily varies with the change of the seasons. It came into favour as a sanitarium in the summer of 1827, when Lord Amherst, the then Governor-General, took up his residence there during the hot months.

Branch establishments have been opened here by a considerable number of the European mercantile and banking firms of Calcutta and other cities, and first-class private residences, standing in well-wooded and elevated situations, have increased in number at a rate commensurate with the commercial growth of the town, while several really first-class hotels have been erected for the convenience of visitors.

Trading consists chiefly in supplying the ordinary necessaries of life to visitors from other parts of India, but it is also a

1. GENERAL POST OFFICE, MURREE. 2. HOLY TRINITY CHURCH, MURREE.

3. CHRIST CHURCH AND BOYS' SCHOOL, SIMLA.

The chief attraction in the city, the "Golden Temple," or "Darbar Sahibs," is greatly venerated by the Sikhs, who regard it as an act of virtue to contribute to its adornments. It is a square building—dating from 1586—of white marble surmounted by a gilded dome, and is surrounded on all sides by a sacred tank, access to it being gained by a wide marble pavement. Sheltered by a handsome silk canopy is the "Granth Sahib," or Holy Scriptures of the Sikhs, portions of which are read continually throughout the day; the sacred volume is the object of devout worship by the thousands of pilgrims who visit the city. Near to the

forwarding centre for goods destined for China and Tibet. One exceedingly fine building is the Bishop Cotton School, for

RAM NOUMI, AMRITSAR.

European boys, founded by the bishop himself in 1866 in order to commemorate the deliverance of the British in India during the Sepoy mutiny.

AMBALA, a large commercial city with

BESAKI FESTIVAL, AMRITSAR.

military cantonment, 182 miles distant from Lahore and 62 miles from Delhi, has since the year 1849, been the head-

quarters of the district of the same name.

It is a junction station between the North-Western, East Indian, and Ambala-Kalka Railway systems.

Ambala is believed to have been founded by Amba, a Rajput in the fourteenth century, and, in default of surviving heirs, on the death of one of its rulers in 1823, it lapsed to the British. The cantonment, lying about four miles distant on the south-eastern side of the city, was constructed in 1843, and it covers an area of more than 7,000 acres in extent. Since that date a flourishing trade has been carried on in grain, cotton, oilseeds, piece-goods, carpets, cloth, wool, silk, and other goods, while there are factories for the ginning and pressing of cotton, together with flour mills and glass works.

Ambala is three miles distant on the eastern side of the Ghaggar river, and it has a population of about 80,000 inhabitants.

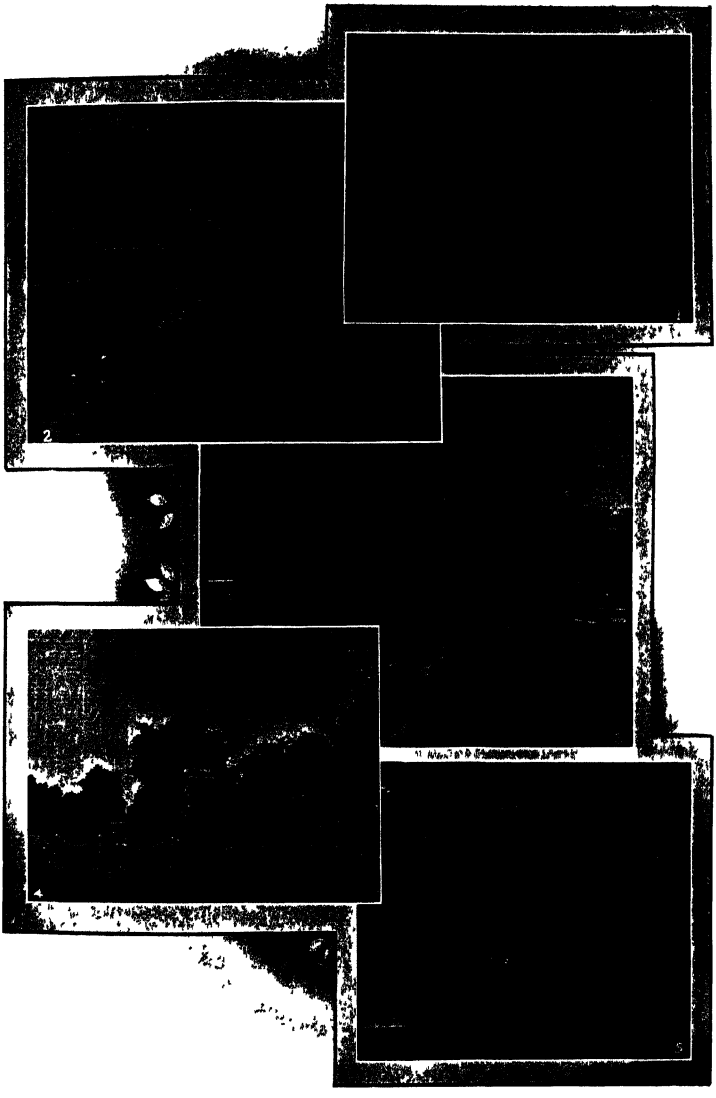
RAWALPINDI, a large commercial city and cantonment, and the headquarters of the district of the same name, is situated on the bank of the River Leh, on the Jhelum Valley road to Kashmir.

Visitors to Rawalpindi should not fail to drive to the Margala Pass, a distance of about fifteen miles, where they will see the obelisk and drinking fountain erected to the memory of General John Nicholson, who did heroic service and eventually fell in the siege of Delhi in 1857.

MULTAN, situated about four miles distant from the river Chenab, is a city of great antiquity, and as one of the ancient frontier strongholds in Northern India it is exceedingly interesting from a historical point of view. It is believed to be identical with Kaspeiraea of the writings of Ptolemy, and tradition is responsible for the supposition that the present city is built on the site of one which was besieged by Alexander about the year 350 B.C.

It was largely owing to its geographical position that Multan was, for the succeeding 700 or 800 years, being constantly attacked by various ambitious powers. The Arabs penetrated the district of Multan before the close of the seventh century, and they were not dislodged for a period of more than 300 years. Subsequent rulers or governors included Mahmud of Ghazni, Mahomed of Gaur, and other famous leaders of armies of those early days, while from about 1200 to 1520 the kings of Delhi held nominal sway over the city. The Moghul Emperors had the strength of forces and good government to secure peace for the district until 1770, when the Sikhs appeared on the scene, but in the year 1840 a series of defeats, inflicted upon those invaders during the second Sikh war, resulted in the establishment of British supremacy.

One of the most striking features of



1. JUMMA MUSJID, RAWALPINDI. 2. SADAR BAZAAR STREET, RAWALPINDI.
3. GENERAL VIEW OF RAWALPINDI CITY. 4. QUEEN VICTORIA'S STATUE, RAWALPINDI.
5. MASSEY'S GATE, RAWALPINDI.

1, 5. Photos by J. F. Peters.

interest in the city to-day is the magnificent tomb, 100 feet in height, of Ruku-ud-din, a Mussalman saint, which can be clearly seen from a distance of 14 miles. Other interesting sights include the tomb of Shah Ruku-i-Alam, the picturesque ruins of the old fort, and the remains of several fine old temples.

Multan is famous for its manufacture of glazed pottery, enamel work, silver ornaments, woollen carpets, silk fabrics, and tin boxes.

The civil station and cantonment is 207 miles distant from Lahore, and 1,486 miles from Calcutta, and the inhabitants are nearly 100,000 in number.

MURREE, in the district of Rawalpindi, in the Punjab, is built on a spur of the Himalaya range, at an elevation of 7,057 feet, and has for more than half a century been a hill sanitarium for the military as well as for officials of the Punjab Government. It is situated about 37 miles distant from the railway station at Rawalpindi, with which it is connected by a service of *tongas*. Magnificent views of forest-clad precipitous heights and fertile fields in the valleys below, while on a clear day the snow-capped peak of Nanga Parbat (26,182 feet) can be clearly seen.

JULLUNDER was formerly the capital of the ancient Rajput kingdom of Katoch, which existed prior to the invasion of Alexander, and it is now the administrative headquarters of the district of Jullunder. Its station, on the North-Western Railway Company's system, is 81 miles distant from Lahore, and the cantonment, about seven square miles in extent, is four miles from the city. Practically the only visible sign to-day of its great antiquity is the "Devi Talab" tank, which tells of its having been occupied by primitive Aryans.

A somewhat strange incident is now witnessed about the end of each year, when a grand singing contest is held near to the tank, in memory of a Hindu Sadhu, who was regarded as the "Singing Laureate" of India. Renowned vocalists, hailing from all parts of the country, assemble for the competition, which usually lasts four days, and they are entertained by public subscriptions, towards which the adjoining native state of Kapurthala contributes largely.

JHELUM, the chief town of the district of Jhelum, is most picturesquely situated on the left bank of the river of the same name, and much of its importance lies in the fact that it is a large timber depôt, trees from the Kashmir forests being floated down the river for collection there.

SIALKOT is a civil station and cantonment situated on the northern bank of the River Aik, in the Lahore division of the Punjab. It is on the Wazirabad-Jammu branch of the North-Western Railway, being about 438 miles from Delhi. It is believed that the town was founded by Raja Sal, who belonged to the family of the Pandavas mentioned in the Mahabharata, and there are evidences to show that it was in the first century A.D. the capital of the kingdom of Raja Rasalu, son of Salwahana or Vikramaditya. Nearly in the centre of the town is a large mound of earth, under which ruins of the stronghold of Rasalu are said to have been discovered. The present fort was constructed during the twelfth century, and it will for ever remain famous in history as the place in which a mere handful of European residents bravely defended themselves against a large number of rebels during the Mutiny of 1857. About one mile distant on the northern side of the town is the cantonment, with its extensive public gardens, tennis and other courts, library and reading-rooms. Numerous interesting objects may be seen in the town, such as the dismantled fort, the handsome shrine of Imam Ali-ul-hak (a temple erected by Raja Tej Singj), and a number of ancient as well as modern shrines of imposing architecture.

The town is also noted for its manufacture of cricket bats, tennis racquets, steel trunks, tents, surgical instruments, and paper.

KASAULI is famous as the place where one of the "Pasteur Institutes of India" has been established. It lies at an elevation of 6,322 feet, overlooking the Kalka Valley, in the district of Ambala. More than 4,000 patients are treated annually for the prevention or cure of hydrophobia, excellent accommodation for paying and indigent guests being provided, while special quarters are reserved for Indian visitors.

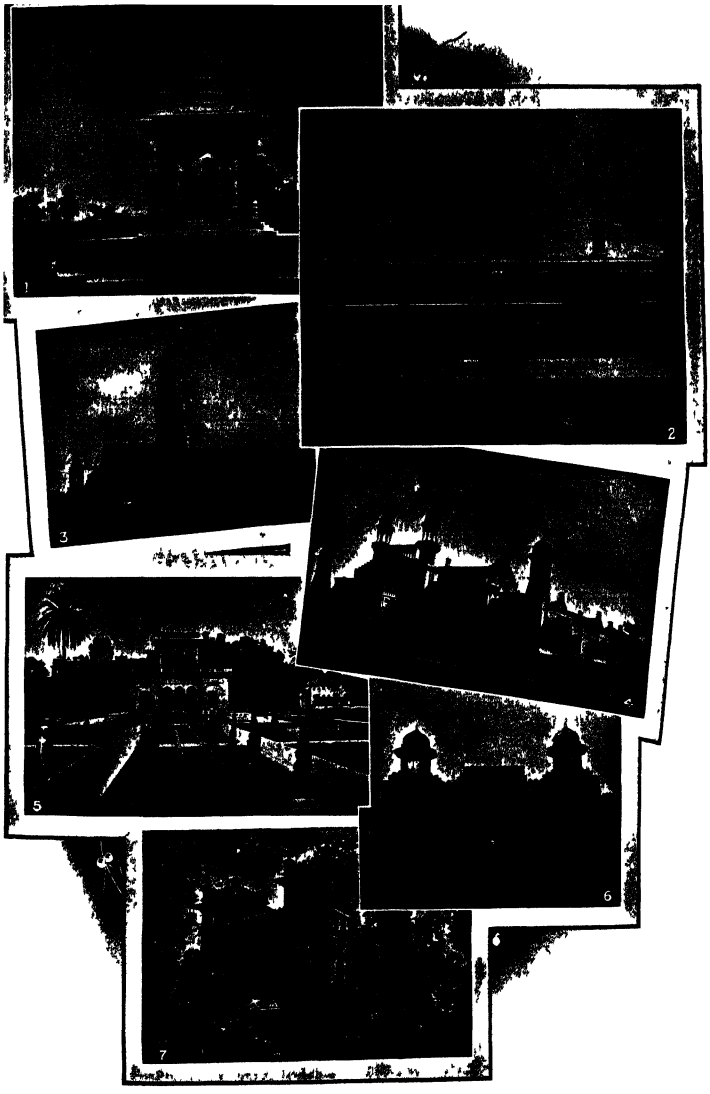
The town is a cantonment and convalescent depôt, and can be reached by cart from Kalka or Kasauli Road stations, on the Kalka-Simla Railway system, which are respectively nine and five miles distant. The road to Simla is 32 miles in length.

KURUKSHETRA.—This name, given to a tract of territory in the division of Ambala, some 70 miles in length and 30 miles in width, is regarded as the holy land of the Hindus, as the ancient Aryans founded their first settlement and started the Hindu religion within its borders. Moreover, it contains about 350 shrines, holy tanks, and places of pilgrimage, the most important of which is at Thaneswar, which adjoins Kuruksheta.

There is a railway junction station at Kurukshetra, on the Delhi-Ambala-Kalka Company's system, 11,000 miles distant from Calcutta, and 96 miles from Delhi, and also a station at Thaneswar, on a branch line running in a south-westerly direction, the two places being only about a mile apart.

The sacred tank at Thaneswar is nearly a mile in length and half a mile in width, and is well provided with substantial bathing ghats on two sides, and in the centre of it is an island upon which there is a temple, to which access is gained by causeways. The Saniahet tank is not so extensive as the one just mentioned, but it is most picturesquely situated among groves of mango-trees, among which may be seen a number of beautiful temples and private residences. Many thousands of Hindu pilgrims from the Punjab, United Provinces, Bengal, and elsewhere assemble at Thaneswar when an eclipse of the sun takes place, for the purpose of bathing in the holy water, and it was estimated that at the first festival after the extension of the railway to Thaneswar in April 1894, there were no fewer than three-quarters of a million people in the gathering.

PANIPAT, situated about 53 miles to the north of Delhi, on the Delhi-Umballa-Kalka Railway, is one of the historic towns of Northern India. Its antiquity is proved by references to it being made in the Mahabharata as one of the five places claimed by Yudhisthera from Duryodhan as the price of peace in the Kaurava and Pandava War. Panipat will always remain famous in the chronicles of India by reason of the fact that it was the scene of three of the most important battles. The first of these was in 1526, when Ibrahim Lodi was defeated by the Emperor Babar, who thereby established the Moghul dynasty; the next occasion was when Akbar was victorious over Himu, the Hindu Governor of the Afghan Emperor, Sher Shah, in 1556; and the third was in 1761, when Ahmed Shah Durrani, the Afghan, conquered the Marathas in 1761. The old town of Panipat was built near a former bank of the River Jumna, while the modern one stands on a mound of ruins of its predecessor. Many ancient monuments, tombs, and temples may be seen, but the chief



1 QUEEN'S STATUE, LAHORE.
2. THE EMPEROR JEHANGIR'S TOMB, SHAHDARA.
3. GOVERNMENT COLLEGE, LAHORE.
4. THE CHIEF COURT OF THE PUNJAB, LAHORE.
5. HAZURI BAGH, LAHORE.
6. FORT GATE, LAHORE.
7. TOWN HALL, LAHORE.

4, 6, 7 *Photos by S. Day & Sons*

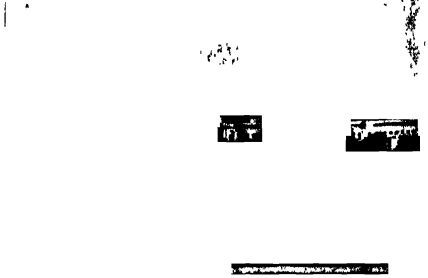
attraction is the tomb of the Mahomedan saint, Kalandar. The town has cotton-ginning and pressing factories, as well as manufactures of cutlery, silvered glass, brass vessels, and other household requisites.

BHIWANI, the most important commercial town in the district of Hissar, has risen rapidly from a small village until it has become the chief centre for trade with Rajputana. It is 890 miles distant from Bombay and 857 miles from Karachi, and the latest census gave the number of inhabitants as 35,917. Its merchants deal chiefly in wheat, flour, salt, sugar, cotton goods, and iron, but it has several industries, including the manufacture of articles of brass and other metals, tin boxes, and other goods, while it has more recently become possessed of cotton-pressing and ginning factories. Bhiwani was constituted a municipality in the year 1867, and large sums of money have been expended on educational, medical, and other matters, which have considerably improved the appearance of the town and have materially added to the comfort of its inhabitants.

KANGRA.—The district of the same name, of which the town of Kangra is the headquarters, lies on either side of the Sub-Himalayan chain, in the Punjab, and consists of three parallel ranges, forming four valleys, in each of which a large river takes its source. There is, naturally, a great diversity of very fine scenery, comprising the rugged aspect of the glorious Himalayas and the fertile valleys of Kulu, Spiti, and Bangahal.

The famous Kangra Valley was ruled by Katoch Rajputs from time immemorial until the advent of the British at the conclusion of the first Sikh War. The name Kangra was applied strictly to the fort, which stands on a precipitous rock of great height, and the town itself was known as Nargarkot.

The latter is built on the slopes of a hill towering above the Banganger river, and it is frequently referred to in early history as the "Benares of the Punjab." Among its numerous shrines, the one worthy of special notice is the temple of Devi, but it suffered considerable damage during an earthquake in 1905.



SECRETARIAT BUILDINGS (TEMPORARY), DELHI.

GUJRAT.—Tradition is responsible for the assertion that the original town of Gujrat was founded during the fifth century by Rani Gujravi, daughter-in-law of Raja Rasalu, of Sialkot. The present town was probably erected during the reign of Akbar (1556–1605), as that emperor is credited with being the builder of the fort. A noted Mahomedan saint named Pir Shah Daula resided in Gujrat, and with the vast wealth which he accumulated from the offerings of his devotees, he erected a number of very handsome buildings. His shrine is visited to-day by many pilgrims from considerable distances. Gujrat belonged to the Sikhs about the year 1765, and it was the scene of the battle in which they were defeated by Lord Gough in 1849, thus bringing the Province of the Punjab under British rule.

Gujrat is the head-quarters of the district of the same name in the Rawalpindi division of the Punjab, and it is about 70 miles distant by the North-Western Railway system from the city of Lahore.

THE ALLIANCE BANK OF SIMLA, LTD.

The Alliance Bank of Simla, Ltd., commenced business at Simla on the 23rd March, 1874, and soon became a prosperous institution. The bank was started to take the place of the United Bank of India, Ltd., which commenced business at Simla and Umballa in 1866. This bank never attained much success, and in October 1873 the present chairman of the Alliance Bank was invited to take the management in the hope of retrieving the bank's fortunes. Matters, however, had gone too far for this object to be accomplished, and the United Bank was placed in voluntary liquidation on the 21st March 1874, the Alliance Bank commencing operations two days later. It had been arranged that all the good business of the old bank should be taken over by the new concern, the shareholders of the former getting fifty per cent. of their capital of Rs. 2,50,000 in shares of the new bank.

The Alliance Bank started with a capital of Rs. 5,00,000, of which Rs. 2,50,000 was issued to commence with. One-half was taken up by the public and the other half was allotted to shareholders of the old United Bank of India. The remainder of Rs. 5,00,000 was issued as follows: Rs. 1,50,000 on the 1st October, 1877, and Rs. 1,00,000 on the 1st May, 1878. In 1891 the capital of the bank was increased to Rs. 10,00,000, in 1904 to Rs. 15,00,000, in 1909 to Rs. 20,00,000, in 1914 to Rs. 30,00,000, and in 1916-17 to Rs. 66,61,200. The authorized capital is divided into 45,000 ordinary shares and 55,000 preference shares. At present 30,000 ordinary shares and 36,612 preference shares, all fully paid, are in issue.

The reserve fund has been regularly and steadily increased year by year since the bank commenced operations, partly from premium on share issues and partly from profits, and now amounts to Rs. 42,00,000 which is invested in Government paper. Since its formation the bank has paid dividends, increasing from seven per cent. in the first year to seventeen per cent., which it is now distribut-

ALLIANCE BANK OF SIMLA, LTD.

1 SIMLA TOWN BRANCH. 2 DELHI BRANCH 3 AMBALA BRANCH.

ing. At the end of the first half-year, namely the 31st December, 1874, the working capital stood at Rs. 3,37,000. This has increased year by year until it now amounts to Rs. 11,25,000, and from these figures it will be seen that the bank has grown into a large and powerful institution.

The Alliance Bank of Simla, Ltd., was, in the first instance, intended as a local institution at the summer headquarters of the Government of India and the permanent headquarters of the army in India, but on the failure of the Punjab Bank it was decided to secure as much of that bank's business as possible. The Alliance Bank was appointed liquidator of the Punjab Bank, and branches were opened at Murree in 1877 and Lahore in 1878. Subsequently branches were opened at Umballa in 1885 and Cawnpore in 1887. The Alliance Bank also liquidated the Himalayan Bank, Mussoorie, and Lloyd's Bank, Darjeeling, and opened branches at both places in 1891 and 1896 respectively.

The Alliance Bank came into greater prominence during 1916 by reason of a considerable enlargement of its activities, inasmuch as on the 11th April of that year it absorbed the Punjab Banking Company, Ltd., and on the 1st July following took over the Delhi & London Bank, Ltd. These amalgamations materially added to the importance, strength, and prosperity of the Alliance Bank, which has now come to be one of the best-known banks in India, with thirty-nine branches spread over the various trade centres of this country. During 1917 its position has been still further strengthened by the proposal to absorb the Bank of Rangoon, Ltd., on the 1st December, 1917, and by taking over certain offices and approved business of the Bank of Upper India, Ltd. It was in order to finance the new acquisitions that the authorized capital was raised in 1917 by Rs. 20,00,000 to Rs. 1,00,00,000, of which Rs. 15,00,000 will be in preference shares and Rs. 5,00,000 in ordinary shares. It was arranged that the preference shares should be taken up by the shareholders of the banks of Rangoon and Upper India and that the ordinary shares should be sold at Rs. 260 per share to the Development Corporation of India, Ltd., Delhi, which has recently been formed under powerful auspices for the development of India's resources, and with which the Alliance Bank hopes to co-operate and work to material advantage in the future. The premium on the sale of the new ordinary shares will amount to Rs. 8,00,000, and this the directors propose to earmark in the next balance sheet as a special reserve against depreciation in rupee paper.

An analysis of the bank's balance sheets for two years is now given, and it should be mentioned here that the figures for 1917 for the first time include the figures of the Delhi and London Bank.

For the purposes of a comparison of the liabilities and assets of the bank, the following figures are taken from balance sheets for the years ending on the 30th June, 1900, and 1917 respectively.

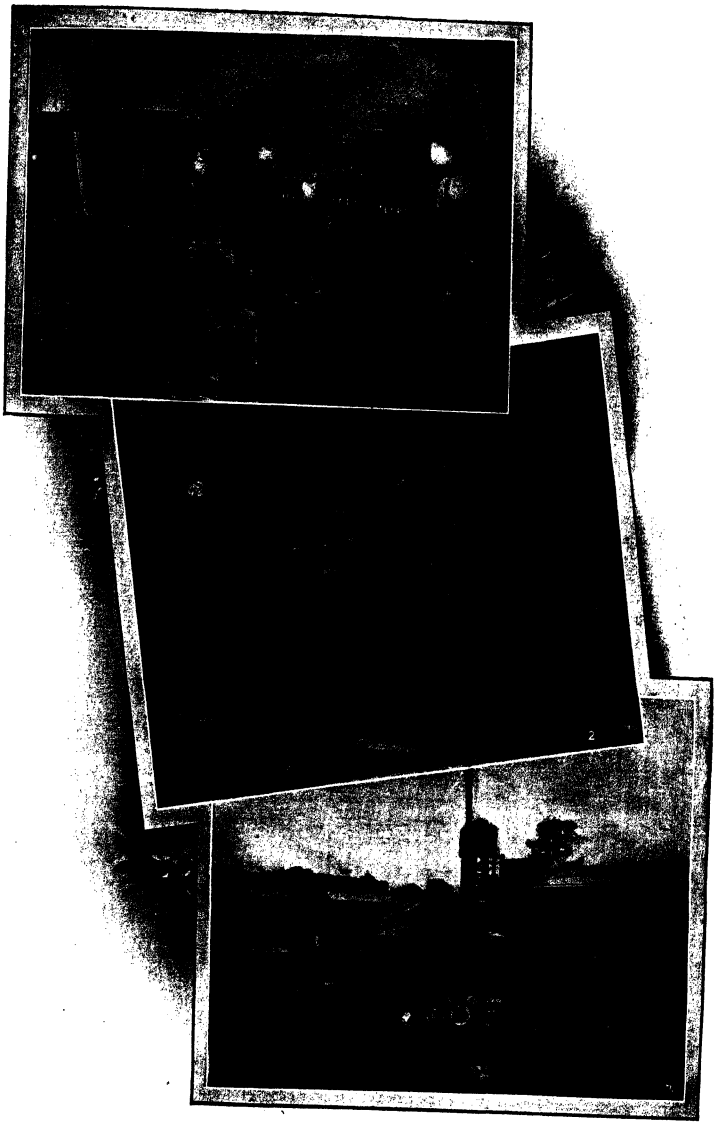
In 1900 the paid-up capital amounted to Rs. 10,00,000; reserve funds, Rs. 12,00,000; deposit and current accounts, Rs. 2,04,14,141; miscellaneous liabilities, Rs. 2,99,440; profit balance, Rs. 1,47,034; and total liabilities, Rs. 2,30,60,165. For the year just concluded the figures are: Paid-up capital, Rs. 66,61,200; reserve funds, Rs. 40,00,000; deposit and current accounts, Rs. 10,00,27,222; miscellaneous liabilities, Rs. 9,55,662; profit balance, Rs. 9,16,709; and total liabilities, Rs. 11,25,72,022. In the statement of assets for 1900 the cash account is stated to be Rs. 38,76,480; investments, Rs. 37,22,612; bills discounted, loans, &c., Rs. 1,47,55,227; bills receivable, Rs. 81,823; bank premises, Rs. 6,24,483; and total assets, Rs. 2,30,60,165. The amounts for the year 1917 are: Cash. Rs. 1,63,67,249; investments, Rs. 2,72,40,798; bills discounted, loans, &c., Rs. 6,44 59,653; bills receivable. Rs. 5,00,637; bank premises, Rs. 40,03,685; and total assets, Rs. 11,25,72,022.

Recent profits and dividends are given as follows: For the year ending 30th June, 1914, the gross profits were Rs. 29,40,849; expenses, Rs. 25,57,351; net profit, Rs. 3,83,498; dividend on ordinary shares at the rate of fourteen per cent. per annum. The statement issued three years later were: Gross profit, Rs. 56,15.115; expenses, Rs. 47,21,322; net profit, Rs. 8,93,793; dividend on preference and ordinary shares at the rates of six per cent. and seventeen per cent. respectively.

The proportion that the net profit for the past twelve months bears to the paid-up capital is 13.4 per cent.; to capital and reserve combined, 8.4 per cent.; and to the total working resource seven per cent.

THE AMRITSAR DISTILLERY COMPANY.

The Amritsar Distillery Company was established as a private company in the year 1898, the promoters being the brothers A. E. Dyer and E. J. R. Dyer, of the firm of Messrs. E. Dyer & Co., brewers, well known in India. It was the first private distillery in the Punjab, and it is to-day both the oldest and the largest in the Province. Previous to the year 1898, the spirit consumed by the masses of the Punjab was made by indigenous methods in Government distilleries in almost all district and *tahsil* headquarters of the Province, and these at one time numbered no less than 118. As means of communication improved these small distilleries were thinned out, and distilling was centralized until, in the year 1897, there were only seventeen such factories in existence. It was at this juncture that Government decided to sever its connection with distillation and to allow the Province to be supplied by unaided private enterprise, and it was thus that the Amritsar Distillery was erected. Two patent steam stills, one fire still, and one small Indian still were erected at considerable expense, and they were capable of turning out spirit to the extent of 3,00,000 London-proof gallons per annum, which was more than the average consumption in the Province at the time. The first few years of the distillery were marked by troublesome experiences. All the Government concerns were not at once closed, and the Indian licencees boycotted the private ones as much as possible, as they believed that Mr. Dyer was responsible for the closure and for depriving them of a certain number of retail vend licences which Mr. Dyer in one year took the risk of buying up in Lahore in the hope of extending the business. The Government distilleries were, however, gradually closed; three more modern ones were licensed; and within a few years the spirit trade of the Punjab was entirely in the hands of private enterprise. Mr. A. E. Dyer died a few years after the Amritsar distillery was commenced, and Mr. E. J. R. Dyer became sole proprietor. This gentleman died in the year 1911, and from that date the distillery was carried on under the control of the Administrator-General of Bengal until the end of the financial year 1916-17, when it was bought and taken over by the Trust of India, Ltd. In the year 1908 the managing authorities were permitted to tender for the supply of spirit to the State of Patiala, and they secured and held the contract until the



AMRITSAR DISTILLERY COMPANY.

1. Wholesale Bottling Department. 2. Fermentation Room. 3. General View.

State erected its own distillery. The manufacture of Indian spiced spirits was started in 1909, and to this day those products are given preference in all parts of the Province. The output of the distillery was increased in 1910, when the State of Kashmir was added to the list of those places to be supplied, and in 1912 the Distillery was allowed to tender for the supply of spirits to the Sind Province. From the opening of the distillery to the end of the financial year 1916–17 some 36,00,000 gallons of L.P. spirit have been sold, and Government revenue to the extent of about Rs. 1,45,00,000 has been paid. Many improvements will now probably be introduced, as the company has been absorbed by the Trust of India, Ltd., and not the least of these will be the collecting of carbonic acid gas, of which some 700 tons can be produced annually. The company has again this year (1917) been allowed to tender for the supply of country spirit for Sind, and have secured trade in that Province to the extent of about 2,00,000 gallons of L.P. spirit. The company has a normal staff of three Europeans, two of whom are now at the Front, namely, Captain F. G. Carter and Sergt. C. B. Hamilton, and the distillery is being carried on under the management of Mr. A. C. Mullen.

THE AMRITDHARA PHARMACY.

Shakespeare, in his *Twelfth Night*, says: "Some are born great, some achieve greatness, and some have greatness thrust upon them." Of these three conditions perhaps the second is the one which would appeal with the mightiest force to the majority of the human race, although the third would possibly prove to be a close runner-up.

A sound mind in a young and sound body naturally seeks an outlet for inherent capabilities, and the possessor of it will strain every nerve to attain the goal of his ambitions. Fame is, however, not so easily acquired in the present day with its educational facilities as it was in the time of our forefathers, when there were fewer opportunities for the development of genius. History tells of eminent discoverers in every branch of science and of commercial activities, but as long as the world exists there will always be men springing into prominence who have brought to light some new force, some invention, or some theory which will be of incalculable benefit to mankind in general.

These notes have reference to one who was not "born great," but who has achieved a marvellous reputation in the sphere of medicine by the exercise of unmistakable natural abilities.

The subject of the sketch, Pandit Thakur Datta Sharma Vaidya, the proprietor of the "Amritdhara" pharmacy in Lahore, comes of a Brahman family residing at Fatehwal, a village in the Ajnala subdivision of the district of Amritsar in the Punjab. He was born in the year 1881, and after receiving his early education in his native village, he went to Amritsar to continue his studies, especially, however, with the view of gaining a good knowledge of the English language.

A boy soon finds his level in a large school, and the verdict of his colleagues is expressed by the comradeship or aloofness in which he is held. Pandit Thakur Datta Sharma won the somewhat rare distinction of securing the admiration of students senior in age to himself, and his proficiency in class-work—particularly in mathematics, a favourite subject with him—obtained for him a mastership for the teaching of his own fellow scholars after the ordinary hours of duty.

While at the school he evinced a strong desire to become skilled in the science of medicine, and, as hundreds of thoughtful students have done in the past, he loved to roam by himself, pondering over the subject which had taken such a hold upon his imagination that sleep and food were almost non-existent necessaries of life. To his credit let it at once be said that this particular trend of mind appears to have had its origin in a strongly grounded desire to relieve suffering by dispensing specifics calculated to arrest disease and prolong life. To this end he associated freely with *Sannyasis* (ascetics and saints of India), from whom he derived much information which was invaluable to him in later years.

Shortly after that time he began to read (after school hours) medical works with an experienced practising *hakim*, who not only instructed him in the theory of the healing art, but also enabled him to witness the effects upon patients of certain specific drugs.

The Pandit then went to a college at Lahore with the object of further prosecuting his studies, but he was dominated to such an extent by his predilection for the work of a medical man that he abandoned his intention of taking merely classical degrees, and even forfeited a Government scholarship which had been granted to him.

It was at this juncture that the practice of medicine according to ancient Hindu systems appealed to him with such effect that he at once arranged for a course of study with some of the most famous vaidyas of the day. This led to a keen desire on his part to open an *Ayurvedic* pharmacy, but owing to private family affairs the matter was temporarily suspended.

With great reluctance he entered Government service at a small salary, but his heart was not in his work, he craved for the pestle and mortar, and for the smell of chemicals, which was to him as the very breath of heaven. He therefore at the same time opened a small shop in Lahore for the sale of medicines, and he soon received such generous support from the public that he gave up his Government appointment in the year 1914 and devoted himself entirely to his cherished business.

One of his first ventures in his new enterprise was the establishment of a weekly medical journal, named *Desh-Upkarak*, for the benefit of medical practitioners, and that publication is now printed in Urdu as well as Hindi in order that Unani and Vedic professional men may equally share in its benefits.

The Pandit never relaxed his efforts to secure a specific medicinal preparation which he trusted would fulfil his highest expectations, and after many years of incessant study he produced "Amrit Dhara," or the elixir of life, which the proprietor claims to be a cure for a very large number of diseases. Within a year the Pandit's discovery became recognized far and wider, and in the words of an author, "it earned for the Punjab something of the veneration which the ancient world had for Greece."

Notwithstanding the success already achieved in the ayurvedic system the Pandit had an almost unquenchable hunger for greater knowledge, and he accordingly engaged a *hakim* to teach him the Unani system of medicine, and a qualified practitioner to instruct him in the principles of allopathy, while an English dental surgeon has coached him in that special branch of science.

The sales of "Amrit Dhara" increased with great rapidity, necessitating the construction of the Amritdhara Buildings, which are not only well known on account of their palatial character, but also from the fact that the premises contain the

AMRITDHARA PHARMACY (PANDIT THAKUR DATTA SHARMA).

1 Amritdhara Buildings 2 Pandit Thakur Datta Sharma Vaidya, Inventor of Amritdhara

3 Staff of the Amritdhara Pharmacy. 4 A Part of the Pharmaceutical Works

largest collection of *Ayurvedic* medicines in Northern India. The structure has a frontage of 150 feet with a depth of 300 feet, and a portion of it was opened by the late Dr. P. C. Chatterjee, C.I.E., retired judge of the High Court of the Punjab, while the remainder was "fathered" by Mr. F. W. Kennaway, then deputy Commissioner of Lahore. Thousands of phials of "Amrit Dhara" were sent away every month, and the postal authorities, finding that the dispatch of such a vast number of parcels was too great an undertaking for their resources, established a sub-post office named "Amritdhara" post office in the Amritdhara Buildings for the express purpose of dealing with the Pandit's business. A striking proof of the popularity of this specific was given when the Lahore Municipal Council bestowed the name Amritdhara Road upon the adjoining thoroughfare.

It may be added that the Pandit has greatly benefited the public by his original works on various branches of medical science which contain a vast amount of up-to-date information.

Apart from his professional engagements the Pandit has shown that he has a sympathetic side to his nature, as the "All-India Vedic and Unani Conference" owes its existence to his efforts, and the "All-India Brahman Conference," recently held at Lahore, claimed him as secretary of the proceedings. Any movement tending to the welfare of his country has his warmest support, and his numerous charitable acts show him to be a worthy successor to his father and grandfather, who were widely known for their zeal in religion and their spirit of benevolence.

M. ASMATULLA.

To have become the proprietor, and to undertake the full control, of half a dozen factories as well as of an extensive mercantile business at the comparatively early age of fifty years, is the soundest possible proof of the ability and energy displayed by Mr. M. Asmatulla, of Lahore. This gentleman started life at the lowest rung of the ladder, but he possessed shrewd common-sense and great determination, qualities which rarely fail to result in success. Practical experience was gained by him from various sources of commercial life, and it is that which is at the present time the foundation of his activities.

Mr. Asmatulla is a merchant in a large way of business, dealing in coal, wool, cotton, and other goods, exporting them to the principal markets in India and Europe, and he has also obtained a first-class diploma as a mechanical engineer. His premises at Naulakha, Lahore, are most conveniently situated adjacent to a main line system of railway, with which the works have—at Mr. Asmatulla's own expense—been connected by a private siding, which very greatly facilitates the arrival and dispatch of raw material and products.

It is, however, as an owner of factories that this gentleman is best known, and he is now sole proprietor and manager of the following concerns: (1) A Cummin's patent small-measurement hydraulic cotton and wool-baling press, which was established in 1903. The factory is fitted with twenty single rollers, but this number is to be increased owing to pressure of work. (2) A cotton-ginning factory started in 1918. (3) An ice factory, worked on the Cummin system, supplied by the Pulsometer Engineering Company, Ltd., and established in 1912. The daily output of ice is about five tons, all of which is consumed locally. (4) An iron and brass foundry able to turn out castings up to two tons, together with a workshop fitted with an excellent equipment of machinery and tools, among which are a planing machine and lathe with respective capacities up to 10 feet and 6 feet. (5) A cotton press and ginning factory at Sangla Hill containing baling and finishing presses, with twenty single and eight double rollers by Messrs. John Shaw & Sons, and (6) An ice factory at the Lahore Cantonments, established in 1902, capable of making five tons daily by the "Siddeley" ether system. Practically the whole of this quantity is disposed of locally.

Mr. Asmatulla has for a considerable time enjoyed the privilege of holding contracts from the Government of the Punjab, and he is especially proud of the fact that he has received most flattering testimonials from the highest authorities as to the manner in which he carries out his undertakings.

This gentleman is greatly respected in public and private life, and he has gained the fullest confidence of all with whom he has had business dealings.

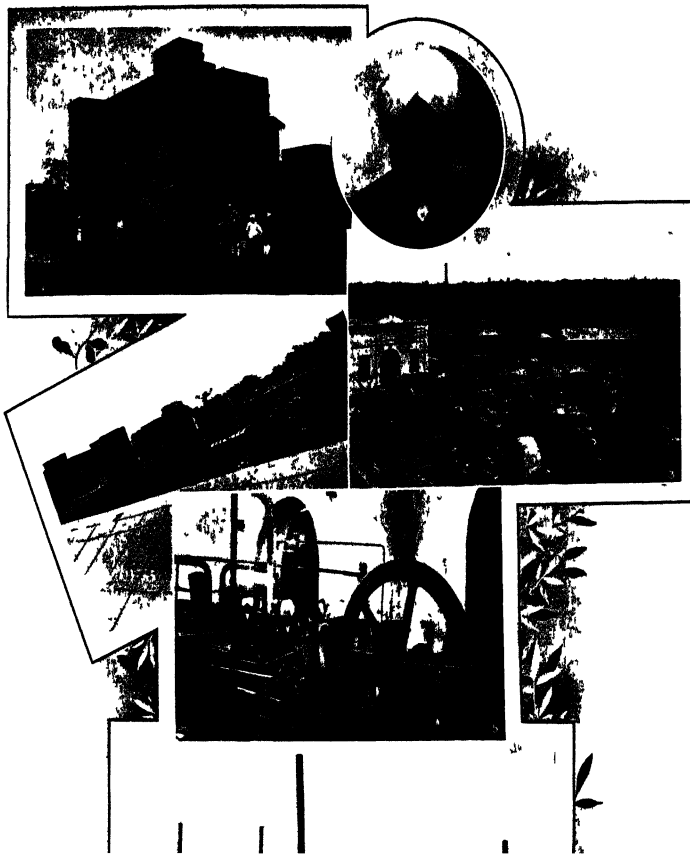
THE AYURVEDIC AND UNANI TIBBI COLLEGE, DELHI.

The Hindu and Mahommedan indigenous systems of medicine in vogue in India are called respectively the *Ayurvedic* and the *Unani* (Greek).

The *Ayurvedic* system is undoubtedly one of the most ancient and earliest developments of the art of healing in the world. Like all other sciences it had been a progressive one up to the fifteenth century. Its period of growth can be roughly divided into three epochs of one thousand years each. The *Vedic* period (1500 to 600 B.C.) had its commencement with the charms and rituals of the *Vedic* medicine man, and ended in a systematic study of herbs and simples. In the *Ayurvedic* period (500 B.C. to A.D. 500) the art of healing rose to the dignity of a science. The Tantric period (A.D. 600 to 1500) developed the science of chemistry, which always remained a handmaid of medicine. Thus the Hindus were the pioneers in the art of healing, and it had through the Arabs a considerable influence over mediæval Europe.

The Greeks obtained the art of healing partly from India direct and partly from Egypt. The name of Hippocrates (460-357 B.C.), who was called "the father of medicine," and by whom names were ascribed to diseases which are still retained, and who treated it methodically for the first time, is still known all over the world as one of the greatest benefactors of mankind. The Greeks improved upon it, and their disciples, the Romans, added to it very considerably, chiefly through Galen (A.D. 130-200), who was the author of valuable treatises on anatomy and physiology, which were accepted as standard works until the close of the fifteenth century.

The Arabs in their turn not only kept the art alive during the dark ages, but they also placed its foundation for the first time on a scientific basis. They, assisted by their Jewish and Christian contemporaries, derived their inspiration both from the East and the West. Their system was a compromise between the *Ayurvedic* and the Græco-Roman ones, but they continued, in sheer gratefulness to their masters, to call their system by the original name of *Unani*, although it would be more aptly termed the Arabian system. This system remained in full force throughout the entire civilized world from Java to Cordova, and from Astrakhan to Colombo, until the end of the seventeenth century, when, the Baconian method of research having been developed, the art began to be presented in a new form, especially in the West. The Mahommedan conquerors brought the



M. ASMATULLA

1. Cotton and Wool Baling Press, Ice and Ginning Factory and Iron Foundry, Lahore City. 2 M Asmatulla 3 Factory Compound
4 Factory Compound 5. M Asmatulla Ice Factory, Lahore Cantonment 6. Shamcha Hill Roadside

1 Exterior of Hindustani Dawa Khana, Delhi

THE AYURVEDIC AND UNANI TIBBI COLLEGE

2 Interior of Hindustani Dawa Khana, Delhi

3 Lady Hardinge Female Medical School

4 Lady Hardinge Female Hospital.

Unani system with them into India, and being patronized here by their emperors, it incorporated, without any prejudice from the *Ayurvedic* system, what was best in it.

The secret of the popular attachment to these Indian systems lies in their drugs and methods of treatment, which are simple and indigenous to the country, and therefore more effective and cheaper than those of Europe, which are, after all, exotic and too expensive for a poor country. The only drawback under which these systems laboured, and were on that account liable to be displaced by their more fortunate Western rival, was their not having availed themselves of modern discoveries in science.

The first man among the *Unani* physicians of India to see the necessity of improving their system was the late Haziq-ul-Mulk Hakim Abdul Majid Khan, a scion of the oldest family of the royal physicians at Delhi. He established a school in 1889, and introduced into its curriculum the teaching of modern anatomy and surgery. His younger brother, the present Haziq-ul-Mulk Hakim Ajmal Khan, has gone a step further. He has laid the foundation of a college and a *dawakhana* (pharmacy), in which provision is made for instruction in the principles of physical science, anatomy, physiology, clinical medicine, and surgery, along with the old science of therapeutics and pathology.

Lord Hardinge (late Viceroy and Governor-General of India) was kind enough to lay the foundation of a wing of this college in March 1916. What he said in his historic speech on the occasion will ever remain the Magna Charta of the indigenous systems in their unequal struggle with their modern rival. A quotation from that speech is as follows :—

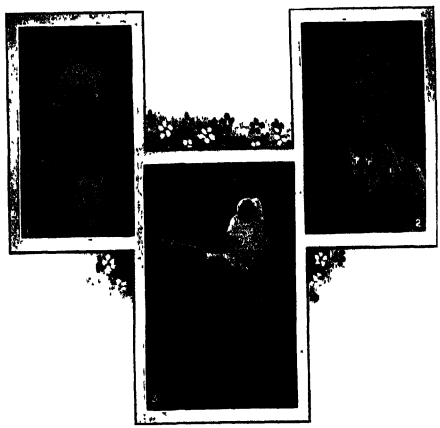
"I came to the conclusion that our Western system, however much it may strive after perfection, has not attained it yet. Its theories are constantly undergoing changes and development, and its ideas of the causes and best methods of the treatment of cholera, malaria, and plague, to take some striking examples, have undergone remarkable transformations within quite recent years, and I may add that it has borrowed some of its best-known drugs from the East, where the study of medicine was kept alive throughout the dark ages.

"If, then, our own system of medicine is to some extent empirical, it certainly does not become a mere layman like myself to pass any sweeping condemnation upon the empiricism of its Eastern counterpart, and when I remembered how many millions in India are beyond the reach of the medical aid provided by Government, and how many of those who have means of access to our best doctors still prefer to be treated in accordance with the indigenous system, I came to the conclusion that I should be wrong to throw discouragement upon the scheme the Honourable Mr. Haziq-ul-Mulk has so much at heart, and which aims at the improvement and development of this branch of medicine on safe and sound lines."

The college, under the style of "The *Ayurvedic* and *Unani* Tibbi College," together with the Hindustani *dawa-khana* (pharmacy) attached to it, is managed by a board of trustees registered under Act XXI of 1860.

This institution had, up to the end of the year 1916, sent out about 292 qualified and trained *hakims* and *vaids*, who are practising throughout the country, to the great relief of human distress and to the satisfaction of their countrymen, and it is worthy of note that the demand for them is increasing daily. The number of students on the rolls is now about 140, who come to it from all parts of India.

The *dawa-khana*, maintained by the board, is famous all over India for the supply of the best simple and compound indigenous medicines. Its sales amounted in 1916 to Rs. 1,48,040, and the net income was Rs. 48,617. This income, and other amounts derived from donations and contributions from princes and others, goes to maintain the expenses of the college. A magnificent set of buildings has been nearly completed, which will ultimately cost about Rs. 4,50,000, while the estimated expenditure upon the whole scheme will not be less than Rs. 12,00,000.



BABA UJAGAR SINGH BEDI.

1. Baba Ujagar Singh Bedi. 2. Tikka Sant Singh Bedi. 3. Manmohan Singh Bedi.

BABA UJAGAR SINGH BEDI.

The religious creed held by the Sikhs was formulated in the latter portion of the fifteenth century by Guru Baba Nanak, who taught the existence of a Supreme Being, condemned idolatry, proclaimed the uselessness of rites and ceremonies, advocated the brotherhood of man, and declared that salvation was to be obtained only by a life of devotion and the practice of good deeds.

These principles grew in favour until about the year 1690, when Sri Guru Govind Singh, the tenth Guru, in succession, introduced a more militant spirit into Sikh doctrines, mainly owing to the persecutions of the Emperor Aurangzeb.

One of the principal representatives of the fourteenth generation descended from Guru Baba Nanak is Baba Ujagar Singh Bedi, whose chief place of residence is at

Rawalpindi, and who is great-great-grandson of Baba Saheb Singh Bedi, the next successor of Guru Govind Singh.

Baba Saheb Singh was very highly respected, not alone for his piety, but also for his zealous labours in disseminating the truths laid down by the founder of his faith. He left behind him a brilliant illustration of self-sacrifice, and his daily life was a portrayal of the cardinal virtues of the religion he professed, while it has frequently been asserted that without his inspiring influence Sikhism would have become a dead letter.

The sacred trust so valiantly maintained by the Baba Saheb was bequeathed to the late Hon. Baba Sir Khem Singh Sahib Bedi, K.C.I.E., who was equally as staunch as his predecessor in his allegiance to his religious creed, and at the present time those high principles have no more active and faithful exponent than Baba Ujagar Singh Bedi. The scrupulously upright conduct of this gentleman in public and private life has secured for him the admiration as well as the respect of his acquaintances among all classes of people, while in his own community he is justly regarded as a leader whom it is safe to follow.

H. BARSBY.

While in the service of the Government of the Punjab at Simla, Mr. H. Barsby acquired a large and varied experience in general constructional work, and many of the principal buildings in that city were erected by him. Among these were the Lady Hardinge Cottage Home and the well-known Hotel Cecil, 220 feet in height above the level of the carriage road, which contains a million and a half bricks, and was completed in twelve months.

In the early portion of 1917, however, this gentleman commenced business on his own account at Simla as a builder, contractor, and designer.

Contracts are undertaken for all kinds of constructional work in and around Simla, and he is now building and completely furnishing a residence for the Hon. Mr. G. R. Lowndes, member of the Supreme Council of His Excellency the Viceroy and Governor-General of India. About forty masons, thirty-six carpenters, and 120 coolies are engaged in the transport of bricks and other materials.

Mr. Barsby can scarcely be said to have taken more than the first step upon the ladder of his new career, but he already finds that he will be greatly disadvantaged if he does not considerably enlarge his workshops and make other provision for coping with the quantity of future business which is practically assured. He is therefore arranging for extensive steam joinery works and for the acquisition of land from which clay suitable for the making of bricks may be obtained, when he will instal modern plant capable of meeting his requirements in building operations. The machinery in the premises now in use is driven by an oil engine of 16 h.p., and electricity is generated for lighting purposes.

Mr. Barsby has a large garage for the storage of motors, and he also possesses a number of cars which are let out on hire, on his account, while as an important adjunct to his building work, he has recently commenced the manufacture of all kinds of household furniture.

THE BHARAT INSURANCE COMPANY, LTD.

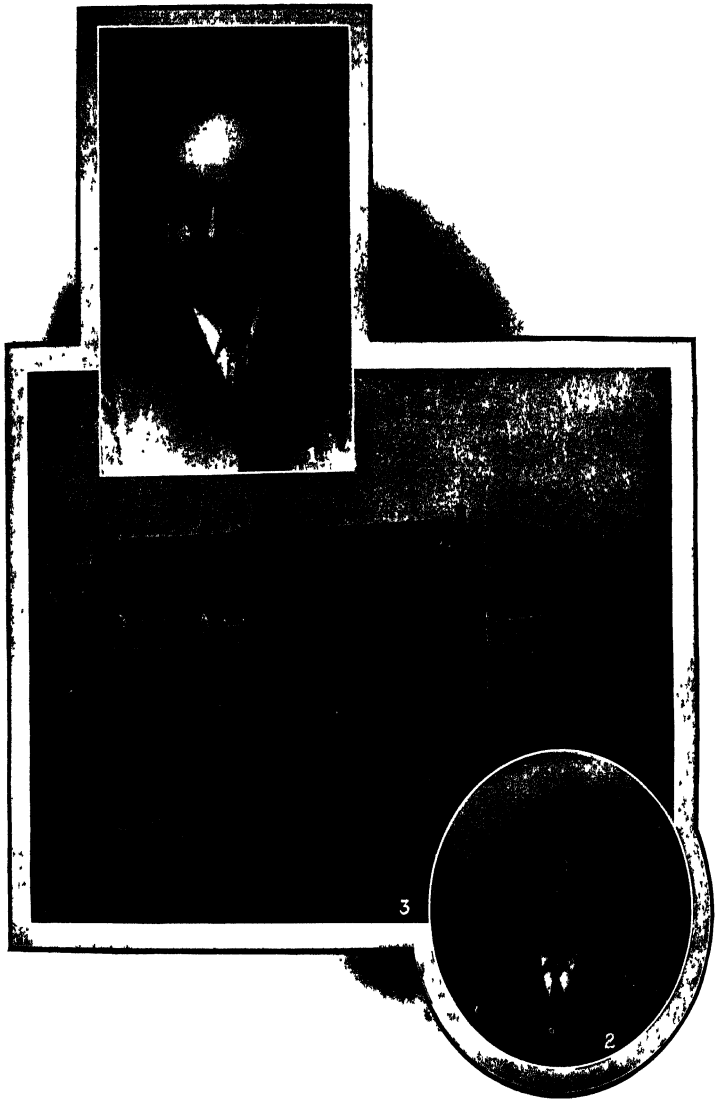
The Bharat Insurance Company, Ltd., which is wholly under Indian management, and was the first in this respect, was established in Lahore in 1896. At that time the principles of insurance were practically unknown to the people of the Punjab and India generally. The promoter of the enterprise, Mr. Harkishan Lal, soon found that in starting it he had set a difficult task for himself, and that it was not as easy as he at first imagined to obtain adequate support for a pioneer venture of this kind. Naturally, he had to struggle hard for months before he could complete even such preliminaries as registration. In August 1896 he succeeded, under many discouragements, in starting the company with a capital of Rs. 5,00,000. His indomitable courage and dogged perseverance helped him to overcome all obstacles, and in the following years he found some measure of public support was assured. In 1907 the capital of the concern was raised to Rs. 10,00,000, which has for several years been fully subscribed. The company has now been working for about twenty-one years under the guidance of its founder and chairman, Mr. Harkishan Lal. It has won a name for success and stability, and has come to be reckoned as a first-class life office in the East. The funds of the company at the present day exceed Rs. 25,00,000. Its effective business amounts to about Rs. 80,00,000, while claims paid out to policy-holders exceed Rs. 16,00,000.

The company's record has been one of continuous progress, and in spite of the financial crisis of 1913 it has maintained its reputation as a concern which is managed on sound and safe lines. The last actuarial valuation of the company, made towards the end of 1913 by the late Mr. T. G. Auckland, F.I.A., F.F.A., an English actuary of note, added appreciably to the reputation of the company. Mr. Auckland's report, among other matters, mentioned that the mortality experienced by the company was well within expectations; that the earning power of the company on its invested accumulated funds was nearly 6 per cent. per annum on an average, and that the funds exceeded by Rs. 1,00,000 the liability of the company on the date of valuation. Mr. Auckland congratulated the directorate and the policy-holders on such satisfactory results, and a reversionary bonus of Rs. 10 per thousand per annum on the face value of with-profit policies was then declared. It is hoped that with the growth of time this purely Indian institution, the success of which has been remarkable for a pioneer venture, will grow into a mighty institution for the lasting good of a very large number of people.

The first directors of the company were: Mr. Harkinshan Lal, B.A. (Cantab.), Bar-at-Law; Rai Bahadur Peary Lal, Inspector of Schools; Rai Sahib L. Balmokand, of Messrs. Chhota Lal & Sons, bankers, Lahore; Lala Prabhu Dyal, B.A., Ll.B., pleader and banker, Multan; and Bhagat Ishwar Das, M.A., advocate, Chief Court, Lahore.

The present directors are: Lala Harkishan Lal, B.A. (Cantab.), Bar.-at-Law, chairman; Sheikh Umar Bakhsh, B.A., pleader, Chief Court, Punjab; Mullick Girdhari Lal, B.A., managing agent, the Punjab Cotton Press Company, Ltd.; and K. Sorabjee, Esq., of Messrs. Jamsetjee & Sons, Lahore.

The first manager and actuary of the company was the late Mr. Gyan Chand, who was appointed secretary in September 1898, and subsequently became manager and actuary. This position was held by him until his death, which occurred in May 1906. The services which Mr. Gyan Chand rendered to the "Bharat" during his ten years of office were extremely valuable, and his services were fully recognized by the shareholders, who voted for his children a cash gift of Rs. 1,000, besides a life annuity to his widow. He was succeeded in the post of manager and actuary by Pandit Mohun



BHARAT INSURANCE CO., LTD.

1. Lala Harkishan Lal, B.A (Cantab.), Barrister-at-Law, Founder and Chairman. 2. K. C. Vidyarthi, Manager.
3. Bharat Buildings, Lahore.

Lal Tiku, and although his life was soon cut short he distinguished himself by his energy as a canvasser during his brief term of office. The next manager, Mr. Lajpat Rai Sahni, B.A., held office from January 1908 to May 1913. The present manager is Mr. K. C. Vidyarthi, who took charge of the affairs of the company towards the latter part of the year 1914, and the company is prospering under his capable control.

The company are owners of an imposing and substantial pile of buildings at Lahore known as "Bharat Buildings," the foundation stone of which was laid by Mr. Harkishan Lal in 1907. These premises are situated in a most prominent locality in the city, and the company also have branch office buildings at Lucknow, Sukkur, and Rawalpindi.

The "Bharat" is a progressive and popular life insurance office transacting business at headquarters and at all its chief agencies and branches, which are spread throughout India. Branches have been established at Lahore, Rawalpindi, Delhi, Ajmere, Nagpur, Lucknow, Bankipur, Sukkur, Karachi, and Quetta; while there are chief agencies at Calcutta, Bombay, Bangalore, Mangalore, Poona, and Dacca.

The Medical Board of the company consists of Dr. C. C. Caleb, M.B., M.R.C.S. (London), Professor of Physiology at the Medical College, Lahore, and Rai Bahadur Dr. Beli Ram, L.M.S., the well-known physician of the same city.

The bankers of the company are the Bank of Bengal, Lahore; the Alliance Bank of Simla, Ltd., Lahore; the Bank of Bombay, Poona; the Bank of Madras, Bangalore City; and the Allahabad Bank, Ltd.; while Messrs. Nelson King & Simon, chartered accountants, of Lahore, are auditors.

The success of this unique institution, which, as has been stated, is the first venture of its kind in India, speaks highly of the organizing capacity of its founder, and of the capable management of its present officials.

In view of the magnificent services rendered to the company in particular, and to the cause of industry and commerce in general, by Lala Harkishan Lal, it is only fitting that some personal references to the life of that gentleman should be added.

Mr. Harkishan Lal, B.A. (Cantab.), barrister-at-law, is a native of the Trans-Indus Frontier Province, formerly the Western Punjab, the inhabitants of which are regarded as the most pushful and enterprising people in the "land of the five rivers." He was born at Dera Ismail Khan in the year 1866, and belongs to a well-known and respected family of Aroras, a community which is reputed for commercial enterprise, and his education was started in the Persian, Sanskrit, and Gurmukhi languages in the old type of pathshalas and muktabs. He was placed in a modern style of school, first at Dera Ghazi Khan and Lahore, and subsequently at the Government College at the latter place. He was not long in college before his intellectual attainments attracted the attention of his teachers, and he graduated in 1887, winning a State scholarship entitling him to prosecute his studies at Cambridge University. While there he passed his B.A. examination with honours, and at the same time he obtained admission to the Middle Temple, keeping his terms there and passing the examinations necessary for a call to the Bar.

On his return to India in 1891, he entered Government service, and was employed for a time in the Government College, Lahore, as assistant-professor of mathematics and economics, but as a permanent position to his liking did not present itself he turned his attention to the law as a profession. Accordingly in 1892 he returned to England and was called to the Bar. On arriving in India again in the same year he practised for a short time in the Law Courts of his native district, Dera Ismail Khan, but he soon removed to Lahore with the object of undertaking cases in the chief court there. He was specially drawn to Lahore in order to take an interest in the political life of the country, and he accordingly joined the ranks of workers for the Indian National Congress which had been invited to hold its first session in the Punjab in 1893. He built up a lucrative practice in that city in a remarkably short time, and distinguished himself as one of the leading authorities in commercial and company law.

Rapid as his rise in the profession was, it did not, however, satisfy his restless nature, and he began to interest himself in the economic development of his country. Notwithstanding the great reputation he had established as a successful lawyer, he was so convinced that, in order to accomplish the economic regeneration of India, the ambition of large numbers of its educated sons should be, for at least one generation, to turn to business careers in preference to Government service and law. He literally translated his conviction into practice in 1899 by throwing up his lucrative practice, and by accepting an appointment which was rewarded by a monthly allowance of Rs. 500, out of which he had to pay his own travelling expenses.

It is needless to describe in detail the lasting services he did to the Punjab and to India by successfully diverting a considerable part of the activities of its educated young men to business pursuits at a time when commercial and industrial enterprise was looked upon as most venturesome.

There is hardly any joint-stock commercial enterprise in the Punjab with which Mr. Harkishan Lal has not been directly or indirectly connected. He is popularly known as the "Mulk-Ul-Tajjar," that is, the "Prince of Merchants," and he is also styled the "Father of the industrial development of the Punjab." He was the founder and organizer of, or has been intimately connected with, the following joint stock companies, namely: The Punjab National Bank, Ltd.; the Amritsar Bank, Ltd.; the People's Bank of India, Ltd., Lahore; the Lyallpur Bank, Ltd., Lyallpore; the Lahore Spinning and Weaving Mills Company, Ltd., Lahore; the Pioneer Flour Mills Company, Ltd., Lahore; the Bhupindra Flour Mills; the Punjab Mutual Hindu Family Relief Fund, Lahore; the Bharat Insurance Company, Ltd., Lahore; the Punjab Cotton Press Company, Ltd., Lahore; the Indian Chamber of Commerce, Lahore; the Pioneer Leather Company, Ltd., Lahore; the Real Estate Company, Ltd., Lahore; the Pioneer Jewellery Company, Ltd., Lahore; the Pioneer Investment Company, Ltd., Lahore; the Golden Ginning Company, Ltd., Lahore; the Indian National Trustee Association, Lahore; the Kanhya Lal Harnarain Singh, Ltd., Lahore; the Lahore Electric Supply Company, Ltd., Lahore; the Punjab Stationery and Printing Company, Ltd., Lahore; the Commercial Academy; the Century Flour Mills Company, Ltd., Shikarpur; the Cawnpore Flour Mills Company, Ltd., Cawnpore; the Jumna Flour Mills Company, Ltd., Bombay; the People's Spinning and Weaving Mills Company, Surat; and the Moradabad Spinning Mills, Moradabad.

It is not too much to say that he has given new life to the Punjab, and although he has met with great difficulties in his enterprises he has, by his perseverance and fearlessness, coupled with strength of

mind and his unique personality, successfully encountered and overcame much of the opposition and obstacles placed in his way.

In political life Mr. Harkishan Lal is a devoted Congressman, and has distinguished himself greatly by successfully holding three sessions of the Indian National Congress at Lahore in 1893, 1900, and 1909. During the unrest in the Punjab in 1907 Mr. Harkishan Lal worked hard to establish mutual goodwill between the people and the Government.

Mr. Harkishan Lal was one of the executors and trustees of Sardar Dyal Singh Majithia's Trust, and he bore the chief brunt of a long and tedious litigation which ended successfully in the public interest, and he served thereafter for many years as the trustee of the Tribune of the Dyal Singh College and the Dyal Singh Library. He is an ardent social reformer, and recommends intermarriage between Indian castes and the abandonment of restrictions on dining together, he himself not hesitating to set an example, having married in 1908 a lady of Bombay, one of a different caste from his own. He was nominated as a member of the Punjab Legislative Council in 1908, where his independence of opinion earned a distinguished reputation for himself.

In the year 1909 Mr. Harkishan Lal most successfully organized an industrial exhibition on an unprecedently large scale at Lahore, and he presided over the "All-India Industrial Conference" held at Bankipur in the year 1912, while his positions as secretary of various educational, political, and commercial institutions during the past twenty-five years are too numerous to mention.

In his private life Mr. Harkishan Lal is most simple, unostentatious, amiable, and easily accessible, and his advice, sought by thousands, is given freely.

The Bharat Insurance Company, Ltd., Lahore, and the Lahore Electric Supply Company, Ltd., of which he was the founder and is now chairman, will for ever remain monuments of his labours. Of his work in connection with the second of these Sir Louis Dane, the then Lieutenant-Governor of the Punjab, spoke in high terms of praise at the opening ceremony on November 18, 1912. He said: "The scheme for lighting Lahore by electricity had been practically hawked about in every possible market to find some one sufficiently public-spirited to take it up. It was in his opinion pre-eminently an enterprise to be carried through by the Indian people themselves, and he was glad to think that when European concerns had declined to have anything to do with it, and when even the municipality had decided against it, the man was not wanting in Lahore to take up the scheme and carry it through. It was mainly owing, he would like to say, to the initiative of Mr. Harkishan Lal and Mr. James Currie, and mainly to the former, that the scheme had been so successfully initiated." Sir Louis Dane concluded his speech by stating once more that the scheme reflected the greatest credit on Mr. Harkishan Lal.

R. B. BOOTA SINGH & SONS.

A successful commercial man is one who—no matter how unpretentious a start in life he may make—is sufficiently shrewd to discover and grasp opportunities, who knows when and where to buy and sell his goods, who insists upon his expenses being kept below his income, and who, with unflinching courage, conducts his business in such a manner as to win the respect and confidence of his fellowmen. An excellent illustration of this assertion is given in the history of Sirdar Rai Bahadur Boota Singh, C.I.E., who is the present head of the well-known firm of R. B. Boota Singh & Sons, general merchants, Government and railway contractors, and manufacturers of tents, paulins and furniture, whose headquarters are at Rawalpindi.

It is more than half a century since R. B. Boota Singh left the district of Jhelum, in the Punjab, on the conclusion of the Sikh war, and took up his residence at Rawalpindi, where, with marvellous pluck and determination, he commenced trading as a hawker with a princely capital of Rs. 17. The Kabul campaign was undertaken shortly after that date, and the enterprising young traveller accompanied the expedition of the late General Roberts with the object of supplying provisions to the troops. On returning to Rawalpindi he founded the business already referred to, which has been growing steadily until it has attained vast proportions.

The property at Rawalpindi covers an area of several acres, and the extensive brick buildings comprise a foundry and workshops for the manufacture of various kinds of goods, chiefly for army or sporting purposes.

One of the earliest contracts obtained was for the construction of an arsenal for the military authorities at Rawalpindi, and this work, successfully completed, paved the way for a very large number of other orders from the same source, not merely for the erection of buildings, but also for supplying practically every requisite for camp, mess, and general outfit for men and animals on field service.

All iron and steel work, such as mouldings, castings, fittings for harness, swords, *kukries*, table and clasp knives, spoons, forks and other articles, is carried out in the foundry and workshops. Tents are made of the very best materials and in all sizes, from those suitable for bathrooms to others large enough to shelter aeroplanes, and the continuous demands made upon the firm for these goods for the army is ample proof of their first-class quality.

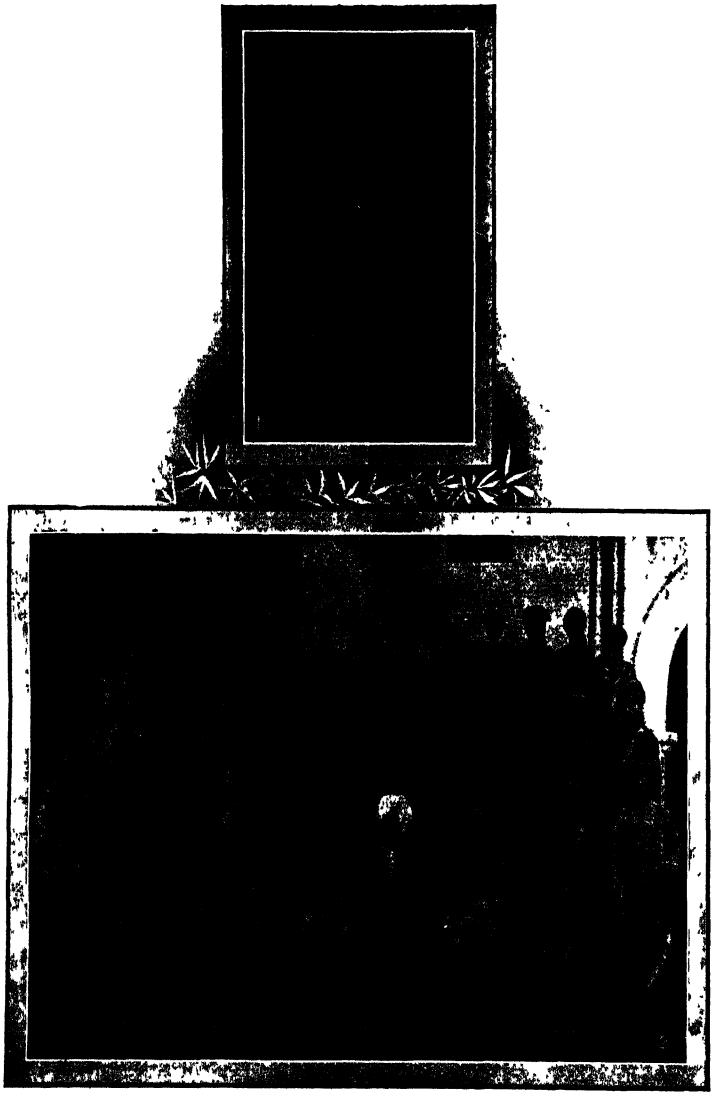
Excellent work is performed, too, in galvanizing, and ropes of various kinds are made by hand as well as by fine machinery in the firm's sheds, which are more than 700 feet in length.

A special feature is made of the repairing branch, and Messrs. Singh & Sons have such an excellent equipment of machinery and so competent a staff of workmen in the shops that they are able to undertake repairs of the most intricate character.

The enormous growth of the business necessitated the opening of branches in Delhi, Lahore, Peshawar, Cawnpore and Ferozepore. The Cawnpore establishment is engaged chiefly in supplying harness and saddlery; tents and paulins for the ordnance department are the principal items at Ferozepore; general army contracts are in the forefront of business at Peshawar; and contracts for railway work and the supply of railway stores and materials are undertaken at the Lahore offices.

Rai Bahadur Boota Singh, as head of the firm, controls every department of work in this huge undertaking, while Harman Singh and Jaidev Singh are local managers of the Rawalpindi and Delhi branches respectively.

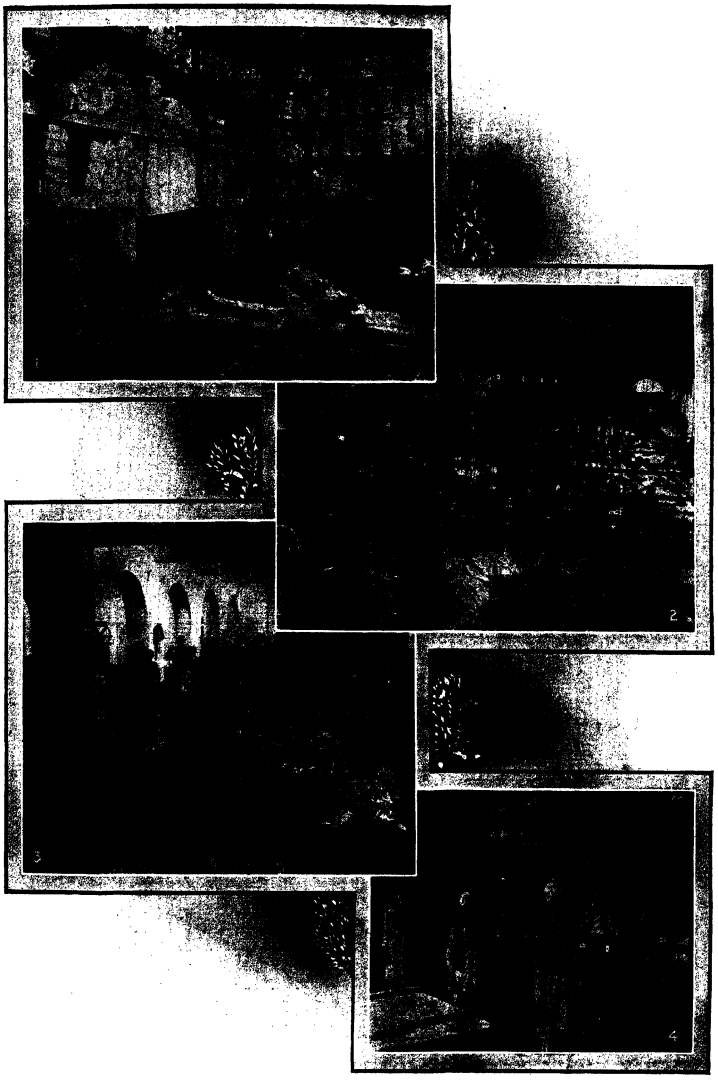
Messrs. Boota Singh & Sons have rendered valuable assistance to the Government of India by supplying necessaries for the troops in every frontier war during the past thirty or forty years; they have helped in the late war by furnishing men, money and munitions, and to their lasting honour, be it said, they have, at their own expense, raised and sent to Mesopotamia a general corps



R. B. BOOTA SINGH AND SONS.

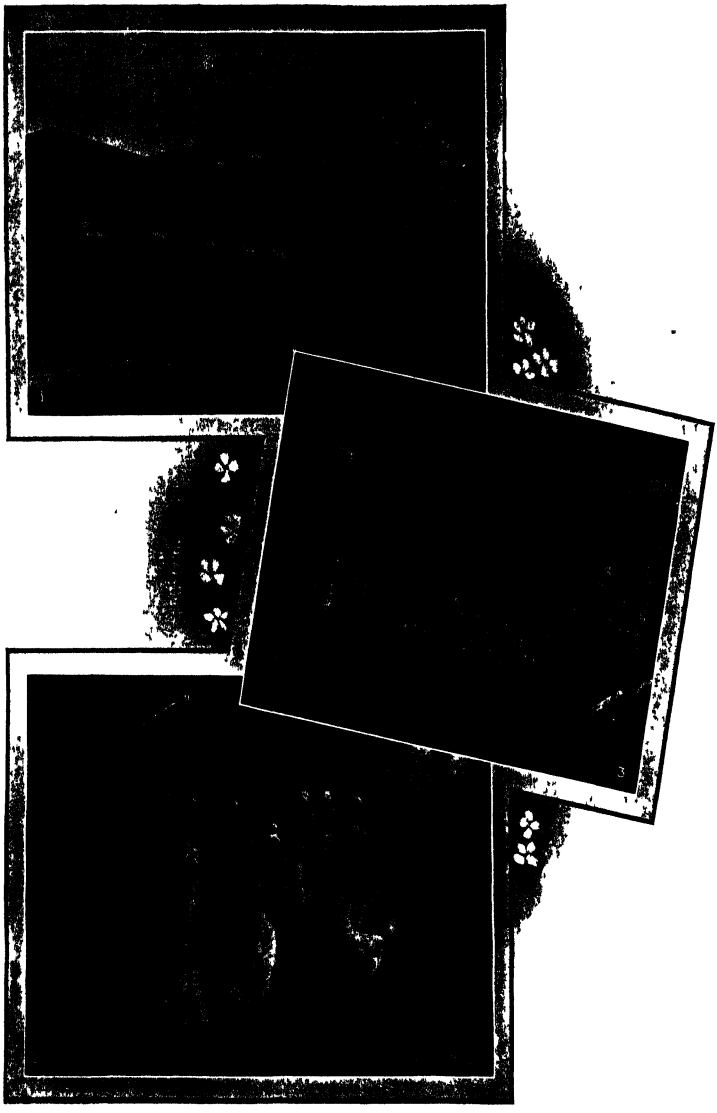
1. Rai Bahadur Boota Singh, C.I.E., O.B.E., Proprietor and Founder.

2. One Unit of R. B. Boota Singh and Sons' Artificer Corps, Supplied and Equipped by Them, 1916-1917.



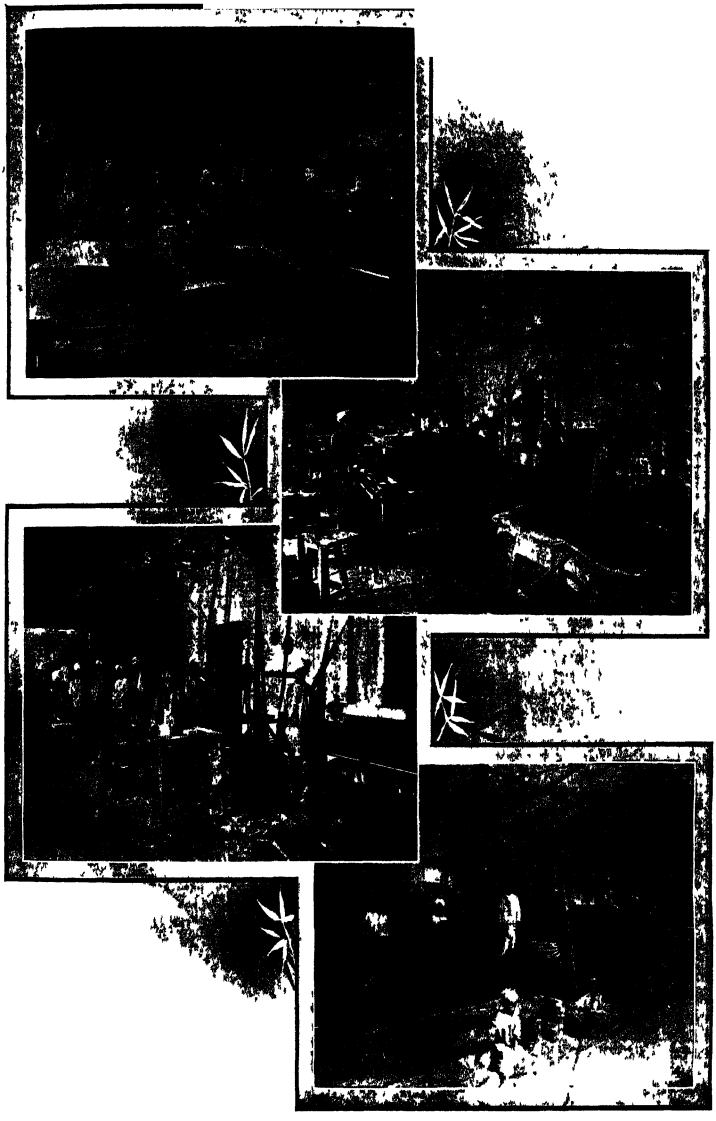
B. B. BOOTA SINGH AND SONS.

1. Textile Stores. 2. Tent Manufactory. 3. Another View of the Tent Manufactory. 4. Tape-Weaving Looms.



B B. BOOTA SINGH AND SONS.

1. Exterior of Workshop, Rawalpindi. 2. Blacksmiths' Shop. 3. Iron Foundry



R. B. BOOTA SINGH AND SONS.

1. Carpenters' Shops. 2. Wood Working Machinery. 3 Machine Shop (Metal Section). 4 Ropemaking Machinery.

of trained men for transport and other duties.

The firm have received an immense number of testimonials from various officers in charge of the arsenal at Rawalpindi during the past thirty years, and there is perfect unanimity in those letters as to the unexceptional manner in which they have carried out their contracts. A glance at these documents reveals the following among many other and most favourable commendations. "As an arsenal contractor Boota Singh has given every satisfaction. I cannot speak too highly of the way in which he has performed his work." "I wish to place on record my appreciation of the excellent work Boota Singh has done for me in supplying tents. I consider him the best tent-maker in the Punjab."

In connection with army supply and transport corps service, Boota Singh stands out prominently as one who was entrusted with most important duties, and officers under whom he laboured speak in the highest terms of his great abilities. Here are a few of their eulogistic remarks. "On leaving the commissariat transport department at Rawalpindi (October 1899), I wish to express my great satisfaction with the way Sirdar Boota Singh has worked for Government. When the Tirah expedition was started he went to the front and gave great help there, for which he was made a Rai Bahadur." "I have the honour to acknowledge the receipt of sums of money amounting in the aggregate to Rs. 1,03,369 as the savings accruing to the State by their making, through you, taken the commercial risks attending the purchase of supplies for the Delhi manœuvres and Durbar 1903) to the value of about Rs. 14,25,000. This is a record of which you may well be proud." "I have known Rai Bahadur Boota Singh for some time, and have the greatest pleasure in certifying to his thorough reliability." "I have known Rai Bahadur Boota Singh for many years, both as a contractor and purchasing agent for the 2nd Rawalpindi Corps, and I have found him a man of unimpeachable honesty and integrity." "Boota Singh accompanied the Kurrum Column in 1879 to Aly Khel, and also went to Bunnoo in 1881 with a field force under my command. He is an enterprising and straightforward man of business, and bears a high character. He turns out very good field service tents." "Boota Singh, government contractor, was assisting me in purchasing camels, ponies, mules and donkeys for transport purposes during the Chitral relief expedition. He went with me to Gujur Khan, Fatehjang, Hussanahbad, Jhelum, Lalamusa, Malakwal, Pind Dadan, Khushab and Bhera during April and May 1895. He is very straightforward in all his dealings." "Boota Singh is materially assisting the supply department in arranging for food and forage for the army of 35,000 men between Umballa and Delhi, and for the wants of this immense Coronation camp."

This gentleman's services were appreciated very highly, too, in enterprises of a more private character, as the following will show. "Boota Singh, who had the contract for making the house-boats and furnishing them on the occasion of His Excellency the Viceroy's trips down the Indus, carried out his duties to my entire satisfaction." In January 1903 the Lieutenant-Governor of the Punjab wrote: "By command of His Excellency the Viceroy and Governor-General in Council, this certificate is presented in the name of His Most Gracious Majesty King Edward VII, Emperor of India, to Rai Bahadur Boota Singh, in recognition of good work done by him as vice-president of the Rawalpindi Municipal Committee." "Under the orders of the Punjab Government, this *sanad* is presented to Rai Bahadur Boota Singh, vice-president of the Rawalpindi Municipal Committee, in recognition of the good services rendered in the plague epidemic of 1903–4."

The lengthy connection of Messrs. Boota Singh & Sons with Punjab and Northern India generally enables them to have a unique knowledge of the inhabitants of that territory, and in order to give further expression of their loyalty to the throne they, in May 1915, opened a recruiting agency at Rawalpindi, and this was followed by similar agencies at other important centres. Several members of the Singh family gave most valuable assistance in this worthy enterprise, not only by taking active steps in recruiting, but also by holding meetings and by articles and letters in the vernacular press. Rai Bahadur Boota Singh was the controlling spirit in this work; he personally attended fairs, accompanied by his agents; and he travelled far and wide with the object of exhorting the people to realize their responsibilities and to do all in their power to help the British Government in every possible way. Between May 15, 1915, and September 30, 1916, this gentleman was instrumental in obtaining 2,422 recruits, who were secured: 753 through the Rawalpindi agency, 1,099 through the Lahore office, 197 from Delhi, and 373 from Peshawar. Major E. J. Mollison, C.I.E., recruiting officer at Rawalpindi, in a report dated September 11, 1916, said, *inter alia*: "Rai Bahadur Boota Singh, C.I.E., of Rawalpindi, has been most successful in his efforts to help Government during the great war by obtaining recruits for the Indian Army. He has established recruiting agencies at Peshawar, Rawalpindi, Lahore and Delhi, each having attached to them a number of recruiters and attendants. The agencies are worked on thoroughly business lines, with accounts, records and returns all in order. Arrangements are in force at each agency to attract recruits by means of entertainments, and to feed and lodge recruits until they are disposed of."

The whole working expenses of the agencies, i.e. pay of staff, rent of buildings, entertaining, feeding and lodging of recruits was defrayed by Rai Bahadur Boota Singh. Every branch of the service was supplied with recruits, including fighting men, skilled tradesmen, muleteers, camel-drivers and others. Another work in which he was engaged was the subsidizing of well-known lecturers and preachers who, under his auspices, travelled about the country delivering lectures on loyalty and the duty of people towards Government.

The Adjutant-General, Simla, telegraphed on July 16, 1915, to the Rai Bahadur: "Commander-in-Chief desires me to convey his thanks and appreciation of your valuable assistance in recruiting." Major E. H. Dunsford, recruiting officer for Pathans, in a letter, said: "The whole up-keep of the agency, staff, &c., has been provided by Rai Bahadur Boota Singh, and the work done has been of great assistance to me. I consider the Rai Bahadur's efforts a most practical display of loyalty, which might with advantage be imitated by other wealthy men." Lieutenant C. Rae, 3rd Sappers and Miners, attached to 1st Labour Corps, said: "The Rai Bahadur has been of the greatest assistance to me during the past few weeks by bringing me considerably more than 400 men." Lastly, Captain K. D. Allan, recruiting officer for Sikhs at Amritsar, reported that he had read with pleasure the account of the work done in recruiting by Rai

Bahadur Boota Singh, C.I.E.: "His efforts, which have entailed a very considerable amount of trouble and expense, have been most successful. His success in obtaining 2,422 recruits speaks well for the energy with which he has devoted his valuable services."

In Western countries, possessing great educational and other facilities, it is not by any means uncommon to hear of public men who have started life as pit-boys, apprentices to artisans, agricultural labourers, or office messengers, and who have subsequently risen by their own indefatigable energies and upright conduct to become cabinet ministers, presidents of self-governing states, and merchant princes, but in India there are fewer aids for youths, and therefore the attainment by Rai Bahadur Boota Singh of his proud position reflects the highest possible credit upon him. The history of his career might be studied with profit by the boys of India, and the inspiration given to them by a consideration of the remarkable success of such a man should be an incentive to them to cultivate characteristics of perseverance, favourable conduct, and efficiency in work.

BRAGANZA'S HOTEL.

It is somewhat strange to reflect that a quarter of a century ago there was not an hotel worthy of the name within a moderate distance from the railway station at Lahore, the capital city of the province of the Punjab, with a population at that time of more than 130,000 inhabitants. And this despite the fact that the city is rich in historic associations, and is connected with practically every Mahomedan dynasty of northern India. A change took place in 1898 when the late Mr. D. A. Braganza, who was then lessee of refreshment rooms on the North-Western Railway system, came to the conclusion that an excellent opportunity presented itself for the establishment of a first-class hotel in a suitable position, and in the same year secured a plot of land near to the station, upon which he constructed a fine building containing thirty rooms.

The proprietor had in his previous career gained a wide and varied experience in catering for the public, and it soon came to be generally known that the name of Braganza was a guarantee of good management, of cleanliness in the house, and of a *cuisine* of unexceptionable quality. These three conditions are indispensable features in an hotel, and when travellers discovered that reports concerning their existence were based upon solid facts they invariably requested on arrival at Lahore that they might be conducted to "Braganza's," where they knew they would be thoroughly satisfied with their treatment.

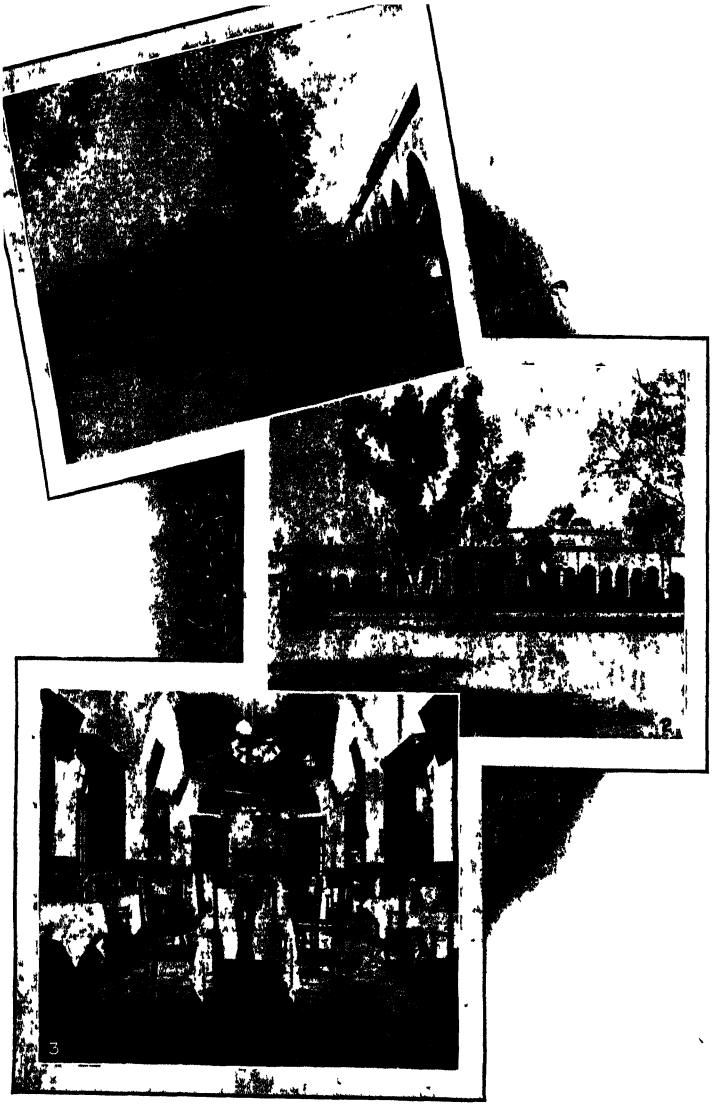
The reputation thus gained several years ago has been more than maintained, and at least ten additional rooms are now necessary for the accommodation of the increasing number of visitors. Each room is furnished with the object of securing for guests the greatest amount of personal comfort, and electric lights and fans have been installed throughout the house.

Mr. D. A. Braganza died in the year 1915, and the business has since that date been conducted with equally successful results by his son, Mr. C. F. Braganza, whose telegraphic address is "Braganza," Lahore.

THE CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA (DELHI).

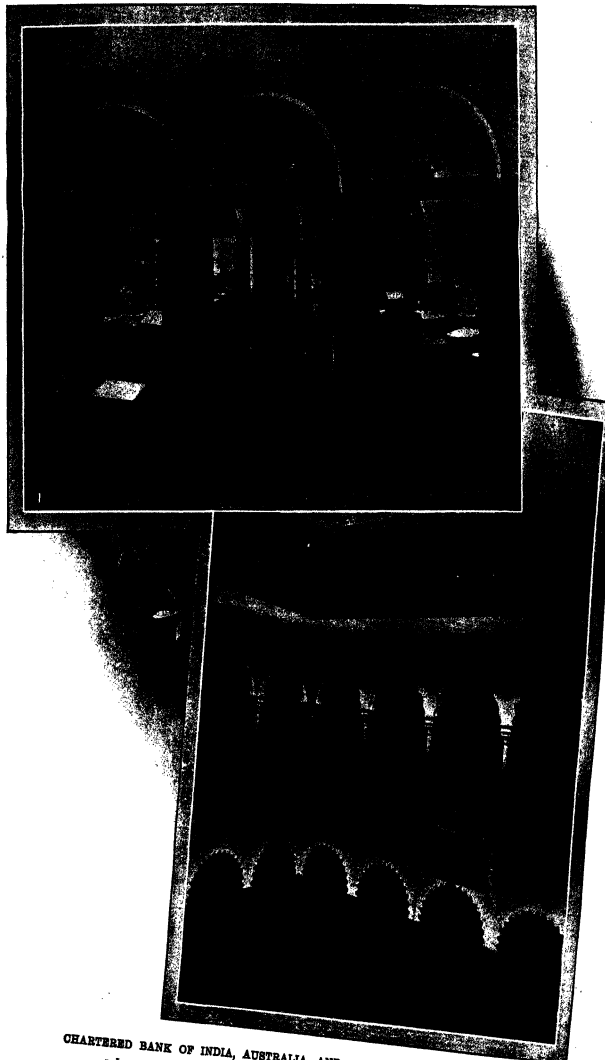
As the name implies, this bank was founded by Royal Charter, the date of incorporation being 1853. It is interesting to note that of the many chartered banks conducting business at the time of the formation of this institution, there are now only four others remaining, these being the Bank of Australia, the Bank of British North America, the Colonial Bank, and the British Linen Bank. The charter has been renewed on various occasions, the last renewal being in 1909, for a further period of thirty years. The prospectus of the bank pointed out that it was "established chiefly in order to extend the legitimate facilities of banking to the vast and rapidly extending trade between the Australian Colonies, British East India, China, and other parts of the Eastern Archipelago—a field at present wholly unoccupied by any similar institution. The objects of the company will, however, also embrace in connection therewith the extension of banking accommodation to the direct trade of British India, China, and Australia with this country, at present so inadequately provided for." All but one of these objects have been achieved, the one exception being that the bank has not so far opened any office in Australia, though, indeed, the question has been mooted more than once. Not only have the propositions laid down in the prospectus been carried out, but the bank has extended its influence to a much greater extent, and offices have been opened in other parts of the world beyond those at first intended, as in addition to India and China, business is carried on in the Strait Settlements, Siam, the Dutch East Indies, Japan, and the United States of America. The bank did not actually start business until 1857, three offices being then opened, namely, Bombay, Calcutta, and Shanghai. In 1858 operations were commenced in Singapore and Hongkong, and other important branches are those at Rangoon, opened in 1862, Batavia in 1863, Manila in 1872, Penang in 1875, Yokohama in 1880, and Bangkok in 1893. At the present time, in addition to the head office at 38 Bishopsgate, in London, business is conducted at the following places: Amritsar, Bangkok, Batavia, Bombay, Calcutta, Canton, Cebu, Colombo, Delhi, Foochow, Haiphong, Hankow, Hongkong, Iloilo, Ipoh, Karachi, Klang, Kobe, Kuala Lumpur, Madras, Malacca, Manila, Medan, New York, Penang, Peking, Puket, Rangoon, Saigon, Seremban, Shanghai, Singapore, Sourabaya, Taiping, Tavoy, Tientsin, and Yokohama.

For some years after its formation the bank enjoyed a period of substantial prosperity, but towards the close of the sixties of last century there was experienced a time of severe depression, which naturally was reflected in the accounts of all banks, while, as far as the Chartered Bank was concerned, by the year 1870, with a paid-up capital of £800,000, the whole of the reserve, amounting to £105,000, was swept away, and for a brief time the bank was compelled to suspend the payment of dividends. In two years' time, however, it had sufficiently recovered from the depression to enable it to resume payments, and from that time the growth of the institution has been rapid. This may be gauged from the fact that by 1880, that is, within the short period of eight years, a reserve fund had once more been built up amounting to the substantial figure of £190,000. The deposits reached a total of £3,938,186, and the paid-up capital, which had been raised to £800,000 in 1864, remained at that figure until 1907, when the steady and continued expansion of business called for an increase. It was accordingly raised to £1,200,000, consisting of 60,000 shares of £20, each fully paid, and it is at the present time 50 per cent. greater than it was in 1880. During



BRAGANZA'S HOTEL.

1 View of Entrance. 2 Roadside View 3 Dining Room.



CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA, DELHI

1. Interior of General Office. 2. Portion of Exterior.

that time the reserve fund was very substantially increased By 1900 it had risen from £190,000 to £575,000, but in the fifteen years since that date it has been more than trebled, and on December 31, 1915, it amounted to £1,800,000. It will thus be seen that this fund is half as much again as the paid-up capital Moreover, with one exception, the whole of this fund has been built up from profits The increase of capital in 1907 was made at such a figure as to permit of a premium of £400,000 being secured, and this was added to the reserve fund In addition to the reserve fund of £1,900,000, the directors decided that £150,000 of the profits for 1914 should be set aside for special purposes, inasmuch as there are certain contingencies arising from the negotiation of documents relating to continental trade and other matters, the result of which cannot be ascertained until the end of the war Further evidence of the great growth of the institution is to be found in connection with deposits In 1860 they amounted to £1,600,000, by 1880 they reached nearly £4,000,000, and twenty years later they amounted to £9,200,000 It was in 1903 that they first exceeded £10,000,000 in 1910 an increase of 50 per cent had been secured, while on December 31, 1916, they had risen to £22,704,096 Similar growth is noted in loans and advances In 1880 they amounted to £1,590,000, by 1900 they were £4,700,000, ten years later the sum was £8,175,000, and on December 31, 1916, they stood at £9,601,277.

The gross profits for 1916 amounted to £828,675, as compared with £741,745 in 1915 This was accompanied by a rise in the expenses from £358,873 to £447,415, so that the net profit amounted to £381,260, as compared with £382,872

Dividends have been paid during the five years ending on December 31, 1916, as follows 1912, 16½ per cent , 1913, 17 per cent , 1914 and 1915, 14 per cent , and in 1916, 17 per cent.

The Delhi agency was opened in January 1912, immediately after the royal proclamation of the city as the new capital of India, and the offices are situated in Chandni Chowk, said to be the finest thoroughfare in Asia

E. CAPOR & CO.

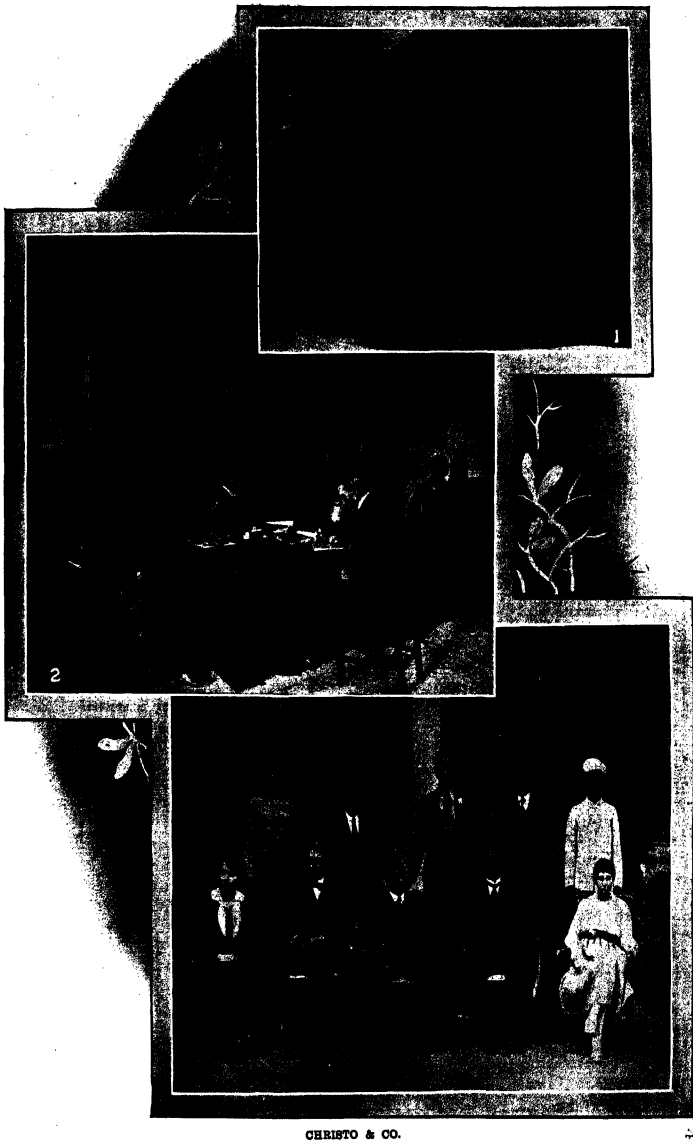
Messrs E Capor & Co have recently started their business operations by manufacturing first-class furniture and other goods for dwelling-houses, offices, and scientific, literary, and other institutions, and a very large and varied stock of different kinds of wood is always kept on hand

There is a remarkably fine display of them in the firm's showrooms It is impossible to enumerate every class of article manufactured, but the following list will give an idea of the varied character of the productions general furniture for dining, drawing, and breakfast rooms, dinner buffets and wagons, roll-top desks, writing-tables, sideboards, office and other chairs, bookstands, wardrobes, kitchen dressers, chairs for invalids, *almirahs* of every description, organs, music stools, couch and portable beds, Chesterfields, settees, mantels, French bedsteads, bedroom suites, dressing chests, toilet glasses, perambulators, mail carts, sorting cases, stamping tables for post offices, cash boxes, delivery tables, drawing stands, tables and stools, easels, benches, and blackboards, together with an enormous quantity of other goods

Messrs E Capor & Co are now catering for the supply of all descriptions of sporting requisites and indoor games of

E. S. CAPOR & CO.

1 Exterior View of the Premises, Cutchery Road, Sialkot. 2. The "North Light" Tennis Racket. 3 E. S Capor, Managing Proprietor



CHRISTO & CO.

1. Exterior of Offices. 2. Proprietor's Office. 3. Staff Group.

excellent quality, a speciality being made of the "North Light" tennis racket, which has already met with the warmest approval of expert players.

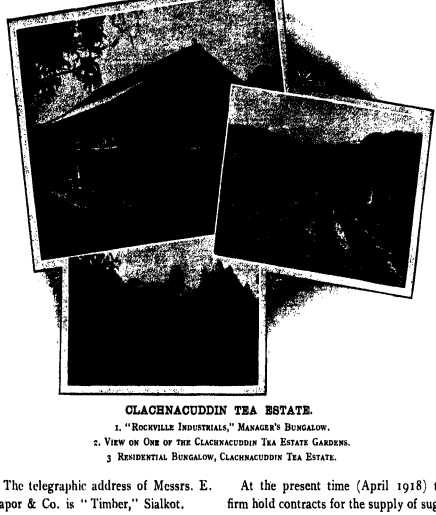
The telegraphic address of Messrs. E. Capor & Co. is "Timber," Sialkot.

CHRISTO & CO.

This firm was established in the year 1913 at 4 Cullum Street, London, E.C., for the purpose of carrying on an export and import business between Europe and India, and also with the object of developing the Indian patent of the "Richards" coal carbonization process.

In February 1914 Messrs. Christo & Co. opened their head office in India in the city of Lahore in the Punjab, and their operations centred mainly in their acting as sole selling agents of sugar manufactured by the Cawnpore Sugar Works, the Marhourah Sugar Factory, the Champaran Sugar Company, and the Ryam Sugar Company. During the short existence of the firm its business has been greatly expanded by the energy and perseverance of Mr. P. B. Christo, the founder and proprietor of the concern, who has for the whole period taken upon his own shoulders the responsibility of active management.

The sales of sugar for the year 1914 amounted to 50,000 *maunds*, or 4,000,000 lb., of the value of Rs. 4,77,000, and during the fourth year of working no fewer than 1,00,000 *maunds*, representing Rs. 12,00,000, were disposed of to various customers.



CLACHNACUDDIN TEA ESTATE.

1. "Rockville Industrials," Manager's Bungalow.
2. View on One of the Clachnacuddin Tea Estate Gardens.
3. Residential Bungalow, Clachnacuddin Tea Estate.

At the present time (April 1918) the firm hold contracts for the supply of sugar of the value of Rs. 6,00,000.

The activities of the firm are not, however, confined to the selling of indigenous or foreign sugar, as an extensive trade has been built up in Indian wheat—the gross turnover now exceeding 4,000 tons, worth Rs. 1,75,000—and in gunnies, coal, pepper and other spices.

Although these items only of commerce have been specifically mentioned, it must be understood that Messrs. Christo & Co. are at all times prepared to entertain sound business proposals in the way of dealing with any kind of marketable commodity in or outside of India.

Mr. Christo is very ably supported in the control of his multifarious activities by an efficient staff of European and Indian assistants, and no better proof of the success which has attended their efforts can be given than by pointing to the fact that according to the audited balance sheet of the firm's affairs in 1915 the assets were stated to be of the value of Rs. 2,20,000, and that at the close of the year 1917 they had reached the very satisfactory figure of Rs. 3,70,000.

The foregoing notes will be sufficient to show that the business of the firm has steadily developed into an important industrial undertaking, but it is necessary to add that the results would have been even more gratifying if the Great War had not commenced within six months of the establishment of Mr. Christo's venture in India. This unfortunate occurrence closed normal channels of communication, and thus placed huge obstacles in the way of exporting or importing goods, but the firm is bravely holding its own in the midst of the keenest competition, and is looking forward with confidence to the future.

Messrs. Christo & Co. are now negotiating with manufacturers in Egypt, Japan, and other countries, with the object of being fully prepared for the very great revival of trade which it is anticipated will follow the cessation of hostilities.

THE CLACHNACUDDIN TEA AND FIBRE ESTATES.

The beautiful Kangra Valley, in Northern Punjab, lies in the hollow between the lower Himalayas and the outer Savalic ranges, and the Clachnacuddin Tea and Fibre Estates are situated on the western slopes of the first-named mountains. The property was originally purchased by Mr. Duncan MacBean, senior, formerly agent in Quetta of the Punjab Banking Company, who, about the year 1882, relinquished his position in order to become a tea planter. There were strong inducements for capitalists to take up the cultivation of tea in Kangra in the early eighties, as the produce of gardens was then realizing prices ranging from Rs. 1 to Rs. 4 per lb. Parenthetically it may be observed that tea grown upon this estate was regularly supplied to the late Right Hon. W. E. Gladstone at the last-named figure, and that the proprietor received a flattering testimonial from that famous statesman. Cycles of misfortunes as well as eras of prosperity come and go, however, and planters in the early nineties witnessed so great a reduction in prices that there was scarcely any profit to be made, and as misfortunes never come singly, a terrible earthquake in 1905 wrecked the valley, demolishing buildings and causing the death of about twenty-four thousand persons. Mr. MacBean suffered the destruction of his fine factory, built of blue sandstone, and fully equipped with modern machinery, his coolie lines and godowns, as well as the bungalow occupied by Mr. MacBean, junior, whose cherished only daughter,

nine years of age, perished in the calamity. This appalling catastrophe resulted in many estates belonging to honoured European tea companies and private owners being forced into the market, when they were disposed of to Indian capitalists. With the help of the Kangra Valley Earthquake Relief Fund Mr. MacBean rebuilt the factory and other premises which had been demolished, and erected a new bungalow in accordance with an approved style of earthquake-proof buildings.

Soon after the resuscitation of the gardens Mr. Duncan MacBean, junior, introduced a new form of green tea, producing a pale and pungent liquor, and invented various labour-saving machines for manufacturing the same, which is now sold at remunerative rates in Amritsar, the leading tea market in Northern India for the State of Kashmir, Afghanistan, Bokhara, and other places. This much-favoured sample has been steadily superseding Chinese and Japanese teas, but owing to the exigencies of the Great War the North-Western Railway has been unable to convey consignments usually forwarded to Afghanistan, Kashmir, and elsewhere in India, and the embargo placed on shipping has prevented exportation.

Since the bitter experiences of 1905 Mr. Duncan MacBean, junior, has turned his attention to other sources in order to augment his income, and the first step taken was to plant on his waste land some millions of agave fibre plants. He subsequently successfully extracted beautiful white fibre, which he baled in a press of his own invention, and sent in large quantities for sale in Calcutta.

Mr. Duncan MacBean, junior, the present manager of the estates, has now added another industry in the form of manufacturing a variety of breakfast cereals, which have become exceedingly popular among Europeans and Anglo-Indians, clubs, messes, hotels, schools, and mercantile firms throughout the length and breadth of India and Burma, and the military authorities and British hospitals are now using them in preference to Quaker Oats and oatmeal. The establishment of this industry benefited the Mother Country by reducing the demand at home for goods of this character, which were so much needed there during the War, and it also rendered very great assistance to the Imperial Government by obviating the necessity for providing cargo space for a certain quantity of foodstuffs which would otherwise have been imported from Great Britain.

The cable address of the Estates is "Caducidad," Palumpore.

THE DELHI BISCUIT COMPANY, LTD.

The idea of the establishment of a biscuit factory in Delhi for the benefit of orthodox Hindus originated with L. Radhamohan of that city (the present chairman of directors), and the flourishing position of the Delhi Biscuit Company to-day is largely due to the untiring energy and support of that gentleman.

The company was formed in the year 1898 under the name of "The Hindu Biscuit Company, Ltd.," and only Brahmans and high-class Hindus were, and still are, employed in the factory, so that biscuits are touched by Hindus only. Many industries in India have been very severely handicapped owing to caste prejudices, but those which are concerned in the manufacture or preparation of articles of food are the worst sufferers.

By a careful adherence, however, to a strictly defined policy, the company's business grew rapidly and their goods increased in popularity day by day. Early in the year 1914 complaints were brought to the notice of the management that Hindus sold their biscuits as "Hindu" biscuits, purchasers assuming that they had been manufactured by the Hindu Biscuit Company, therefore it was deemed advisable to change the name of the company to the Delhi Biscuit Company, Ltd., and that resolve was at once carried out, registration of the new title taking place in the same year. It is worthy of note that there was a remarkable increase of sales during the next two years, in each of which the directors declared a dividend of 50 per cent. Europeans as well as Indians became large purchasers, and already Delhi biscuits have become household words in India.

The company are now manufacturing fifty-five different varieties of biscuits and nearly thirty kinds of cakes, in addition to bread and pastry. The finest ingredients procurable are used in the factory, and all manufacturing is done under expert supervision.

Biscuits are supplied in bulk or in 7, 14, and 28-lb. tins, and range in price from "Cabin" or "Canteen," at about 4 annas per pound, to "Coronation," "Imperial," and others, at 10 or 11 annas.

The company have invariably gained the highest awards for their goods at exhibitions, and they have received ten gold and five silver medals in addition to a large number of certificates. The firm enjoy the patronage of His Excellency the Commander-in-Chief in India, the Government of India, and of many rulers of Native States, and several hundreds of thousands of biscuits were supplied during the Coronation Durbars of 1903 and 1911.

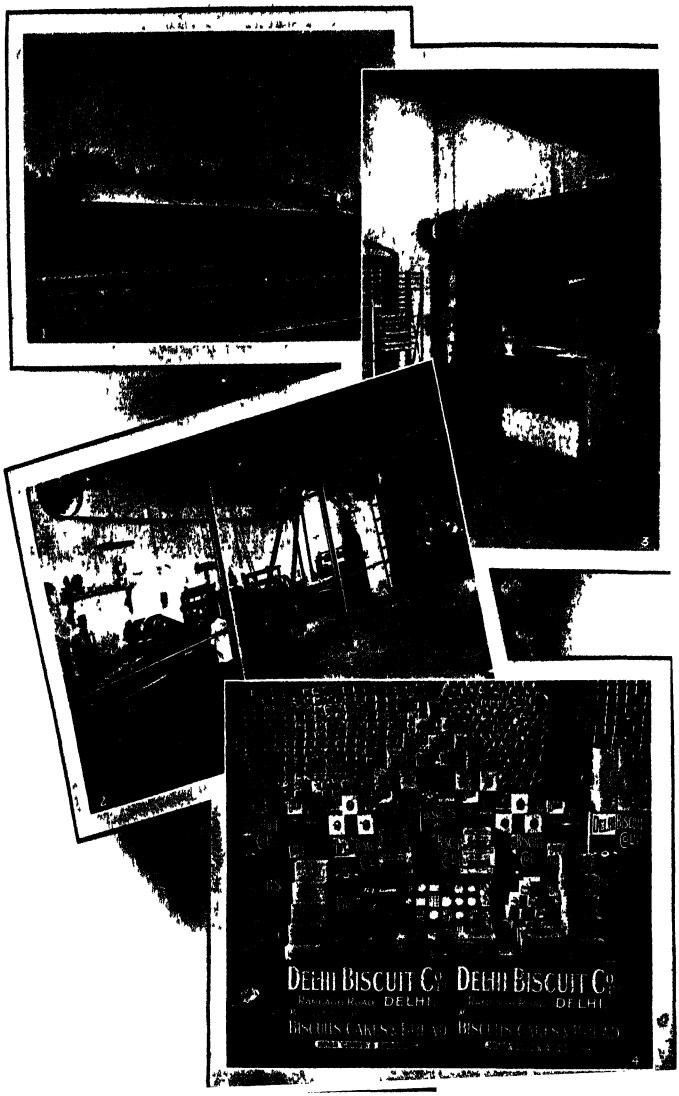
A special feature is now being made of dog biscuits, which form an ideal food, and are said by the company to be superior to any other brand on the market. Innumerable testimonials have been received from patrons indicating their high appreciation of the company's goods, and among those relating to household biscuits, one notices such expressions as "I like them better than those of foreign make," "Thanking you for your excellent supplies," "I tasted some of your cheese biscuits and found them excellent," "Please send me another tin of your excellent 'Cabin' biscuits," "We like them very much, they are all very good." And with regard to dog biscuits: "I find them excellent for both dogs and chickens," "Kindly send me another box, I am very pleased with them," "Each biscuit is as good as 1 lb. of meat," "The last lot have greatly benefited a very delicate dog, and in future I am going to feed him on nothing else."

The factory is a model of cleanliness, and in every department one notices machinery of the most approved type. Plant has recently been erected for making tins, thus rendering the company more independent of outside assistance.

It might be mentioned, in conclusion, that many years ago the Government was approached with the view of sending an Indian (with an industrial scholarship) to England to learn the art of bakery, but as that privilege was not granted the company expressed their willingness to bear all expenses of the candidate if the Government would secure him an appointment in one of the leading biscuit factories at home, and it is to be regretted that the proposal was not accepted. This question opens up a wider one, as to how far the best interests of both India and England might be advanced by a more generous recognition of trade relationships tending to the development of industrial concerns on each side of the sea.

About one hundred hands are employed in the factory, which is just outside of the city of Delhi.

The telegraphic address of the company is "Biscuit," Delhi.



DELHI BISCUIT CO., LTD.

2. Break and Cutting Machine. 3. Oven.

THE DELHI CLOTH AND GENERAL MILLS COMPANY, LTD.

Delhi, the Imperial City of India for more than seven centuries, is a place of varied interests and great historic importance. It was the scene of the splendours of the Courts of the Moghul emperors and the centre of the leading struggle in the Sepoy Mutiny of 1857.

Beyond the romance which is attached to the history of those early days, however, Delhi is fast becoming an important trading centre with its large number of mills, and it bids fair to become the chief manufacturing centre of Northern India.

An important commercial undertaking was commenced there in the year 1890, when the Delhi Cloth and General Mills Company, Ltd., was formed with registered offices at the mill premises in Bara Hindu Rao Rhotack Road.

The chief products of the mills are *pasooti* cloth made for Government purposes, tents, tent ropes, tapes, sheetings, fancy and washing checks, *soosi*, twills, drills, *chadars*, tablecloths, towels, dusters, napkins, *mulls*, nainsook, longcloth, shirtings, *dhoties*, tent cloth, *punkha* fringes, and other goods, and it is a notable feature of the factory that every process of manufacture, from the ginning of the raw material to the perfect completion of the articles, is carried out within the four walls of the company's buildings.

Machinery of an excellent type and of modern designs has been erected, and the necessary power is derived from a steam engine of 600 h.p., while humidifiers, fire extinguishing plant, and other up-to-date improvements have been affixed wherever required.

There are 16,000 spindles in use at the present time, but increasing pressure upon the company's resources has caused the directors to begin the work of enlarging the buildings in order that the weaving department may be doubled in size.

The supply of military requirements is naturally the first consideration of the directors, and in addition to the thousands of yards of cloth now being issued monthly for war purposes the mills are also producing no fewer than from eight hundred to a thousand tents within the same period.

The company have their own moulding and general workshops in which they are able to make new machinery to replace obsolete or worn-out plant in the mills, and they also carry out all necessary repairs, which is no slight advantage in an undertaking of this magnitude. Mr. Madan Mohan Lal, the secretary of the company, represents the board of directors and is in charge of the business and office.

The manager—Mr. Macgregor—occupies a bungalow in the compound, and the company usually employ about eight hundred constant hands.

The 28th Annual Ordinary General Meeting of the shareholders of the company was held on March 31, 1917, when the directors presented the audited balance sheet and the profit and loss statement for the year ending December 31, 1916. It was stated therein that, in spite of the cloud which still hung like a pall over the spinning industry in India, the profits for the twelve months were Rs. 57,006, including a balance brought forward from the previous year. The directors proposed to allocate this sum as follows: Dividend at 4½ per cent., Rs. 31,500; charity, Rs. 1,000; bonus to the staff, Rs. 500; depreciation fund, Rs. 20,000; bad debts written off, Rs. 55; and amount to be carried forward, Rs. 3,950. The capital of the company is Rs. 7,00,000, made up of 2,800 shares authorized and subscribed of Rs. 250, and the reserve fund shows the following figures: Depreciation, Rs. 4,09,003; general reserve, Rs. 1,32,000; provision for bad and doubtful debts, Rs. 98,363; and insurance fund, Rs. 5,000.

THE DELHI ELECTRIC TRAMWAYS AND LIGHTING COMPANY, LTD.

The origin of this company is traced to the commencement of the year 1903, when preparations were in progress with the view of making the city of Delhi a fit and proper place for the holding of a splendid Durbar in honour of the accession of His late Majesty King Edward VII. Not the least important of the many undertakings then carried out was the erection, by a private company (with the approval of the local authority), of a small power station for the purpose of electrically lighting the streets of the city and of a small number of public and private buildings. The supply was controlled by Messrs. John Fleming & Co., of Bombay, who in 1905, in conjunction with Mr. Arthur Grey, of Lahore, and Mr. R. L. Forrest, of Bombay, obtained from the Punjab Government powers to provide a general supply of current in the city and to construct and operate electric tramways within the same area.

That concession resulted in the formation in London in 1906 of the Delhi Electric Tramways and Lighting Company, Ltd., with the object of taking over the licences granted by the Government, together with the small power station which had already been built. Within twelve months the company had commenced the construction of the tramway system, and the erection of a new power-house, together with electric supply mains in the city and the Civil Lines. It was most unfortunate that the company's enterprising spirit received a severe blow during the construction period owing to the failure of their chief contractors, Messrs. Bruce, Peebles & Co., but, notwithstanding serious delays thereby caused, the tramways began to run on June 3, 1908. The new power station was put into operation for general supply of current a few weeks before that date.

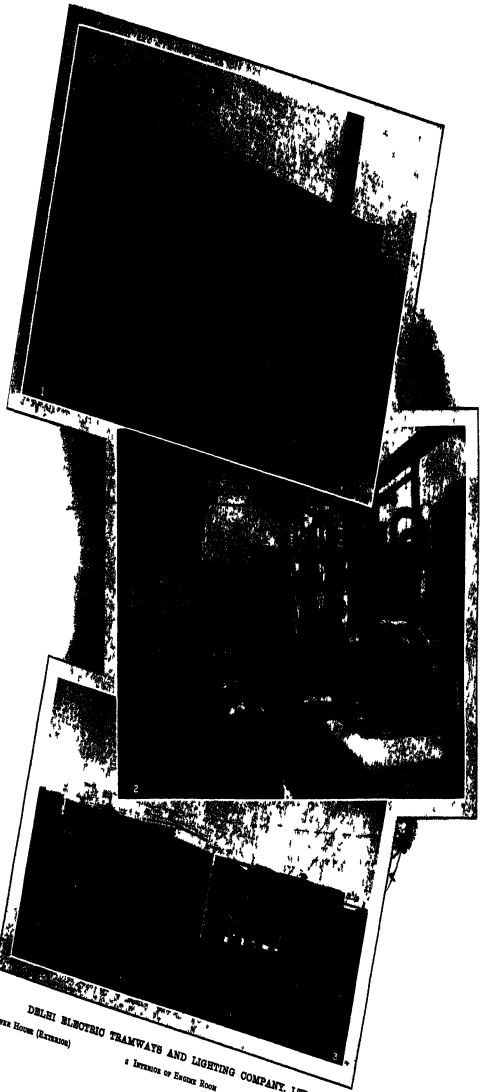
The company's troubles were not then, however, a thing of the past, as they were catering for people, conservative by nature, who had always been accustomed to walking, and whose earnings were extremely small, and therefore the reluctance or inability of the public to avail themselves of the facilities provided made it difficult for the company to obtain even a fair start. The schedule of fares was based upon an extremely moderate scale, and although the number of passengers increased gradually, it was not until the year 1914 that the company began to obtain returns in any way commensurate with the efforts of the management and the capital which had been invested.

The tramway system consists of a track rather more than 9 miles in length, but a portion of it is laid with double lines, giving a route of nearly 6 miles. The current is supplied on the overhead trolley system, the poles being channel steel. There are twenty-four semi-open cars of the single-deck type, and the average weekly distance covered is approximately 9,500 miles. Fares are calculated on a basis of 1 pice (¼ anna) per half-mile, but 3 miles may be travelled for 4 pice. Such remarkably cheap rates as these have broken down the wall of apathy which was plainly visible previously, and statistics show that no fewer than about 145,000 persons are now making use of the cars in each week.

The supply of energy for power, lighting, and fans is on the continuous-current system, the pressure being 250 volts for lighting purposes and fans and 500 volts for power. Overhead distributing mains are used throughout the whole system,

DELHI CLOTH AND GENERAL MILLS COMPANY, LTD.

1. Staff Group. 2. Tent Makers and Tape Making by Hand. 3. Rope Makers. 4. Exterior View.



DELHI ELECTRIC TRAMWAYS AND LIGHTING COMPANY, LTD.

1 Power House (Extension)

2 Interior of Engine Room

3 Car Depôt

but underground feeders are being installed within the city area. About 2,500 consumers are connected with the station, and the total capacity of current-consuming apparatus receiving current is 2,344 kilowatts. Included in the latter total are about sixty power consumers, having a total of 580 h.p. in small electric motors. The total number of units sold in 1916 was approximately 1¾ millions.

Steam and Diesel engine plant of 1,340 b.h.p. (together with a large battery of accumulators) is installed in the power station, and in addition there is a motor generator for exchanging current with the 6,600-volt alternating-current Government Durbar power station, which supplies the new city works and other buildings outside of the company's area of service.

The total capital expenditure at the close of the year 1916 was £174,964.

The directors of the company are Mr. A. W. Tait (chairman), Colonel Sir Buchanan Scott, Messrs. Montrion Campion, M.I.C.E., Stratford Andrews, and Carrol Pearman, while the general manager and chief engineer is Mr. J. G. Griffin, M.I.E.E.

The London offices of the company are at Basildon House, Moorgate Street, E.C.

THE DELHI FLOUR MILLS COMPANY, LTD.

This company was incorporated in the year 1916 with a capital of Rs. 8,00,000 with the object of acquiring, as going concerns, the flour mills in Delhi formerly owned by Messrs. A. John & Co., and the Delhi and Northern India Flour Mills Company, Ltd.

The property of the company comprises two large up-to-date flour mills, and the whole of the machinery—which is on the Turner and Simon systems—has an aggregate output capacity of thirty-three sacks hourly.

The company's products, consisting of all qualities of flour, *atta*, and *suji*, are dispatched under the "Stag" brand, which is well known throughout India.

Messrs. R. G. Govan & Co., the managing agents of the company, are at present endeavouring to bring about an adjustment in the present anomalies in regard to railway freights, and their efforts are being strongly supported by the Punjab Chamber of Commerce. The Indian Railway Administration appears to favour the exportation of wheat as against flour by scheduling cheaper telescopic rates on the former when consigned to ports than on wheat carried to flour-milling centres. Messrs. Govan & Co. contend that the flour industry in India should be fostered and encouraged by the railway authorities quoting more favourable rates on wheat sent to milling centres, and on flour conveyed from such centres to ports of export, than upon wheat carried direct from the producing districts to sea-going vessels.

It may be added that the milling companies in Delhi and elsewhere in the north entertain the hope that the representations and suggestions made by Messrs. Govan & Co. and others interested in the flour industry will be favourably entertained by the Railway Board and the Commerce Department of the Government of India.

DELHI'S IVORY PALACE.

All who have made a study of the early literary history of India will have noticed repeated references to visits made to the shores of the Persian Gulf and the Arabian Sea by traders who sailed away with products of that country, which included shawls, silks, spices, ivory, peacocks' feathers, and other goods, while in more recent times tourists as well as merchants from every portion of the Western world have spoken or written in the highest praise of the marvellous specimens of high Indian art obtained by them in the shape of carved and inlaid wood and ivory goods, of embroidery, or of beautifully ornamented and chaste designs of articles in gold, silver, brass, and other metals. The skill displayed in the manufacture of such goods is, in the majority of instances, an hereditary trait which has been transmitted from father to son through hundreds of years, and especially is this the case in connection with workers in ivory and wood.

One might illustrate this by giving some particulars regarding the unique business carried on at the Ivory Palace, Delhi, by the firm of Fakir Chand and Rughnath Dass, of whom the latter is the surviving partner and sole proprietor.

Established before the mutiny of 1857, they are the oldest firm in India dealing in ivory and sandalwood carvings, miniature paintings, and Indian curios of all descriptions, and the continued support of patrons from almost every quarter of the globe is ample testimony to the excellent workmanship displayed in their wares.

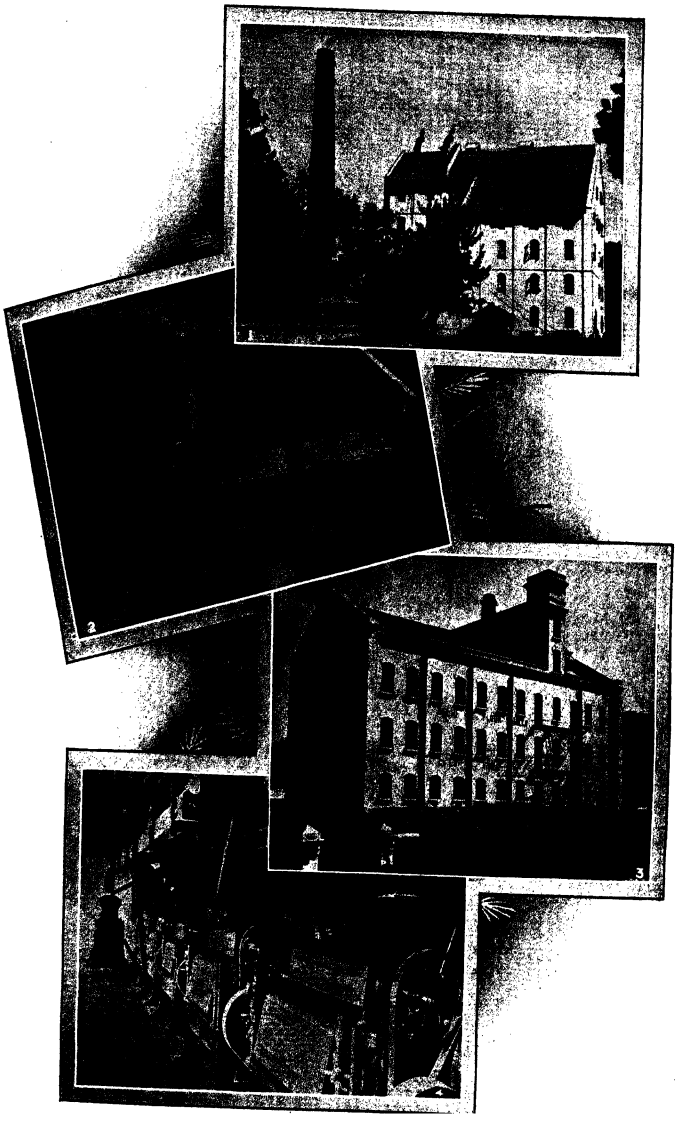
Carving in ivory is carried on in India at Delhi, Murshidabad, Travancore, and Mysore, but Delhi is first in importance of these places; and Fakir Chand and Rughnath Dass are unapproached by any other firm in Delhi.

Mr. Ellis, Assistant Commissioner of the Punjab in the year 1901, wrote in the *Pioneer* newspaper: "Ivory carving proper may be said to be confined to Delhi. In that city Fakir Chand and Rughnath Dass practically monopolize the trade, and, in fact, no one in the Province can compete with them. The family of the proprietor has carried on this work for four generations."

It is no secret that "superior workmanship" is the driving force which has placed this firm so far ahead of all other workers and dealers in ivory and wood in India, but unexampled success has not divested the proprietor of those inestimable qualities of courtesy and scrupulously honourable conduct without which he could never have reached his present high pinnacle of fame.

The handsome premises near the Juma Masjid in Delhi are a treasure-house of artistic goods, and a mere pen-and-ink sketch of the contents of cabinets and showcases can give but the faintest conception of their value and beauty.

Anyhow, mention may be made of Indian and foreign jewellery, wood-carving work, comprising *shisham* and rosewood screens, tables, Indian brass ware, consisting of tables, enamelled and embossed work, trays, vases, goblets, bowls, boxes, card cases, and toys; paintings on ivory of views of Delhi and Agra, of courts and processions, and of kings and queens of the Moghul Empire, sandalwood articles, such as caskets, screens (ranging in value from Rs. 1,000 to Rs. 3,000), brackets, cabinets, work and other boxes, tables, and card and other cases; carved and inlaid sandal-wood work, represented by caskets, handkerchief and other boxes, chess boxes, tables, and chess figures, cabinets and tea caddies, together with an enormous assortment of magnificent ivory articles, including carved tusks up to Rs. 10,000 in value, the Taj at Agra, carved elephants, bullock carts, *bahlis* (women's carriages), *tongas* (bankers' carts), peacock ships, Hindu gods and goddesses, chess-men, camels, horses, palanquins, marriage *palkis*, native carts, Indian ploughs, boxes, sticks, fans, combs, snake-charmers, Indian and Japanese figures, paper-weights and other goods too numerous to mention.



DELHI FLOUR MILLS COMPANY, LTD.

2. Exterior View, "B" Mill. 6. Centrifugal Room, "B" Mill. 3. "A" Mill, Exterior View. 4. Roller Floor, "A" Mill.

DELHI'S IVORY PALACE

2 Brassware Department 3. Ivory Showroom 4. Furniture Room

The firm have been awarded several gold and silver medals at the principal exhibitions in India, and they have received hundreds of testimonials from purchasers at their establishment. Among the latter are the following: Her Excellency Lady Curzon visited the showrooms in November 1899, and was much pleased with the articles and the fine workmanship of the goods shown to her; Her Royal Highness the Princess of Wales made some purchases, and His Royal Highness the Prince was pleased with the articles supplied (December 1905); Lady Charles Bentinck, in the same month, wrote that she had never seen anything like the goods in the whole of India; Messrs. Burjorjee Shapoorjee and Mancherji Burjorjee, of Ahmedabad, in 1906, said that the shop was replete with marvellous workmanship in ivory, and they were really struck with some of the fine specimens shown to them. They had purchased several articles, and their only regret was that their purse did not allow them to take any more. The proprietor showed great politeness, and the prices were very moderate. The Duchess of Sutherland in 1907 bought several pieces of sandalwood and ivory, and considered the work most excellent; in 1908 Count Moltke wrote that he had been much pleased with his purchases and with the treatment received by him; and Lord Shaftesbury, Lord Chamberlain to Her Imperial Majesty the Queen Empress, writing from the King-Emperor's Camp, Delhi, in December 1911, said that "Her Majesty was very pleased with the ivory work supplied to her; and she much appreciated the delicacy and beauty of the carvings." The proprietor is always glad to allow visitors to see the originals of the above and other testimonials.

The firm hold special appointments from (*inter alia*) His Excellency the Right Hon. the Earl of Minto, P.C., G.C.M.G., G.C.I.E., Viceroy of India in 1905, His Honour the Lieutenant-Governor of the Punjab, His Imperial Highness the Grand Duke Boris Vladimirovitch of Russia, His Highness the Governor-General of Portuguese India; also from His Excellency the Right Hon. Baron Hardinge of Penshurst, P.C., G.C.M.G., G.C.V.O., and His Excellency the Right Hon. Lord Chelmsford, G.C.M.G., G.C.I.E., G.C.S.I., the late and present Viceroys and Governors-General of India respectively.

Thousands of tourists visit the firm's premises annually, and every facility is offered for a thorough inspection of beautiful and artistic carving and other work performed by the employees, who are about a hundred in number.

THE DEVELOPMENT CORPORATION OF INDIA, LTD.

The commercial and industrial development of a country depends as much upon the possibility of obtaining the necessary capital as upon the energy and foresight of the promoters of an undertaking. As far as India is concerned, there has not been any shortage of money —although it has been carefully conserved—but there has undoubtedly been a very remarkable absence of the spirit of true progress. India is immensely rich in natural products, which are capable of being manufactured into thousands of different marketable commodities, but it was only at a comparatively recent date that the exploitation of some of these sources of wealth was taken in hand.

Consideration of these facts by Mr. Robert Boulton, the senior partner of Messrs. Boulton Brothers & Co., of London, led to the formation by that gentleman in 1917 of the Development Corporation of India, Ltd., with the object of promoting industrial expansion in India and of providing financial aid for industrial concerns which in the ordinary course of business would not be regarded as suitable for receiving accommodation from bankers. The head-quarters of the corporation are located in a very fine spacious building at 10 Alipore Road, in Delhi, and other offices have been opened at 4 Council House Street, in Calcutta, and at Simla, while it is intended to increase the number of branches from time to time according to future requirements.

The general manager and a director of the corporation is Mr. Melville Macfadyen; Mr. G. A. Moncrieff, a partner of Messrs. Boulton Brothers & Co., is acting as chairman of the corporation during Mr. Boulton's absence from India; and the other directors are Mr. W. Angelo and Mr. P. D. Macpherson.

The authorized capital of the corporation is Rs. 20,000,000, and during each of the two years since inauguration payments of dividends have been made at the rate of six per cent. and eight per cent. upon preferred and deferred capital respectively.

The corporation are the managing agents of the Premier Oil Company of India, Ltd., the Premier Soap Company of India, Ltd., and of the North-West Soap Company, Ltd.

These undertakings were formed with the object of developing the vegetable oil soap and fertilizer industries, and plans have recently been sanctioned for the erection of extensive factories on modern lines in Calcutta, Bombay, Cawnpore, and Lahore. The Premier Oil Company of India, Ltd., has a controlling interest in the Premier Oil Mills, Ltd., Cawnpore and Lahore, the North-West Soap Company, Ltd., Calcutta and Meerut, British Fertilizers, Ltd., Colombo, and the Premier Soap Company of India, Ltd., Calcutta.

The Premier Oil Company has a large interest in, as well as a working arrangement with, the British Ceylon Corporation, Ltd., Colombo, and the Gwalior Oil and Soap Company, Ltd., Gwalior.

The amount of capital at present paid up of the Premier Oil Company of India, Ltd., is Rs. 40,50,000, and the paid-up capital of the Premier Soap Company of India, Ltd., is Rs. 25,00,000.

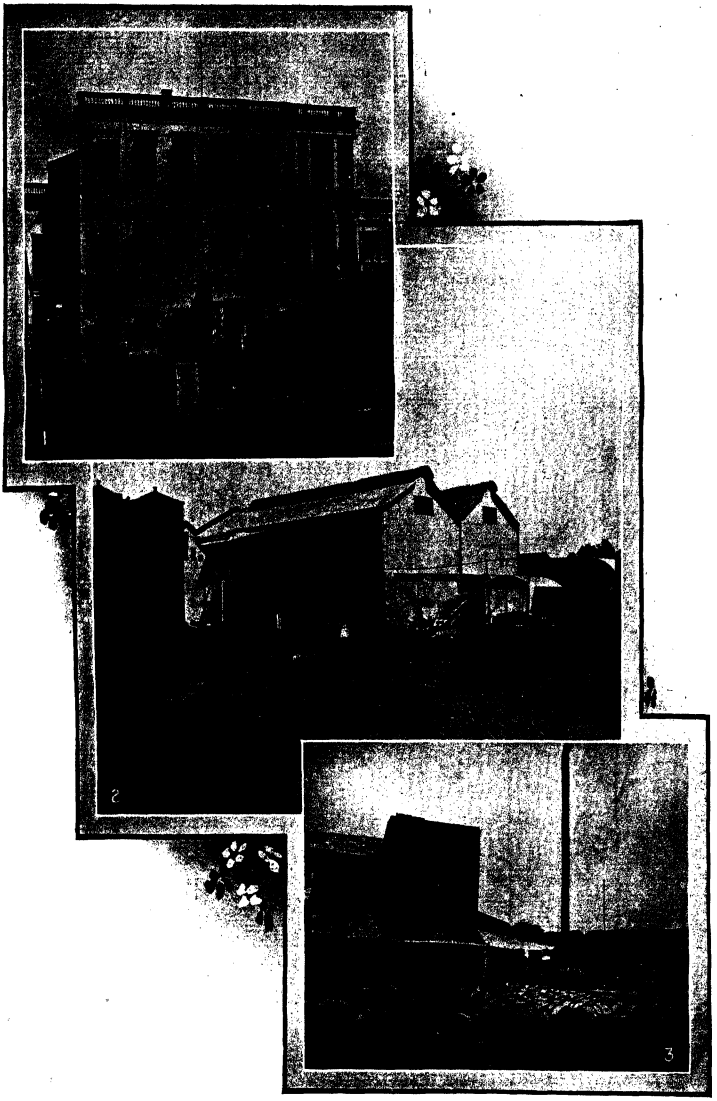
Mr. G. A. Moncrieff is chairman of both the Premier Oil Company of India, Ltd., and of the Premier Soap Company of India, Ltd.; Mr. Melville Macfadyen is the managing director of both concerns, and Mr. C. M. de Souza is the general manager, the other directors being Mr. A. V. Laver, Mr. F. J. Mitchell, Sir James Roberts, Kt., C.I.E., Mr. Gerald Stapledon, and Mr. H. F. Yeoman.

Owing to the very great difficulty experienced in obtaining machinery from England and from America, several of the mills were only able to produce one-fourth of their possible output, but notwithstanding that fact, the Premier Oil Company of India, Ltd., has paid a dividend at the rate of 10 per cent. per annum upon the first year's working.

The Premier Soap Company of India, Ltd., has only recently been formed, and consequently no accounts have yet been issued.

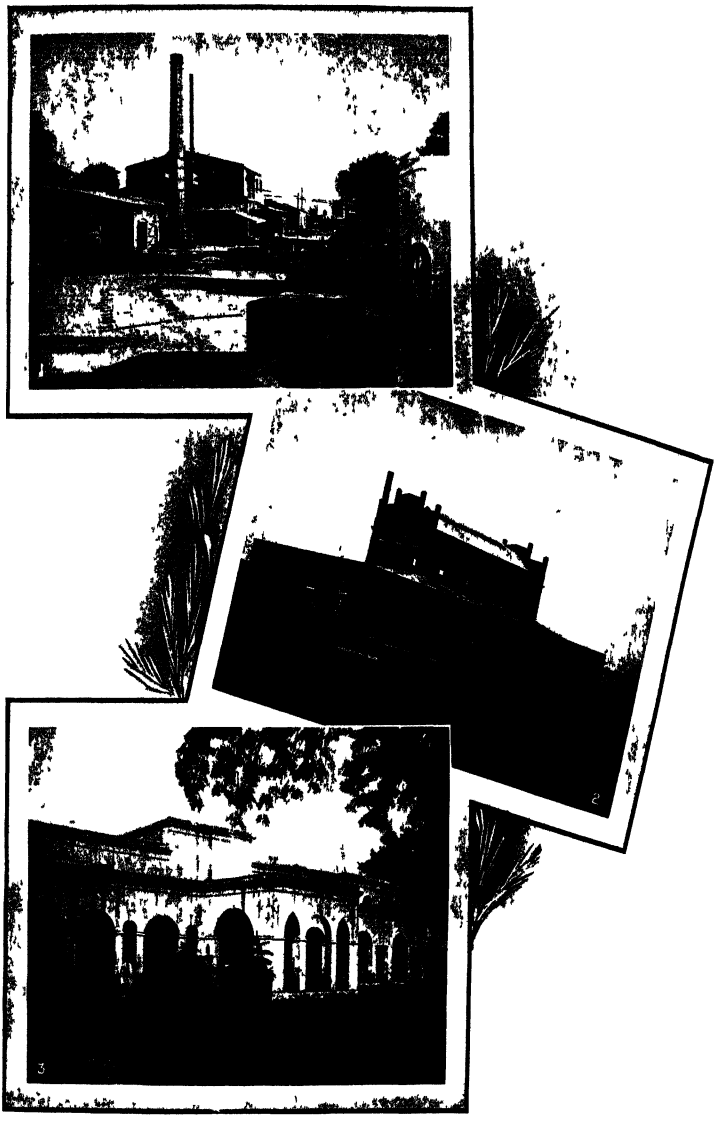
DHANJIBHOY & SON.

Very little was known by the outside world of the State of Kashmir at the close of the eighties of last century, when the firm of Dhanjibhoy & Son was established at Rawalpindi by the late Nawab Khan Bahadur C. Dhanjibhoy, C.I.E., K.I.H. The business then consisted of the carriage of merchandise or produce by *tongas* and bullock-carts, the only means



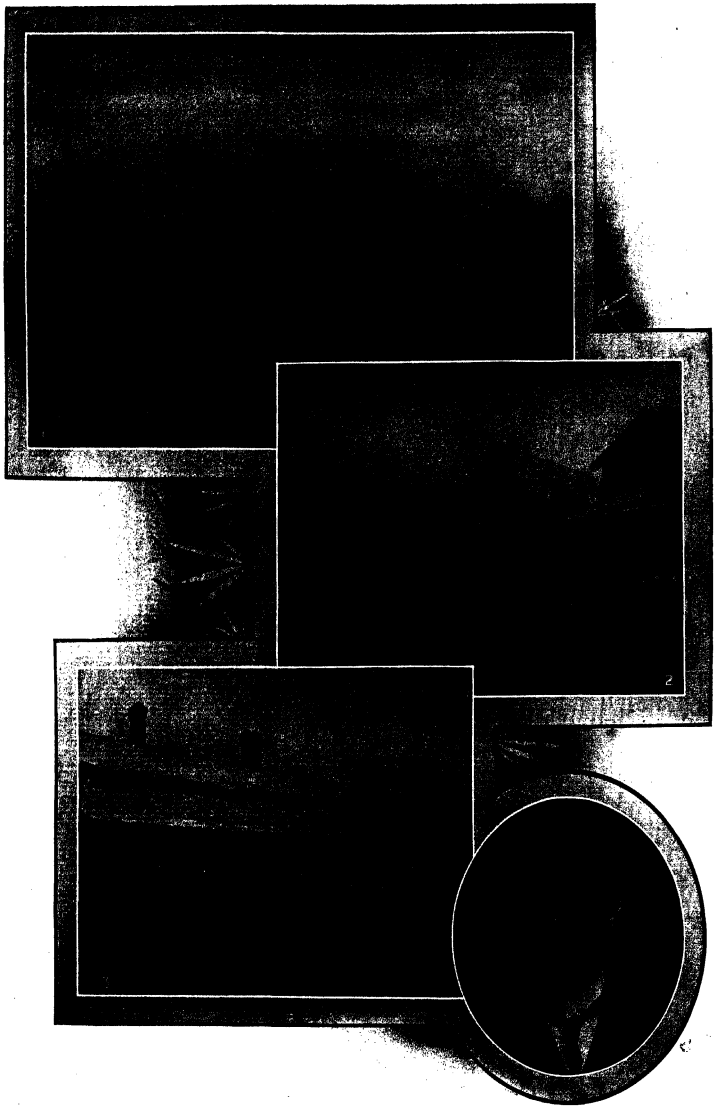
THE DEVELOPMENT CORPORATION OF INDIA, LTD.

1. Calcutta Office of the Development Corporation of India, Ltd. 2. The Soap, Glycerine, and Candle Works, Calcutta.
3. Oil Mills at Cawnpore.



THE DEVELOPMENT CORPORATION OF INDIA, LTD

1 Oil Mills at Lahore 2 Oil Mills at Gwalior. 3 Delhi Office of the Development Corporation of India.



DHANJIBHOY AND SON.

1. Office and Group of Cars. 2. Tonga Office at Murree. 3. Tonga Office at Srinagar. 4. Mr. S. C. Dhanjibhoy.

DHANJIBHOY AND SON.

1. Motor Garage. 2. Machine Shop. 3. Carpenters' Shop. 4. Tonga Office at Ghazel. 5. Tonga Office at Baramulla.

of transport then available. The sphere of operations was limited to the section between Rawalpindi and Murree, but this was extended in the direction of Kashmir as quickly as a properly made road took the place of the narrow and frequently unsafe goat track which led to Srinagar.

In course of time the proprietor was joined in the business (then called the Imperial Carrying Company) by his son, S. C. Dhanjibhoy, who, since the death of his father in 1912, has been sole owner of the whole undertaking, branches of which have been opened at Murree, Garhi, Baramula, Gulmarg, Srinagar, and Abbotabad.

It may be mentioned here that the late Nawab Khan Bahadur despatched twenty-five fully-equipped Red Cross *tongas* for use in the South African War; he also sent forty ambulance *tongas* with an expedition to China; and he maintained a *tonga* service during the troubles in Tirah.

The firm are now Government mail contractors, out-agents to the North-Western Railway, Government warrant holders, and general carriers. They are always prepared to arrange for the transport of passengers or goods in any part of Northern India, and guide books to Kashmir recommend tourists, sportsmen, and others to communicate with this firm prior to their arrival in the State.

In 1914 modern methods of locomotion necessitated the commencement of a motor service between Rawalpindi and Murree, but owing to increasing traffic this will be considerably enlarged in the near future. Between forty and forty-five motor-cars, lorries, and busses are now engaged in a regular daily service for mails as well as passengers and goods, while about a hundred *tongas* run between Murree and Kashmir.

The firm have their own workshops at Rawalpindi, which are fitted with up-to-date machinery, including a number of lathes. Necessary repairs to the firm's motor-cars and *tongas* are effected by skilled operatives, but the firm are also prepared to undertake similar work for other persons.

The proprietor retains full management in his own hands, and he employs from eight hundred to nine hundred men.

The telegraphic address of Messrs. Dhanjibhoy & Son is "Dhanjibhoy," Rawalpindi.

E. DYER & CO., LTD.

The brewing of beer—that is, of a sound and palatable liquor free from chemical and other impurities—is an industry of comparatively modern growth in India, and it has not yet attained any great dimensions. What is termed "country" beer, an iniquitous decoction, and baneful in its effects, has been prepared from time immemorial, but the conversion of good barley and hops into a harmless beverage was not known in this vast country until the year 1855, when the late Mr. E. Dyer erected a brewery at Kasauli, a cantonment and convalescent depôt in the district of Umbala in the Punjab. Initial difficulties were experienced in the lack of indigenous barley of a satisfactory quality, and in the paucity of the districts in which that cereal could be grown, but more recently suitable cultivation has been adopted, and it has been found that a very good malting barley can be grown in the Delhi district and other parts of the Punjab. All hops, however, have to be imported, as the climatic conditions are against their production. In the Native State of Kashmir they have been grown very successfully in a small way as an experiment, and in 1915 Messrs. Dyer & Co. offered to take up land and cultivate on a large scale under expert European management, but they were refused permission, as the State does not encourage British industry.

When British supremacy was established in India and was followed by the stationing of large numbers of home-born troops, the demands for decent ale and beer became more and more insistent.

Mr. Dyer at the outset recognized the obstacles to be overcome, but by steady perseverance and the application of practical experience his venture soon proved to be a success. He was then approached by several Government officials and military officers, with the object of inducing him to sell the Kasauli brewery and to construct another one for them at Murree, a hill station for British troops in the district of Rawalpindi. The proposal was accepted, and the Murree Brewery Company was formed in the year 1860, with Mr. Dyer as manager.

The company manufactured ales and stout, delivering them in casks or jars, and they also carried on an extensive trade in the same beverages sold in bottles, but a special feature was made of large contracts entered into with the Government of India for the supply of malt liquor to the British troops in a considerable number of stations.

Mr. Dyer afterwards retired from the managership of the Murree Company and opened a brewery on his own account at Simla, but at a later date he—in partnership with a few friends—established breweries and distilleries, under the name of E. Dyer & Co., at Solan, the premises being picturesquely situated among the Simla Hills; at Lucknow, on the banks of the River Goomtee; and at Mandalay, in Burma.

The enterprising spirit of the partners was rewarded by success, similar to that which had attended Mr. Dyer in his previous undertakings, and as the business continued to expand the firm was incorporated as a private limited liability company in the early part of the year 1917, Mr. E. S. McGowan becoming managing partner and director.

The importation of English and Scotch ales is undoubtedly a factor to be reckoned with in India, but the cost of production at home, *plus* ocean freightage and railway rates, to places eight hundred or a thousand miles from the nearest seaport, must inevitably pave the way for a much larger consumption of beers brewed locally, provided that the quality of the beverages can be maintained at the high standard of excellence for which Messrs. Dyer & Co. are so justly famous.

FATEHMAHOMED DOSTMAHOMED.

Probably the greatest tribute which can be paid to this firm of dealers in, and exporters of, hides and skins is that they have been appointed purchasing agents of these goods on behalf of the Government of the Punjab. This flattering recognition is undoubtedly due chiefly to the old-established reputation of the partners for fair and honest trading, but it is also partly attributable to the great commercial advantages possessed by the firm in having established sound business relationships with practically every country in the world, in which, by the way, they have arranged for most satisfactory financial references with all leading banking concerns.

It is more than half a century since the firm was founded at Amritsar, the headquarters of the hide and skin industry in Northern India, and the undertaking has progressed in such a satisfactory manner that branch agencies have been started at Calcutta, Delhi, Lahore, Sialkot, Cawnpore, and Karachi.

E DYER & CO (SOLAN BREWERY).

1. Mr E Dyer, the Founder of the Firm. 2 Lucknow Brewery. 3. Solan Brewery

FRAY'S MOTOR WORKS.

1. A Corner of the Showroom. 2. Exterior View of Premises. 3. Portion of Machine Shop.

FATEHMAHOMED DOSTMAHOMED.

1. Proprietors. 2. Staff. 3. Arsenicating and Selecting Hides. 4. Baling Press. 5. Godown Yard.

Hides and skins are purchased in nearly every Province of India, but chiefly in the Punjab, and these include common, framed, and drysalted hides of cows, buffaloes, and calves of all weights and sizes, together with Amritsar drysalted goatskins, North-Western wet-salted goat skins, and sheep skins with and without wool upon them.

The firm have their own godowns and baling presses at Amritsar, Calcutta, Delhi, Cawnpore, Lahore, and Karachi, and the buildings are equipped with the necessary plant for submitting the raw produce to the process of arsenication prior to its being baled for export.

The telegraphic address of the firm is "Muttaquin" at Calcutta and Cawnpore; and "Bismillah" for Amritsar and other places where they are represented.

FRAY'S MOTOR WORKS.

An amazing development of the motor industry in India is one of the principal features of trade returns during the past fifteen or twenty years, and were it not for the tremendous demands made by the military authorities upon English and other foreign manufacturers, there is little doubt that importations of cars, lorries, and cycles would be much greater than they are.

This restriction of exportation from abroad has, however, been the means of throwing motor works in this country more upon their own resources, and the requirements of owners are now met by local firms in a greater degree than ever before.

Fray's Motor Works were established in 1912 at Rawalpindi by Mr. A. O. Fray, an automobile specialist and mechanical engineer who has had many years practical experience in the trade, and who now exercises personal supervision over each department at his headquarters and at his branch business at Murree.

The premises at Rawalpindi, covering an area of 500 square yards, consist of three large brick buildings and another in which are several stores, godowns, and other outhouses. The workshops are fully equipped with first-class lathes and other machinery, and all kinds of repairs are promptly executed at reasonable charges, under European control, while spare parts of various descriptions are made by experienced workmen. Batteries are recharged at moderate rates.

A fine selection of new and second-hand cars is always available for inspection by intending purchasers, and accessories for all motor vehicles, of the value of Rs. 1,50,000, are kept in stock at all times.

Mr. Fray is agent for Overland, S. Cripps-Booth, and other manufacturers of cars, of "Zenith" and "Indian" motor cycles, Michelin tyres and tubes, and for the Burma Oil Company's petrol, oil, and grease. Cars and motor cycles are bought or sold on commission, and exchanges may be effected by arrangement. A number of cars are kept for hire by tourists and others who desire to visit Kashmir, or indeed any other part of Northern India. There are motor garages at Rawalpindi and Murree, capable respectively of accommodating twenty and fifteen cars.

Mr. Fray is agent for the Motor Union Insurance Company, and he is, further, contractor to His Majesty's Government and to a number of Indian States.

All inquiries by personal visit or correspondence are promptly attended to, while telegrams may be addressed, "Garage," Rawalpindi.

THE GANESH FLOUR MILLS COMPANY, LTD.

Although there has been in recent years in India a marked revival of old-established industries calculated to be of immense benefit to the country, there are certain conditions affecting some of these enterprises which will seriously cripple them unless hindrances are either removed or considerably modified.

A notable instance of this is met with in the milling of wheat. Milling companies in the Punjab and other territories in the north-western portion of India complain that the chief obstacle in the way of expansion is that railway companies charge excessive rates for the carriage of flour, higher, indeed, than the cost of transporting wheat to mills, and that as a consequence there is little inducement for farmers to go to the trouble and expense of milling. Further than that, Indian railway traffic managers grant distinctly preferential rates for export wheat as compared with the rates charged on wheat consumed in Indian mills which are not situated at ports of shipment for oversea. It is for the removal of such anomalies as these that representations have been made recently to railway authorities with the object of obtaining some relief from burdens which are held to prevent development of the milling industry.

Delhi—where the Ganesh Flour Mills are situated—is practically surrounded by the fine wheat fields of the United Provinces and the Punjab, and, owing to its being connected by main trunk railways with all parts of India, it is undoubtedly the best centre for the milling and subsequent distribution of flour, but there is the above-mentioned railway rates problem to be faced.

The Ganesh Flour Mills Company, Ltd., was formed in the year 1891, and the Board of Directors now (1917) consists of Rai Sahib Raj Naráyan (chairman), and Lala Chhabil Das, Rai Sahib Moti Sagar, B.A., LL.B., Mr. Thakurdas Madhak, Mr. Hira Lal, and L. Kallu Mal.

The construction of the original mill, together with the supply of necessary machinery and plant, was entrusted to Messrs. Henry Simon, Ltd., of Manchester, and milling was commenced on May 24, 1894.

The hourly output of the mill was from twelve to fifteen sacks of flour, but about eight years later that quantity was increased to more than twenty sacks, while in 1906 the greatly enlarged demand for the company's products compelled the directors to erect another mill (adjoining No. 1) with machinery which added a further ten sacks, making the two mills capable of grinding 160 maunds of wheat per hour.

The premises, which cover an area of about 20 acres, are adjacent to the Delhi Kishunganj railway station at Delhi, and consist of the two mills, godowns capable of storing nearly 8,000 tons of wheat, and several bungalows for members of the staff, together with large water tanks for the storage of water.

The whole of the machinery and plant, supplied and erected by Messrs. Simon, Ltd., includes double "Simon" roller-mills and scalpers, together with centrifugal flour dressers, purifiers, sieves, and other apparatus. Really fine flour can only be obtained from clean wheat, hence the directors were careful to instal a full complement of washing, drying, and cooling machines, together with a complete plant for cleaning the wheat, while attention was directed to the fixing of fans and dust collectors, which are indispensable to the comfort as well as the general health of workmen. The mills are lighted by electricity, and fire sprinklers have been fixed in all parts of the buildings. The

GANESH FLOUR MILLS COMPANY, LTD.

1. Exterior View of the Mills. 2. Interior of Engine Room. 3. Roller Floor. 4. Purifier Floor.

driving power of the machinery is supplied by steam engines of 500 h.p.

The best wheat that can be obtained is used in the mills. It is automatically weighed, and passed into silos or bins, and after being cleaned is then milled. Every process in dealing with the grain and its products is entirely carried out by mechanical aid, the hands of workmen never coming in contact with a single particle. Fine flour, *atta*, and bran are manufactured in addition to a large quantity of other meal.

The company have an excellent demand for their goods in every part of India, and they also export largely to Egypt and other places. The annual output of flour has now reached the huge figure of 23,000 tons.

From these facts it will be understood that the disabilities affecting many Delhi and other mills have not prevented the Ganesh Mills Company from showing steady progress, but the directors have on many occasions gratefully acknowledged that a very large proportion of the success achieved is due to the untiring energy and capable control of the late Babu Kishen Chand, the first managing director. This fact appears the more remarkable when we know that the Babu had the bitter misfortune to be deprived of his eyesight for the whole period of his tenure of office.

A striking proof of the interest taken in the mills was afforded some ten or twelve years ago when the late Ameer of Afghanistan, during a tour in Northern India, expressed a desire to be conducted through the mills in order that he might witness the various processes of manufacture, from the arrival of the wheat to the time when it was discharged from the machinery in the form of the finest flour.

The present manager—Mr. Cyril R. Goodwin—possesses exceptional abilities for his duties, and he has for several years past maintained such a consistently high standard of flour that the Ganesh Mills enjoy a reputation which is the envy of many other competing companies. This gentleman is very efficiently supported by Mr. Maha Narain, the secretary of the company.

The following particulars as to the financial position of the Ganesh Mills Company have been extracted from the statement of accounts for the year ending September 30, 1917. The net profits were Rs. 2,05,691-3-3, and this sum, added to Rs. 2,280-0-4 brought forward from the previous year, made a total of Rs. 2,07,971-3-7 available for disposal. The directors recommended to the shareholders that the sum of Rs. 60,000 should be placed to depreciation account, that dividends should be paid at the rates of 7 and 15 per cent. respectively on preference and ordinary shares, and that the balance should be carried forward to the following year.

GHULAM MOHAMMED.

When a Westerner visits Eastern countries there are innumerable objects, strange and fascinating, which attract his attention as soon as he threads his way through native bazars, teeming with a motley crowd of chattering and gesticulating vendors, but when he gazes upon the shops of Indian and other merchants which are literally crammed with indigenous products of the manufacturing or industrial activities of the people, he instinctively begins to make mental calculations as to the number of banknotes in his pockets, or the balance lying to his credit in the hands of his agents. He sees beautifully-carved work in ivory and wood; splendidly-chased articles in gold, silver, and other metals; silks, woollens, embroideries, jewellery, precious stones, and, in short, a bewildering assortment of curios and works of art of all descriptions.

A noted emporium in India, in which a purchaser might spend a small fortune in the course of two or three hours, is that belonging to the brothers Ghulam Mohammed and Mohammed Sudder Uddan (carrying on business as Ghulam Mohammed), at the Mall, Simla. Their headquarters establishment is at Kohati Gate, in the city of Peshwar, in the North-Western Frontier Province, and it was opened about forty years ago, but the Simla stores were not started until early in the year 1917. As, however, the businesses carried on at the two places are practically identical in character, a general description will suffice.

The first impression one receives on entering the premises is the almost endless variety of the contents. There are Persian Bukhara, Punjdah and other carpets and *sooznis*; Kabul posteen, coats and rugs; Russian squirrel, siabal, and, indeed, fur skins of all kinds; Afridi wax cloth, Kashmir shawls, embroideries, lace, jewellery, precious stones, muslins, gold and silver antiques, wood and ivory carvings, and a unique collection of Indian curios and novelties, but this brief list can only convey a very faint idea of the magnitude and beauty of the stock kept in the two treasure-houses of the firm.

It should be added that a special feature is made of Persian carpets, and the making up of all kinds of furs in styles to meet the wishes of customers.

M. D. HARRI RAM & SONS.

The extensive business now carried on at Rawalpindi and elsewhere by Messrs. N. D. Harri Ram & Sons, was established in the year 1840, the founder trading as an ironfounder and Government contractor. The present partners, Messrs. G. R. Sethi and M. R. Sethi, A.M.S.E. (London), are proprietors of a very much larger concern whose development has necessitated the opening of branches at Murree and Lahore, while at Srinagar in Kashmir the firm trade under name and style of Harriram & Sons.

The premises at Rawalpindi are fine brick buildings, comprising offices, workshops fitted with modern machinery driven by steam power, an iron foundry with casting and moulding appliances, and a sufficient number of forges to cope with all work performed by smiths and other artisans.

The firm always carry a large stock of iron, steel and timber in the ordinary course of business, but being especially Army contractors in the Public Works Department of the Government and to the Kashmir State, they undertake all kinds of structural work, including bridges and culverts. Military requirements, during the period at which these notes were compiled, were of such an urgent character that Messrs. Harri Ram & Sons devoted all their energies to the execution of the multifarious orders which were entrusted to them by the Army and Military Department, and although the complex character of those requirements thoroughly tested the capabilities of the firm, the partners have the satisfaction of knowing that they worthily met the claims made upon them.

They were then manufacturing tents for the Ordnance Department and other military supplies, as, for example, caps for soldiers and cloth to be made up in army factories.

As hardware merchants the firm keep a general assortment of all description of goods, but a special feature is made of galvanized iron pipes and fittings and wire netting and general ironmongery. Household furniture is also being manufactured for local sales as well as for the military.

1. Machine Shop. 2 Carpenter Shops 3 Offices and Yard, 4. Workshops and Offices.

N. D. HARI RAM AND SONS.

The firm are also forwarding agents, having *ekkas* and *tongas* for the conveyance of passengers as well as goods to Srinagar and other places in Kashmir or the Punjab.

Employment is found for about two hundred men.

The telegraphic address of the firm is "Harriram," Rawalpindi, and "Sethi," Srinagar.

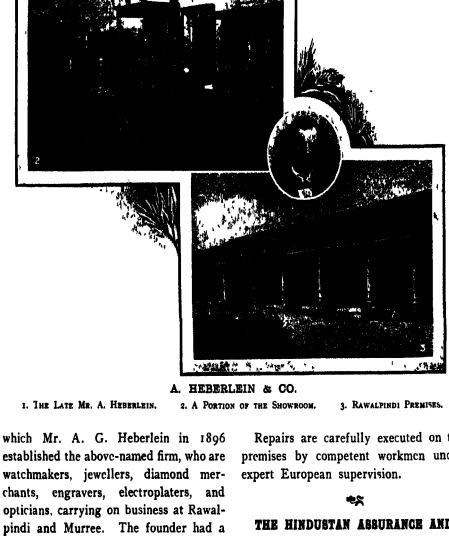
A. HEBERLEIN & CO.

The motto of "good value for money," coupled with promptitude in executing commissions," was the principle upon which Mr. A. G. Heberlein in 1896 established the above-named firm, who are watchmakers, jewellers, diamond merchants, engravers, electroplaters, and opticians, carrying on business at Rawalpindi and Murree. The founder had a limited amount of capital, but he was a practical workman, and his patrons soon realized this fact and placed the utmost confidence in him.

Mr. Heberlein threw the whole weight of his experience and skill into the business, working from morning to night, but his exertions were amply rewarded by the success which he gained. He unfortunately died in November 1917, mourned by his immediate relatives and friends, and greatly esteemed by the Masonic fraternity to which he belonged.

The business passed into the hands of his widow, Mrs. M. Heberlein, and as still greater progress has been made in spite of commercial depression, it is evident that the proprietress has taken infinite pains to please her greatly increased circle of customers.

This is now one of the oldest and most up-to-date firms in the Province of the Punjab, and constant importations from Europe are being made of modern descriptions of jewellery, precious stones, watches, silver goods, best English plated ware and optical goods.



A. HEBERLEIN & CO.

1. The Late Mr. A. Heberlein. 2. A Portion of the Showroom. 3. Rawalpindi Premises.

Repairs are carefully executed on the premises by competent workmen under expert European supervision.

THE HINDUSTAN ASSURANCE AND MUTUAL BENEFIT SOCIETY, LTD.

Life assurance is a form of thrift and investment which has up to the present time met with comparatively small favour in India. It is possible that one of the reasons for the slow progress made is that there is no immediate tangible evidence of value received for money expended. The Indian loves to see and handle that for which he pays, whether it be land, buildings, merchandise, or jewellery, and there seems to be a prejudice against parting with money in order to secure benefits for himself or his heirs in the dim and hazy future, similar to that which prevails in a large degree in connection with the placing of notes or coin in the hands of bankers.

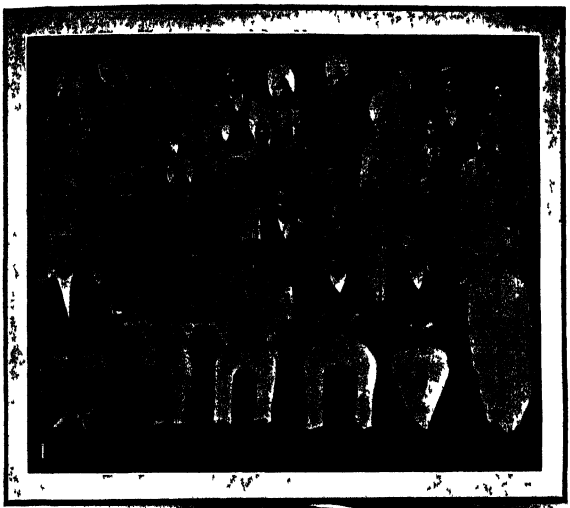
There has, however, been a very distinct advance during the past ten or fifteen years, and the passing of the Indian Life Assurance Companies Act of 1912, which gave the Government certain powers of control over assurance companies, has tended to the strengthening of public confidence in well-established societies, while it has, at the same time, forced into liquidation some ten or a dozen other companies which were not above suspicion.

The Hindustan Assurance and Mutual Benefit Society, Ltd., was formed in the year 1908 with registered offices at Gujranwala in the division of Lahore in the Punjab, and it is entirely managed by prominent Indians. The directors are Lala Krishan Lal Sehgal, Government treasurer, and Honorary Magistrate of Jhelum; Lala Bheri Ram, B.A., LL.B., pleader and municipal commissioner, Jhelum; Dr. Satyapal, B.A., M.B., physician and surgeon, Amritsar; Lala Hakim Rai, B.A., LL.B., pleader of the Chief Court of the Punjab at Gujranwala; and Diwan Mangal Sen, managing director.

Branches have been opened at Bombay, Chittagong, Madras, Lucknow, Amritsar, Lahore, Karachi, Srinagar, Peshawar, and Jhansi, all of which are in direct communication with the head office through the Society's chief secretary, Mr. W. C. Khushbash.

The society undertakes all kinds of life assurance business in its various departments, and notwithstanding initial difficulties common to all new ventures, and in spite of the dire effects of the European war upon the money market and upon the cost of ordinary necessaries of life, steady progress has been made from the commencement.

It would be well to refer here to a report made in August 1916 by Mr. Eric B. Nathan, F.I.A., F.F.A., of London, the society's consulting actuary, who made a valuation of the assets and liabilities as shown on the preceding March 31. Mr. Nathan wrote: "Under present conditions the basis adopted is a conservative and a severe one for a company which has only just undertaken ordinary life business, . . . and the result of my investigation is very satisfactory."



HINDUSTAN ASSURANCE AND MUTUAL BENEFIT SOCIETY, LTD

1 STAFF First Row —(1) Mr N D Karmarkar (Auditor) (2) Lala Ishar Das (Secretary—Revenue) (3) Lala Chanan Shah (Asstt Manager). (4) Lala Hakim Rai (Chairman) (5) Lala Nanak Chand (Secretary—Claims) (6) Lala Sunder Das (Accountant)

2 EXTERIOR.

"Your company has made very considerable financial progress during the past year, and if this progress is maintained there should be a prosperous future before it . Your members should be satisfied with the management"

The tenth annual meeting of shareholders was held on July 15, 1917, to receive the report of the directors and statement of accounts for the year ending March 31, 1917, and in the former it was stated that unprecedented difficulties had been encountered, not the least of which was the limited supply of money in circulation which impoverished the exchequers of all classes of people throughout India

Nevertheless 266 new proposals for insurance in the ordinary account department were received during the year, and the amount of business transacted was more than double the quantity from 1915 to 1916 The society accepted 533 proposals in the provident life department and 811 in the marriage department A resolution was carried declaring a dividend at the rate of 12 per cent free of income tax, and charity at 1 per cent The authorized capital consists of Rs 5,00,000 in ordinary shares of Rs 5, of which 23,033 had been subscribed, realizing Rs 1,00,970

The following points should be specially made mention of The Society has paid over nine lakhs of rupees in claims under its various schemes of business, and holds numerous credentials in support of its good and honest work A staff of nearly a hundred men is employed at the head office The managing director—Diwan Mangal Sen—is a known philanthropist in the Province, and has given more than a lakh of rupees towards public charities and Government institutions either connected with the war or other useful movements He personally maintains a first-class high school and a public library at Gujranwala the latter being open free to people of the town He is the president, patron, and general secretary of a number of educational, social, and reformatory enterprises and takes a lead in many functions calculated to be of service to the country He has performed opening ceremonies and laid foundation stones of about half a dozen educational schools for boys and girls at different places in the Punjab He is a gentleman of good birth and sound education, courteous, and withal cosmopolitan in his views, and his private purse is ever open for the relief of really needy persons

The auditors of the company are Messrs Viney and Thurston, chartered accountants, of Lindlie Chambers, 6 Hastings Street, Calcutta

THE HOLTA TEA COMPANY.

The possibility of the cultivation of tea in India was brought to the notice of the East India Company as far back as the year 1788 but no important step was taken until the lapse of about fifty years, when a committee was appointed to investigate and report upon the soils and climate favourable to the growth of the plant During the course of this inquiry the indigenous tea-plant was found in several parts of Assam and elsewhere, and although much has been done in the way of crossing home-produced and imported types, the three principal classes of tea now cultivated in India are the indigenous Assam, the Chinese, and a hybrid between these two kinds

It is believed that the first tea company was formed in 1840, and since that time

THE HOLTA TEA COMPANY

1 Factory and Manager's Bungalow 2 Coolies Plucking Tea 3 Proprietor's Bungalow

the industry has made rapid progress, until at the present day the total area under this crop in India is about 600,000 acres in extent.

The Holta tea gardens in the famous Kangra Valley in the Jullunder division of the Punjab were originally planted by the Government of that Province (about the year 1850), with the object of introducing the cultivation of tea into that territory. Several years later the property was purchased by a syndicate, who formed a joint-stock company with a capital of Rs. 8,00,000. Adjoining tea estates belonging to the Nassau Tea Company, the Central Tea Company, and the Chornali Company, were acquired by the Holta Company, and thus a compact area of about 1,600 acres was formed. In addition to the land actually planted with tea, the company also possessed large valuable forests as well as a considerable quantity of land suitable for future development.

In 1905 the whole of the Kangra district was devastated by a terrible earthquake, which caused widespread ruin and misery, and the Holta Company was one of many in that neighbourhood which were compelled by stress of circumstances to go into voluntary liquidation.

There were few agriculturists, or even mere speculators, who were sanguine enough to believe that the valley could ever recover sufficiently from the effects of the upheaval to become a productive area, but Rai Daulatram held a different opinion, and backed up his conviction by purchasing the whole of the Holta Company's property, with the object of reviving an industry which before the disastrous occurrence had been of a most promising character.

That gentleman, who is still sole proprietor, took vigorous steps to level the broken surface of the land; he erected a fine large factory, which is well-equipped with modern machinery for the manufacture of black and green tea; and as the result of his energy and perseverance he now has the satisfaction of being the possessor of thriving tea gardens, whose produce has obtained a desirable reputation for its first-class quality.

The various processes of manufacture, such as plucking, withering, rolling, firing, and sifting, are carried out by qualified employees, who are under the direct supervision of the proprietor and his general manager, Mr. J. Fitzpatrick.

Rai Daulatram takes a deep interest in the welfare of his labourers, as he has built a large store whence their daily wants can be supplied; he has opened a night school where they can obtain instruction; and he has established a dispensary where medical advice and treatment is gratuitously given. Thus some twelve hundred coolies—the average number employed on the estates—are living contentedly under the most favourable conditions, and therefore the "bogey" of "shortage of labour" has no terrors for the proprietor of the Holta gardens.

JAI CHAND.

The history of the family of Lala Jai Chand, who is the senior partner in the firm of K. Ram Chand & Co., of Amritsar, importers of general merchandise, may be traced to Lala Jamnadas, who migrated from Kandahar, in Afghanistan, to India about the middle of the nineteenth century. The latter was a merchant who had won a high reputation throughout Central Asia by reason of his practical business capabilities, his rectitude of character, and his great benevolence. He had two sons living at his death, and the elder one, Lala Fakir Chand, had so far distinguished himself as to be appointed an honorary magistrate and municipal commissioner in Amritsar, while the younger, Lala Kishen Chand, succeeded to the business of his late father. Lala Fakir Chand was subsequently created a Rai Bahadur and a divisional *Durbari*, but as he had no male issue he adopted his grandson, Lala Ram Narain, who is to-day an honorary magistrate and a member of the Amritsar municipality. Lala Kishen Chand left a son named Lala Ram Chand, who established the firm of importers trading as K. Ram Chand & Co.

Lala Ram Chand was a man of superior intellectual attainments, which were manifested in the rapid growth of his undertaking, and it is worthy of notice that he was a firm believer in the principle of co-operation, as he gave to his senior assistants certain shares in annual profits in lieu of paying them fixed salaries, thereby securing whole-hearted interest in their daily work.

Lala Ram Chand was noted in private life for his charitable gifts to various institutions as well as to private persons, and works of public utility constructed at his expense in Amritsar are a living proof of his desire for the welfare of the town which was the adopted home of his forefathers.

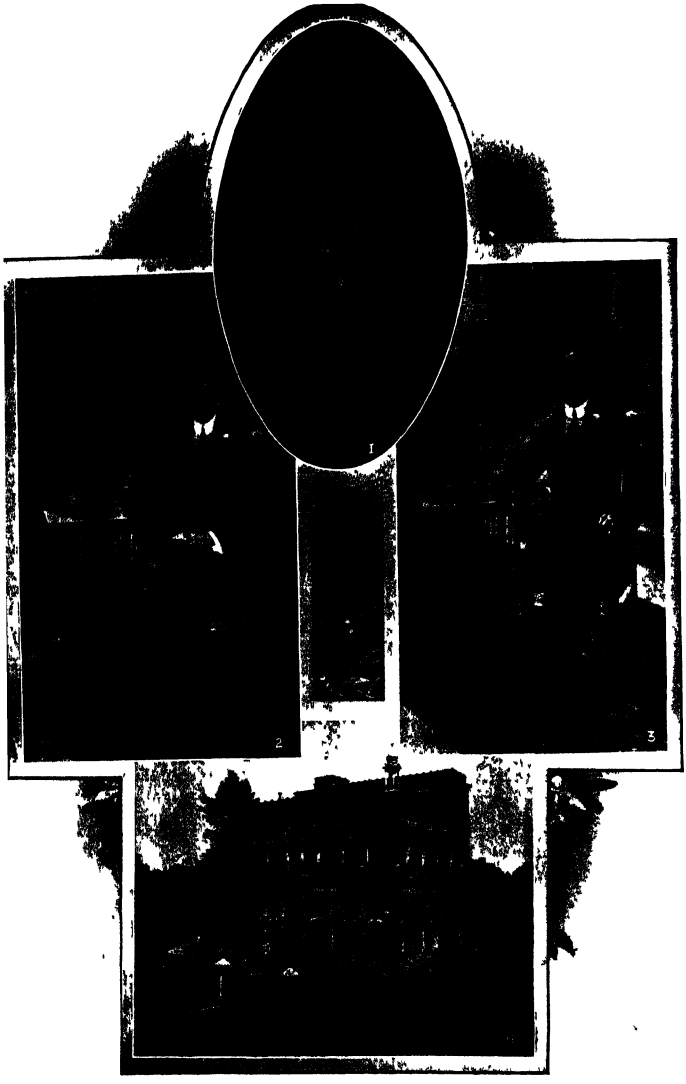
In honour of the celebration of the Diamond Jubilee of her late most gracious Majesty Queen Victoria, he erected the handsome building near the Amritsar railway bridge, known as Ram Chand's Court, and he also presented a public clock to be placed at the Hall Gate of the town. He also bore the expense of the construction of a large edifice, called Ram Chand's Showroom, which was dedicated to the mercantile and manufacturing communities of Amritsar, the intention of the donor being that the structure should be used as a kind of "exchange," in which samples and specimens of goods of various descriptions might be exhibited for the mutual benefit of local vendors and purchasers from the chief town in the *mofussil*. Lala Ram Chand was a man of a most amiable nature, endearing himself to those with whom he came in contact in business as well as in private circles, and his unswerving loyalty to the Imperial Government was rewarded by his appointment as an honorary magistrate and a divisional *durbari*. His election to a seat on the municipal council was also a fitting recognition of his many virtues.

By his unfortunate death while still in the prime of life the town of Amritsar lost a worthy citizen, and its inhabitants a devoted friend. His adopted son, Lala Jai Chand, took over the control of the business, and in practically every respect he appears to be following in the footsteps of his lamented father. He has introduced into the firm, as junior partner, his cousin, Sardas Budh Singh, who is serving under the share conditions as the assistants of his predecessor had done. It may be mentioned that the use of the Ram Chand Showroom was granted to the managers of the clerical and commercial school for some years, and it has now been placed at the disposal of the Government to be used for the training of recruits to be sent to the front.

Lala Jai Chand has two sons—Rattan Chand and Harbans Kumar—who are being carefully brought up and educated under the personal supervision of their father.

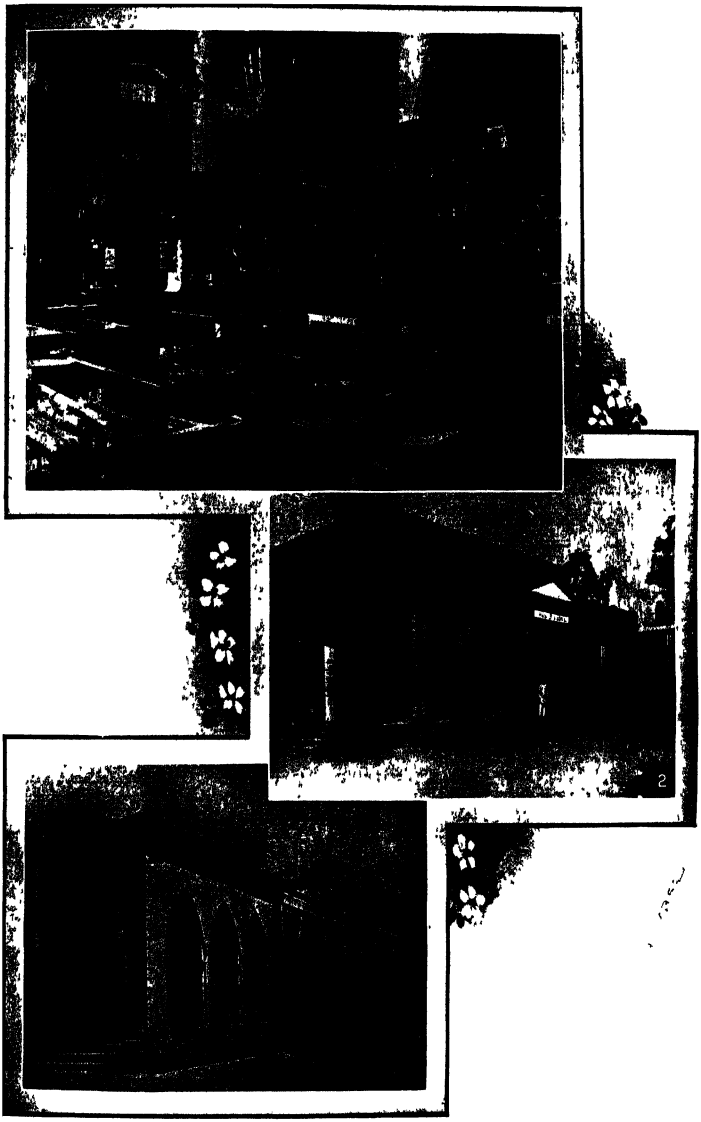
JAMASJEE & SON, LTD.

Some fifty years ago, or even more, the numerous punitive expeditions undertaken by the Imperial Government in Northern India were the means of bringing to the front in commercial life men of brains with a positive genius for undertaking duties of a most onerous and responsible character. For example, a body of troops



JAI CHAND

1 Lala Ram Chand 2 Lala Jai Chand, Son of Lala Ram Chand. 3 Sardar Budh Singh, Nephew of Lala Ram Chand
4 Ram Chand's Court



JAMASJEE AND SON, LTD.

1. Front Showroom, Rawalpindi. 2 Exterior, Rawalpindi Premises. 3. Peshawar Branch.

proceeding through an unknown country in which it was almost impossible to obtain the necessaries of life as well as other stores, were in urgent need of a contractor to supply food and clothing for men, forage and saddlery for horses, and a thousand-and-one other things which a commanding officer would be utterly unable to procure on his line of march.

One of those who rendered invaluable assistance to the Government of India in the above capacity was the late Mr. Jamasjee Hormusjee Boga, who established the firm of Jamasjee and Son in the Punjab in the year 1845. This gentleman accompanied British troops in a large number of frontier and other engagements, and the thoroughly successful manner in which he performed duties assigned to him and the strictly honourable completion of contracts entered into gained for him the warmest approval of all with whom he came in contact. His business as a general contractor grew very rapidly, and he soon extended the field of his operations so as to include the towns of Lahore, Amritsar, Multan, Dalhousie, Jhelum, Rawalpindi, and Murree.

About twenty years later Mr. Jamasjee disposed of that portion of his business which was conducted from Lahore, Amritsar, and Dalhousie, with the object of securing greater opportunities for developing connections established at the Jhelum, Rawalpindi, and Murree branches.

Mr. Jamasjee died in 1884, and was succeeded by his grandson, Khan Bahadur Nasarwanjee J. Jamasjee Boga, who enlarged the sphere of operations of the firm and eventually opened a further branch at Peshawar. In 1906 the Khan Bahadur converted his undertaking into a joint stock company with limited liability, and at the same time he entered into business relationship with the Murree Brewery Company, Ltd., in which concern he holds a large number of shares.

Messrs. Jamasjee & Son, Ltd., are now in a most prosperous condition, having built up their reserve fund to an amount almost equal to their capital account, and having thriving business centres at Peshawar, Rawalpindi, Murree, Nowshera, Cherat, Sialkot, Lahore, Ferozepur, Multan, Quetta, and Karachi. They are chiefly concerned as sole distributing agents for the brewery company, but they are also extensively engaged as regimental contractors and wholesale importers of wines, spirits, provisions, and general merchandise.

The control of the company is in the hands of Khan Bahadur N. J. Jamasjee as general manager and director, and his colleagues on the board are Colonel John Powell, V.D., and the Hon. Mr. E. W. Parker.

KHAN BAHADUR SHAIKH GULAM HUSSUN & CO.

An ancestor of the proprietor of the above-named firm left Central Asia with his family very many years ago and made a home for himself in Kashmir, where he resided for a considerable time, and where his name is still held in the highest esteem.

In or about the year 1820 a descendant, named Shaikh Wahab, migrated with a large number of dependents to the city of Amritsar, and in 1835 he established a business there, under the name of Shaikh Wahab Gulam Hussun, and commenced direct trading with merchants in Paris by exporting beautiful Indian shawls, which were eagerly sought after by fashionable ladies at the chief courts of Europe. The Franco-Prussian War of 1870-1, however, completely stopped that lucrative trade between France and this country, and some other suitable employment had to be found for the twenty thousand weavers of shawls in Amritsar who had in consequence been thrown out of employment.

Some ten years later, Khan Bahadur Shaikh Gulam Hussun and Khan Bahadur Shaikh Gulam Sadik, who had succeeded to the business of their late father, under the title of Khan Bahadur Shaikh Gulam Hussun & Co., turned their attention to the making of woollen carpets, an industry which was at that time being carried on in only one place—the jail at Lahore—in the whole Province of the Punjab. The brothers started a few looms in Amritsar, and they prospered in their undertaking for a few years until the failure of a firm in London, who held a contract to purchase all carpets, caused this most promising factory to be closed.

Shortly after this date the Viceroy of India, the Marquis of Ripon, ordered the weaving of carpets in the Lahore jail to be discontinued, and this action provided endless opportunities for the activities of private firms. It, for example, caused the firm to open another factory at Amritsar, and the encouragement which the partners received induced them to erect three others in the *mofussil*. These buildings are equipped with a hundred and ten looms, and employment is found for about seven hundred hands, while practically the whole of the output is disposed of direct from the factories to purchasers overseas without the intervention of agents.

Wool of the highest quality, some of which is imported, is purchased by the firm, and every process in the making of carpets is carried out entirely by hand. The raw material is first carded with a reverse bow and mallet, it is then passed on to women, who spin it with the old-fashioned wheel which is so frequently portrayed in ancient pictorial books; the yarn thus prepared is washed well, and it is then sent to a large building, fitted with a steam boiler, where it is dyed in absolutely fast colours which for beauty and permanence cannot be excelled at any other place.

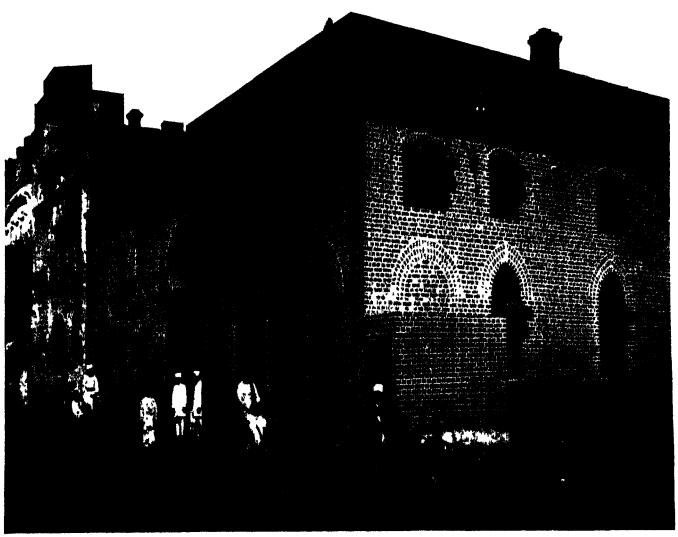
Bengal indigo is used in the preparation of blue colours, and it may be said shortly that hundreds of various shades are obtained from the mixture of different indigenous dyeing substances. These carpets, made in grades, are remarkably durable, colours are not in any way damaged by repeated washing, and the highest praise must be given for the truly excellent workmanship displayed, while some of the wool is of such a superior kind that no fewer than four hundred knots are made in the space of a square inch. The most superb examples of antique carpets of other countries are reproduced in these factories with such exactness that it is impossible to distinguish the copies from the original masterpieces of artistic work issued from Persian and other looms. Specimens of these productions were awarded a first-class certificate of merit at the Punjab Exhibition in 1893, and a gold medal in a similar competition in the Punjab in 1909–10, the official report on the last occasion containing these words: "The first three or four carpets on the wall (part of the exhibit of Khan Bahadur Shaikh Gulam Hussun & Co., of Amritsar) are of matchless beauty both in point of colours and designs."

Khan Bahadur Shaikh Gulam Hussun died in the year 1898, and Khan Bahadur Shaikh Gulam Sadik became sole proprietor of the carpet factories. He also conducts other businesses, such as rearing and reeling silk, banking and commission agency, under the name of Shaikh Wahab Gulam Sadik. His bankers are the Bank of Bengal at Lahore, and the National Bank of India, Ltd., Amritsar. Shaikh Gulam Sadik has three sons, the eldest of whom, Shaikh Sadik Hussun, is now ably assisting his father in the management of the factory.

KHAN BAHADUR SHAIKH GULAM HUSSUN & CO

1 Cleaning and Packing Department 2 Weaving Looms 3 Dye Houses. 4. The Founder and His Eldest Son

Khan Bahadur Shaikh Gulam Hussun was an honorary magistrate at Amritsar, President of the Anjuman-i-Islamia, and a representative of the social and political body of the Mahommedan community in the same city. Khan Bahadur Shaikh Gulam Sadik is an honorary magistrate of the first class, President of the Anjuman-i-Islamia, a member of the various Mahommedan educational institutions and political associations in India. His unquestionable loyalty to the paramount power and frequent services rendered to the Government have been publicly acknowledged on several occasions, and he has cheerfully subscribed Rs. 1,00,000 to war loan funds. In regard to his private relations it may be said that he is owner of a considerable quantity of agricultural land and house property in and around Amritsar.



CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA (AMRITSAR BRANCH).

THE CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA (AMRITSAR BRANCH).

Incorporated in England by royal charter, with head office at 38 Bishopsgate, London, E.C., the Chartered Bank of India, Australia, and China, has made remarkable progress in every part of the world in which it has opened branches. These have been established in the most important cities in India, China, Japan, and the Federated Malay States, and in New York. They have also corresponding agency business with the leading banks in all parts of the world.

The branch at Amritsar, in the Lahore division of the Punjab, was started in the year 1910, near the Octroi Office, but with the extension of banking operations the company subsequently removed to a new building in Hall Bazaar, which they hold under lease. Every description of banking and exchange business is transacted, including the granting of drafts payable at any of their branches or through their correspondents, the purchase or collection of approved bills of exchange, the issue of letters of credit, and the purchase and sale of Indian Government and other securities. Fixed deposits are received for twelve months or shorter periods on terms which may be ascertained on application. The Amritsar branch is largely interested in financing transactions in piece-goods, cotton, wheat, and other grain for export, hides and skins, and in gold, for which this city is an important distributing centre.

The paid-up capital of the company, in 60,000 shares of £20 each, amounts to £1,200,000; the reserve fund is £1,800,000; and the sum of £1,200,000 stands to the credit of the reserve liability fund of the proprietors.

THE HON. KHAN BAHADUR MIAN MUHAMMAD SHAFI, C.I.E.

The aspirations of Indians for further recognition in social, commercial, and political circles in their own country has been most marked during the past fifteen or twenty years, and this awakening has had a wonderful effect in bringing to the front men of undoubted ability who are striving by all legitimate means in their power to obtain for themselves and for future generations greater facilities for the development of powers which have hitherto lain dormant.

This may be illustrated by a reference to the valuable services rendered on behalf of his countrymen by the Hon. Khan Bahadur Mian Muhammad Shafi, C.I.E., barrister-at-law, of Lahore. The Mian Family of Bagbhanpura, of which the subject of this article is a highly respected and leading member, are owners of a large number of villages and land, in addition to residential property, in the

districts of Lahore, Montgomery, Lyallpur, Simla and Mianwali, in the Punjab, and of Dera-Ismail-Khan, in the North-Western Frontier Province.

Mian Muhammad Shafi was born on the 10th March, 1869, and started his education by making a study of the *Koran*, according to the custom of high-class Mahommedans, and was subsequently educated in the Government and Forman Christian Colleges at Lahore. Even during his scholastic career he manifested an interest in public affairs by contributing articles on topics of the day to the *Pioneer* (Allahabad), the *Civil and Military Gazette*, and the *Tribune*, (Lahore), and the *Muslim Herald* (Madras).

In August 1889 he proceeded to England to study for the Bar, where he became a member of the Hon. Society of the Middle Temple, and distinguished himself by winning scholarships in International Law, Constitutional Law, and Constitutional History. He was also elected to the position of President of the Anjuman-i-Islamia (London), in succession to Mr. Abdul Rahim now one of the Judges of the Supreme Court, Madras. His work in the Paddington Parliament, where he came to occupy a prominent position in the Unionist Party as Secretary for India, and the addresses delivered by him in the metropolis on behalf of the Anglo-Indian Temperance Association, the National Indian Association, the Society for the Promotion of Indian art, and also during the General Election of 1892 proved to be of the greatest value to him in acquiring a fluency of speech, which has been of incalculable service to him since his call to the Bar in June 1892.

Mian Muhammad Shafi began his professional career in October 1892 at Hoshiarpur, in the Punjab; and in May 1895 he started practice in the Chief Court at Lahore, where he has risen to a foremost place as an advocate. For several years he was vice-president of the Chief Court Bar Association, and was elected its president in February 1917. He holds a similar position in the Lahore Bar Council. He is the author of several important legal treatises upon (*inter alia*) the "Provincial Small Cause Courts Act," the "Punjab Tenancy Act," and the "Law of Compensation for Improvements in British India"; and he wrote a series of articles on the "Punjab Courts Act," the "Punjab Preemption Act," and the "Punjab Alienation of Land Act." In the summer of 1908 he was nominated to the Punjab Legislative Council, where he has performed much useful work as a member of budget committees, of select committees on bills, and by his advocacy of legislation calculated to promote the welfare of the agricultural population. In December 1911, when an invited guest in the Punjab Central Camp at His Imperial Majesty's Coronation Durbar at Delhi, he was elected a member of the Imperial Legislative Council, in which he is at present the representative of the Punjab Mahommedans. In September 1915 he moved in the Imperial Legislative Council a resolution advocating India's representation on the Imperial Conference, which, having been adopted unanimously, was accepted by His Majesty's Government, and India thus received recognition as an equal partner in the Empire.

THE HON. KHAN BAHADUR MIAN MUHAMMAD SHAFI, C.I.E.

The few years of Mian Muhammad Shafi's residence in England were instrumental in impressing him with the necessity for education as the surest means of uplifting a nation; and while practising at Hoshiarpur he founded the nucleus of an educational fund which is now the source whence the local Islamia High School is maintained. He has always taken the deepest interest in the work of the "Anjuman-i-Himayat-i-Islam," the premier Mohammedan Educational Association in Lahore, and of the Islamia College Committee, of which he is the president, and has contributed large sums of money by way of gifts and grants towards the support of that institution, as well as of a considerable number of schools for boys and girls. His enthusiasm in the subject of raising the status of Indian women by means of educational advancement was evinced by his becoming joint secretary of the general committee which raised the necessary funds for the foundation of Queen Mary College for Girls, at Lahore. He is a Fellow of the Punjab University, and holds many important positions on the various faculties and boards of that University. He is also a member of the Central Standing Committee of the All-India Muhammadan Educational College, and a trustee of the Mahommedan Anglo-Oriental College, Aligarh.

When the idea for giving a definite form to the Muslim University scheme was actively taken up in 1911, Mian

Muhammad Shafi organized a provincial branch of the general committee, which collected more than Rs. 3,00,000 for the fund, and as general secretary of the Provincial Committee, vice-president of the Foundation Committee, and a member of the Constitution Committee, he has shown how thoroughly he is in sympathy with the movement. In December 1916 he was elected president of the All-India Mohammedan Educational Conference held at Aligarh, this being one of the most successful gatherings in the history of that Association. His active interest in the cause of Urdu literature was recognized by his election as president of the All-India Urdu Conference held at Poona in July, 1915.

Mian Muhammad Shafi's public political career may be said to have begun when, on his return from England, he contributed articles to leading newspapers, and also delivered a series of lectures on current topics. In 1901 he published a series of articles in the Lahore *Observer*, in which he urged that the time had arrived when Indian Mussalmans should have a political organization of their own. These articles bore fruit five years later, when the late Nawab Muhsinul Mulk, with the co-operation of provincial leaders, and in consultation with the various Muslim associations throughout India, organized the famous All-India Mohammedan deputation, under the presidency of His Highness the Aga Khan, which presented an address to the then Viceroy, the Right Hon. the Earl of Minto, in October 1906, setting forth the claims and aspirations of Indian Muslims. Of this deputation, in organizing which he took a prominent part, Mian Muhammad Shafi was a member. His reply of His Excellency to that address was regarded as the "charter of the rights of Mohammedans," and led to the formation of the "All-India Muslim League," the inaugural meeting of which was held at Dacca in December 1906. Mian Muhammad Shafi, as a leader of Mussalman political thought in the Punjab, realizing that the Central League must depend for success very largely upon the active support of the various Provinces, organized the Punjab Provincial Muslim League at Lahore in November 1907, and he was appointed as its first general secretary.

The active part played by this gentleman in Muslim politics was suitably acknowledged by his election as President of the Annual Sessions of the All-India Muslim League at Lucknow in February 1913. His opening address proved that he had acquired a thorough grasp of Indian political questions, and was prepared to approach controversial problems in a progressive and liberal-minded spirit. The two principal features of his address were the urgency of the adoption of the principle of self-government under the *aegis* of the British Crown, and the promotion of active inter-communal unity and co-operation.

Mian Muhammad Shafi is entirely opposed to the extremist school of Indian politicians, but is a staunch supporter of (*inter alia*): Expansion of Imperial and Provincial legislative councils, separation of executive and judicial functions, extended employment of Indians in the higher branches of the public services, grant of fiscal autonomy to India, a wide diffusion of free elementary education among the Indian masses, in addition to many other important measures, all of which he has energetically advocated by speeches in the Provincial and Imperial legislative councils, as well as on public platforms. He is strongly in favour of greater social intercourse between Europeans, Hindus, and Mohammedans, and was one of the founders of the Punjab Association Club, of which he is now the president. He is also a member of the executive committee of the Punjab Association and President of the Punjab Muslim Club. He was joint secretary of the committees of the Victoria Diamond Jubilee Fund and of the Queen Victoria Memorial Fund, and the fine bronze statue surmounted by a beautiful marble canopy erected near Charing Cross in Lahore is a standing monument of the labours of this gentleman and his colleagues.

Mian Muhammad Shafi was the only non-official member of a committee which sat at Simla in 1907 for the purpose of devising measures for the prevention of plague, and his action in obtaining and circulating a *fatwa* from the Anjuman-i-Mustasharul-Ulma had great effect in popularizing preventive measures against that terrible disease. He has been, further, president of the Young Men's Mohammedan Association, chairman of the executive committee of the Punjab Red Crescent Society, and is patron of the Anjuman-i-Behboed-i-Mussalmanau at Delhi, a member of the Municipal Committee of Lahore, and president of his tribal organization, the Anjuman-i-Ramjan-i-Hind.

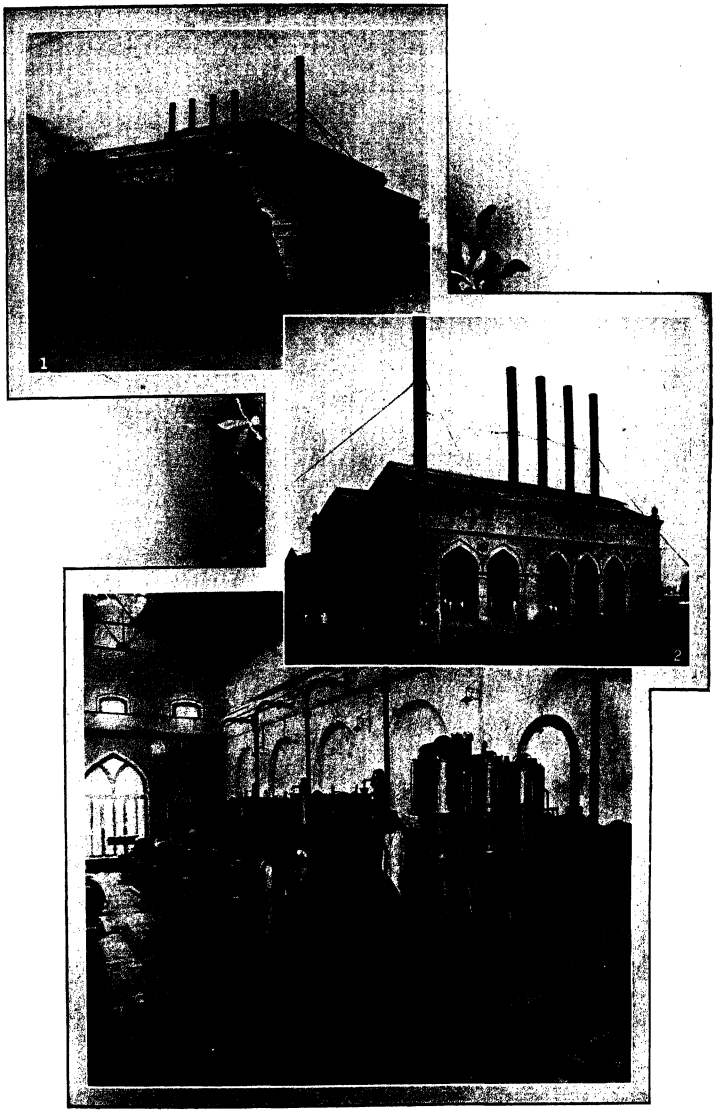
Since the outbreak of the Great War, the Khan Bahadur has proved his loyalty to the Throne by addressing meetings in favour of enlistment, contributing largely to various war funds, rendering excellent service as president of the War News Association, as president of the committee of the Punjab University Double Company, as member of the Central Committee of the War League at Karachi, as vice-president of the Punjab Provincial Committee of the Indian Defence Force (1917), and a member of the Provincial Publicity Committee. His latest achievement in public life is the organization of the All-India Muslim Association, representative of the progressive moderate section of the Indian Musalmans, of which organization he has been elected as the first general secretary.

THE LAHORE ELECTRIC SUPPLY COMPANY, LTD.

The importance of—nay, the necessity for—the lighting by electricity of the city of Lahore, the capital of the province of the Punjab, was for several years a continually recurring subject for discussion at meetings of public bodies as well as between commercial men and private residents, but it was not until the year 1912 that definite steps were taken with the object of securing so desirable a consummation. The Government of the Punjab had, through their public works department, been operating a small power and lighting plant for Government House and The Mall, the leading thoroughfare in Lahore, and they had even invited the municipality as well as a London and an Indian syndicate to inaugurate a scheme which should embrace the whole of the city, but their efforts were unrewarded.

It was at this juncture that Lala Harkishen Lal, B.A. (Cantab.), a gentleman connected with several banking and other institutions, succeeded in persuading a number of well-known business men to associate themselves with him in carrying out the project which, although favoured by the Government, had not been launched. On the 21st March, 1912, therefore, the Lahore Electric Supply Co., Ltd., was formed, and steps were at once taken for the construction of buildings and the acquisition of the necessary plant.

Owing to the assistance rendered by the Government the company secured a long lease, at a nominal monthly rent of Rs. 30, of a suitable plot of land in McLeod Road, situated as near to the



LAHORE ELECTRIC SUPPLY COMPANY, LTD.

1. Exterior of Office. 2. The Power House. 3. Interior of Power House.

centre of probable demand as could then be ascertained, and upon this ground a generating station, a small shop for repairs, main stores, offices, and other buildings were constructed at a cost of Rs. 1,02,219.

A quantity of wire, poles, and other accessories hitherto used by the Government in their lighting scheme already referred to was taken over by the company, and the latter were fortunate in being able to obtain from the Government of India certain machinery and plant which had been employed in connection with the Imperial Coronation Durbar held at Delhi in 1911, which comprised: Four 125 kw. high-speed Bellis Siemens compound D.C. sets, generating 500-550 volts at 500 revolutions per minute, with piping and all essentials; four marine type Babcock and Wilcox boilers; four Weir-steam feed pumps; four feed-water heaters; and steam, exhaust, and water piping; while a new switchboard was purchased in England.

The plant was erected under the personal supervision of Mr. J. Jenson, electrical engineer, in consultation with Mr. J. S. Pitkeathly, C.V.O., A.M.I.E.E., A.M.I.M.E., both of whom were attached to the Delhi Durbar Electrical staff. Completion of the above-mentioned work took place in November, 1912, and on the 18th of that month the premises were formally opened by His Honour Sir Louis Dane, G.C.I.E., C.S.I, the then Lieutenant-Governor of the Punjab, the supply of electric current being commenced with an initial load of 25 kw.

By Notification No. 3612, dated the 25th November, 1912, the Punjab Government granted a licence to the People's Bank of India, Ltd., for the supply of electrical energy within the municipal area of Lahore. The bank did not work the concession itself, but floated a company entitled, "The Lahore Electric Supply Company, Ltd.," to take over the concession without charging any profits as promoter of the concern. This company began to supply current during the same year.

By Notification No. 3001-G, dated 28th October, 1913, the licence was transferred to "The Lahore Electric Supply Company, Ltd.," with effect from that date.

The plant now (1918) installed and in working order includes: Four 125 kw. Bellis Siemens sets; two 230 kw. Bellis Crompton sets lately purchased second-hand from the Calcutta Electric Supply Corporation in order to make up the deficiency of one 150 kw. Diesel set commandeered by the British Government for war purposes.

The connected load is as follows:—

	Government.
Lighting .	168 221 kw.
Fans	243·5 ,,
Power	83,578 ,,
Municipal street lighting, 1,254 lamps	39.8 kw.... ... ...

Public.	Total.
plus 791.288 kw.	959.509 kw.
plus 501.520 ,,	745.020 ,,
plus 408.87 ,,	492.448 ,,
	39.8 ,,
Aggregating	2236.777 kw.

while at the present time there are outstanding in the company's books 252 applications for connections aggregating some 194 kw. made up as follows: Lighting and fans, 142 kw.; power (motors), 52 kw.; total, 194 kw.

The peak load during the summer months is 900 amperes, and in winter 1,100 amperes. The total units generated from the 1st April, 1917, to the end of January, 1918, were 12,97,851 in number, and the quantity sold for all purposes was 10,10,004 units. Works cost per unit is 1.2 annas, while the total cost is 2.5 annas. The anticipated total revenue for the year ending on the 31st March, 1918, is Rs. 3,50,000.

Realizing the possibilities of electric power requirements in Lahore in the near future; keeping in view the large expansion of the civil station during the past five years and its probable future extension; taking also into consideration the great demand for power that is and will be necessary for the city and the cantonment; and bearing in mind, further, that the present plant is far too small for the needs of Lahore and is not so modern and efficient as it might be, the directors of the company have decided on the complete reorganization of the scheme as soon as conditions permit. This new project, as at present roughly outlined, will be as follows: The proposed generating station is to be outside the thickly populated areas, and adjacent to the railway from which a siding will be carried for the easy conveyance of coal and other materials; the main generator sets to be steam turbo alternators operating at 6,600 volts; 3 phase; 50 periods at 3,000 revolutions per minute; the main feeders are to be underground and overhead, transmitting power at 6,600 volts to the two city sub-stations, four civil station sub-stations, and the cantonment for the supply of power in bulk to the military authorities. The city and civil sub-stations are to be linked in ring formation; the distributors from sub-stations to be overhead with an exception, possibly, in the case of public parks and special Government sections; and the street lighting to be mainly on the overhead system operated from control gear at sub-stations.

There will be the following sub-stations: In the city two sub-stations, each of 1,000 kw. capacity in two units; in the civil station, four sub-stations, each of 1,000 kw. capacity in two units; in the cantonment, one receiving station of 600 kw. capacity in two units; and in the generating station, one sub-station of 1,000 kw. capacity in two units.

The last named is to be a transformer sub-station, and the other six will be rotary convertor sub-stations, as the present supply could not be changed without inconvenience to the public.

It is anticipated that a very much greater supply of electric power will be required when the proposed new scheme has been started in the civil station. Connections and applications for supply now amount to 2,430 kw., and when reorganization has been carried out and it has become possible to reduce prices for power, it is anticipated that some 5,000 kw. will be required. In the city approximately about 100 kw. are now connected, but only the fringe of this source of revenue has yet been touched. The population of Lahore is about 2,50,000 in number, and a connected load of 2,000 kw. is confidently expected; and in the cantonments, from figures to hand, it is believed that when the time comes for picking up this load, the requirements for all purposes will be 600 kw.

Approximately Rs. 12,00,000 additional capital will be needed, and it is anticipated that this sum will be readily subscribed (if not privately arranged for) by the investing public, considering the advance made and dividends paid by the scheme now in force.

The present board of directors is as follows: Mr. Harkishan Lal, B.A. (Cantab.), barrister-at-law, chairman; the Hon. Mr. Lala Mohan Lal, Rai Bahadur Lala Ramsaran Dass, C.I.E., Rai Bahadur Lala Mohan Lal, Rai Bahadur Lala Niranjan Dass, Mr. Ganpat Rai, barrister-at-law; Khan Bahadur Mian Siraj-Ud-Din, Dewan Krishna Kishore Dhariwalla, and Lala Mool Chand.

The general manager and chief engineer is Mr. G. R. Drummond, M.I.E.E., M.I.M.E., the chief assistant is Mr. W. Bull, the second assistant is Lala Pokhar Dass, and the secretary is Lala Ratan Chand.

The following particulars and figures have been extracted from reports of directors and statements of account published up to the present time. There were many serious difficulties which had to be overcome by the company during the first three or four years of its existence, such as the very heavy expenses connected with the laying down of necessary plant, the hesitancy on the part of the public to subscribe to the capital fund, and heavy rates of interest on loans, but the directors had the utmost confidence in the venture, and they have now been able to pay fairly satisfactory dividends to shareholders.

The fourth annual statement for the year ended on the 31st March, 1915, showed that the income from all sources was Rs. 2,00,697, as compared with Rs. 1,18,323 for the previous twelve months, and that after making provision for depreciation, and for previous losses, there was an available net profit of Rs. 17,086. After writing off a sum of about Rs. 4 700 for preliminary charges, the balance of Rs. 12.386 was absorbed by the payment of the first dividend at 7½ per cent. on preferential and ordinary shares and the carrying forward of a sum of Rs. 1,076 to the succeeding year.

The next report, 1915-16, stated that there had been a considerable increase in the consumption of electric power, but owing to war conditions the company had been handicapped by the non-delivery of materials for the proposed scheme for lighting the city. It was nevertheless shown that the income had risen to Rs. 2,75,598, being an increase of nearly Rs. 75,000 over the figures for the previous year. A dividend was declared at the rate of eight per cent. per annum on ordinary, and seven per cent. on preferential shares, the reserve fund was credited with a sum of Rs. 20,000, and the balance was carried forward.

The annual report for the twelve months which expired on the 31st March, 1917, stated that several important works had been undertaken, including the lighting of the city of Lahore, extensions to mains in the civil station, and the erection of new street lighting wires along certain roads.

Nearly 190 lights had been connected outside the area of the city and 164 within its borders, thus bringing the total number to 1,324. A very gratifying improvement in the position of the company had been manifested during the year, the gross revenue being Rs. 3,12,374, while the corresponding figures for 1915-16 were Rs. 2,75,598. After defraying all working charges, paying interest on debentures, making provision for depreciation, and allowing an amount of Rs. 16,765 for defalcations which had accrued during the previous three years, the net profit available for distribution was Rs. 1,05,260. The directors dealt with this as follows:—

An interim dividend at six per cent. paid in July, 1917, absorbed Rs. 42,229; a further dividend on ordinary shares at six per cent. and on preferential shares at three per cent. amounted to Rs. 34,741; the sum of Rs. 20,000 was paid to reserve fund; and the balance of Rs. 8,290 was carried forward.

The authorized capital of the company then stood at Rs. 7,50,000, and the amount paid up was Rs. 7,42,379, while the debenture account remained at Rs. 2,50,000.

THE LAHORE SPINNING AND WEAVING MILLS COMPANY, LTD.

The balance-sheets of this undertaking show that it has been managed to the great advantage of shareholders for several years past, and its flourishing condition is largely due to the tact and ability of Mr. Harkishen Lal, B.A., who founded it in 1898, and who from that time has been managing director. The capital is Rs. 10,00,000, of which rather more than Rs. 7,00,000 have been paid up.

The directors are Messrs. Harkishen Lal, B.A., K.B.Sh. Maula Buksh, Shib Das, Raghnath Sahai, Mullick Girdhari Lal, and Sheikh Umar Baksh.

The company are owners of a fine two-storeyed cotton spinning mill with weaving, folding, and measuring departments, at Shahdara, near Lahore, together with about a dozen ginning factories in the Punjab, which are under the immediate control of the Punjab Cotton Press Company, Ltd.

The internal equipment comprises 23,000 spindles and 434 looms, and the whole of the machinery, which was erected by the manufacturers, is of the most up-to-date description, especially in the ring frame and mule rooms.

Practically all of the spun yarn is woven into check and other cloth, of coarse or "middling" textures, for local requirements, but it is intended to make cloth of a finer substance as soon as it is possible to obtain suitable cotton from American markets.

A distinctive feature of the mill is the provision made for securing an abundance of light in every portion of the mill, and although the buildings are sufficiently large at the present time to meet all demands, the company have about forty acres of adjoining land, which is reserved for greater accommodation whenever required.

Mr. W. Hare has been mill manager since 1904, and he employs about 1,000 hands.

LALA ISHWARDAS VARSHNEI.

If there is one man who has by force of example, by practical demonstrations, and by the training of others, done more to establish and develop the art of glass-making in India, that person is Lala Ishwardas Varshnei, S.B. (Boston, U.S.A.), managing agent of the Upper India Glass Works, Ambala, in the Province of the Punjab, and proprietor of the United Provinces Glass Works at Bijhoi, in the district of Moradabad.

This gentleman, who is barely thirty-eight years of age, commenced his educational career at the Mahommedan Anglo-Oriental College at Aligarh, his native place, when twelve years of age, and he was still young when he manifested a strong natural leaning towards the study of mathematics and towards technical research in connection with industrial development. This latter propensity proved so strong that Lalaji—although belonging to a Vaishya family opposed to foreign travel, and without obtaining the consent of his parents—sailed for Europe and other countries with the object of gratifying his cherished desire. While in Japan, as a student of applied chemistry, it came to his knowledge that two leading officials in the service of the Government of India held a conversation with a well-known Bombay merchant (who had then recently returned to India with European experience in the glass industry) on this very subject, and he was informed that the discussion closed with a consensus of opinion that the difficulties of carrying out such a project were almost insurmountable if not actually impossible. The word "impossible

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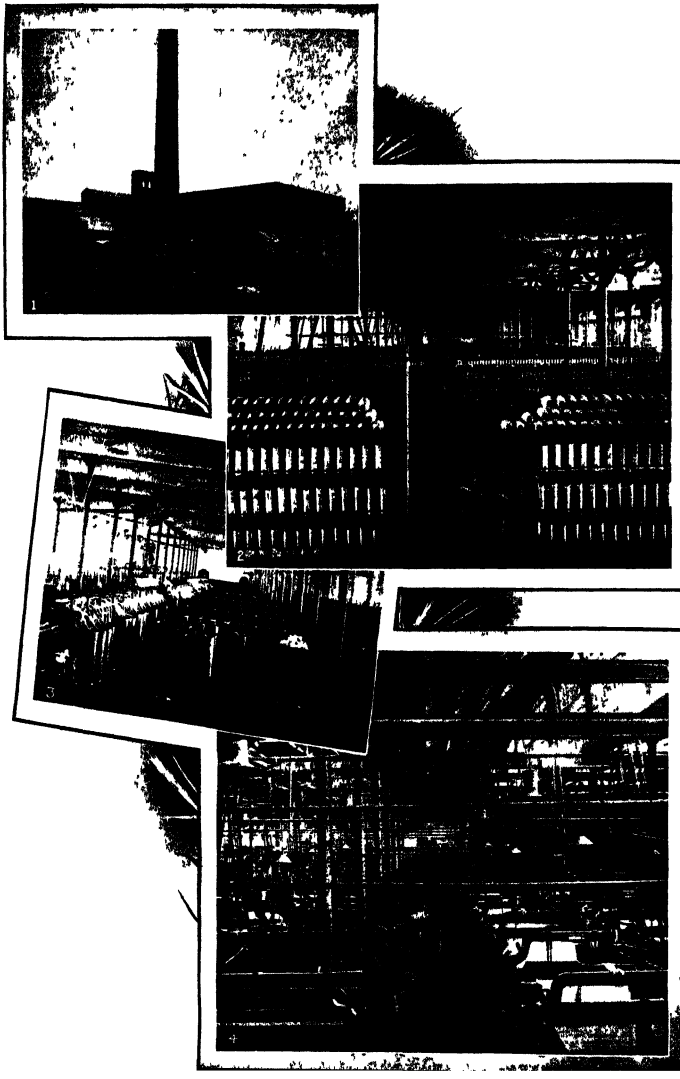
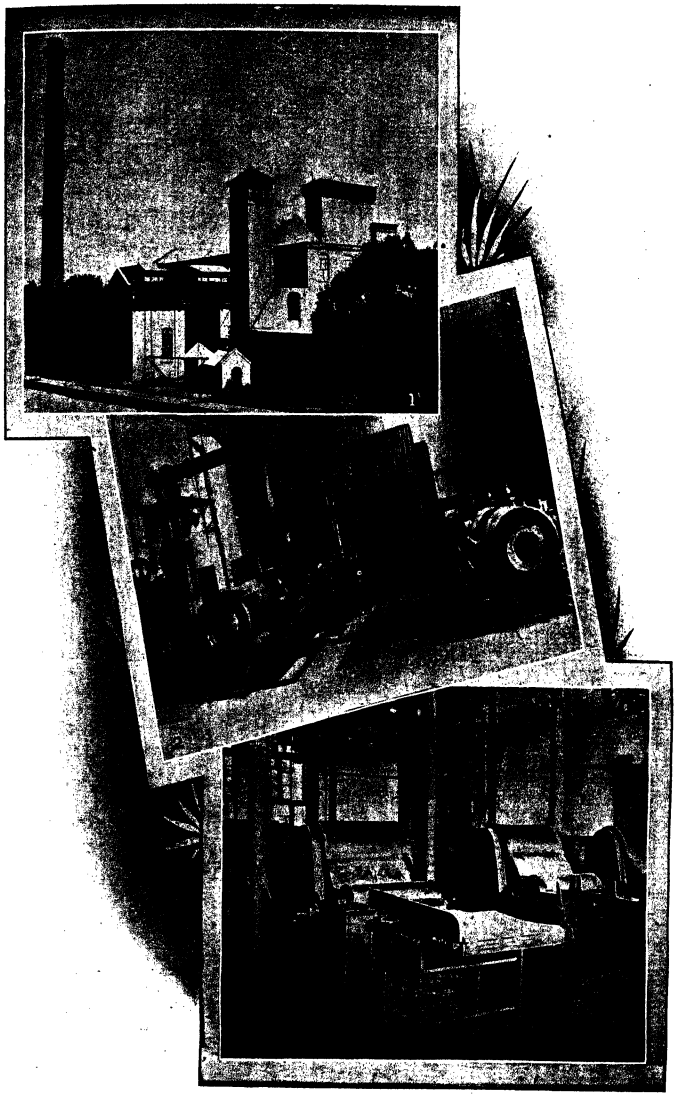


LAHORE SPINNING AND WEAVING MILLS.

1 Exterior View. 2. Mule and Ring Frame Department. 3. Card Room. 4 Weaving Shed

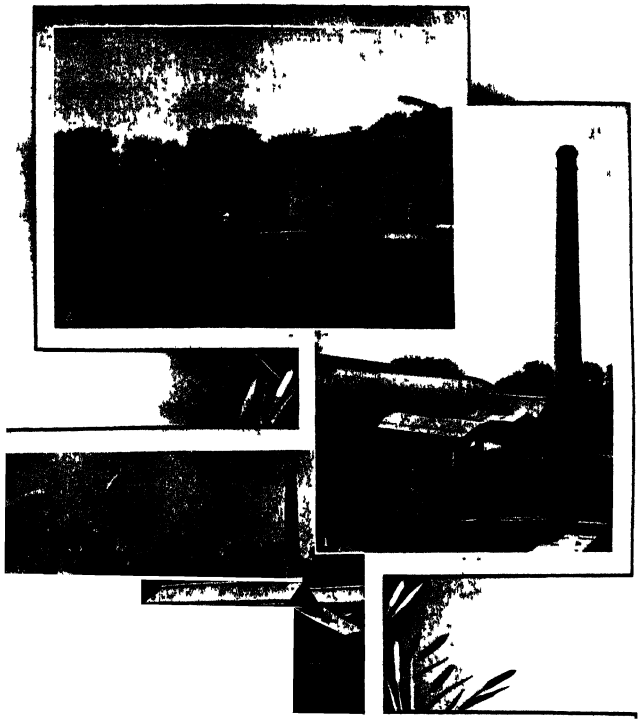


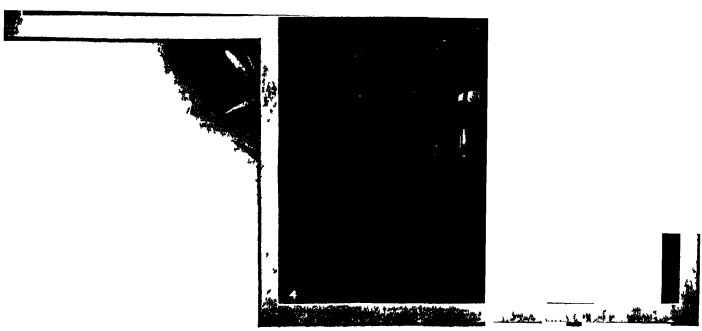
KHALSA SPINNING AND WEAVING MILLS.

1. Exterior View of the Mills. 2. Engine Room. 3. Blow Room.

BHAUPENDRA FLOUR MILLS

1 General View of Bhaupendra Flour Mills 2. Engine Room. 3 Roller and Grinding Floor. 4 Flour Dressing Room.





UNITED PROVINCES GLASS WORKS

1 Factory View, Ambala City 2 Godown and Office, Ambala City 3 Exterior View of the Glass Works Bijnoi.
4 Display of Manufactured Goods.

roused the spirit of Lala Ishwardas, and throwing heart and soul into an exhaustive consideration of the subject, he came to the conclusion that in the first place India required expert glassblowers whose employment must be supplemented by an expert who could be induced to teach the art to others, as it was realized that Japanese or Austrian experts were not willing agents in the matter of imparting instruction.

Lala Ishwardas gained great practical experience in the Massachusetts Institute of Technology at Boston, in America, as well as in Japan, and he also visited centres of the glass industry at Dresden, Strasburg, and other places in Europe, where he obtained an insight into the production of glasswork of the finest quality.

On his return to India he started a glass factory in Sikandra Rau, in the district of Aligarh, but owing to the unfortunate death of one of the principal promoters it became necessary to close the building. He subsequently established the Paisa Fund Glass Works at Talegaon, in the district of Poona, and he not only successfully worked the factory for a number of years, turning out chimneys, globes, jars, and other sundries, but he also gave instruction in the craft to others who were willing to avail themselves of his generous offer. The hands thus trained are now successfully working several glass factories in Bombay and other places.

The Upper India Glass Works at Ambala were commenced in 1897 under the management of a European expert, who employed only highly qualified European workmen. The concern changed hands on several occasions, and met with little or no real success until the year 1914, when Lala Ishwardas took over control.

The United Provinces Glass Works at Bijhoi, started by the same gentleman little more than a year ago, make a special feature of chimneys and globes, and the promoter has every reason to be satisfied with the results obtained. It should be mentioned here that at this factory (which, by the way, has already been doubled in size) free training is given by experts to all who are willing to study with the view of becoming adepts in an art which was never so necessary to industrial progress in India as at the present time when the chief glass manufacturing centres of Europe are cut off from trading with other parts of the world. These students are paid during training, according to the progress made by them, and some are such apt pupils that their monthly salaries have within twelve months risen from Rs. 5 to Rs. 30. Lala Ishwardas has also made himself acquainted with the science of economic geology and mineralogy, and is thus fully competent to secure raw materials of a suitable standard.

An obstacle which has caused trouble in the past, namely, the objection raised by employees to the covered crucible, is gradually becoming less formidable, thanks to the patience and energy of Lala Ishwardas.

When this gentleman was in America he was deputed to visit England as a delegate to the Society of Chemical Industries, and he was called upon by the Industrial Commission held in India in 1917 to give evidence in connection with the question of the manufacture.

A brief summary of his remarks may fitly be given here. He stated that his practical experience in this art in India and elsewhere covered a period of about fifteen years. It was stated that more than thirty glass factories had been started in India during the preceding twenty-five years, and that the greater portion of their aggregate capital, amounting to more than Rs. 50,00,000, had been absorbed by losses. A few concerns were just managing to keep open doors, while others, staffed by workmen trained by Lala Ishwardas, were yielding fair returns. "The want of trained labour is alone responsible for the major portion of these failures," was the reply given to a question, and then the witness proceeded to expound his views upon the work of teaching. It was urged that students, after receiving education up to the matriculation standard, should enter a higher technological institute, and should make themselves conversant with applied chemistry, steam, and mechanical engineering, elements of electrical engineering, and other subjects, but special encouragement should be given to them to visit factories in Europe, if possible, and that in any event they should serve a lengthy apprenticeship in local works under a thoroughly qualified instructor. Various other suggestions were made, a very important one being that railway companies should be persuaded to reduce their inland rates on raw materials as well as upon manufactured goods, and the following significant reply to a question gives food for reflection: "Steamer charges from Japanese or European ports to ports in India are equal to railway charges upon glassware in this country for a distance of about 300 miles; therefore factories situated 500, and even 1,000, miles from a place of import which is a distributing centre (a not infrequent occurrence) are unable to compete on favourable terms."

The Government of Bombay in October 1909 manifested a laudable desire to encourage the development of industries in India by issuing a notice that the Governor-in-Council desired to call attention to the glassware produced at the Talegaon Works, and requested that as far as possible articles made there should be procured when purchases were made for Government purposes in any department. The goods specially mentioned included powder bottles, pestles, mortars, funnels, jugs, tumblers, cups, plates, lamps, candlesticks, globes, chimneys, ink and gum bottles, and paper weights.

Lala Ishwardas has been awarded several gold medals for goods shown at exhibitions, while hundreds of congratulatory testimonials have been received at various times.

His Excellency the then Governor of Bombay, Sir George Sydenham Clarke, G.C.M.G., visited the Paisa Fund Glass Works in June 1912, and wrote: "I have had much pleasure in inspecting this factory. The work exceeds my expectations, and I hope this useful enterprise will be increasingly successful." In July 1913 Baron Willingdon, G.C.I.E., the succeeding Governor of Bombay, remarked that he and Lady Willingdon "had spent a very happy afternoon, and wished the industry all possible success." The Assistant Secretary of the Indian Industrial Conference in June 1912 said: "Mr. Ishwardas deserves to be congratulated on the efficient management and successful working of this concern. The samples turned out by the factory are quite equal to the articles of foreign make. . . . Mr. Ishwardas appears to know thoroughly the theoretical as well as the practical side of his work, and seems capable of conducting the factory without the help of Japanese experts."

It is hoped that the praiseworthy example of the Bombay Government (above referred to) in patronizing in a very special manner the all-important, but indifferently recognized, glassware industry will be followed by other Governments in India.

C. E. MACKAY.

On a traveller visiting in 1917 the extensive workshops in Chamberlain Road, Lahore, belonging to Mr. C. E. Mackay, civil and mechanical engineer and contractor, it was no surprise to him to find that Mr. Mackay and his staff of about six hundred hands were devoting nearly the whole of their time to the manufacture of field equipment of a general character for the use of the military authorities.

The works, which cover an area of 12,000 square feet, were opened in the year 1907, and they comprise a foundry, smithy, carpenters' and other shops, all of which are fitted with a good supply of first-class electrically driven machinery for drilling, cutting, bending, rolling, and other purposes. All castings required are forged upon the premises, and all necessary woodwork is prepared in the joiners' shops.

Mr. Mackay at the time of the visit was supplying army transport carts at the rate of about 250 in each month, in addition to ambulance trains, railway furniture and lamps, sanitary buckets, water-bottles, mess tins, and a large quantity of requisites of various kinds. A large stock of iron is always kept on hand, as the proprietor not only has to be prepared to satisfy the urgent demands for military stores, but is naturally desirous of meeting as far as possible the needs of a very extensive business connection which by energy and ability he has secured.

Mr. Mackay has for some time past realized the absolute necessity for greatly increased accommodation in his works, and he has therefore obtained a most centrally situated plot of land, 32,000 square feet in extent, adjacent to the Mall, in Lahore, and he proposes to erect upon it extensive new shops designed and constructed on the most modern scientific principles and equipped with thoroughly up-to-date machinery and plant.

The proprietor employs two European assistants (one civil engineer and one mechanical engineer) as well as several Eurasian and Indian assistants, but he personally supervises every branch of his establishment.

T. C. MALLER.

The manufacture of carpets is an industry which has been carried on in India for several centuries, but it is probable that the ideal carpet was the one made in Persia during the fifteenth and sixteenth centuries. That was one whose "pile" did not wear away and whose colours did not fade. It was composed of the finest wools treated with pure vegetable dyes, and it was usually made to order, as the cost was prohibitive to all excepting princes and others to whom expense was no consideration.

Mr. T. C. Maller, the owner of a well-known carpet factory at Amritsar, has been engaged in manufacturing for more than twenty years, and he formerly supplied the American markets with rugs dyed in the usual Indian fashion, the colours of which were not lasting, and which would fade away in the process of chemical washing. This gentleman visited the United States many years ago, and he found that there was an excellent demand in the principal cities in that country for really good carpets which would stand chemical washing and the wear and tear of many years' constant use.

On his return to India he began to make experiments in fixing dyes in the wool, and although he obtained vegetable substances from every part of the world, including Iceland and Chili, he proved that 90 per cent. of them were useless. His object was to make carpets of the finest wool (obtained from anywhere it could be procured) and the purest vegetable dyes, and then to subject them to chemical treatment, when they might be expected to bear comparison with antique Persian productions.

Mr. Maller subsequently made and dispatched five carpets to New York to be submitted to the chemical washing process, and the results were all that could be desired, seeing that they became identically the same in appearance as those priceless antique Persian carpets, while the actual cost was infinitely less.

The factory at Amritsar comprises three compounds, in which there are facilities for the preparation, including carding and spinning, of wool, dyeing, and weaving, and carpets of any quality or design are made there entirely by hand.

Mr. Maller is strongly of opinion that in the midst of factories which are still engaged in making cheap carpets, necessarily of inferior materials and dyes, there is ample room for one which manufactures one kind, and one only, and that one the best that can be produced.

Carpets are made from ancient patterns obtained from antique samples and designs, and these are most carefully copied in the form of manuscript directions for the weavers. Knots in them vary in number from 48 to 400 to the square inch, but the quality of materials and workmanship is of the same high-class standard in every instance. Prices range from Rs. 15 to Rs. 20 per square yard, and any designs or colours can be selected by customers, while sizes run from 3 to 25 feet in width. A small number of sample carpets is kept on hand, but Mr. Maller relies chiefly upon orders specifying the exact requirements of his patrons.

A carpet measuring 9 by 12 feet cannot be made in less time than about three months, while one made of inferior materials may be completed by a similar number of hands in three weeks. Any colour or shade may be selected for the designs, and here it may be mentioned that Mr. Maller has obtained the secret of the Chinese Imperial "Ming" yellow dye. The proprietor claims that he prepared his dyes in a manner different from that followed by any other manufacturer in the world, and the Professor of Chemistry at the Leeds University in England, while on a visit to Mr. Maller's factory, confirmed this opinion.

Oriental carpets deteriorated very considerably many years ago, but their excellence has again been assured, chiefly owing to the greater number of chemicals now available and to the discovery of a huge variety of half-shades and quarter-tones.

Mr. Maller conducts his factory on technically scientific lines, and he personally supervises the work in each department.

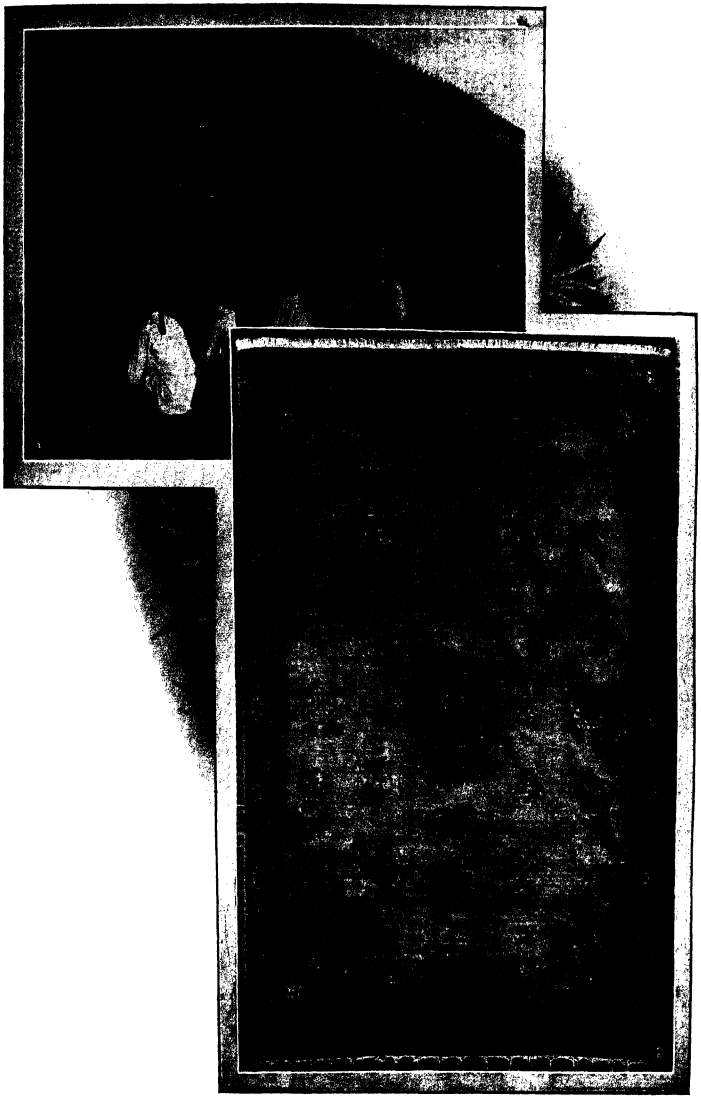
MOHAMED HUSSEIN ALLAHIBUX.

The partners in this firm of skin merchants at Amritsar are Mian Mohamed Hussein, Mian Dost Mohamed, and Mian Fazal Ellahi, who are sons of the late Haji Allahibux, who established the business in the year 1870. The founder, from the commencement of his career, gave abundant proof of the possession of a practical acquaintance with the leading principles of commercial dealings, and he threw such energy into his daily work and gained the respect of so large a circle of patrons that he was able to leave to his sons an undertaking which is at the present day one of the most important of its kind in Northern India.

The premises at Amritsar comprise

C E. MACKAY

1 Smithy and Foundry. 2 Cabinet Shops 3 Lamp Manufactory



T. C. MALLER.

1. Hand-Look Carpet Weaving. 2. Chinese Carpet with Bas-relief Effect.

MOHAMED HUSSEIN ALLAHIBUX.

1. Sorting and Baling Godown. 2. Baling Press. 3. Proprietor's Office. 4. Exterior View. 5. Cawnpore Branch.

offices, factory, godowns, and other buildings, which form an imposing structure on the grand trunk road leading from Peshawar direct to Calcutta, and they have a floor space of about 50,000 square feet in extent. The property was erected at a cost of more than Rs. 1,00,000. Within the compound is a mosque to which Mahommedan employees retire for prayer.

The head office is under the superintendence of Mian Mohamed Hussein, and the firm have agencies in nearly every part of India; the principal one being at Delhi, where the management is in the hands of Mian Dost Mohamed; those at Cawnpore and Lucknow are controlled by Mian Fazal Ellahi, and others at Multan, Sialkot, and Hyderabad (Sind) are worked by various commission agents.

Wet-salted skins, dealt with at the first three of the towns just named are, on receipt at the factories, assorted according to quality in "primes" and "seconds," and differentiated by measurement and weight into "extra heavy," "heavy," "mediums," and "light" parcels. Consignments of these are made up in Delhi and Cawnpore for despatch to Calcutta, Bombay, or Karachi, where they are shipped to the United States of America.

Dry salted goat and sheep skins from all branches, as well as others purchased in the market at Amritsar, are stored in godowns at headquarters for selection, assortment, and packing, and after being subsequently pressed in bales, they are forwarded for shipment to European countries or the United States of America. Sheepskins and pelts are also exported to the above-named countries, while England is the destination for wool.

The firm is represented in America by Messrs. J. H. Rossbach and Brothers, whose agent in Amritsar—Mr. Peter A. Schmedding—enters into and completes all contracts with them, and the annual quantity of skins which change hands in this manner is now about 40,00,000 in number. All packages for overseas are marked with the letters "R. B."

Messrs. Mohamed Hussein Allahibux possess a substantial sum of money as capital for the carrying on of their vast business, and all financial matters are entrusted to the National Bank of India, Ltd.

About two hundred hands are employed daily at each of the factories, but these are exclusive of a large and competent clerical staff, business assistants, and commission agents at Amritsar and the various branches.

Apart from his strenuous commercial life, the chief partner—Mian Mohamed Hussein—takes a keen interest in the general welfare of his fellow Mahommedans, and in the town of Amritsar itself he is extremely popular among all sections of the community. It is one of the tenets of the Mahommedan religion that during the month of Rajjab its wealthy adherents should give alms to the poor to the extent of 2½ per cent. upon the value of their possessions, and Mian Mohamed Hussein, in compliance with this injunction, regards it as a sacred obligation resting upon him to visit every Mahommedan man and woman in Amritsar, to whom he presents money and clothing according to their several necessities.

Further than this, he grants scholarships to sons of poor parents with the object of enabling them to prosecute their studies in religious and other subjects, and of encouraging advanced students to proceed to the taking of University degrees.

THE MURREE BREWERY COMPANY, LTD.

This company was established in the year 1860 with the object of supplying British troops in Northern India with good beer at a reasonable price, the imported article in those days being very costly, and long contracts given to the company by Government were periodically renewed up to 1907, when they ceased, and open competition had to be faced.

A third of the present buildings—known as the Ghora Gali Brewery—were then in existence, and consisted of two sets of maltings (75 quarters), brewhouse, fermenting tuns, cellars, offices, and the assistant brewer's quarters, but as trade increased further accommodation was secured by the erection of other structures higher up the side of the hill, upon which the premises are erected. The site is about six miles distant along the main road from Murree. Finally, a new set of maltings was built in 1876, the capacity being 100 quarters at a time. The barley malted here is usually obtained from the North-West Frontier Province, and also occasionally from the Rewari district.

The "upper maltings" consist of three floors. On the top of these is the steeping tank, and in the two upper storeys there is sufficient space to "grow" 200 quarters of barley. On the third floor is the kiln on which the malted grain is dried and cured, as well as a room for screening and storing the finished malt. Steps lead one down to the hop-store and mill-room, where there is a very fine grinding machine, by Messrs. Worssam & Co., and close at hand is the brew-house, with its two twenty-quarter mash tuns and two boiling coppers. By the side of the coppers are two boilers by Babcock and Wilcox, and a compound engine by Messrs. Marshall & Sons & Co., Ltd., in addition to a dynamo, which supplies the brewery and maltings with electric light.

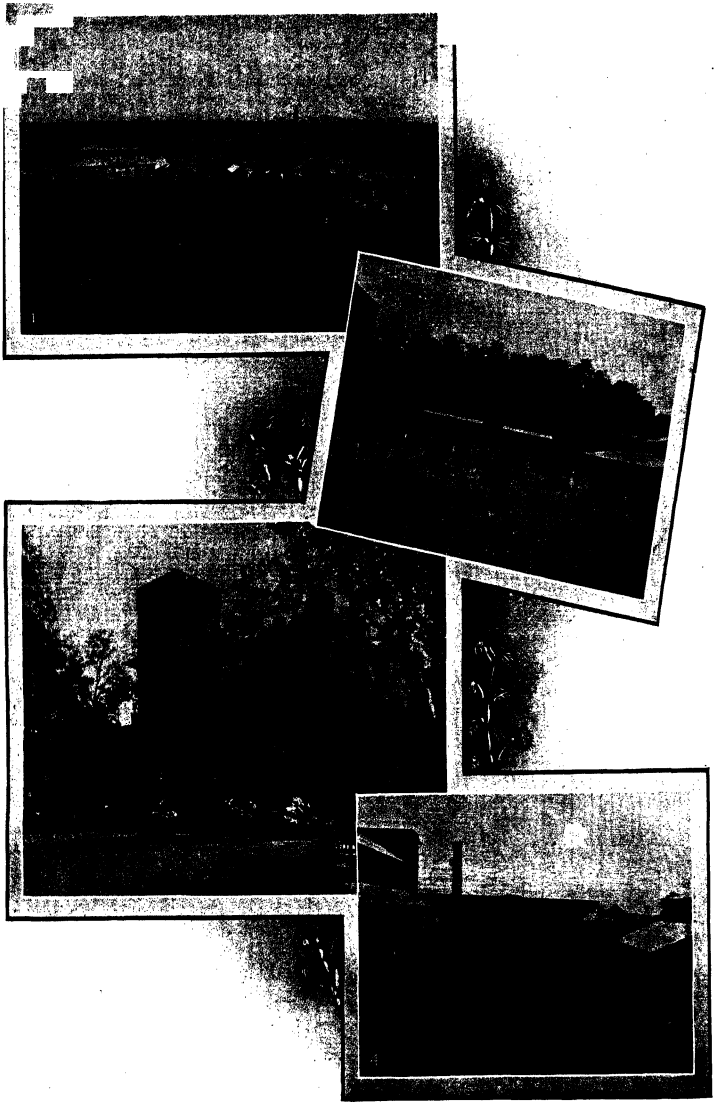
A long flight of stone steps gives access to various store rooms and the refrigerating and fermenting chambers, the latter having six vats with a capacity of 100 hogsheads each. At the foot of the steps is a large yard, and on either side are huge cellars with vats of 100 hogsheads capacity, glass enamelled steel tanks of 150 hogsheads capacity, and many wooden vessels of varying sizes, the total storage being about 3,000 hogsheads. To the left of the yard, and above the cellars, are the old maltings and kilns, and to the left of these is the cooperage, in which all the casks are repaired, cleaned, and finally sterilized by steam. To the right of the yard, and above the cellar, are spacious offices occupied by the manager and secretary and his head office staff.

In the front of, and facing the main building, are a printing office, a bottling and "pasteurizing" room, and a godown, underneath which is another cellar, and lower down the hillside, and below the main road, are extensive quarters for the Indian staff.

On the hillside above the main buildings are separate quarters for the head office clerks, a large barley store, a very fine two-storeyed house for the manager and secretary, and others for the managing brewer, chief accountant, and assistant secretary.

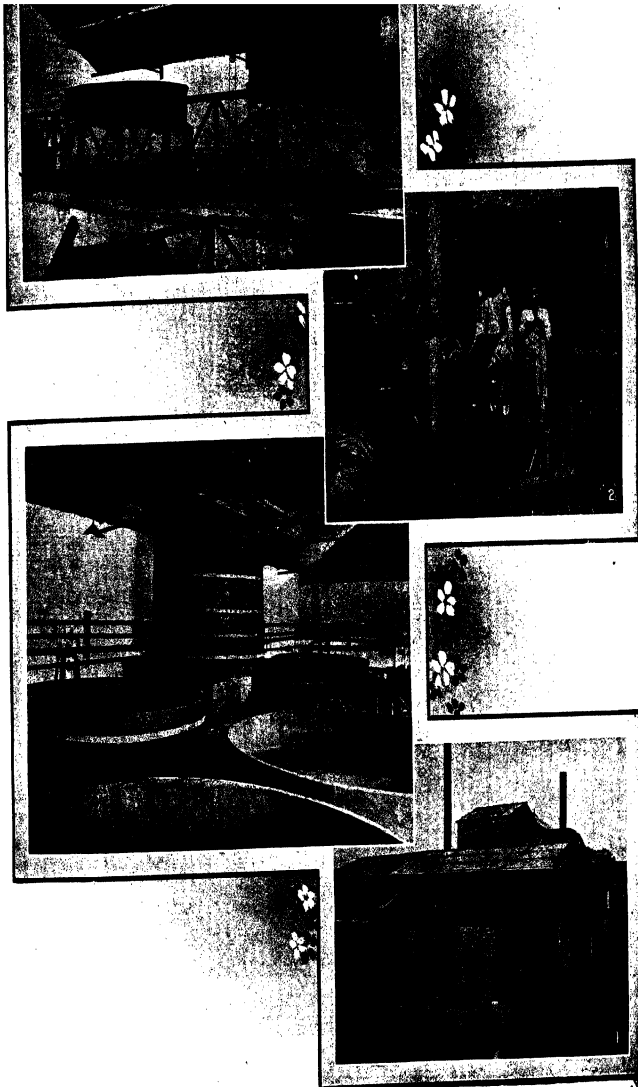
The water supply, obtained from natural springs nearer the summit of the hill, runs into masonry reservoirs, from which it is laid on to every part of the maltings and brewery. The water is exceptionally pure, and eminently suitable for brewing the best quality of ales and stout.

A fine metalled road leads up from the main thoroughfare to the upper maltings at the top of the buildings, in which all raw materials are stored, and thus the processes of malting and brewing proceed upon a system of natural gravitation, until the finished beer is received into cellars



MURREE BREWERY COMPANY, LTD.

1. General View of Brewery and Distillery, Rawalpindi.
2. Manager and Secretary's Bungalow, Rawalpindi.
3. Portion of Loading Yard, Showing Railway Sidings.
4. Coopers' Repairing Yard, Rawalpindi.



MURREE BREWERY COMPANY, LTD.

1. Distillery, Rawalpindi. 2. Bottling Room, Rawalpindi. 3. Copper Room, Rawalpindi. 4. Fermenting Room, Rawalpindi Distillery.

NAWAB SAHIB

MURREE BREWERY COMPANY, LTD.

1. General View, Ghora Gali Brewery. 2. View from Coal Shed, Ghora Gali. 3. Exterior View of General Offices, Ghora Gali.

MURREE BREWERY COMPANY, L/TD.

1 Water Reservoirs, Ghora Gali 2 Mashtun and Hoppers, Ghora Gali. 3. Cooperage, Ghora Gali. 4 Cellar, Ghora Gali

at the base, to be stored there until matured.

The company manufacture and supply to British troops and the general public: "East India Pale Ale," "Light Champagne Ale," and "XXX Stout" in bottles, and "draught beers" in casks and jars holding from one gallon up to fifty-four gallons.

For the convenience of canteens, and for quick consumption, the company have for many years past filtered most of their draught ales, thus enabling customers to consume the contents of casks and jars to the last drop, but owing to the difficulty of obtaining materials for this process during the late war this practice has not been regularly followed. At the time when Government contracts ceased the company found it necessary to appoint distributing agents, and Messrs. Jamasjee & Sons, Ltd., who were selected for the position, now sell their beers and stout in practically every town between Peshawar and Karachi.

Naturally the company were compelled to fight against severe competition, but they have always held the largest share of the trade in Northern India, notwithstanding the fact that everything (with the exception of barley and labour) such as hops, casks, machinery, and plant, and a thousand and one articles for the various departments, has to be imported from Europe. The railway freight, too, on such goods is an important item on a line so far from a seaport, and in addition there is the cost of transport along 32 miles of a hill road between the railway terminus and the brewery.

The company purchase the best hops procurable, either in England or California.

The capital of the company was originally fixed at Rs. 12,00,000, but during the nineties of last century it was increased to Rs. 18,00,000.

THE RAWALPINDI BREWERY

The very great progress made by the Murree Brewery Company, Ltd., after formation in the year 1860, and the unprecedented demand for their famous ales and stout over a greatly increasing area of Northern India, led the directors to erect a branch brewery at Rawalpindi about thirty years later. The buildings, which are in the form of a quadrangle, are enclosed by a high wall, and comprise the mill-room and brew-house, with coolers and refrigerators on the top floor, all of which are on the northern side; offices and store rooms on the south side; fermenting rooms, with six vats each, having a capacity of 100 hogsheads, are situated on the eastern side; and the bottle-washing, bottling, "pasteurizing," and packing rooms are on the west; while below the whole structure are huge cellars containing storage vaults capable of holding 3,000 hogsheads. At one end of the bottom floor is the kiln from which the prepared malt is transferred by means of an elevator to the top floor, where there are malt stores, screening rooms, and a steeping cistern. Barley, hops, and other ingredients are raised by steam power to the top floor; the second, third, and fourth floors, made of slate, are used for "growing" the barley; and the fine maltings have a capacity of 100 quarters of grain. On the eastern side of the outer yard are the cooperage and engineering workshops, together with the boilers and the dynamo-room, the whole building being lighted with electricity. A plentiful supply of excellent water is obtained from two wells on the estate, but in view of an emergency arising a connection has been laid between the brewery and the reservoirs, which meet the requirements of the cantonments and the civil station of Rawalpindi.

The company have their own railway siding, and thus the facilities for unloading raw materials and for despatching their products direct from the premises are exceptionally good.

The storekeeper's house is near to the gate of entrance, and a large number of storerooms have been erected within the wall, while on the outside of the latter are a palatial residence and fine grounds for the use of the manager and secretary. Bungalows have been provided for the managing brewer, his assistant, the distiller, and the engineer; and suitable quarters have been arranged for the Indian staff, who are from 250 to 300 in number during the winter months.

Owing to the high temperature of the water during the summer months, brewing and malting operations are only possible from the beginning of October to the end of March.

The company have garage accommodation for their motor lorries, which run between Rawalpindi and Ghora Gali, the principal brewery near Murree.

THE RAWALPINDI DISTILLERY

About twenty years ago the directors of the Murree Brewery Company, Ltd., whose breweries are situated at Ghora Gali, near Murree, Quetta, and Rawalpindi, realized that, in addition to the necessity for a larger supply of "country" spirits, there was a more clearly expressed demand for pure malt whisky, which could be placed on the market at a lower figure than the price charged for the imported article. They therefore opened a distillery, on the eastern side of, but communicating with, the premises of the brewery at Rawalpindi, which comprises a fermenting-room, "still" house, boilers, spirit stores, godowns, and machine and other rooms, the whole block forming a square with a spacious yard in the centre. The plant includes two pot-stills, continuous stills of the Blair-Campbell and MacClean and Coffey types, and the distillery is capable of turning out 3,50,000 L.P. gallons of spirit in each year.

All ingredients used in manufacture are of the best quality procurable, *gur* and molasses being required for "country" spirit, and the purest barley malt for whisky; while excellent water is obtained from the company's wells on the premises. The distillery is worked throughout the year, employment being found for about fifty men.

MUHAMMED SHARIF A. RAHMAN.

The largest centre in Northern India for the export of raw hides and skins is Amritsar, and there is no firm in this rising town which carries on a more extensive trade in this particular line than that of Muhammed Sharif A. Rahman. The firm was established in the year 1897 by Sheik Muhammed Sharif, the sole proprietor, who by straightforward and business-like dealings, and particularly by his scrupulous promptitude in executing orders entrusted to him, has gained for the concern trading in the above name a renown which may well be envied by competitors.

The imposing premises known as "Sharif Manzil" have been constructed on modern architectural and scientific principles, not the least important of the arrangements carried out being the provision made for the safe storage of goods, thus securing immunity from possible damage arising from an excess of hot weather or from a more than usually heavy downpour of rain during the monsoon seasons. These buildings are equipped with suitable machinery for pressing,

MURREE BREWERY COMPANY, LTD

1 Interior of One of the Malt Houses, Ghora Gali. 2. Malt Mills, Ghora Gali 3 Steam Engine, Ghora Gali

4. Refrigerators, Ghora Gali.

MUHAMMED SHARIF A. RAHMAN.

1 Exterior View. 2. Proprietor and Son. 3. Staff Group. 4 Skin Drying and Scaling Yard

packing, and other requirements of the hide and skin trade.

The firm have appointed accredited representatives in the United States of America, Canada, Japan, and throughout the whole of Europe, while agents of foreign firms travelling in India invariably make a practice of entering into business relations with, and becoming permanent customers of, the firm of Muhammed Sharif A. Rahman. This fact alone is sufficient to account for the claim that the firm in question annually exports a larger quantity of hides and skins from Amritsar than any other consignor in a similar line of business. The flourishing condition of this concern cannot be doubted when it is stated that the firm pays more in the way of income tax than any of its contemporaries.

Main branches have been opened at Karachi, Delhi, Cawnpore, Multan, Gujranwala, Agra, Shikarpur, Peshawar, Jhansi, and other centres, while subsidiary depots have been established in all the principal markets of India. This arrangement places the firm in a position to deal promptly with foreign or local orders of any magnitude at any period of the year.

The eldest son of the proprietor, Sheikh A. Rahman, has had the good fortune to acquire experience and a thorough insight into European business methods by visiting the chief manufacturing and industrial centres on the continent, and since his return to India the head offices at Amritsar have been mainly under his control.

All branches are under the supervision of either the proprietor's own sons or of tried and trustworthy agents, and this management of a practically personal character gives the key to the success and established reliability of the firm.

Telegraphic codes in use comprise the A B C (4th and 5th editions), Liebers, the Western Union, Simplex, Standard, and a private one, while the telegraphic address is "Muhammed," Amritsar.

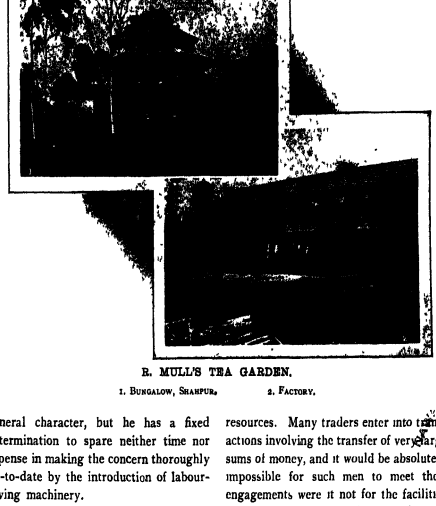
R. MULL'S TEA ESTATE.

The tea gardens belonging to this estate—covering an area of about 300 acres—are situated at Shahpur, in the district of Kangra, in the Punjab, and about mid-way between the railway stations of Pathankot and Palampur. The property lies in a fertile valley, rich with luxurious vegetation, surrounded by snow-clad mountains, and at an elevation of 5,000 feet above the level of the sea. The plantation was started by a Colonel Burnett at the time when the Government of the Province began to encourage the cultivation of tea in Kangra, the land being purchased for an absurdly low figure. After two changes of ownership the property, together with the goodwill of the business, passed into the hands of the late Rai Bahadur Diwan Hardial Singh, of Kotla, the father of the present proprietor, Diwan Sahib Rhoda Mull, barrister-at-law. The last-named gentleman has added to the planted area and has made numerous improvements of a general character, but he has a fixed determination to spare neither time nor expense in making the concern thoroughly up-to-date by the introduction of labour-saving machinery.

Quality of tea is the first consideration, but the owner has good ground for his optimistic forecast that by intensive cultivation of the land, and by the adoption of more modern methods of manufacture, the net yield of good saleable produce will be materially increased in the future.

The question of the cultivation of fruit in the rich soil of these gardens has recently been seriously considered by Diwan Rhoda Mull, and as a result he has now imported grafts of several choice varieties, which give promise of being profitably grown.

Mangoes of the Bombay and Malda types have already been gathered, and they have been pronounced by experts to compare most favourably as regards delicacy of flavour with those produced in other districts.



R. MULL'S TEA GARDEN.
1. Bungalow, Shahpur. 2. Factory.

THE NATIONAL BANK OF INDIA, LTD. (LAHORE).

Banking operations in India are still in their infancy when compared with the system prevailing in England, but a very large amount of business is done in this country which has the effect of stimulating trade and in developing industrial resources. Many traders enter into transactions involving the transfer of very large sums of money, and it would be absolutely impossible for such men to meet their engagements were it not for the facilities afforded by banking institutions of sound repute.

Among the latter may be mentioned the National Bank of India, Ltd., which was registered in London under the Companies Act of 1862 on March 23, 1866. The head offices are at 26 Bishopsgate, London, E.C., and branches have been established at Calcutta, Bombay, Madras, Karachi, Amritsar, Cawnpore, Delhi, Lahore, and other places in India, and at Colombo, Rangoon, Aden, Zanzibar, Nairobi, Kampala, and other places abroad.

The Lahore branch is located in a very fine building (situated in a central position

NATIONAL BANK OF INDIA, LTD. (LAHORE).

1. Front View of Bank. 2. Another View of the Bank. 3. Office Interior.

near to the Post Office), which was erected prior to the Mutiny in 1857 upon land, nearly four acres in extent, which was acquired from the Government of the Punjab by the Agra and United Services Bank, Ltd. The name of the latter concern was subsequently changed to the Agra and Masterman's Bank, Ltd., but when that Company went into voluntary liquidation in 1871 the style of the Agra Bank, Ltd., was adopted; and in 1900 the premises and business were taken over by the National Bank of India, Ltd.

The bank conducts a large exporting and importing business with Indians, chiefly in hardware and general stores, but as *octroi* duty at Lahore is prohibitive as regards silk and cotton piece goods, trade in these commodities is practically restricted to Amritsar, which may be regarded as the distributing centre for the Punjab and North-Western Frontier Provinces.

As Lahore enjoys the advantage of having a currency office, exporting firms appoint purchasing agents in this city, but it can never become an important distributing centre until the *octroi* system is put on the same basis as at Amritsar or at Delhi. An annually increasing export trade is carried on in the district of Montgomery in saltpetre, in the form of fine nitre.

The manager of the bank is Mr. W. Ferrier, who is assisted by Mr. M. D. Crichton, while the Indian staff is about forty-five in number.

Every description of banking and exchange business is transacted; current deposit accounts are opened for approved customers and kept free of charge, and deposits are received for fixed periods on terms which may be ascertained on application.

The subscribed capital of the company is £2,000,000; the paid-up capital is £1,000,000; and the reserve fund is £1,250,000.

THE NATIONAL BANK OF INDIA, LTD. (DELHI).

The head offices of the National Bank of India, Ltd., are situated at 26 Bishopsgate, London, E.C., while branches have been opened at Calcutta, Bombay, Madras, Karachi, Lahore, Amritsar, Delhi, Cochin, Cawnpore, and Tuticorin in India, and at numerous other places in Ceylon, Burma, British East Africa, and in the Far East.

The Delhi branch in Chandni Chowk was started in July 1889 in premises adjoining those which are now occupied by the company, and the business, which has grown to important dimensions, consists chiefly in financing imports of cotton piece-goods and exports of skins, hides, wheat, seeds of various kinds, and other indigenous produce. All ordinary banking transactions are entered into by the company, but information with regard to current, fixed deposit, and other accounts is always obtainable from the local manager.

The upheaval now going on in financial matters throughout the world must be expected to cause variations of existing rules of banking procedure, but, subject to any necessary alterations, the company are prepared to open current accounts and allow interest on daily or monthly balances according to arrangement, while credits are granted on approved securities. Fixed deposits are received for definite periods upon terms which may be arranged on application to the manager. The bank undertakes the safe custody of all kinds of securities, together with the purchase or collection of approved bills of exchange, and it grants drafts payable in London and elsewhere.

The bank owns a fine bungalow in the Civil Lines in Delhi, which is tenanted by the manager.

The telegraphic address is "National," Delhi.

NEDOU'S HOTEL.

Travelling in India rarely leaves pleasant recollections in the mind, owing to tedious delays and unsatisfactory arrangements generally, and it would be positively unendurable but for those homely hotels, occasionally met with in many cities and towns, which compensate the wayfarer for the trials he has borne with more or less patience.

One of these really desirable hostelries is Nedou's Hotel, in the Mall, Lahore. It is a substantially built brick and concrete, two-storied structure, having two wings, and a very large central porch, and it is situated in the very heart of the best portion of the city, being immediately opposite the Zoological Gardens, near to Government House, and within a short distance from a number of historic buildings for which Lahore is justly famous. This is an ideal position for an hotel, and the premises, which include an exceedingly fine compound, have a frontage upon the Mall of about 250 yards.

The business was established in another part of the Mall in the year 1880, and in 1908 it was transferred to the present address. Excellent accommodation has been provided for about a hundred residents and visitors in well-furnished and scrupulously clean suites and rooms, some of the former comprising sitting, bed and bath rooms, and there is also a very large dining-room, capable of seating a hundred guests, together with drawing, reading, card, billiard, and other rooms.

All of the rooms are fitted with electric lights, fans, and fireplaces. Provision has been made in the compound (which is 3¼ acres in extent), for coachhouses, a thirty-stall stable, a garage to hold six motor-cars, and excellent quarters for servants.

The proprietors take pride in their magnificent annual display of chrysanthemum blooms, there being no fewer than about five thousand plants.

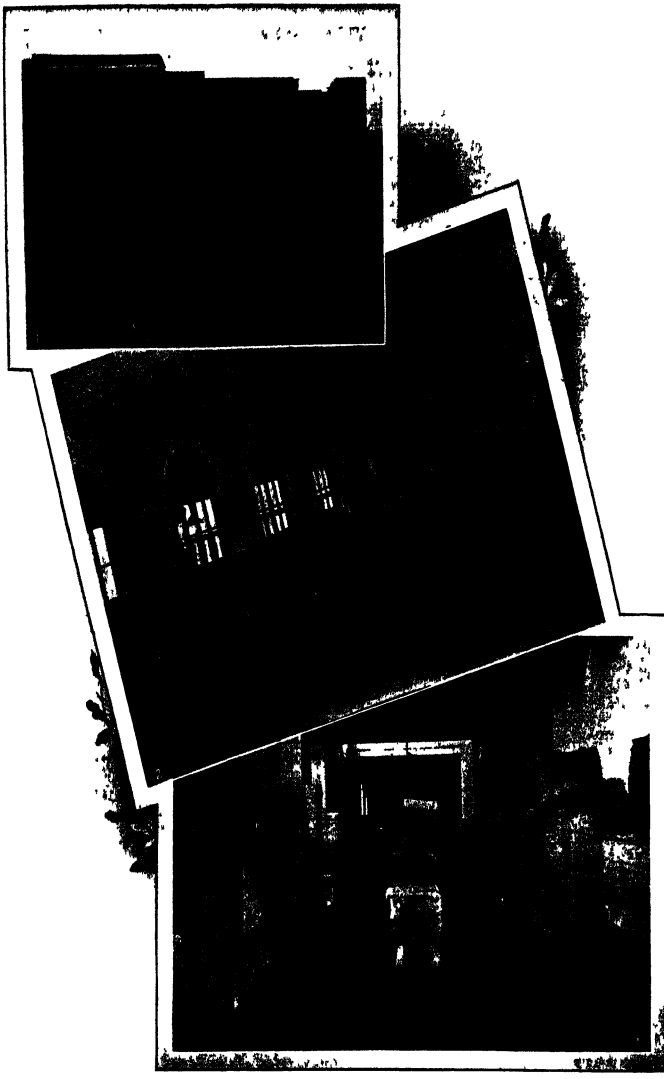
The proprietors are Messrs. M. Nedou, Mr. H. Nedou, Mr. W. A. Nedou, and Mr. W. D. Nedou.

Branch hotel businesses were opened at Gulmarg and Srinagar in the State of Kashmir in the years 1888 and 1900 respectively, and all three establishments are most efficiently supervised by the partners themselves.

NIZAMUDDIN & CO.

Upon the establishment of this firm in 1902 business was commenced by exporting large quantities of raw hides and skins to Great Britain and the United States of America. Commercial relationships were also established with reliable firms in France, Italy, Egypt, and from that date onwards the firm have, by their straightforward dealings and the commendable manner in which they conduct their operations, gained a most desirable reputation.

The present partners are Hafiz Mohamed Halim, Honorary Magistrate, Municipal Commissioner, and *Reis* of Cawnpore, trustee of the Mahommedan Anglo-Oriental College at Aligarh, and of Dar-ul-ulum of Nadwatul-Ulema, Lucknow; Khawja Nizamuddin, Honorary Magistrate and *Reis* of Amritsar, member of the Council Anjuman-i-Himayat-i-Islam, Lahore, Trustee Dar-ul-ulum of Nadwatul-Ulema, Lucknow, and secretary of the Hides and Skin Merchants' Association, Amritsar; and



NATIONAL BANK OF INDIA, LTD. (DELHI)

1. Exterior View 2 Interior, General Office, 3. Interior of Godown

NEDOU'S HOTEL, LAHORE

1 Dining Hall 2. Sitting Room 3 Billiard Room, 4 General View of the Hotel

Khawja Quamaruddin, son of Khawja Nizamuddin, while Khawja Shamsuddin is assistant.

The firm collect either wet or dry hides and skins from various districts in the Punjab, the United Provinces of Agra and Oudh, and Rajputana. The process of curing wet hides and skins respectively is performed by the application of arsenic and salt, and when the former have been thoroughly dried by the sun they are sorted into grades according to weight and quality. It should be mentioned that great care is taken to pack and press into bales for export only those hides and skins which have been dried to the fullest extent.

It is somewhat strange that, although Amritsar has one of the largest skin markets in Northern India, there has not hitherto been a tannery there for the preparation of leather. Messrs. Nizamuddin & Co., therefore, with characteristic energy, are about to open the Amritsar Tannery now under construction, in which they intend to tan all kinds of hides and skins on similar lines to those prevailing in Cawnpore. This process will at first be carried out partly by hand power and partly by machinery, and it is confidently expected that this industry—new as regards Amritsar—will meet with the success which has attended other efforts of the firm under notice.

THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD.

In India the words "Dhariwal" and "The New Egerton Woollen Mills Company, Ltd.," are synonyms. Dhariwal is situated on the Bari Doab Canal in the Gurdaspur district of the Punjab. The present company has been in existence since 1889, when it took over the premises and goodwill, such as it was, of the Egerton Woollen Mills, in liquidation.

That the existing company has achieved a brilliant success is evidenced by the developments at Dhariwal and by the commercial history of India for the past thirty years. "Dhariwal" products were practically unknown before 1889, now "Dhariwal Long Life Wool Wear" is a household phrase throughout India and the East generally. "Pure Wool" is the business axiom of the directors, and strict adherence to the rule of pure wool, and nothing but pure wool, has brought the company into the front rank of the textile industry in India.

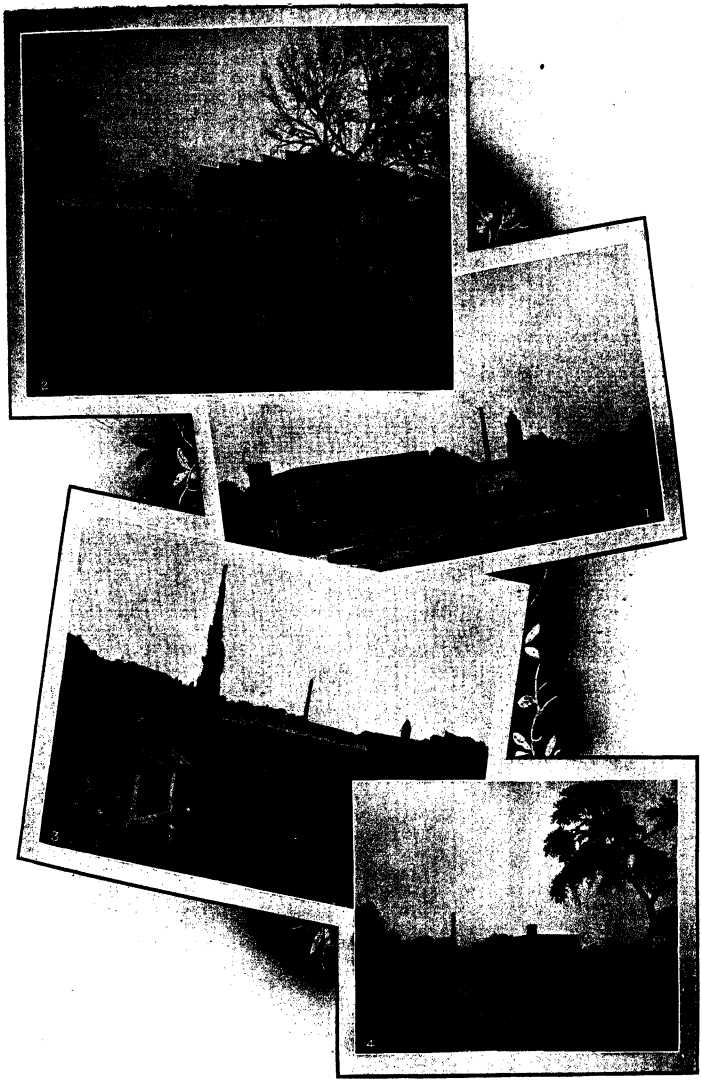
The principal output of the New Egerton Woollen Mills comprises woollen and worsted yarn, woollen and worsted fabrics, and knitted goods of various descriptions. The entire plant is absolutely up-to-date and complete in every respect, and it is kept in that state by the company's competent European staff.

The property of the company extends to some 350 acres, and it may be divided as follows: Mill premises, quarters for European staff, a model village, and an industrial settlement, this latter being a model village itself in every respect.

The power necessary to drive the enormous plant of the mills is derived mainly from the Bari Doab Canal, which, *via* the company's own waterways, constructed at a cost of some Rs. 5,00,000, actuates a series of large and powerful water turbines. In addition to these is the power developed by a large gas engine (the gas for which is made in a special producer-plant), and a series of oil engines, giving in all about 1,000 horse-power. Thus it will be seen that in no circumstances can

NIZAMUDDIN & CO.

1. KWAJA NIZAMUDDIN AND TWO SONS. 2. HAND BALING PRESS. 3. SORTING SKINS.



THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD.

1. General View of the Mills from the North, Showing European Staff Bungalow and Schoolmaster's Bungalow.
2. The Mill Stores (Left) and the "Old Mill." 3. A View of Part of the Mills, Showing Portions of the Offices in the Foreground, Right and Left.
4. General View of the Mills from South. (The Canal was Constructed by the Company.)

a complete involuntary stoppage of the mills be brought about by a failure of any one source of motive power. Had it not been for the war, by this time a new main battery of turbines would have been installed, driving a central generating station of such power as to supply electricity for the entire electrical drive of the whole mills, but it is only a matter of time before this new power scheme is completed. Near to the present power houses are the buildings in which are a series of large Lancashire boilers for the provision of steam for process purposes.

The textile machinery throughout the mills is of the most modern variety and by the best makers only, as the directors realize that only plant of the most improved type can be depended upon for the production of goods of superior quality. The company claims that its products are "long life wool wear," and it certainly is entitled to do so, as it insists on manufacturing from only the best quality of wool, which is made up by the finest type of machinery known to the trade. The procuring of the wool for these manufactures is, of course, a factor of extreme importance. The raw material, wool of all qualities to the finest merino, comes not only from every part of India, as we know it, but also from the Hill States of the Himalayas, Sikkim, Thibet, Bhutan, Bikanir, Australia, Africa, the British Isles, and even Baghdad.

Strolling through these busy mills, where upwards of 2,500 hands are employed, one sees a splendid variety of beautifully made cloth and other goods, and some of these may now be referred to. Cricketing flannels and tennis worsteds have a great reputation throughout India, and they are particularly recommended by the company on account of their good wearing qualities. Costume flannels, tweeds and worsteds are designed from materials specially suited to the Indian climate. "Dhariwal" overcoat and uniform cloths are in great demand for regimental purposes, being strong and of splendid texture, and made in a variety of colours. Special attention is directed to the company's famous pure-wool Egerton tweeds in smart designs and colours and to "Dhariwal" *puttoos*, which are excellent materials for *shikar* clothing and garments which may be called upon to withstand heavy wear and tear. Flannels for shirtings, blouses, pyjama-suits, negligé shirts and children's clothing are extremely soft in texture, and are produced in a variety of subdued shades. There is a splendid assortment of super-fine travelling rugs made from pure merino wool, and these are supplied in artistic patterns in large or small checks. Army, ordinary bed, grey sepoy and coolie blankets are made in sizes ranging from 76 by 60 in. to 96 by 72 in., and *lohis*, or Indian shawls, are made in plain white, natural grey, and various pleasing colours. Turning to the hosiery department one notices jerseys, Cardigan jackets, sweaters, coat-sweaters, motor scarves, opera-wraps, motor and golf coats, also all types of socks, stockings, and mittens. The majority of these articles may be made according to measurements supplied, and every assistance is given to intending purchasers in order that complete satisfaction may be assured.

Military requirements have for four and a half years caused ceaseless activity in the mills to the total exclusion of other work, but notwithstanding the extraordinary pressure, the company maintained a constant standard of quality throughout. It will be of interest to give some particulars of the principal supplies made by the mills to the Indian army from the commencement of the war to the signing of the armistice on the 11th November, 1918: Thick woollen cloth for great-coats, warm British coats including garments made up at the mills, 2,339,664 yards; serge and other cloth for trousers, tunics and other articles, 1,399,483 yards; warm flannel for shirts, 2,154,669 yards; socks, 1,596,790 pairs; putties, 868,428 pairs; mittens, 611,190 pairs; 291,989 blankets and yarn for blankets; and 451 370 jerseys.

In addition to the above, substantial supplies were made of other woollen necessaries such as comforters, and Balaclava caps. It should also be stated that these huge quantities were supplied to the Government at practically pre-war prices, the company giving Government the full benefit of the reduction in working costs which resulted from the plant being employed day and night. The consequent saving to the Government has been estimated at well over a crore of rupees (£666,666 13s. 4d.). The mills would have been able to do considerably more for Government but for the difficulty experienced in securing and training the men necessary to run the complete plant day and night, a difficulty naturally increased by the active recruiting campaign conducted in the district.

Every article offered for sale by the company, either direct from the mills or from the retail branches in Calcutta, Bombay, Delhi, Lahore and Amritsar, is manufactured on the premises at Dhariwal, and price lists and samples may be obtained from headquarters or from the *depôts* in the cities above mentioned. With the exception of the raw material, the mills are entirely self-contained as far as the manufacture of finished wool products is concerned. There are departments for everything, from the picking of the wool on arrival, to the baling of the finished goods prior to despatch. Carding, combing, spinning, weaving, dyeing, shrinking of cloth, each has its own department, its highly-skilled artisans and its European overseers. In the workshops, replete with the most modern machine-tools, not only are all repairs carried out most expeditiously, but even the manufacture of new machinery, and of time and labour-saving devices, is undertaken.

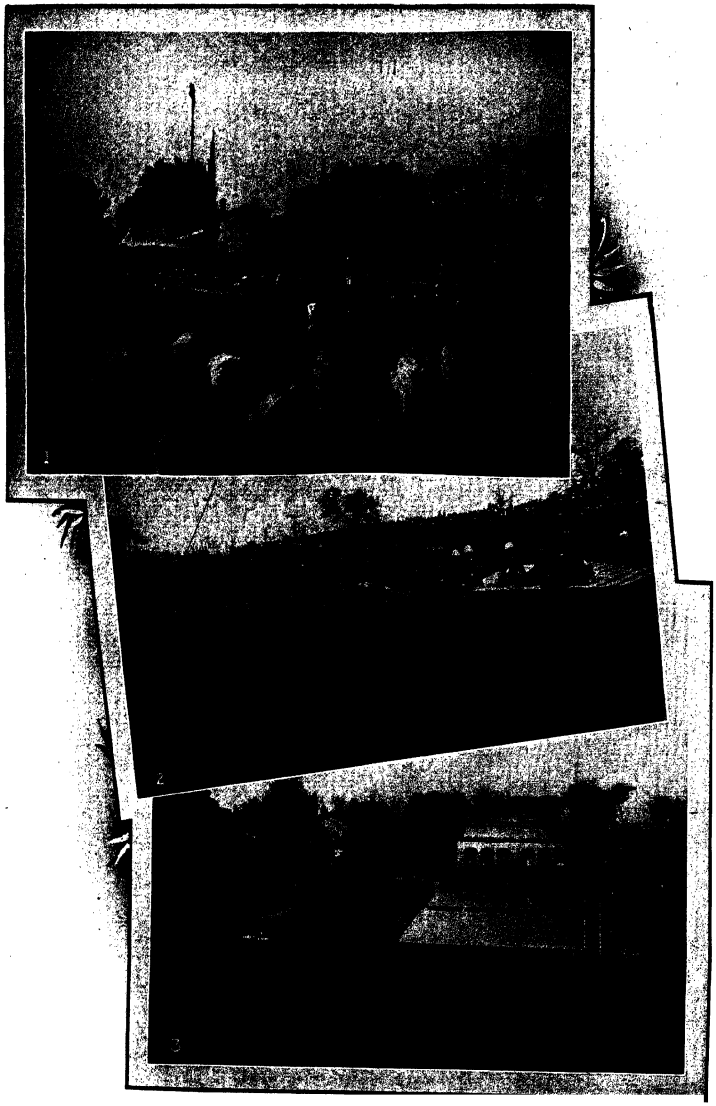
As has already been stated, the mills give employment to upwards of 2,500 Indians—men, women, and children, and the housing of these people with their dependants is really an important undertaking in itself. Building work is continually going on, being carried out by the company's artisans under the direction of the mill engineers, and in order to meet the demand for the requisite material the company has been obliged to open its own brickfields, which are replete with modern plant. It is the company's boast that every one of its employees can be properly housed in modern, sanitary quarters.

The large model village consists of thirty-two lines of from twenty to sixty dwellings, each with its own enclosed forecourt; and each line of dwellings is provided with a more than adequate number of wells, thus ensuring an ample supply of absolutely pure water. Sanitation is one of the things which has been most carefully attended to by the company, with the result that all arrangements are thoroughly modern in character and leave absolutely nothing to be desired. Special quarters have been provided for the Indian clerks and foremen, for whose benefit a club has also been instituted, where they may gather for social, recreative, and instructional purposes.

There is, of course, a school for the children of all the Dhariwal workers. This is the "Milne Memorial School," a well-equipped thoroughly modern institution controlled by a staff of certificated

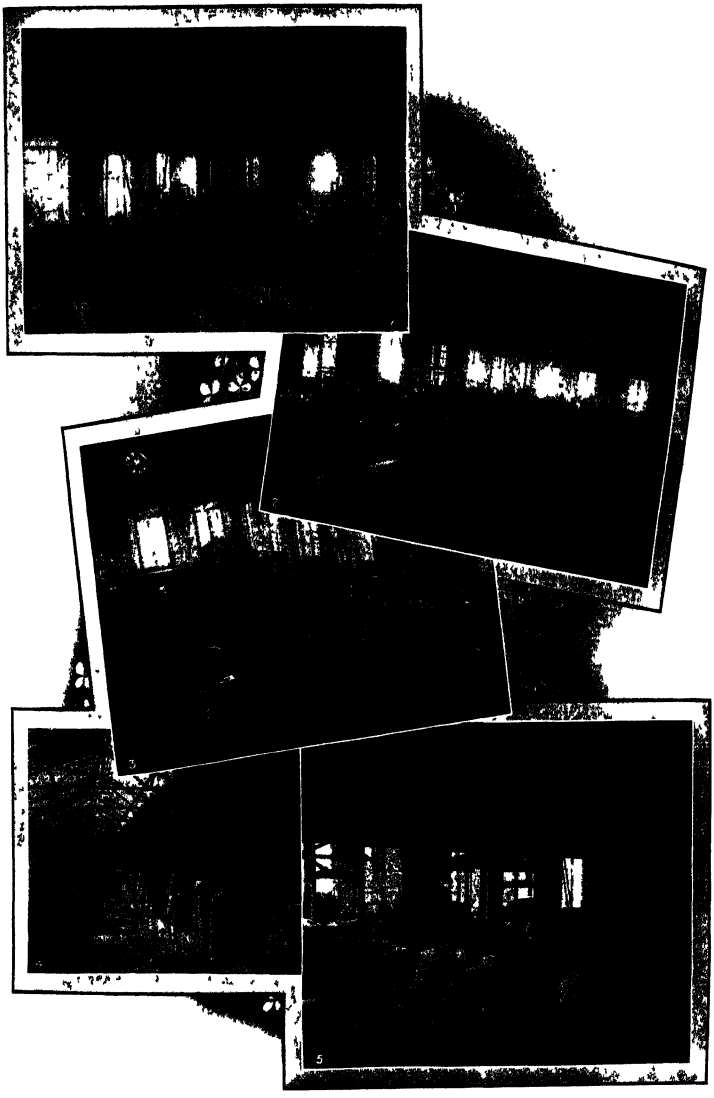
THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD.

1. View of Main Turbine House and Tail Race. 2. The Main Boiler Houses. 3. Another View of the Dye House.
4. Main Turbine House and Head Race. 5. One of the Company's Private Waterways.



THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD.

1. The Annual Sports: Wrestling. 2. Annual Sports: A Keen Contest. 3. A Tennis Afternoon at Egerton Club.



THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD

1 A Corner of the Workshops, 2 Partial View of the Hosiery Department 3 Another Corner of the Hosiery Department
4 Yarn Store 5 Packing Department, Showing Bales and Baling Presses

THE NEW EGERTON WOOLLEN MILLS COMPANY, LTD

1 Wool Sorting 2 Worsted Spinning 3 Part of Woollen Spinning Department. 4 Corner of a Worsted Card Room
5 A Corner of the Dye House

teachers under the auspices of the local American Mission.

The Dhariwal Co-operative Credit Society is another institution inaugurated by the company for the benefit of all classes of its workers, and this Society occupies nine large shops, situated opposite the main gate of the mills. The benefits conferred are very real, as all through the times of high prices, occasioned by the war, the Dhariwal workers have been able to purchase more for the rupee here than was possible in any bazaar in India, this only being possible by reason of the enormous dealings of a society having to cater for several thousands of consumers. Furthermore, at the end of each financial year the profits on the year's working are distributed among the members in the form of dividends.

Sport among the employees of the mills is greatly encouraged by the company, and in order to foster this spirit, two days annually are set aside for an enormous sports meeting, in which all are encouraged to take part. Some really fine displays of strength and skill are to be witnessed, more especially among the wrestlers, and keen contests take place for the prizes given by the company.

Before concluding, a word should be added concerning the European staff. In normal times there are some twenty-five Europeans, mostly with families, employed by the company. They are housed in well-constructed, modern bungalows, with large fruit and flower gardens, situated, more or less, in a ring round three sides of the mills. There is a special mess for bachelors, though some of these have their own bungalows. The "Egerton Club" is Dhariwal's social centre; it provides an excellent library, music and reading-rooms and billiards, together with customary refreshments. There are also two tennis courts and ground for Badminton.

THE NORTHERN INDIA CARRIAGE AND MOTOR WORKS.

One of the outstanding features of the past half-century is the marvellous ingenuity displayed in the invention or improvement of vehicles capable of conveying passengers or goods at a far greater speed than has ever been recorded in the history of the world. When railway trains and steamships became regular means of communication our forefathers, who had been accustomed to a journey of a week's duration in a mail coach between London and the North, or to a passage of three months between Southampton and the Cape of Good Hope, openly expressed fears regarding the new-fangled methods, and some even went so far as to prophesy disasters of untold magnitude. In spite of all gloomy forebodings, however, continents have been linked together by luxuriously furnished vessels, and railway companies have provided equally satisfactory means of travelling on land.

That period of development has been followed by what may be termed the "motor age," which has caused such a revolution in the industrial world. Then, again, one reads of the wonderful supremacy of the air, a domination which has opened an era of possibilities of so momentous a character that the coming ten or fifteen years will doubtless usher in still more marvellous changes.

India has followed in the wake of Western countries—although at a comparatively slower rate—in the adoption of some of these facilities for accelerated travelling and in improved methods of generating power for its mills and factories, but progress in this direction must of necessity be more tardy as innate conservatism as well as racial and caste prejudices are hindrances which have to be reckoned with.

These notes, however, refer to one of the flourishing motor industries in Northern India, and in this connection it may be interesting to glance at some Government statistics relating to this important subject.

During the official year 1913-14 the imports of motor-cars from England were 1,669 in number, valued at £515,139; the United States of America sent 868 cars, worth £140,211; and 343 cars, priced at £101,016, were received from other countries.

The outbreak of the Great War in August 1914, however, placed British manufacturers at a considerable disadvantage, as their works were to a very large extent monopolized by the Government in turning out military supplies. This restriction opened a wider door for American cars, and the advantages thus offered to the enterprising manufacturers of that country were speedily grasped by them. Thus during the year 1916-17 it is seen that motor-cars from England were only 549 in number, and that their value was given as £179,490; America's contribution was 3,686 cars, valued at £697,229; France sent 89 cars, costing £28,501; Italy 47 cars, worth £25,345; and other countries 16, valued at £3,216. The total importations of these two periods respectively were: 2,880 cars, value £756,366; and 4,387 cars, value £933,781.

These figures prove conclusively that the motor industry is a prominent factor in the economic life of India, and some particulars may now be given of the well-known Northern India Carriage and Motor Works, belonging to Mr. J. S. Evans. The business was commenced in 1897 as a carriage-builder's establishment, but the new order of things which has taken place during the past twenty years has led the proprietor to give special attention to motor-cars and cycles.

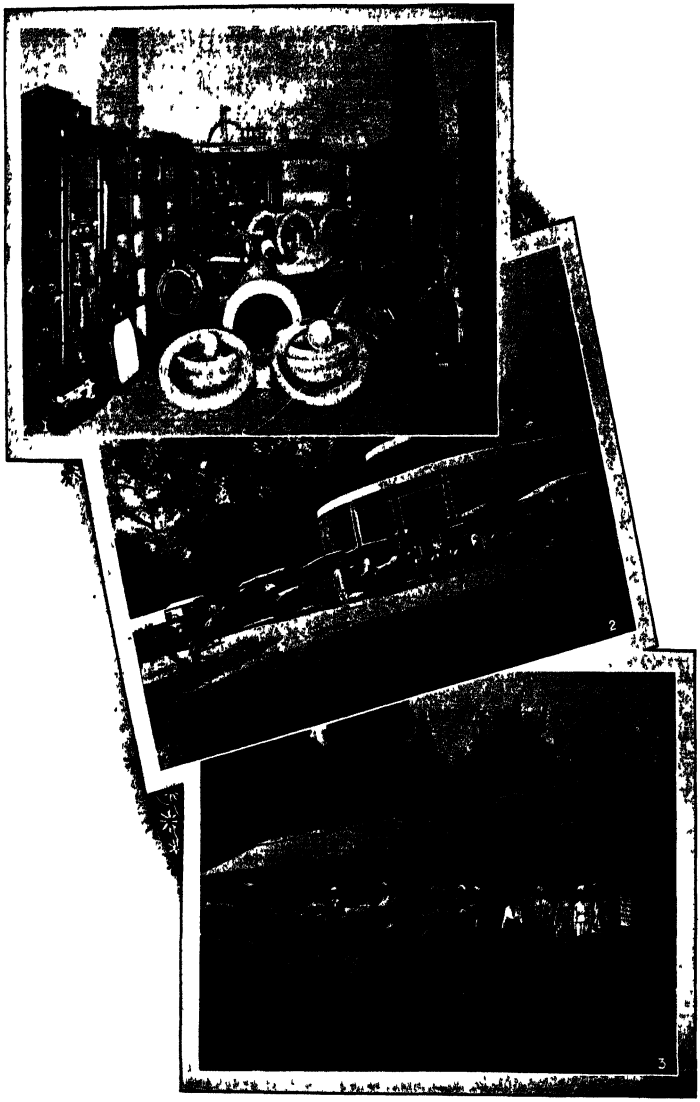
The building of carriages and carts to be drawn by horses has not, however, been discarded, as all descriptions of these vehicles of high-class quality are made and stocked on the premises.

Mr. Evans has a number of motor-cars which are kept for hire, and he is agent for the sale of "Vauxhall," "Overland," "Ford," and "Metallurgique" cars, as well as for "Triumph," "A.J.S.," "Douglas," "Rudge," and other motor cycles supplied by the most reliable makers. He is also agent for the famous "Dunlop" tyres and motor accessories, but at the same time he always has on hand a good assortment of spare parts and requisites, including petrol and oil, suitable for all leading types of cars. A garage, capable of accommodating sixteen cars, has been provided, and competent chauffeurs are sent from the works to drive motors for customers.

A special feature is made of the department in which all kinds of repairs, refurnishing, and painting of cars is carried out by expert European hands, and this work is performed so creditably that vehicles rendered unattractive and practically useless through lengthy service or accidents are turned out so completely transformed that their owners might be excused if they failed to recognize their own property.

The premises, which are situated in Murree Road, Rawalpindi, cover an area of an acre and a half, and the supervision of the whole of the works and of the fifty or more employees is undertaken by Mr. Evans personally. A branch establishment, conducted on entirely the same lines as at headquarters, has been opened at Murree.

The registered telegraphic addresses



NORTHERN INDIA CARRIAGE AND MOTOR WORKS.

1 Showroom, Rawalpindi. 2 Cars at Rawalpindi 3 Garage at Murree.

are: "Motors," Rawalpindi, "Evans," Murree.

THE PINDI AUTOMOBILE COMPANY.

The use of steam as the motive power for the propulsion of trains was looked upon by our forefathers as an experiment fraught with the greatest danger to human life, but as the years passed the antipathy of the people to George Stephenson's invention gradually wore away, and to-day one cannot take up a map of any civilized country in the world without noticing innumerable lines—like the intricate web of a spider—representing various systems of railways which practically link continent with continent

Similar prejudices were manifested against motor vehicles, but the opposition to them was of less duration, and they are now regarded as essentials in commercial as well as private circles. Greater rapidity of transport along roads has been secured than was possible with the horse, which has from time immemorial been the friend, and in some instances the slave, of man. Longer distances can be covered in a given time, and motor-cars and cycles can make light work of a day's journey.

Valuable as motor-cars are upon comparatively level thoroughfares, they are indisputably superior to animals in negotiating the steep ascents, as well as the declivities, which are common in nearly every part of Northern India.

A realization of these facts prompted Mr. Sydney E. Hoop, of Rawalpindi, to establish the Pindi Automobile Company, in June 1918, and although scarcely twelve months have elapsed the business has made wonderful progress, mainly by reason of the personal and prompt attention given to customers by Mr. Hoop, who is sole proprietor. The premises, including new fitting-shops recently erected and placed under the control of a European expert, are most conveniently situated at 103 Edwardes Street, near the railway station, but at the present moment (September 1919) additional accommodation is being provided.

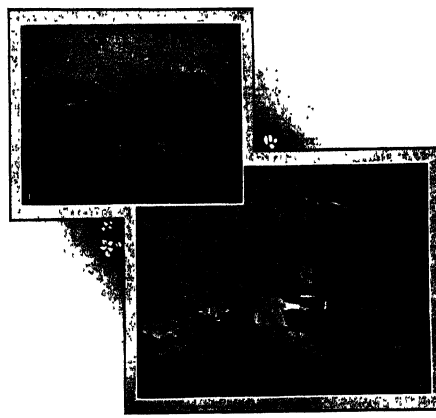
The company are agents for "Buick," "Chambers," "Nash," "Essex," "Maxwell," and "Henderson" cars and motor-cycles, "Goodrich" safety-tread tyres, tubes, and every description of motor accessories, while all kinds of vehicles are bought, sold, exchanged, or are accepted for sale on commission.

Only a few years have elapsed since visitors to the beautiful Valley of Kashmir were compelled to travel by *tonges* over the long and tedious distance between Rawalpindi or Murree and Srinagar, but the above-named company are now prepared to supply comfortable motor-cars, with expert drivers, on receiving prior notice of only a few hours.

All kinds of repairs are carefully effected by efficient workmen, and as all spare parts are constantly kept in stock, there is little delay in returning cars to their owners.

The company are constantly receiving shipments of cars as well as accessories, including lamps, electric bulbs, patches for tyres, repair outfits, mirrors, valve-pins and parts, sparking plugs and wires, cleaning materials, lamp tubing, horns, burners, pumps, mascots, watches, mats, piston rings, valve-springs, spare wheels, radiators, mudguards, tool-boxes, and a miscellaneous assortment of other articles.

The proprietor exercises personal supervision over every detail of work, and replies to letters of enquiry are promptly forwarded.



PINDI AUTOMOBILE COMPANY.

1. Exterior View. 2. Interior.

THE PUNJAB COTTON PRESS COMPANY, LTD., AND THE PIONEER FLOUR MILLS.

The business conducted by the Punjab Cotton Press Company was originally a private partnership concern, but as the turnover continued to increase at a rapid rate a limited liability company was formed in the year 1900 by Mr. Harkishen Lal, B.A., who has been managing director from that date to the end of April 1913, after which date he took up the position of chairman of the company, Mullick Girdharilal, B.A., having been appointed managing agent, a position which he has held to the present time.

The head offices are at Lahore, and cotton-ginning factories have been established at various places, including Kasur, Lyallpur, Toba Tek Singh, Hissar, Sarghoda, Pattoki, Najibabad, Tando Adam (Sind), Meerut, and Sirhind.

The authorized capital is Rs. 10,00,000, divided into 2,000 shares each of Rs. 500, and the amount paid up is Rs. 9,90,500.

The cultivation of cotton is always attended by a good deal of uncertainty as regards results, and the company, with a laudable desire to provide against any curtailment of profits for shareholders owing to the whole or partial failure of crops, decided to establish other industrial concerns in the neighbourhood.

One of these, the Pioneer Flour Mills, was opened at Shahdara, about five miles distant from Lahore, in the year 1903. The property is more than thirty acres in extent, and the premises, substantially built of brick, include the four-storeyed mill, two-storeyed godowns with basement cellars, warehouses, and offices, and the machinery of a modern type, which is

PIONEER FLOUR MILLS.

1. Roller Floor, where Wheat is Milled. 2. Silk Machinery Dressing Flour. 3. General View of Mill.

driven by a steam engine of 350 indicated h.p., is capable of grinding 2,000 maunds of wheat every twenty-four hours.

The principal products of the mill are fine flour, *sooji*, *rawa*, *atta*, and bran, and nearly the whole quantity is disposed of in markets in various parts of the Punjab, although the company are supplying flour, bran, and *atta* under contract with the Government of the Punjab, and are occasionally exporting a few consignments.

The mill is usually kept working day and night throughout the year, and employment is found for about 120 hands.

The company have excellent facilities for receiving or forwarding grain or manufactured products, as a railway siding is connected with the premises and an up-to-date elevator, worked by machinery, effects a wonderful saving of time and labour. An ample supply of water is derived from a number of wells on the property.

The company make their own castings, and all repairs are attended to in the blacksmiths' and other workshops, and electricity, generated by the company's own plant, is used for lighting purposes in all the buildings.

It speaks well for the reputation of the products of the mill that the demand for them is increasing so steadily that further accommodation is being secured by an extension of the buildings.

RAI BAHADUR HARI CHAND.

When Maharaja Ranjit Singh, of Lahore, was in the zenith of his power in the Punjab just prior to the year 1840, the father of Rai Bahadur Hari Chand—who belongs to the family known as Peshawari Kheshtriya, a branch of Dewan Derei Dass family—occupied a very important position in his service. The subject of this sketch settled in Lahore, where he inherited land and household property, but he removed to Multan about the year 1878 and practised as a vakil there for a period of nearly twenty-five years. He was a valuable member of the Punjab Legislative Council, and performed equally meritorious work as a Viceregal *darbari*. He was president and subsequently vice-president of the Municipal Committee of Multan. He was also chairman of the last Hindu Conference of the Punjab. The Rai Bahadur is undoubtedly a clever and methodical man of business, and his capabilities in this direction have resulted in his being appointed a director of several public institutions. Since retiring from legal practice, the Rai Bahadur has done yeoman service in the interests of the public in the capacity of Hon. Extra Assistant Commissioner at Multan.

In marking their sense of appreciation of the assistance given by the Rai Bahadur in various official positions, the Government have made a grant to him of 500 acres of land, and for the great help so cheerfully rendered in the cause of the Allies in the late war His Excellency the Viceroy and Governor-General has awarded him a *sanad*. He has four sons, and the eldest, Vishen Narain, is associating himself with his father in the management of his property and in general commercial transactions.

RAI BAHADUR HARI CHAND.

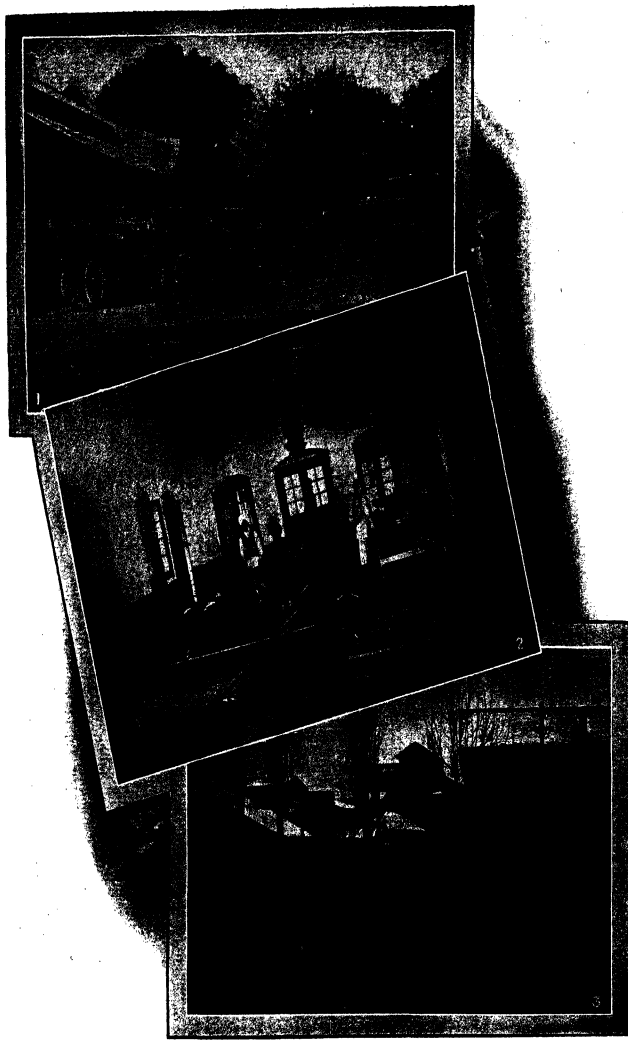
N. D. RADHA KISHEN & SONS.

The extensive undertaking now carried on at Rawalpindi and Srinagar by Messrs. N. D. Radha Kishen & Sons, is the outcome of a general contractor's business, which was established at the first-named place in the year 1840. The major portion of the contracts entered into were obtained from the Public Works department of the Punjab Government, and in course of time the concern had grown to such an extent that a branch was in 1887 opened at Srinagar, the capital of the State of Kashmir.

The firm are now described as engineers, Government and army contractors, iron and brass founders, and iron, hardware, and timber merchants, while they are also proprietors of the Kashmir Motor-Car Service.

They have extensive workshops at Rawalpindi, which are equipped with machinery for carrying out engineering work of all kinds, and smaller ones at Srinagar, where repairs of a minor character are attended to. Large stocks of engineers' requirements and general hardware goods are kept on hand, but greatly increased business activities, especially in the past few years, have compelled the firm to commence considerable extensions of the premises, and to make arrangements for the fixing of a quantity of new machinery.

Messrs. Radha Kishen & Sons are, at the present time, chiefly interested in contracts for construction and other work for the Government of India, the Public



N. D. RADHA KISHEN AND SONS.

1. Motor Garage, Rawalpindi. 2. Engineering Workshops. 3. General View, Srinagar Premises.

Works department of the Punjab, and the military authorities, one of the most notable structures built by them being the fine Technical Institute at Srinagar. They are also agents for the exportation of various Kashmir products, including ash, walnut, and other timber, together with *pashmina*, *puttoo*, and *loi* goods, these being woollen fabrics of various qualities and patterns somewhat similar to English tweeds, homespuns, and blankets.

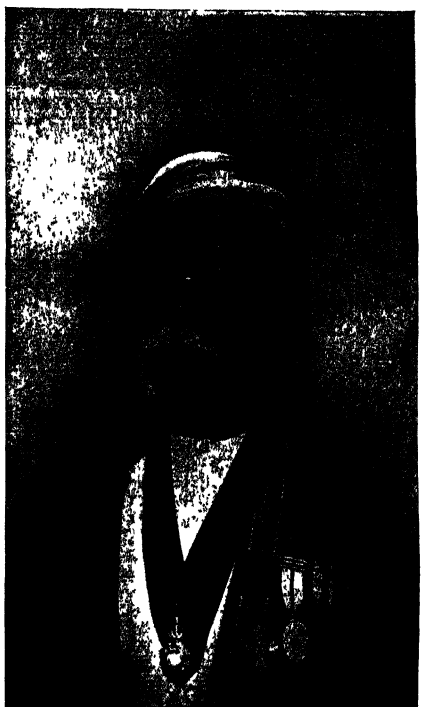
The connection of the firm with the motor industry has come about by a natural process of development and the determination of the partners to be abreast of the times in providing up-to-date means of travelling. The firm have twenty-five cars running regularly between Rawalpindi and Srinagar and on other routes, but they are always prepared to book advance orders on behalf of persons who may wish to travel either to or from the railway station at the first-named place. Their motor garage at Srinagar has accommodation for twenty-five cars.

Further than this, Messrs Radha Kishen & Sons have more than a hundred bullock-carts for the transport of all kinds of goods, an important contract in this department being one for carrying silk from Kashmir to Rawalpindi

The honoured position held by this firm is amply demonstrated by the fact of their being entrusted with Government and other contracts, but they have, in addition, received numerous eulogistic testimonials from notable personages, including Lord Hardinge, the late Viceroy, who was supplied by them with *tongas*, *ekkas*, and bullock-carts.

The head of the firm is Lala Radha Kishen Sethi, A. R. Sethi, C.E , is in charge of the Rawalpindi works, and Dholan Shah Sethi acts in a similar capacity at Srinagar. About two hundred hands are employed, one-fourth of whom are in Kashmir.

The telegraphic address is " Fairness," Rawalpindi.



RAI BAHADUR LALA SHEO PARSHAD, C.I.E., O.B.E., RAIS OF DELHI.

RAI BAHADUR LALA SHEO PARSHAD, C.I.E., O.B.E.

One of the largest and wealthiest Hindu *joint* families in Upper India is that known as " Chhunna Mal Wale," thus designated in honour of an illustrious ancestor named Rai Chhunna Mal Saheb.

Rai Bahadur Lala Sheo Parshad, C.I.E., O.B.E., the present head of that family, is an elderly gentleman of striking personality, highly esteemed by all who come in contact with him by reason of his transparent honesty of character, and his gentle and unassuming manners. His predecessors have been noted for their great benevolence, and the Rai Bahadur has certainly inherited a large share of their extremely generous natures, seeing that he has erected and supports many buildings in and near Delhi which are devoted to charitable purposes, he spends a considerable sum of money in providing daily food for the hungry poor, and his purse is ever open to render assistance to any public institution, or in furtherance of any cause or proposal which has for its object the uplifting of the people.

The leading officials of the Government of India have had abundant opportunities of satisfying themselves as to the thorough loyalty and devotion of the Rai Bahadur to the British Throne, and these traits were especially manifested during the late war by many valuable donations to various relief and other funds, but he outstripped himself when, in answer to an appeal made by Lady Chelmsford, the

Vicereine of India, he gladly granted "Rothney Castle" for the use of lady clerks and typists employed in Government offices in order to set men free for active service, this building, by the way, being the largest in the Simla Hill States with the exception of Viceregal Lodge.

In business circles, too, the Rai Bahadur is very greatly respected, and his firm, known as Messrs. Chhunna Mal Salag Ram, is one of the oldest in Delhi, having been transferred from Lahore to the present capital when it was called Shahjehanabad, after the Emperor Shahjehan. He has also for the past eighteen years or thereabouts been managing director of the Delhi Cloth and General Mills Company, Ltd., while in educational matters, in which he is an enthusiast, he is the main supporter of the Anglo-Sanskrit Victoria Jubilee High School at Delhi, holding office as president of the board of management.

This gentleman's father, Rai Bahadur Lal Umrao Singh Saheb, late Hon. Magistrate and Municipal Commissioner, was an intense admirer of the beautiful in art as well as nature, and he was one of the first to welcome the application of advanced scientific principles to the skill of artizans in Delhi.

He himself was no novice in engineering, as he constructed a small railway and worked it on his own property, and he connected his private residence with those of his immediate friends by the installation of telephonic and telegraphic wires.

The title of Rai Bahadur was conferred upon Lala Sheo Parshad in 1897 at the coronation of the King-Emperor George V.; in 1911 he was made a Commander of the Indian Empire; and on the occasion of the King-Emperor's birthday in 1918 the honour of O.B.E. was conferred upon him.

RAI BAHADUR MELA RAM'S SONS.

The Mela Ram cotton-spinning mills, situated in Mela Ram Road, Lahore, were opened in the year 1897 by Sir Dennis Fitzpatrick, K.C.S.I., then Lieutenant-Governor of the Province of the Punjab. The mills—which are confined to spinning only—are equipped with 6,400 mule and 6,848 "ring" spindles, and they have an average annual output of about 4,680 bales.

Cotton is grown in nearly every part of the Province, and the area of land under this crop has increased considerably since complete systems of irrigation have brought the soil into a state of greater fertility. The kind usually cultivated is known in the trade by the name of "Bengals," which belongs to the short-stapled variety.

The Hon. Rai Bahadur Ram Saran Das, C.I.E., is the sole proprietor of the mills.

The firm of Rai Bahadur Mela Ram's Sons are general contractors, owners of mills and house property, and merchants; their London agents are Messrs. John Batt & Co., Ltd.

The telegraphic address of the firm is "Melaram," Lahore.

RAI SAHIB M. GULAB SINGH & SONS.

More than forty years ago there was in one of the vernacular schools in Lahore a young teacher named Munshi Gulab Singh, who was indefatigable in his efforts to impart sound instruction to those under his care, and his observations leading him to the opinion that the text-books then in use were not altogether suitable for the scholars, he devoted his leisure hours to the compilation of others, which, upon publication, gained the hearty approbation of the Department of Education of the Government of the Punjab. This was the commencement of a career which, in the course of time, resulted in the building up of the colossal undertaking now conducted by Messrs. M. Gulab Singh & Sons, at Lahore and in other parts of India, as Government printers, chromo-lithographers, type founders, publishers, booksellers, bookbinders, and stationers.

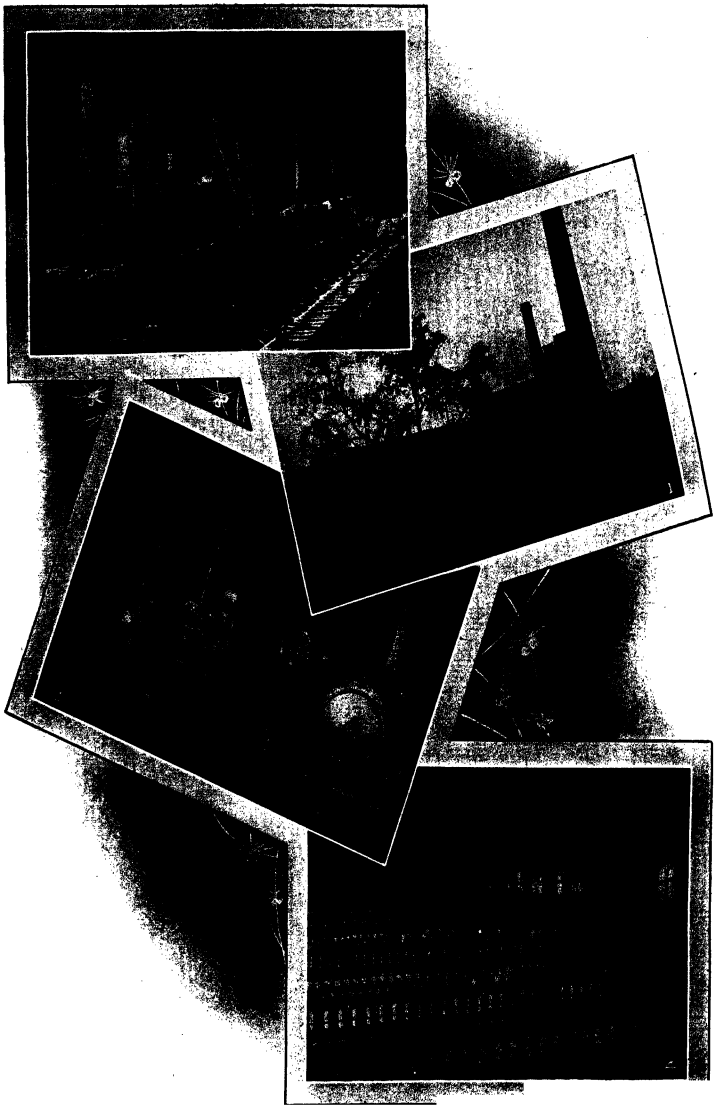
Gulab Singh persevered with the issue of his books while retaining his teachership, but the demand for them increased to such an extent that in 1873 he relinquished his scholastic work and erected a printing press, equipping it with all necessary machinery and plant, and from that date he became his own publisher also. The first real test of the capabilities of the new venture was made in 1880, when the proprietor was required to print a large number of forms for the census of the Punjab for that year, and the manner in which the work was completed gave the greatest satisfaction to Sir Denzil C. J. Ibbetson, K.C.S.I., then Census Superintendent, and subsequently Lieutenant-Governor of the Punjab.

Six years later Gulab Singh was entrusted with the printing and distribution of all books, maps, and diagrams issued under the authority of the Director of Public Instruction in the Punjab. This huge undertaking necessitated an enlargement of buildings, the importation of chromolithographic plant, and the employment of workmen skilled in artistic printing. A special publishing department also became necessary in order that the circulation of so large a quantity of productions might be carried out with efficiency and despatch. During the fulfilment of this contract arrangements had also to be made for a regular issue of those school books which Gulab Singh was constantly preparing for publication, but not for once did the "Mufid-i-Am" Press, as the works were called, fail to complete any engagement into which it had entered.

The greatest compliment was paid to the "Press" in 1907, when the Government of India accepted a tender for the printing of all standard forms used in its various departments. Greatly increased accommodation, as well as machinery, became an absolute necessity. Calcutta was, at that time, the capital of India and the seat of Government, and therefore it was decided that additional works of a modern character, fitted with thoroughly up-to-date machinery, should be constructed as quickly as possible in that city. A suitable site was obtained on Lower Circular Road, and the new building, fully equipped with specially selected plant imported from England, the United States of America, and Germany, was ready for occupation in October of the same year. Printing was commenced a couple of months later in order that a good supply of stock forms should be in readiness in the following April, from which date the terms of the contract were to take effect.

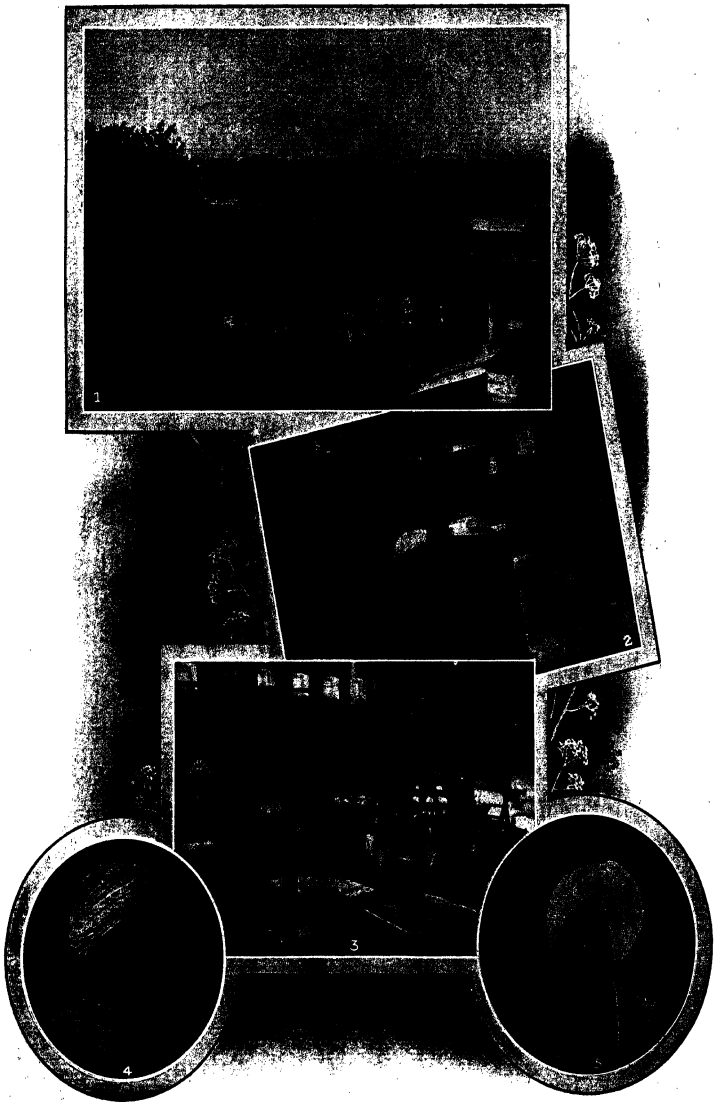
These premises were purposely designed for the carrying out of this stupendous order, and in addition, extensive workshops have been provided in which all descriptions of refitting or repairing work can be executed at the shortest possible notice.

The Lahore works cover an area of about three acres, and they comprise machine and compositors' rooms, and a separate department under European supervision for bookbinding, drawing and artists' work, and lithography, together with large godowns for the storage of paper and blocks, in addition to other premises usually found in large concerns of this character. Renewals of type are supplied by the foundry in which castings are made, and all kinds of repairs,



MELA RAM COTTON MILLS.

1. Exterior View. 2. Card Room. 3. Engine Room. 4. Spinning Room.



RAI SAHIB M. GULAB SINGH AND SONS.

1. Exterior View. 2. A Corner of the Showroom. 3. Portion of Rotary Litho Machine.
4. Rai Sahib M. Gulab Singh, the Founder. 5. Rai Sahib Mohan Lall, Present Proprietor.

whether to buildings or internal fittings, are executed in the workshops by thoroughly skilled artisans. The machinery and plants include two steam engines of 20 h.p. and 10 h.p. respectively, a monotype, double super royal machines (the maximum size of sheet to be printed being 44 inches by 29 inches), the latest patterns of rotary machines, 13 litho machines of various sizes, 4 quadruple crown rotary machines, an aluminium dye-stamper, 12 letterpress machines, wire-stitching and cutting machines of different sizes, ink-grinding and knife and blade sharpening machines, a stone planing machine, and many others. Lithographic work is done upon stone and aluminium plates, and the three-colour process is carried out in the most artistic manner, while every description of bookbinding is turned out in faultless style by experienced hands.

The book-selling department compriscs a great variety of volumes, chiefly of an educational character, printed in type, or in manuscript, in ten languages, among which Oriental tongues predominate.

Large contracts for all classes of printing have been entered into with several Government departments, and trading connections have been established throughout India—in fact, in all important centres, from Afghanistan in the north to Ceylon in the south—while publications issued from the press are well known in nearly every part of the world.

Rai Sahib Gulab Singh died in 1898, when the management of the concern devolved upon his eldest son, Rai Bahadur Mohan Lal, who was subsequently joined in partnership by his brother Lala Lal Chand, the former retaining control at Lahore and the latter at Calcutta.

Messrs. Gulab Singh & Sons employ about five hundred hands at Lahore, while they have also a large staff of *katabs* or vernacular writers.

It may be mentioned that the firm have been awarded the highest possible distinctions for books, maps, and other scholastic requirements, at the two most recent Industrial Exhibitions in the Punjab.

Rai Bahadur Mohan Lal manifests a keen interest in local affairs in Lahore, being a member of the principal boards of control, and the firm are joint owners of a large number of business and private houses in that city.

S. RATTAN SINGH, HAKIM SINGH.

Very extensive business operations in the timber trade in northern India are carried on by the well-known and highly-respected firm of S. Rattan Singh, Hakim Singh, who have descended from an ancient and honoured Khatri family who lived in the Punjab about the beginning of the nineteenth century. Those ancestors occupied responsible positions in the Government of the Province, and they also exercised very considerable influence in social circles over others of the same caste as themselves; but about the year 1840, when the Punjab was plunged into the greatest confusion owing to invasions from without and revolts within its borders, they migrated to the State of Kashmir, where the stern rule of the Maharaja Gulab Singh, a Dogra Rajput, had succeeded in evolving order out of chaos.

It is unfortunate that authentic records of the lives of many of those who acquitted themselves most creditably in the service of His Highness the Maharaja cannot now be traced, but one can refer in definite terms to Sardar Jai Singh, the father of Sardar Rattan Singh.

The former gentleman became head of the forest administration in Kashmir, and it may be remarked that as this was the chief revenue-producing department in the State, the occupant of so responsible a position was naturally regarded as a prominent member among the advisers of the Maharaja.

Sardar Jai Singh was a man of great integrity and of deeply-rooted religious feelings, and while still in the service of the State, although advanced in years, he expressed a desire that his son, Sardar Rattan Singh, who had manifested an aptitude for a commercial career, should have an opportunity of carving out a career for himself.

Under the skilful guidance of his father, Sardar Rattan Singh shortly afterwards made a start in the timber trade, and the venture, small though it was, has developed into the huge undertaking now carried on by Messrs. Sardar Rattan Singh, Hakim Singh, at their headquarters at Wazirabad, in the Lahore division of the Punjab, and at branches at Sialkot, Jhelum, Lahore, and elsewhere in Jammu and Kashmir.

There was very little commercial activity, and particularly in connection with timber, in the Punjab at the time of the establishment of this business, and therefore Sardar Rattan Singh can fairly be described as a pioneer in industrial matters in northern India.

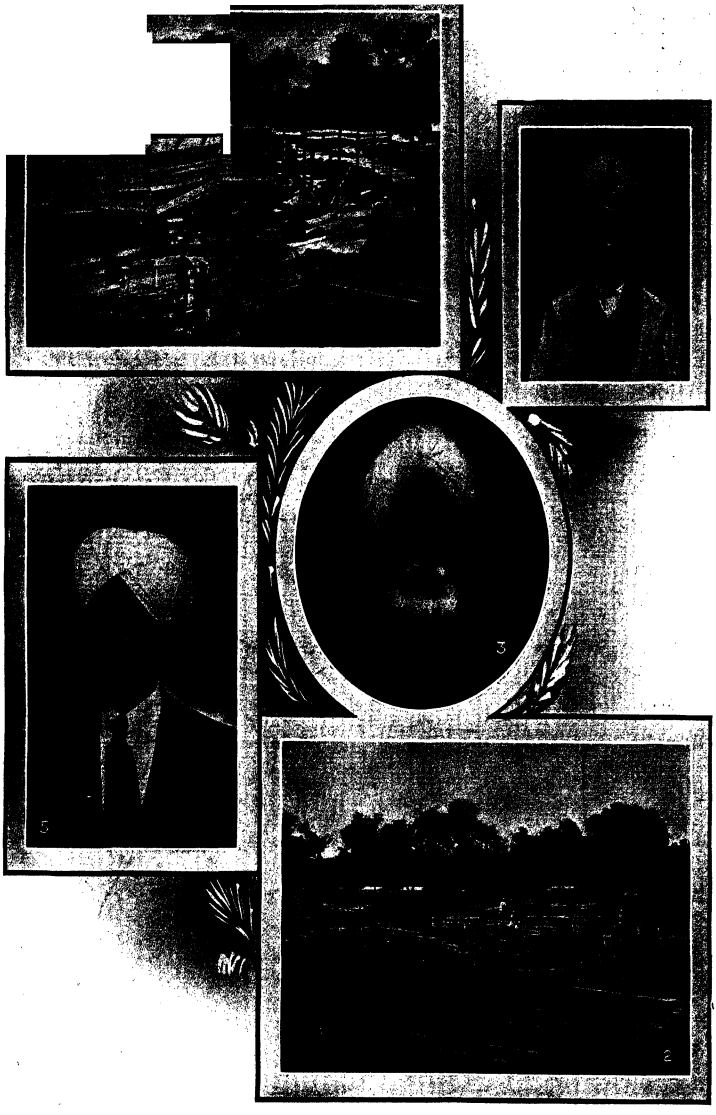
The proprietor insisted from the very first that all transactions should be based upon strictly honourable principles, and this upright method of dealing with customers caused the business to grow so rapidly and attain such dimensions that Sardar Rattan Singh admitted his son, Sardar Hakim Singh, as manager of the whole concern.

Sardar Rattan Singh had proved himself to be a man of enterprising spirit coupled with the rarer gift of foresight, but the son's application to his work showed that he had inherited all the high qualifications possessed by his father, and in addition to this his advantage in years enabled him to throw a tremendous amount of energy into the business. Inspired by the ambition of youth he set himself the task of securing a monopoly in northern India, if not of the whole country, in connection with the exploitation of forests and trading in all kinds of timber. He thereupon extended his activities to the forests of Dehra Dun, Kashmir, Bhadarwah, the Native State of Poonch, and other areas, and he was so singularly successful in his efforts that his negotiations with the Nepal Government resulted in his securing a contract for working the forests in that State which had hitherto been quite inaccessible to Indian traders. This work was carried on for a few years, when circumstances arose which rendered it advisable that the proprietor should confine his attention to other fields of activity which had been opened up by him.

Exceedingly large areas of timber trees had been taken in hand in Kashmir, and the work of extraction has been proceeded with throughout the year under the capable supervision of Sardar Hakim Singh, who pays occasional visits to his undertakings in the Punjab.

Such vast responsibilities as these, resting upon one who was advancing in years, caused the Sardar to place a large share of the management in the hands of his eldest son, Sardar Kartar Singh, who has been gradually relieving his father of the control of the most important matters in the business.

The chief offices are at Wazirabad, where Sardar Kartar Singh supervises a large clerical staff of Indians who are experienced in the timber trade, and he has gained a great reputation in business circles for the excellent manner in which he performs his arduous duties. He has



S. RATTAN SINGH HAKIM SINGH.

1. Timber Sawing Department. 2. Timber Awaiting Dispatch. 3. Sardar Rattan Singh. 4. Sardar Hakim Singh.
5. Sardar Kartar Singh.

imbibed a number of Western ideas which tend to secure discipline among employees, regularity and promptitude in dealing with orders, and his desire to control the undertaking according to modern views is evidenced by the fact that two European officers—experts in forestry —are employed on the staff.

Sardar Hakim Singh has always acted in business on the principle of "no risk, no gain," and therefore he has devoted himself entirely to wholesale transactions, such as contracts with the North-Western and the Oudh and Rohilkhand Railway Companies for the supply of timber for sleepers, bridges, and other constructional requirements.

Since the outbreak of the Great War the firm have delivered many hundreds of thousands of cubic feet of timber to munition boards in India, through whom it has been sent for regimental purposes to various countries, and they have quite recently executed several other large contracts in a manner which has gained the highest praise from Government authorities.

The firm now hold leases of nearly all the forests in Kashmir, and they are greatly extending similar areas in the Punjab, while at the same time their personal reputation for financial stability and honourable dealings is unassailable.

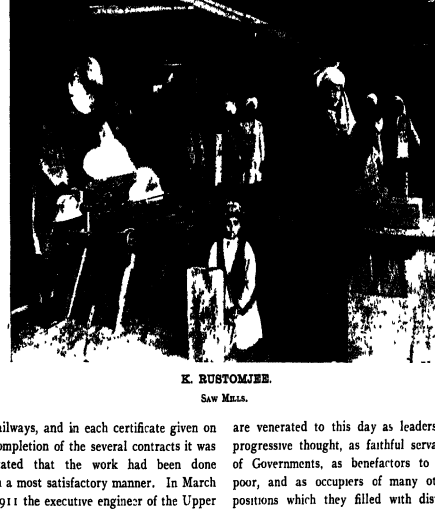
K. RUSTOMJEE.

When one hears a man described as a contractor it is generally understood that he is an individual who is prepared to furnish estimates for and carry out almost any kind of work that may be required. That is a correct designation of Mr. K. Rustomjee, of Lahore, who commenced business in that city in the year 1896.

Some of the most important undertakings in which he has been engaged have been connected with the construction of railways, and in this particular line, of which he makes a special feature, he has met with unvarying success and has gained enviable commendation from those who have entrusted him with contracts.

Only three years after the business had been started the resident engineer of the Southern Punjab Railway certified that Mr. Rustomjee had been employed by him in earth-works, pitching on bridges, burning bricks and lime, and in carrying out masonry work on buildings and on five spans of a 40-feet girder bridge, and that he had given complete satisfaction in the performance of his duties. Similar praise was accorded in July 1899 for masonry work, the sinking of wells, iron and woodwork, and other matters on the Government estate at Kumaun in the United Provinces. Prompt and careful cartage of materials is always expected of, but not in every instance given, by contractors, but Mr. Rustomjee earned high praise between the years 1904–8 for transporting machinery, bridge plant, and permanent-way material, including rails and sleepers, for the construction of the Jesh-Doab and the Lodhran-Khanewal railways, and in each certificate given on completion of the several contracts it was stated that the work had been done in a most satisfactory manner. In March 1911 the executive engineer of the Upper Chenab Canal stated that this gentleman had supplied about 70,000 feet of Kander lime and 12 lakhs of bricks, had manufactured ballast, and had built a notched fall, a difficult piece of work, and that perfect satisfaction had been given.

The above is not a tithe of what could be written of Mr. Rustomjee's successful undertakings, and it need only be added that his workshop employees are now labouring from early morning to late at night in order to cope with the greatly increased demands made upon them. The machinery in the works, which is driven by electricity, is of an up-to-date character, especially the circular saws in the timber mill, which were supplied by Messrs. Duncan Stratton & Co.



K. RUSTOMJEE.
Saw Mills.

SARDARS SOHAN SINGH AND MOHAN SINGH.

There is a very considerable amount of warrantable pride manifested by a number of native races in India on account of their long genealogical records, which contain the names of men who in the course of centuries became famous as warriors, were prominent as historians, poets and scientists, or who are venerated to this day as leaders of progressive thought, as faithful servants of Governments, as benefactors to the poor, and as occupiers of many other positions which they filled with distinguished ability.

This "warrantable pride" is a heritage among the Sikhs of Northern India, and among their numerous families who have won fame and honour in various rôles it would not be an easy matter to point to one more justly renowned than that of which Sardars Sohan Singh and Mohan Singh, of Rawalpindi, are members.

Their ancestry dates from a very remote period, but it can be clearly traced from about the middle of the eighteenth century, to a Khukran family of repute, at the head of which was Sardar Sadhu Singh, a well-known *Rais* at Rawalpindi,

who about the year 1766 was appointed by Sirdar Milkha Singh, a Governor of the Sikh Raj, as *Rasad Rasan*, or supplier of rations, to the Sikh troops. He died in 1798, and was succeeded by Sardar Budha Singh, who was selected by the above-named Governor as *Kardar*, or collector of revenue. During his tenure of this office he rendered most efficient service to General Ventura (under orders from Maharaja Ranjit a free gift, while the remainder was to be regarded as only a grant for life. Sardar Nand Singh constructed a number of public buildings in Rawalpindi, as well as a large *serai* at Sang Jani.

His son, Sárdar Soojan Singh, undertook and successfully completed several Government contracts during the early years of British occupation, for important works in the cantonments and civil station at Rawalpindi, and for his assistance in this direction His Honour the Lieutenant-Governor of the Punjab conferred upon him a *Khilat* of Rs. 1,500. He was also the recipient of several testimonials from civil and military officers eulogizing his public-spirited character. For some time previous to his death in 1875 he had had a strong co-adjutor in the person of his brother, Sardar Karpal Singh, the youngest of Sardar Budha's six sons, among whom their late father's estate had been divided. Sardar Karpal Singh, with the help of his nephew, Sardar Soojan Singh, served the Government by supplying stores and transport during the years following the Mutiny, particularly in connection with the Kabul campaign in 1879, and for the valuable assistance thus given the title of "Sirdar" was bestowed upon him in 1888, and he was made a "Rai Bahadur" in the following year. He was, further, presented with two gold watches, engraved in a suitable manner, in recognition of his excellent work. As an honorary magistrate and president of the Rawalpindi Municipal Committee, he won the respect and confidence of all with whom he came in contact. The scheme for supplying water for that city was initiated by him, and he also provided the necessary funds, without interest, for carrying out the project.

Sardar Karpal Singh passed away in 1894, leaving a daughter surviving him, while the family traditions were carried on by Sardar Soojan Singh, who followed in the footsteps of his father and uncle and quickly gained a high social position. His thorough support of the British Government was manifested by the expeditious and satisfactory manner in which he conducted the supply of grain, fuel, fodder and other necessaries for the second Afghan war, the duties frequently involving the display of considerable courage in the face of well-nigh insuper-

SARDARS SOHAN SINGH AND MOHAN SINGH.

1. Staff Group. 2. Palace (Shadi Ghar). 3. Temples (Raghunath Mandir)

Singh) in the assessment of land revenue, and he was rewarded by the grant of a share in certain octroi duties. Upon his death in 1841, one of his sons, Sardar Nand Singh, became connected in business matters with Diwan Kishan Kour. In 1853 he assisted the British in the capture of Nadir Khan, a leading rebel in the district of Rawalpindi, and during the succeeding years up to and including 1857—the year of the Sepoy Mutiny—he furnished accurate information of a valuable character to the Government regarding the attitude of Indian troops in a number of cantonments. For this help he was awarded a perpetual *jagir* of village *Misriot*, and the whole village of Katariav, one-half of which was

SARDARS SOHAN SINGH AND MOHAN SINGH.

1. Sirdar Nand Singh. 2. Rai Bahadur Sirdar Sujan Singh. 3. Sirdar Hardit Singh. 4. Sirdars Sohan Singh and Mohan Singh.
5. Group of Children.

able difficulties. He also performed similar services with expeditions to the Black Mountain and Miranzai, as well as with the Malakand Field Force, for which he received the titles of "Sirdar" and "Rai Bahadur." He held the high positions of provincial durbari, honorary magistrate, civil sub-judge, and vice-president of the Rawalpindi municipality.

Memorials of his noble-minded generosity are seen to-day in the fine Lansdowne Institute and the public market in the same city. The whole of his possessions fell to his son, Sardar Hardit Singh, on his lamented death in 1901.

The latter inherited the conspicuous ability and the charitable disposition of his predecessors, and by the faithful discharge of his duties as a private citizen, as honorary magistrate and municipal commissioner, he gained the esteem of a very large circle of friends and acquaintances, who deeply mourned his death in 1916. He left behind him two sons, Sardar Sohan Singh and Sardar Mohan Singh, whose names appear at the head of these notes.

Sardar Sohan Singh, born in 1874, was educated at the Aitchison College, Lahore, and, after taking possession of his vast estates, he began to devote much of his time and to contribute liberally to deserving charitable institutions in Rawalpindi, and further to give hearty support in the furtherance of the material and social welfare of the inhabitants. His generosity is unbounded, and in conjunction with his only brother, Sardar Mohan Singh, a contribution of Rs. 6,000 was made to Lady Hardinge's Memorial Fund for fallen heroes in the European War; Rs. 200 were given monthly in equal parts to Lady O'Dwyer's and Lady Barrett's comforts for troops funds; a sum of not less than Rs. 27,000 has been presented to various war funds at different times; Rs. 10,000 have been donated for the construction of aeroplanes; and Rs. 15,000 have been sent to the Imperial Relief Fund. The brothers have also subscribed Rs. 3,00,000 to the two Indian war loan funds.

In addition to being the owner of many houses and landed properties, Sardar Sohan Singh holds a *jagir*, in perpetuity, of *misriot* Rs. 750, and of Katarian village, Rs. 249, making a total of Rs. 999.

This gentleman was chosen as Divisional Durbari in July 1918, and in the following month he was made an honorary magistrate of the third class for the *tahsil* of Murree, in the district of the same name. He is also president of the committees of the Khalsa High School and of the Rughnathja, both of which are at Rawalpindi. At a Durbar recently held by the Lieutenant-Governor of the Punjab, he was presented with a *sanad*, granted by the Government of India in recognition of his efforts in enlisting support for the Indian war loan funds.

As soon as the present Afghan trouble commenced in the present year (1919), Sardar Sohan Singh placed his services and resources at the disposal of the Imperial Government, who warmly thanked him for his generous offer. He has two sons and one daughter, born respectively in the years 1913–15 and 1916.

Sardar Mohan Singh, like his elder brother, Sardar Sohan Singh, was educated at the Aitchison College at Lahore, where he gained distinction in class-work as well as in out-door physical exercises.

In 1917 he was awarded the Aitchison College diploma and the "Rivas" gold medal, the latter being a special annual honour granted to the most deserving student of the year.

Sardar Mohan Singh was most energetic in obtaining recruits for the late European War, and his services were recently recognized by the Government of the Punjab when His Honour the Lieutenant-Governor presented him with a *sanad*.

By mutual agreement he shares the greater part of the family estates with his brother, and that he has already begun to take an interest in public work in Rawalpindi is evidenced by the fact that he was appointed vice-president of the third Punjab Temperance Conference held in that city in the early part of the present year.

SHAMS-UD-DIN & CO.

Dealing in hides and skins has from time immemorial been an industry which has claimed the attention of thousands of the inhabitants of India, mainly by reason of the immense number of wild as well as domesticated animals which are annually killed. But it is only in comparatively recent years that a much-needed improvement has been manifested in the manner in which these commodities are prepared for foreign markets or for tanning purposes in factories which have rapidly come into existence in India during the past half-century. Purchasers in Europe and elsewhere are now far more insistent upon the soundness, cleanliness, and other characteristics of exported goods in this line of business, and this insistence upon acceptable raw produce has been the means of the establishment of companies and firms who studiously endeavour to meet the requirements of importers.

In this connection one may refer to the business of Messrs. Shams-ud-din & Co., of Amritsar, founded in the year 1880 for the export of raw hides, goat and sheep skins, wool, hair, casings and fleshings, which has grown to immense proportions, trading being carried on with Great Britain and other countries in Europe, as well as with the United States of America.

The firm are not satisfied in being classed merely as hide and skin merchants, as they claim that the high-class character of their trade, and the financial stability attaching to their name, entitles them to a foremost place among the leading exponents of industrial enterprises in India.

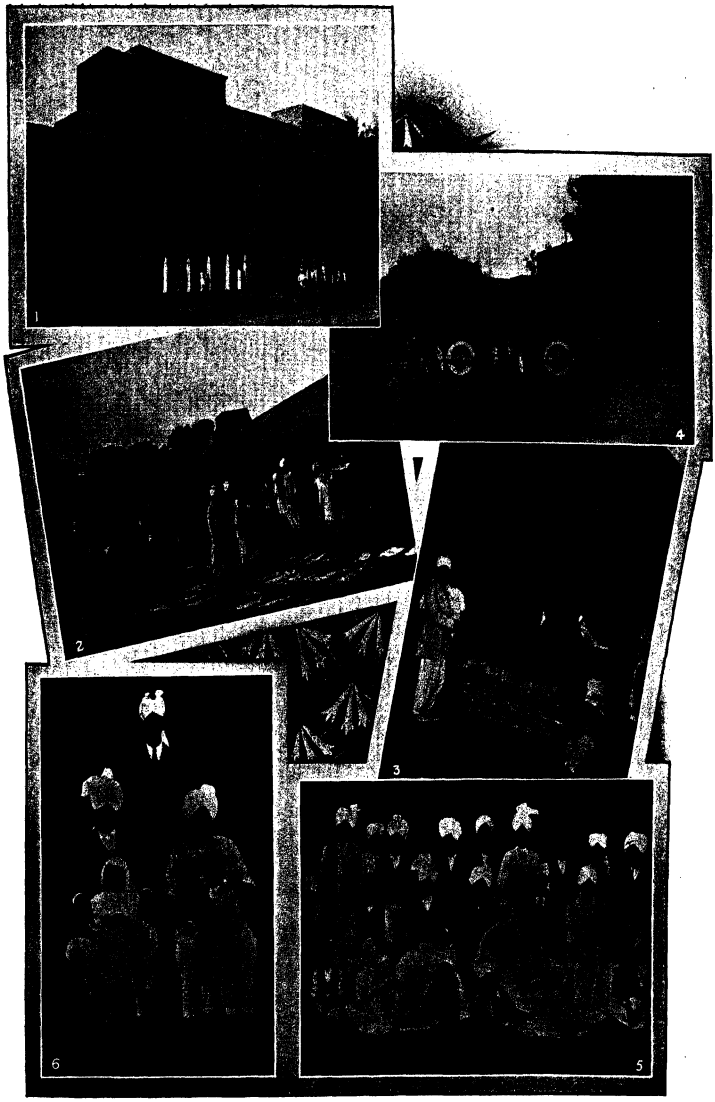
Doubts entertained by clients residing in other countries, or by those who are unknown personally to the proprietor, with regard to his *bonâ fides*, are speedily dispelled by the ability of the firm to mention as first-class references: The National Bank of India, Ltd.; the Chartered Bank of India, Australia, and China; and the Alliance Bank of Simla. Foreign orders are executed against approved bankers' credits.

The firm are also importers of continental, Manchester, Bradford, and other piece goods, as well as of sundry articles for general household purposes. Branches in India have been established at Calcutta, Delhi, Cawnpore, Lucknow, Lahore, Gujranwala, Kasur, Multan, and Sukhur, and a large staff of clerks and labourers is employed at these places and at the head-quarters at Amritsar.

The extensive premises at the last-named town comprise offices, stores, and large godowns, which were constructed at a cost of about Rs. 2,00,000, and the buildings are equipped with all necessary plant, including two baling machines. The firm are also owners of landed property at Chiniot, Lyallpur, and Gujranwala, in the Province of the Punjab.

The business is personally conducted by Mr. Shams-ud-din, who is ably assisted by his two sons, Mr. Dost Mohamed and Mr. Mohamed Umar.

It should be observed that trading with foreign countries is carried on under the



SHAMS-UD-DIN & CO.

1. Exterior View. 2. Skin Drying Yard. 3. Skin Baling Machine. 4. Carts Loaded with Bales,
5. Staff Group. 6. Proprietor and Two Sons.

name appearing at the head of these notes, while inland business is transacted under the style of Messrs. Shams-ud-din, Meherbux & Co.

The telegraphic address of the firm is "Shams," Amritsar.

SHEIKH BUDHA ALI MOHAMED ABDUL KARIM.

The hide and skin market in Amritsar is one of the chief features in that important city. It draws its supplies from all parts of the Punjab, in which there are immense numbers of cattle, buffaloes, and goats, and it possesses excellent railway facilities for the transport of produce to the chief ports of shipment.

Nearly half a century ago Haji Sheikh Budha founded a business in that town for dealing on a commission basis in hides and skins, and although he was greatly assisted in his enterprise owing to the comparative lack of competition in those early days, his patient and persevering efforts resulted in the building up of a sound commercial undertaking. On the death of Sheikh Budha his son Ali Mohamed became proprietor, but his life was only a short one, and he was succeeded by his two sons, the present owners, Abdul Karim and Abdul Rahim.

The partners now carry on a very extensive trade as hide, skin (tanned, white and red), hair, and wool merchants, and as exporters of such produce to England and America on their own account, and their lengthy practical experience has caused them to be regarded as experts in this particular line of business. They are, further, importers of all descriptions of merchandise as well as being agents for a number of well-known English manufacturers, and they are always ready to correspond with British or American firms seeking to obtain new markets in India for their goods or who are desirous of being directly represented in this country.

About two years ago the firm established an electrical department in which there is an excellent stock of every kind of electric fittings and accessories manufactured by leading European companies, and the very satisfactory progress made in this branch is attributable as much to the practical experience of the partners in this line of business as to the high-class character of the goods which they import.

A carpet factory, more recently started, has already been equipped with a few looms and other necessary plant, and expert weavers have been appointed, thus enabling the firm to execute orders in a manner which cannot fail to meet the requirements of their increasing number of patrons.

Sheikh Budha, the founder of the firms, erected a mosque near to the ancestral home of the family at Morigunge, at a cost of about Rs. 60,000, and the street in which the building is situated has been named after the donor. He was, further, during twenty years of his life a municipal commissioner, and assessor in court cases, and as an acknowledgment of these faithful services a grant of land in the district of Lyallpur was made to him. As a real friend of the deserving poor and as a staunch supporter of charitable institutions his name will be gratefully remembered in Amritsar for many years to come.

His grandsons, the present partners, are owners in Amritsar of large godowns, which are leased to various tenants, as well as of a number of residential buildings, gardens, and a quantity of agricultural land. They are members of the "Anjuman Islamia," a society which exists for the furtherance of educational and religious matters among their fellow-countrymen. Their eminently sound financial position as a firm enables them to reap the numerous advantages in open markets of which men of capital are always ready to avail themselves, and their ability to help others has been conspicuously manifested by the donation of substantial contributions to various war funds.

The telegraphic address of the firm is "Trionce," Amritsar.

SHEIKH CHERAGH DIN & SONS.

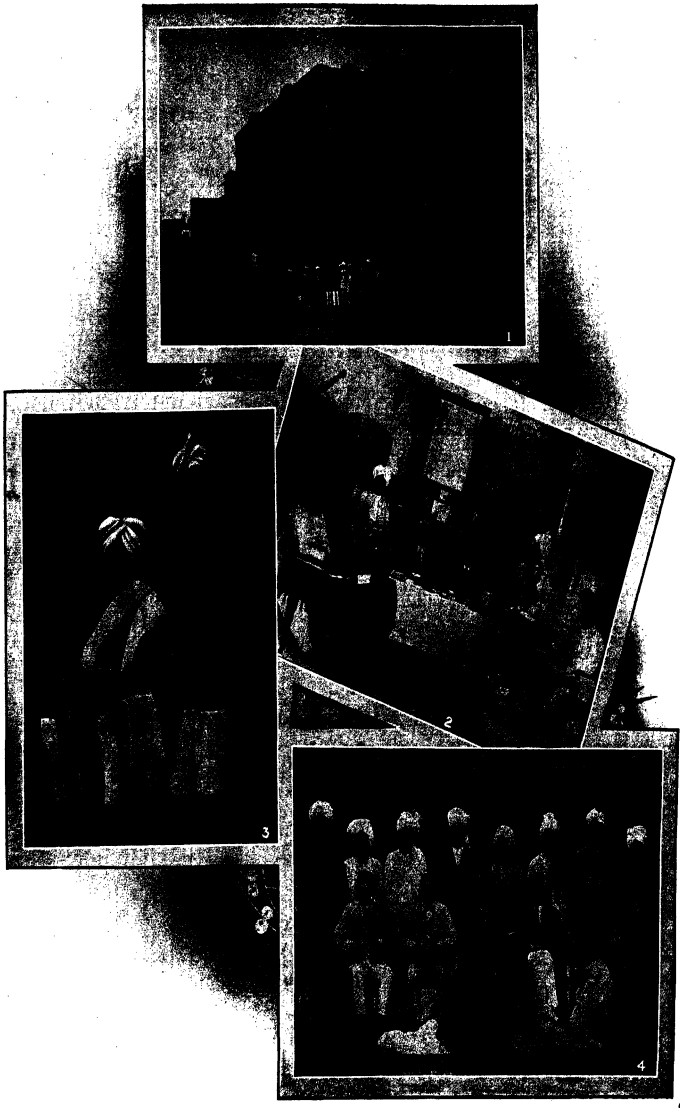
The word "sheikh" in the Arabic language signifies a chief, and this honoured title was held by Cheragh Din, who about the year 1875 established the above-named firm in Davies Road, Lahore, and commenced business as a general contractor.

The founder was a man of shrewd perception, and he not only greatly developed his undertaking, but also acquired a considerable quantity of household property. He received great assistance from his only son, Khan Bahadur Sheikh Mohamed Bakhsh, to whom he gave a power of attorney when he left India in 1894 on a pilgrimage to Mecca, and who was such a successful man of business that he was not merely manager, but in the course of time became proprietor of the whole concern.

The firm have constructed several public roads, canals, and buildings for the Government of the Punjab, including new railway offices and institute, carriage or wagon shops, and a locomotive foundry, in addition to a number of private works such as a museum, the Mayo and Albert Victor Hospital, a School of Art, and a theatre. These and other important undertakings have been carried out in a most praiseworthy manner, with the result that individual members of the firm have been able to render excellent service in the public life of Lahore, and have, further, placed them in a position to render substantial financial aid to deserving charitable causes.

Khan Bahadur Sheikh Mohamed Bakhsh, who was born in the year 1869, became learned in the Persian and Arabic languages, and obtained a sufficient acquaintance with English to enable him to speak and write correctly in that tongue.

In the year 1894, when the late Lord Roberts was Commander-in-Chief in India, he was granted a *sanad* by the Government as an acknowledgment of the admirable way in which the firm had executed contracts for work entrusted to them; in 1909 he was given the title of "Khan Sahib"; and in 1911 he became a "Khan Bahadur." During the visit to Lahore of Their Royal Highnesses the Prince and Princess of Wales (now Their Imperial Majesties the King-Emperor and Queen-Empress), the Khan Bahadur subscribed most liberally to the reception fund, and he also rendered efficient service to the public authorities in making the city as attractive as possible. He was a man who was extremely generous, but he was not one to proclaim his benevolence from housetops, as anything savouring of ostentation was most repugnant to him. Among many valuable donations may be mentioned: Rs. 8,000 to the Muslim University Fund; for the purpose of constructing a room in the Islamia College, Lahore, the sum of Rs. 2,000; to the King Edward Memorial Fund, Rs. 2,500; and Rs. 600 to the local coronation committee in 1911. He rebuilt an old mosque inside the Shahalmi Gate, Lahore, and constructed a new one in Railway Road in the same city, in addition to a new Musafir Khanna, the cost of these works amounting to several thousands of rupees.



SHEIKH BUDHA ALI MOHAMED ABDUL KARIM.

1. Factory and Godowns. 2. The Office. 3. The Late Proprietors. 4. Staff Group.

NAWAB SALAR JUNG

The Khan Bahadur was a municipal commissioner for the city of Lahore, a member of the managing committee of the Punjab Muslim League and the Punjab Association Library, a member of the general council of the "Anjuman Himayat Islam," president of the "Anjuman Nomaniya," and vice-president of the "Anjuman Talimuch-Koran" and "Anwar-ul-Kadaria." He was a guest of the Government of India at the Coronation Durbar at Delhi in 1911, and was presented with commemoration medal and certificate. He died, after a very short illness, in December 1912, beloved and highly respected by all who were acquainted with him. His father, the founder of the firm, succumbed to shock only ten days later, and thus the business and extensive property devolved upon Cheragh Mohamed Fazl Ilahi, the present proprietor.

The latter, who was born in 1892, was privately educated in English and Persian, and he has conducted the commercial interests of the firm with conspicuous ability.

Following in the footsteps of his father and grandfather, he is manifesting considerable interest in public affairs, and in the matter of liberality towards charitable institutions he has already proved to be a worthy successor of his predecessors. He has contributed in a generous manner to various war funds; he has constructed at his own expense a refreshment-room for the benefit of soldiers; while in recognition of these and other similar services to the Indian army he was, in November 1917, presented by His Excellency the Viceroy with a *sanad*.

CH. MOHAMED FAZL ILAHI.

1 Mohamed Manzil. Ch Mohamed Fazl Ilahi. 3. S. Cheragh Din Sahib. 4. K B. Sh. Mohamed Bakhsh Sahib.

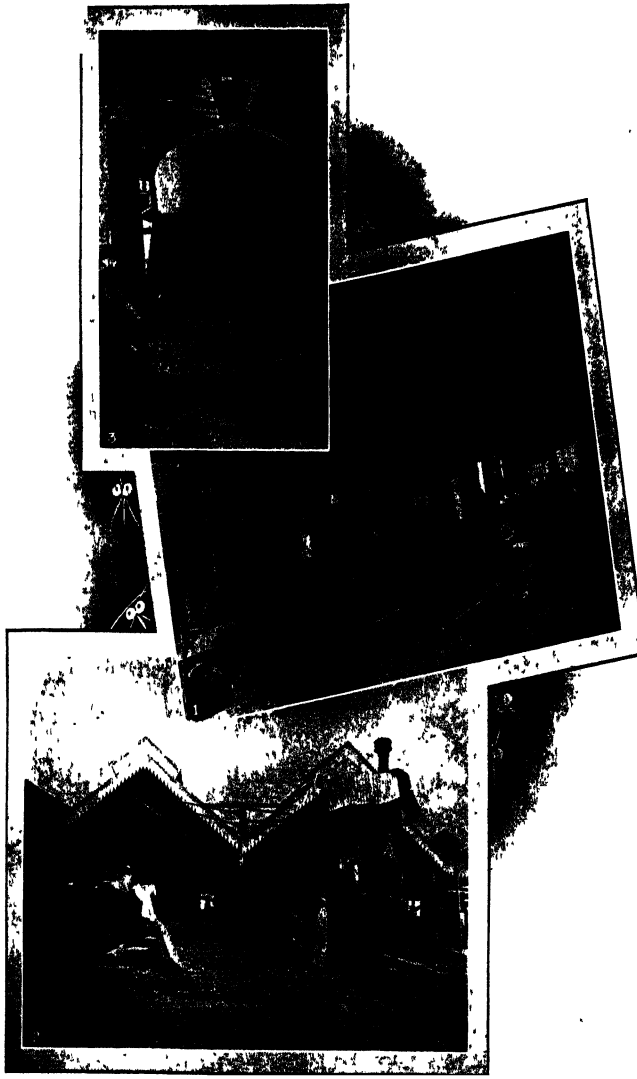
SPEDDING & CO.

The firm of Messrs. Spedding & Co, timber merchants, saw-millers, engineers, and contractors, whose head offices are at 7 Lawrence Road, Lahore, was established in the year 1888. Commencing as engineers and contractors, they constructed a part of the Kashmir Road, and later the Gilgit Road. (See Knight's *Where Three Empires Meet*.) In 1894, however, they turned their attention to the timber industry, then in its infancy, and began to exploit some of the Kashmir forests, and although they started in a small way they have steadily increased their efforts, until to-day their timber may be seen floating down all the five great rivers of the Punjab. Large forests in Kashmir as well as in the Punjab are leased by the firm, and their annual output is a very large one. Various kinds of timber are dealt with, but principally deodar, kail, chir, spruce, and silver fir.

The difficulties to be overcome before the timber can be placed upon the market are unquestionably very great. The majority of the forests worked are far indeed from the beaten track; the country is wild and rugged, and entirely without roads; villages are few and far between; and most of the labour has to be imported from outside, frequently from great distances. The whole of this foreign labour has to be provisioned, as the supplies to be obtained locally are generally insufficient for the inhabitants themselves. The grain and other food has to be carried from the nearest market to the forests—sometimes a journey of fourteen or fifteen days—on ponies and bullocks, and, in the more inaccessible parts, on sheep and goats. To keep such a large army of men adequately pro-

SPEDDING & CO.

1. Front View, "Spedding's Saw Mills," Jhelum. 2. Hauling Logs out of the River by means of Steam Winch and Timber Slide.
3. A Portion of the Log Yard, Showing Logs Ready to be Taken into the Mills.



SPEDDING & CO.

1. Interior View of Corner of One of the Shops. 2. Steam Crane Placing Log Ready for Cutting on "Ransome's" Horizontal Log Band Saw Machine
3. Sawdust Consumer, which Feeds One of the Large Boilers.

SPEDDING & CO.

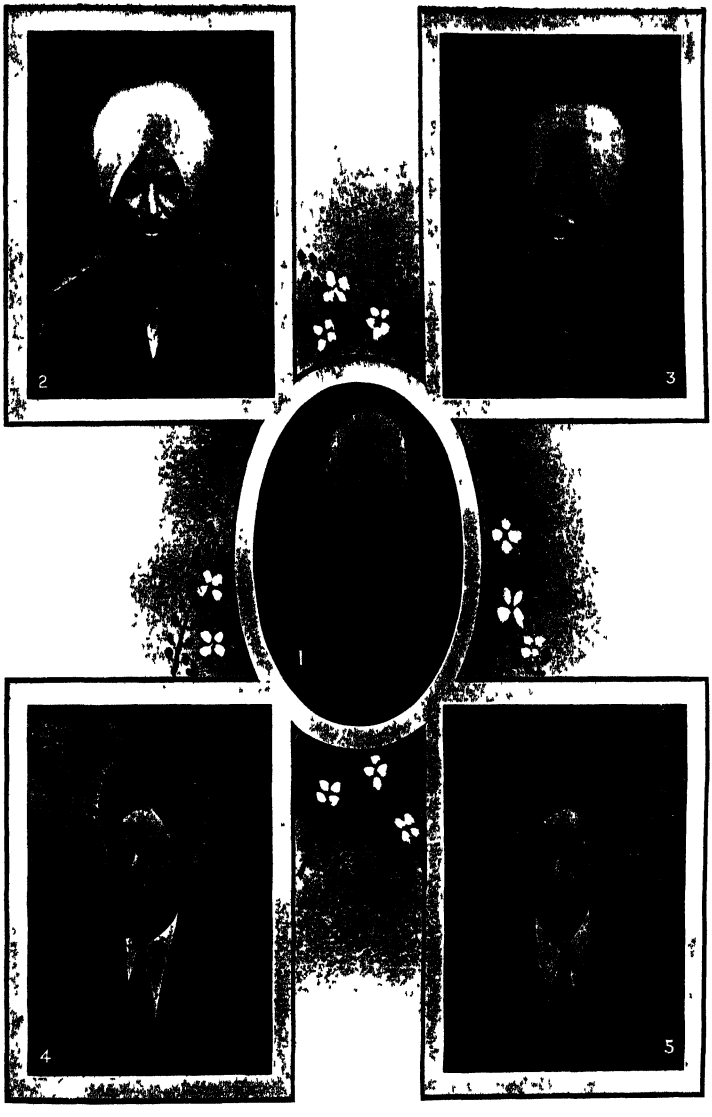
1. A Junction of Two "Wet Slides," Showing Scantlings Entering the Pool, or "Houd."
(These pools are used for breaking the force of the sleepers, and conserving water at every quarter mile.)

2. Breaking a Jam of Sleepers. 3. Slide and Stacks of Sleepers Broken up by an Avalanche.

4. Buffalow-skin Swimmers who are Employed in Breaking-up Timber Jams in the River. 5. Hand Sawyers at Work.

SPEDDING & CO.

1 View of Deodar Forest, Showing Precipitous Nature of Ground. 2 Axemen at Work, Felling Trees.
3 General View of the Forest, Showing a "Wet" Slide, Down which Timber is Sent. 4. A Forest Manager's Hut in Winter.



BABA ANTAR SINGH BEDI.

1 Hon. Sir Baba Khem Singh Bedi, K C I E 2 Baba Antar Singh Bedi 3 Baba Hardit Singh Bedi.
4 Tikka Harbans Singh Bedi. 5 Tikka Jaojit Singh Bedi

visioned is by no means an easy matter, yet this must be done, as failure to meet their wants for even a few days would spell ruin to an entire year's work. Timber in the shape of both logs and sawn scantlings is extracted from the forests. The firm have always specialized in the sawing of sleepers both broad and metre gauge, and have supplied hundreds of thousands of sleepers annually to the Indian railways, the North-Western Railway in particular having been largely dependent upon Messrs. Spedding & Co. for their requirements. Sleepers are sawn by hand in the forests, and are carried to the nearest floating stream whence they are either floated, or sent down slides and chutes, to the rivers. They have frequently to be carried over long distances, and this necessitates a very large number of labourers if the work is to be finished before the launching season comes round. Sleepers are taken down in the autumn to the plains—three to four hundred miles distant—by gangs of rivermen, and on arrival there they are collected and tied into rafts of from 500 to 750 in number and so transferred to the sales depôts at Wazirabad, Doraha, Beas, Jhelum, and Lahore, the entire journey taking from three to nine months, according to the amount of water in the river. The rafting of the sleepers from the catching to the sales depôts occupies about ten days. If the weather proves unpropitious very serious losses may be incurred from floods, which smash the rafts and carry the loose sleepers over one hundred miles past their destination. Besides the expense of searching for and collecting the scattered sleepers, which is very heavy, serious losses occur through thefts.

The firm have large sawmills at Jhelum where logs and baulks are converted into scantlings, boards, planks, and matchboarding, as well as into finished work of every description, but these works are at present exclusively engaged in meeting military requirements. The machinery and plant in the mills, which are worked by powerful steam engines, comprises horizontal log bandsaws, horizontal band reciprocating saws, frame, flitch, and circular saws, planing machines, spindles, lathes, and numerous other kinds of wood-working machinery. Large steam cranes, for hoisting heavy logs, etc., have been erected in the yard, and an oil engine has been fixed for the generation of electric light.

Realizing that the lighter kinds of wood, such as spruce and silver fir, have only to be known to be appreciated at their full value, the firm are making great efforts to introduce them to the Indian market, from which they should eventually oust the far more expensive foreign imported woods. Samples of Himalayan spruce and fir sent to Calcutta, Bombay, and other large centres, have been pronounced fully equal to, if not better than, the expensive pine and deal woods imported from Norway, Austria (before the war), Japan, and other oversea countries. These woods have been approved of for doors, window frames, tables, chairs, and interior work of every kind when economy is a matter for consideration.

For their timber work the firm employ some twenty European experts, under whose immediate supervision everything is carried out.

In addition to their activities in the timber trade, the firm are also managing agents of the Lahore engineering works, Shalamar Road, Lahore. Ironwork of every description is undertaken, including repairs to machinery and boilers, and the making of machine parts to order, while a speciality is made of castings. The foundry is being equipped with a considerable amount of new machinery, and is being brought thoroughly up to date in every respect. A skilled European engineer is in charge, and all orders are carried out under his direct control.

UBEROI, LTD.

It is claimed on behalf of the company known as "Uberoi, Ltd.," proprietors of the "Punjab Sports Works," at Sialkot, that they are the largest manufacturers of athletic goods in the East.

This, as Americans would say, is a "tall order," but one has only to pay a visit to the extensive workshops and showrooms at Sialkot, and also to the fine premises at the company's branches at Calcutta, Madras, Lucknow, and Delhi, and witness the operations of an ordinary working day in order to realize that the claim rests upon a solid foundation of facts. The business was established in the year 1888, and was for some time carried on under the name of Ganda Singh Uberoi & Co., the founder, Mr. Ganda Singh Uberoi, being the present managing director. From the very commencement the proprietors determined that "Uberoi" goods connected with every type of outdoor or indoor sports should stand for high-class quality, and to-day there are no other manufacturers in this particular line who are better known throughout India than Uberoi, Ltd.

The premises at Sialkot, which cover an area of about 10 acres, consist of fine brick and iron buildings constructed by the company's employees, and they comprise workshops, factory, large showrooms, two halls, measuring more than 100 feet in length; offices, and a most desirable residence, which is occupied by the managing director.

The present factory, erected in 1912, superseded the original one, which is now used as stock-rooms. About 70 per cent. of the materials required in manufacturing, such as seasoned English ash, catgut, leather, glue, English willow, and tennis racket frames, is imported from England, being purchased from absolutely reliable makers through the company's London office. Other goods imported annually comprise many thousand cubic feet of mulberry wood from Chhanga Manga, Para rubber, several tons of Sarawak cane for handles of cricket bats, polo sticks and rackets, and a considerable quantity of timber from Kashmir.

All machinery in the factory is thoroughly up-to-date in every respect, and it is wonderfully varied in character, doing work ranging from the making of iron or brass castings for wickets or the feet of posts for tennis nets to the turning of small pieces of wood in fashioning pegs for cribbage-boards. A tour of the shops reveals a machine for case-hardening cricket bats, having a pressure of 5 tons; a leather cutter to ensure an equality of thickness; automatic lathes; rounding machines; a patent inter-locking press; a machine for cutting out splices for hockey sticks; band and other sawmilling machines; and frame-bending machines. Driving power is derived from a 50 h.p. boiler, while an oil engine is held in reserve for emergencies. The showrooms contain a splendid assortment of all kinds of goods, and reference may now be made to a few of these.

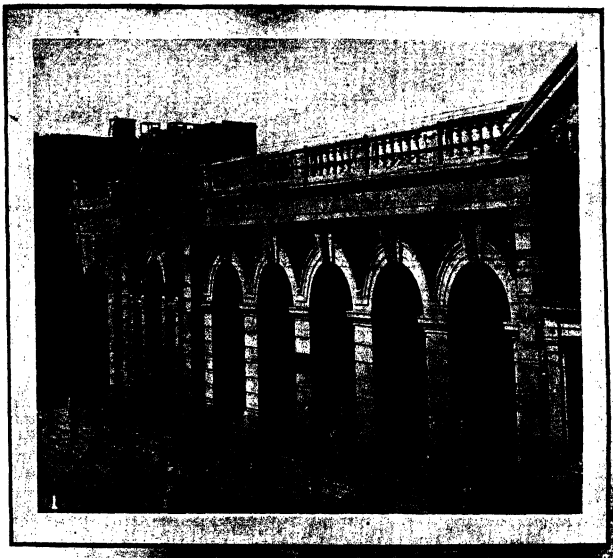
Among the numerous types of cricket bats, attention is directed to the "Perfecta," which achieved such a great reputation for high-class quality that the All-India cricket team selected it for their tour in England. It is fitted with the choicest white, wide-grained, close bark, English willow blade, and the handle is built of pure Para rubber and the finest quality Sarawak cane, and it is constructed on an entirely new principle, which reduces the wear on the blade, thus eliminating

UBEROI, LIMITED

1 Cricket and Football Shop 2. Tennis and Badminton Shop 3 Portion of Mill

UBEROI, LIMITED.

1. View of Offices. 2. Managing Director's Residence, Side View.



NATIONAL BANK OF INDIA, LTD. (AMRITSAR)

1. Exterior, Amritsar Branch. 2. Interior, Amritsar Branch.

all jarring. Other types include the "Resista," an ideal bat, costing Rs. 16; the "Tropical," "Improved Oriental," "Challenge," "Khalsa," "Rustum," and the "Rangroot."

English cricket bats are selected by the company's expert in London, and are imported regularly. Cricket balls are made of the best English cowhide, and are completed with special worsted and cork imported from home. There are also many types of cricket stumps made of the best ash or mulberry, and capped with solid brass tops and steel shoes. Other cricketing apparatus includes leg guards, wicket-keeping gauntlets, batting gloves, cricket nets, bags, and telegraph scoring boards and books.

The rackets department would incite the envy of the most fastidious player, as there is a magnificent display from which to make a selection. The "Loop-lock," a favourite with leading players, is strengthened by a process of stringing which defies heat, humidity, or any distinct change of climate, and is, in fact, the "last word" in construction.

The "Perfecta," "Imperator," "Excellus," "Tropical," and other types are made of English ash, and are strung with the best quality of red and white English gut, and are turned out by expert workmen. Near at hand one sees tennis posts, nets, ground markers, and many other tennis sundries. An experience of more than a quarter of a century has enabled the company to manufacture excellent Badminton rackets from English ash and "Perfecta" gut, and a special feature is made of securing a scientifically correct standard of perfect balance. Nets, posts, and shuttlecocks are also seen in rich profusion. Footballs for Association and Rugby players are made of the best materials procurable, and one marvels that such excellent specimens of workmanship can be produced at such reasonable prices. The "Perfecta" is made of the famous "Tugite" leather, said to be the toughest material of its kind ever produced. The "Khalsa" consists of eight pieces of stout cowhide, sewn together by hand by skilled workmen; and the "Matchless," "Rangroo," "Jungi," "Kankar," and "Rustum," types are of equally good make.

The company keep in stock a fine selection of polo sticks, some of which have been supplied to the Punjab Polo Tournament at Lahore, the Native Cavalry Polo Tournament at Mian Mir, the Punjab Frontier Force Polo Tournament at Kohat, the Punjab Native Infantry Polo Tournament, the Kashmir-Gulmarg Polo Tournament, the Naini Tal Polo Tournament, and the Peshawar Polo Tournament, as well as to a hundred station polo clubs, more than a hundred regimental polo clubs, and two thousand two hundred British officers. A uniform standard of perfection is maintained in this department, which is controlled by an experienced foreman. Golfers cannot fail to be attracted by the company's clubs and other accessories, which are made of the finest quality of hickory, while the heads are worked up from the best Scotch beech, or are shod with iron forged by hand in the works.

Much more might be written concerning general athletic outfits, including vaulting horses, dumb-bells, boxing-gloves, horizontal and parallel bars, punching balls, quoits, rope ladders, running requisites, spring-boards, and a variety of specialities, such as bridge and other cards, cribbage boards and pegs, dice, draught and chess boards, dominoes, water-wings, and surgical elastic stockings.

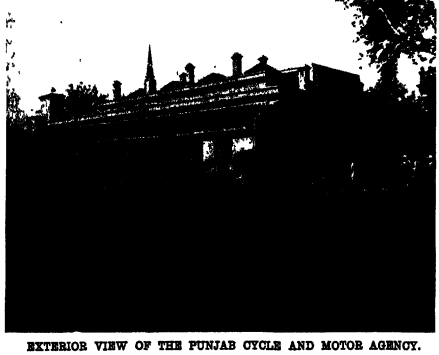
Repairs are most carefully carried out by competent hands, such as re-blading, re-handling, and re-wrapping cricket bats, tennis and other rackets are re-strung (many thousands of these being attended to annually), and, in a word, sporting articles of all kinds, whether in a broken or damaged condition, are returned to patrons in their original forms.

Each component part of every article manufactured in the works is passed—in its various stages—under the strict supervision of Mr. Ganda Singh Uberoi, the managing director, and Mr. A. E. Trimmings, the manager, and about three hundred hands are employed under European departmental foremen.

Mr. Uberoi takes a keen interest in local affairs, and in private life he is well known for his liberal contributions to charitable institutions and needy persons.

It may be added that the business of the company has attained very great dimensions, and notwithstanding some dislocation of trade owing to the difficulty of obtaining consignments of goods from England at the present time, the company are faced with the necessity of making considerable additions to their already extensive premises at Sialkot.

The telegraphic address of the company is "Uberoi," Sialkot.



EXTERIOR VIEW OF THE PUNJAB CYCLE AND MOTOR AGENCY.

DELHI—THE IMPERIAL CITY

WE are pleased to announce to Our people that on the advice of Our Ministers, tendered after consideration with Our Governor-General in Council, We have decided upon the transfer of the seat of the Government of India from Calcutta to the ancient capital of Delhi, and simultaneously and as a consequence of that transfer, the erection at as early a date as possible of a Governorship for the Presidency of Bengal, of a new Lieutenant-Governorship in Council administering the areas of Behar, Chota Nagpur and Orissa with such administrative changes and redistribution of boundaries as Our Governor-General in Council, with the approval of Our Secretary of State for India in Council, may, in due course, determine."

Such were the memorable words uttered on December 12, 1911, by His Majesty King George V, King of the United Kingdom of Great Britain and Ireland and of the British Dominions beyond the Seas, Emperor of India, in making the Royal announcement which restored to Delhi the honour of again becoming the capital city of the British Empire in India.

Several capitals of India have been built upon or near to the site of modern Delhi, Hindu chroniclers going back as far as the year 1400 B.C. for the settlement of the first of the number, although one is on safer ground in referring to the ancient city known as Dilli, or Dillipur, which is said to have been founded by Raja Dilhi about the year 50 B.C., and was situated about five miles distant from the historic spot where the ever-to-be remembered Royal Darbar of 1911 was held.

This city, which is reported to have had strong towers and other fortifications, was occupied by Hindus until the close of the twelfth century, when it was taken by Mahomedans, who held it until 1398. It was then raided by Timur the Tartar, who proclaimed himself Emperor of India, and for nearly a hundred years from 1450 the city was under the Afghan dynasty.

It subsequently underwent many vicissitudes, but it was, with slight interruptions, subject to the Moghuls until the Mutiny of 1857, when it was captured by the British.

The comparatively modern city of Delhi was erected early in the seventeenth century by the Emperor, Shah Jehan, who named it Shahjanabad after himself, and it is doubtless built over the departed glories of palatial structures which were the homes of almost forgotten dynasties. It stands on an eminence on the right bank of the Jumna river, and the surrounding wall of solid stone is nearly six miles in extent and encloses the fort, the military cantonments, the railway station, and public and other buildings, while within and beyond the wall are palaces, shrines, tombs and remnants of beautiful edifices. The wall was built by Shah Jehan, but further protection was added by the British in the early part of the present century by the construction of a ditch and *glacis*.

The Fort, which was formerly the palace of the Emperor Shah Jehan, has been greatly reduced in size and splendour since the days of the Mutiny, but it is worthy of a visit, as its encircling walls, a mile and a half in length, enclose lovely gardens and some remarkably interesting buildings. It is situated on the eastern, or river side, of the city, and it is 3,200 feet in length from north to south and 1,800 feet in width from east to west. Mention should be made here of the gates of entry, which have been prominently connected with famous historical events. The Lahore Gate, at the end of Chandi Chowk, Delhi's principal thoroughfare, has an archway, forty feet in height to twenty-four in width, and is flanked by towers crowned by pavilions. The Delhi gate and southern wall of the Fort is somewhat similar to the Lahore Gate as regards construction, but it is rendered even more imposing by the placing of a stone elephant on either side of the entrance. There are other gates in the wall, and it was through one of these that His Majesty the King-Emperor passed when on his way to the Imperial Darbar of 1911.

Near the inner side of the Lahore Gate is the roofed street, or arched vestibule. It is about 260 feet in length and 27 feet in width; it consists of thirty-two arched cells used as shops, and a central octagonal court open to the sky.

The first structure of importance to be noticed is the Diwan-i-Khas, the hall of private audience, a magnificent pavilion of white marble containing a central apartment supported by thirty-two richly-carved pillars inlaid with precious gems. An inscription engraved in Persian characters above the arches is translated as follows:

"If Paradise be on earth, it is this, it is this, it is this."

This hall once contained the famous Peacock throne, estimated to have cost more than £6,000,000 sterling, which was taken away by Nadir Shah, the Persian conqueror, in 1739. This throne was

inlaid with rubies, sapphires, emeralds, pearls and other priceless stones, all of which were so exquisitely blended that they almost correctly depicted living birds.

The Moti Masjid, or "pearl mosque," almost adjoining the above, was the private house of worship of the Emperor Aurangzeb and the ladies of his court. It is extremely beautiful, and it is significant that, while the outer walls are in agreement with the alignment of other buildings, the inner walls are deflected in the direction of Mecca. The mosque, built of marble, is 40 feet in length by 30 feet in breadth, and it stands on a plinth $3\frac{1}{2}$ feet in height.

The Diwan-i-Am, or "Hall of Public Audience," formed the main building of the palace. It consists of a large hall supported by red sandstone pillars, but the noble building does not at the present time give any conception of the gorgeousness of the ceremonies which took place when Moghul courtiers assembled to do homage to their Emperors.

The most famous mosque in India, and one of the finest buildings in the city, is the Jama Masjid, the great mosque, or cathedral, of Shah Jehan. The edifice is situated on a rocky eminence called Jujulapahar, which is midway between the Delhi and the Kashmir Gates. The mosque is a red sandstone structure 200 feet in length and 120 feet in width, and was built during the reign of Shah Jehan between the years 1630 and 1658. It has two minarets, 130 feet in height, from which extensive views are obtained over a wide expanse of country dotted here and there with trees and beautiful gardens, while the grey outlines of partly demolished buildings are silent reminders of vanished dynasties.

The Rang Mahal, or palace of colours, may be found on the southern side of the Diwan-i-Khas. The building, measuring 153 feet by 69 feet, was thus named from the brilliance of the colours with which it was formerly adorned. Although the outward appearance of the structure is somewhat sombre in character, the interior is conspicuous, with its fine marble dadoes and gilded ceilings and summits of arches.

On the eastern side of the Moti Masjid is the Hammam, which is connected with the Diwan-i-Khas by a marble pavement more than 40 feet in width. The edifice, which is said to have been used as a bath for the children of the Royal Court, comprised a main hall with an apartment on either side. Tradition has it that the pavements, the walls to a height of three feet, and the reservoirs were inlaid with costly precious stones, and traces of this splendour and of the marble lattice screens are still in evidence.

The Kutab Minar has the distinction of being the highest pillar or minaret in India. Its construction was commenced by Kutub-ud-din about the year 1200, and it was completed twenty years later. It is 238 feet in height, and rises from a base diameter of 47 feet to one of 9 feet at the summit. A recent description of the pillar says: "It is divided into five storeys separated by balconies decorated with ornamental bands; the second storey has semi-circular fluting; the next has angular fluting; and the third is a smooth cylinder; the circular shaft of the topmost storey is decorated with ornamental bands of marble and red sandstone, and on each storey are numerous inscriptions; the plinth is two feet in height, and it is a polygon with twenty-four sides."[1]

No visitor to Delhi should miss seeing the famous Ridge, a crest of hills 60 feet in height and not more than a mile distant from the walls of the city on its northern side.

It was from this point of vantage that the siege of Delhi was directed during the Sepoy Mutiny, when the fate of the Empire in India hung trembling in the balance. Upon the summit of the eminence a handsome memorial has been erected in honour of those who then forfeited their lives.

The Loha-ki-lat (iron pillar) in the court of the Jama Masjid was, according to several historians, constructed early in the sixth century, and was originally placed in the old city of Dilli. The pillar is 23 feet 8 inches in height, about 14 inches of which were embedded in the ground, but great difference of opinion exists as to the manner in which it was constructed. The shaft, 16 inches in diameter, is of solid iron, and several writers have referred to this as a curious fact, seeing that other ancient pillars were hollow and were wrought in brass or copper.

Adjacent to the Jama Masjid is the Jain temple, which was constructed about the year 1770. This edifice has a fine oblong dome, and the internal ceiling, which is richly gilded, is no less beautiful than the marble columns which support it.

It is generally agreed that the magnificence of the Zinath-ul-Masjid is only exceeded by the Jama Masjid. It is situated between the fort and the native infantry lines. The mosque is 150 feet in length by 60 feet in width, and the main court or hall, paved with red sandstone, has a tank in the centre which measures 43 feet by 33 feet. Its finely carved archways, beautiful marble traceries and gilded ornamentations are greatly admired. At the front of the structure are two octagonal minarets, rising to a height of 100 feet and surmounted by copper gilt domes. The mosque was built in the year 1700 by Zinath-ul-Nissa Begam, a daughter of the Emperor Aurangzeb, who decreed that during his reign his sisters and daughters should be celebrated.

Near to the hunting palace, built in 1354 by Firoz Shah Toghlak, is Asoka's pillar, 32 feet in height, and built of red sandstone. It was erected by King Asoka nearly three hundred years before the Christian era, and when found near Meerut by Firoz Shah Toghlak, it was re-erected by him at Delhi. The pillar bears the following inscription: "This pillar was originally erected at Meerut in the third century B.C. by King Asoka. It was removed thence, and set up in the Kashuk Shikar palace, near this, by the Emperor Firoz Shah, A.D. 1356. Thrown down, and broken into five pieces by the explosion of a powder magazine, A.D. 1715–19. It was erected and set up in this place by the British Government, A.D. 1867."

The tomb of the Emperor Humayon, situated near the Arab Sarai gate, is one of the most important Moghul structures of its kind in India. The mausoleum contains the remains of many descendants of the house of Timur, but chief interest centres in the cenotaph of Humayon, which may be found in a domed hall near the central tower on the southern side of the structure. It has been described by one writer in these words: "The tomb, 6 feet by 2 feet, stands on a white marble platform 6 inches in height, inlaid with black stars. The monument, shaped like a huge casket, is composed of a single block of white marble; the roof of this room, 80 feet in height, is surmounted by a magnificent white marble dome with a copper-gilt spike, higher than the basement terrace by 140 feet; its floors and walls (the latter to the height of 6 feet) are of white marble."

The other cenotaphs in this fine building include those of Haji Begam, widow of Humayon; the Emperor Jahander

[1] *Delhi*, by J. Renton Denning.

Shah, a grandson of Aurangzeb, the Emperors Farokhsir and Alamgir II, Prince Mahomed, a son of Aurangzeb, and Sangi Begam, daughter of Alamgir II

There are many beautiful gardens and pleasure grounds in Delhi, and one must not omit to mention Nicholson Park, in Alipur Road, in which there is a fine statue erected to the memory of Brigadier-General John Nicholson, the hero of the siege of Delhi in 1857 The memorial, sculptured by Brock, was unveiled by His Excellency Lord Minto on April 6, 1906

It is impossible to describe within narrow limits a tithe of the wondrous mosques, shrines and tombs which speak so silently and yet so eloquently of the luxury, the wealth and the splendour of successive courts of Moghul emperors, therefore a personal visit made in the company of an experienced guide should be undertaken by all who take pleasure in making archæological discoveries of the most interesting character

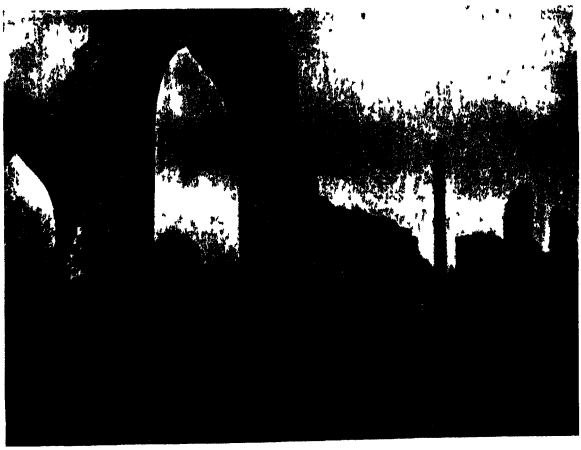
Turning to more recent history, however, it will be remembered that on October 1, 1912, a proclamation was issued whereby Delhi, with an *enclave* of surrounding territory 557 square miles in extent, was declared to be a province under the administration of a chief commissioner, subject, however, to the superintendence and control of the Governor-General of India

It must be borne in mind that since the Darbar of 1911 the building of the new capital has been commenced, and the foundation-stone was laid by His Majesty the King-Emperor on December 15th in that year The accepted report of the Town Planning Committee provides for the construction of Government House, the council chamber, and a large block of Secretariat buildings at Raisina Hill, and the laying out of parks and gardens, and it further gives lengthy recommendations upon various subjects, including such important matters as water supply, drainage, sewerages and internal communications

The present Delhi is a thriving commercial city, and is most admirably served by the East Indian, North-Western, Great Indian Peninsula, Oudh and Rohilkhand, and the Delhi-Umballa-Kalka Railway systems, by which excellent services of trains are maintained with all parts of India The prosperity has increased rapidly in recent years, and one of the chief features of its growth has been the large number of flour and other mills and factories which have been erected A brisk trade is carried on in various kinds of agricultural produce and general merchandise, while it is, as of yore famous for its beautifully carved furniture and its artistic wares, especially gold and silver embroideries, which are much sought after

The population of the whole area comprises about 392,000 persons, while the inhabitants of the city are 250,000 in number

Delhi is 903 miles distant from Calcutta, and 848 miles from Bombay, while it is situated about 725 feet above the level of the sea



IRON PILLAR AND ARCHES, DELHI.
Photo by M. L. Shingan Chand

COTTON AND THE TEXTILE INDUSTRY

By OSBORNE MARSHALL

THERE are reasons to believe that cotton was known in India as early as 1,500 years before the Christian era; anyhow, 800 years before that date cotton was often mentioned in literature. The art of spinning and weaving was practised in India nearly three thousand years ago, and the magnificent courts of ancient Rome and Greece drew largely upon India for cotton, silks, and gold-thread cloth. The exports of cotton yarn and cloth from India to England began with the advent of "the Governor and Company of Merchants of London trading into the East Indies," which company received its first charter from Queen Elizabeth on the 31st December, 1600. In 1621 it was estimated that 50 000 pieces of Indian calicoes of the value of £50,000 were imported annually into England. In 1674-5 the value of imports had risen to £160,000, but this remarkable progress suffered a severe check by the invention and development of spinning machinery and the advent of the steam engine. Gradually the position has been reversed, and India is now a very large importer of British textile manufacturers.

Indian raw cotton was imported into England long before it was received there from America, but its production in the States developed much faster than in India. Gradually, therefore, the American samples attained supremacy in Great Britain, and in more recent times the consumption of Indian cotton in the British Isles has been negligible.

Whilst America, on a maximum acreage of 38 million acres, has produced a crop of more than 16,000,000 bales of 500 lb. each, the largest crop ever produced in India under favourable weather conditions has been only 6,000,000 bales of 400 lb. each on a maximum acreage of 25 million acres.

The climatic conditions under which cotton is grown in India are so diverse in different parts of the country that, while in some districts cotton planting is taking place, in others cotton picking has just begun. In the north (Bengal districts), picking is normally commenced late in September, while in the southern districts it is as late as March. The methods of cultivation are still primitive, and little or no artificial manures are used, but the agricultural departments are having an educating influence in the direction of a judicious application of fertilizers.

Formerly the only method for the removal of lint from the seed was the hand-gin, a very primitive machine the cost of which was from Rs. 2 to Rs. 3. The cotton, loosely packed, was despatched to Bombay, where it was baled for shipment by a cotton "screw" worked by hand, menials using a capstan. While the cotton "screw" has been entirely superseded by steam presses of various systems, and patents have been brought out in large numbers all over the cotton area, hand-ginning has gradually been displaced by machine power, the plant chiefly used being the roller-gin driven by steam or oil engines. Ginning factories have been established all over the cotton districts, and it may be estimated that about 75 per cent. of all cotton consumed by Indian mills, or exported, is now delinted by machine gins, and the number of ginning factories is still increasing. Saw gins are in general use in the Dharwar districts and are being tried in other parts of the country, so far, however, without success.

As already stated, Great Britain was originally the main market for the surplus cotton from India, but with the increase of American cotton available, and the gradual deterioration of many of the stapled kinds of Indian cotton, Lancashire looked less and less to India for her supplies. The continent of Europe, to which the shorter stapled cottons of India made more appeal than to the United Kingdom, gradually became the chief buyer for whatever Indian cotton was not consumed by mills in this country, but the continent has again been gradually ousted from pride of place by Japan, which, apart from India itself, has become by far the largest consumer.

Formerly stapled cotton represented a much larger proportion of the crop grown in India than it does now. The main causes operating towards this decline have been the mixing of shorter-stapled *kappas* with the long-stapled variety in ginneries, and the consequent admixture of inferior seed. Further than this, however, the fact that the short-stapled kinds, as a rule maturing earlier and giving a greater yield of seed cotton per acre and a better ratio between lint and seed, and being also less liable to climatic vicissitudes, have appealed more to the cultivator. There are exceptions to some of the above conditions, notably in Cambodia, but the danger lies in the extinction of stapled kinds resulting in an excess over require-

ments of shorter-stapled varieties. The need of looking to the Empire at large for a greater proportion of Great Britain's requirements, and to India as the most likely source in the near future, has prompted Government to appoint a committee to make inquiries regarding the question of the revival and extension of the production of long-stapled cotton. As the field of lint per acre in India is only about 50 per cent. of the average in the United States of America, there seems indeed room for improvement in the method of cultivation.

Exotics have been introduced from time to time, but with the exception of Cambodia, which has proved to be satisfactory, and of "Punjab-Americans" grown on irrigated land in the Punjab which seems likely to be successful, other exotics have so far failed, and the agricultural departments in India are turning their attention to the improvement of the strains of indigenous varieties.

The crop is grown in most districts with the natural rainfall, which varies largely, but in the Sindh and Punjab districts vast tracts are watered by artificial means, and large extensions of irrigation works are contemplated.

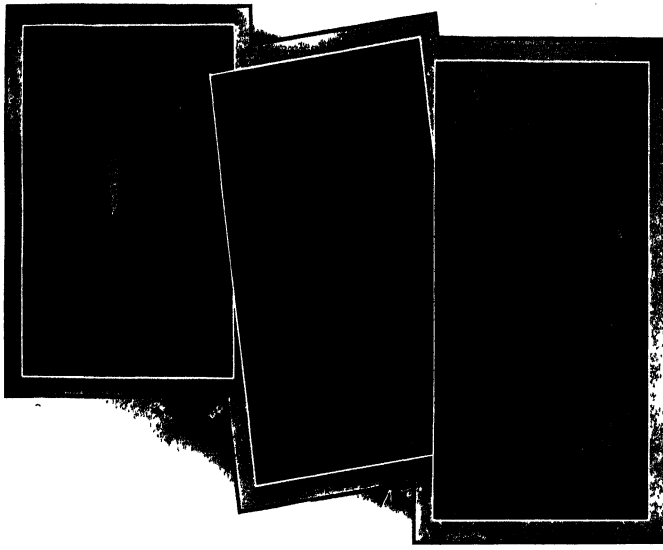
Bombay, by far the most important seaport in India for the export of cotton, may be said to be the home of the cotton spinning and weaving industry in the country, chiefly by reason of its moist climate being distinctly favourable for the purpose. It has, further, for a long time been the chief distributing centre for cotton in India, and consequently it attracts the bulk of the crop.

The first mill started in Bombay was in the sixties of last century. The number of mills in India and Ceylon on the 31st August, 1916, was 267, of which 1 is situated in Ceylon, and 89 (including 4 in course of erection) are situated in the Island of Bombay. In the past thirty years the number of spindles in India has increased from 1,100,000 to 6,840,000, and the number of looms from 9,000 to 110,000. Of these Bombay alone claims 44 per cent. of the spindles and 48 per cent. of the looms. The paid-up capital of all the cotton mills in India is about Rs. 197,000,000 or over £13,000,000, and of Bombay alone Rs. 80,000,000 or more than 5¼ millions, but as most of the mills have a capital expenditure running, in some cases, into three and four times the amount of their paid-up capital, the total sum invested would probably amount to somewhere near Rs. 500,000,000 or over £33,000,000, and the investment would not be replaceable at anything approaching this figure now.

With the exception of a few which are making use of water-power, mills in India were driven by steam until the advent of the Tata Hydro-Electric Power Supply Company, Ltd., a few years ago, but since that time one-third of the mills in Bombay have adopted the electric drive.

At first the mills in India were almost exclusively employed in spinning, and China was the chief market for their products, but factors have arisen which have changed these conditions, and mills are now turning their attention more and more to weaving, which, in spite of the excise duty, has been much more remunerative than spinning, so much so that at present there would probably be very few purely spinning mills left were it not for the difficulty of obtaining textile or other machinery from the homeland.

The restrictions of imports of cloth from Lancashire and the closing down of many lines imported from enemy countries have given Indian mills an opportunity, of which they are rapidly taking advantage, of opening up outside markets, and, in addition, of rapidly developing trade in products which were formerly largely in the hands of German manufacturers. The outlook for the industry is most hopeful, and out of the good profits made by mills at present, large sums are being set aside for future development which will enormously strengthen the position of Indian mills for the future. In fact, the manufacture of textiles is bound to fill a great place in the industrial life of New India.



MR. AND MRS. SOMERSET PLAYNE EN ROUTE FOR KASHMIR.

1. The Poplar Avenue. 2. In a Snowdrift at Murree 1918. 3. On the Road in Kashmir.

KASHMIR AND JAMMU

EARLY HISTORY

By ARNOLD WRIGHT

NO part of India—it might almost be said of Asia—is invested with a more romantic interest for the Briton than Kashmir. He sees it through the glamour of "Lalla Rookh" and is disposed to say of it in the words of that famous poem:

> "Oh! if there be an elysium on earth
> It is this: it is this."

Sometimes, perhaps, when close contact with inevitable drawbacks have taken off the edge of the first enthusiasm, the traveller is inclined to regard the ecstatic view of the Happy Valley as a trifle overdone; but on the whole Kashmir shares with the Taj Mahal the distinction of being a "sight" which the traveller does not consider to have been over-rated. In the exquisite beauty of its scenery, the glorious colouring and profusion of its flowers, the buoyancy of its atmosphere and the general delightfulness of its life and surroundings, the country is, indeed, unique in the East.

Historically, too, Kashmir has a record which places it high among the territories of India in point of interest. Its earliest history takes us into the dim region of Hindu mythology. "The current legend in Kashmir," notes the erudite writer in the *Gazetteer of India*, relates that the valley was once covered by the waters of a mighty lake, on which the goddess Parvati sailed in a pleasure boat from Haramukh mountain in the North to the Konsanag lake in the South. In her honour the lake was known as the Satisar, or lake of the virtuous woman. The country side was harassed by a demon popularly known as Jaldeo, a corruption of Jalodbhava. Kasyapa, the grandson of Brahma, came to the rescue, but for some time the amphibious demon eluded him, hiding under the water. Vishnu then intervened, and struck the mountains at Baramula with his trident. The waters of the lake rushed out, but the demon took refuge in the low ground near where Srinagar now stands, and baffled pursuit. Then Parvati cast a mountain on him, and so destroyed the wicked Jaldeo."

In classic India, Kashmir had an honoured place. The ancient chronicles speak of a "glorious King of Kashmir" named Gonanda, who was "worshipped by the region which Kailasa lights up and which the tossing Ganga clothes with a soft garment." In the same records the name of Asoka is associated with Srinagar, a town of ninety-six lakhs of houses resplendent with wealth. Buddhist influence predominated in this

early Kashmir. The kings were probably of that faith, and it is even claimed by Buddhist writers that the third Buddhist council was held in the country. Toleration, however, seems to have been the keynote of religious policy in those remote times, and Buddhist and Hindu lived amicably together, but when the famous Chinese pilgrim, Hiuen Tsiang, visited Kashmir in about the sixth century of the Christian era, he found the mass of the people Hindu and the Buddhist monasteries few and partly deserted. Another turn in Kashmir's wheel of fate brought into power about A.D. 528 Mihirakula, the king "cruel as death," who is known to history as the leader of the White Huns or Epthalites. Tradition lingers to this day of the brutal instincts of this monarch, the village people in that portion of the Happy Valley "pointing to a ridge on the Pir Panjal range, Hastivanj, where the king, to amuse himself, drove one hundred elephants over the precipice, enjoying their cries of agony." A notable king was Pravarasena II, who reigned about A.D. 700 and built his capital on the site of the present Srinagar. Another ruler of whom history takes great account is Lalitaditya, who ruled in the middle of the eighth century, and who distinguished himself by his successful campaigns in India and Central Asia. Returning from his last campaign loaded with booty, he followed the usual custom of building a capital for himself, and not content with this, he destroyed the earlier one which his predecessor had founded. His selection of a centre as the seat of government was not confirmed by his posterity. But laws which he imposed circumscribing the actions of cultivators have become stereotyped in the life of Kashmir. Yet another aspirant for the honour of fixing the state capital was Sankara Vannan, a king who reigned from 883 to 902. This king, after the manner of his kind, destroyed Paraspur, the then capital, and founded a new city, the town which corresponds with the modern Pattan. Finally, in this line of Hindu kings, we have Queen Didda, who reigned from 950 to 1003.

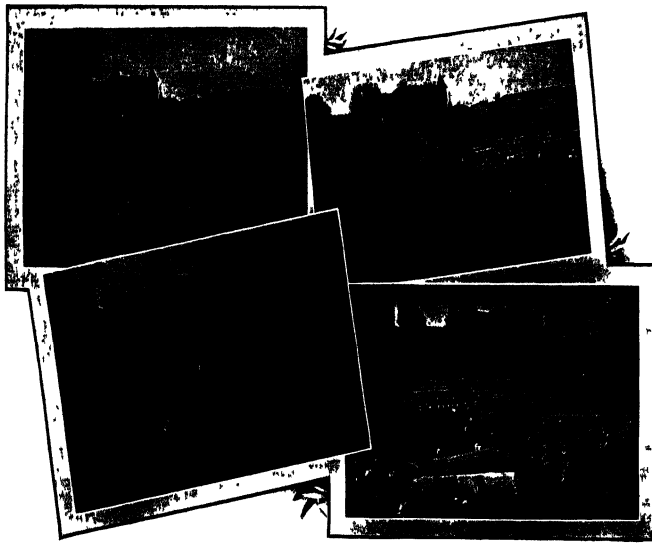
The subsequent history of Kashmir for some hundreds of years was a succession of violent changes in which dynasty succeeded dynasty, as some adventurer or other, by his military talents, acquired power. At the end of the fourteenth century a Mahommedan domination was exercised over the Happy Valley through a line of so-called Sultans. The best-known of these kings was Sultan Sikandar, a fanatical prince who, not content with destroying all the Hindu temples and works of art waged an incessant war against the prevailing faith by a cruel system of proselytism which left the unfortunate Hindus no alternative to apostasy but death or exile. His drastic measures had the inevitable effect of outwardly destroying the Hindu character of the population. But happily for the people the cruel *régime* inaugurated by Sikandar was not continued in the reign of his successor, Zain-ul-abidin. Abolishing the iniquitous poll-tax on Hindus and other oppressive measures of his predecessor, he inaugurated an era of toleration under which Hindu learning revived and the Brahmins regained their influence. This enlightened Sultan's death left Kashmir a prey to the old anarchical influences, and it was not until the conquest of the territory by the Emperor Akbar at the end of the sixteenth century that a reign of order was established.

Akbar's association with Kashmir is one of the poetic traditions of Indian history. Though he visited the valley only three times he was much attracted to it, and caused his great minister, Todar Mull, to devote to it a prominent measure of his administrative abilities. It is however, to the Emperor Jehangir that Kashmir owes its most opulent memories of Mogul rule. This monarch was greatly drawn to the country, and lavished upon it an extraordinary amount of money and care. A conspicuous feature of the Kashmir of his day was the many lovely pleasure gardens which the emperor caused to be created in appropriate positions, notably around the Dal lake. It is stated that the revenue from these gardens from the sale of roses and bed musk, was as much as one lakh of rupees a year, a very large sum having regard to the difference in values between those days and the present time. The Mogul connection lasted until the middle of the eighteenth century, when, in consequence of the decay of the Imperial power, the Subah of the State became practically independent of Delhi. Thereafter it fell under a ruthless Afghan despotism, the people being hideously oppressed by a succession of governors from Kabul, each of whom was more cruel than his predecessor. At length, their condition becoming insupportable, they turned for aid to Ranjit Singh, of Lahore, whose rising star was then attracting the attention of India. As a consequence of this appeal the Sikh chief in 1814 sent an army to Kashmir, the advance being made by the Pir Panjal. The expedition was a failure, and nothing further was done until 1819, when Ranjit Singh's best general, Misr Diwan Chand, accompanied by Gulab Singh, of Jammu, invaded Kashmir, and after driving out the Afghan representative, Mahomed Azim Khan, established the Sikh power. The Sikh rule, though milder than that of the Afghans, was in many respects cruel. When a terrible famine ravaged the valley in the early years of the Sikh ascendancy, the people were left to die in their thousands by Sher Singh, the Governor. Sher Singh's successor, Mian Singh, was a man of a different stamp, and grateful memories still linger of his exertions to repair the ravages of the famine. He was unfortunately assassinated by mutinous troops.

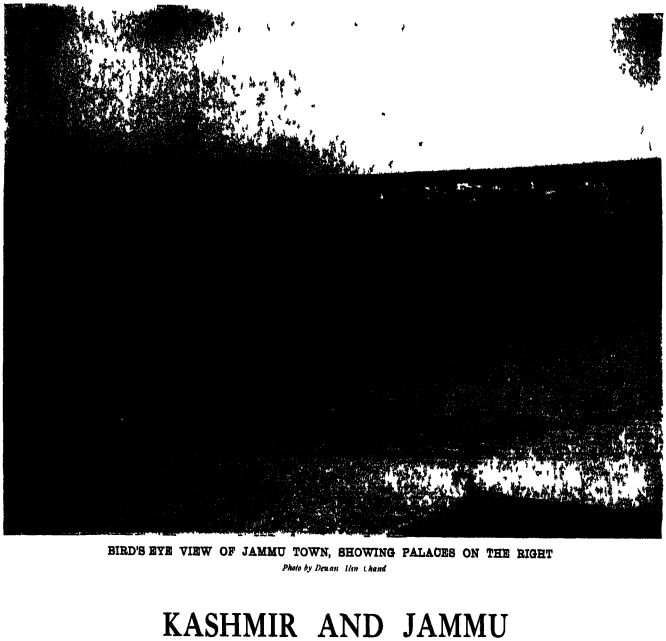
While Kashmir was passing through the later vicissitudes in its history which we have outlined, a new power was growing in influence on the environs of the State. This was the authority waged by Goolab Singh, a Rajpoot who was one of Ranjit Singh's favourite lieutenants. Created Raja of Jammu in 1820 for services rendered to the Sikh cause, Goolab Singh, by force of character, speedily organized his territory on firm lines, and, in conjunction with his brothers, Dhyan Singh, who was made Chief of Punah, and Suchet Singh, who for his services had been placed in charge of the state of Ramnagar, eventually established a complete domination of nearly all the country between Kashmir and the Punjab. Ladakh and Battistan were also brought under control, with the result that Goolab Singh was practically master of all the territory immediately surrounding Kashmir.

When war broke out between the British and the Sikhs, Goolab Singh prudently refrained from taking sides until in 1846, after the battle of Sobraon, he acted the part of mediator between the British and their beaten enemy. The treaties concluded as a result of this intervention gave to the British as equivalent of an indemnity of one crore of rupees, the hill countries between the rivers Beas and the Indus, and transferred from the British to Goolab Singh for the sum of 75 lakhs all the hilly and mountainous country situated to the east of the Indus and the west of the Ravi. The Sikhs for a time resisted the transfer

of the Kashmir territory to Goolab Singh, but through Sir Henry Lawrence's intervention the territory was ultimately handed over A new development occured a little later when Goolab Singh's Dogra troops having relieved the Sikhs at Gilgit and Aster, the Hunza Raja invaded Gilgit territory and captured the fort there. The Maharaja quickly recovered the lost fort, but in 1852, partly by treachery, the Dogra garrison, was driven out and annihilated Goolab Singh died in 1857 before the reverse could be wiped out, but his successor, Ranbir Singh, in 1860, sent against the fort a well-equipped expedition, which succeeded in finally establishing the Dogra hold upon this much contested outpost Ranbir Singh was an excellent ruler, a man of learning and culture and strong intelligence. His life and reign was darkened at their close by the calamitous famine of 1877–9, which decimated the Happy Valley. On his death in September 1885 he was succeeded by his eldest son, the present Maharaja Pratap Singh, G C S.I , one of the best known and most enlightened of the rulers of India, whose career is fully dealt with in a subsequent page



H E THE VICEROY'S VISIT TO KASHMIR, 1918



BIRD'S EYE VIEW OF JAMMU TOWN, SHOWING PALACES ON THE RIGHT

Photo by Dewan Hira Chand

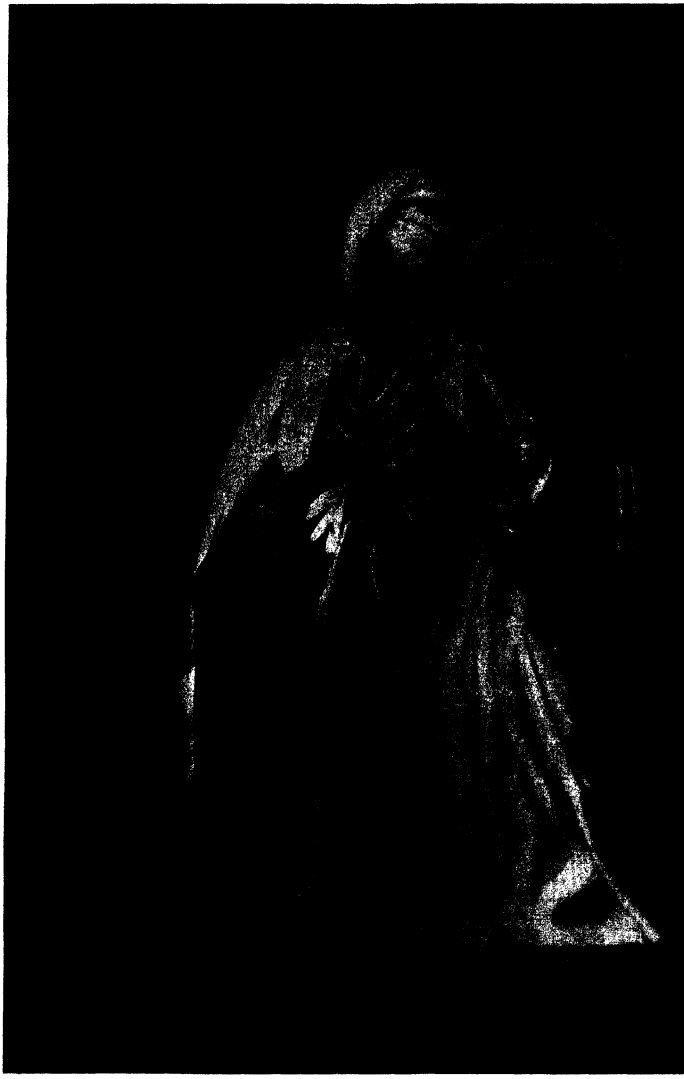
KASHMIR AND JAMMU

MODERN HISTORY

IN the foregoing early history brief reference is made to the dynasty which now rules over Kashmir It will be interesting to supplement the facts there given with some details concerning the individual rulers of the State

Maharaja Gulab Singh was succeeded by his son, Maharaja Sir Ranbir Singh Sahib, G C S I, G C I E, during whose reign a political officer was appointed to represent the Government of India, chiefly in connection with the issue of passports to European visitors His Highness was a most capable ruler, grappling in a very efficient manner with problems of reform and progress which had been too long delayed, and his chief charm lay in the fact that his personal character was above reproach, that he was always ready to meet his subjects in open Durbar to discuss and, if possible, redress grievances, and that by example and precept he endeavoured to instil into the minds of his subjects an earnest desire to raise themselves socially and thus become worthier inhabitants of one of the most important States in India The magnificent services rendered by His Highness the Maharaja in support of the British troops during the Mutiny of 1857 elicited the highest praise from the Imperial Government who in their desire to give further manifestation of their recognition, offered to present to His Highness an *ilaka* in the Province of Oudh This honour was duly appreciated by His Highness, but he begged leave to decline the grant, declaring that ' he had come forward to share the burden of the campaign as a true friend and devoted ally of the British Government and not as a mercenary prompted by love of gain ' His Highness died in 1885, and was succeeded by his son, the present ruler, whose title is Lieutenant-General His Highness Maharaja Sir Pratap Singh Indar Mihandar Bahadur Sipar-i-Saltanat, G C S I, G C I E, C B E, LL D

His Highness was thirty-five years of age when he came to the throne, and had already made his mark as a scholar and administrator A diligent student in his earliest years, he in course of time became acquainted with the Sanskrit language with the best authors in English literature and with the principles of science medicine and law After his educational training was completed he underwent a thorough grounding in administrative work in the Revenue, Judicial, and other departments of State Thus, it may be said of him that when he ascended the *gadi* he had a well-furnished mind, and was able to deal wisely and justly with the intricate questions of State management His Highness has been a sportsman of the true type from a very tender age, and his prowess in wrestling, horsemanship, cricket, and other recreations has been a great stimulus to the young people of Jammu and Kashmir to make the best use of suitable opportunities for indulging in healthy physical exercise One of the first acts of importance under the new *regime* was the appointment by the British Government



HIS HIGHNESS LIEUT.-GENERAL SRI MAHARAJA SIR PRATAP SINGH, SAHIB BAHADUR, G.C.S.I., G.C.I.E., C.B.E., LL.D., INDAR MOHINDAR, SIPAR-I-SALTANAT, OF JAMMU AND KASHMIR STATE.

Photo by Vernon.

of a Resident in Kashmir, who superseded the political official already mentioned.

In the year 1887 differences arose between the Government of India and His Highness the Maharaja, in consequence of which the latter voluntarily requested that he might be relieved of ruling powers for a period of five years, whereupon a State Council was appointed to conduct the administration of the State under the general control of the Resident. In 1893 His Highness the Maharaja became President of the Council, and in October 1905 he was reinvested with full ruling powers by His Excellency Lord Curzon, Viceroy and Governor-General of India, the Council being at the same time abolished. In 1892 His Highness was created a Knight Grand Commander of the Most Exalted Order of the Star of India, and four years later he was granted the honorary rank of Major-General in the British Army. The disturbances which were continually occurring on the north-western frontier necessitated the despatch of several military expeditions by the British Government, and in the majority of these affairs the troops of His Highness acquitted themselves in a most creditable manner when fighting side by side with the Imperial forces. This bravery was especially conspicuous in the Tirah campaign, in which the artillery detachment of Jammu and Kashmir earned a great reputation for the great skill with which they carr.ed out orders entrusted to them.

For the purposes of revenue administration the State is divided into four parts, namely: (1) the Province of Jammu, which comprises the five *wazarats*, or districts, of Jammu Khas, Udhampur, Kathua, Reasi, and Mirpur; (2) the Province of Kashmir, containing the *wazarats* of the Southern Division, the Northern Division and Muzaffarabad; and the frontier districts of (3) Ladakh and (4) Gilgit. The two provinces are under the supervision of governors, while the two frontier districts are under Wazir-i-Wazarat. The general administration of the State is in the hands of His Highness, who is assisted by his chief minister, Raja Sir Daljit Singh, K.B.E., C.S.I. The portfolio of Revenue Minister is held by Rai Bahadur Major-General Diwan Bishan Das, C.I.E., V.O., and that of Home Minister by Nawab Maula Baksh Khan Bahadur, C.I.E. Rai Bahadur Kunwar Parmanand is the Judge of the High Court, and holds charge of the Judicial department. Under him is a Chief Judge for each of the two provinces, together with sub-judges, magistrates, munsiffs, and special magistrates.

GENERAL RAJA SIR HARI SINGH, K.C.I.E., COMMANDER-IN-CHIEF, JAMMU AND KASHMIR STATE ARMY.

Photo by Diwan Alam Chand.

The army—including the transport department—is under the Commander-in-Chief, General Raja Sir Hari Singh Sahib, K.C.I.E., nephew to His Highness the Maharaja.

The Public Works, Forests, Accounts, Land Settlement, Game Preservation, Horticultural, and Sericulture departments are controlled by European officials of great ability, while the postal and telegraph service is in the charge of the Imperial Government.

The police force, comprising about 2,135 officers and men, is maintained by the State at an annual cost of Rs. 4,92,000, and there are central jails in the cities of Jammu and Srinagar, together with a number of subsidiary ones in various parts of the State.

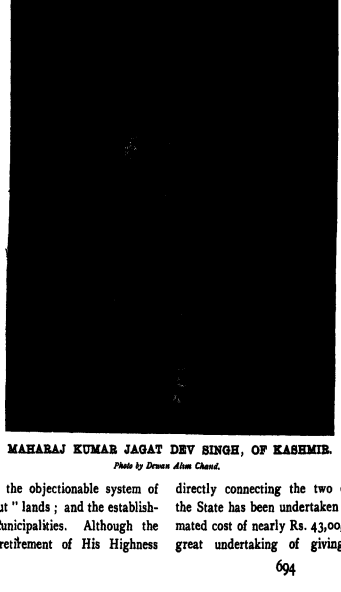
The State also maintains two mountain batteries, one garrison battery, artillery,

a troop of lancers and bodyguard cavalry, sappers, miners, and nearly 4,000 Imperial Service troops.

Epidemics of cholera and plague, coupled with laxity on the part of the people in taking proper sanitary precautions, have prompted the *Darbar* to support a very strong medical department, and there are now State hospitals at Jammu and Srinagar, a leper asylum, military hospitals, and nearly fifty-five dispensaries scattered over the different districts.

His Highness the Maharaja, at the date of his succession (1885), realized that reforms were urgently needed in a number of important matters affecting the wellbeing of his subjects, such as the reorganization of the State departments and the introduction of a system of grading officials at higher rates of remuneration, the removal of taxation which pressed unfairly upon the people and consequently prevented progress; the extension of road and railway facilities; an alteration in the manner of fixing and collecting rents, which included the abolition of the objectionable system of "farming out" lands; and the establishment of municipalities. Although the temporary retirement of His Highness interfered to some extent with the furtherance of some of these schemes, the Maharaja's brothers, the late Raja Sir Ram Singh, K.C.B., and Raja Sir Amar Singh, K.C.S.I., were indefatigable in their endeavours to raise the status of the whole territories and their inhabitants, but the most definite results in the way of improvements have been obtained within the past ten or fifteen years in pursuance of the wise policy inaugurated by His Highness, and carried out under his personal direction.

A great impetus has been given to the cultivation of fruit trees, as it has been shown that if pursued on definite scientific lines the exportation of indigenous produce of orchards is likely to become a very valuable asset to the State. The extension of internal communication by means of railways, roads, and canals has been rapidly pushed forward, one of the principal of these works being the construction of the road from Srinagar to Gilgit at a cost of nearly Rs. 15,00,000. Recently the construction of a motor road directly connecting the two capitals of the State has been undertaken at an estimated cost of nearly Rs. 43,00,000. The great undertaking of giving a good supply of water to the cities of Jammu and Srinagar has been satisfactorily completed, and hydro-electric installations have been established for lighting and other purposes in both Jammu and Kashmir. A model agricultural farm has been started in Srinagar with the view of spreading among the *Zamindars* the knowledge of scientific methods of cultivation, and a department of archæology has been organized for the preservation of ancient historic temples and monuments. Steps have only recently been taken to prevent the devastation of forests by persons who appear to be without any idea of the damage which they cause. Practical shape has also been given to the movement of co-operative credit societies by the establishment of agricultural banks in several parts of the State.



MAHARAJ KUMAR JAGAT DEV SINGH, OF KASHMIR.
Photo by Diwan Alum Chand.

Perhaps the greatest of all benefits secured for the State is a wise scheme of land settlement which transformed the condition of the peasant occupiers, and in this connection one cannot do better than quote the words of the Settlement officer, who, according to a handbook prepared by the late Dr. Arthur Neve, F.R.C.S., of the Church Missionary Society, said: "Under the old *régime* the revenue officials, from highest to lowest, combined to rob their master and despoil the people. It has always struck me that in numerous and vexatious impositions the officials used every device in order to make the demand burdensome and costly to the people.

"Land, which alone can be relied upon for revenue purposes, became, with every new imposition, less productive to the State and to the cultivator, and every year saw a diminution in the revenue, which was carefully concealed from the Maharaja.

"When the late Maharaja Ranbir Singh tried in 1873 to collect the revenue in cash, he was thwarted by the opposition of the officials, and this opposition necessitated the application of both tact and perseverance on the part of the European Settlement Commissioner.

"As the settlement progressed it gained the confidence of the people, and the peasantry soon learnt that the new arrangement introduced freedom. While relieving the exactions on every kind of produce, the assessment was a light one, and was fixed for ten years. The value of land was at once enhanced; but it was wisely determined not to grant the villager rights of sale or mortgage, which might have relieved him from official imposition, only to make him the slave

of the money-lender, as in many parts of British India.

"In this way the cultivators secured the reward of their labours, with the result that much waste land was soon taken up. It may now be asserted that the peasantry, with their little vegetable gardens, their poultry and sheep farms, with their abundant fruit trees, with vast mountain grazing grounds and privileges in the way of firewood and forage, are now exceedingly well off."

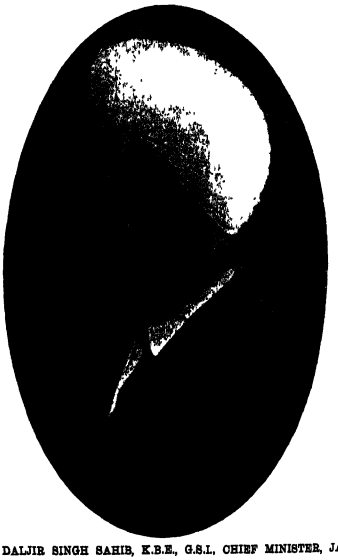
The Jammu and Kashmir ruling house has always been noted for its unflinching loyalty to the Suzerain power, and in illustration of this, reference may be made to an address delivered by His Highness on the occasion of the celebration of the birthday of His Gracious Majesty the late King Edward VII, on June 28, 1907. Speaking in open *Darbar*, His Highness said:

"Pleasant to me are the constant recollections of His Gracious Majesty, as I happen to have enjoyed the great honour and privilege of being known to and having entertained him personally, when he visited Jammu as the Prince of Wales in my father's time, just thirty years ago, and, in view of my innermost feelings of devotion, loyalty, and attachment to His Imperial Majesty's person and throne, happiest to me is the day when I have the honour to celebrate the birthday of the most dearly-loved Sovereign, in which I have asked you, ladies and gentlemen, to join me this evening. We all of us know how deeply His Majesty has endeared himself alike to the great and small rulers and the people by his constant and earnest efforts in the interest of the world's peace, and his eager desire to do everything in his power to promote the intellectual and physical wellbeing of his subjects throughout vast dominions of the British Empire over which the sun never sets. His sympathy towards the native States of India and their rulers, and his keen interest in their welfare, are well known, which sympathy—it is a matter of much gratification for us all—is fully shared by Their Royal Highnesses the Prince and Princess of Wales. I sincerely pray that the Great Giver of all good may spare His Imperial Majesty for many years to continue a prosperous reign which has already been productive of lasting benefits not only to the British Empire but to the whole world. May he live long, happy in his most estimable family, happier in the deep and sincere affection of his people, and happiest in the memory of his noble and useful life."

While a guest at the coronation celebrations at Delhi in 1911, His Highness the Maharaja was honoured by His Majesty the King-Emperor, George V, by being created a Knight Grand Commander of the Most Eminent Order of the Indian Empire, and on his return to the State His Highness held a *Darbar* at Jammu, at which he announced a number of concessions in honour of the Royal visit to India. These included the grant of Rs. 5,00,000 for sanitary and other improvements, and of Rs. 2,50,000 in aid of primary education, the sanction of a scheme for the improvement of the position of small holders of land, an extension of the powers of municipalities, and the gift of literary pensions and prizes for scholars in State schools.

The abhorrence of His Highness the Maharaja of the dastardly attempt made upon the life of His Excellency Lord Hardinge, Viceroy and Governor-General of India, in December 1912, was manifested by his offer of Rs. 10,000 for the capture of the would-be assassin. At a public meeting held at Jammu shortly afterwards, His Highness, who presided, said: "Words fail to give adequate expression to our sense of horror and indignation at the foul deed. To me the shock has been exceedingly severe, because not only do I claim the personal friendship with His Excellency, but the ties of close friendship have united the two families for more than sixty years."

His Highness is a devoted Hindu of the orthodox type, spending mornings and evenings in the observance of religious worship, and his catholicity of mind is exemplified by his tolerance towards the creeds and convictions of all other persons. It might be said with truth that His Highness is one of his own people: he sympathizes with them in their difficulties and troubles, he makes personal inquiries, as far as possible, into their grievances, he realizes the deep responsibility laid upon him as ruler of more than three million subjects, and he is deeply interested in all matters tending to their literary, social, and moral welfare. His Highness is entitled to a salute of twenty-one guns.

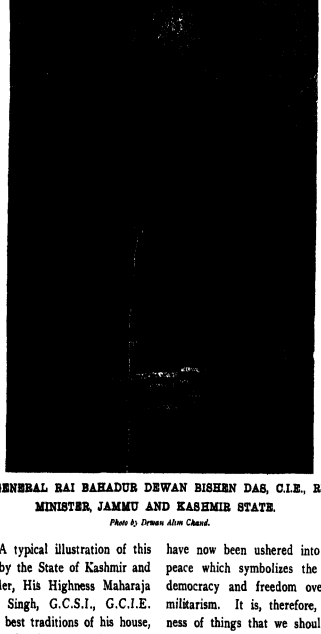


RAJA DALJIR SINGH SAHIB, K.B.E., G.S.I., CHIEF MINISTER, JAMMU AND KASHMIR STATE.

Photo by Diwan Atam Chand

It may be convenient at this juncture to refer to the financial and other assistance rendered by the State to the Imperial Government during the Great War which has recently been brought to a conclusion.

Of the several outstanding features of the war, none is perhaps so important and of such wide significance, so far as the British Empire is concerned, as the spontaneous outburst of loyalty that it has called forth from the ruling princes of India. A typical illustration of this is afforded by the State of Kashmir and its wise ruler, His Highness Maharaja Sir Pratap Singh, G.C.S.I., G.C.I.E. True to the best traditions of his house, whose unswerving loyalty to the British Throne is well known to all readers of Indian history, His Highness was from the commencement of the war deeply engaged in organizing all possible measures of assistance to the righteous cause of the Empire. In this connection it may be well to reproduce a copy of an important speech made by His Highness the Maharaja at a peace celebration *Darbar* held at Jammu on December 17, 1919. "Gentlemen,—More than a year has passed since the termination of the Great War which convulsed the world for a period of more than four years. The misery and desolation which followed in the train of this stupendous conflict can better be imagined than described. But, thank God, the forces of righteousness triumphed over those of evil, and humanity emerged from its trial to resume its march in the course of its evolution towards higher purposes. We have now been ushered into an era of peace which symbolizes the victory of democracy and freedom over Prussian militarism. It is, therefore, in the fitness of things that we should assemble here to partake in general rejoicings which this occasion has invoked throughout the Empire. In doing so, I hope we shall be excused if we are unable to refrain from recalling to our memories with a feeling of pride the part which we as members of the body politic of the British Empire played during the anxious period of its tribulations. The war presented a golden opportunity to the people and princes of India, who had a lasting stake in the stability of the British Empire, to give a practical proof of their devotion and attachment to the Imperial throne of Great Britain. I am glad to say that my State and people did not yield to anyone in placing their resources, both in men and money, at the disposal of the Empire; and thus they contributed what they could towards the emancipation of the world from the forces of darkness, and towards a brilliant achievement of peace and liberty.



MAJOR-GENERAL RAI BAHADUR DEWAN BISHEN DAS, C.I.E., REVENUE MINISTER, JAMMU AND KASHMIR STATE.

Photo by Dewan Alim Chand.

"With the commencement of hostilities I took the earliest opportunity of despatching to the front my Imperial Service troops, consisting of the 2nd and 3rd Kashmir Rifles and the 1st Kashmir Mountain Battery. The stirring deeds of heroism and gallantry which characterized the careers of my officers and men in the field have been highly appreciated.

"In a despatch dated December 1, 1914, to the Secretary of State for War, Major-General A. E. Aitken, commanding the Indian Expeditionary Force 'B,' wrote as follows:

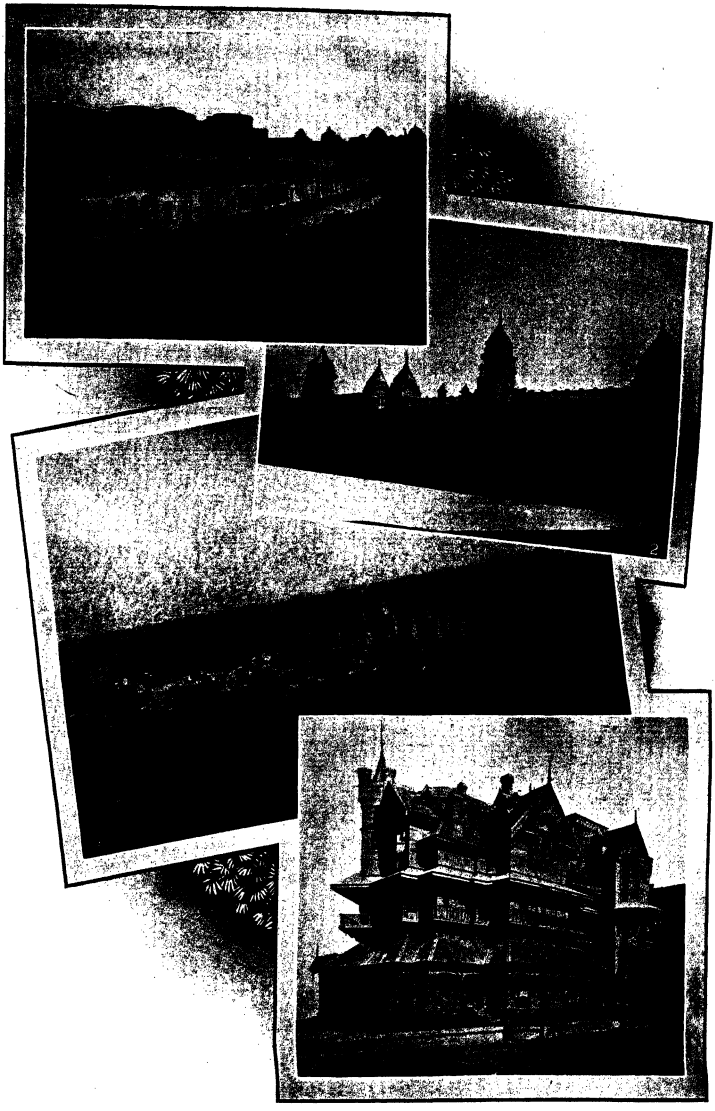
"'*3rd Kashmir Rifles.*

"'Lieutenant-Colonel Raghbir Singh, 3rd Kashmir Rifles, and Lieutenant-Colonel Durga Singh, 2nd Kashmir Rifles, handled their units with conspicuous gallantry and skill during the action at Tonga on November 4, 1914. The good work done by their units throughout the operations reflects the greatest credit on them in every way.'

"In his telegram dated January 23, 1915, General Wapshare, Zanzibar, sent a message to the Chief of the General Staff, saying that in the attempt to relieve Jasin post the fighting lasted for nine hours. . . . The odds were heavy, more particularly in machine guns. A gallant fight was put up by about 40 of the Kashmir Rifles in a house close to the post. The greater part of them in the end managed to break through and join the Umba force.

"The Commander-in-Chief, 2nd East Africa Brigade, thanked all ranks for the magnificent spirit and fortitude shown by them during three days' fighting (in September 1916) under as trying and difficult circumstances of country, heat, food, and water as any man could be asked to face, and he appreciated the fine work done by the 3rd Kashmir Rifles.

"The following officers and men were mentioned in despatches submitted by Lieutenant-General the Hon. J. C. Smuts, Commander-in-Chief East African Forces: Subedar Parsadh Singh, Jama-



1. SIDE VIEW OF MANDI PALACE, JAMMU. 2. CIVIL AND MILITARY OFFICES, JAMMU.
3. VIEW OF RUGHNATH TEMPLES, JAMMU. 4. VIEW OF RAMNAGAR AMAR PALACE, JAMMU.

Photo by Dewan Alim Chand.

dar Amir Khan, Jamadar Bom Bahadur, Havildars Attaullah and Harku, Guran Ditta, and Devi Singh, sepoys Hafiz Ali and Raham Ali.

"The following officers and men of the Kashmir Mountain Battery No. 1 were also mentioned: Subedar Alif Khan, Gunner Ali Baksh, Havildar-Major Khushal Singh, Havildar Rajor Singh, Abdullah, Havildar Mohammad, Driver Fateh Bahadur, Naick Gandharb Singh, Driver Naick Ishri Singh, Driver Naick Mohammad Din, Havildar Mattiullah, Driver Nandu, Driver Naick Relu, Gunner Naick Sher Baz Khan, Driver Havildar Sohnu, and Naick Yakub Shah, while Jamadar Majra Singh, Naick Chuni Ram, and Havildar Mal, of 1st Kashmir Infantry; Captain Shiv Das, Jamadar Bom Bahadur, of 3rd Kashmir Rifles, were mentioned by General Viscount Allenby, G.C.B., G.C.M.G., Commander-in-Chief Egyptian Expeditionary Force. The General Officer Commanding East Africa, on the withdrawal of the 2nd and 3rd Kashmir Rifles, expressed his 'regret at having to lose them, as they had done consistently well on service, and he regarded them as being especially suited for campaigning in East Africa.'

"General Van de Venter telegraphed to the Commander-in-Chief in India as follows: 'Your telegram dated 19th December. My telegram dated 19th May, 1917, begins. On departure of 2nd and 3rd Kashmir Rifles for India I desire to place on record for your information and that of the Maharaja appreciations of meritorious services of these two regiments for two years and six months in East Africa. Spirit of these two battalions excellent; they are thoroughly reliable.' 'The Kashmir Imperial Service Mountain Battery has rendered good service in East Africa, and has throughout maintained a high standard of efficiency and discipline, and on departure of this unit wish to record my appreciation of the good services rendered,' dated 14 February, 1918.

"His Excellency the Commander-in-Chief in India was pleased to extend a hearty welcome and convey congratulations for the gallantry of the Kashmir Imperial Service Troops on the services which they have rendered to the Empire during the war.

"Several officers and men were also decorated with marks of distinction for special acts of valour performed by them in the field, as, for instance: Subedar Randir Singh, 2nd Kashmir Rifles, was awarded a second-class Order of Merit for his gallant behaviour in the action at Tonga on November 4, 1914, when in command of a detachment which charged and secured the enemy's trenches and captured a machine gun, he being severely wounded when leading his men. Two sepoys, Bal Bahadur Chattri and Bal Bahadur Thapa, were awarded a second-class Order of Merit for gallant behaviour on the night of January 18–19, 1915, at Jasin, in volunteering to carry a message to Jasin post. The post was surrounded by the enemy and the errand was one of great danger. At night, with two Africans, they proceeded in a dug-out through the mangrove swamps adjoining the post, and, though unable to get through the enemy's outposts, which were in a close ring round the post, they fired on the enemy, remained out all night, and brought in useful information.

"The following, in the 2nd Kashmir Rifles, were awarded Indian Distinguished Service Medals: Subedar Mardan Ali Khan, Havildar Madho, Sepoy Billoo, Saif Ali Bhagwan Singh, Ganga Ram, and Devi Singh.

"Lieutenant-Colonel Haidar Ali Khan and Major Gandharb Singh were awarded second-class Orders of British India.

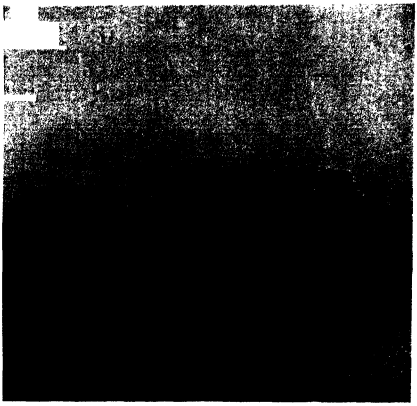
"Lieutenant-Colonel Durga Singh, 3rd Kashmir Rifles, was promoted to a first-class Order of Merit. This gallant officer, who was suffering from fever at the time, was conspicuous for his courageous behaviour in leading his men on November 4, 1914, at Tonga. He was shot across the face and again through the back of the head. The second-class Order of Merit was awarded to Havildar Attaullah Khan and Sepoys Hafiz Ali and Rahman Ali, 2nd Kashmir Rifles. The above-named two sepoys were also awarded Russian decorations, 'Medal St. George, fourth class.'

"The late Tzar of Russia was pleased to confer the Order of Saint Stanislaus, third class (with sword), upon Lieutenant-Colonel Haidar Ali Khan, 2nd Kashmir Rifles.

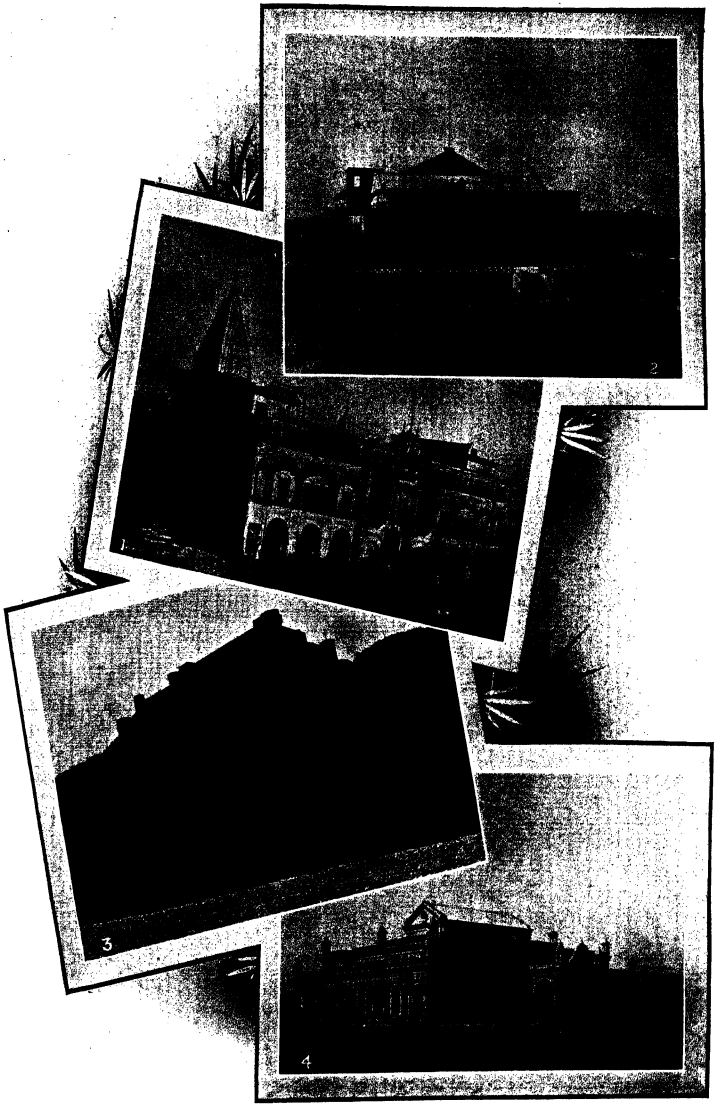
"The under-mentioned officers and men of the 2nd Kashmir Rifles were awarded honours as noted below: Jamadar Bom Bahadur, I.D.S.M., Lance-Naick Devi Singh, I.O.M., second class; and Havildar Haribir, I.D.S.M.

"The Governor-General in Council was pleased to sanction the award of the Indian Distinguished Medal to Naick Kumel Singh and Meritorious Service Medals to Havildar-Major Bag Ali, Driver Havildar Musahib Ali, and Havildar Sant Ram, of the 1st Kashmir Mountain Battery.

"Meritorious Service Medals were also awarded without annuity to: Havildar Ali Akhbar, Naick Teju, Sepoy Mohammad Akram, of the 2nd Kashmir Rifles, and Quarter-Master Havildar Bal Bahadur, Naick Kar Bir, and Sepoy Sahib Ram, of the 3rd Kashmir Rifles.



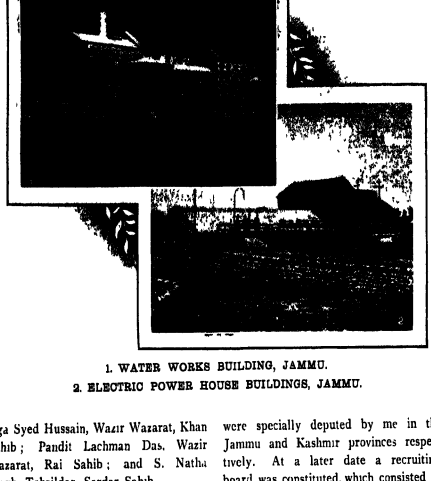
SUSPENSION TAWI BRIDGE, JAMMU.
Photo by Drown Allen Chand.



1. PURANI MANDI TEMPLES, JAMMU. 2. MUSEUM BUILDING, JAMMU. 3 FORT BAHU, JAMMU.
4. PRINCE OF WALES COLLEGE, JAMMU.

Photo by Dewan Alim Chand.

"The following officers were also granted distinctions by the British Government in recognition of their war services: General Raja Sir Hari Singh Sahib, Commander-in-Chief, was created a K.C.I.E.; Raja Daljit Singh, C.I.E., Chief Minister, became K.B.E.; A. M. Stow, Esq., I.C.S., Settlement Commissioner, O.B.E.; General Farman Ali Khan, C.I.E.; Colonel Haidar Ali Khan, C.I.E.; Colonel Anant Ram, Rai Sahib; Khan Bahadur Chaudhri Khushi Mohammad, Governor, Khan Bahadur; Raja Ali Gohar, Naib Tehsildar, Khan Sahib; S. Mir Hosain Shah, Tehsildar, Khan Sahib; Aga Syed Hussain, Wazir Wazarat, Khan Sahib; Pandit Lachman Das, Wazir Wazarat, Rai Sahib; and S. Natha Singh, Tehsildar, Sardar Sahib.



1. WATER WORKS BUILDING, JAMMU.
2. ELECTRIC POWER HOUSE BUILDINGS, JAMMU.

"During the period of their active service in the field my troops had to be reinforced from time to time, and I am glad to be able to say that the arrangements made by the officers of the army in connection with these additions were highly commendable. Notwithstanding all this, troops were maintained to preserve internal order and to protect the frontiers of the State as heretofore.

"Recruiting operations were successfully conducted for our own troops as well as for the Indian armies under the keen supervision and guidance of British recruiting officers and officers of my troops, with the co-operation and united efforts of executive officers of the province and districts. The Jammu was the first to come forward to help the *Darbar* with men in this direction. The wave of enthusiasm which caught my people in Jammu spread to Kashmir and even to remote places such as Baltistan, and my people were able to send in for the armies no fewer than 18,391 men, that is to say, 14,535 from the Jammu province, 3,547 from Kashmir, and 309 from Ladakh district. In the initial stages of recruiting operations, two revenue officers, namely, Khan Sahib Mir Hosain Shah and Khan Sahib Raja Ali Gohar Khan, were specially deputed by me in the Jammu and Kashmir provinces respectively. At a later date a recruiting board was constituted, which consisted of the Commander-in-Chief, my ministers (with the Chief Minister as chairman), and as secretaries, the late Dr. Diwan Badri Nath and subsequently the late Rai Bahadur Pandit Uday Chand. The keen interest which these officers took in recruiting work stands to their credit. To encourage my people in offering themselves for enlistment, grants of bonuses, kit allowances, rations and clothing were sanctioned, and concessions in the form of exemptions of their relatives from *Kar-Sarkar* and grants of timber on favourable rates were made. Civil and criminal cases instituted by or against them were ordained to be postponed, and a *Panchayat* system to settle their household disputes was introduced.

"The military expenditure consequent upon the contributions referred to above was increased by Rs. 9,43,541. In addition to this the State contributed Rs. 10,56,337 to the Imperial Relief and other funds; General Raja Sir Hari Singh contributed Rs. 3,36,656 towards the Imperial Relief and other funds, and subscriptions to these funds by the people of my State—both officials and non-officials—amounted to Rs. 1,40,982.

"The total contributions to the war loan funds amounted to Rs. 53,00,788.

"Of the raw materials of the State, arrangements were made by the Forest Department of the State for the supply of timber to the Munition Board for railway requirements in Mesopotamia, and of walnut wood for the manufacture of rifles.

"Humble though these contributions may appear in the face of the immense resources of the British Empire, you will, I hope, agree with me in thinking that in keeping with our resources they afford us an occasion for pride in the share which has fallen to our lot in the speedy termination of the terrible war. This feeling is intensified by the fact that while we were in the thick of hostilities, my people of the Kashmir province had to face an unprecedented rise in the price of staple food-grains in 1917. This storm of economic trouble was tactfully met, measures being adopted which afforded great relief to the people without in any way prejudicing the *Darbar's* policy of helping the Empire in the time of its need.

"It is a matter of much gratification to me to say that in all that my Government has been able to do in giving practical expressions of traditional loyalty of my house to the Crown, it has received the faithful co-operation of its officials and subjects of all grades and classes. I highly appreciate the meritorious services rendered by Raja Sir Daljit Singh, who has received the distinction of K.B.E. He has been at the helm of State affairs and has, it is needless to say, been able, by his wise statesmanship, to guide, with great success, the destinies of the State during these troublous times. I cannot speak too highly of the splendid services of Major-General Rai Bahadur Diwan Bishen Das, my Revenue Minister, who has from the beginning of the war stood by me at all times offering ungrudging help and advice in measures connected

with the war, and of the praiseworthy services of Rai Bahadur Kanwar Parmanand in successfully carrying out the work in connection with the 'Our Day' movement and publicity bureau. While thanking these officers, I must convey an expression of cordial gratitude to the Raja Sahib of Poonch, His Highness the Mihtar of Chitral, the Mir of Hunza and Nagar, who came forward with ungrudging assistance for the successful prosecution of the war and in upholding the traditions of devotion of my house to the King-Emperor. I also appreciate the spirit of loyalty and self-sacrifice which actuated all my subjects, including *Jagirdars*, *Raisis*, traders and *Zamindars*, as well as officers of all departments of my State, and thus enable me to avail myself of their unstinted support in these trying times. My best thanks are also due to General Rose, Major Karr, and various inspecting officers of my Imperial Service troops, as well as to Major Tancred, Major E. J. Mollison, Divisional Recruiting Officer, Rawalpindi, and Major E. B. Barnes, Divisional Recruiting Officer, Lahore.

"I cannot close these remarks without expressing my deep sense of gratitude to my staunch friend Colonel Bannerman, for the valuable advice and cordial assistance which I have received at his hands during his tenure of office as Resident in Kashmir. His keen insight into the affairs of the State, and his sagacious diplomacy have been of material support to the *Darbar* in carrying out their policy for the successful administration of the State during the war and economic disturbance.

"I have considered it desirable to give an expression of my appreciation of the work of deserving persons in the form of grants of *sanads* and badges. In addition, it is under my consideration to increase the pay and allowances of officers, non-commissioned officers, and *sowars* of Imperial Service troops and to grant certain other concessions."

The average European reader on hearing the word Kashmir will in all probability have his thoughts thrown back to his schooldays, when boys, and girls too, were taught that Kashmir was famous chiefly for its manufacture of ladies' shawls of superb quality, but few of us would be given the faintest conception of a country which has been immortalized by Eastern and Western poets as one of unparalleled loveliness. There is the wild grandeur of its lofty mountains, with their snow-clad summits, fertile valleys which yield an abundant supply of grain, fruit, and flowers, luxuriant forests covering the slopes of the mighty hills, and shooting and other recreations for sportsmen; while for those who are in need of a bracing climate for the recovery of shattered health the valley of Kashmir has no equal.

The territory belonging to His Highness the Maharaja, known by the name of the State of Jammu and Kashmir, has an area of nearly 85,000 square miles, and it is inhabited by more than 3,100,000 people. It is bounded on the north by the Karakoram mountains, on the east by Chinese Tibet, on the south by the Punjab, and on the west by the Punjab and the Hazara country.

Rising gradually from the great plains of the Punjab are two ridges of sand-stones at an elevation of about 4,000 feet above the level of the sea. Further to the north are the Middle mountains (800 feet to 10,000 feet), with excellent pasture

FRONT VIEW OF PALACES ON THE RIVER JHELUM, SRINAGAR.
Photo by Diwan Atma Chand

lands, luxuriant forests, and other vegetation, and behind these the mighty chain of snow-clad mountains which divides the drainage area of the Rivers Chenab and

BIRD'S-EYE VIEW OF SRINAGAR TOWN.
Photo by Dewan Atma Chand

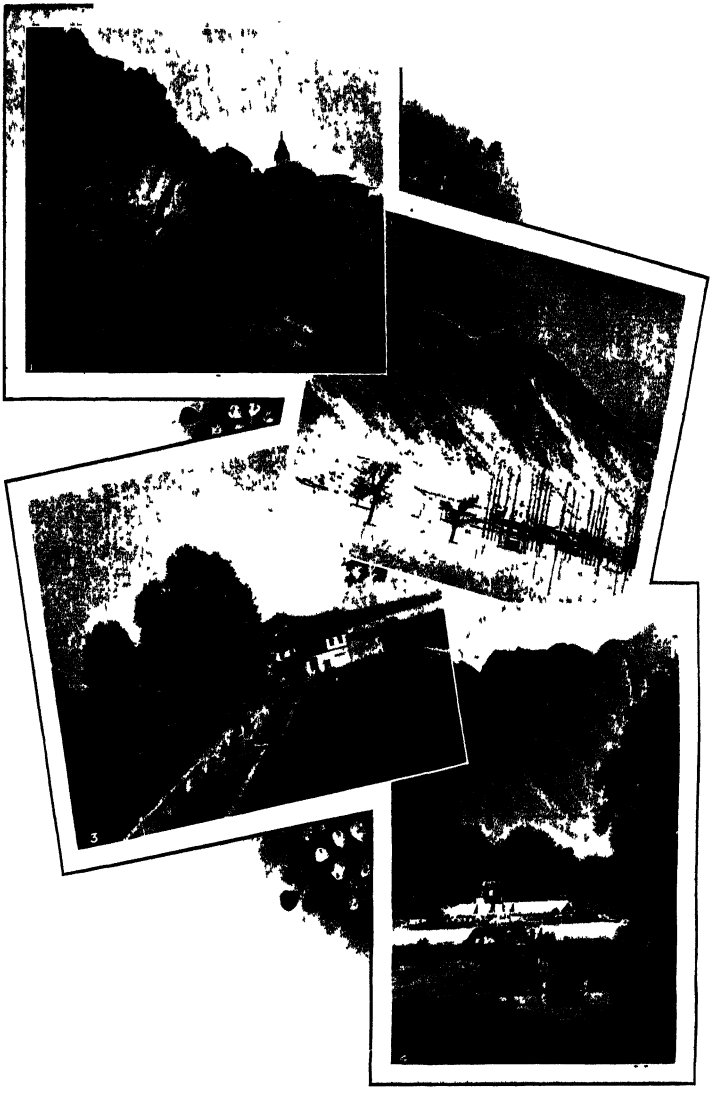
Jhelum from that of the higher feeders of the Indus, and which rises to heights varying from 15,000 feet to 27,000 feet. Branches of this chain, namely, the Pansal, Pir Panchal, Darwar, Haramukh and Sonamarg, enclose the beautiful valley of Kashmir, which is about 84 miles in length and 30 miles in breadth, with an area of about 4,500 square miles.

Before detailed reference is made to the numerous attractions of the valley, which is situated nearly in the centre of the dominions of His Highness the Maharaja, it is necessary to offer some particulars of the physical features of a few of the noble heights which encompass it. In the Pir Panchal range the principal peaks are: Tukakuti, 15,524 feet, its snow-tipped summit being visible even from Lahore; Kali Nag, 15,524 feet; and Afarwat, near Gulmarg, 14,500 feet.

Between the Kashmir valley and little Tibet, the mountains have, among others, the peaks of Nanga Parbat, or Deomar, 26,629 feet (the eighth highest summit in the world); Nankun, in Suru, 23,410 feet; Amar Nath, 17,321 feet; Gashabrar, 17,836 feet; Kolahoi, 17,827 feet; Kohenhar, 17,000 feet; and several others reaching altitudes between 10,000 feet to 16,000 feet. This range is a continuation of the main chain of Himalayas, and preserves this great elevation through Kashmir territory for a distance of 150 miles to the Bara Lachu pass, where it enters Spiti. There are several passes over the summit, including Zozi La (11,300 feet) on the road between Srinagar and Dras or Leh, and the Burzil (13,500 feet) between Kashmir and Gilgit.

The Karakoram range, on the northern frontier of the Maharaja's territories, unites on the west with the Hindukush mountains, which divide Badakhshan from Afghanistan. It forms the watershed between the Central Asian drainage and the streams flowing into the Indian Ocean. Lofty spurs extend into Kashmir, separating the various tributaries of the River Indus, the result being a stupendous mass of rocks 220 miles in length, and a width of from 30 miles to 60 miles on the southern side of the watershed. Its peaks include the Harmush, in Gilgit, 24,285 feet, and Rakipushi, in Hurza, 25,550 feet, together with a group of others round the head of the Baltora glacier, the principal of which is the Gordon Austen peak (28,265 feet), the second highest mountain in the world.

Tourists to Kashmir who are able to ascend many of these high mountains will experience both pleasure and surprise at finding a considerable number of very beautiful lakes at altitudes of several thousand feet. Among these may be mentioned: Shisha Nag, about three miles distant from the eastern end of the Liddar valley, is a large sheet of water, azure blue in colour, at an altitude of about 12,000 feet. Gangabal lake is situated on the summits of the Hurmukh mountain in the Lolab and Sind valleys at an elevation of 16,905 feet. Kashmiri Pandits pay annual visits to this lake, in whose waters they deposit the ashes of deceased relatives. In the Liddar valley may also be seen the lake Hatyara Talab, lying on a plateau at a height of 14,800 feet, near Panchtarni. It was formerly called Brahmasar, but when an



1. VIEW OF ZAIN-UL-ABDIN TOMB, SRINAGAR. 2 VIEW OF SHANKARA CHARYA TEMPLE, SRINAGAR
3. SHALAMAR GARDEN. 4 NISHAT BAGH (GARDEN)

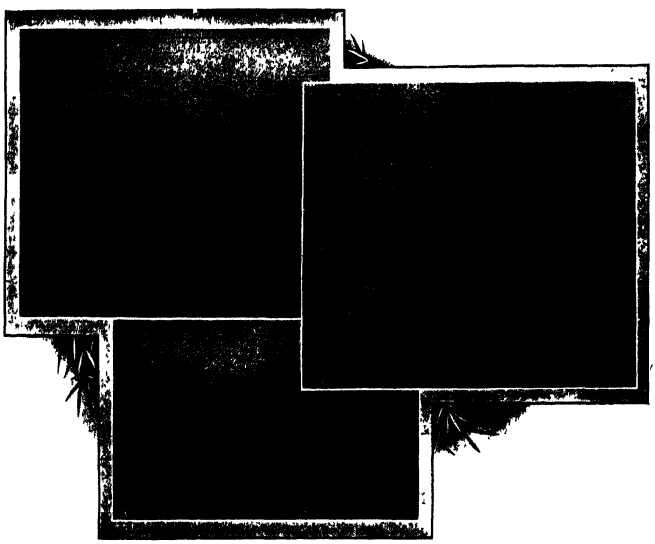
Photo by Dewan Ahm Chana

unusually severe snowstorm caused the death of a very large number of pilgrims, the name was changed to Hatyara Talab, which signifies "murderous tank."

There are numerous freshwater springs in all parts of the valley, and natural watercourses are abundant, but the chief river is the Jhelum, the "Vetasta" of the Hindus, the "Bidaspes" of Ptolemy, and "Hydaspes" of Alexander, which rises in the north-eastern portion of the valley, and, after forming the lakes of

differing altitudes; for instance, the Province of Jammu, which is on practically the same level as the Punjab, has the tropical heat of the latter, while Kashmir, situated in the sub-tropical area, is subjected to extraordinary variations of temperature. There is a proverb to the effect that in Kashmir "one must have fan and fur together." Summer weather commences in the valley in the month of May, but the heat is not oppressive until July or August, when there

Before the year 1891 there was no management or control of forests by State officials, and this neglect led to such damage being done that many years must elapse before they can be the asset to the State which they ought to be. Traders paid royalties and cut down trees indiscriminately, and villagers were even worse in their depredations. At the present time the whole area of nearly 8,373 square miles is under the supervision of a conservator, and the most



1. AMIRA KADAL (BRIDGE), SRINAGAR. 2. HARI PARBAT FORT, SRINAGAR.
3. VIEW OF PRATAP COLLEGE, SRINAGAR.
Photo by Punna Ahm Chand

Srinagar, it reaches the Baramulla Pass after a course of 170 miles, of which 70 miles are navigable. It then becomes a mountain torrent until it passes Dangalli, 40 miles eastward from Rawalpindi, and, after entering the plain in the district to which it has given its name, it then enters the district of Jhang and ultimately becomes the Chenab River, with a total length of 540 miles. Other rivers of minor importance are the Pohru, in the Lolab valley, the Dudhganga, which rises in the Pir Panchal range, and the Kishenganga, in the Tilail valley.

The climate varies to a very great extent in the State, owing to the widely

is an exodus of visitors to Gulmarg, Sonamarg, and other places at altitudes of 7,000 feet or 8,000 feet. There are heavy falls of snow in January and February, but the surrounding heights are thickly clothed in their white garments by the third week of October, while severe frosts are experienced even on the lower plains in the months of November and December. Speaking generally, the climate in the valley is of an invigorating character; there is a rich profusion of the most beautiful flowers, and the forests on the slopes of the hills above are very striking in the harmonious effect of their colouring.

valuable trees are cedar, spruce, deodar, fir, maple, birch, and pine on the mountains, and poplar, willow, and plane in the valley, while choice fruit is obtained from apple, pear, quince, peach, and other trees.

The principal crops are rice, maize, wheat, barley, millet, cotton, saffron, tobacco, hops, flax, peas, and beans, and excellent vegetables, including practically all those commonly found in Great Britain, are extensively grown.

The advent into the State of annually increasing numbers of visitors bent on shooting big game has driven many of the rare species into the fastnesses of the

mountain forests, but even yet much enjoyment may be had with rifle or gun within a comparatively short distance from Srinagar, the capital city.

Bears are found in all parts of Kashmir, the black type being common in the Lolab, Sind, and Liddar valleys, while those of the red variety are met with on the slopes of mountains. Leopards may be bagged throughout the whole of the valley; the *barasingha* inhabits the Pir Panchal range, near the Wooler lake, and in the neighbourhood of Kistwar; ibex and Himalayan chamois offer good sport; wild goat, with horns running to 50 inches in length, is plentiful on the Pir Panchal, Kajnag, and Shamshri mountains; the wild pig provides sport in the eastern portion of the valley, and wolves, foxes, jackals, and other small game are frequently seen.

Game birds, including pheasants, partridges, quail, snipe, woodcock, and funtail, are obtainable almost everywhere, and fishing may be had in rivers, lakes, and canals, and trout fishing, which is a special feature of Kashmir, in some of the selected waters in the valley.

The Kashmiris have for many centuries been famous for their highly skilful and artistic wood-carving, the weaving of shawls and carpets, for silver and copper work, and for sericulture.

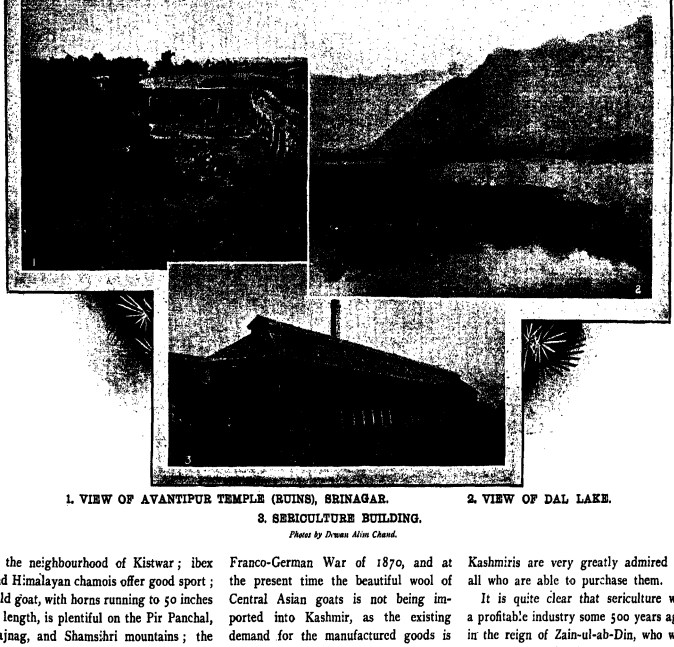
The making of those magnificent wool shawls which in olden days were highly prized in the royal courts of Southern and Eastern Europe was in the zenith of its importance at the beginning of the fifteenth century, but the industry has been declining at a rapid rate since the Franco-German War of 1870, and at the present time the beautiful wool of Central Asian goats is not being imported into Kashmir, as the existing demand for the manufactured goods is too insignificant.

Nearly all of the Kashmiris who were formerly engaged in making shawls are now employed in weaving carpets, for which a great demand has sprung up in Europe as well as America. The patterns are designed by clever artists, and the execution of the work reflects highly upon the extreme care and attention to details manifested by the operatives.

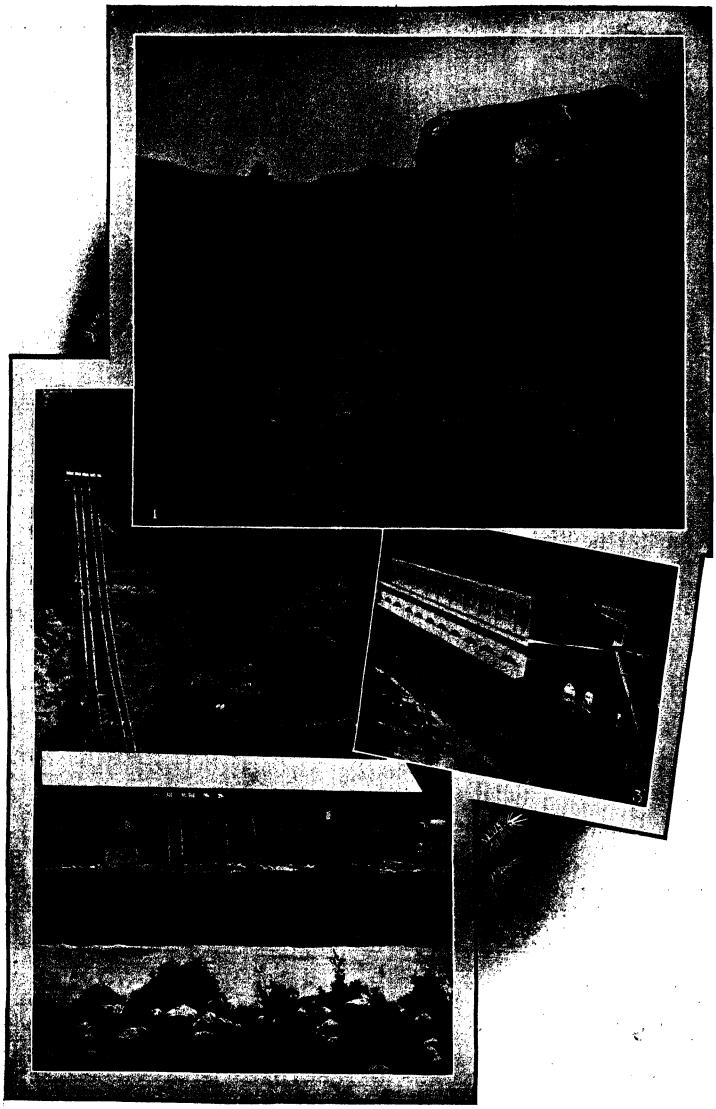
Wool is now used largely in making a fabric named *puttoo*, which is an imitation of English tweeds and homespuns, and is in great favour with visitors from foreign countries.

The numerous stores in Srinagar, Jammu, and other places contain very fine collections of wood-carving, especially in the form of tables, screens, and photograph frames. Silver and gold work and the enamelling of copper is done chiefly at Srinagar, and the exquisite designs carried out by skilled Kashmiris are very greatly admired by all who are able to purchase them.

It is quite clear that sericulture was a profitable industry some 500 years ago, in the reign of Zain-ul-ab-Din, who was a progressive ruler, but in later years it was neglected to such an extent that it almost collapsed entirely. A revival took place about the year 1897, and owing to the fostering care of His Highness the Maharaja and of the active support of the principal State officials, Srinagar now possesses the largest silk factory in the world. In illustration of the importance of the industry it may be stated that there are now about 49,000 persons



1. VIEW OF AVANTIPUR TEMPLE (RUINS), SRINAGAR. 2. VIEW OF DAL LAKE.
3. SERICULTURE BUILDING.
Photos by Diwan Alim Chand.



1. VIEW OF MARTAND TEMPLE (RUINS). 2. GENERAL VIEW OF ELECTRIC POWER HOUSE, MAHORA.
3. STATE CHAWKWARI (BOAT).

Photos by Dewan Atim Chand.

engaged in rearing silkworms in Kashmir, and more than 38,000 *maunds* of cocoons are being delivered annually at the factories at Srinagar and Jammu.

The principal articles of export are linseed, timber, livestock, hides, skins, grain, wool, and woollen goods, while imported merchandise includes salt, piece-goods, petroleum, metals, sugar, and tea.

Primary instruction is imparted in schools, free of all cost, and this boon has greatly strengthened the efforts of the *Darbar* to create and maintain among the subjects of His Highness the Maharaja a deeper interest in the momentous question of the education of the young. The progress made in the teaching of the English language has been most satisfactory, and there are now in the State two arts colleges, 304 primary schools, high and middle schools in every large town, schools for girls, and one technical institute, in addition to a normal school and institutions for special instruction in Sanskrit. Some 28,000 pupils are now on the rolls, and for their encouragement a number of scholarships and stipends are awarded by the *Darbar*.

It is not a pleasant task to deal with the natural calamities to which the "Happy Valley" has in the past been subjected, but the story of the State would not be complete without a brief reference to a few of the more important disasters.

One of the greatest charms of this very beautiful valley is the glory of the snow-capped peaks glistening in the sunlight, but admiration may be tinged with sadness when it is recollected that the melting of that white carpet of purity during heavy summer rainfall has on several occasions been the cause of tremendous floods, which have resulted in the destruction of thousands of lives of human beings as well as of agricultural stock, and the destruction of villages, houses, bridges, and crops. Records are in existence to prove that in the year 1379 no fewer than 10,000 houses were destroyed; in 1735 a calamity of a similar extent occurred; in 1746 the seven bridges across the River Jhelum in Srinagar and nearly 10,000 houses were washed away; in 1893 rain fell for nearly sixty consecutive hours, six of the bridges in the city of Srinagar were swept away by the tide, hundreds of lives were lost, cattle were drowned, and crops were destroyed; ten years later eight inches of rain fell in twelve days, and the whole valley became one vast expanse of water, with the result that a terrible loss of life ensued. Since that date energetic measures have been taken with a view to prevent these floods or to minimize their force by constructing a "spill" channel and by dredging and throwing up or strengthening the embankments, and there is every reason to believe that the city is now permanently secure against the ravages of floods.

Earthquakes have been another fruitful source of disasters, and it is a curious fact that several of them have continued, almost intermittently, for a period of nine or even twelve months. In the year 1778 the shocks caused the inhabitants to leave their houses and encamp in the open for a whole year, during which time there was scarcely any cessation of disturbances. An enormous number of homes were levelled to the ground; in 1827 very many dwellings were demolished, occupants being buried beneath the ruins; in 1878 about twenty houses fell into a chasm which occurred in the village of Kundabal; and in 1884 a fissure 700 feet in length, 300 feet in width, and 70 feet in depth engulfed six houses with all their inmates; more than 10,000 houses were destroyed, 3,400 lives were lost, and 40,000 head of cattle were swept out of existence.

Kashmir, as befits its history, is richly endowed with works of antiquity. Climatic conditions are none too favourable for their preservation, but the *Darbar*, with an enlightened perception of their value, is taking steps to save them from further decay. The descriptions hereafter given of some of the most important of these remains are in the main extracted from that valuable treatise on "The Architecture of Kashmir," by Mr. T. S. Growse, C.S., published in the "Royal Asiatic Society's Transactions."

In nearly all of the temples the *cella*, or sanctuary, forms practically the whole of the building, and usually there are doorways facing east and west, thus permitting the rays of the rising or falling sun to fall directly upon the idol.

The religious exercises of Hindus have from earliest days been dedicated to the worship of Siva in one or other of the many forms in which that deity is represented. In a fine state of preservation is the small cave temple of Bhaumajo, standing on the bank of the River Lidar, less than a mile distant from the village of Bhavan. It is situated at the further end of a cavern and in size is only about 10 feet square, but it is regarded as the earliest perfect specimen of a Hindu temple. It was probably erected about the end of the fifth century. The temple of Pandrathan, about four miles distant from Srinagar on the road to Anantnag, was built during the reign of King Parlha about the year 925, and it was dedicated by Meru, his prime minister, to Mahadeva or Siva under the name of Meru Verdahana Swami. Like many other temples in Kashmir, it stands in a tank about 100 yards from the bank of the Jhelum, and the surrounding land was the site of the original city of Srinagar, the name which it bears being a corruption of the Sanskrit Puranadhishthana, signifying "the old capital." The base of the temple measures nine feet in length and nine feet in width, and it is worthy of inspection chiefly on account of its classically-sculptured dome, which resembles the architecture of Athens or Rome.

About 18 miles from Srinagar is the temple of Payech, which was built by King Narendraditya between the years 483 and 490, and which is regarded as one of the most beautiful shrines in Kashmir. This structure, which is eight feet square, consists of only ten large stones, there being one at each corner, four in the tympanums over the doorways, and two others in the pyramidal roof. The sculpturing, which is considerably defaced, represents Brahma, Vishnu, Siva, and the goddess Durga.

About three miles distant from Anantnag, on its eastern side, is the temple of Martand, or "the sun," which is believed to have been constructed by King Lalitaditya. It is of a more imposing character than many others in the State, as it is some 63 feet in length, and although the roof has been removed, the height must have originally approached 70 feet. In addition to the sanctuary there is a choir and nave, both of which are richly panelled, and a pillared quadrangle 220 feet in length and 142 feet in width.

The Mahommedans have many interesting old mosques in Kashmir, and one of the principal of these is that of Hazratbal, standing on the bank of the Dal lake near Srinagar. The chief attraction for pilgrims is the sacred hair of the prophet, which it is said was taken to Kashmir from Bijapur in the year 1700. The relic is shown to crowds of pilgrims who assemble on certain days of the year. On the southern slope of the fort-crowned Hari Parbat hill in Srinagar are the ruins

1. WATER WORKS, HARWAN.
2. ZAINA KADAL (FOURTH BRIDGE), SRINAGAR.
3. CHASHMA SHAHI (WATER SPRING), KASHMIR.
4. ACHHABAL GARDEN.

Photo by Dewan Alim Chand.

of a fine old mosque, which was built in the time of the Emperor Akbar, and it is recorded that religious strife ending in plunder and bloodshed occurred here between the Sunnis and the Shias in the year 1874.

Srinagar (meaning *Surya-Nagar*), "the city of Surya," or the sun, the capital of the State, extends for a distance of about three miles on both sides of the River Jhelum, which is crossed by seven bridges, nearly all of which are constructed of timber, and it is situated at the base of the hills Hari Parbat and Shankracharya at an elevation of 5,235 feet above sea-level.

The city has an area of 5,139 acres, and at the census of 1911 the inhabitants were 1,26,344 in number, comprising 96,941 Mahommedans, 28,739 Hindus, 486 Sikhs, and 178 belonging to other religious creeds.

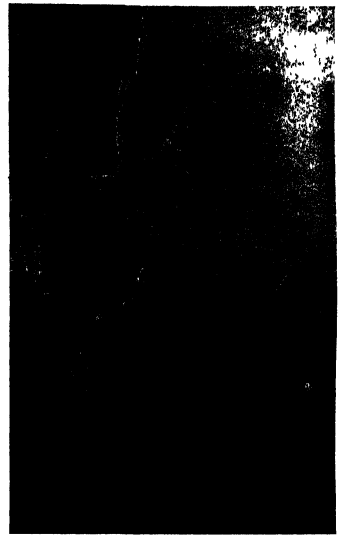
The River Jhelum and several canals are the chief highways in the city, and, as a consequence, there are few streets of importance, but during the past few years great improvements have been effected in planning new buildings, paving roads, and in other ways securing better sanitary conditions.

On approaching Srinagar the eye is attracted by the Hari Parbat hill, which ascends about 500 feet above the level of the city, and upon the summit of which is a fort built by the Emperor Akbar. A very large sum of money was spent upon the construction of a wall surrounding the fort, but it is not at the present time as impregnable as it appears to be.

The Shankracharya hill is about 6,200 feet in height, and as its ascent is comparatively easy, tourists may rely upon obtaining an excellent view of the city, the river, the plains below, and the huge ranges of mountains in the far distance. On its summit a Buddhist temple (probably the oldest in Kashmir) was built about the year 200 B.C., but all traces of it have now disappeared. A Hindu temple dedicated to Jyeshtervara, a title of Mahadeva, was erected during the fifth century A.D. by Raja Gopaditya, and this may be seen to-day.

Not far from the Srinagar Club is the Residency, a magnificent building on the right bank of the Jhelum, access to it being gained by a flight of stone steps. On the Bund, near the head post office, are the principal stores, in which European goods of all kinds may be purchased; the Lal Mandi, built by His Highness the late Maharaja as a royal guest-house, and now used as a museum in which there is a good collection of curios, such as old weapons, coins, artistic articles, and an ornithological section. The State hospital, on the opposite side of the river, has excellent accommodation for more than 100 in-patients, and attached to it is a ward for the reception of cases sent by the military authorities. Almost adjoining is the Amira Kadal bridge, over the Jhelum, built by Amir Khan Jawanshur, about the year 1773. This structure was damaged by a flood about twenty years later, but it was rebuilt and again opened for traffic in 1796. Standing upon this bridge, the visitor may see a number of palaces and houses belonging to State officials and others; the royal palace, with its semi-circular frontage overlooking the river, the dome of an adjoining temple, and numerous State barges resplendent in their decorative work and colouring; while following the course of the Jhelum the eye notes the projecting verandahs of houses whose inhabitants issue forth in the cool of the evening to take their enjoyment by boating on the waters of this Venice of the East.

The fourth bridge down the river, named Zaina Kadal, dates from the year 1426, and just below it are the remains of the tomb of Zain-ul-ab-Din, one of the most famous Mahommedan kings. Within a few minutes' walk is the Jama Masjid, the cathedral mosque of Srinagar, situated between the southern end of the Fort hill and the Zaina Kadal bridge. It was originally built by Sultan Sikandar Shah in 1404, and it is a most imposing edifice, with cloisters supported by 327 pillars, one-half of which are more than 40 feet in height. The courtyard is 254 feet in length and 234 feet in width. The mosque was burned down on three occasions, namely, in 1462, in 1619 (during the time of the Emperor Jehangir), and in 1674, when Aurangzeb was emperor. It was rebuilt in the same year, and in 1916—after a lapse of nearly two and a half centuries—it was found necessary to undertake restoration work upon the foundations.



KASHMIRIS AT PLAY.

The Kashmir valley is a network of canals, and some of the most beautiful scenery in the State may be witnessed from one of the hundreds of boats which may be hired for trips. The most attractive route between Srinagar and the famous Dal, or City, lake is by the

Taunt-i-Kul canal, the traveller embarking near the Sher Garhi palace. After passing through the Dal Darwaza, or Dal Gate, a favourite place for bathing and fishing, the boat proceeds for about an hour and then enters the lake, which is five miles in length and two miles in breadth. Ranges of mountains from 3,000 feet to 4,000 feet in height shut in the lake on three sides, and at the foot of them are numerous villages, orchards, and gardens designed by Moghul emperors. Attention is soon directed to floating gardens, which are the result of an accumulation of earth and vegetable deposits resting upon aquatic plants.

Bordering on the lake are many fine gardens and wooded trees, and first of all one notices the Nasim Bagh, a beautiful stretch of park-like land, thickly studded with plane-trees. Near the north-eastern corner of the lake is an artificial canal, about a mile in length and 36 feet in width, bordered with broad green paths overshadowed by beautiful trees, and at the end of it there are the noted Shalimar Gardens, established by the Moghul Emperor Jehangir

VIEW FROM MR. PLAYNE'S HOUSEBOAT, APRIL 1918.

in the year 1619. These are 590 yards in length and from 200 yards to 250 yards in breadth, and the ground is arranged in four terraces of about equal dimensions. On the fourth or topmost of these is a magnificent black marble pavilion about 65 feet square, and in the brilliant period of the Delhi emperor it was called the "Abode of Love," and was reserved for the ladies of the court. The gardens were prepared by Jehangir for his beautiful wife, Nur Mahal, the "light of the *harem*."

About two miles distant from the Shalimar Gate is the Nishat Bagh, or "Garden of Gladness," 600 yards in length and 360 yards in width, and it well deserves its name, with its fresh-looking turf, its ten terraces, its giant plane-trees, cypresses, and other choice horticultural specimens. Lofty mountains culminating in Mount Mahadeo (13,000 feet) form a superb background, and in the opposite direction there is the crystal lake with its numerous objects of interest. A stream of water flows down the successive terraces, and by a clever arrangement of masonry miniature cascades are formed.

Twenty-eight miles in a westerly direction from Srinagar is Gulmarg, or the "Meadow of Flowers," the summer resort of His Highness the Maharaja, the Resident, and many of the leading inhabitants of Srinagar. It was formerly called Gaurimarg, or the "Meadow of Gauri," wife of Siva, but the name was changed by Yusuf Shah, a king of Kashmir of the Chak dynasty. It is situated on the western end of the Pir Punchal range of mountains, at an altitude of about 8,500 feet above sea-level. It is only a small place, almost deserted during the winter months, but in the "season," from June to September, it is thronged with visitors. The beauty of the scenery defies description; the sides of the huge mountains are clothed with fine forests, the flowers are the loveliest in Kashmir, the views across the valley, including Srinagar and the Woolar lake, are remarkably fine, and at the back of the town is the Panchal range, with the peak of Aferwat rearing its head to a height of 14,500 feet.

About eight miles distant from Srinagar, on its eastern sides, is Pampur, a town of about 3,500 inhabitants, which was founded between the years 812 and 840 by Padma, minister of King Ajatapida. Many of the buildings are in a somewhat dilapidated condition, but there is a handsome mosque which should be seen by tourists. Saffron is largely cultivated on the plateau above.

A large and interesting town, some 45 miles from Srinagar, is known to Hindus as Anantnag, or Islamabad to Mahommedans. It is built upon a hill, from which several springs of water flow regularly into stone tanks, in which are fish regarded as sacred by Hindus. Wooden articles, such as bowls, spoons, spinning-wheels, and chandeliers, as well as rugs and floor and table cloth, are made here in considerable number.

A very interesting town is Avantipura, on the right bank of the Jhelum, 18½ miles distant from Srinagar by road and 27 miles by river. It was founded by King Avantipura, who reigned in Kashmir between the years 854 and 883, and was formerly the capital of the province. Recent excavations have revealed the remains of a large number of fine buildings, but the only ruins worth noticing by the ordinary traveller are those of two temples built by the founder and dedicated by him to Mahadeva.

Less than 20 miles from Islamabad is the village of Verinag, which derives its name from the splendid spring at the foot of the Banihal Pass in the Pir Panchal range, from which water flows into a stone tank, 10 feet in depth, which was built by the Emperor Jehangir in the year 1612.

The capital of the Province of Jammu is the city bearing the same name, and it is situated on the right bank of the River Tawi, at an elevation of 1,300 feet above the level of the sea. It is built upon a gradually ascending slope of a hill, and thus it commands a remarkably fine view of the fertile plains below, of groves of mango and other fruit trees,

and the tortuous courses of the Tawi and Chenab rivers.

On approaching the city the most prominent features are the Ramnagar Palace, which was built by His Highness' brother, the late Raja Sir Amar Singh, K.C.S.I., on the highest part of Jammu, and of the very large number of domes and pinnacles of temples. The Royal Palace is a most imposing structure, and the beautiful designs of the architect have been cleverly carried out by the builder. His Majesty the late King Edward, when Prince of Wales, visited the city during a tour in India in the year 1875, and a large and handsome building then erected for his accommodation has since that date been converted into a museum known as Ajaib Ghar, in which there is a collection of specimens of skilful workmanship, as well as a fine assortment of curios. It also contains a library and a number of rooms in which State officials and many of the leading inhabitants assemble for general recreation and games. Near to this building are the Ranbir High School and the Saddar Hospital, and across the Tawi River there is the Bahu fort, which is worthy of inspection.

Although Kashmir has during the past few years been selected by an increasing number of visitors either as a health resort or as a suitable centre for sporting trips, there are very few houses, or even quarters, available for Europeans after the commencement of the spring months. Hundreds of persons, therefore, avail themselves of the excellent accommodation provided by houseboats, which were introduced at the end of the eighties of the last century. Some of these have rooms fitted with doors, windows, and even fireplaces, and they are frequently let furnished with bedsteads, tables, chairs, crockery, and sundry other necessaries.

Moorings may be obtained on the Jhelum, or in one of the numerous canals, or on the water of the famous Dal lake. The total number of licensed boats in the valley on January 1, 1916, was 7,100, and they comprised: 252 houseboats, 917 *dungas*, 1,961 small barges, 765 *shikaras*, 2,000 small *shikaras*, and 200 boats used by visitors for fishing, together with others suitable for various purposes.

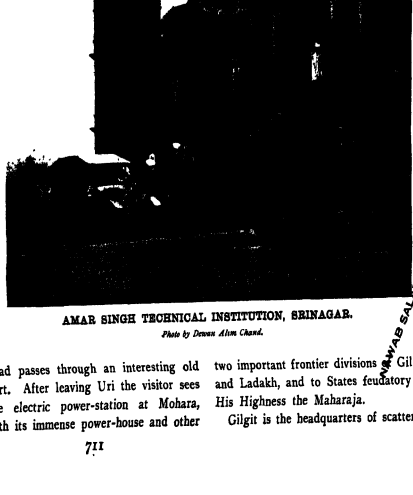
The most frequently used and the easiest route to Kashmir is by rail to Rawalpindi, a station on the North-Western Railway, and thence by the Murree route to Srinagar, a distance of 196 miles, which can be covered in two days by motor-cars, which are available for hire. A brief description may now be given of the Murree route to Srinagar. For the first 17 miles the road is practically level, but a gradual ascent, which commences at the twenty-third mile, increases rapidly until it reaches Murree, at an altitude of more than 6,000 feet. About 27 miles from the starting-point the bridge at Kohala is crossed, and the traveller then enters the territories of His Highness the Maharaja. After driving for nearly two hours the visitor sees the picturesque *dak* bungalow at Dulai, where refreshments were in 1883 served to the Marquis of Ripon, then Viceroy of India, and to Lady Ripon, who immortalized it in Indian history by bestowing upon it the name of "Honeymoon Cottage." After passing the village of Shelter, where a fine panorama of beautiful scenery is obtained, a halt may be made at Domel, the next stage on the way. Further along is the lovely waterfall of Jaskool, and at this point the invigorating breezes from the mountains of Kashmir are welcomed by travellers. The Opi Nala, a picturesque mountain glen (123 miles), is crossed by a bridge of iron girders, while on approaching Uri the road passes through an interesting old fort. After leaving Uri the visitor sees the electric power-station at Mohara, with its immense power-house and other buildings. The waterhead of the power is obtained from the Jhelum River, and the fall is not less than 400 feet in depth, thus affording sufficient force to work heavy turbines. The drive is then continued through fine forests to Rampur, near which town are high cliffs towering over the road. About two miles distant from Rampur is an interesting old temple, supposed by many persons to be the most perfect shrine of its kind in India, and a few minutes later the village, with ancient fort, of Nowshera comes into sight. The road hereabouts is constructed at an elevation of about 5,000 feet, and a remarkably fine view is gained of the valley of Kashmir, with the peaks of Manga Parbat (26,900 feet), Harmukh (16,900 feet), and Kolahvi (18,000 feet) in the distance.

The next town on the route is Baramulla, with a population of about 3,000 inhabitants, which was almost entirely destroyed by an earthquake in 1885.

Some travellers prefer to travel by boat on the Jhelum for the remainder of the journey. Continuing by road, however, Pattan (5,200 feet) is reached, and from this stage a drive of 18 miles brings one into Srinagar.

Reference may now be made to the two important frontier divisions of Gilgit and Ladakh, and to States feudatory to His Highness the Maharaja.

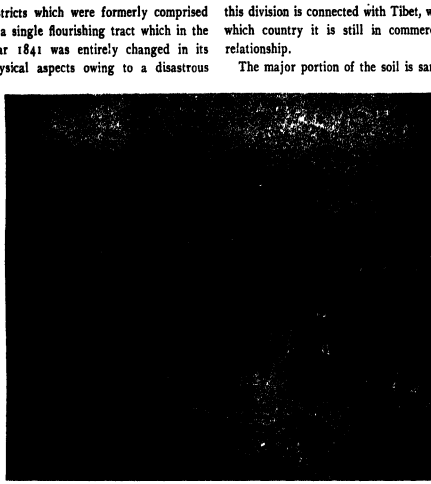
Gilgit is the headquarters of scattered



AMAR SINGH TECHNICAL INSTITUTION, SRINAGAR.
Photo by Dewan Alim Chand.

NAWAB SALAR JUNG BAHADUR

districts which were formerly comprised in a single flourishing tract which in the year 1841 was entirely changed in its physical aspects owing to a disastrous flood on the River Indus, whose course became blocked by a serious landslip. Gilgit now includes the *tahsils* of Gilgit and Astor, in addition to numerous valleys leading down to the Gilgit River. The territory is situated in the extreme north-westerly region of the Himalaya range, and within a radius of about 60 miles there are nearly twenty peaks varying in height from 18,000 feet to 26,600 feet.



CHATTABAL WEIR.
Photo by I. Avery

Agriculture, the chief occupation of the people, is carried on under favourable conditions, and the land of cultivators is well tilled, liberally manured, and regularly irrigated. The principal crops are rice, wheat, barley, maize, millet, pulses, and cotton. The only manufacture is the weaving of woollen cloth, in which a considerable number of the people are engaged, while others are employed in trading miscellaneous goods.

LADAKH.—The most westerly province of the high mountainous land spoken of as Tibet is known by the name of Ladakh.

It is now politically a division of the State lying between the Himalaya and the Kuenlen mountains, and between Baltistan and Chinese Tibet. Prior to the time of the conquest of Ladakh by Maharaja Gulab Singh in the early part of the nineteenth century, the history of this division is connected with Tibet, with which country it is still in commercial relationship.

The major portion of the soil is sandy in character, and scarcely any crops can be grown successfully without irrigation. The chief products are wheat, barley, peas, rapeseed, beans, turnips, and lucerne.

A considerable trade is carried on in agricultural produce, and salt is exported to Skardu and Kashmir in exchange for grains, tobacco, ponies, and all kinds of fruit.

Ladakh is in charge of a *Wazir-i-Wazarat*, who is responsible for Baltistan and the three *tahsils* of the division, namely, Ladakh, Kargil, and Skardu.

Leh is the most important place in Ladakh, it being an *entrepôt* for trade between India and Central Asia, and a British officer is stationed in Ladakh to supervise this traffic in merchandise.

On the frontier there are several chiefs of petty States who are feudatory to the Maharaja of Kashmir, and these are under the direct charge of a political officer of the Government of India, stationed at Gilgit. These States acknowledge the suzerainty of Kashmir, but form no part of its territory.

Among these feudatories are:

BHADARWAH.—The Rajas of this chiefship were formerly Mian Rajputs, and were allied, as regards caste, with families who ruled over Basoli and Kulu. In 1810 the Chandas took possession of the territory, but about twenty years later Bhadarwah passed into the hands of Maharaja Gulab Singh of Jammu.

The chief town of Bhadarwah is a busy place with a large open market and several bazars, a fort, mosques, and a large temple. A large number of the inhabitants are of Kashmiri origin, and are employed chiefly as agriculturists, while others are engaged in weaving shawls, for which the district is famous.

The town is also noted for its luscious fruits, the chief of which are apples, pears, apricots, mulberry, and cherries.

POONCH, another *jagir* of the State, fell to the lot of Raja Dhyan Singh when the hill country in the Punjab, under the rule of the Sikhs, was divided among the three Dogra brothers.

Jawahir Singh was the next holder of the territory, but he was not recognized as independent of Jammu in the treaties of 1846, hence he became a vassal of his uncle, Maharaja Gulab Singh. The territory is 1,594 square miles in extent, and its ruler is Raja Sir Baldeo Singh Sahib Bahadur, K.C.S.I.

The chief town, of the same name, is situated near the junction of the Poonch and Bitar Rivers at an elevation of about 3,300 feet.

A flourishing trade in all kinds of agricultural produce is carried on, and visitors may obtain excellent fishing and bear-shooting in the vicinity.

CHITRAL.—This State, in the Dir, Swat, and Chitral agency, comprises an area of 4,500 square miles. It is bounded on the north by the Hindu Kush range of mountains, on the west by Badekhshar and Kafiristan, on the south by Dir, and on the east by the Gilgit agency.

In 1854 the Maharaja of Jammu and Kashmir was invited to assist Shah Afzal, Mehter of Chitral, in repelling an invasion of Gilgit, and in 1868 an attack upon Chitral was unsuccessfully made. The Kashmir *Darbar*, who had, with the approval of the British Government, been in alliance with the Mehter for a considerable period, now formally recognized him, and increased the subsidy granted to him.

The chief town is in reality a group of villages situated on the bank of the Chitral River, and it is the headquarters of the political agent for Dir, Swat, and Chitral.

HUNZA-NAGAR.—This is the name of two small chiefships in the north-west portion of Kashmir, lying on the banks of the Hunza River.

Situated between these two States and Gilgit there were formerly a fort and some villages which were a source of contention between the respective rulers.

In 1877 the chief of Nagar, with the help of the Kashmir *Darbar*, occupied the disputed territory, but in 1886 he agreed to withdraw his troops in favour of a garrison from Kashmir.

In 1888 the latter were ejected by the two chiefs, who had united their troops, but the strongholds were soon reoccupied by the army of the Maharaja.

A British agency was established in 1889, and the rulers agreed to respect the control thus imposed; but their promises were broken, and troubles followed until 1895, when they accepted the terms of the Government of India as well as Kashmir. Both States are autonomous as regards internal affairs, and acknowledge the suzerainty of the Maharaja, to whom they pay a nominal tribute.

COCKBURN'S AGENCY.

The term "agency" when applied to a commercial undertaking is certainly an elastic one and would convey the impression that the proprietors were engaged in a concern where nearly every description of goods can be obtained or any kind of commission can be executed. This may not be strictly accurate with regard to Cockburn's agency of Srinagar and Gulmarg, in the Native State of Kashmir, but it is very little wide of the mark, as the proprietor is a banker, general agent, and a kind of universal provider of all requisites for *camping* and *shikar* trips, a supplier of houseboats fitted with electric light, huts, *dongas*, tents, furniture, cooking and household utensils, provisions, general stores and equipment, cartridges, petrol, motor tyres, wines, spirits, and a miscellaneous collection of other commodities. The agency was established in the year 1885 by Colonel Cockburn—under the name of Cockburn & Co.—and the fine brick building on the Bund in Srinagar (near to the post and telegraph and club), now occupied as the headquarters of the business, is successor to the original premises which were destroyed by fire in 1913. The Colonel commenced by exporting all kinds of Kashmir products—in fact, he was the first to attempt this—and after seven years of successful trading he handed over the whole concern to his daughter, who sold it in 1910 to Mr. T. Avery, junior, who is now sole owner. The scope of the business has been very greatly extended by the present proprietor, as the comprehensive character of his operations, already referred to, abundantly proves.

General agency work is undertaken on behalf of visitors to Kashmir, including advice and information regarding journeys, routes, the climate, cost of living, horses, servants, and other matters, and provided timely notice is given of intended arrivals Mr. Avery undertakes to have in readiness camp, tent, houseboat, servants, provisions, and other necessaries for sightseeing, hunting, shooting, mountaineering, or whatever other form of recreation may be on their programme. Early notification of a tour should be given with regard to supplying special boats, as the proprietor has to obtain them in the open market.

Kabul or Swiss cottage, kitchen, men, servants' and other tents and *shamianas* may be engaged from the agency at rates ranging from Rs. 5 to Rs. 18 per month according to size; camp furniture in complete sets, with a piano if required, can also be obtained on hire; luggage can be cleared and forwarded; parcels are collected; and camps are pitched and tent-floors supplied; while banking matters are so arranged that visitors can draw cheques against their own deposits or can give authority to the agency to meet ordinary accounts of local tradesmen.

It should be mentioned that the forwarding branch does not undertake delivery beyond the confines of India, as the agency is not concerned in shipping goods to foreign ports.

Tents and luggage are stored for clients; letters and telegrams are held pending arrival of visitors; garages are provided for motor cars; and any other agency business not enumerated above is transacted at moderate charges.

Mr. Avery courts letters of enquiry for information, and he is always ready to give intending tourists the benefit of his wide experience, and to furnish estimates as to the probable cost of any proposed trips covering long or short periods.

Major C. E. L. Porter is general manager of the agency at Srinagar, and Pundit Bala Koul, the Babu in charge, has been connected with the business since its foundation.

A branch of the agency has been opened at Gulmarg, a fashionable summer resort, at which clients can have their requirements attended to equally as well as at Srinagar.

Mr. Avery is agent in Kashmir for Messrs. Eley Brothers, 12-bore shot cartridges, "B.O.C." petrol, Dunlop tyres and tubes, and for Messrs. Kellners' wines and spirits.

Kashmir is a delightful resort for those who need a renewal of vigour after the enervating influences of the plains; its varied scenery is grand beyond description; it is full of interest for archæologists, botanists, geologists, and artists; and hunters of large game may almost at any time meet with black and brown or red bear, leopard, Bara Singha, ibex, Himalayan chamois, markhart, and many other kinds.

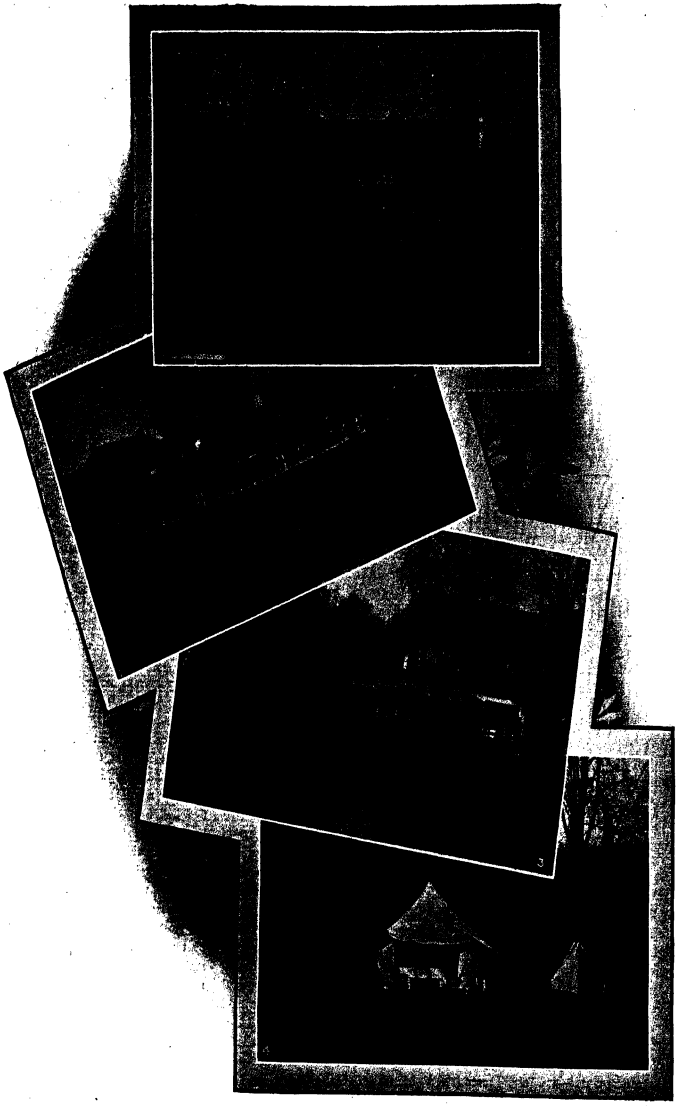
The agency has in the past had the honour of furnishing complete equipment for a very large number of distinguished sportsmen, mountaineers, and transcontinental travellers, including the Duc d'Abruzzi and others.

Permanent employment is found for about twelve hands.

COX & CO.

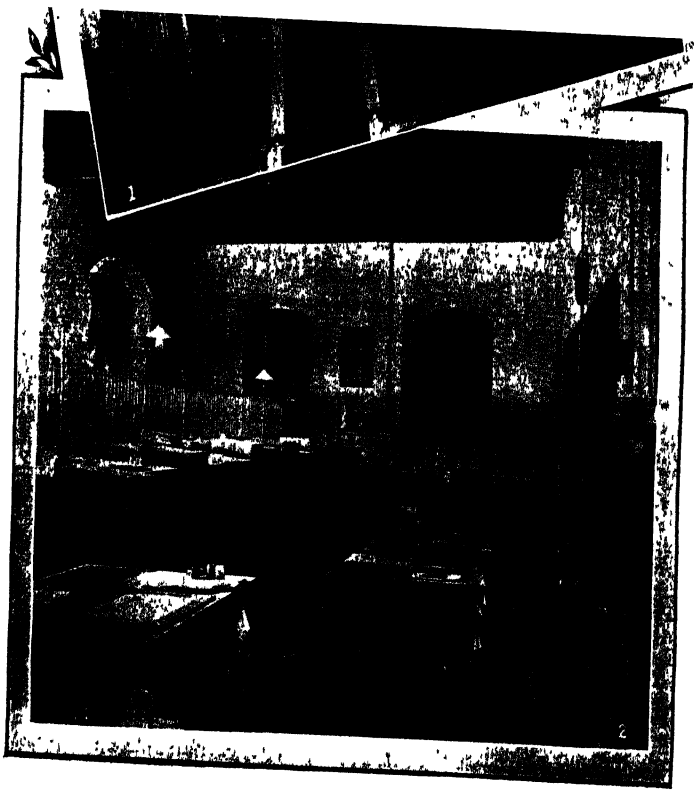
The Army Banking Institution of Messrs. Cox & Co., of 16 Charing Cross, London, has been in existence since the year 1758, and while all classes of ordinary banking business, including the issuing of letters of credit, are transacted, the firm are known more particularly as the chief pay agents of the British Army. Their representative, Mr. Norman L. Greene, arrived in India in 1904 for the express purpose of establishing branches and agencies in this country, and in pursuance of that object he, in 1906, opened offices at Srinagar, the capital of the State of Kashmir and Jammu. They are now owners as well as occupiers of a very fine building constructed on up-to-date lines, on the Bund, adjoining the river Jhelum in that city, and the structure, which contains handsomely-fitted offices together with commodious residential quarters on the second storey, is one of the most imposing of its kind in the whole of the State. It is built of fire-proof materials and contains excellent strong-rooms and safe-deposits for the custody of legal documents, shares, and other valuable securities.

The firm are financial agents for the State, and have been the means of stimulating industrial efforts in many directions; in fact they have always used their best endeavours to further the interests of British trade in every place in which they have established themselves.



COCKBURN & CO.

1. Exterior View of the Agency. 2. Houseboat. 3. Doonga. 4. Camp.

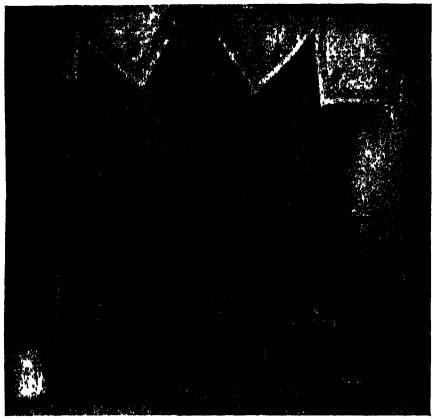


COX & CO.

1. Exterior, Bank Building. 2. Bank Interior.

Current and saving-bank accounts are opened, fixed deposits are received, and information concerning rates of interest and other matters may be obtained on application to the manager.

Letters of credit are also issued, and drafts are granted on London at the current rate of exchange, as well as on branches and agencies throughout India. Remittances of money by telegraph are sent to all parts, and addresses of clients are registered, free of charge, in the head office in London.



SHOWROOM OF A. HESSING & CO.

COX'S SHIPPING AGENCY, LTD.

This agency was established in London in the year 1914 with the object of undertaking shipping, passage, and other business of a similar character, including the import and export of cargo and baggage, and the storage or removal of personal effects and other goods on behalf of the numerous clients of Messrs. Cox & Co., bankers and army agents. Passages are arranged upon all shipping lines, and reliable information as to dates of sailings and other particulars is always obtainable at any of the agency's offices. Railway tickets, too, are issued for circular tours, and intending passengers can arrange through Messrs. Cox & Co., bankers, for letters of credit to meet them at almost any place in the world.

The head offices of the agency in London are at 16 Charing Cross, S.W., and branches have been opened at Southampton in England; at Paris, Rouen, Marseilles, and elsewhere on the Continent of Europe; at Calcutta, Bombay, Rawalpindi, Murree, and Srinagar in India; and at Cairo, Port Said, and Alexandria in Egypt.

The telegraphic address is "Coxia, Srinagar, Kashmir."

A. HESSING & CO.

The business carried on by this firm, on the Bund in Srinagar, was formerly a department of Cockburn's Agency, and in 1910 was formed into a separate and distinct firm under the style of C. Cockburn & Co., but in 1916 it was purchased by Messrs. Hessing & Co., who deal in every variety of Kashmir goods of useful and artistic descriptions, and they also manufacture various articles according to designs of customers.

The firm's large show-rooms, which are situated above the offices occupied by Cockburn's Agency, contain a large assortment of carvings, embroideries, *papier-mache* goods, brass-work, carpets, pottery, basketware, Puttoo tweeds, and Pashmina goods. Every article on the premises is marked in plain figures at the exact sale price, and this plan has proved to be of great service in effecting quick transactions with customers. Consignments are shipped to wholesale purchasers in all parts of the world.

Lingerie for ladies is embroidered by hand by about forty-five to fifty embroiderers, who work under the direct supervision of Mrs. Hessing, while Mr. A. Hessing has full control of all other departments.

THE KASHMIR GENERAL AGENCY.

In former years visitors to Kashmir were compelled to travel by short stages from the nearest point on the railway, as they had to take with them all camp equipment and personal luggage, as well as a large quantity of certain kinds of provisions. All that has to be done now is to communicate with—by way of example—the manager of the Kashmir General Agency at either Srinagar or Gulmarg, when information will be in readiness at the railway station at Rawalpindi; and by arrangement he will supply everything required from a house-boat to a sweeping brush, and will provide and equip camps for immediate occupation in Srinagar or Gulmarg.

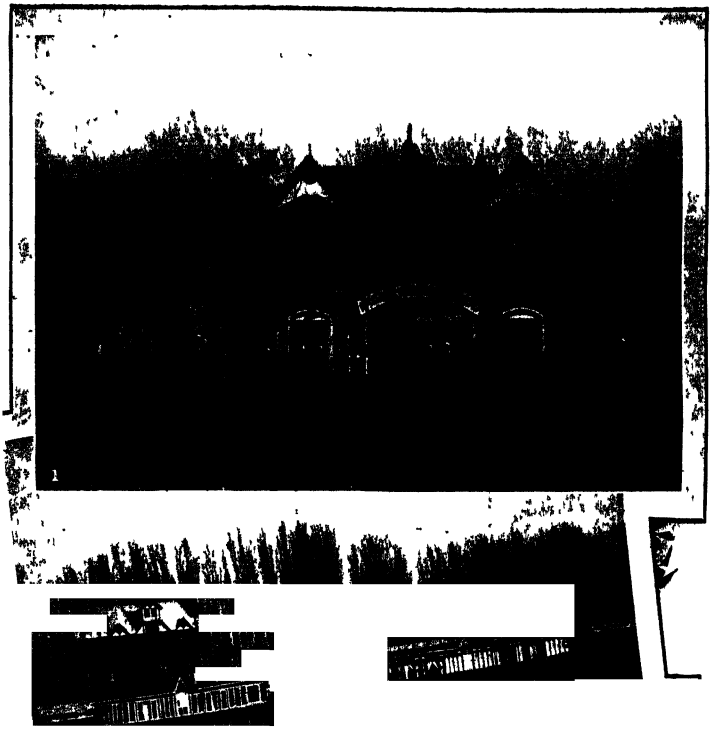
The business conducted by the Kashmir General Agency was established in 1897 by Captain Losack, and in the year 1916 it was taken over by that gentleman's daughter, Mrs. Mackenzie, who is now sole proprietress.

The stores contain a large and varied stock of oilman's goods, tents, furniture, crockery, glass, and other commodities, including wines and spirits from the well-known firm of Messrs. Cockburn & Co., Ltd., of Leith, Scotland.

It is a special feature of the agency that it undertakes full responsibility for the complete equipment of camps, and will also arrange for motor-cars for trips to any part of the State. Tents, including ropes and iron and wooden pegs, ranging in size from 7 by 7 feet to 14 by 14 feet, can be hired at reasonable monthly rates; Gulmarg huts and houseboats are engaged and cleaned by the agency; furniture for sitting and bedrooms and kitchens may be hired; and the greatest care is taken in selecting suitable servants for clients.

Uncarved furniture is also manufactured by the agency for general sale purposes, and all descriptions of Kashmir goods of a useful or ornamental character are purchased on behalf of customers, and are forwarded to all parts of the world.

The proprietress invites correspondence from intending tourists or from persons interested in the unique productions of Kashmir, and a guarantee is given that



KASHMIR GENERAL AGENCY.

1. Exterior View. 2. Houseboats. 3. Camp.

prompt personal attention will be given to all such communications either at the head offices at Srinagar or at Gulmarg, where a branch establishment, conducted on precisely similar lines, has been opened.

The bankers of the agency are Messrs. Cox & Co., of Srinagar.

W. LAMBERT.

The unrivalled scenery, the magnificent climate, and the numerous opportunities afforded for rest as well as recreation by the "happy valley" in the Native State of Kashmir are year by year becoming more and more appreciated not only by the wearied inhabitants of the cities and towns of India, but also by the thousands of tourists who in normal times find in the glories of the East that physical and mental tonic of which they are sorely in need. Such visitors do not always, however, provide themselves with a number of necessaries which just make all the difference between real enjoyment and mere passable pleasure, or if they have not been entirely forgetful they usually have to make up for deficiencies or otherwise obtain renewals. Thus it is that enterprising business men in Kashmir have earned lasting reputations for the foresight—born of experience—which has led them to open establishments which for variety, quality, and prices of goods compare most favourably with much larger stores in Bombay, Calcutta, and other cities.

The handsome premises, centrally situated on the Bund in Srinagar, the capital of the State, belonging to Mr. W. Lambert, may justly be termed an emporium, but they are more than that, as they are not only stocked with goods of a general character, including drugs of all descriptions, stationery, a choice selection of books, and requisites for fishing and all other outdoor sports or games, but they also contain a fine art gallery filled with admirable oil and water-colour paintings, engravings, picture postcards, and other artistic productions. The gallery is also stocked with artists' materials and colours of every variety.

Mr. Lambert spent twelve years of his early life with Mr. W. Wilson, chemist, of Rawalpindi, but in 1908 he established himself in business at Srinagar. By the constant importation of fresh drugs and chemicals the proprietor is able to guarantee absolute purity of ingredients in medicines, and his employment of thoroughly trained European chemists in this department ensures accuracy in dispensing. The well-fitted shop, which is open throughout the year, is stocked with household and toilet requisites, surgical instruments, and other articles usually sold by an up-to-date chemist, and as a fully competent assistant resides on the premises urgent night calls can be immediately attended to. Further than this there is a large assortment of all kinds of useful articles for visitors, such as tobacco, cigars, cigarettes, pipes, a great variety of sweets of undoubted quality, and other goods.

The artists' department is in reality one of the "show places" in Srinagar. In addition to the gallery hung with valuable paintings and pictures, ample provision has been made for the encouragement of visitors to take their own photographs or to make their own sketches of the intensely interesting scenery of northern India. Cameras and accessories are kept on hand, a dark-room is provided for general use, and every kind of printing, mounting, moulding, and framing is carried out by experts on the premises. Mr. Lambert has made a special feature of having his own series of picture postcards, portraying numberless views of one of the most beautiful countries in the world.

Nearly every branch of outdoor sport can be enjoyed in Kashmir, but shooting and fishing are those which meet with the greatest number of followers. The proprietor holds a splendid stock of every variety of fishing tackle, and he is always pleased to give information to tourists as to the requirements of an angler in any part of the State.

When the curtain of night has descended, putting an end to hunting expeditions, golf, and other open-air pleasures, visitors turn again to Lambert's for indoor games or books with which to while away the evening hours.

Mr. Lambert also has a branch establishment of a similar character at Gulmarg, the summer headquarters of the Residency. The extensive premises, adjoining the post office and immediately opposite Residency Hill, occupy one of the most central positions in this much favoured suburb, and the private residence attached to the shop is occupied by a trained chemist who is in attendance nightly as well as daily. Gulmarg is noted for its famous golf links, and here again Mr. Lambert has developed a large trade in golfing gear and accessories.

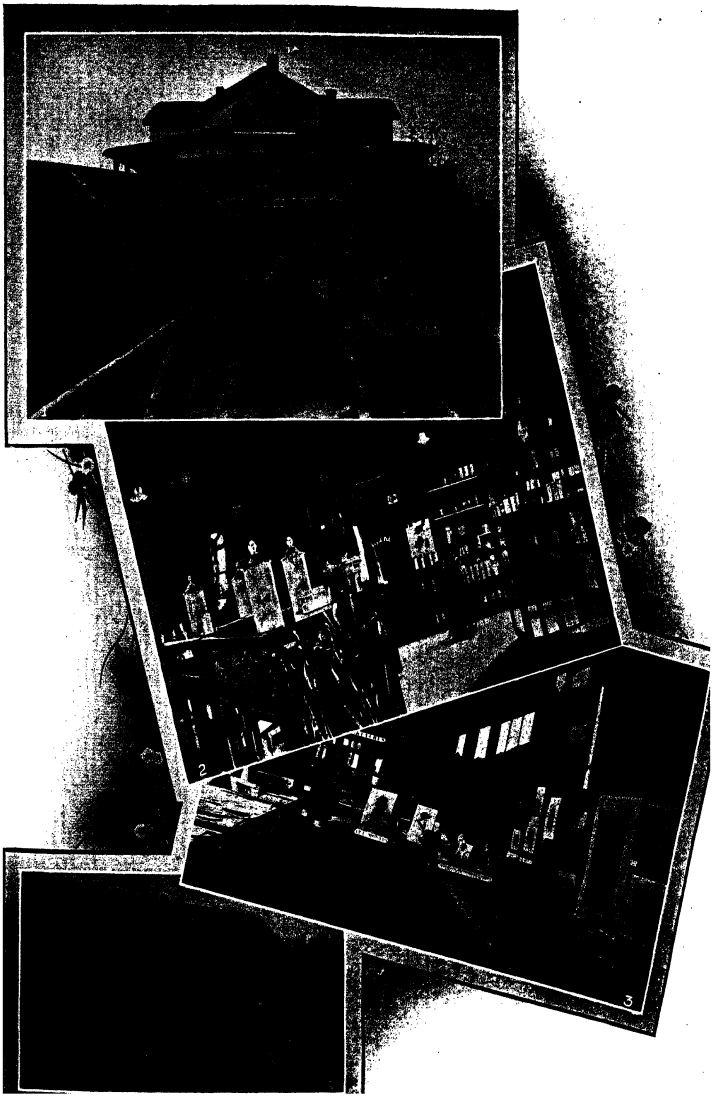
Mr. Lambert is sole proprietor of the two businesses, and although he retains the management in his own hands he finds constant employment for three European assistants and a large staff of native servants.

MITCHELL & CO.

Scattered throughout India are handloom factories in which coarse carpets, blankets, and other articles are produced, but it is in northern India—especially in Kashmir—that one finds the best qualities of wool and silk spun and woven into artistic goods of various descriptions. Indian carpets were well known in Europe in the Middle Ages, but it is generally conceded that the Great Exhibition held in London in 1851 caused a great increase in the quantity exported annually.

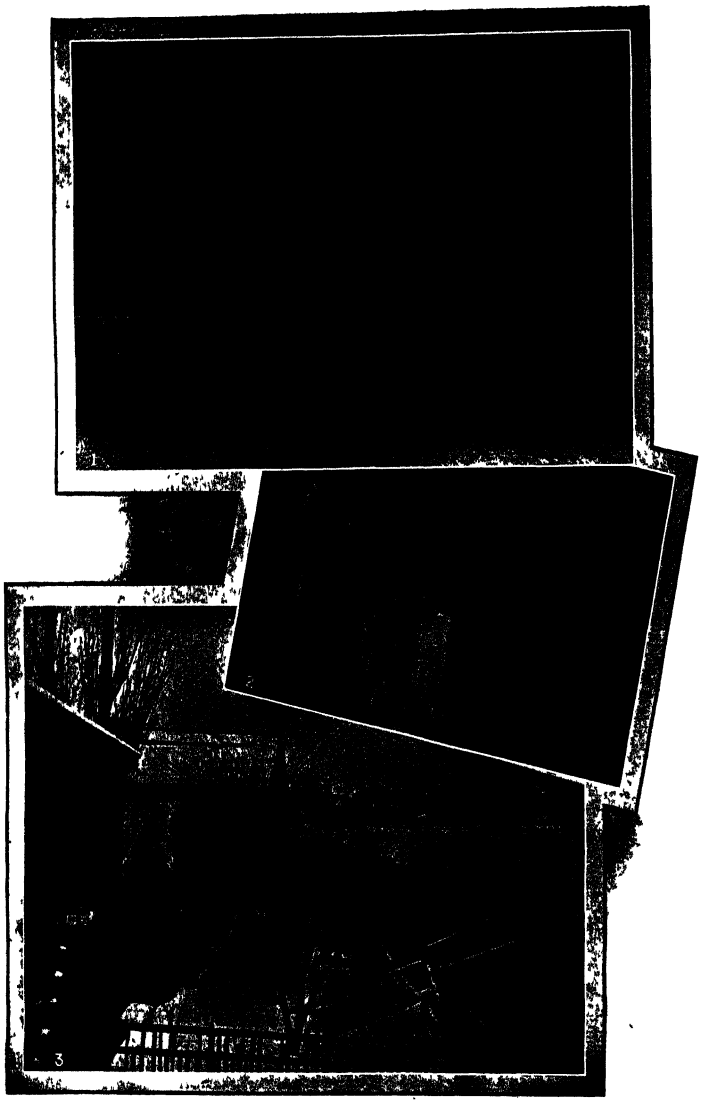
A very interesting morning may be spent in making a tour of the up-to-date carpet factory in Srinagar, which was established about the year 1885 by Messrs. D'Auvergne & Co., and taken over in 1897 by Messrs. Mitchell & Co., the present proprietors. The premises cover an area two acres in extent, and wherever one looks, be it in the weaving, mixing, dyeing, or other departments, steady work is being performed by about eight hundred hands, all of whom are paid according to results. A large number of these are expert workmen controlling intricate machinery mixing shades of colours up to as many as seven hundred in number, and handling wool and silk with the dexterity born of practical experience. Wool is obtained from various parts of northern India, but chiefly from Kashmir and the province of Ladakh, and after it has been dyed it is passed on to the weaving shed, in which 216 looms are fixed. Kashmir silk is also used in the making of both carpets and rugs, but all goods are manufactured to order only. Stitches in these goods vary from 64 to 400 in number to the square inch, but the quality most frequently manufactured contains 150 to the inch. Prices are regulated according to the stitches and not in accordance with the design of any article, and they range from Rs. 22-8 to Rs. 70 per square yard, the actual minimum being Rs. 16, while the usual sizes made are from an ordinary hearth-rug to a carpet measuring 24 ft. by 15 ft.

England was Messrs. Mitchell's best market until 1914, when the unsettled state of affairs in Europe resulted in the



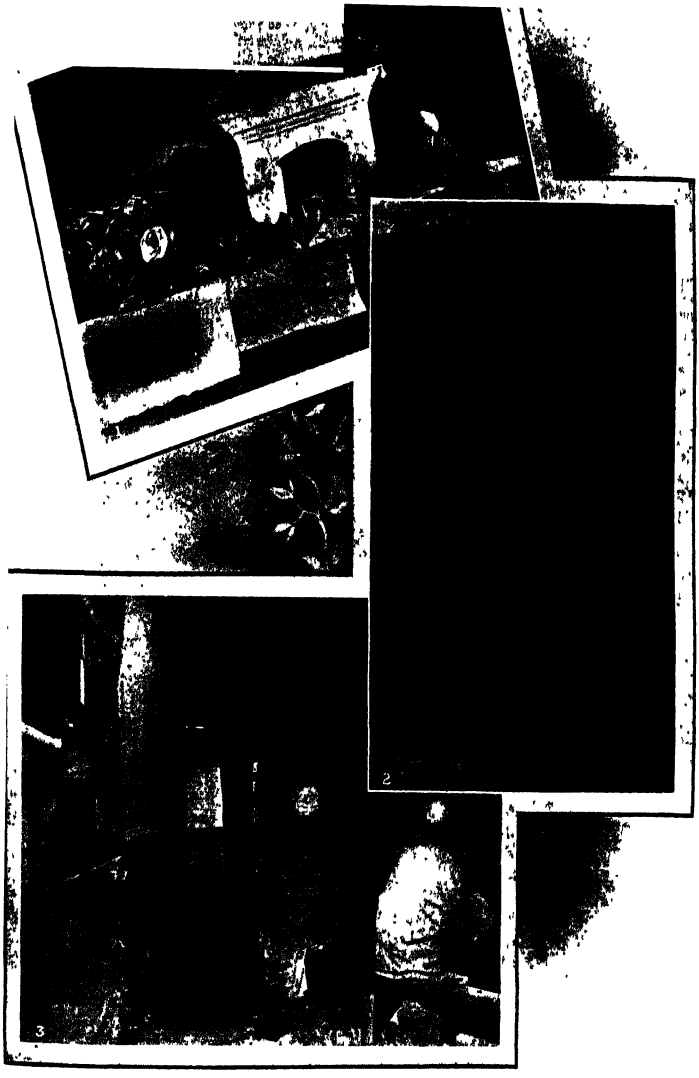
W. LAMBERT.

1. Srinagar Shop. 2. Main Showroom, Srinagar. 3. Interior, Picture Gallery, Srinagar. 4. Gulmarg Shop.



MITCHELL & CO.

1 Carpets in the Godown. 2. Portion of Dye House. 3. View, Showing Part of Factory.



MITCHELL & CO.

1. Designers and Draughtsmen. 2. Specimen Carpet. 3. Workers on Looms.

opening up of new fields of enterprise in the United States of America, but India has not been slow in recognizing the merits of these goods, as viceroys, princes, ruling chiefs, and other prominent personages have accorded patronage to this well-known firm.

The partners in the concern are Messrs. W. and F. J. Mitchell, and the manager is Mr. H. R. Blunt.

NEDOU'S HOTELS (GULMARG AND SRINAGAR).

Gulmarg, about twenty-eight miles distant from Srinagar, and about 8,500 feet above the level of the sea, has within the past twelve or fifteen years been entirely changed from an unfrequented plateau to a delightful summer residential resort for the Political Resident of the Kashmir State, H.H. the Maharaja of Kashmir and Jammu, and Kashmir nobles and officials, together with a considerable number of regular visitors who have learned to appreciate the unique natural advantages of this magnificent Himalayan substation.

Nedou's hotel was opened in the year 1888 by Messrs. M. Nedou & Sons, the well-known proprietors of a similar establishment at Lahore, and when it was constructed with local labour there was not a single worker on the building who had ever seen such a thing as a carpenter's nail or a glass window, and there were only two Europeans' houses in the neighbourhood. The whole of the property, which extends to about forty-three acres, is held under purchase lease from the State, to which it will revert in due course.

The hotel—which, by the way, is built entirely of wood—contains 70 bedrooms, dining-room with accommodation for 250 people, sitting, drawing, and card-rooms, large lounge, and billiard-room which is connected by a passage with a ball-room, and theatre, and a large supper-room and bar. Ample room is available for fully 75 couples of dancers, while the theatre is spacious enough to hold 350 spectators.

For several years this most comfortably furnished and convenient house was not visited annually by more than about fifteen or twenty persons, and it was not until about a decade ago that Gulmarg became popular and that the enterprising spirit of the owners met with due reward. All the apartments were originally lighted by electricity generated by the private plant of the proprietors, and although the current is now derived direct from the State supply, Messrs. Nedou still retain their own machinery with the view of meeting any emergency.

A bakery and confectionery department and a well-managed dairy are attached to the hotel, and after the requirements of visitors have been satisfied there is a large quantity of bread, fancy pastry, cakes, milk, cream, and other produce available for sale to the general public, while catering for reception, banquets, dances, and entertainments is undertaken. The theatre is open for engagement for plays, concerts, and other purposes, but the proprietors display their customary generosity in granting free use of it for charitable performances.

The hotel, which is open from the 1st June to the 30th September—the Gulmarg "season"—is in close proximity to the golf links, and is admirably situated for visitors in search of health, for tourists who revel in glorious natural scenery, and sportsmen who may be attracted by the facilities afforded for shooting or fishing, while within an hour's drive is a place which has already become famous for its toboggan slides.

Messrs. M. Nedou & Sons, of Lahore, were not only the first in the field in establishing hotels in the State of Kashmir, but at the present time they possess the monopoly in Srinagar, the capital city, and at Gulmarg, which has in recent years earned the highest reputation as a most attractive summer resort.

Their hotel at Srinagar—known as Nedou's Hotel—was opened in the year 1900, but the experiences of the first few years were sadly disappointing, as in 1903 the whole of the premises were deluged with flood-water, and only seven years later they were subjected to another submersion which lasted for no less than five days. These catastrophes resulted in very heavy financial losses.

The hotel is a fine brick building containing forty bedrooms, dining and drawing-rooms (the latter being fitted with a floor for dancing), a large hall, and other apartments.

The whole property consists of the hotel, a garage for eleven motor-cars, a bakery, dairy, orchards and flower and vegetable gardens, bread, confectionery, fancy pastry and dairy produce required for home consumption, but a considerable quantity of these commodities is disposed of to regular customers in the city.

The hotel stands in an unrivalled position opposite the General Post Office, the Srinagar Club, and the polo ground, and the management of every department, and the supervision of the fifty or more servants, is in the capable hands of one of the partners.

Messrs. Nedou & Sons are veritable encyclopædias of valuable information for tourists or casual visitors, as their long experience of the Kashmir State has given them unique opportunities of becoming acquainted with the routes to places of interest in the neighbourhood and the most likely haunts or stretches of water where hunting large game or fishing may be obtained.

In years gone by a goat-track was the only route between Rawalpindi and Srinagar, but in recent years a good road has been made for nearly the whole distance, for which motor-cars and other conveyances may be engaged at any time.

Messrs. Nedou & Sons have for some time past been greatly inconvenienced by the inadequacy of the accommodation for visitors to this hotel, and since the preceding portion of these notes was written they have constructed an *annexe* containing twenty-two suites of rooms, each of which comprises sitting, bed, and bathrooms. The new two-storeyed building, which has been erected with bricks, rests upon stone foundations, and with the view of securing immunity from damage owing to stress of weather, the roof has been covered with *malthoid*, an up-to-date water-proof substance.

The rooms are well-ventilated, and additional protection from discomfort from either sun or rain has been secured by having a wide verandah along the full length of the building.

The proprietors have furnished these apartments with due regard for the comfort of their patrons, and the installation of electric lighting is not the least of the up-to-date improvements which have been effected.

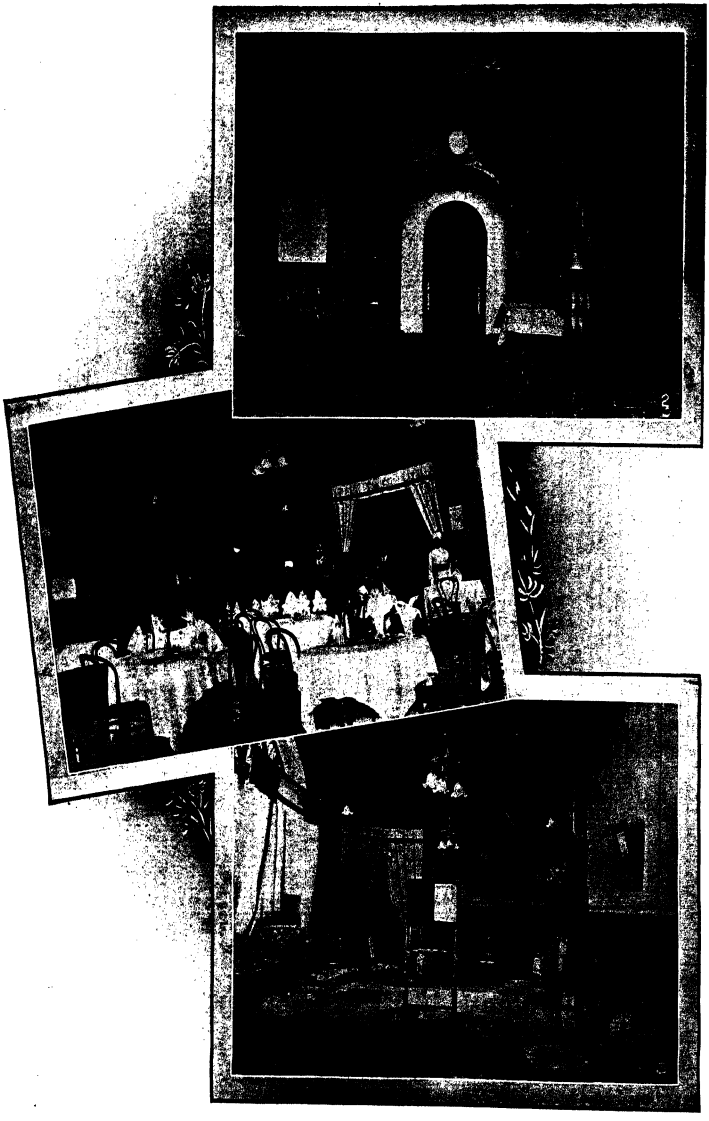
SUBHANA & SON.

"A beautiful wooden gate erected near the Kashmir Camp at the coronation Durbar held at Delhi in December 1911 was carved by Messrs. Subhana & Son, of Third Bridge, Srinagar, and was graciously accepted by His Majesty the King Emperor."

These few words speak volumes as to the skill in workmanship which one may expect to find in the premises of this firm

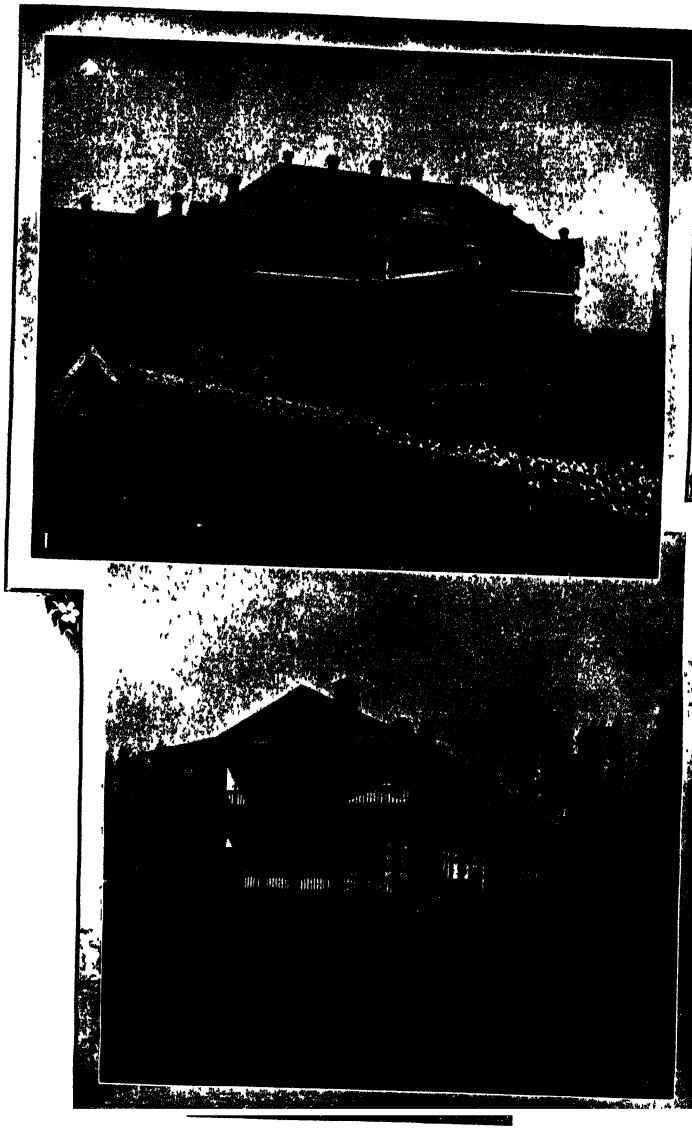
NEDOU'S HOTELS.

1. General View, Srinagar Hotel. 2. Garage. 3. General View, Showing Gulmarg Hotel. 4. Bathroom, Gulmarg



NEDOU'S HOTELS.

1. Dining Room. 2. Hall. 3. Drawing Room.



NEDOU'S HOTELS.

SUBHANA AND SONS.

1 Curio Room. 2 Walnut Wood Carved Furniture Room

of silversmiths, wood-carvers, and makers of *papier-mache* goods, who have attained a wide reputation for ornamental and artistic work in making various kinds of articles. Messrs. Subhana & Son manufacture plain and carved furniture, house-boats, and *dongas*, but a special feature is made of the sale of Indian curios, of which a very large stock is kept. All descriptions of Kashmir jewellery are supplied, and the firm are always prepared to make all classes of goods according to designs submitted by their patrons.

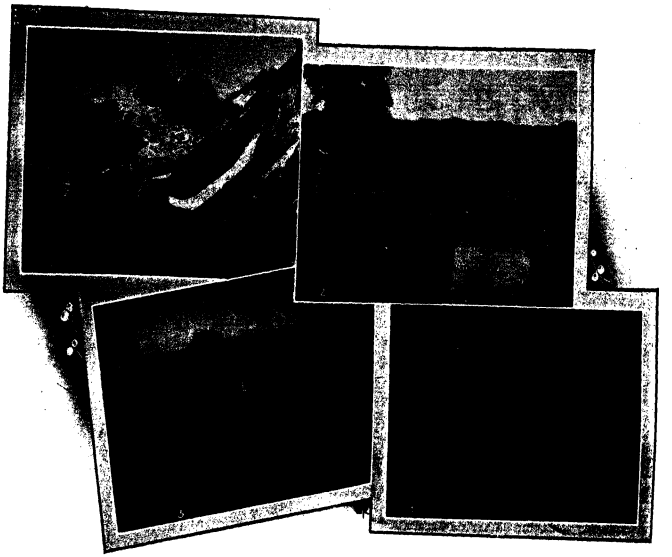
Mention may be made here of two very fine pillars which were carved for the Delhi Gate at the Durbar held on the 1st January, 1903, in celebration of the accession of His late Majesty King Edward VII. Photographs of these unique specimens of artistic work are sent to connoisseurs and others who are interested in artistic work.

Messrs. Subhana & Son have been awarded medals for carvings shown in London in 1886, at Jaipur in 1888, and at Calcutta in 1900, while in 1902 no fewer than six such distinctions were conferred at Delhi. In addition, they have received excellent testimonials from distinguished customers, among which is one given by the late Earl Roberts.

The partners (father and son) have a good orchard at Srinagar from which they pack and export, and they also supply *shikaris* to tourists and others.

About 350 hands are constantly employed.

SRINAGAR CHURCH.



1. PANCHITERNI MOUNTAIN, NEAR AMARNATH, KASHMIR. 2. CHINAR BAGH, KASHMIR.

Photos by P. Vishi Nath & Sons.

3. THIRD BRIDGE, SRINAGAR. 4. FOURTH BRIDGE, SRINAGAR.

THE ARTISTIC CRAFTS OF KASHMIR

By FRED H. ANDREWS, F.S.A.M., PRINCIPAL, A. S. TECHNICAL INSTITUTE, SRINAGAR.

THERE is very little in existence to-day to show that the arts and crafts of ancient Kashmir were at all remarkable. There are, however, ruined Hindu temples dating from the eighth century, and a few Buddhist *stupas*, which testify to a certain taste and skill in architecture and stone-carving, particularly the temple at Martand, built by King Lalitaditya, and that at Avantipura, on the right bank of the River Jhelum, about nineteen miles from Srinagar, which was erected by King Avantivarma about the ninth century. These exhibit architectural pretensions of considerable importance, the order being an adaptation of the Greek Doric style minus the architrave, which gives place to a type of trefoil arch of which the centre foil is stilted to accommodate itself to the rather acute pediment of the roof, the supporting side foils approximating to quadrants.

At Martand a notable feature is the coffering of the high semicircular vault of the cella, recalling that of the Palmyra buildings and of the customary treatment of similar vaults and arches by the Romans. The details of figure work, where used, and of ornamentation, are frequently well modelled and vigorous in execution. These early buildings graphically illustrate the facility with which the Kashmiri then, as now, adapted the art he borrowed (and practically all Kashmiri art is borrowed) to his special needs.

Owing probably to climatic conditions, nothing else of importance of ancient handiwork has survived. There is no trace of any but very ordinary red pottery such as might be produced by almost any village potter.

The huge jars unearthed at Avantipur are interesting, and bear witness to the potter's cleverness in this particular type of vessel, but they are of coarse clay and show no outstanding skill nor any artistic inclination. They impress by their sheer bulk. Yet a people capable of the beautiful carving preserved in some of these ruined shrines, telling of the traditional adaptability of the Kashmiri, must almost certainly have possessed skill in many of the perishable arts, and perhaps a certain measure of originality in their treatment of them.

Textiles.—In a country of once well-wooded hills, and of a temperate climate for the greater part of the year even in the valley, one of the most obvious natural products is wool, and it follows that spinning and weaving would be naturally developed to provide warm clothing as a protection against the severe weather of the winter months. The fine close wool of the Kashmir goat lent

itself to the production of a good yarn, and with the importation of patterned textiles from Persia, and the opportunities of trade with that and other adjacent lands, the weaving of beautiful fabrics for clothing and general use became an established industry. The celebrated shawls, now fallen into cold neglect, are among the most wonderful examples of the figure-weaver's art. Their graceful and intricate interlacing of pattern, profusion of floral detail, and wonderful harmony of colours, even if we no longer desire these shawls as garments, compel our unbounded admiration for them as examples of marvellous skill and taste. Whether the pattern be loom-woven or worked with the needle, the delicacy and daintiness of the craftsmanship is exquisite, and the fineness of the yarn employed is sometimes almost incredible. The wool for the best of these and other fabrics is obtained from Ladakh, and even further, and the pattern is almost invariably composed of variations of the *badam* or "almond" design. The origin of this curved and elongated pear shape has often been a source of speculation and of dogmatic attribution by many positive-minded amateurs. It has been picturesquely and arbitrarily attributed to the great bend made by the River Jhelum just above Srinagar, and it has also been definitely derived from the impression of the side of a man's closed fist. That it is an ancient form of jewel worn in the headdress of rulers of Persia and said to be the symbol of the Sacred Flame, brings us nearer to the source of the Kashmiri's inspiration; but as a form of it is found on Egyptian burial cloths, when it is unquestionably a leaf of the *pipal* kind, elaborated with an "inhabited" pattern, it seems evident that there is still scope for further investigation, and that a local origin cannot be conceded.

Embroidery.—Exquisite needle-work is found on the embroidery of the *Choga*, or coat, as used in former days, and even now, by the more conservative Kashmiris, for ceremonial wear. This embroidery is applied to edges and cuffs, to shoulder, back, and corners. Some of the finest examples of the embroiderer's craft may be found on such coats, and Moghal patterns are usually combined with the badam, generally in exquisite taste. But this fine work is no longer made or required. The increasing demand for cheap table-centres, doyleys, cushion-covers, and so on, and the steady advance of the sombre European dress among all classes, has permitted the extinction of the fine craftsman of an earlier day. With the development of the shopkeeper and agent, the craftsman has been submerged, and, in the degenerate form in which he still survives, he, in dark and dirty hovels, is kept under supervision, yet out of public view, in order to produce only such things as are readily saleable to the singularly uninformed and inartistic clientéle of the owner of the shop. To this person art has no meaning until reduced to terms of cash. There is no joy in producing a beautiful thing, cash profit is the only consideration, and as the purchaser makes it a law that he must haggle over cost, the quality of the work is steadily declining under the pressure of low prices, dearer material, and more ambitious notions of profit. But these embroideries are frequently good in a popular sense, and very attractive, and a large demand exists for Kashmir work both locally and far afield. Persia, which was probably the original market for shawls, still takes a large number annually.

There is a charm in the Oriental richness of patterns and silks, chiefly noticeable whenever an echo of the earlier manner of design is present, but the unspeakably commonplace patterns introduced by persons who get their art notions from drapers' catalogues, or South Kensington, or equally undesirable sources, are responsible for the rapid decline in artistic quality of the work. A treatment, which has of recent years found much favour with European purchasers, if one may judge by the frequency of its repetition, is called the Lhassa pattern, and consists of an unintelligent *melange* of dragons and Tibetan symbols, more or less distorted and in unsuitable colouring. The dragons are lifeless caricatures, and the symbols are not understood by the people who work them.

Another application of embroidery is used on *numdahs* for floor and couch coverings, and on thin *pattu* for purdahs and cushion-covers. A coarse chain-stitch is used, and some of the older designs are bold and good. The demand for cheap work of this kind for the adornment of houseboats during a brief season has led to the production of much that is bad and inartistic, forming appropriate settings for the persons who use them. At Islamabad, a large town on the Jhelum, about thirty-four miles from Srinagar, an interesting form of *pattu* patchwork is made. In principle it is just that of "Boule" work. Pattern and ground are cut to a design in two or three colours, then arranged together in the manner of marqueterie and joined by stitching. There is no waste, for the shaped pieces cut from the ground of one are used for the pattern on a contrasting ground in another, just as in "Boule" cabinets one finds that the tortoise-shell pattern on a brass ground of one of them is reversed in another. The work is called *gabba*, and makes handsome linings for State tents, and *shamianas*, and wears remarkably well as a floor-cloth. The patterns are generally bold, and the colours used chiefly red, blue, white, green, and yellow.

Suitings.—Plain cloths of wool (*pattu*) are woven in all towns and villages for winter suitings, and for blankets (*lois*), used universally as *togas*. A demand from dealers beyond Kashmir for something more attractive than the natural grey *pattu* of the country has induced the weavers to imitate various British and Irish tweeds with considerable superficial success. Such fabrics, made for export, are loosely woven of very uneven yarn, and are not very satisfactory from the practical point of view. There is no reason, however, why Kashmir "tweeds" should not be completely successful, and it is only necessary that the weavers (or their agents) should aim at a high standard of craftsmanship in order to create a very extensive trade. The demand by the British military authorities for this cloth during the war has been too much for the capidity of the Kashmiri, who has been exporting rubbish of the shoddiest kind at high prices. The probable result will be to destroy the reputation which Kashmir *pattu* formerly had, and to put an end to outside trade for many years to come.

The silk industry is dealt with in another section of this volume.

Wood-carving.—Wood-carving is an ancient craft of the country, and very fine examples of architectural work are still to be found in some of the older *mosques* and *ziarats*. On the huge grain boats which ply up and down the river, traditional designs, roughly cut but of considerable merit, may be found, but modern development is in the direction of over-elaboration and excessive and meaningless high relief. The Kashmiri owes this change to the popular demand of visitors, who generally suffer from the delusion that high relief and under-cut-

ting are particularly meritorious attributes; and it is sad to see good wood worried into lumpy, crude abominations, while the vigorous low relief and discreet work of an earlier period is under a cloud. The demand also makes it necessary that all tool marks shall be laboriously burnished out of existence, and that an oily smug finish shall be presented. The trader himself has no artistic sense as a rule, and, in any case, rupees appeal more powerfully than a submerged artistic conscience. Therefore we find dead, fat dragons of foreign extraction sprawling over tables, screens, bureaux, cheroot-boxes, and other objects of popular demand. Iris and Chinar stand out in solid chunks an inch in thickness, and crimes against art and craftsmanship stare one in the face in every shop. It is always a source of secret delight to one of some artistic taste to find the newest horror called after the name of the "customer." Revenge is thus assured! There is no question that the carver is skilful both in design and execution, but the pity of it is that he blindly follows the directions of his patrons, and, generally, to his undoing.

But if the carver is skilled, the cabinet-maker is not. Nothing is ever properly constructed or joined, and doors, drawers, locks, and hinges never fit. Whatever merit there may be in the work is superficial, and the cloak of ornament covers all possible sins of construction.

Silverwork.—The silversmith, on the other hand, is often a good craftsman, but he has not yet learned much about ornamental treatment beyond his traditional methods. He does not understand repoussé, and so continues his old method of chasing. He is good in a limited way at hammering shapes, and his construction is often passable, even in one or two cases extremely good. Perhaps his patrons are nervous about suggesting treatment of metals, not being so sure of their material as in the case of embroidery and wood-carving! They do not get beyond copying cheap factory-made goods from catalogues, which, although not helpful in developing a sense of design, do not endanger the skill of the smith.

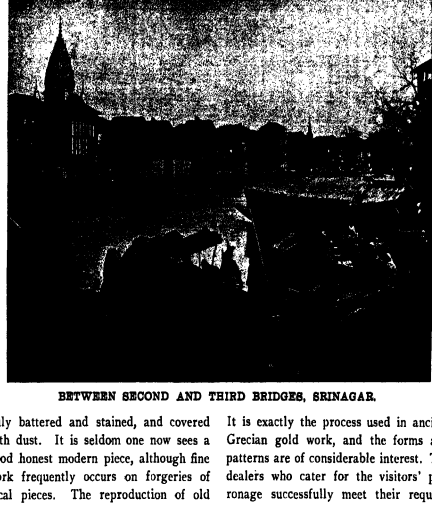
Copperwork.—The coppersmith, too, is equally good, but he has taken to the evil practice of manufacturing "antiques," and this very seriously threatens his real skill. Antiques are now provided by the thousand for the visitor, and, of course, the more unfinished the work and the worse condition it is in the better pleased is the purchaser. The Lhassa style of *thing is sure to sell well, if sufficiently* dirty. All the shops are full of them, duly battered and stained, and covered with dust. It is seldom one now sees a good honest modern piece, although fine work frequently occurs on forgeries of local pieces. The reproduction of old Persian inscriptions is really quite commendable, but merely for the purpose in view, as dates are copied, and then pointed to as complete and satisfactory evidence of antiquity. But what are these poor people to do! Providence delivers into their hands the seeker after the lamp of Aladdin, why should they therefore flout Providence, and send the seeker away empty, when they can produce his heart's desire as often as he asks? And, be it remembered, much more is paid for an antique than for new work, however bad the one and good the other. It is obvious that they should take the line indicated by Providence, and thus prosper.

Jewellery.—Of jewellery in the European sense there is none, the requirements of the people in this direction being apparently limited to elaborate hair and ear ornaments, chains for women, and buttons, studs, and amulets for men, all of silver, with the occasional introduction of coloured glass or turquoise. The designs are old and good, but the workmanship is generally clumsy, excepting in the case of the very skilful "grain" work, generally used on large barrel-shaped buttons. Most of the ornamental work is pressed in metal moulds, and for this process a thin silver sheet is used. It is exactly the process used in ancient Grecian gold work, and the forms and patterns are of considerable interest. The dealers who cater for the visitors' patronage successfully meet their requirements by the manufacture of badly-made necklaces composed of strings of beads or pearls interspersed with lumps of *lapis-lazuli*, turquoise, or agates of various varieties. A large proportion of the stones are imported from Europe and are of inferior quality, with nothing distinctive about them, and frequently they are only imitations. Recent attempts at filigree settings in silver and gold are decidedly poor and beyond the present capacity of the smith.

It is the clumsiness of the craftsman, his carelessness of finish, his want of thoroughness, and, above all, his attempt to follow a style or styles he does not in the least understand, that make all his imitations of Western jewellery so inferior.

Paper-making.—The traditional writing material of Kashmir is birch bark, being the paper-like inner layers of the bark of the Burja, and it has been used from time immemorial by Kashmiri Pandits for their beautifully written Sanskrit records and religious books, inscribed in imperishable densely-black ink.

Paper-making in Kashmir probably



BETWEEN SECOND AND THIRD BRIDGES, SRINAGAR.

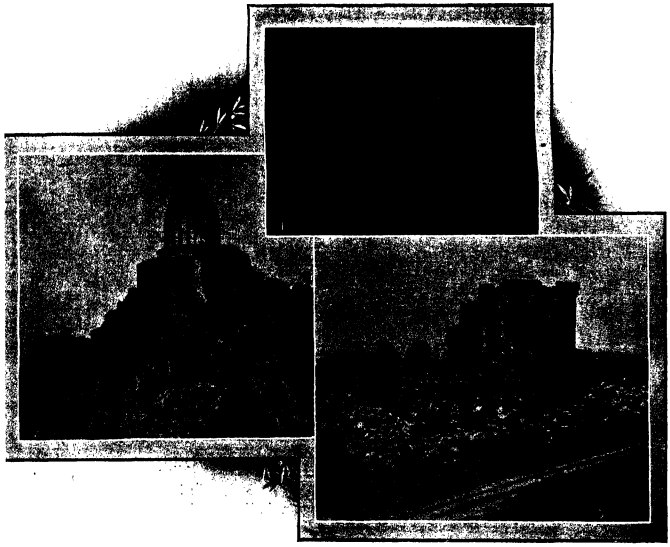
dates from the fifteenth century, when its introduction may have been due to the enlightened efforts of Zain-ul-Abidin. The processes are those practised in Persia, and have remained unaltered through the five centuries that have elapsed since Zain-ul-Abidin's time. The material is rag, which is pulped under the blows of an iron tup set in a horizontal wooden lever, which is raised by means of a revolving shaft turned by a primitive water-wheel. Washing by hand in the running stream, near which the mills are necessarily placed, follows the beating, and the waterleaf is made on an ingenious mould constructed of fine grass stalks. Superfluous water is squeezed out under the pressure of boulders supplemented by the weight of a couple of men, after which the sheets are stuck on to a mud wall to dry. The sizing is of rice paste applied by means of a felt glove, and calendering is done by hand with a stone burnisher.

proving the industry and bringing it up to modern requirements is being considered by the Durbar at the suggestion of the principal of the Technical Institute, and experiments have shown the possibility of producing a good quality of efficient writing-paper which could be profitably used by the State offices.

Papier-mâché.—The well-known art of the ***papier-mâché*** maker of Kashmir has suffered perhaps less from outside advice than any of the other crafts. This is probably due to the fact that the entire procedure is still in the hands of the descendants of the original Persian craftsmen. The origin of ***papier-mâché*** painting is said to be the painted bows and arrows of the old Persian warriors, and as the art is still called ***kumangari*** (***kumana***-bow), there is no reason to doubt the derivation. It is an interesting fact that most of the present painters live in a district of Srinagar called Kumangarpura. The processes involved in the production of ***papier-mâché*** ware are too long to detail here, but every stage of it is carried out with extreme care and thoroughness, which in itself is sufficient proof that the craftsman is not a true Kashmiri. The shopkeeper has done, and is doing, his best to degrade the art by endeavouring to produce cheap and inferior articles, and the purchasing public does its utmost to help his scheme by cutting down prices. Those who have seen the best craftsmen at work and the pleasure they derive from putting their most skilful and delicate brushwork into their designs, will deplore the destructive influences opposing their better inclinations.

The processes, simply stated, are, first, the construction of the shape of the vessel in paper pulp on a wooden mould, the preparation of the surface with a kind of white distemper, upon which the designs are painted in water-colour, including gold, with a medium of glue; and finally glazing with a fine amber varnish. The early patterns are based upon the ***badam*** of the shawl weavers, but of late years a large variety of floral schemes have been most successfully and artistically developed.

To sum up, it would appear that there is little indigenous decorative art in



1. MARTAND.
2. RUINS OF TEMPLE OF MARTAND.
3. THAKHTI-SULAIMAN TEMPLE.

1, 3. *Photos by P. Pitchi Nath & Sons.*

The quality of the paper naturally varies considerably, and while fairly satisfactory for use with the reed pen (***qalm***) and Persian ink, is unsuited to metal pens dern ink. The question of im-

THE ARTISTIC CRAFTS OF KASHMIR

Kashmir, the evidence of Persian and Arab origin being overwhelming for all art dating from the late middle ages. Zain-ul-Abidin seems to have been a most active patron of the arts, and probably in his time foreign craftsmen were called in in connection with building and decorating, from whom the Kashmiri, with his imitative aptitude, quickly learned. Many of the foreigners settled in the country, and, as has been already noticed, where their blood has remained unmixed, as in the case of the Kumangars, their art has maintained its quality, but it is probable that in most instances inter-marriage has weakened the original strain to the point of extinction.

THE AMAR SINGH TECHNICAL INSTITUTE, SRINAGAR.

From the foregoing note on the artistic crafts, it will be evident that the necessity for some guiding and controlling force is urgent. It is greatly to the credit of the Durbar that, recognizing this, the Amar Singh Technical Institute was erected as a memorial to the late Raja Sir Amar Singh, K.C.S.I., and opened in 1914. The scope of its labours is intended to touch all the arts and crafts in Kashmir, and from its commencement it has, year by year, developed on these lines. The institute is placed in a fine open space, with views of the snowy hills in all directions, a perfect setting which should help inspiration and encourage high ideals when general education shall have advanced sufficiently for such matters to make their appeal to the imagination.

The building, of two floors, is constructed of red brick, and contains fine large and airy class-rooms, together with offices for the principal and the clerical staff. The upper rooms provide, besides the offices, studios for all the drawing and designing classes, modellers, painters, decorators, and pottery painters, while the lower rooms comprise workshops for carpenters, builders, engineers, potters, and basket-makers. Additional buildings are machine shops for carpenters and engineers, kiln house, smithy, plasterers' shop, and stores. A separate structure is being erected for a model paper-mill, and other rooms now being added to the main building will provide special accommodation for advanced students, photography, and other purposes. A tastefully arranged flower garden gives a pleasing character to the portion of the grounds in front, and the principal's quarters, designed and built by himself, assisted by staff and students, is situated at a distance of about a thousand yards from the institute.

The subjects of instruction first developed were those representing the most immediate needs of the State from the practical point of view, such as carpentry, smithing, house-painting and decorating, sign-writing, building, plastering, and surveying. To these have been added pottery-work and basket-making, embroidery, and modelling in clay, while a section recently opened for the training of sub-overseers for the Public Works Department seems likely to be well patronized, because success means an appointment to a Government position. Drawing and designing are taught in all the classes.

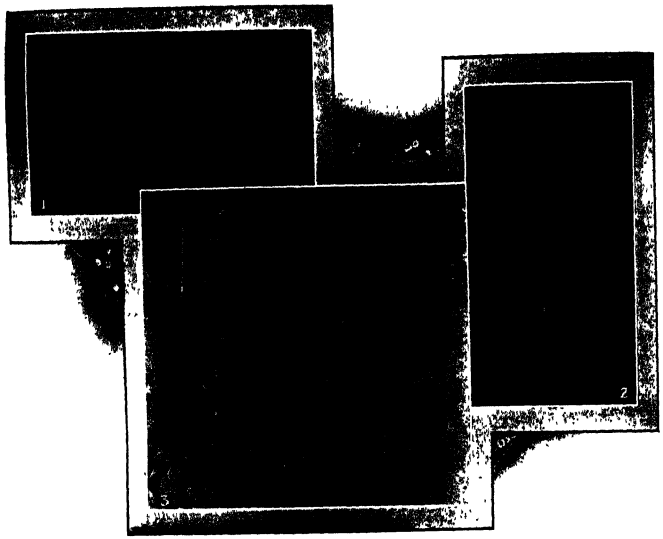
The cultivation of English willows for basket-making has been commenced under the care of an expert grower from Yorkshire, as it was found that the varieties of indigenous willow were quite unsuited to anything but the commonest types of baskets. A small plantation has been laid out in the institute grounds, and a more extensive area of several acres has been prepared at the mouth of the Sind river for further development.

Investigations were made during 1917 into the possibilities of improving the ancient paper-making industry, and experiments carried out under the guidance of an expert—Mr. W. Raitt, of Dehra Dun—have met with most promising results.

Other progressive proposals are under contemplation, and will be undertaken as circumstances permit. The great aim of the instruction is thoroughness and honesty of workmanship, the development of the faculty of reason in work, and the cultivation of the inventive powers in design. The mental development is far more necessary than the mechanical, for all the craftsmen are clever with their hands, but the directing brain power is their weakness. They can copy only too well, but in copying achieve generally only a superficial resemblance, ignoring the meaning of construction as being too troublesome and unnecessary.

The number of students on the roll of the institute is about 150, and most of these receive State scholarships. Technical education is new in the State, but the appreciation of the work of the institute will increase as general education advances. It is notable that the Hindu subjects of His Highness are keenly alive to the value of technical training, although the crafts in Kashmir are at present almost entirely in the hands of Mahommedans. Pandit students have shown considerable aptitude for handicrafts, and have generally some education to help them; the inevitable result being that they will practise crafts more successfully and intelligently after finishing their training than those who follow the old line of indifferent training in the workshops of their fathers, and unless the latter apply themselves to the acquisition of more thorough methods they will find their trades slipping from them into more capable hands. Old time Hindu prejudices against manual labour are breaking down, and with their better mental equipment they are bound to take a higher place as craftsmen than those who are untrained. There is plenty of room and scope for all communities if they are equally well trained, but if one neglects the advantages open to all which the others seize, obviously the untrained man must go under. A scheme for establishing technical classes in elementary and secondary schools, which would do much to popularize this branch of education, has been put forward by the principal, and is under the Durbar's consideration. In the meantime, all that is possible in the well-equipped workshops of the Technical Institute is being done, and new activities are constantly being introduced by the principal with the view of demonstrating how much better work than has hitherto been accomplished can be performed in the future.

The head of the institute, Mr. Fred H. Andrews, was for some years principal of the Mayo Schools of Art at Lahore, in the Punjab, where he succeeded Mr. Lockwood Kipling, father of Rudyard Kipling, and at the time of his appointment to Kashmir he was in charge of one of London's most successful Schools of Art and Crafts.



1. COLLECTION OF HEADS SHOT IN GILGIT AGENCY. 2. TYPES OF MARKHOR HEADS SHOT IN GILGIT AGENCY.
Photos by Major H. L. Haughton.
3. RED BEAR SHOT BY MAJOR H. L. HAUGHTON IN GILGIT.

SPORT IN THE STATE OF KASHMIR AND JAMMU

By Col. A. E. WARD

THIS State, politically subordinate to the Government of India, is about 350 miles in its greatest length from east to west, and about 270 miles in breadth. It extends from latitude 32° 17′ to 36° 58′, and from longitude 73° 26′ to 80° 3′, and is bounded on the north by the Karakoram mountain, on the east by Chinese Tibet, and on the south and west by the Punjab and the Hazara country. It has been defined by writers as "one of the finest countries upon which the sun shines," "the sub-Alpine region of Asia's Italy," "a dream of loveliness," and "unsurpassed for its scenery." Its climate is healthy and invigorating, its amazing wealth of flowers and fruit blossoms is indescribably beautiful, and the grand panorama of surrounding snow-capped mountains, with peaks ascending to about 28,000 feet, is one of the grandest in the world.

The State is, moreover, the playground of Northern India between the months of April and November, and all kinds of outdoor sports are indulged in. The rhythmic ring of ponies' hoofs in polo games is heard from May to October, the sharp crack of a driven cricket ball resounds through the salubrious atmosphere, and tennis claims its devotees, while the sturdy anathemas of golfers, charitably attributed to very substantial "bunkers," seem to give an increased impetus to the luckless ball.

The beautiful lakes and rivers provide an abundance of excellent sport for anglers, but this form of enjoyment is fully dealt with in a separate article in this volume.

The large quantity of various species of large and small game constitutes Kashmir a unique paradise for hunters, and shooting with gun or rifle is available, although close periods are not all of the same duration. Sportsmen, yes, and keen sportswomen, too, are concerned chiefly with mountain-loving wild goats and their allied types, deer, bears, leopards, and the ounce or snow-leopard, but a detailed list of the *fauna* in the State may now be given.

Among animals included in the generic term of goats are the following: (*a*) The ibex has a wide range of habitation, and very fine specimens are found on high precipitous mountains, their horns occasionally attaining a length of 50 inches. (*b*) The ***markhor***. Of the four varieties found in India, the Astor and the Pir-Panjal are fairly numerous in the State. The former of these carries a pair of

massive horns with an open spiral of one and a half turns, while the twist in the Panjal variety is more contracted and usually has two turns. Horns more than 50 inches in length, measured round the spiral, are eagerly sought after. (*c*) The *tahr* dwells in forest regions, their favourite resorts being precipices upon which grow trees, bushes, and grass. The horns are short, but the trophy is worth securing on account of the length of the mane. (*d*) The *serow* is a goat-antelope, which lives in rocky mountain forests in the Kashmir, Kishtwar, and Pir Panjal ranges. Residents in the State advise hunters that this species has no special value attached to it, but that it is usually followed with the object of completing a collection of heads. (*e*) The *goral*, or Himalayan chamois, is found on the outer ranges of Kashmir and in Kishtwar. (*f*) The *nilghai*, or blue bull, is preserved in the Province of Jammu, where it is regarded as a sacred animal. (*g*) The Indian antelope, or black buck, is confined to the plains. (*h*) And the Tibetan antelope and gazelle frequent altitudes of more than 12,000 feet, chiefly in the district of Ladakh, the horns of the former measuring from 22 inches to 27 inches in length and the latter from 12 inches to 15 inches.

In the category of wild sheep, those known as "Hodgson's sheep" (*Ovis Ammon*) are found in Ladakh at about 15,000 feet or more above the level of the sea, and they are partially migratory in their habits. Horns of males, measuring 40 inches in length along the curve, are much prized.

"Vignes" sheep, or the *sharpu*, frequents Baltistan and Ladakh, while the *bharal*, or wild blue sheep, is common in Ladakh. Both of these animals are greatly desired for the table.

The deer tribe comprises a number of remarkably fine species, and foremost among them is the Kashmir stag (the red deer of the State) which is distributed throughout the hills on the northern face of the valley. After the stag has cast its horns in March or April, it retires to the heights for the summer months. A normal head carries ten tines. Royals, and heads with thirteen to fourteen points, are also found. Large antlers range from 40 inches to about 48 inches. There are other deer allied to the Kashmir variety, but none of these Asiatic stags enter the State. The shooting season extends from September 15 to the middle of March. The barking-deer (*Cervulus muntjac*) is found on the ranges in the southern portion of Kashmir, but it is rarely met with in the valley. The musk-deer (*moschus moschiferus*) inhabits altitudes varying from 6,000 feet to 13,000 feet, but the shooting of it is now absolutely prohibited. It is of small importance as a trophy, being hornless, but it is interesting from a naturalist's point of view on account of the large development of its canine teeth, and the musk pod, found in the abdominal glands of the male, which is valuable.

Black bears are commonly found on lower ranges of hills, but they migrate from one place to another in search of food, and at certain seasons of the year they pillage fruit and agricultural crops with a noticeable fondness for roots. The brown species is scarce, being found only on high mountainous ledges of rock and caves, but it is never seen during the winter months.

The largest members of the cat family are the leopards, including the ounce or white leopard, which are found chiefly in the Kashmir and Nubra valleys, although they are occasionally met with on the lower ranges of hills. The Tibetan lynx haunts the district of Ladakh, and other members of the feline tribe are sought for on account of their valuable skins.

Wolves are fairly plentiful in Ladakh, and wild dogs, the most destructive of all pests, are responsible for considerable damage in Baltistan and Kishtwar, but they are seldom seen in Kashmir proper. The yak dwells in the more remote portions of Ladakh, but it is regarded as a sacred animal and cannot be shot in the State. Other fauna comprise the wild boar, found on the lower hills, foxes, jackals, marmots, otters, and many others.

Small mammals abound in Kashmir and on the frontier, and although naturalists claim to have discovered many new species in recent years, there has, perhaps, been too great a tendency to give generic rank to many rodents which are probably only varieties.

Field rats and mice are numerous in all parts of the State, and among the former, those which are most frequently observed belong to a soft-furred variety of the common Indian type. The short-tailed mole rat swarms in gardens when the winter is severe, and it is productive of a considerable amount of damage. Voles are plentiful on the hills, and although there are several species, it is only during the past few years that a recognized classification of them has been generally accepted.

Mouse hares are interesting little animals, found chiefly in Gulmarg, while *Ochotona*, *Curzoniae*, *Macrotis*, and *Aurita* are met with at high altitudes in Ladakh and on the borders of Tibet. Two specimens of water-shrews are known, and the ordinary musk-shrew and bats of different kinds are in evidence in all parts of the State. The red flying squirrel, and a smaller variety known as the Kashmir flying squirrel, are common everywhere; their fur is exceedingly soft and fine, but it is unfortunate that their skins are too thin and brittle to be made up into cloaks. Hares frequent low hills, and in Ladakh; the Afghan, woolly, and upland species are those usually seen by sportsmen. Porcupines have a preference for roaming on low-lying ground, but hedgehogs are a rarity.

In addition to the martens and weasels already mentioned among fur-bearers, others of a similar family are the Tibetan polecat and the ermine, or stoat, the latter being exceedingly scarce.

The yellow-bellied weasen is found as far westward as Kishtwar, and the Indian ratel (or badger) lives at the base of outer hills.

The Simian tribe is represented principally by the species known as the Bengal monkey, although the Himalayan langur is an inhabitant of some of the forests.

The Indian mongoose, both large and small, is fairly numerous, but the ruddy variety is almost a stranger, either on hills or in valleys.

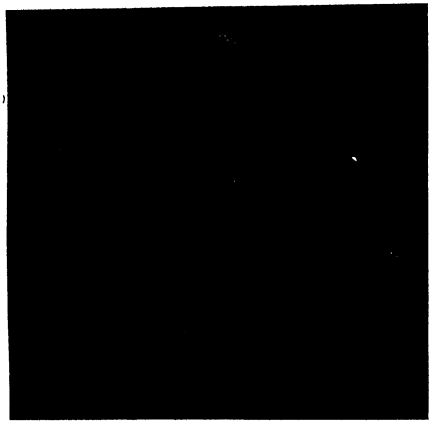
Game birds are represented by the common peafowl of the Jammu Province; the *koklass*, *chir*, and *tragopan* (or Western horned) pheasants; and *monal*; several types of quail; black, grey, and Tibetan partridges; and the Himalayan and Tibetan snow cocks and grouse. Many of these birds are somewhat rare, those most frequently shot being the *monal* and *koklass*.

Many kinds of pigeons are found in wooded districts, and these include the green variety met with in Kishtwar, the Indian blue rock, the blue hill, Eastern stock, and many others abound in the hills, while the beautiful speckled wood-pigeon breeds in the eastern portion of Kashmir. Indian turtle and other doves are also common.

A large number of waterfowl spend the winter in Kashmir, but only the white-eyed pochard and a few mallard stay to

breed in the summer. The bar-headed goose breeds on some of the lakes in the northern part of Ladakh, while the Brahminy and a few other types are in the habit of nesting in the Changchenmo and Nubra valleys.

A complete list of waterfowl is as follows: the mute swan; the grey-lag goose; the white-fronted goose; bar-headed goose, rarely seen in winter; the sheldrake, seldom met with; the ruddy sheldrake or Brahminy; the cotton teal, exceedingly scarce; the common teal, widgeon, fantail; the gargeny or blue-winged teal, the shoveller, red-crested pochard, white-eyed duck, the scaup, tufted duck, the white-headed duck or stifftail, the smew, goosanda, the red-crested merganser, the great-crested grebe, and the dabchick.



MARKHOR SHOT BY MAJOR H. L. HAUGHTON NEAR GILGIT.

Other birds affording good sport are woodcock, fantail, and painted snipe, which breed in Kashmir, while jack snipe may be secured during winter months only.

Very large numbers of birds of endless varieties are met with in Kashmir, especially during the summer months, and although many of these migrate through the State for breeding purposes in distant mountains, others remain and make their nests in the valleys and adjacent hills.

The following list is given in the sequence adopted in the "Fauna of India" series: Ravens are found chiefly in Ladakh, no part of which is less than 9,000 feet above the level of the sea; carrion and jungle crows are more evenly distributed, and the hooded crow is rarely seen; while the ordinary Indian house crow and many kinds of jackdaws are common at lower altitudes. Magpies frequent Ladakh and Baltistan, and the yellow-billed blue-winged species is found in Kashmir. There are two types of jays, nutcrackers, and choughs, ten of tits, and a number of laughing thrushes, of which the western variegated, and the streaked-laughing variety, are well-known residents. The Himalayan whistling-thrush, which haunts streams almost everywhere, emits a peculiar shrill note, which has secured for it the name of "the idle schoolboy"; shortwings, the well-known little white-eye, and firecaps belong to a family regarded as summer visitors; bulbuls—especially the white-cheeked variety—are plentiful, but the stolizka tit is not often encountered. There are three species of nuthatches, and two of drongos, the black drongo, or king-crow, being looked upon as a general favourite. The Kashmir wren, two types of tree creepers, and the gold crest are regular inhabitants, while the wall creeper is only seen in winter. No fewer than thirty-two species of warblers either migrate into Kashmir territory or are permanent residents. Shrikes, of which the rufous-backed is the commonest, are numerous, and the lovely Rajah bird, or short-billed minivet, the males of which are clad in scarlet and black and females in more sombre colouring, are easily recognized.

The mellow notes of the Indian oriole herald in the summer months, during which paradise flycatchers and fully a dozen others of the same family are greatly in evidence. Chats are seen in considerable numbers, but they usually migrate to the higher ranges, although the small variety, known as the Indian bush chat, is no stranger in any portion of the Kashmir Valley. A large black and white bird—in appearance like a wagtail—frequenting streams in the hills, is the western spotted forktail, which can be easily identified by its flesh-coloured legs, while the lesser forktail may be observed hopping from stone to stone in the beds of rivers. There are about half a dozen varieties of redstarts, the white-capped one being found chiefly near banks of rivers, many of which are at an altitude of at least 11,000 feet. The beautiful blue-throat and ruby-throat, together with the red-flanked and the blue-headed and two other species of robins, are visitors to the State. The Central Asian blackbird is very rarely met with, but ouzels are numerous, the common one inhabiting gardens being known as Tickell's ouzel. Rock thrushes comprise some of the most beautiful birds in Kashmir, and accentors travel in large flocks into and through the State.

Next in order come the finches, which may be said to include the hawfinch and grosbeak. Of the Fringillidæ, of which Kashmir is the home of more than forty species, those most frequently seen are the Himalayan goldfinch, the orange bullfinch, the little gold-fronted finch, and a few of the lovely rose finches. Martins and swallows make their appearance in summer time only. Twelve different kinds of wagtails, and nearly as many varieties of pipits, are fairly plentiful, while skylarks are even more numerous. The purple sunbird is confined to the plains; four species of woodpeckers, the wryneck, and three varieties of barbets are not scarce, and the yellow-backed honey guide, although somewhat rare, may be met with occasionally.

Indian and European rollers, frequently called jays owing to the colour of their plumage, two varieties of noisy bee-eaters, four species of kingfishers, the European hoopoe, and swifts, are more or less commonly found.

The friendly cuckoo is a welcome visitor when the balmy air of spring tells of

the approach of warmer days, and it, as well as the *koel*, is exceedingly plentiful, while paroquets, rich in plumage, breed almost entirely in the Lolab Valley and adjoining districts.

Kashmir is famous for its remarkably fine owls, some of which are natives of the forests; the great horned species is sparsely scattered over a large extent of country, but the rock-horned and scops varieties, together with a few owlets, are plentiful.

Several types of eagles are very scarce, such as the golden variety, but there are others, including hawk and fishing eagles, which are found on all high peaks. Hodgson's fishing eagle will easily be recognized by its utterance of a peculiar clanging kind of call when soaring over lakes. Griffon vultures are the most numerous of this important family, and the bearded species, or lammergeyer, may frequently be met with, but there are other species which are rare, owing to the perilous heights of their habitations. Kites, buzzards, falcons, kestrels, and the little merlin, are more prominent in winter than in summer.

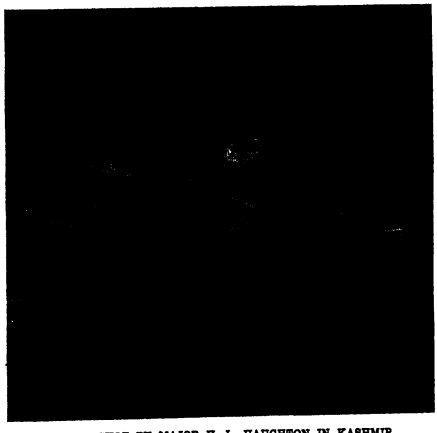
The pheasant-tailed jacana, seen resting upon water-lilies in various lakes, visits Kashmir during the warm weather. Plovers, waders, and other similar birds do not call for particular reference, as they are seldom seen, but the whiskered tern, as it is common everywhere, may be mentioned as the bird which produces eggs sold as plovers', and it may be added that nests of the red-wattled lapwing are also frequently robbed for the purpose of supplying the table with similar counterfeits.

A few remarks may now be added with regard to furs, obtained from several of the before-mentioned animals, which are sold by traders at Srinagar, the capital of the State. Excellent leopard skins may be had, but the prices asked by retailers are usually very high. Ounce, or snow-leopard, skins are derived from Ladakh and other outlying districts, those of the Pallas cat are very rare, while others from the jungle are made up into carriage rugs, which can be purchased at a comparatively low figure. Good Tibetan lynx skins are scarce, but notwithstanding this obstacle the demand for them is very keen, while there is an abundant supply of waved and civet cat furs. Ladies have a preference for the beech marten (*missr* in the vernacular), fox, marmots, and Indian marten skins, while Palm-civets and white-nosed weasels secured in the Pir-Panjal are greatly fancied by visitors. Very fine black wolf skins are obtained in Ladakh, and the pelts of others are made up for sale to wealthy Indians for coat collars and cuffs. Jackal skins are used for rugs or mats; the *Pushrn*, or under fleece of the ibex, makes an exceedingly warm blanket, and that of the Chinese goat is used for shawls, although it is frequently mixed with inferior materials.

Many skins exposed for sale in Srinagar and other places are not actual products of the Kashmir State; some of them are dyed, or are imperfectly cured, while those mounted on cloth should be studiously avoided by purchasers. Tourists, therefore, will be wise to obtain skins in the rough dried condition, and have them forwarded to England to be set up.

Licences are required for shooting, and regulations relating to game laws, close seasons, and the number of animals allowed to be shot, together with any other information, may be obtained from the secretary, Game Preservation Department, Srinagar.

His Highness the Maharaja reserves an area of about two hundred square miles for the entertainment of his own personal friends.



GURAL SHOT BY MAJOR H. L. HAUGHTON IN KASHMIR.

LAKE AND RIVER FISHING IN KASHMIR

By Major H. R. WIGRAM, Secretary, Kashmir State Game Preservation Department

THE lakes and rivers of Kashmir form a theme that has delighted the heart of artist and poet, author, and lover of nature, from the time when the Mogul Emperors first visited the valley some four hundred years ago until the present day.

The Valley of Kashmir runs pretty well due east and west, and the Jhelum river traces its placid course throughout its length, with an almost imperceptible fall, from Islamabad, where navigation commences, to Baramulla, where it bursts through the narrow barrier in the hills, and, becoming a raging torrent, pours its waters down to the Punjab.

The Jhelum, which is the chief waterway of Kashmir, is fed throughout by rivers and streams, the chief of which are the Bringhi and Arput, Rembiara, Veshan, and Lidder, at the upper end of the valley, and the Sind, Madmati, Erin, and Pohru (or Lolab), at the lower, whilst the Kishenganga, a river of very much the same volume as itself, joins it at Domel.

All these rivers, as well as nearly all the mountain streams, are well stocked with country fish, which contribute a valuable asset to the food-supply of Kashmir, especially to the poorer classes, and also form a source of nutritive employment to some four or five hundred *Mahagirs*, or professional fishermen.

Mr. Frank Mitchell, hon. director of trout culture, has compiled a list of the indigenous fish of Kashmir, which is as follows:

1. The Chiroo (*Schizothorax Esocinus*) is chiefly an inhabitant of lakes, but it ascends the larger rivers to spawn in the spring; hen fish, which largely exceed the cock fish in size, have been killed up to 26 lb. in weight.

2. The Chush (*Schizothorax Intermedius*), though smaller, is very similar in its habits. It remains somewhat longer in the rivers, where the younger fish of both varieties are often found of considerable size at all times of the year.

3. Ehocht (*Oreinus Sinuatus*) is more of a river fish, and is generally found in the rapid waters above the level of the valley up to 7,000 or 8,000 feet. It hibernates in springs, or descends to the large lakes in winter. The recent lowering of the level of the Woolar lake has allowed the *Garhanjees*, or fishermen, to make great hauls of these three varieties in winter, with the result that the stock in all rivers has become perceptibly smaller, and fish in Srinagar can hardly be obtained in the season.

4. The Rupport (*Labeo Dyocheilus*) is one of the handsomest indigenous Kashmir fish. Day gives its maximum weight as about 2 lb., but I have never seen one over 1 lb. At one time it was plentiful in the Veshau and Jhelum rivers, near Bijbehara, but it is now very scarce.

5. The Snow Trout (*Diptycus Maculatus*) is perhaps one of the best-known fish to European anglers who spend summer in the hills. They are found in great numbers in the waters of nearly all our rivers, but are very rarely seen below 6,000 feet, although I have caught them as high as 12,000 feet, but waterfalls make most rivers inaccessible to them at such a height.

6. The Anyur (*Exostoma Stoliczikæ*) is an ugly catfish, which is also found in most of the upper streams. It can climb over stones when going up a waterfall, but cannot swim up, and it is now getting scarcer. Small numbers are, however, found in lakes and rivers up to and over 12,000 feet, a height to which the *Diptycus* cannot ascend.

7. The Til Grun (the loaches; *Nemacheitus Stoliczikae, V. Marmorata*) are in all the rivers of Kashmir, and, where available in any numbers, they are much appreciated by the poorer people. The extreme size to which they grow is from 5 to 6 inches.

8. The Ram Grun (*Botia Geto*) is a very delicate little fish living chiefly in the lakes. They are caught when running up the rivers to spawn, and are now very scarce indeed. The small horn with which they are armed is very sharp, but it is no protection against the *Garhanjees*.

9. The Tatgarh (*Cirrhina Latia*), a small fish of from 3 to 5 inches in length, lives in the lakes and spawns on weeds. They are not much appreciated as food, and are used largely to feed trout at the Harwan.

10. The Mahseer (*Barbus Tor*) is only a migrant, and I cannot feel sure that it breeds as high up as the Valley of Kashmir, although there is no doubt that it does in the Jhelum and its affluents.

Of imported fish, the brown trout (*Salmo Fario*) has now proved a great success in all waters above 5,000 feet, where it can be established and protected.

The mahseer, of course, head the list both from a sporting point of view and also for their value as an article of diet in the market. They are migratory, and,

LAKE AND RIVER FISHING IN KASHMIR

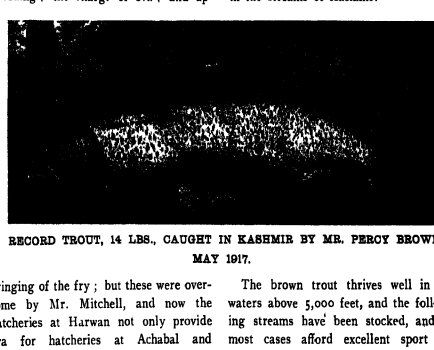
whether for spawning purposes or not, they run up, during the summer months, from the lower Jhelum to the upper waters of that river in Kashmir.

The chief fishing centres for mahseer, which are largely patronized by the angling public, are Ningle, where the Jhelum emerges from the Woolar lake, and Sopour, which adjoins it; Shadipur, at the mouth of the Sind river; and a few places such as Baramulla, Domel, and Ghurry on the Tonga road, at all of which places a few good fish are caught every year. Of the other fish, the Chush and Chiroo give fair sport with the fly and fly-spoon pretty well throughout Kashmir, and large fish are taken annually by spinning at Gunderbal, where the Sind river leaves the hills and flows into the valley, whilst the snow trout, an excellent fish for the table, affords pastime to numerous fishermen at Gulmarg, Pahlgam, and all the hill stations throughout the State. In the larger rivers and lakes netting is permitted, and the *mahagirs* make a livelihood by this method, supplying the whole valley with fish.

All the waters of Kashmir are preserved, and licences are required for each method of fishing.

The scheme for the preservation of fish in Kashmir is as follows: The waters of Kashmir are divided into three classes—trout waters, reserved waters, and protected waters—and separate legislation is provided for each. The trout rivers I will now deal with. On the reserved waters, rod fishing and netting are allowed in fixed portions, and the licence fees are as follows: (*a*) Licences for rod fishing for the season, five rupees; (*b*) netting with casting-net, sixteen rupees (this fee including the right to fish under (*a*) above), whilst on the protected waters, which comprise practically the whole of the remaining rivers and lakes, the fees are: For rod for the season, two rupees; netting with small nets and landing nets, spears, and night lines, Rs. 6.8.0; whilst a general netting licence, including drag and large casting nets, costs eleven rupees. Rivers are watched and protected by guards, and the grant of licences and all matters of control, both financial and executive, are vested in the secretary of the Game Preservation Department, Srinagar.

Trout fishing in Kashmir now takes such a leading place in the sport of the country that a short history of its introduction into the country may be of general interest, and is worthy of record. In 1900 a committee of sportsmen, recognizing the possibilities of the grand rivers of Kashmir as trout waters, started a private enterprise to get out ova from England, and Mr. Frank Mitchell was elected as secretary to carry out the scheme. This gentleman is now the hon. director of trout culture in Kashmir, and thanks are due to his excellent management and knowledge that the *Salmo Fario* may now be confidently said to be established in our rivers. At first there were many difficulties to be overcome; difficulties in getting out the ova; difficulties in the selection of water fulfilling the many conditions necessary for the tanks and hatcheries; difficulties in the finding of suitable men for training in trout work and the delicate operation connected with breeding: the charge of ova: and up-



RECORD TROUT, 14 LBS., CAUGHT IN KASHMIR BY MR. PERCY BROWN, MAY 1917.

bringing of the fry; but these were overcome by Mr. Mitchell, and now the hatcheries at Harwan not only provide ova for hatcheries at Achabal and other places, and for putting down direct into rivers, but they have provided eggs for stocking trout streams in Kulu, Assam, the Frontier, Naini Tal, and elsewhere.

The method of the introduction of trout into the rivers is as follows: (*a*) Ova.—Springs adjoining the rivers, and, if possible, high up, and some distance away from the streams, are carefully selected, and in November and December, during the spawning season, the ova are taken out in boxes and placed in the clear fresh water, which gently flows over them, the cases being covered with branches to prevent injury. The ova hatch out in the early spring months, after which the wee trout have to look after themselves. (*b*) Yearlings.—The ova are kept in hatching-boxes at the various hatcheries, and, after passing through the *alevin* stage, are transferred to ponds and tanks and artificially fed until the following autumn, when they are put into the side streams of higher rivers, where they are enclosed with wire netting to prevent them from getting down into the main stream until the succeeding autumn, when they are released, to find their way down to adjoining rivers. The same course is adopted with two-year-olds, except that they are kept for another year in confinement, when they are ready to start the fight for existence as ½-lb. or ¾-lb. fish.

The food upon which the fish are fed is made locally, and consists of closely-ground silk-worms, dried fish, and cereals.

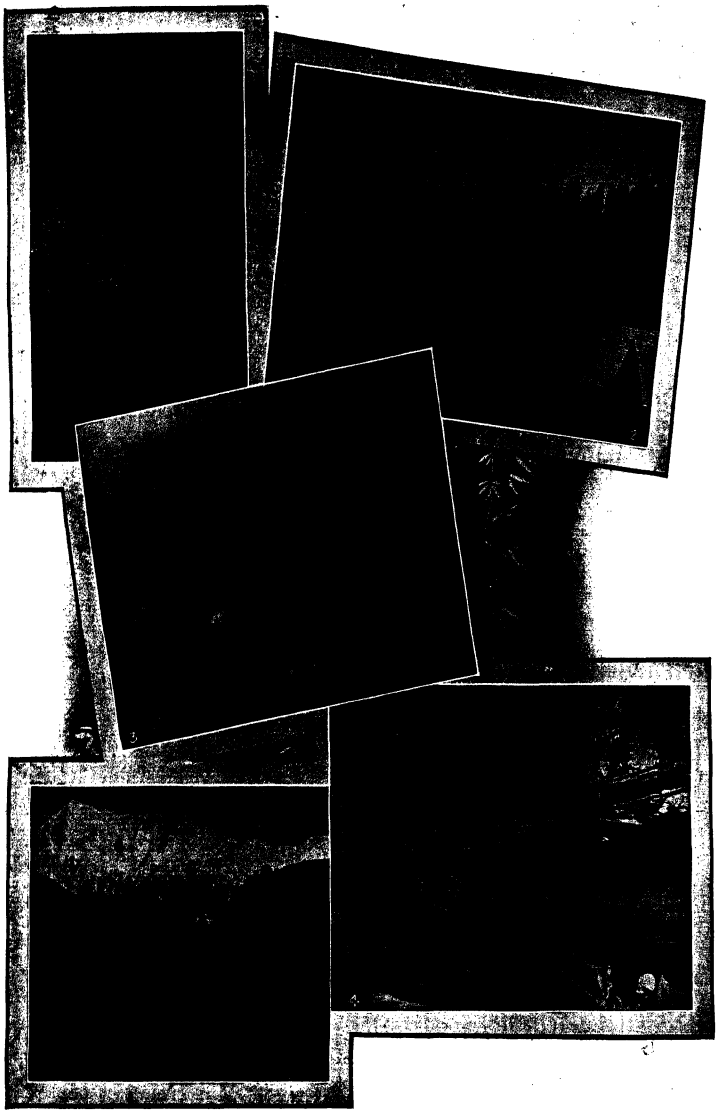
The success of this method of bringing up is proved by the returns of 1917–18, when some 25,000 yearlings and two-year-olds were available for distribution in the streams of Kashmir.

The brown trout thrives well in all waters above 5,000 feet, and the following streams have been stocked, and in most cases afford excellent sport for anglers: the Lidder, the Achabal and Arput, the Veshan and Koolgam, the Arrah, the Burzil branch of the Kishenganga, the Burdwan stream at Gurais, the Wangut, the Erin and Sirander, the Bringhi and Nowboog rivers, the Pohru, the Madmati, the Thrickar river, the Manisbal lake, and the high lakes on the northern slopes of Mount Harmook.

In the above rivers the following are the recognized methods of fishing: On the Achabal and Arput, the Burdwan stream at Gurais, the Erin and Sirander, the Bringhi and Nowboog, and the Madmati, fishing with fly only is permitted, except in certain specified pools and plaoes where minnow and spinning baits are allowed.

In all other rivers fishing is permitted: (*a*) by rod and line; (*b*) with artificial, natural, and dead bait only, fishing with worm being prohibited.

The number of trout allowed to be



1. THE FOUNTAINS. 2. MAIN STREET, GULMARG. 3. ARO-LIDDAR VALLEY, KASHMIR.
4. ROPE BRIDGES, JHELUM VALLEY, KASHMIR. 5. MUZA PARBIT, KASHMIR, 27,600 FT.

LAKE AND RIVER FISHING IN KASHMIR

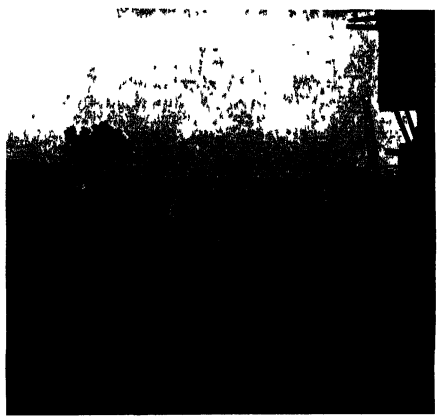
caught is limited to four in one day, except on the Arrah, where the limit is six, and a size limit of nine inches is laid down, below which all fish must be returned to the stream

The following licence fees are charged for trout fishing For the season, viz April 1st to September 30th, Rs 60, for one week, Rs 25, for one day, Rs 5, and in addition to the above permits are issued limiting licence-holders to one week at a time on any of the above rivers

Trout attain a large size in Kashmir, and one of 14 lb was taken, on a minnow, by a sportsman in the Bringhi in 1917 Fish from 3 lb to 5 lb are not uncommon, and give grand sport when caught on the fly. A general list of flies which kill well is as follows salmon flies, Jock Scot, Sir Richard, Durham ranger, Black Doctor, Thunder-and-Lightning, Cock-of-the-walk, and, in addition to the above, almost all the English and Scotch trout flies are taken, tied on Nos 6 to 8 hooks, and when the rivers are low and clear in summer and autumn, fine gut and small flies are equally deadly

The stocking of some of the lakes is now being proceeded with, and as the Manisbal lake a most lovely spot, has already been supplied with rainbow trout, the results should be seen shortly, whilst some of the high mountain lakes have afforded excellent fishing for two or three years, and have proved, without a doubt, that the high altitude at which they lie is no bar to the well-being of the fish

In conclusion I can only add that for anyone needing rest or holiday in the most delightful surroundings, take a houseboat and spend your summer in Kashmir, whilst if you are a fisherman, pack up your 10-foot rod, go through your flies, hunt out your waders, and come along Fishing is, without doubt, the most uncertain sport in the world, but with a perfect climate, your camp pitched on the grassy slopes of a wellnigh ideal trout stream with the scenery unrivalled in its grandeur, what more can you ask for?



PAMPORI BRIDGE, KASHMIR (SPEAR-FISHING BOAT IN FOREGROUND)

Photo by P. Tobin Nath & Sons

HINDU AND MAHOMMEDAN CUSTOMS AND FESTIVALS IN THE STATE OF KASHMIR

By SHENKER JOO, M.A.

INDIA is a land of many religions, and a large number of customs which vary considerably in different parts of the country.

In Kashmir Hindus rise early in the morning, and before leaving their beds the majority of them offer a short prayer, while those of a more pronounced religious turn of mind sit upon a piece of clean white cloth, a carpet of grass, or the skin of an antelope, and count a number of beads, at the same time reciting a sacred Vedic *mantra*. Upon leaving the room they proceed to the nearest river, where they either go through ordinary ablutions, or on the bank perform daily *sandhia*, which is a curious practice of withholding and expelling the breath. In the first place a long breath is inhaled very slowly through the left nostril, and after it has been retained for a few seconds, it is then exhaled through the right nostril. This performance is repeated three or four times, and it is said that it produces a mental calmness which lasts throughout the day. Special prayers, accompanied by a peculiar movement of the hands, are then offered, whereupon the worshipper retires to his home to read portions of the *shastras*. Orthodox Hindus never retire to rest without repeating this ceremonial.

The system of combined family life has been in existence from prehistoric times. Brothers, cousins, and uncles live together under the same roof, as in patriarchal ages. Sometimes there is only one bread-winner in the whole combined family, the remainder being, virtually, human parasites. This promotes idleness, diminishes individual effort, and is suicidal to the general prosperity of the nation.

The all-important question of marriage is arranged by middle-men, whose chief qualification appears to be an absolute indifference to truthfulness, and thus they have no qualms of conscience in inventing fanciful descriptions of the beauty, wealth, or desirability of the young couple on whose behalf they are employed. After all preliminaries have been settled satisfactorily, the mother of the bride causes her house to be thoroughly cleaned and whitewashed, and on the auspicious day of celebration of the marriage, the wedding procession goes there to find that an altar has been erected, incense is burning, and priests are chanting *Vedas*. During the course of the proceedings the couple are called upon to swear that they will cling to each other as one body and one soul, that through *mantras* they are united, and that they will not separate from each other either in this or any other world. The woman is called *urdang*, that is, "half body, left side." A feast, consisting only of vegetables, is given to the guests, and the bride and the newly-wedded husband, accompanied by their friends, then leave for the home of the bridegroom, but on arrival they find all doors closed against them by the latter's sister, until she has been given presents in money or kind. The couple are invited to visit the bride's father in the evening, and after the husband has received a present in cash, he and his wife return to their new home. The bride spends a few days, not exceeding a week, in her husband's house, and then returns to stay for a similar period with her own father, and it may be remarked here that on every occasion the latter wishes to see his daughter as a visitor he must pay a certain sum of money to the husband. The couple live together if they are adults, but if this is not the case a second marriage ceremony called *Zuge* is necessary, but on this occasion the services of priests are dispensed with. It is incumbent upon the bride's father to invite his son-in-law and a number of guests to attend a feast, which frequently costs him a considerable amount of money. The relationship between husband and wife is usually one of great affection and fidelity, and it seems somewhat strange to learn that they are not allowed to converse with each other in public until the death of the husband's parents, or until they have had children born to them, whichever event shall happen first. In former years it was the duty of the wife to obey implicitly the orders of her mother-in-law or sister-in-law; she had to rise at an early hour, and in cases of poverty she would be expected to clean the house,

carry water, and cook food, in addition to many other inferior household duties.

Recent years have ushered in an era of partial emancipation for the women of India, and even in far-off Kashmir they enjoy a newly-discovered freedom which virtually delivers them from interference by the family.

Children are, as a rule, obedient to the will of their parents, but it is asserted that the spread of education and western ideas has given them views of a larger environment than that enjoyed by their fathers and mothers, and that, as a consequence, parental control is frequently conspicuous by its absence.

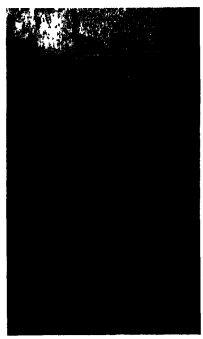
In connection with the birth and early life of a child, some curious customs are observed.

A few weeks prior to the expected time of an increase in the household, the prospective mother is sent to her husband's house with a few pots full of curd, which is distributed to his relatives, while she is presented with new clothing by her father. This is called the "curd ceremony." On the sixth day after the birth of a child the mother is placed in a bath of warm water in which are thrown drugs of valuable medicinal qualities, and she is further allowed to receive visits from her friends.

Visitors—excepting those of closest relationship—are not permitted to eat or drink in the house for the first ten days, as it is regarded as infectious and unclean, but on the eleventh day the mother wears new clothing, made for her by her husband, and attends a ceremony called *Kahanether*. The child's name is declared during these proceedings, and a priest produces his horoscope, a scroll of paper showing the planets that are favourable or otherwise to it, and if the offspring be a male the astrologer is certain to receive a substantial fee.

The ceremony *Zara kasi*, or shaving the head of the child—for which there is no fixed date—is attended by relatives who, together with the mother and the infant, receive new clothing and attend a feast in commemoration of the event. Fees are paid to the priest and barber. The bestowal of the holy thread marks one of the most important days in the life of every Hindu, and the ceremony is preceded in Kashmir by the most elaborate preparations. Not more than two weeks prior to the event the house is entirely whitewashed, and the women spend some days in calling upon relatives inviting them to attend, receiving from them in return presents of money as good omens. Two days before the event the hands of the boy and his female relations are dyed by the maternal aunt, who is paid a fee for her trouble, and on the following day male relatives, neighbours, and friends are asked to the house, when each individual pays to the host a gift of eight annas or a rupee, while a lamb is frequently sacrificed to the gods.

Then follows the *Yugnupavit*, or the tying-on of the sacred thread. It should be mentioned that all the arrangements for this festival are left in the hands of women, who provide most sumptuous feasts for guests, they themselves singing,



A POTTER, KASHMIR.

in relays, throughout the day and night. An altar is erected in the house, and the priests continuously chant *Vedas* during the burning of incense. At nightfall the boy is taken to the bank of a river, where he performs certain ceremonials. During this absence from home his mother, aunt, and other female relatives dance in a circle in the compound, while the spectators pay a small coin for each revolution. The above rites, which usually take place when the youth is about eleven years of age, signify that the "twice-born has now received his second birth."

On the death of a Hindu the body is washed with warm water, and is then placed on a plank of wood for removal to the crematorium, those forming the procession continuing to chant: "*Sheo, Sheo, Shambú; Sri mahadiv Shambú; Khentorah mi Paradah*," meaning, "Oh, God of Peace, forgive our sins." The priest subsequently sprinkles flour upon a small piece of ground, placing upon the site a basket containing a lighted lamp, and by subsequently examining the impressions made upon the flour, that individual is said to be able to discover what body has received the departed soul. The physical remains are then burned. Those who have attended the ceremony subsequently proceed to a river, in which they bathe, and after walking seven times round a fire made upon the bank, they retire to their own homes.

On the third day after the cremation the sons of the deceased visit the ashes of their late father's body, and return with a few small bones, termed "flowers," which are kept in the house until they are finally cast into the River Ganges or into the Gungabal lake.

If the deceased should be a person of considerable age, various ceremonies (including the sprinkling of water and the offering of balls of rice) are performed on the bank of the river or lake during the next ten days, and the sons shave their beards. On the eleventh day the soul of the deceased, which it is believed has hitherto been wandering in space, is said to be translated into the world of ancestors by the chanting of *mantras*. On the twelfth day a special ceremony is held in order to satisfy the cravings of the spirit, while on the following day mourners put on clean clothing, the men shaving themselves, and it is obligatory that during these twelve days no visitor shall eat or drink in the house of the mourner, as it is considered to be infectious. Subsequently to this date, fortnightly, then monthly, and finally annual ceremonies of a similar character are observed. On these occasions the presence of the particular son who performs the *sharada*, or ritual, is essential; water is sprinkled in a prescribed manner in the name of the deceased, and balls of rice are offered.

There are two distinct theories regarding the doctrine of transmigration: one, based upon the law of Karma, is that the soul is given another body which may be human, animal, or vegetable, as soon as it leaves its original shrine; and the other is that the soul is translated to the world of spirits to undergo a process of purification, after which it is re-incarnated and subsequently permitted to soar to higher spheres.

Hindus have great faith in the wearing of charms to avoid untoward influences of stars, planets, and evil spirits and eyes. These are worn by children as well as

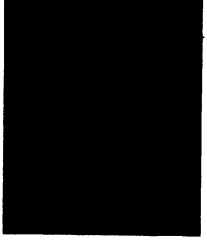
fully-grown men and women, and usually consist of circular or oblong pieces of metal or gold upon which an image of a god or magical figures are engraved, and occasionally one sees large black earthenware pots suspended on new houses with the view of accomplishing the same end.

Omens, too, play an important part in controlling the actions of individuals: crows, owls, and kites are regarded as precursors of evil; swallows, hoopoes, and bulbuls are supposed to be prophetic of good fortune; and the last-named is considered to be also the messenger bird foretelling the arrival of a guest. Again, if a man, on leaving his house, should meet an old woman of unprepossessing appearance, or a person with one eye, or a dog, or donkey, he believes that some dire misfortune will befall him unless he can retrace his steps, but it should be added that, with the advance of education, this superstition is losing its hold upon the people.

Sacrificial ceremonies are performed in the State, chiefly in connection with the calamities falling upon households. For example, if illness should overtake an individual, the relatives of the sufferer offer a fat lamb to the priest, who places upon it the misdeeds of the patient, and the animal is then killed, although in somewhat rare instances it is turned loose in a forest. This practice is called *Raja kat*. An outbreak of small-box is attributed to the goddess Shetala, and when this fell disease attacks a family, the mother—if not actually affected by it—presents a female ass or goat in order to propitiate the goddess, but the inhabitants are beginning to understand the benefits derived from vaccination, and about one per cent. of the total population have already been inoculated against small-pox.

The Hindu community in Srinagar is labouring under two self-imposed but lamentable social evils, namely, the prohibition of the remarriage of widows, and child-marriage. The miseries and afflictions from which poor dumb widows suffer are heart-rending. If a girl should lose her husband, even in childhood, when she is not more than ten years of age, she is doomed to perpetual widowhood, her presence at festivals or marriage ceremonies is considered most inauspicious; she may not put on clean clothes; and in order to be a good virtuous widow, she must not wash or dress her hair, but is required to give up all enjoyments of life and patiently wait for death. Life is a burden to her, her company is unacceptable anywhere, and this state of affairs degrades her morally, and is, further, a great stigma upon the community.

At the present time the struggle for existence has become harder in Kashmir, as well as elsewhere, and consequently widows are not now so well cared for as when conditions were more favourable. As this enforced widowhood has some religious sanction now that the practice of *sutti* has been prohibited, nothing is done to abolish the before-mentioned inhuman custom. A Martin Luther is needed in Kashmir to revolutionize the whole social system, as this abominable custom is



CUTTING REEDS, KASHMIR.
Photo by P. Vishi Nath & Sons.

slowly but steadily decreasing the Hindu population. The evil is aggravated by child-marriage, which brings untold misery in its train; it has weakened the general physique of the community, and consequently Hindus are not so well able to endure the strain and stress of life. They, therefore, seek lighter occupations as clerks, and they give up study when quite young in order to seek employment. Women, strangely enough, are quite satisfied with this practice, and are utterly opposed to reform. This is detrimental to all progress, but custom, prejudice, and ignorance are responsible for their attitude in this matter.

Hindu festivals are almost legion in number, and differ considerably in practice in various parts of India, but the following are some of the important ones celebrated in Kashmir.

Shivratri.—This is the greatest of all festivals, and continues for ten days. Earthen pots filled with walnuts and water, representing the god Shiva and his attendants, are worshipped by the people, and it is incumbent upon non-resident members of each household to return to their homes in order to participate in the celebrations. Children unite with their elders, and usually receive presents of money. *Tela attam.*—A sacred fast is observed by the people, and lamps are kept burning in conspicuous places in memory of departed spirits. *Senth* is celebrated in the early morning of a day in spring, and the housewife, in calling the attention of the family to the promise of the fruits of the earth, presents before each individual a basket filled with rice, salt, cooked food, silver, and gold. The *Holi* festival continues for eight days, and during this period boys and men (chiefly Punjabis) daub their own apparel and that of others whom they meet with viscous liquids of various colours. These proceedings are conducted in an hilarious manner, and not rarely are attended by serious consequences.

The *New Year* celebration is marked by a general reunion of families, sons-in-law in particular being invited by their fathers-in-law; women visit their fathers and other relatives, or spend the days in gardens near the fort, in which they take refreshments and thoroughly enjoy themselves. *Zetha attam.*—On this day worshippers journey in boats or on foot to Tola Mulla, a most popular place of pilgrimage, where there is a spring, in the centre of which is an ancient temple constructed of large slabs of dressed white stone. Meat is not allowed to be consumed on this occasion. *Hara Chandash.*—This festival is spent in a visit to Khrew, the ancient Khaduvi, where there is a monolithic temple of stone, in miniature, and they worship the goddess there. *Janm Ashtami* is the occasion for the celebration of Krishna's birthday, and the people observe a strict fast until the rising of the moon, when a religious service is held, fruit and milk being given as refreshments. Fathers are required to send various articles of food to their daughters' husbands and mothers-in-law. *Anta choda.*—This day is dedicated to the goddess of wealth and wisdom, and priests attend the festival, taking with them snakes made of cotton thread, a serpent being the symbol of wisdom. *Dasera* is held to commemorate the battle of Rama with Ravana, the King of Ceylon, which is dramatically produced at this festival, and on the tenth, or last day, the wooden images representing Ravana and his two brothers, together with their palace, are

reduced to ashes. This work of destruction is sometimes secured by volleys fired by the troops of H.H. the Maharaja. *Gun Chadda* is dedicated to the elephant god Ganesh, and *Khechi Mavas* is held in honour of Kavir, the treasurer of Shiva. *Gora Tril* is devoted to Saraswati, the goddess of music and wisdom. Priests bring forward coloured pictures of the goddess, upon which is written a verse in Sanskrit. A translation of one of these inscriptions runs as follows : " Saraswati, the giver of all blessings, eyes made of the lotus of knowledge, bestow upon me knowledge and devotion."

Kao Punium takes place in the middle of winter, and as this season of the year is particularly severe in Kashmir, the people are requested to make special efforts on this day to provide food for birds, which cannot otherwise obtain nourishment by reason of the depth of the snow. *Hara Satam* is dedicated to the sun, and in the holding of the festival an explanatory circular diagram is drawn in various colours upon the ground. Fruits and flowers constitute the principal offering. *Dewali* is celebrated in honour of Vishnu's victory over the demon Narakasura, and as the conqueror entered his city amidst illuminations and the acclamations of the people, it is the practice to-day for inhabitants to rise early in the morning and fill their houses with lighted lamps. New clothing is worn, traders open new books of accounts, and the deities are invoked to grant their blessing upon the succeeding year.

Eclipses of sun or moon are attended by general fasting and the observance of certain rituals, and men who have leisure spend the day in worship. Food which is cooked before the eclipse is not partaken of afterwards, as it is believed that unwholesome atoms fall from the sun and moon during the occurrence. Two different theories are held regarding eclipses, namely : (*a*) that Rahu, or Ketu, two celestial giants (stars), endeavour to cut up the sun or the moon ; and (*b*) that the circumstance is a mere shadow. The first of these versions is supported by those who believe only in tradition, while the second is put forward by Sanskrit scholars.

A brief reference should now be made to a few of the places most sacred to Hindus in Kashmir.

Tola Nulla.—Here there is a spring which frequently changes its colour, and Hindus profess that they can foretell the future by a study of this phenomenon. Pink, green, and orange are supposed to indicate prosperity, while black or red are precursors of adversity.

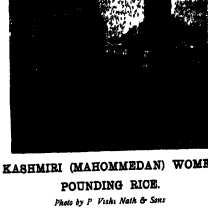
Hari Parbat is the Hindu pantheon, and is visited early in the morning by a large number of Hindus. *Amar Nath* attracts pilgrims from distant parts of India, who pay visits to do homage to a *lingam* made of ice.

Martand contains a spring dedicated to the sun, and it contains an ancient temple of considerable size. There is a large lake at *Gungabal* into which Hindus, in the month of August, throw the bones and ashes of their dead relations.

MAHOMMEDAN CUSTOMS

(THE SUNI TRIBE)

A WEDDING between two parties is arranged by a third person, who appoints a day for the confirmation of an engagement, and for the preparation of the marriage contract. Gold and silver ornaments are sent to the bride, and the father of the latter provides a feast to the bridegroom's father and his friends. The marriage, which takes place shortly afterwards, lasts for three days for a son and two days for a daughter, and the ceremonials commence with *Hinna bandi*, at which refreshments are given by both parties to their relatives and neighbours, while *hinna* and gold ornaments are offered to the bride, and women indulge in singing and merry gatherings throughout the day and night. This is followed by the actual wedding, and in the evening a procession wends its way to the house of the bride, to whom a litter has previously been sent, while the bride's father entertains the husband and his friends. The bride then accompanies the groom to his house, but the latter is compelled to pay money to his own sister before his wife is allowed to enter the doors. The bride's father subsequently sends sugar, tea, cakes, and spices to the husband's father and a present of a shawl to the bridegroom, together with apparel to the wife. On the last day of the rejoicings the bride is carried back to her father's house, where she remains for nearly a year, and her father-in-law is expected to give her a richly made garment or a



KASHMIRI (MAHOMMEDAN) WOMEN POUNDING RICE.
Photo by P. Vishi Nath & Sons

fine gold ornament at the time of her departure.

The lower classes—especially boatmen —have a procession on their own account on the closing day, and they are accompanied by instrumentalists playing drums and flutes, which produce most discordant sounds.

The husband is not allowed to visit his wife in her original home unless her father again gives a feast to him and his friends, but after this has been done he is at liberty to see her whenever an opportunity occurs. The wife does not speak to her husband in the presence of relatives ; she is expected to be entirely submissive to her mother-in-law and the latter's eldest daughter ; and she must rise early in the morning and perform all household duties.

The marriage-tie cannot be broken unless both husband and wife are desirous of separating, and divorce is usually arranged by one or the other paying a considerable sum of money.

When the death of a Mahommedan takes place, friends and relatives assemble at the burial ground at an early hour in order to offer prayers for the welfare of the soul of the deceased. Portions of the *Koran* are recited over the grave by the digger, and on the first Friday after this event the ceremony of *Dastar*

bandi, or wearing of turbans, is observed in the house of the mourners. On the fortieth day food is given to the relatives and priests with the view of promoting the good of the soul of the departed one, and the *Koran* is read by priests. For the first year after death monthly distributions of food are made to priests.

The following among Mahommedan festivals may be mentioned: *Id-ul-fitr* is commonly regarded as the "children's day"; boys and girls, after passing a sleepless night in anticipation of the eventful morrow, receive gifts of money and make the most of their holiday, while prayers are offered and women chant soothing strains of music, which are regarded as appropriate to the occasion. The people generally, but especially the wealthy classes, are required to adjust tithe accounts, and failure to do this is believed to be followed by disasters. *Id-ul-daha*.—This feast is celebrated two months and ten days after *Id-ul-fitr*, and is carried out on much the same lines, but with this addition, that all persons who can afford it sacrifice a single lamb or more according to their individual means. One-third of the sacrificial animal is distributed among neighbours, even Hindus living in the vicinity receiving a share; a third is given to relatives; and the remainder is taken by the members of the family concerned. *Shabi Meraj*.—This commemorates the night on which Mahommed is believed to have ascended to heaven to have conversation with the Almighty and to have solved the problems of Life and Death. The followers of the Prophet are expected to go to Hazratbal, on the bank of the Dal Lake, where is the most sacred Mahommedan shrine in Kashmir. In this building is a glass frame, in which a hair of the beard of the prophet is deposited, and this relic is shown to large crowds

SPINNING THREAD AND GRINDING CORN, KASHMIR.
Photo by V. Vishi Nath & Sons.

of pilgrims who throng to see it. *Shabi Barat*.—This is supposed to be the anniversary of the night upon which the Book of Fate was written. Mahommedans generally are staunch believers in Fate, regarding a human being as a puppet without a free will of his own, but their philosophers are now divided into two classes, namely, those who believe in the free agency of man, and others who teach a creed of Divine will or fate. One of the most important Mahommedan festivals in Kashmir is *Shabi Qadar*, held in the month of Ramzan, to commemorate the teaching of the *Koran* to Mahommed. Others include *Ursi Amir* (held in honour of Ali II), *Ursi Pir*, and *Mukdum Sahib*.

Shia Mahommedans have customs peculiar to themselves, but they are fewer in number than those of the *Sunis*, and it is notorious that they have for many years been subjected to religious persecution, just as the Jews in mediæval Europe. They therefore hate *Suni* saints and shrines. The chief festivals are the Mohurrum and the *Now Roz*, or New Year, the former of these being celebrated in Kashmir in the same manner as at Lucknow and elsewhere in India. The *Shias* never associate with the *Sunis*, they having their own *Ziarats* and mosques. Other tribes living in Kashmir are the Buhris, Purbis, and Sikhs.

Before closing it may be added that the magnificent work of the mission school in Srinagar—the capital of the State—is gradually lessening the hold which these customs and festivals have had for centuries. For instance, the marriage of mere infants is now being discouraged; no married boy under eighteen years of age is admitted to the school without a penalty, and efforts are made to alleviate the miseries of the widows. It is entirely due to the mission that Hindus and Mahommedans are realizing the necessity of female education. Other schools have been opened for giving rudimentary instruction to girls, and new ideas upon social and moral progress are being infused into the minds of the people.

FORESTS IN KASHMIR

By W. R. MACPHERSON

HE forests of Kashmir provide one of the principal sources of revenue to the State, but the income thus derived might be largely increased without any deterioration to the forests, but for the lack of transport facilities. There is no railway in Kashmir, the nearest station being Rawalpindi, some two hundred miles from the capital, Srinagar. Timber can, therefore, only be exported to the Indian markets by river or by cart road. The former method is a lengthy process, which also entails serious losses from theft and from timber becoming waterlogged and then sinking, whilst the latter plan is so expensive that it is useless from a business point of view, excepting for very rare and valuable timber. As a direct consequence of these difficulties, very few of the many excellent woods of Kashmir are, at present, of any commercial value. Transport by river is only feasible in the case of light woods, such as cedar, pine, fir, and spruce, whilst walnut is the only wood which is, as yet, of sufficient value to justify the heavy expenditure which must be incurred in conveyance by road. It will therefore be seen that Kashmir is in the unfortunate position of possessing a very valuable property, of which a considerable proportion is going to waste.

The whole of the Kashmir woods and forests are controlled by a European conservator, lent by the Indian Government, and under him are both European and Indian officials, who are responsible for the proper working of the enormous tracts of land which comprise the whole forest area. This vast region is split up into divisions, each under the control of a forest officer; the division again being partitioned into ranges, under the supervision of forest rangers.

The most valuable of the Kashmir woods is the walnut (*Juglans Regia*), which is found at altitudes between 3,000 and 10,000 feet. This is a large deciduous tree with broad, greyish-white sapwood, and heart-wood, brown in colour but with darker streaks, frequently beautifully mottled. Its weight is 44 lb. per cubic foot. Large quantities are used annually in Srinagar itself in the manufacture of carved tables, furniture, fancy boxes, and other goods, for which there is always a great demand when the influx of summer visitors commences. Other uses for this wood include interior fittings of houseboats, spinning wheels, and hand looms. It was formerly tried for service rifle-stocks, but it was found to be too heavy and brittle; further experiments have, however, proved successful, and large quantities are now being exported for this purpose. As, however, the wood has to be carried by hand for considerable distances before it reaches the cart road, a very large sum is expended in transport before it reaches the railhead. It is gravely open to doubt whether market conditions after the war will justify the same procedure. Certain of the Kashmir walnut trees are noted for the remarkably fine nuts which they produce. These bear a shell so thin that they have come to be known universally as "paper walnuts," and they are in great demand, large numbers being sent down yearly to the Indian markets. The most valuable portion of the tree is, however, the "burr," which is used for veneering, and sells at a high figure. Although walnut commands a higher individual price than any other tree, it is far from being the largest producer of revenue. It is from the vast deodar, pine, spruce, and fir forests that the State derives its greatest source of income, and of these conifers, the deodar is by far the most valuable.

Deodar, or Himalayan Cedar (*Cedras Deodara*), is a very large evergreen tree, which is found at heights ranging from 4,000 to 10,000 feet, but is most common between 6,000 and 8,000 feet. Trees at a higher altitude than 8,000 feet are generally stunted, very "branchy," brittle, and of little commercial value. Deodar requires very little soil, and appears to thrive on rocky and precipitous ground. It is only with the greatest difficulty that the timber can be extracted in some forests, as many trees are completely smashed when felled. The wood is used principally for railway sleepers, but it is also in great demand for house-building, doors, windows, furniture, bridge piles, boats, cars, and masts. Owing to the immense requirements of the Northern Indian railways, practically the whole of the Kashmir out-turn is sent down in the shape of sleepers, and for the past twenty years the majority of those have been supplied by Messrs. Spedding & Co., of Lahore, the largest forest contractors in Northern India. The deodar frequently grows to a very great size, specimens measuring 30 feet in girth being by no means uncommon.

The wood is moderately hard, very durable, and absolutely impervious to white ants. Its weight, per cubic foot, is 35 lb.

Blue Pine (*Pinus Excelsa*).—This is a very large evergreen tree, which is found principally between 6,000 and 10,000 feet. The wood is extensively used in Northern India for house-building, doors, windows, and furniture, and it is an efficient substitute for deodar in places not infested with white ants. It is a very durable wood of good quality, and has been proved by experiments to be suitable for railway sleepers in places free from those noxious insects.

Long-needled Pine (*Pinus Longifolia*) is found at much lower elevations than the *Pinus Excelsa*, and in considerably smaller numbers. The wood, too, is somewhat inferior, and is, therefore, less popular, realizing a lower price in the market, but it can be used for almost all purposes for which the former is suitable. When freshly cut the wood is full of resin, and, in consequence, is very heavy. For this reason it must be sun-dried in the forests for a full year before it is fit to be launched and floated down to the plains, and even then a considerable proportion is lost through becoming water-logged. The weight per cubic foot of the *Pinus Excelsa* is 30 lb., and of the *Pinus Longifolia*, 40 lb.

Very large forests of silver fir and spruce (*Abies Pindrow* and *Picea Morinda*) are found in Kashmir. These trees grow at elevations of 7,000 to 11,000 feet, and generally at considerable distances from streams and rivers, thus making extraction of logs and scantlings an expensive operation. Until quite recently there has been considerable prejudice shown against these trees, but buyers are at last commencing to realize that they have been turning a cold shoulder to two very valuable producers of timber. When cut up they closely resemble Baltic pine, and are unquestionably superior to the cheap Japanese woods, now so largely imported into India. As a proof of their durable quality, it may be mentioned that in Gulmarg all the huts are constructed of fir or spruce, and, notwithstanding severe weather conditions to which these buildings have been subjected, the wood has lasted well for very many years. In the plains these woods are chiefly used for cheap furniture, planking, boarding, tea chests, packing cases, and houses, but important experiments are now being carried out with spruce for the making of certain parts of aeroplanes, and considerable success has been achieved. As these two species are without smell or resin, they are peculiarly suitable for tea chests, fruit boxes, and numerous other articles for which only expensive imported timbers were formerly considered good enough. There is undoubtedly a very big future before these woods as soon as their true value has been appreciated by the public, and it is most probable that within the next few years the demand will exceed the supply.

Very few of the other varied species of Kashmir woods are at present being used commercially, but a short list of those most commonly found, which are being employed as timber by the inhabitants themselves, is given below.

Mulberry (*Morus Alba*).—This tree grows at elevations up to 11,000 feet in considerable quantities. The weight of a cubic foot of wood is 45 lb. It is used for buildings, furniture, boats, agricultural implements, and turning.

Horse Chestnut (*Æsculus indica*) is found from 4,000 to 10,000 feet. Weight per cubic foot, 34 lb. Chiefly used for decks and interiors of cabins in house-boats, furniture, cart shafts, and coopering, and occasionally for carved tables, screens, and fancy boxes. It is frequently stained to resemble walnut, and is sold as such to unwary and ignorant visitors.

Po (*Parrotia Jacquemontiana*) is found in large quantities between 2,800 and 8,500 feet, and its weight per cubic foot is 62 lb. It is used chiefly for small poles and rafters, handles of axes, hoes, tent pegs, and native bows. The twigs are twisted into ropes for the making of bridges across rivers and streams. Enormous quantities of it are used annually for firewood.

Silver Birch (*Betula Utilis*) flourishes at heights between 10,000 and 14,000 feet, the highest level of tree vegetation. Weight per cubic foot, 44 lb. The wood of this tree is rarely, if ever, used for any purpose, but the bark is in great demand for the roofing of houses, a large quantity being sent annually to Srinagar for sale.

Poplar (*Populus Alba*) is met with at altitudes between 4,000 and 10,000 feet, and a cubic foot weighs from 28 to 44 lb. It is used chiefly for bridging. All the avenues of trees in Kashmir are of the poplar variety.

Ash (*Fraxinus Floribunda*) is very scarce, and extraction being extremely difficult, it is in consequence but little used. It grows at heights between 4,000 and 10,000 feet, and a cubic foot weighs from 28 lb. to 44 lb.

Oak.—There are many species of oak in Kashmir, but the most common are: *Kharshu*, or brown oak (*Quercus semicarpifolia*), found between 8,000 and 12,000 feet; holly oak (*Quercus Ilex*), met with on ranges from 3,000 to 8,000 feet; and moru oak (*Quercus Dilatata*), between 7,000 and 9,000 feet. All three are used chiefly for buildings, agricultural implements, bedsteads, and handles of tools. Weight per cubic foot of holly and kharshu oak, 61 lb., and of moru oak, 54 lb.

Nettle Tree (*Celtis Australis*) is found up to 8,000 feet, but it is only common in certain localities, not being found over the whole of Kashmir. The weight per cubic foot is 45 lb. In those places where it is fairly plentiful it is in considerable demand for building purposes, ploughs, and handles of tools.

Yew (*Taxus Baccata*) grows at heights between 6,000 and 11,000 feet. Weight per cubic foot, 44 lb. Chiefly used for furniture and cabinet work, country trucks, ploughs, and solid wheels for trucks.

Chinar (*Platanus Orientalis*).—This is a very large deciduous tree, whose wood is of a yellowish or pink-white colour, and a cubic foot of it weighs about 41 lb. It is most plentiful in the Kashmir Valley, and is largely used in the manufacture of household furniture, trays, and other similar articles.

Arkot (*Rhus Wallichii*).—This is a small tree with white sap-wood and reddish-brown heart, which turns to a yellow colour where thoroughly dried. Hardness is the chief characteristic of this timber, which is locally converted into saw frames, handles for axes, legs for bedsteads, and other articles in which durability and soundness are essentials. A peculiar feature about this tree is that, when it is freshly cut, the sap is so poisonous that a species of eczema is sure to follow contact with the skin of a human being.

Practically every kind of fruit tree common to an English orchard thrives well in Kashmir, and in particular one might mention apples, pears, peaches, plums, and apricots. The difficulties of transport, already referred to, prevent general exportation, but a large quantity of apples is sent annually to all parts of India. Crops from fruit trees growing in a wild state are not appreciated by Europeans, but they are greatly valued by villagers.

HORTICULTURE AND VITICULTURE IN THE STATE OF KASHMIR AND JAMMU

By A. M. PEYCHAUD, Director of Horticulture, Kashmir

An early Indian writer —Kalhan—in his introduction to the "Rajatarangini," when referring to the famous Kashmir Valley, says: "It is a country where the sun shines mildly, being the place created by Kashayapa as if for his glory. High temples, the saffron, iced water and grapes (which are rare even in heaven), are common here. Kailas is the best place in the three worlds, Himalaya the best part of Kailas, and Kashmir the best place in Himalaya." The climate of the valley is most salubrious, being similar to that of Switzerland, and in the spring-time, between the middle of March and the first week in May, the natural beauty of the scenery on mountain and lowlands is enhanced by the gorgeous display of blossoms on the immense number of fruit-bearing trees of many varieties. Fruit is now an important item of export, and the manner in which horticulture in all its phases has been developed in the State is worthy of notice.

From the year 1856, French firms in Paris began sending agents for the purchase of shawls. These agents were:

Year.	Name.	No. of Years on Duty.	Name of Firms Purchasing.
1856–57	Petit	1	Chevieuse Aubertot
1856–57	Ojouanet	1	Frainy Gramagnac
1860–63	Lebreton	3	" "
1863–70	Olivre	7	" "
1866–71	Lefebvre	5	" "
1865–68	Gosselin	3	Cie. des Indes
1867–70	Brochard	3	Oshede Blemont
1865–82	Dauvergne	17	Cie. des Indes

The last-named gentleman, Mons. H. Dauvergne, happened to observe a large quantity of grape vines growing wild in the valley, and conceived the idea of making wine for his own consumption. The success of this experiment reached the ears of the late Maharaja Rambir Singh, who expressed a desire that the gentleman in question would continue the manufacturing process on behalf of the State, but Mons. Dauvergne explained to His Highness that, although he had achieved his object, satisfactory results on a large scale could not be expected unless accredited varieties of vines were imported from Europe and an expert in the art of making wines and cognac were also engaged.

The Maharaja agreed with the views expressed, and requested Mons. Dauvergne to find such an expert who would be willing to enter the service of the State in carrying out the project; and, through the agency of the School of Horticulture at Versailles, Mons. G. Ermens, formerly head gardener of public parks in Paris (who had then recently returned from Egypt, where he had been laying out gardens for the Khedive), accepted the proposal of His Highness. Upon arrival in Kashmir, Mons. Ermens made a thorough investigation of the soil, climate, rainfall, and other conditions prevailing in the State, and after a comprehensive report had been submitted by him he was sent to France for the purpose of obtaining cuttings of different types of vines used in that country for the manufacture of Medoc wines, as well as of machinery for crushing grapes, vats for fermentations, alembics for making cognac, and other necessary plant and tools. Being a gardener by profession, he embraced the opportunity of bringing to India with him a considerable number of young fruit trees, which he believed would thrive in Kashmir, together with a quantity of implements with the object of starting an experimental agricultural farm in the State. The vine cuttings and fruit trees were planted at Chashmashahi in 1875, and four years later, when grapes were plucked, Mons. Ermens endeavoured to make wine, but his efforts did not meet with much success, seeing that his experience as a gardener was not sufficient for him to produce high-class wines or liquors. Realizing the wisdom of the old adage that "a shoemaker should stick to his last," he, in 1880, obtained permission to take leave of absence from the State in order that he might secure two experts, one to take charge of the vineyards and the other to undertake the manufacturing process, these respective positions being ultimately filled by the appointment of Mons. L. Bouley and A. M. Peychaud.

These gentlemen soon became aware of the serious nature of the difficulties which confronted them, and the most important of these was the absence of cart-roads as means of communication with

1. SABOT ORCHID. 2. BULRUSHES. 3. PODOPHYLLIN SEED AND LEAVES. 4. CROWN IMPERIAL LILY.
5. YELLOW ASTER, MAUVE SCABIUS. 6. IRIS: GROWS LAVENDER, PURPLE, AND WHITE.

Painted by Mrs. Leach.

other places, these being absolutely necessary for the establishment of an export trade, seeing that the consumption of either liquors or wines in the State itself would be far too insignificant to warrant the opening of a large factory.

It was, however, apparent to these experts that, if it were not possible to manufacture wine in large quantities in the near future, there was, at all events, abundant scope for the production of good fruit of European types. They found that the forests in Kashmir contained a large quantity of wild fruit trees, such as apples, pears, apricots, peaches, and plums, and having collected about two thousand of these, they grafted upon them—as stocks—varieties of French trees previously introduced by Mons. Ermens. Mons. Bouley was unfortunately compelled, owing to illness, to retire from his office in the year 1887, and Mons. Peychaud was left alone to continue the work which gave such encouraging prospects. The latter gentleman—with the help of Sirdar Roop Singh, then Governor of Kashmir—gathered together during the winter season of 1886–7 about twenty-five thousand wild fruit stocks, and this was the beginning of a nursery which has been of incalculable benefit to the State. Grafted trees were subsequently distributed to State gardens and Government officials, and excellent accounts have been given of their fruit-bearing capabilities.

All the trees, whether fruit trees, fancy, or chenars, that are actually seen ornamenting the gardens of either Europeans or native officials on both sides of the roads from Amirakadal to Shalimar, are the produce of the Horticultural Department, and the older trees in the majority of the gardens date from the time Mons. Peychaud was raising those trees as an amateur.

Some misunderstanding unfortunately occurred in 1892 between Mr. W. Lawrence, then Settlement Officer, and Mons. Peychaud, and in consequence thereof the latter gave up his appointment and left for Europe.

In 1897 he received a telegram from Major J. L. Kaye, the succeeding Settlement Commissioner, inviting him to return to the service of the State, and on his arrival in Kashmir he was grieved to find that although some of the vineyards were still in existence, not a semblance of a nursery for young fruit trees was to be seen. Mons. Peychaud, therefore, at once began the work of re-construction and of attending to other important matters of a similar character, but in 1901 he had an interview with Sir Louis Dane, Resident in Kashmir, at which the possibilities of further fruit culture were thoroughly discussed, and as a result it was decided to form a State Horticultural Department.

Mons. Peychaud thereupon sailed for Europe in order to procure fresh varieties of fruit trees suitable for the Kashmir climate, and shortly after his return to India he took steps to organize the new department, and further, to raise a greater annual quantity of plants than he had done in previous years. Trees from the newly-prepared nurseries were distributed *gratis* to Zemindars with the view of encouraging them to take a deeper interest in cultivation, and it may be added that since 1904 from 60,000 to 75,000 young fruit trees have been circulated annually.

The value of this work as an asset of the State may be gauged from the fact that fruit worth Rs. 1,43,957 was exported during 1901, the year of the establishment of the department, and that in 1915 the output realized Rs. 7,28,441, but this satisfactory increase is expected to be considerably larger as the trees become more productive, provided, however, that the means of transport are greatly improved.

The collection of fruit trees now comprises 398 different varieties, namely: peaches, 42 kinds; plums, 20; apples, 148; pears, 82; cider apples, 12; cherries, 16; apricots, 32; filberts, 10; Spanish chestnuts, 12; table grapes, 12; and wine grapes, 12.

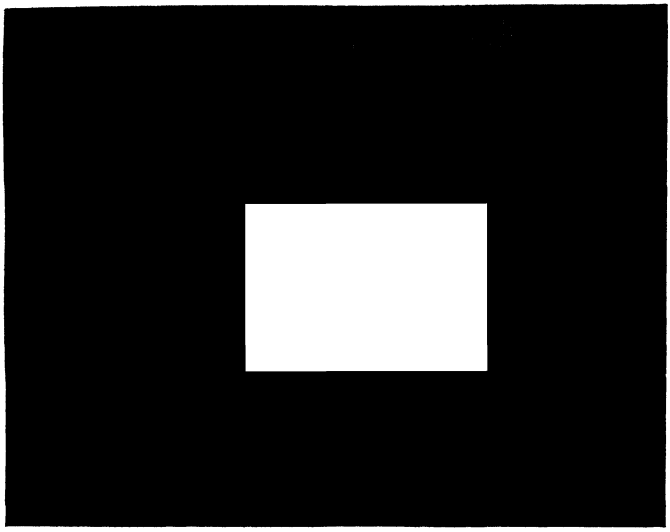
In order to facilitate distribution of trees, nurseries have been established at scattered places, such as Chashmashahi, Harwan, Navpura, and Pathan, while another one started at Vernag has been discontinued on account of unsuitability of soil.

In addition to the fruit stocks imported in 1901, Mons. Peychaud also introduced a number of greatly-desired timber trees, including oak, 12 varieties; cork (Quercus Suber); Acacia Robina, 6 varieties; Spanish chestnuts, 10 varieties; American ash, 4 varieties; and Catalpas Pawlonias, together with several species of flowering bushes. A very great advance has been made in sericultural work in Kashmir in recent years, and the greatest credit is due to the State Department of Horticulture, which is annually raising in its nurseries, the distributing, without cost, to Zemindars throughout the valley, from 20,000 to 30,000 mulberry trees in order to provide food for silk-worms.

The disease which was decimating the silk-worms from the restart of the silk industry in 1897, practically disappeared immediately after Mons. Peychaud advised the pruning of the mulberry trees in 1903, resulting in making the average produce of twenty-five seers of cocoons per one ounce of seed increase to forty seers, or nearly double the amount previously produced. This was a good turn done by him to the factory and the State as well, yet it is regrettable that, in spite of the enterprise being carried on under European advice, no gratitude was shown to him in return for his disinterested advice.

It will be seen from the above notes that horticultural undertakings, such as restocking the forests of Kashmir and encouraging an increased cultivation of fruit trees, have been of very great benefit to the State, and similar words might have been appropriately applied to the subject of viticulture until the year 1913, when, for reasons unknown to Mons. Peychaud, the Superintendent of Customs and Excise and the present Revenue Minister induced the Political Resident, the Hon. S. M. Fraser, C.S.I., C.I.E., to issue a document involving the closing of wineries and distilleries, with the result that wines and cognac are not now manufactured. This branch was at that time giving a profit of fully 100 per cent. annually, and the consequent yearly loss to the State Treasury is not less than from Rs. 25,000 to Rs. 30,000. Moreover it is confidently asserted that the receipts from this source would assuredly have increased in the future side by side with the greater development of the country.

Mons. Peychaud at the present time occupies the position of director of the Horticultural Department, inspector of mulberry culture, Northern Division, and inspector of hop gardens.



KASHMIR SILK FACTORY.
STAFF GROUP.

THE SILK INDUSTRY IN KASHMIR

THE oldest records in existence making any reference to the arts and industries of India speak in high praise of the rich silk and articles of silk which were sent from this country for the purpose of adorning the persons or beautifying the palaces of potentates in various parts of the world, but particularly in far eastern Europe. Although the silk was so greatly admired it was manufactured by the primitive methods of many centuries ago, and in course of time the demand for it has very considerably diminished.

The remarkable revival of the industry in the State of Kashmir is very largely due to the energetic work and the practical experience of Sir Thomas Wardle, F.G.S., F.C.S., who in 1904 published a volume entitled "Kashmir, Its New Silk Industry," in which the author gives an excellent account of the steps taken to put new life into an undertaking which was gradually but surely decaying.

It was the opinion of experts about that time that the climatic conditions prevailing in Kashmir were eminently suitable for the cultivation of the European univoltine silkworm (*Bombyx mori*), from which is chiefly obtained the usual silk of commerce, and that they were equally favourable for growing mulberry trees upon which those worms are fed. It may be mentioned that as far back as the year 1869–70 His Highness the Maharaja Ranbir Singh actually succeeded in reviving interest in the silk industry, but his efforts proved to be of little real value to the State, as serious financial losses arose from enormous expenditure on buildings, and the absence of proper supervision.

In the year 1878 nearly all the silkworms in Kashmir were carried off by disease, and as far as the Government of India was concerned matters were left in abeyance.

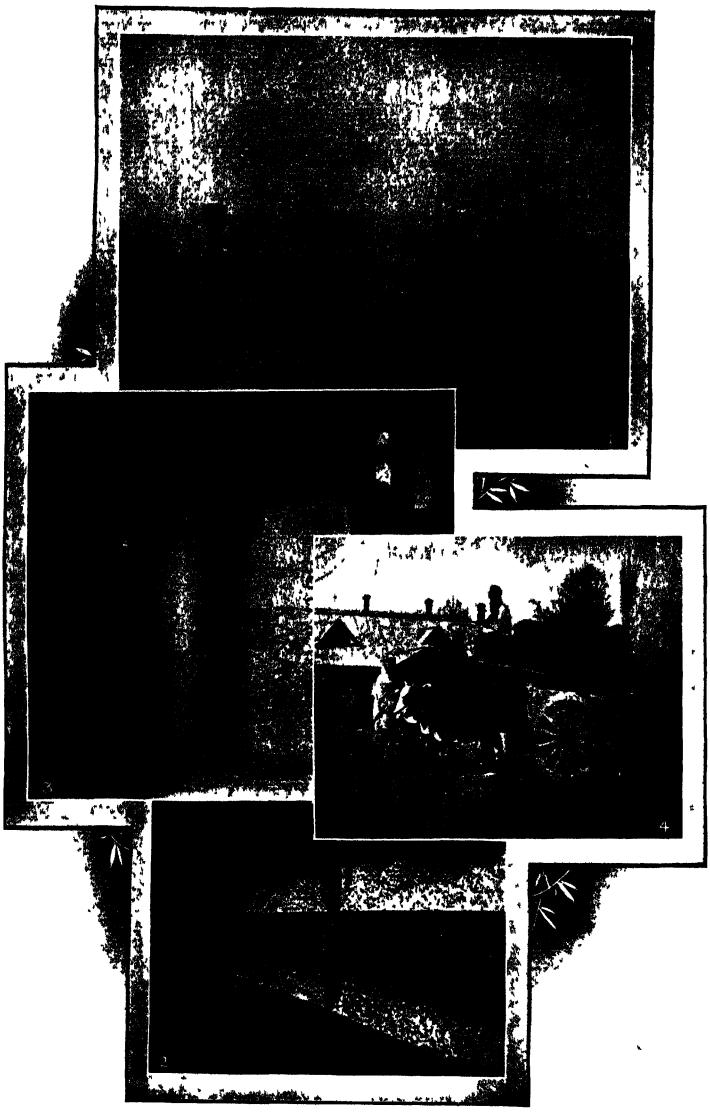
In 1893 Sir Thomas Wardle purchased silkworm eggs in Italy of the value of about Rs. 600, and after these had been successfully hatched in Kashmir, further quantities were ordered from the same source in succeeding years.

The question of the desirability of continuing the purchase of seed from Europe was seriously discussed in India, but at a conference on sericulture held at Srinagar it was decided that in view of the possibility of introducing disease by means of impure eggs the danger of using tainted seed could not be overestimated, and therefore the practice of obtaining supplies from Italy or France should not then be abandoned.

In 1897 the silk industry in Kashmir was placed under the supervision of Mr. C. B. Walton (son of the late Lieutenant-General Walton, C.I.E.), who for twenty years had occupied important positions successively as assistant manager and subsequently director of a large silk filature in Bengal. The construction of filatures near Srinagar in Kashmir was

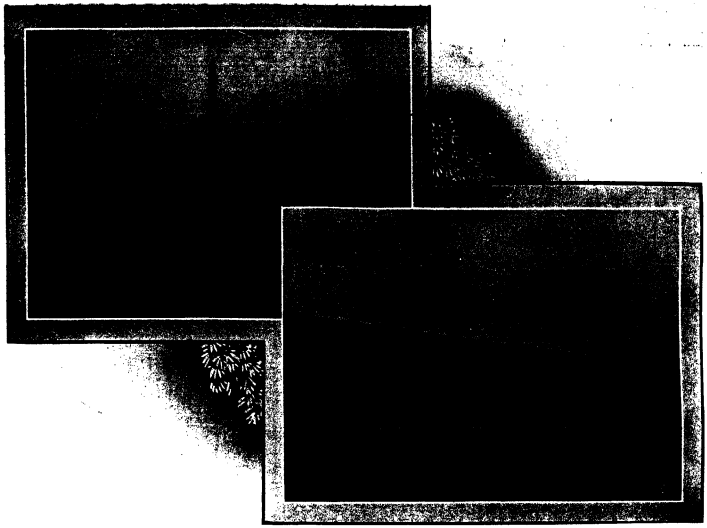
KASHMIR SILK FACTORY.

1. Pump Room. 2 Exterior of Office. 3 View from No 6 Filature



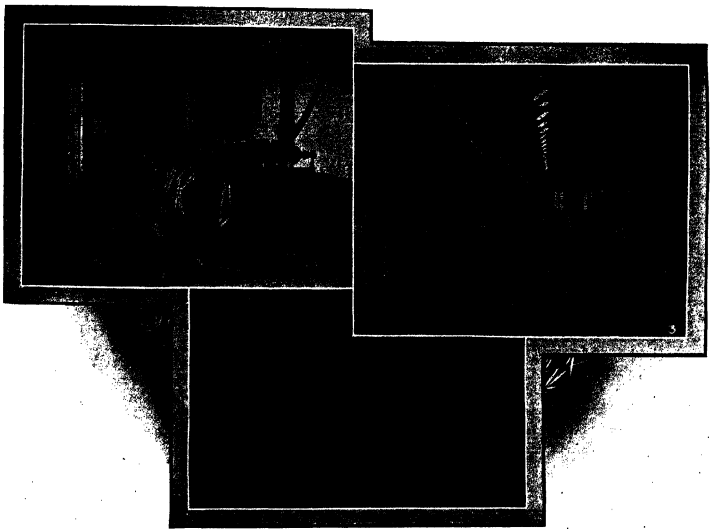
KASHMIR SILK FACTORY.

1, View from the Bund. 2 Interior of Cocoon Store. 3 Press Room 4, Casting Bales.



KASHMIR SILK FACTORY.

1 Exterior of Filature. 2. Weaving Shed.



KASHMIR SILK FACTORY.

1. Testing Room. 2. Hamam. 3. Sorting Room.

then commenced, and before the close of the year 1903 ten of these buildings had been erected, each of which was 435 feet in length, 42 feet in width, and had two rows of reeling apparatus at which 550 men and boys were employed.

It was expected that attempts would be made to establish private enterprise in which the promoters would be only too glad to raise their industrial structures upon the excellent economic foundation laid with so much care and at such

ject of private enterprise had been introduced, His Highness the Maharaja declared in the most emphatic manner that he had no wish whatever that the silk industry then supported by the State should go into private enterprise. He was very much opposed to it, and said it was intended as far as possible to have it retained and expanded as a State industry. His Highness's brother, General Raja Sir Amar Singh, warmly endorsed this expression, and said there

considerably, while in 1901–2–3 no less a sum than £12,999 was expended. Again, the number of persons engaged in attending to the rearing of silkworms increased from 1,304 in 1898 to 44,245 in 1903, and it must be borne in mind that these people belonged to a class of His Highness's subjects who were greatly in need of constant employment.

Reference may now be made to the annual report of the Sericulture and Mulberry Culture Departments of the

KASHMIR SILK FACTORY.
A General View.

great expense by the State, and, as a matter of fact, the surmise proved to be correct.

This question was thoroughly discussed, and it was reported that at Jaipur, in April, 1902, His Excellency the Viceroy (Lord Curzon) made use of the following words "There is no spectacle which finds less favour in my eyes, or which I have done more to discourage, than that of a cluster of Europeans settling down on a Native State and sucking from it the moisture which ought to give sustenance to its own people."

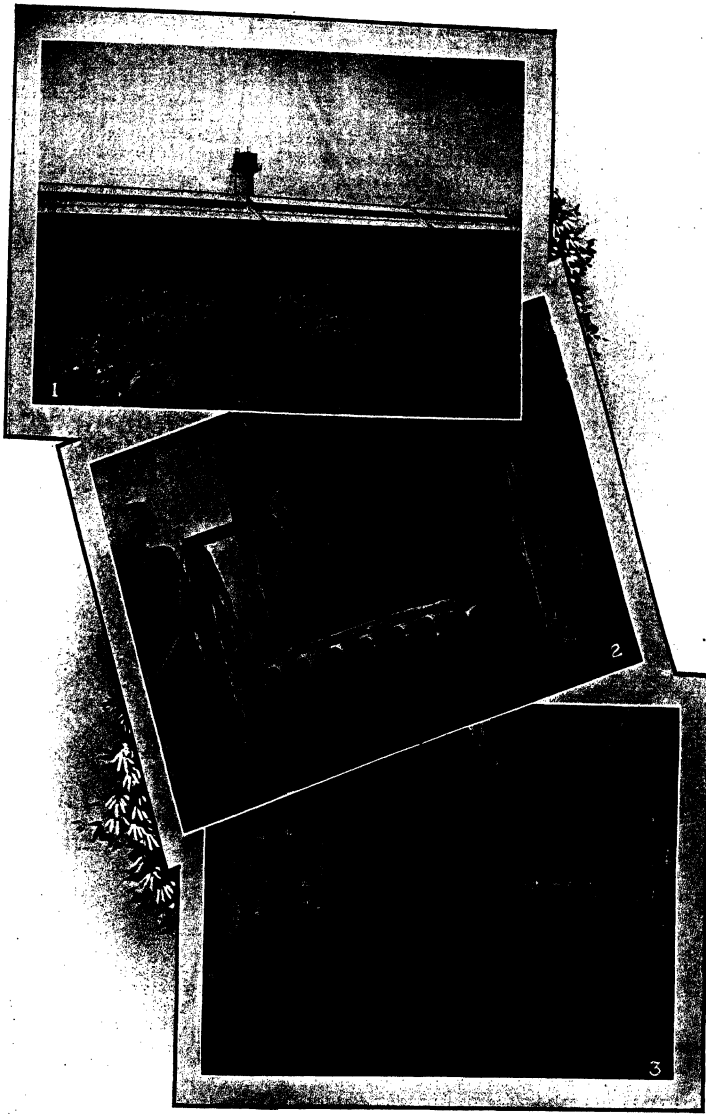
In connection with this matter a Durbar was held at the Palace, in Jammu, on March 13, 1903, and after the sub-

was no intention whatever, nor had there ever been, to hand it over to those who had been trying to lay hold of it as a private enterprise.

His Highness the Maharaja has always taken the deepest interest in the development of the silk industry in Kashmir, and he as well as those who have been directly engaged in its control have had the satisfaction of witnessing its remarkable expansion. For example, in 1897, when the industry was practically non-existent, the first purchase of silkworm eggs was of the value of about £600, and for the next succeeding five years the quantity thus obtained from France and Italy was annually increased very

State, and to the remarks of the Settlement Commissioner thereupon for the year 1915–16. It was stated that about twelve months previously a disastrous fire occurred at the factory, when six filatures and nearly the whole stock of cocoons, including the latest crop, were destroyed.

This catastrophe involved a loss of Rs. 15,14,423, of which about Rs 12,00,000 were recovered from insurance A further serious consequence was the almost entire cessation of operations, resulting in the throwing out of employment of a very large number of hands. The outbreak of the Great War followed shortly afterwards, and that event almost entirely closed European markets, and



KASHMIR SILK FACTORY.

1. Exterior Cocoon Store. 2. Silk Room (in Filature). 3. Filature.

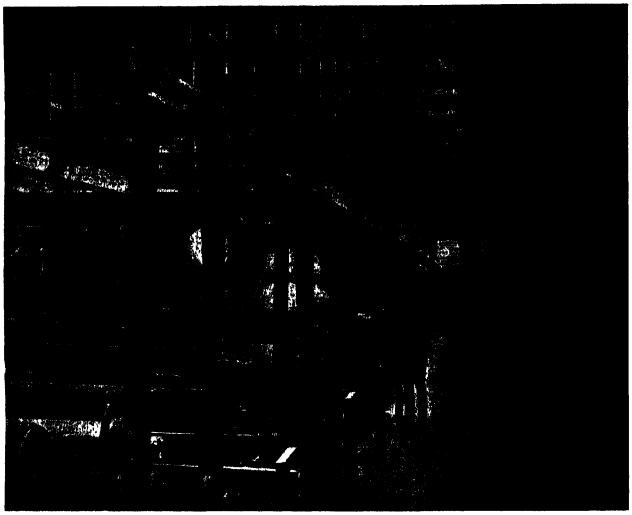
resulted in heavy expenditure owing to increase in freights.

Reconstruction of the destroyed buildings was commenced as soon as possible after the fire, but work was necessarily slow owing to the difficulty experienced in obtaining machinery and plant. Upon restoration of the premises a "Grinnell" sprinkling plant was installed at a cost of Rs. 1,36,873, but as a set off to this expenditure annual premiums amounting to Rs. 17,600 have been saved owing to the increased security of the property.

recently in the market in Europe for silk of the best quality, and a consignment of No. 1 silk sent from Srinagar realized 12s. 8d. per 1 lb., but at a more recent date the director has received an offer, through Messrs. Cox & Co., of 21s. per lb. Fairly satisfactory prices have also been obtained in Siamese markets for No. 3 quality of silk.

The State Department of Sericulture also controls the silk industry in the Province of Jammu, which is subject to practically the same conditions as prevail in Kashmir. The quantity of silkworm eggs distributed in 1916 for rearing purposes was 4,055 ounces, and the total yield of cocoons amounted to 2,861 maunds, giving an average weight of about 56 lb. for each ounce of seed. The quality of the reeling work performed was better than in previous years, and a prominent firm of French manufacturers reported as follows: "We find that the standard is more regular than in previous bales; there is a sensible improvement in the regularity, and this gives more value to the goods."

A serious difficulty in the way of the rearing of silkworms in Kashmir is the insufficient supply of suitable mulberry leaves, and this matter was referred to at considerable length by Sir Thomas Wardle in 1903. He found a very large number of mulberry trees which were only fit for firewood, as the most valuable leaf-bearing branches had been chopped off in order that the collection of leaves might be made upon the ground. In numberless instances there had not been expert work in pollarding or pruning, and therefore the trees were prematurely withering and becoming useless for sericultural purposes. A department for the cultivation of mulberry trees was subsequently established, and excellent work has been performed in planting and stimulating the growth of young trees, and in taking active measures to prevent further damage being done to the forests.



KASHMIR SILK FACTORY.

INTERIOR OF WEAVING SHED.

Among the chief duties of the Department of Sericulture is the giving of instruction with regard to the care of young worms, especially during the first few days of their life, and supervision of the operations of feeding, cleaning and moulting, all of which must be carefully watched. During the year under notice the Department in Kashmir issued 37,610 ounces of seed to 51,076 persons engaged in the work of rearing, and the result, showing 72 lb. of produce for each ounce distributed, was slightly less than in the previous year, the deficiency being attributable to unfavourable climatic and other causes.

Considerable activity has prevailed

For the purpose of mulberry culture the State is divided into two portions, and in the year 1916 no fewer than 47,398 young trees were sent out from the Department to be planted by specially selected assistants, the aggregate up to that date being 135,823 and 104,390 for the Southern and Northern Divisions respectively.

Eight nurseries for the rearing of young plants either from seed or cuttings

have been established in various parts of the State, and these have been placed under the care of officers trained in horticultural science. It has been found that the most suitable sites for planting young trees is on the banks of canals where there is a certain amount of natural moisture. In order to secure the best results the Department has appointed a number of guards who are constantly employed in digging, watering, pruning, and in other ways attending to the plants.

There is far less damage done to matured trees than was the case formerly, but this is chiefly due to the fact that the people are rearing thousands of silkworms, a work for which they are well paid by the State, and they realize that injury done to trees is prejudicial to their own interests.

From these brief notes it will be seen that an historic industry had been allowed to die from sheer lack of knowledge of scientific procedure, and that in the space of twenty years an undertaking has been firmly established which affords a livelihood for thousands of people, is producing silk of superior quality which is in great demand in European markets, and which is a substantial aid to the revenues of the State, within whose confines the enterprise is conducted.

PERSIAN WHEELS, SIND
Photo by L. Faulkney

SIND

HISTORY

By ARNOLD WRIGHT

THOUGH it lies to a considerable extent outside the main stream of Indian history the province of Sind is not in that happy position which is attributed to the country which has no past. With one great epoch in the life of ancient India—the Greek invasion—Sind is immemorially associated. After conquering the Punjab and establishing the city of Alexandria on the spot now occupied by Nehli, Alexander the Great turned southwards and marched through Sind, following the course of the Indus. He ultimately reached the ocean, and at the mouth of the river the conqueror beheld for the first time the action of the tides. Before returning inland Alexander shipped part of his army under the great General Nearkos to the Persian Gulf, from whence ultimately they found their way back to Greece along tracks in Mesopotamia which have become strangely familiar in recent years to the British soldier. The remnant of the Greek army marched under Alexander's leadership through Southern Beluchistan and Persia to Susa where after experiencing great hardships, he arrived in 325 B.C. In India the great Macedonian left behind a number of Greek garrisons established for the most part in several fortified settlements. One of the principal of these was at Palata the modern Hyderabad, the old capital of Sind.

Greek influence continued active in Sind during the whole of the period in which the dominance was maintained in Northern India. About two centuries after the original invasion Hyderabad fell a prey to Eukratides, the King of Bactria, who conducted a memorable campaign in India, advancing as far as Cutch and Guzerat. After this episode Sind fades out of the ancient Indian records until the Christian era has well advanced, when a line of Buddhist kings is disclosed ruling the country from capitals placed at Alor and Brahmanabad. They, however, are mere shadows, and it is not until we get into the period of the Mahommedan invasions that we have any well-defined outline of events. Mahomed of Ghazni seems to have conquered the province without settling it. When he left power was divided between two local dynasties—the Sumras and the Sammas, both of Rajput origin though adherents of the Mahommedan faith. When these princes lost their hold on the province as they did in course of time their place was taken by a clan or sept known as the Arghuns, of foreign—probably Beluchi—origin, and the Arghuns in their turn were replaced by a Turkhan dynasty.

During the reign of Akbar, who was born in the province, at Umarkot, Sind

1. THE BOHRRE BAZAAR, KARACHI. 2. PREEDY ROAD, KARACHI. 3. ELPHINSTONE STREET, KARACHI.

Photos by R. Jalbhoy.

was embodied in the Mogul Empire. It remained subject to Delhi until the death of Aurungzebe, when, upon the break-up of the empire, local chiefs asserted an independent authority. At the outset the Kalhorns were in the ascendant, but before the middle of the eighteenth century they had been supplanted by the Talpoors, a dynasty of Beluchi origin who ruled under the title of Mir or Ameer, and had their capital at Hyderabad.

It was with the Talpoors that the East India Company concluded an arrangement which enabled them to establish in 1758 their first foothold in the country at Tatta, in the delta of the Indus. But a good many years before this there had been active relations maintained between traders and others in the province and the British representatives further down the coast. In the late seventeenth century and the early eighteenth century records we come across frequent references to "Sindy," more especially in connection with the Company's communications with the Persian Gulf. It was a frequent custom in those days for the chief representative in Western India to send to Europe and receive from Europe despatches *via* Karachi and the Gulf. This "overland mail" went to Bunder Abbas, whence it was taken by caravan to Aleppo, there to be transmitted by the quickest means that might offer to England. In these mailing operations swift country craft were often employed in the Gulf section of the journey, while the route from Karachi to Bombay was traversed by *pattamars* or messengers travelling overland. By these means the Company's representatives were often able to secure information of events in Europe of the highest value long before it could have come to hand by the long sea route. It is interesting to note in passing how in the course of modern developments the historic glory of Karachi as a mail centre has been revived. When the aerial mail has been more fully organized its importance will be still greater.

The Tatta factory was never of any great consequence. The Company's officials were severely restricted in their operations by the jealousy of the Mirs, and in 1775, trade becoming impossible, the establishment was withdrawn. For a considerable period afterwards the Mirs were left to stew in their own juice, or more appropriately perhaps it may be said, to grill in their own sun. It was not until the Afghan imbroglio during Lord Auckland's term of office as Governor-General that, to facilitate the operations prosecuted to place Shah Shuja upon the throne of Kabul, a treaty was concluded with the Sind princes rendering the Indus free for all the fluvial nations and giving the British paramount authority in the province, with possession of Karachi, Sukkur, Bukkur, Roree, Shikarpur, and a chain of forts by Dadur to the Bolan Pass. Ere the treaty had been long in force the terrible disaster to British arms, commencing with the assassination of Sir Alexander Burnes, our political agent in Kabul, and culminating in the total annihilation of the British army of occupation during its retreat to India, introduced a serious new factor into the situation. The Mirs had assented unwillingly to the treaty, and though they perforce permitted the passage of the British Army escorting Shah Shuja on its way to Afghanistan by the Bolan Pass, they were ready to take advantage of any opening that offered to cast off the yoke. Their chance came, or appeared to come, when the British legions perished miserably in the snow of the Afghan passes, leaving only a single survivor to tell the tragic tale. Never had there been such a blow administered to British prestige since the very earliest years of the British connection.

Realizing the critical position of the forces occupying Sind even in the presence of the vigorous measures adopted to punish the treacherous Afghans, the Government of India, which was now under the Earl of Ellenborough, appointed General Charles Napier, a fine old soldier who had distinguished himself under Wellington in the Peninsula, to undertake the supreme direction of affairs in Sind. Landing in Karachi on 9th September, 1842, after a terrible voyage from Bombay, during which two hundred soldiers succumbed to cholera, Napier entered upon his difficult duty of enforcing the treaty which the Mirs were showing every disposition to break. He found them outwardly friendly but secretly extremely inimical to British control. Napier took the measure of the situation exactly, and made vigorous preparations for the crisis which he foresaw could not be long delayed. He was hampered in his measures by Outram, who was in political charge and was anxious that diplomacy should be given a longer trial than Napier was ready to allow. The feud which subsequently arose between these two gallant men supplies one of the least creditable chapters of British Indian history. It need not be referred to here save to say that Outram subsequently splendidly vindicated his reputation for valour in the historic episodes of the Mutiny, on the records of which his name is linked with that of Havelock in undying fame.

When, after a series of barren negotiations, Napier had convinced himself that the Mirs were hostile and only awaiting the opportunity to attack the British forces, he decided to strike. His first move was against the Mirs' desert stronghold, Emaum Ghur—an immensely strong fortress with walls forty feet high and surrounded by an exterior wall fifteen feet in height. It was deemed by the Mirs impregnable against a European force, which would have to advance through a waterless waste. But they had reckoned without Napier's resource and determination. Instead of moving a large body against the place, he mounted five hundred picked troops on camels and advanced swiftly against the stronghold. Deeming discretion the better part of valour, the Mirs evacuated the fortress and Napier marched in in triumph without the loss of a single man. Writing of the movement subsequently, the Duke of Wellington described it as one of the most curious military feats he had ever known to be performed or had ever read about in his life. Napier, he said, "moved his troops through the desert against hostile forces; he had his guns transported under circumstances of extreme difficulty, and he cut off a retreat of the enemy which rendered it impossible for them ever to regain their fortress."

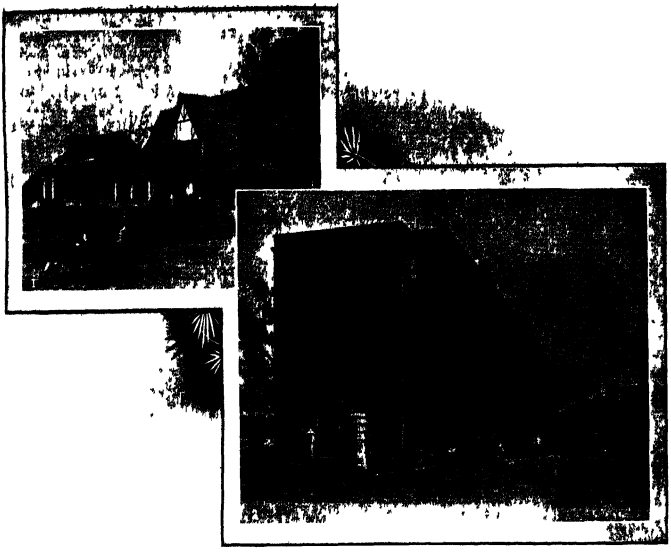
After disposing of Emaum Ghur by shattering it to atoms with ten thousand pounds of gunpowder, Napier prepared for the next move in the campaign. All the news he received told him of a big concentration of force to oppose him. His own fighting contingent was under 2,000 men, but he realized, as other great British-Indian soldiers have done, that attack was the safest course, even though the enemy he had to meet was ten times his strength. An attack on Outram at the Residency at Hyderabad, which was repelled but which necessitated the hurried withdrawal of the British force, confirmed him in the view he had taken. "Let there be sixty or a hundred thousand, I will fight," was his commentary on a report brought by his spies

that the Beluchis would soon have a hundred thousand men in the field. On 17th February the issue was joined on the field of Meeanee, and the enemy, which numbered close upon 35,000 men, was utterly defeated with a loss of six thousand, while the British, on their part, lost nearly three hundred, including seventeen officers—a third of the number engaged. The struggle was a terrific one while it lasted, fought on the Beluchi side with all the desperation of Eastern fanaticism. The two forces were for three hours and a half only one yard apart, and the conflict was to a large extent a personal one, the Beluchi sword being matched against the British rifle and bayonet. The day following the battle Hyderabad surrendered, and the six Ameers handed over their swords to Napier in token of defeat.

Napier had won a signal victory, but he had not yet completed his task of subduing Sind. He still had in the field a dangerous enemy in a local chieftain known as the Lion of Meerpoor, who had held his force of 10,000 men in reserve during the battle and now became the focus of all the patriotic fury of the dominant race. As Napier's brother and biographer says: "Meeanee had only caused a temporary recoil; the army had been saved from destruction, but was still to struggle for victory." With a force of but 2,000 fighting men, of whom only 400 were Europeans, Napier dared not risk another battle against an enemy whose number he knew was little short of 40,000. He consequently entrenched himself on the bank of the river. There he awaited reinforcements, which were soon forthcoming from several quarters. By the third week in March he had at his disposal 5,000 men, and with these he resolved to try conclusions with the Lion. The battle took place at Dubba, six miles from Hyderabad. After a brief engagement the enemy were driven out of the extremely strong position they had taken up here, and Napier occupied Meerpoor, the Lion's capital, without further fighting. Then came shortly afterwards the occupation of Umarkot, one of the few remaining points at which the enemy could rally. By the end of May Napier had secured all his positions, established the British sovereignty, and reduced the great sirdars and chiefs to submission, partly by menaces, partly by conciliation. "Meanwhile," to quote his brother's *Life of Charles James Napier*, "he secretly arranged an immense combination of troops advancing from points hundreds of miles distant, to crush the Lion, who had raised another army, had concerted a new plan of operations with the great tribes on the right bank of the Indus, and prepared a general insurrection around Hyderabad." In June, the thermometer marking 130 degrees, he marched once more against the Lion, contriving by a subtle stroke of policy to stay the projected insurrection. . . . The 8th of June the Lion, being surrounded, was beaten in a skirmish, his army dispersed, and he fled alone to the hill tribes beyond the frontier of Semore; but his conqueror, struck by the sun on the day of the skirmish, was with difficulty saved from dissolution. Nevertheless, after a few days' rest he, though for months hovering between life and death, continued to direct all the affairs, civil and military, until September, when British rule was completely established."

Napier's civil administration of Sind which now followed was not less remarkable than his military conquest of the province. The facts are very well summed up by his brother in his well-known work already quoted. "Appointed Governor of Semore," says Sir Wm. Napier, "he re-organized and conducted the whole civil, political, and social affairs of the conquered people as well as the military government of his army, his subordinates being young officers selected by himself. He abolished slavery, upholding the equality of all men before the law. He put an entire stop to *suttees*, and vigorously suppressed the general practices of infanticide and the murder of women. He changed the military tenures of the great sirdars, turned their vassals into tenantry, and exchanged their quotas of warriors with sword and shield, due to the sovereign power for war, into quotas of labourers with mattock and spade for public works; he abolished *corvées*, caused labourers to be justly paid, and effected all those great social changes without causing discontent. . . . He formed a body of police on an admirable system. . . . He constructed public works of gigantic size, extent, and utility with a marvellous economy. He opened hundreds of miles of canals, and projected greater works and greater extent of irrigation, but was stopped by the supreme Government. He raised Kurrachee from a village to a great city." On the military and political side Napier's achievements were important and far-reaching. He was the first to institute a force mounted on camels—a "camelry," which immediately justified itself by the brilliant results it achieved. On the political side the intimate relations he established with the Beluchi tribes laid the foundation of our supremacy on the North-Western frontier. When he returned to England in the latter part of 1847 he had to his record one of the most successful pieces of empire-building which up to that time had been provided. Yet he was the victim of extraordinary vilification at the hands of a jealous faction in India and an important but ill-informed section of the public at home. That he was always discreet or wise in his actions his best friends will not claim. But that he was one of the greatest soldiers and administrators that British India has produced, and that his conquest of Sind was an extraordinary example of that combination of military and civil genius which is so rarely seen, is to-day beyond cavil.

Sind was happy in finding, as Sir Charles Napier's successor, the brilliant Bartle Frere, whose Governorship of Bombay was so memorable, and whose later connection with South Africa produced such striking results in the sphere of British politics. Frere laboured unweariedly to complete the administrative edifice which Napier had so well begun. His proceedings were sometimes challenged by higher authority, but he was able as a rule to vindicate his measures in the light of the peculiar needs of the province. Sir Wm. Merewether, another able official, followed Sir Bartle Frere, and under his guidance and that of successors trained in the same good school of Bombay officialdom, Sind became one of the most peaceful, prosperous, and contented parts of India. Its future bids fair to be even more brilliantly successful than Napier conceived in his wildest imaginings. Karachi, marked out by nature to be the great port for Northern India, is rapidly coming into its own. The Great War has enormously facilitated its progress. The opening up of Mesopotamia and the convention with Persia are giving enormous fillips to its development by their influences. Lastly, there is the factor of aerial navigation. In the near future, when aerial routes have been opened up throughout the world, Karachi will be one of the key positions, and the whole of Sind will share in the advantages which it will possess as the nearest Indian aerial station to Europe.



1 GYMKHANA, KARACHI 2 THE SIND CLUB, KARACHI

Photos by S. Jalbhoy

SIND

DESCRIPTIVE

THE province consists of the extreme north-western portion of the Bombay Presidency It has an area of 53 116 square miles, and a population, according to the census of 1911 of 3,410 223 inhabitants It is bounded on the north by Baluchistan, the Punjab, and the State of Bahawalpur, on the south by the Runn of Cutch and the Arabian Sea and on the west by the territory of the Jam of Las Bela and the Khan of Kelat, in Baluchistan

Sir Charles Napier was the first British Governor, and the province was divided into districts Sir Charles reorganized the revenue and other departments, and inaugurated many schemes of reform and progress, among the latter being the development of harbour works at Karachi

The construction of the North-Western Railway linked the rich wheat-fields of the Punjab with Karachi, the place of export, and as cultivation increased new markets and new industries were established

The Province of Sind comprises hilly territory in the north, an alluvial plain in the centre and tracts of pasture land and sandhills in the south-eastern portion

The Kirthar range separating Sind from Baluchistan, attains an elevation of 7,000 feet in the north, but it is less than 1,000 feet in height in the southern portion

There are also a few ridges and hills, but they are of little importance The south-eastern corner of the province is formed by the Runn of Cutch, a huge salt-water waste some 9,000 acres in extent Owing to the generally flat surface of the province, the scenery lacks variety, and especially in the neighbourhood of the sea-coast it is oppressively monotonous

Although a very large proportion of the land of the province cannot be cultivated owing to the insufficiency of water, it is a curious fact that no fewer than 75 per cent of the people are engaged in either arable or pastoral farming

The soil is primarily of a clayey substance, which may be converted into a rich mould or light and unfruitful sand by adding or depriving it of the correct amount of moisture

The chief crops are wheat, barley, oil-seeds, vegetables, rice, indigo, millets, pulses, cotton, and tobacco. The principal beast of burden is the one-humped species of camel, and large numbers of these useful animals are bred in the salt marshes of the Indus river

Horses in Sind are small but sturdy, and the Government has recently imported English sires with the object of increasing the size of local animals.

From the foregoing notes it will be understood that one of the chief needs of Sind is a thoroughly efficient service of irrigation by means of canals There were several of these aqueducts in existence when the province was annexed, but excellent work has been carried out in recent years by Government engineers in making new canals, in remodelling and extending old ones, and in obtaining a more satisfactory supply of water by

means of tanks and wells wherever possible.

The aridity of the province may be given as the cause of the extremely small area of forest land, for out of the total area of about 53,000 square miles, only about 1,600 square miles are covered with trees.

The principal forest areas, about a hundred in number, are situated along the banks of the Indus river, and are under the supervision of a deputy conservator. The trees consist of those types usually found in Northern India, but the Government has recently introduced several exotic trees of a very valuable character, such as the tamarind, chestnut, and tallow-tree.

Although the inhabitants of Sind are so largely concerned in agricultural matters, manufactures and industries are of considerable importance. Naturally one will think of Karachi, the flourishing seaport in the western coast, whose rapid growth has had a most beneficial effect commercially, not only in Sind, but also in the Punjab and elsewhere in Northern India.

Apart from Karachi, however, the province enjoys a reputation for leather work, pottery, and carpets. Other articles produced in considerable quantities include cotton cloth, blankets, trappings for camels, lacquered work, and metal articles of various descriptions.

Several factories have been erected for the ginning and pressing of cotton, and there are others for husking rice, as well as bone, flour, and other mills.

Not more than a quarter of a century ago, Sind was the most backward division of the Bombay Presidency as regards the literary attainments of the people.

There were, at that time, very few schools supported by Government funds, but the province has, in recent years, shown that a desire for educational facilities has been strongly manifested by the people. At the same time it is to be regretted that there is yet great hesitation on the part of both Hindu and Mahomedan parents to give their daughters a liberal course of study. There are now an Arts college at Karachi, two training colleges, medical classes, and a large number of primary and secondary schools in various parts of the province.

Archæologists will be interested in the remains of numerous Mahomedan buildings, upon which are inscriptions in Arabic characters; they will explore with pleasure the ruins of several old forts, one of which, in Sehwan, is ascribed to the period of Alexander the Great; and in the delta of the Indus are the relics of many ancient cities of considerable size and wealth.

FERE HALL AND BANDSTAND, KARACHI.
Photo by Vanderiman.

Dealing with the question of administration, the *Imperial Gazetteer* says: "Sind forms a non-regulation sub-province, under a commissioner, who has, however, larger powers than those of an ordinary commissioner of a division."

The Province of Sind is divided for administrative purposes into seven collectorates, under the Commissioner in Sind, namely: Hyderabad, Karachi, Sukkur, Larkana, Thar and Parkar, Nawabshah, and Upper Sind Frontier.

With regard to the administration of justice, reference is again made to the *Imperial Gazetteer*, which says: "The *Sadr* Court, presided over by a Judicial Commissioner, is the highest court of civil and criminal appeal, and the High Court at Bombay has no jurisdiction in or over Sind, except in three or four specified subjects."

KARACHI.—The transformation, within a period of little more than half a century, of a fishing town with about 15,000 inhabitants, into a flourishing commercial city and thriving seaport, with a population of 151,000, is striking testimony to the keen perception of pioneer capitalists and traders. They were strongly impressed by the fact that the extensive harbour was the only land-locked one between Bombay and the Persian Gulf; they saw the vast agricultural areas of Sind, the Punjab, the Central Provinces, and other territories in the north-western portion of India, with their wealth of produce for export; they realized that Karachi was the natural outlet for such merchandise; and, being convinced of the almost limitless possibilities of development, they sternly resolved that in some future day Karachi should be the "Liverpool" of India.

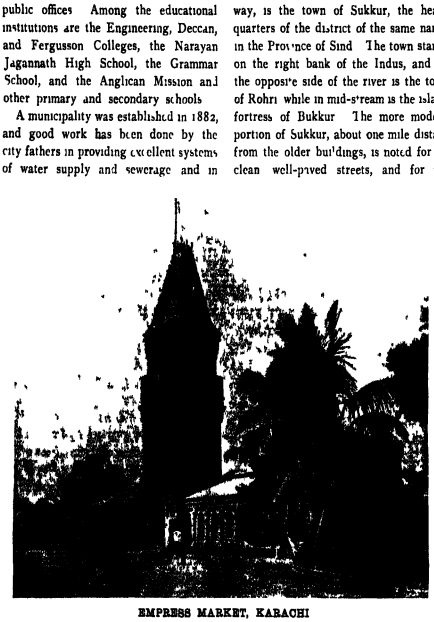
A lighthouse, guarded by fortifications and visible from a distance of 20 miles, has been erected at Manora Head.

The city is situated at the extreme north end of the Indus delta, near the southern base of the Pab mountains of Baluchistan, and it is the chief town and cantonment in the district of Karachi, under the Commissioner of Sind. The bay is formed by the projecting point of land called Manora, at the eastern end of a reef, and Clifton, a promontory immediately opposite at a distance of three and a half miles. It is five miles in length from north to south, and about the same breadth from east to west, and the city is built at its northern end. Trade has increased at an abnormally rapid rate in recent years, the chief exports being wheat, cotton, wool, oilseeds, hides, skins, and bones, and consequently very great improvements have been made in the

harbour, while vastly enlarged dock and wharfage accommodation has been provided

Passing through the business portion of the city, one notices abundant signs of manufacturing and industrial activities in the form of ironworks, cotton presses, mills, and large mercantile houses in which crowds of employees are engaged in furthering its progress Modern architectural designs are the chief feature of the principal buildings, which include four railway stations, Christ Church, the Sind Club, Empress Market, Civil Hospital, the Merewether clock-tower, Frere Hall, the Napier barracks, Government House, and public offices Among the educational institutions are the Engineering, Deccan, and Fergusson Colleges, the Narayan Jagannath High School, the Grammar School, and the Anglican Mission and other primary and secondary schools

A municipality was established in 1882, and good work has been done by the city fathers in providing excellent systems of water supply and sewerage and in



EMPRESS MARKET, KARACHI
Photo by K Jaikhay

making the residential portion as clean and healthy as possible

HYDERABAD, formerly the capital of Sind, is situated on the Ganja Hills, a limestone range running parallel with the River Indus for a distance of about 13 miles The town was founded by Gulam Shah, of the Kalhora dynasty, in 1768, but a few years later it passed into the hands of the Talpurs, who were defeated by Sir Charles Napier, in 1843, in one of the most brilliantly achieved battles in Indian history, and from that time the city and seaport of Karachi has been the capital of Sind

This conflict was fought at Miani, about six miles north of Hyderabad A fine obelisk now marks the site of the battlefield

Visitors will find pleasure in seeing the ruins of the ancient fort, the arsenal, and the tombs of the Kalhora and Talpur rulers

SUKKUR —About 330 miles distant from Karachi, on the North-Western Railway, is the town of Sukkur, the headquarters of the district of the same name, in the Province of Sind The town stands on the right bank of the Indus, and on the opposite side of the river is the town of Rohri while in mid-stream is the island fortress of Bukkur The more modern portion of Sukkur, about one mile distant from the older buildings, is noted for its clean well-paved streets, and for the numerous ruins of tombs and mosques which may be found in the neighbourhood, among them being the vault of Shah Khairud-din, constructed about the year 1758 The railway now passes along each bank of the river, and the excellent service of trains between Karachi and Bombay has interfered considerably with trade in Sukkur, although a large quantity of agricultural produce and merchandise is exported

SHIKARPUR, the headquarters of the district of the same name, in Bombay Presidency, was a most important commercial centre before the extension of railway facilities to that neighbourhood, but it is still carrying on a large trade with Baluchistan, receiving general produce from that country and returning, in exchange, European piece-goods, provisions, metal, indigo, cloth, and other goods Its industrial enterprise is restricted to the manufacture of carpets It is about 330 miles distant from Bombay

LARKANA —The fertility of the soil, and the luxuriance of the vegetation, at Larkana, the chief town of the district of the same name, has earned for the town the name of the ' Eden of Sind '

Situated on the Ghar canal, it is one of the most important grain centres in the province and it has also considerable manufacture of cotton cloth, leather goods, and metal vessels In the town as well as in the neighbourhood, there are several interesting archæological attractions, the principal one being the tomb of Shah Baharah who died about the year 1735

ROHRI on the left bank of the Indus, in the district of Sukkur, in the Province of Sind, is famous for its large number of very fine Mahomedan mosques which include the Juma Masjid, built by Fateh Khan in 1574, and the Idgah Masjid, erected about twenty years later

The greatest attraction of all, however, is the War Mubarak, a building on the northern side of the town, in which is deposited a hair of the Prophet's beard, which is supposed to possess miraculous powers of healing

THE PORT OF KARACHI.

Sir Charles Napier, conqueror of Sind and Governor of the province from 1843 to 1847, recognized from the first the advantages and possibilities of Karachi as a seaport, and exemplified the firmness of his faith by the prompt inauguration of preliminary measures for its development When finally leaving Sind Sir Charles is reported to have exclaimed "You will yet be the glory of the East, would that I could come again to see you, Karachi, in your grandeur" That was a bold prophecy to utter concerning a country seaport which was then a shallow and more or less landlocked lagoon, inaccessible to any but small

native craft owing to the existence of a bar at the entrance, although there was fairly deep water inside Bold, however, as the prediction was, it has been well-nigh fulfilled in the bustling thriving city of the present day

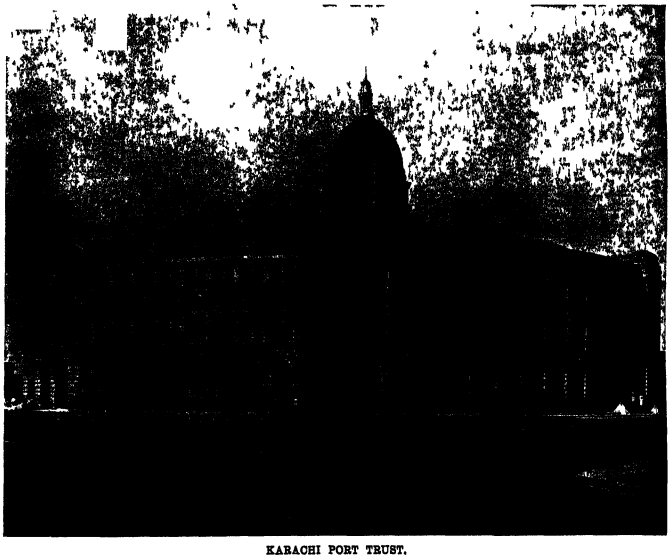
Karachi, in the province of Sind, is situated on the northern border of the Arabian Sea, and at the extreme northern end of the delta of the river Indus It has the advantage of being the nearest

wheat-growing areas of the Punjab and the United Provinces of Agra and Oudh

One of the first steps taken by Sir Charles Napier in furtherance of his project was the construction of a mole, over one and a quarter miles in length, across the tidal marshes, and the Chinna Creek, which lay between Karachi and Keamari, now a township near the main entrance to the port, which at that time was a small fishing village with a population

a master attendant and other officials who acted under the orders of the Commissioner in Sind, but the necessity for the formation of a port trust, which had continually been pressed upon the attention of Government, was met by the passing of the Karachi Port Trust Act No VI of 1886, which was amended in 1902 and on subsequent occasions

During all these years the question of providing safe anchorage received the



KARACHI PORT TRUST.

ADMINISTRATIVE OFFICES

point to Europe of all the British ports in India, being nearly 200 miles nearer to Aden than is Bombay, while the distance from Basra to Karachi is 470 miles less than from Basra to Bombay which is an additional advantage

Karachi was quite an unimportant town of about 10,000 inhabitants when the fort at Manora, the headland on the western side of the entrance to the harbour, surrendered in 1839 to a British squadron commanded by Rear-Admiral Sir Frederick Maitland, of H M S *Wellesley*, but it is now estimated that the inhabitants are nearly 200,000 in number Karachi is the natural outlet for the produce of Sind, Baluchistan, the Phulkian, and other States, and of the vast

of a few hundred inhabitants and is now estimated to contain about 7,000 The causeway over the Chinna Creek has, however, since been removed, and the waterway was in 1864 spanned by a fine bridge 1,200 feet in length and 40 feet in width, the latter being increased by the Port Trust to 70 feet in the year 1914

The first British ship to make the voyage from England to Karachi—named the *Duke of Argyll*, of 800 tons burden—passed safely over the bar into the harbour in 1853, when there was a depth of only twenty-one feet of water at high tide From the time of the British occupation to the formation of a harbour board in the year 1880, the port was managed by

most careful consideration of engineers and others, among whom Mr James Walker, C E , stands out prominently for the expert assistance rendered by him This gentleman designed the breakwater which forms a continuation, seaward, of Manora headland, and protects the harbour entrance from the fury of the south-west monsoon, and the work was admirably carried out in 1870 3 by Mr W H Price, M I C E , the port engineer

The foundation stone of the "Merewether" ship pier (the first pier to be erected) was laid by His Excellency the Viceroy of India, the Marquis of Ripon, in the year 1880, and this structure served a useful purpose until 1908, when the scheme of general improvements

necessitated its removal Two years before H M S *Renown* lay at this pier, and on the 19th March, 1906, received on board Their Royal Highnesses the Prince and Princess of Wales (now Their Majesties the King and Queen) at the termination of their first Indian tour.

The Port Trust Board, constituted under the Act of 1886, held its first meeting on the 4th April, 1887, under the chairmanship of Colonel R. I. Crawford, C I.E , the Collector of Karachi, when ment of the port and the extraordinary expansion of its trade, that it was utterly impossible for the Collector and District Magistrate of Karachi (who had been *ex-officio* Chairman of the Board since its formation) to give the necessary time to the interests of the port, when he was also charged with the administrative burden of a district some 12,000 square miles in extent. After more than one representation on the subject had been made to Government they agreed to a separa-

drawing up to 30 feet can enter at high tide. The S S *Ivernia* holds the record for the deepest draught on leaving the harbour in January 1916, drawing 30 feet 6 inches.

The chairman of the Port Trust has furnished the following particulars of the principal works now in existence on the eastern side of the Ship Channel, commencing from the south end where the eastern groyne (one of Mr. Walker's proposals and a more valuable work), con-

KARACHI PORT TRUST
South End of Harbour

they found themselves in possession of a port with facilities for accommodating steamers up to 3,000 tons burden as follows (*a*) anchorage for three ocean-going steamers, (*b*) fixed and swinging moorings for eight similar vessels, (*c*) the Merewether Pier, accommodating one ocean-going steamer; and (*d*) the Napier mole boat wharf, 680 feet in length, for smaller craft used in country trading, while the construction of a wharfage line, 2,000 feet in length, sufficient for five large steamers, had just been commenced. Steady progress was made in the work of development, but in the early years of the present century it became evident, in view of the enlarge-

tion of the two offices, and in 1909 the present chairman, Mr H. C Mules, C S I, M V O, O.B E, relinquished the collectorship of Karachi and was appointed full-time chairman of the Trust.

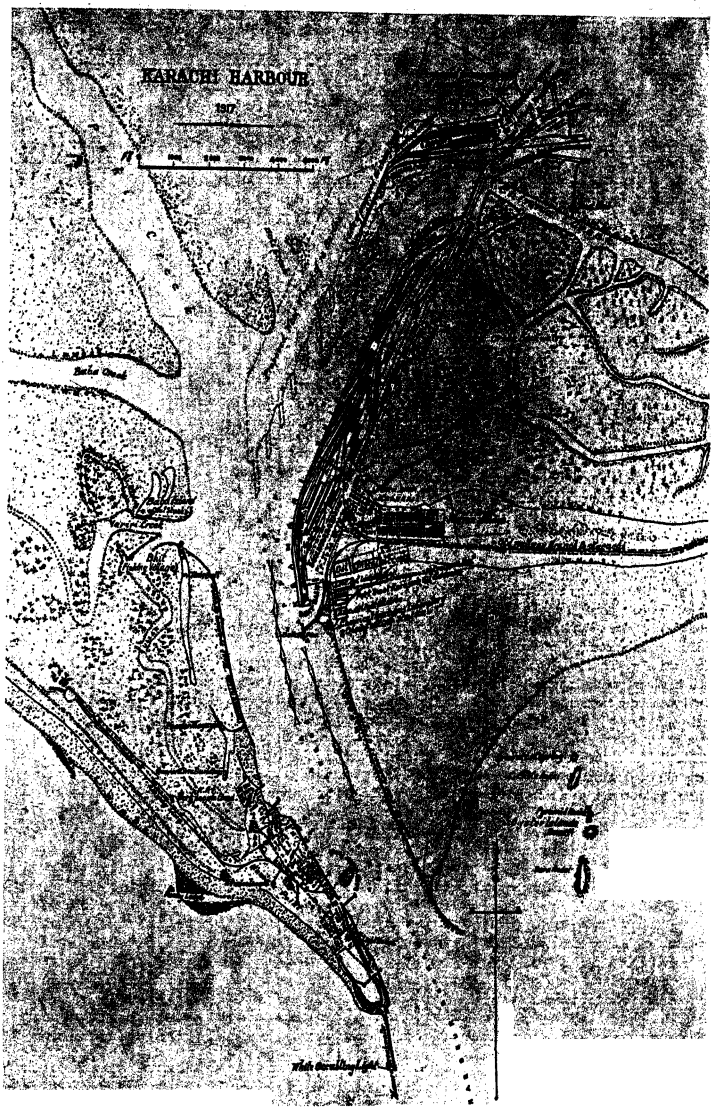
The statistics given on another page show how rapid has been the progress of late years, and demonstrate that the port has developed into one of first-class importance and a most valuable imperial asset.

The shipping facilities within the harbour at the present time afford a sufficient draught of water for any vessel that can pass through the Suez Canal; those drawing 25 feet are able to cross the bar at the lowest state of the tide, and those

structed in 1863 5, springs from the mainland —

(1) Bulk oil pier at which liquid fuel oil and petroleum is discharged by pipes direct into the installations of the Standard Oil Company, of New York, the Burma Oil Company, the Asiatic Petroleum Company, the Tank Storage Company, Ltd, and the Anglo-Saxon Petroleum Company, Ltd., and by drums and tins into railway wagons. This pier was built in 1909.

(2) Boat basin, 11 acres in extent, for landing and embarking passengers and goods from and on vessels in the stream, together with railway service and hydraulic cranes erected in 1911.



KARACHI PORT TRUST.

PLAN OF KARACHI HARBOUR.

(3) Return wharf, 325 feet in length, for coasting steamers, served by railway and hydraulic cranes provided in 1912.

(4) A continuous line of wharfage, 8,600 feet in length, completely served by railway with 87 hydraulic cranes of 35 cwt., one of 30 tons, and one of 14 tons. This wharfage line is divided as follows: "Merewether" wharf with berths for four ships; the "Erskine" wharf, for three ships, which is part of the old one of the same name built in 1888 and was completed in 1908; the "James" wharf, with three berths built in 1895; the "Giles" wharf, for three ships, erected in 1906-7; and the "Younghusband" wharf built in 1907-10 to accommodate three ships.

(5) Heavy-lift pier, with one 14-ton crane for use in connection with a 30-ton floating crane.

(6) Napier mole boat wharf, 1,824 feet in length, available for country craft trade.

There are thus seventeen ships' berths in line at which vessels can lie, discharge, and load with the greatest ease and rapidity, and there are twenty moorings in the stream for ocean-going steamers, together with ample anchorage for native craft. At the north end of the ship channel is the native jetty with warehouses used by vessels discharging and loading in the stream. This was built before the Port Trust was constituted, but it has been greatly improved, especially by the construction of additional warehouses, during the past twelve or fifteen years.

Since the year 1900 the Board has reclaimed some 115 acres of land between Keamari and the Chinna Creek bridge, thus greatly improving the Trust's Keamari railway and produce yards, and this work has completely consolidated the area between the Chinna Creek bridge and Keamari to the north of the Napier mole road. In 1909 the Board purchased from the Karachi Municipality an area of 177 acres of tidal swamp, and this has been converted into a produce yard, and since that year a further area of 61 acres has been reclaimed and is now the "Mansfield" Import Yard, in which there are extensive ranges of warehouses for import cargo on the Karachi side of the Chinna Creek.

No better proof of the enormously rapid growth of the port can be given than by reproducing figures culled from statistics recently issued.

During the financial year from the 1st April, 1887, to the 31st March, 1888, the revenue amounted to Rs. 4,63,696, and the expenditure to Rs. 5,11,157; in 1902-3 the respective amounts were Rs. 15,54,918 and Rs. 12,97,796, and in 1916-17 they had risen to Rs. 46,66,847 and Rs. 39,93,710 respectively. Again, a glance at the value of the trade of the port shows that in 1887-8 it was Rs. 10,26,78,208, made up of imported goods Rs. 6,18,61,331, and exports Rs. 4,08,16 877; in 1902-3 it was Rs. 22,01,86 719, comprising Rs. 11,59,81,484 import and Rs. 10,42,05,235 export, while in 1916-17 the total amounted to Rs. 49,56,89,376 divided into Rs. 20,85 97,022 import and Rs. 28,70,92,354 export. It should be added that the highest revenue was obtained in 1913-14, the year before the outbreak of the Great War, when it amounted to nearly Rs. 50,00,000.

The financial position of the Trust is a very strong one, as it possesses exceedingly valuable assets in land, buildings, and material, and has further established a reserve fund amounting, on the 31st March, 1917, to Rs. 40,47,695, while debts, incurred by loans from Government (Rs. 4,63,538) and the public (Rs. 2,55,40,000), aggregate only Rs. 2,60,03,538, the repayment of which at prescribed periods is secured by sinking funds.

In view of the certainty of future increase in both export and import trade, the trustees contemplate making very considerable extensions and improvements to the harbour, the estimated cost of the first series of which is nearly Rs. 272 lakhs, equivalent to about £1,800,000. The project, known as the "West Wharfage Scheme," has been approved by Government and includes: (*a*) the widening of the ship channel from 600 feet to 1,200 feet, and deepening it to 32 feet, thus enabling vessels to enter the harbour with that draught and to be berthed at the wharves; (*b*) the present construction of six, and hereafter as may be required, of ten other berths for ships on the western side of the channel. The building of a graving dock capable of accommodating the largest vessels using Eastern waters via the Suez Canal, and further improving the entrance to the harbour, are also contemplated in addition to the above. The works have naturally been delayed owing to war conditions, but some progress has been made by the purchase of a very powerful suction dredger, costing, with pipe line, about £96,200, with which good progress has been made in the way of reclamation. A considerable portion of the land so reclaimed has been lent to Government as a yard for the construction of river craft for transport work in Mesopotamia.

There is only one broad-gauge line—the North-Western Railway—running into Karachi. This system extends on the right bank of the Indus to Quetta, a distance of 536 miles, while on the other side of the river it passes through Hyderabad (111 miles), Rohri (296 miles), to Lahore (755 miles). Several narrow-gauge feeder lines which are of the utmost value in tapping the rich productive districts of the north-west are connected at various points along routes with the main system, and it is expected that the conversion of the Jodhpur-Bikanir State Railway from narrow to broad gauge, and linking up with the broad gauge to Delhi, must be accomplished before very long. Oversea transport was, prior to August 1914, conducted through the agency of the British India Steam Navigation Company, the Bombay Steam Navigation Company, and the Ellerman, City, Hall, Wilson, Austrian Lloyds, and other well-known shipping companies, while arrangements had been completed shortly before the above date by the P. & O. Company and other lines to run passenger vessels, as an experiment, with direct service between Karachi and England.

The Port Trust offices, designed by Mr. G. Wittet, J.P., consulting architect to the Government of Bombay, were constructed departmentally by the engineers of the Trust in 1912-15 at a cost, exclusive of site, of Rs. 8,60,000, or about £57,333. The first meeting of the board in these offices was held on the 12th January, 1916, and on the 7th of the following month the premises were handed over to the military department for use as a general hospital for between five and six hundred patients. The trustees have also given up to the same authorities three of their large warehouses in the Mansfield Import Yard, which have been equipped with the necessary accommodation for more than 1,200 wounded and invalid soldiers.

The particulars given above clearly prove that the prophetic words of Sir Charles Napier as to the boundless possibilities of Karachi as a port (referred to at the commencement of these notes) were not prompted by mere imagination,

but that in giving utterance to them his keen intellect convinced him that, provided the means of development were forthcoming, there was nothing in the way of physical or other conditions to prevent the practically unknown town of those days from becoming the "Liverpool of India."

ADAM SOOMAR & CO.

Having migrated from Cutch, on the western coast of India, to Karachi, in the early sixties of the nineteenth century, Mr. Adam Soomar decided in 1869 to commence business on his own account as a baker and confectioner, and with this object in view he managed to secure the tenancy of a small store in Clarke Street. He began trading under the name of Messrs. Adam Soomar & Co., and although he had to battle with several opposing forces, his courage and determination to succeed never failed, his reward coming when he ultimately found that his persevering efforts, backed up by conscientious dealings, had been the means of making his business too cumbersome to be conducted properly in premises with insufficient accommodation. He had by this time become a prominent member of his own—the Mahomedan—community, and had also won the respect of a very large circle of customers. Consequent upon his improved position, he entered into possession of more suitable premises in Frere Street. Mr. Soomar died in the year 1900, having previously been assisted in management by his son, Mr. Dada. The latter gentleman was as indefatigable a worker as his late father, and he soon had the satisfaction of observing that the unpretentious undertaking, started little more than thirty years earlier, had developed to such an extent that still further accommodation was an absolute necessity.

"Fortune favours the brave," it appears, in commercial life as well as in love affairs, for, at this juncture, Mr. Dada was the recipient of a valuable and unexpected legacy, which enabled him to acquire a well-built two-storeyed house, also in Frere Street, to which he immediately transferred his business.

Mr. Dada's two sons, Ismail and Ali Mahomed, who had just completed their education at the Narain Jagannath High School at Karachi, then associated themselves with their father, and they speedily proved that they were thoroughly capable men of business.

The prosperity which has fallen to the lot of Mr. Dada has not made him unmindful of the poverty of others, and with the object of alleviating misery and want, he has been most generous in contributing to several charities.

He has also erected two rest-houses for travellers at Cutch—his native place—and at the suggestion of his son, Ismail, a *madressa* for orphans and poor Mahomedan children has been constructed at Karachi. The inmates of the latter institution are clothed, fed, and educated at the expense of his family, who even provided the necessary school books for the pupils.

Mr. Dada is the owner of several fine houses in Karachi, which include the extensive premises occupied by Messrs. Framjee Sorabjee & Sons, the well-known dealers in wines, spirits, and other consumable stores.

FRAMJEE SORABJEE & SONS.

In the year 1863, when the population of Karachi was exceedingly limited, and when it was considered to be a risky action to inaugurate a business venture of almost any description, some of the resident civil and military authorities induced Mr. Framjee Sorabjee to establish himself as a vendor of wines and spirits, which were to be imported from Europe as well as obtained from different parts of India.

Premises were obtained in Napier Street, and this was the foundation of a gigantic undertaking, of which the joint proprietors at the present time are Messrs. Khursetjee and Cowasjee, grandsons of the founder. Mr. Framjee inherited his transactions, and by these means he soon gained the esteem and confidence of a very large circle of supporters.

Shortly after this date a department was started for the sale of oilmen's stores, which at that time were rarely introduced into Karachi, and the limited supply of these goods, which was actually on offer in the town, was quickly purchased by the wealthy portion of the inhabitants. From wines and spirits it was but a short step to the opening of a mineral-water factory, one of the greatest necessities of Karachi.

Trade in all branches expanded so greatly during the succeeding thirty years that Mr. Framjee was compelled to extend his borders by acquiring a much larger place of business in Frere Street, with an area of nearly 3,000 square yards.

The interests of the firm were then greatly forwarded by Mr. Bomanjee, son of Mr. Framjee, and on the death of the latter he assumed the sole management until his sons, Messrs. Khursetjee and Cowasjee, completed their scholastic careers and become associated with their father in the business.

The firm keep a large stock of various kinds of wines, spirits, and other stores, as well as aerated waters, and in addition they are agents for a considerable number of the leading manufacturing houses in Europe. The enviable reputation which the partners have gained, not only in India but also in England and throughout the greater portion of the Continent, has been acquired by straightforward dealing and studious attention to the wants of all customers. In addition to their numerous private customers in Karachi and the Provinces of Sind, the Punjab, and Baluchistan, the firm are cordially supported by the Government, the military authorities, and several municipalities and public institutions.

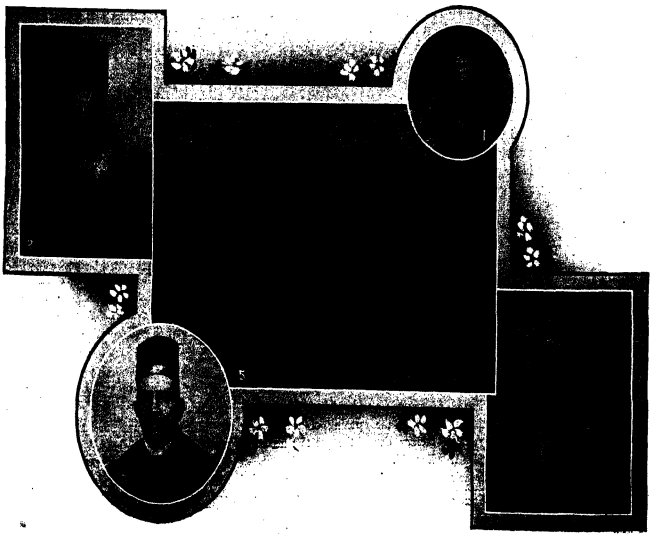
The business, further, rests upon a sound financial basis, the partners having secured the complete confidence of several local bankers, with whom their extensive monetary transactions are placed. No fewer than fifty hands are constantly employed under the supervision of Mr. Khursetjee's son and nephew, who have acquired good business capabilities and have also enjoyed the advantage of an excellent University education.

The founder of the firm—Mr. Framjee—began his business career by becoming assistant to a firm with whom he worked for a number of years, receiving a thorough training in almost every phase of commercial life, and he died at the age of eighty-three years, having won the esteem of all with whom he came in contact. The respect which he earned in his own community was manifested by his appointment as trustee of the Parsi Fire Temple at Karachi, and in order to illustrate the honour in which the whole family is held it may be said that Mr. Bomanjee and his son, Mr. Khursetjee, have been, in turn, elected by their own community as delegates of the Parsi Matrimonial Court of Sind.

Mr. Khursetjee, the life and soul of the business, is an extremely busy man, being actively employed day by day in furthering the interests of the firm in the outside world, while the management of internal affairs is safe in the hands of Mr. Munchershaw, his able assistant.

ADAM SOOMAR & CO.

1. Adam Soomar & Co.'s Shop. 2. Dada Adam Soomar's Residence. 3. Dada Adam Soomar, Sons, and Grandson.



FRAMJEE SORABJEE AND SONS.

1. Framji Sorabji. 4. Bomanji Framji. 3. Khurshedji Bomanji. 4. Cawasji Bomanji. 5. Shop Premises.

ADAMJI BOODABHOY AND SONS

1 Building 2 Interior of Office, showing Proprietor and Staff 3 Interior Godown.

ADAMJI BOODHABHOY & SONS.

Courage must have been one of the chief traits in the character of Mr. Adamji Boodhabhoy, who commenced his business career under distinctly unfavourable conditions. His family belonged to the native State of Cutch, and in the early forties of the nineteenth century he received from the then Mir of Sind a free grant of land, which consisted mainly of jungle and swamp, but upon which a solitary bungalow then stood. There was no store or shop in the vicinity, and the prospects of trading were as unpromising as they possibly could be, but Mr. Boodhabhoy boldly opened a shop on the outskirts of the fishing hamlet which has now grown into the city and seaport of Karachi and began dealing in coir and cotton ropes and sundry other goods. By the exercise of strict economy and by scrupulous attention to the requirements of customers, however, his efforts were rewarded by a gradual widening of the circle of his patrons, and on his death about the year 1880 his son, Mr. Adamji, became proprietor of a well-established business.

The latter began to trade with the Punjab, taking goods from Karachi and disposing of them in Mooltan, Jhellum, Ferozepore, and other places. There were no through railways in those days, merely a line from Karachi to Kotri belonging to the Sind-Punjab Railway Company, and goods as well as passengers were transferred at the latter place to river craft on the River Indus, by which they were conveyed to the three above-mentioned towns, which were then important river ports whence consignments were despatched to the interior, including the cities of Peshawur, Rawalpindi, and Lahore.

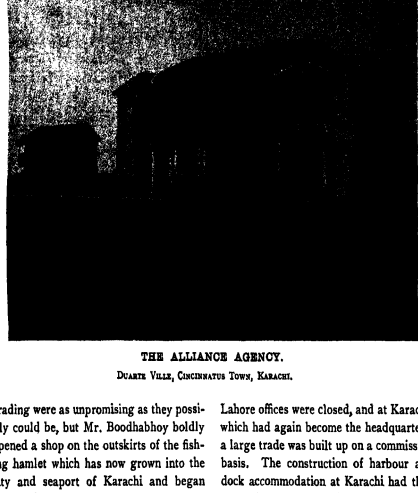
The principal place of business was at that time at Lahore, although the Karachi establishment was still maintained.

In 1899, when connections with the Punjab had been placed on a firm footing, the Lahore offices were closed, and at Karachi, which had again become the headquarters, a large trade was built up on a commission basis. The construction of harbour and dock accommodation at Karachi had then reached a comparatively satisfactory stage, and steamers began to arrive with goods from England, but as Punjab importers lacked arrangements for the unloading and despatching of their consignments, the firm opened a clearing and forwarding office, which is still in existence, for the benefit of leading commercial houses in that territory with whom Messrs. Boodhabhoy & Sons have had business relationships for many years.

A most important step was taken by them in 1904 when they commenced to import goods on their own account from England, the Continent of Europe, and America, the principal items being window glass of all kinds, cement, tin plates, coal tar, and pitch, together with hardware and building materials. This branch was started in a comparatively small way, but the trade has increased to such an extent that the firm are now supplying customers in practically every portion of North-West India.

The firm have their own godowns in addition to others which are held under lease, and all of these are admirably situated in the business centre of Karachi.

Mr. Adamji is assisted in the management by his two sons, Messrs. Gulam Hussain and Akbar Ali, and he has his own purchasing and corresponding agents in London.



THE ALLIANCE AGENCY.
DUARTE VILLE, CINCINNATUS TOWN, KARACHI.

THE ALLIANCE AGENCY.

There are few men connected with the commercial and social life of Karachi who are better known than Mr. N. J. Duarte, who for many years conducted a successful business as a general merchant and millowner's agent.

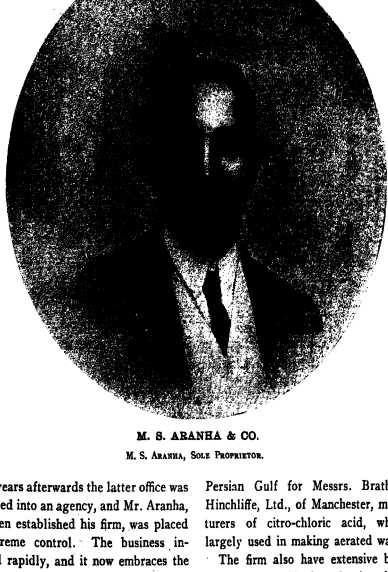
In 1915 Mr. Duarte, with the help of Mr. L. C. Duarte, converted his undertaking into a private joint-stock company styled "The Alliance Agency," with headquarters at Garden Road, Karachi. With this change came an extension of operations so as to include importing, exporting, and various industrial enterprises, and Mr. L. C. Duarte was elected as the first chairman of the company.

Mr. N. J. Duarte was also the founder of a building society, whose aims are, primarily, the construction of buildings of modern architectural designs, calculated to aid in the progress and development of the city. A handsome block, called the "Alliance Buildings," containing fine residential quarters, has recently been erected with reinforced concrete at a cost of nearly Rs. 1,00,000 in Cincinnatus Town, in Karachi. A striking proof of the growth of the society is evinced by the fact that steps have already been taken for the building of a very large and imposing structure, which will be used solely for the conduct of its own business, and it may be added that the amount proposed to be expended—inclusive of cost of land—will not be less than about Rs. 2,50,000.

Although almost seventy-seven years of age, Mr. L. C. Duarte devotes much time and no small amount of energy to the work of the society and of various public institutions in Karachi, while he is very highly esteemed in social circles among all communities.

M. S. ARANHA & CO.

The founder of this firm, Mr. M. S. Aranha, was born at Mangalore, in the district of South Canara, on the western coast of the Madras Presidency, and after completing his studies at St. Aloysius' College in that town, he became connected with the Sirdar Carbonic Gas Company, Ltd., with whom he served for several years in their head office at Bombay. He then proceeded to the Persian Gulf on his own account, and subsequently (1909) rejoined the Sirdar Company, and was appointed manager of their branch at Karachi.



M. S. ARANHA & CO.

M. S. Aranha, Sole Proprietor.

Six years afterwards the latter office was converted into an agency, and Mr. Aranha, who then established his firm, was placed in supreme control. The business increased rapidly, and it now embraces the principal towns throughout Sind, Baluchistan, and the Persian Gulf.

Before Mr. Aranha left Mangalore he had gained some knowledge of the manufacture of tiles, for which that place is noted, and it occurred to him at Karachi that there was an excellent opening for the sale of them in his new home. He therefore secured the agency for Messrs. Alvarez & Co., whose products were so well known in many parts of India, and a most lucrative business has been developed. In fact, Messrs. Aranha & Co. have practically a monopoly in this line in Karachi, and Mangalore tiles have been used for the majority of the principal public and private buildings in that city, such as the Public Works, Port Trust, the Masonic Lodge, the Mules Mansions, and other structures.

In the same year (1915) the firm purchased the goodwill of Messrs. Fenton & Co., manufacturers of mineral waters, and this business is still carried on under the name of the original owners.

Messrs. Aranha & Co. are sole agents in Sind, the Punjab, Baluchistan, and the Persian Gulf for Messrs. Bratby and Hinchliffe, Ltd., of Manchester, manufacturers of citro-chloric acid, which is largely used in making aerated waters.

The firm also have extensive business connections as shipping, clearing, forwarding, and general commission agents, this department being concerned chiefly with the port of Karachi and similar places in the Persian Gulf.

Mr. Aranha employs two assistants, but the management rests entirely upon his own shoulders.

ARDESHIR HORMUSJEE MAMA.

It is always an interesting study to an intelligent observer to watch the growth of a town or village, as such development is an indication of activities which are not allowed to lie dormant, and at least two members of the Mama family have observed with deep interest the progress made by Kiamari, formerly an insignificant landing-place on the north-west coast of India, but now one of the most important portions of the thriving seaport of Karachi.

Khan Sahib Hormusjee Mama, father of Mr. Ardeshir Hormusjee Mama, was scarcely out of his teens when he became Government supply and transport agent at Kiamari, Karachi, and for over forty-two years he rendered most efficient service in the embarkation of troops and stores, but particularly at critical junctures, as, for example, during the first Afghan and Kabul wars. His work was so thoroughly and cheerfully done that he was specially thanked by the Government, who also conferred upon him the title of Khan Sahib. He did not, unfortunately, live long to enjoy his merited honours, but he left behind him a worthy successor in the person of his son, Mr. Ardeshir Hormusjee Mama, who had been trained by his father for the position which he was then called upon to occupy.

Mr. Ardeshir has followed in the footsteps of his father by aiding the military authorities in the Egyptian and other expeditions at more recent dates, and he, too, received the highest praise, in addition to two "field" medals, from the Government of the day. The Great War of 1914–18 furnished him with further opportunities for manifesting his sincere devotion to the Person and Throne of His Imperial Majesty, the King-Emperor, and he has been warmly thanked for his most valuable assistance.

Mr. Ardeshir has for several years been interested in the commercial life of Karachi, and he is to-day recognized as one of the most successful business men in that city.

Mr. Ardeshir is the owner of a considerable quantity of valuable household property, and the most recent addition to the list is a most imposing pile of buildings in Karachi, which is known by the name of "Mama Mansions." The structure, remarkable for its solidity and architectural beauty, is situated at the junction of Inverarity and Victoria Roads, two of the leading thoroughfares in the city, and it covers an area of about 20,000 square feet.

The building has been designed—with modifications suitable for the climate of

ARDESHIR H. MAMA.

1. KHAN SAHIB H. C. MAMA. 2. ARDESHIR H. MAMA.

ARDESHIR H MAMA.

1 Mama Mansions 2 Mama Mansions Opening Ceremony

India—in the French Renaissance style, and while its spacious ground floor is intended to provide ample accommodation for a considerable number of motor-cars and other vehicles, its large wings, halls, and galleries will be devoted to business and residential quarters, up-to-date showrooms, and offices. The mansions are not outside of the best business quarter of Karachi, and yet they are on the direct route to Government House and Clifton, a rising and popular suburb.

Mr. Ardeshir has identified himself with numerous projects launched for the general improvement of the city, and one of his first notable public acts was to manifest his interest in the subject of female education by an expenditure of Rs. 3,00,000 for the erection of a school for girls in Karachi. This school has been named after the name of the family, namely, the Mama Parsi Girls' School.

It is impossible to refer in detail to his charitable gifts to various institutions, such as the Lady Dufferin Hospital, the Y.W.C.A., the Parsi Virbaiji School, the Lepers' Asylum, and the Anglo-Indian Club at Karachi; the Victoria Memorial School for the Blind, the Parsi Girls' School Association, and the Zoroastrian Jashan Committee, Bombay; St. Dunstan's Home for the blind in England; as well as to various war funds and private individuals, but they have amounted to several hundreds of thousands of rupees in value, and he is the same large-hearted generous citizen, always ready to extend a helping hand in deserving cases.

Mr. Ardeshir, still a comparatively young man, and immersed in business undertakings of an ever-widening scope, has not much leisure for indulging his love for sport, but both his late father and he have in earlier days been sound exponents of cricket, the Khan Sahib especially having delighted crowds of the public in Karachi by his vigorous hitting of "boundaries" when playing in matches against the regimental and gymkhana clubs of the city.

ARDASEER & CO.

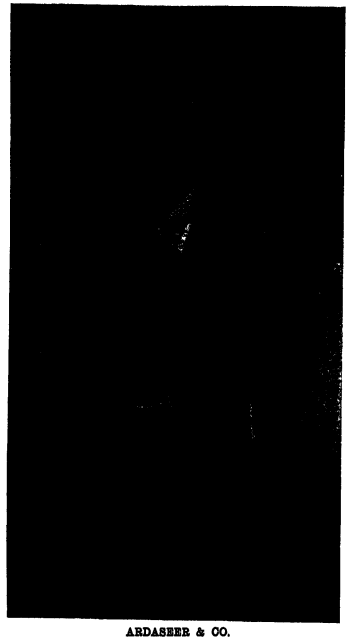
The business commenced in 1908 and carried on by this firm at Karachi as merchants, commission agents, and Government and railway contractors, is an offshoot of the princely commercial house of Messrs. H. J. Rustomjee & Sons, of Rustomjee Buildings, in the same city, the founder of which was the late Mr. Hormusjee Jamsetjee Rustomjee, J.P., the father of the sons who were left to continue the undertaking.

The late Mr. Rustomjee was no ordinary man; he was born amid humble surroundings, with none of the advantages of inherited capital, but he was the possessor of keen business capabilities and indomitable perseverance—qualities which enabled him to overcome difficulties and to rise to a position in which he held the confidence and respect of his associates in the markets of India, Europe, and America, and the affection of those with whom he was more intimately acquainted. He travelled in many countries of the world, and in every city and town visited by him the memory of his genial manner and his cheerful sympathy with others in less prosperous circumstances remains as fresh to-day as at the time when his unexpected death, while still in the prime of life, cut short a career of great usefulness in commercial as well as social circles.

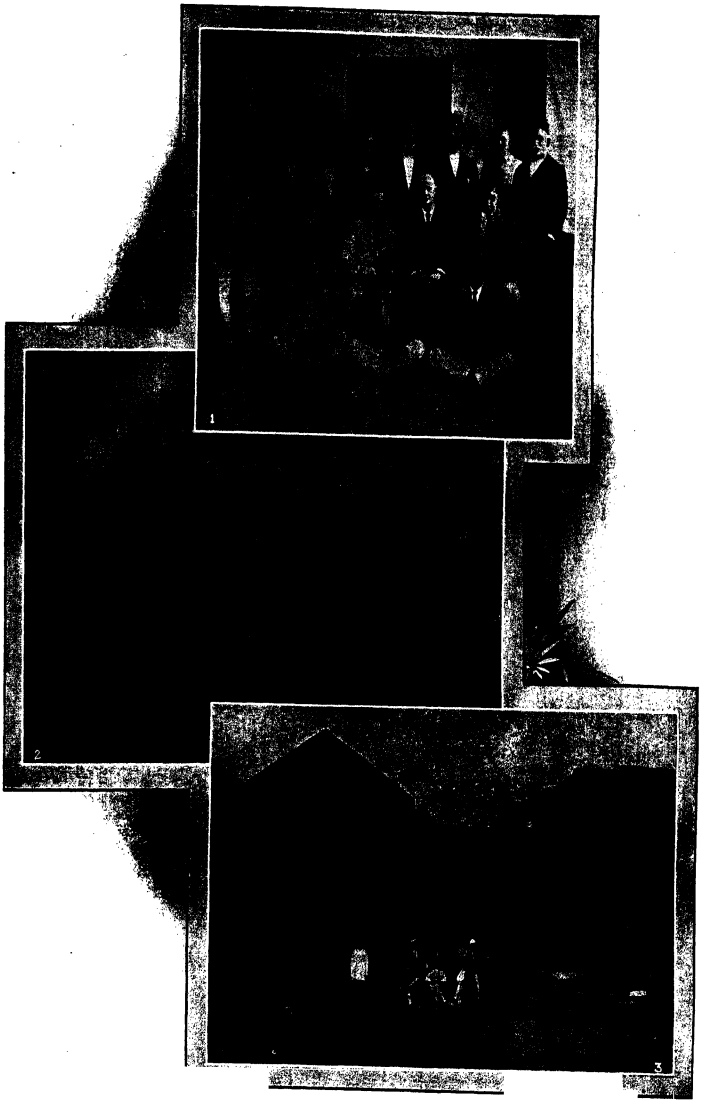
The same kindly spirit, so conspicuous in the character of the late Mr. Rustomjee, is manifested by the partners of Messrs. Ardaseer & Co., who are distinguished for their zeal and integrity, and who give abundant promise of becoming proprietors of as huge an undertaking as that from which the present concern has sprung.

It may not be out of place to mention that Mr. Rustomjee was a member of all the English and Scottish masonic lodges in the Province of Sind, and that on several occasions he was elected to the high position of Worshipful Master; he was, further, admitted as a Righteous Knight in the Oriental Order of the Palm and Shell in New York, and as a Royal Select and Super-Excellent Master of the Grand Council, and Select Master of London in the year 1884.

By his personal benefactions to persons within and outside of the circle of Brotherhood, he left behind him an example worthy of emulation.



ARDASEER & CO.
THE LATE MR. H. J. RUSTOMJEE.



BEAUMONT & CO.

1. Office Staff. 2. Hide Godowns, Lyari. 3. Hide Godown Staff.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

BEAUMONT & CO.

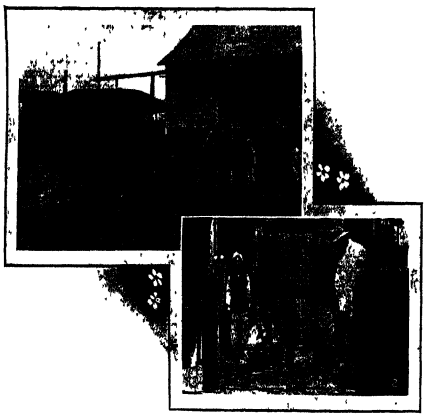
This firm was established in Karachi in the year 1903 by the late Mr. T. L. F. Beaumont, a gentleman who, in addition to a strenuous business career, occupied at various times many important public positions, such as chairman of the Karachi Chamber of Commerce, an additional member of the Bombay Legislative Council, president of the Karachi municipality, consul for the Netherlands, and consular agent for France.

The present partners are Messrs. T. C. Beaumont and E. L. Price, while their senior assistant, Mr. Ian Graham, is authorized to sign on behalf of the firm.

P. F. BILLIMORIA & CO.

When this firm of engineers came into existence in the year 1905, it was started by the sole proprietor, Mr. P. F. Billimoria, who had earlier in life served an apprenticeship of four years in that line with Messrs. T. Cosser & Co., Ltd., of Karachi, who afterwards was employed on a steamer belonging to the Bombay and Persia Steam Navigation Company, Ltd., with the object of gaining experience in marine matters, and who then took up the position of assistant foreman in the large engineering works conducted by Messrs. Cosser & Co.

Mr. Billimoria was therefore well-



P. F. BILLIMORIA & CO.

1 General View of Yard and Machine Shops, Britannia Iron Works.
2. Specialist in Acetylene Welding.

A very considerable trade has been built up in the export of hides and skins under the shipping mark of **B. & Co.** well known in European and American markets.

Messrs. Beaumont & Co. are agents for the Sind Press Company, Ltd., having presses at Karachi and Tando Adam; the Eduljee Dinshaw Ice Factory; the Royal Insurance Company, Ltd.; the Eagle and British General Insurance Company, Ltd.; New Pegamoid, Ltd.; and Messrs. Martin Earle & Co., Ltd.; while they are secretaries and treasurers of the Karachi Steam Lighterage Company, Ltd.

equipped in his profession when he decided to establish his own business in Karachi, and owing to the long practical training which he had undergone, he was justified in his confidence that he would be able to give full satisfaction in carrying out all work entrusted to him. He secured suitable premises standing on spacious ground in Lawrence Road, and established himself under the style of P. F. Billimoria & Co., as engineers, founders, and contractors, specializing in mercantile, marine, and electrical undertakings.

The firm have been particularly successful in repairing ships, a work which is frequently attended by formidable difficulties of an intricate character, but it may be said that in all contracts placed with them it has been their aim to secure a good reputation rather than mere financial gain.

Mr. Billimoria employs a large staff of skilled artisans in his workshops, in addition to a number of competent assistants and clerks in his offices, and the faithful services rendered by them are amply rewarded by the kindly treatment accorded by a strict though indulgent proprietor. Mr. Billimoria is the son of Mr. Framjee Billimoria, who has recently retired into private life after thirty-three years of capable work conscientiously performed for the noted firm of Messrs. Ralli Brothers, merchants of Karachi, Calcutta, and other places.

Mrs. Billimoria has been an invaluable helper to her husband in the building up of his business, and she has also taken a prominent part in connection with Women's work for the relief of disabled soldiers during the late war, for which she received the thanks of the Government of India. This lady is, further, secretary of the Karachi "Zarothosti Banu Mandal," an institution which is doing a large amount of good in rendering assistance to indigent Paris.

J. BLISS.

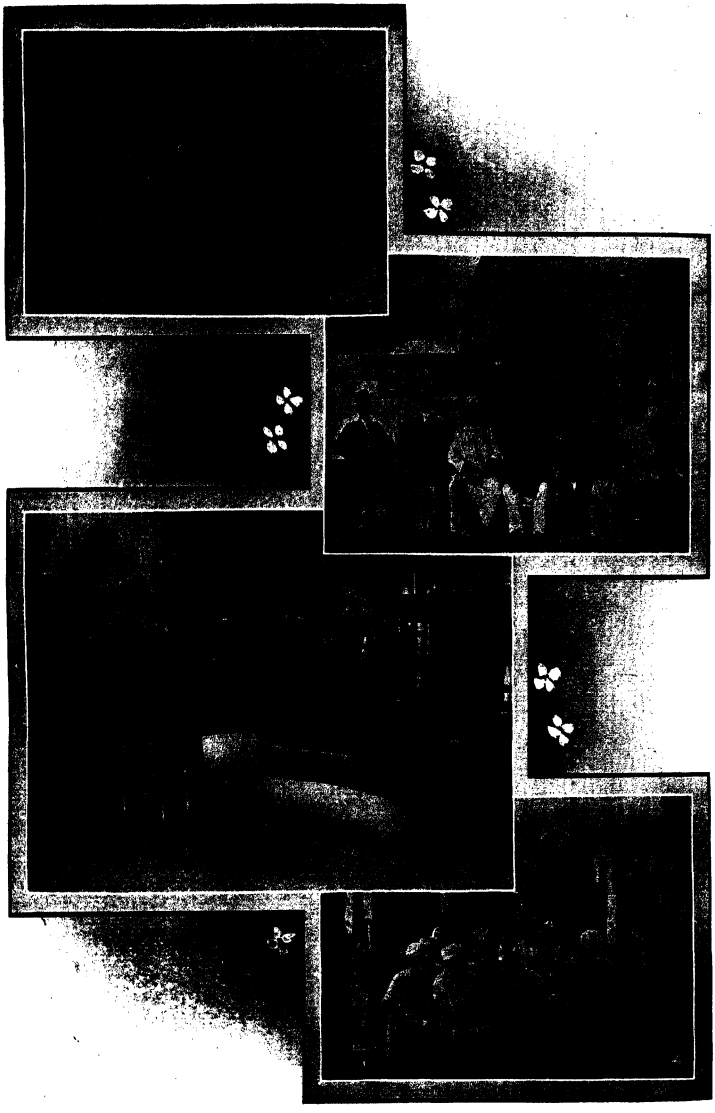
Few cities in India can show such records of commercial expansion in the past quarter of a century as Karachi, which is not only a growing seaport but also an important centre whence supplies of all kinds of goods are sent to the vast inland areas in the north-west.

A chemist's and druggist's business was started by a Mr. J. Bliss in the year 1896, and after a period of ten years that gentleman sold the concern to Mr. D. Smith, who still conducts it under the name of the original proprietor.

The business has grown at a rapid rate during Mr. Smith's ownership, and the premises which were first opened have proved to be utterly inadequate to meet the largely increasing demands. Extensive premises have therefore been erected on a site adjoining the old one in Elphinstone Street, and it is now hoped that with greatly increased accommodation the requirements of customers can be more efficiently met. All drugs, together with other articles usually found in an up-to-date chemist's establishment, such as perfumery, soaps, medicinal preparations, hospital and surgical appliances, photographic goods, and other articles, are im-

J. BLISS.

1. New Premises of J. Bliss & Co. (Under Construction). 2, 3. Soda-water Factory.



BOMBAY FURNISHING DEPOT.

1. Exterior of Shop. 2. Showrooms. 3. Proprietors. 4. Factory.

ported direct from England and America, and as consignments are being received constantly, purchasers can always rely upon getting fresh stocks.

Side by side with this business, however, Mr. Smith started the manufacture of mineral waters. A large new factory just built will be equipped with more modern plant driven by electricity, installed according to the latest principles, and every known device for securing absolute purity of water and other ingredients will be adopted.

Contracts are held for supplying all aerated waters to the North-Western Railway Company on their system between Karachi and Lahore, and Karachi and Quetta, as well as to hospitals, messes, clubs, and several hotels.

THE BOMBAY FURNISHING DEPOT.

The firm of Messrs. Anandji Damji & Co., proprietors of the Bombay Furnishing Depôt, in Elphinstone Street, Camp, Karachi, was founded in the year 1893 by Seth Anandji Damji, who was born at Mandvi, in the Native State of Cutch. Members of the family have, however, carried on business at Bombay for the past three-quarters of a century, trading under the name of Govindji Damji, as general merchants, and specially appointed contractors in the postal service of the Government of Bombay.

When Mr. Anandji established a home in Karachi, he began to import well-seasoned teak and blackwood of first-class quality, and the firm now employ about fifty men in their factory in making superior household furniture and effects, a large stock being always kept of marble-top and plain tables and washstands; dressing tables; sideboards; teapoys; wooden, iron, and brass bedsteads; dining, drawing, dressing, and bedroom chairs; wire mattresses; hospital beds; children's carts; and a huge assortment of various other goods, which may be viewed in their extensive showrooms.

Any special designs of customers, either in manufacturing or upholstering, are carefully copied by highly-skilled workmen, under the able supervision of Mr. Govindji, the manager at Karachi.

Several large contracts for furnishing business premises, as well as private residences, have been most satisfactorily carried out in Karachi, one of the most important of these being the manufacture of all furniture and fittings required for the new palatial offices of Messrs. Mackinnon Mackenzie & Co., merchants and shipping agents.

The works are centrally situated at the corner of Elphinstone and Clarke Streets, and adjoin the large establishment of Messrs. Haji Dossul & Sons.

Mr. Govindji is an orthodox Hindu, and he and his family are greatly respected in the city, in whose progress they take such an extremely active interest.

BRIGSTOCKE JEWANJEE & CO.

This firm of stevedores and *dubashes* at Kiamari, Karachi, well known and highly respected throughout the shipping world, was founded in the year 1875 by the late Mr. G. A. Brigstocke and the late Mr. Jewanjee Pestonji Dubash.

These gentlemen threw the whole force of their energy into the undertaking, and by scrupulously discharging all work entrusted to them they quickly gained the confidence of an increasing number of supporters. The climate of India, however, began to have an unfavourable effect upon the health of Mr. Brigstocke, who was compelled to proceed to England, where he zealously attended to the interests of the firm until the date of his death, which occurred several years later. On his departure from this country, Mr. J. P. Lloyd and Mr. J. C. Henderson strengthened the firm by their admission as partners, the former gentleman retiring into private life after a service of ten years, and the latter relinquishing his share in 1912–13.

Sons and grandsons of the founders worked as assistants to the firm for a number of years, they eventually becoming partners, and the proprietors at the present time are Mr. G. A. Brigstocke, Mr. Pestonji A. Dubash, Mr. Hormusjee Jewanjee, and Mr. A. F. Brigstocke. The firm continue the well-established business in stevedoring and *dubashing*, and they have recently added general contracting work for the naval, transport, and military authorities.

During the period between April 1, 1915, and March 31, 1918—the most strenuous years of the Great War—the firm were entrusted with the work of loading and discharging all transports at the port of Karachi, in addition to the duty of supplying the requisite labour at various military camps, and also the carrying out of the Government contract for the whole of the lighterage service. In the year ending March 31, 1919, the work connected with the arrival and despatch of transports was, by order of the senior naval transport officer, shared by all stevedores at Karachi, but the contract for labour and lighterage remained in the hands of Messrs. Brigstocke, Jewanjee & Co., who are also engaged in meeting all military requirements.

It would be impossible to over-estimate the value of the work performed by this firm in carrying out such important undertakings so promptly and successfully, and it proves conclusively that they have an almost unlimited control over the chief labour markets in Northern India.

Space forbids detailed particulars of the vast quantities of Government stores dealt with by the firm at Karachi, but included in the lists of shipments are railway engines, wagons, brake-vans, pontoons for the construction of bridges, motor-lorries, travelling workshops, and armoured cars.

A few figures may now be given in order to show the magnitude of the responsibility which rested upon this firm during the days of war. Between April 1 and December 31, 1915, they handled 76,905 tons of goods; during the year 1916 the quantity was 288,393 tons; in 1917 the weight was 507,061 tons; and from January 1 to March 31, 1918, it was 182,596; thus making an aggregate total for three years of 1,049,955 tons.

It should be mentioned that these figures represent the tonnage of Government stores only, and do not include those for the work regularly performed for ordinary passenger and cargo steamers.

BYRAMJI DOSSABHOY & CO.

Traders of many nationalities flocked into Karachi when Sind became a portion of British India, and among those who made homes there in those early days were the forefathers of Mr. Byramji Dossabhoy Minwalla, the senior proprietor of the firm of Messrs. Byramji Dossabhoy & Co. Born in the year 1887, Mr. Byramji was educated at the Sind College, Karachi, and after completing his studies there, commenced business as a general merchant, exporter, and importer, establishing valuable connections with leading commercial houses in England, America, Europe, and Japan.

The undertaking, which is carried on in Wassiamal Assoomal Buildings in McLeod Road, has grown to very large dimensions, and is a standing memorial

BRIGSTOCKE, JEWANJEE & CO

1 Shipping an Ambulance Coach on Board H.M.T. *Scottier*. 2, Complete Ambulance Train on Board H.M.T. *Scottier*
3. Barges Shipped on H.M.T *Subadar* for Mesopotamia. 4. Cold Storage Van being Shipped for Basra

to the business capabilities and excellent judgment of the proprietor.

In addition to being the owner of the palatial residence known as "Minton Hall," Mr. Minwalla has also secured the well-known Bristol Hotel, a huge up-to-date structure standing on land some 6,000 square yards in extent. The building comprises a well-ventilated lounge, commodious dining-rooms, clean and comfortable bedrooms fitted with hot and cold water and modern baths and sanitary appliances and fittings, and electric lights and fans have been provided in each apartment. A fine garden occupies the whole of the frontage, and there is excellent accommodation for a considerable number of motor-cars and other vehicles.

This imposing property is situated in the centre of the most fashionable quarter in Karachi, and is within a few minutes' walk from the Camp railway station.

BYRAMJI DOSSABHOY & CO.

1. Dossabhoy Byramji Minwalla. 2. Byramji Dossabhoy Minwalla. 3. The Bristol Hotel.

BUNDALLY KASSUM.

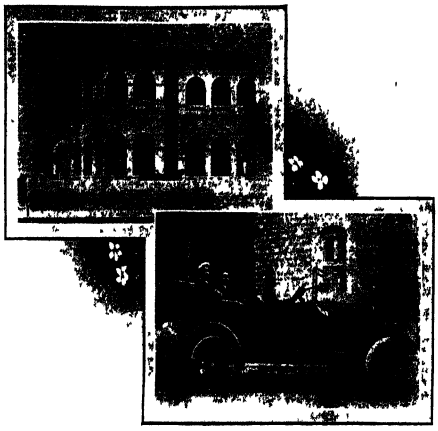
It is about fifty years since Mr. Kassum Valli, a Mahomedan of the Khoja caste, left his home in Cutch, on the Western coast of India, and migrated to Kharadar, Karachi, where he commenced business in a comparatively small way by dealing with local firms in hides, skins and tallow. He was successful in his enterprise, and on his death in 1910, in the sixty-fifth year of his age, his property passed into the hands of his eldest son, Mirali, and the fourth son, Mahamad. The former alone, at the present time, is conducting a large trade in fish, not only in Indian seaports, but also with many places in England, in the name of Bundally Kassum. Kassum Valli's second and third sons, Bundally Kassum and Karim Kassum, had, in 1902, withdrawn from the parent firm and had started on their own account in tanning hides and skins and exporting those goods through the agency of Messrs. Volkart Brothers, of Karachi. The brothers agreed to dissolve partnership in 1912, and Karim Kassum removed to Hyderabad, in Sind, where he carried on a similar tanning and exporting business under the name of Karim Bundally. The second son, Mr. Bundally Kassum, the subject of this sketch, is now the sole proprietor of the business, in Karachi, of tanning hides and skins, and he is also exporting raw produce on his own account—through Messrs. John Gale & Co., Ltd., of Liverpool—to England, America, France, Italy, Spain, and other Continental countries.

This gentleman, who has passed only forty-five summers, has thirty years' practical experience at his back, and it is this very acquaintanceship with the quality and correct value of his commodities and of the best markets for their disposal that has enabled him to become a most successful merchant. Mr. Bundally is also highly respected in private life, as he was not long ago elected to the office of president of the *Khoja* Ismailia Council, of which he had previously been appointed a member of council by His Highness the Aga Khan. He is, further, a governor and visiting member of the Lady Dufferin Hospital, but special mention must be made of the valuable assistance rendered by him to the Government during the late Great War in the selection and purchase of hides, and by his liberal contributions to war bond funds. In addition to the above, Mr. Bundally has contributed the splendid sum of Rs. 50,000 towards a maternity home, now being constructed for the *Khoja* community in the Machi Mikani quarter of Karachi; an amount of

Rs 1,00,000 for a home for the poor, Rs. 15,000 for the Women's Educational Institute; and Rs. 5,000 for a girls' school; as well as many other substantial donations for various charitable objects.

It may be added that Mr Karim Kassum (who, it will be remembered, went to Hyderabad) has also gained great confidence and respect, as he holds the honoured positions of vice-president of the municipal committee, of an honorary magistrate, and president of the Khoja community.

This gentleman was a pillar of strength to the Government by his generous support of war bond funds, and also by his efforts to induce others to follow his own example He is, further, the owner of a considerable quantity of land and household property in Sind



BUNDALLY KASSUM.

1. Haidher Palace, Clifton 2 Bundally Kassum and Gulam Haidher Bundally.

CARLTON HOTEL.

A gentleman who has during the past four years travelled many thousands of miles by road in nearly every district in India, from Cape Comorin to Karachi, said recently to the Carlton Hotel, "It is the most comfortable hotel that I have stayed at in India, . . . the comfort and convenience of the guests is carefully studied."

Such a testimonial from one whose verdict is unassailable is abundant proof that at the "Carlton" one may be sure to enjoy home privileges when away from home.

The hotel was opened in the year 1915

CARLTON HOTEL, KARACHI.

1 Carlton Hotel, Karachi. 2. Dining Room.

by Mr. F. Hubschmid and Mrs. R. Croal as joint proprietors, and every detail of management, from kitchen to drawing-room, is under the direct supervision of the partners.

The premises consist of the main block, together with detached buildings, and accommodation is found for about sixty guests. There is a very fine dining-room to seat 120 guests, which opens on to a wide veranda lounge, and the drawing, smoking, bed, dressing, and other rooms are well furnished, scrupulously clean, and are fitted with electric lights and fans. Stables and motor garages are connected with the hotel, from which carriages or cars can be engaged at any hour, and servants meet all trains and ships to render assistance to intending visitors.

The "Carlton" is most conveniently situated, being exactly opposite the cantonment railway station, and near to the Sind Club, the Gymkhana, the Golf Club, and the polo ground.

THE CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA (KARACHI).

This, the oldest exchange bank in India, was established under a royal charter granted by the Crown in 1853 "to extend the legitimate facilities of banking to the vast trade between India, the Far East, Australia, and England," and it is scarcely necessary to tell people cognisant of India with what success the bank has carried out the objects for which it was founded.

Originally only three offices were opened, namely, in Calcutta, Bombay, and Shanghai, but the unexampled prosperity of the bank has led to the establishment of further agencies throughout the northern hemisphere, and it now has its own branches at:—

Amritsar, Bombay, Calcutta, Delhi, Karachi, and Madras (in India ; Colombo (in Ceylon); Rangoon and Tavoy (in Burma); Singapore, Penang, and Malacca (in the Straits Settlements); Ipoh, Klang, Kuala Lumpur, Seremban, and Taiping (in the Federated Malay States); Bangkok and Puket (in Siam); Batavia, Sourabaya, and Medan (in the Dutch East Indies); Cebu, Iloilo, and Manila (in the Philippine Islands); Saigon and Haiphong (in French Indo-China); Foochow, Hankow, Hongkong, Peking, Shanghai, and Tientsin (in China); Kobe and Yokohama (in Japan); and New York.

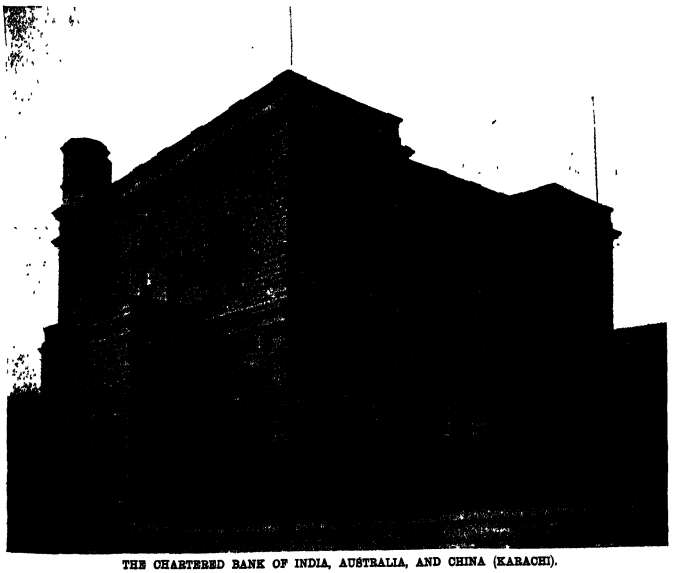
At most of these places the bank owns palatial offices, and the premises at Bombay, Calcutta, Singapore, Shanghai, and in many other cities are amongst the most imposing modern buildings in the Orient.

In Australia, New Zealand, and South Africa, the bank is in direct telegraphic and mail correspondence with all the leading banks, and a large and increasing trade connection between these territories and the Orient has been established.

With its own agency in New York City, the bank is in a position to conduct all kinds of exchange and finance business with all the principal cities throughout the United States and Canada.

The Bank undertakes general banking business of every description. It grants drafts payable at any of its agencies and branches, and at all the principal cities throughout the world. Approved bills of exchange are purchased or received for collection, commercial or travelling letters of credit are issued, and Government or other securities are bought, sold, or held in safe custody. Fixed deposits are received, and floating accounts are opened on terms which may be ascertained on application.

In London the company's bankers are:



THE CHARTERED BANK OF INDIA, AUSTRALIA, AND CHINA (KARACHI).

the Bank of England; the London City and Midland Bank, Ltd.; the London County and Westminster Bank, Ltd.; the National Provincial Bank of England, Ltd.; and the National Bank of Scotland, Ltd.

The last annual report gives the following figures, showing the position of the company on December 31, 1916, and a perusal of the same will give a clear idea of the stability of this institution. The net profit for 1916, after providing for all bad and doubtful debts, was £511,465 10s. 2d., inclusive of a sum of £130,205 12s. 4d. brought forward from the previous year, and a dividend was declared at the rate of 17 per cent. per annum (free of income tax) for the whole year. The capital, which is fully paid, amounts to £1,200,000, and the Reserve Fund stands at £1,900,000. There is also a reserve liability of shareholders amounting to £1,200,000.

The board of directors is as follows: Sir Montagu Cornish Turner (chairman), Sir Henry S. Cunningham, K.C.I.E., Mr. Thomas Cuthbertson, Sir Alfred Dent, K.C.M.G., Mr. William Henry Neville Goschen, the Right Hon. Lord George Hamilton, G.C.S.I., Mr. William Foot Mitchell, and Mr. Lewis Alexander Wallace.

COWASJEE & SONS.

Nearly twenty years ago Commander Charles H. Hewett, R.I.M., Port Officer, Karachi, wrote a letter in which he stated that "Messrs. Cowasjee & Sons are contractors for the supply and handling of coal for this department. They have also supplied all stores necessary for the Sea Pilotage Department, and carry out the duties of landing passengers in quarantine, besides supplying all necessaries for this service. They are ever ready to execute any orders that are entrusted to them, and it gives me much pleasure to certify that they always carry them out very satisfactorily."

These words briefly describe the business operations of the well-known firm of Messrs. Cowasjee & Sons, coal importers, stevedores, and contractors, of Karachi, and the reference made by Commander Hewett to the thorough manner in which they discharge duties assigned to them is the secret of the success which they have attained and of the confidence reposed in them.

The founder of the firm was Mr. Cowasjee Rustomjee Variawa, who established himself as a stevedore and *dubash* in the year 1887, when Karachi, as a seaport, was in its infancy, but the proprietor manifested shrewd business instincts and backed them up with strictly honourable dealings, with the result that, notwithstanding keen competition in obtaining orders for supplies to steamers, he secured a full share of the privilege. In the year 1893 the firm became coal merchants and contractors for bunkering, and in 1900 Mr. Cowasjee's son, Mr. Fakirjee, became a partner. That step was followed by a greatly increased turnover, and at the present time the firm, strengthened in 1909 by the inclusion of Mr. Minocher (another of Mr. Cowasjee's sons), hold contracts for supplying coal to the Admiralty, the Royal Indian Marine; the Port Trust, Karachi; and to a number of English steamship companies whose vessels put in at the port. The firm were pioneers in introducing Australian and Natal coal into Karachi, and on one occasion they held a contract with the North-Western (State) Railway for the supply of 50,000 tons of Natal coal in the course of twelve months, this being a privilege which has not been enjoyed by any other firm in Karachi.

They have succeeded in putting up several time records for bunkering, but the best of them was the supply of 1,200 tons of coal in the year 1913 to His Majesty's transport *Sudan* in the amazingly short time of fifteen hours. About 60,000 tons are now being delivered to Government vessels in the course of a month, and this is exclusive of deliveries to the private mercantile marine.

The stevedoring and *dubash* branch is now confined to Government requirements alone.

Mr. Cowasjee retired from active participation in management in 1908, and his two above-named sons have since that date carried on the business on their own account.

The firm's present offices are situated in Bunder Road, Kimari, Karachi, but new palatial premises are now in course of construction at Willingdon Place, Kiamari, which will be styled "Mules' Mansions" in commemoration of vast improvements made in the port by Mr. H. C. Mules, M.V.O., C.S.I., chairman of the Karachi Port Trust.

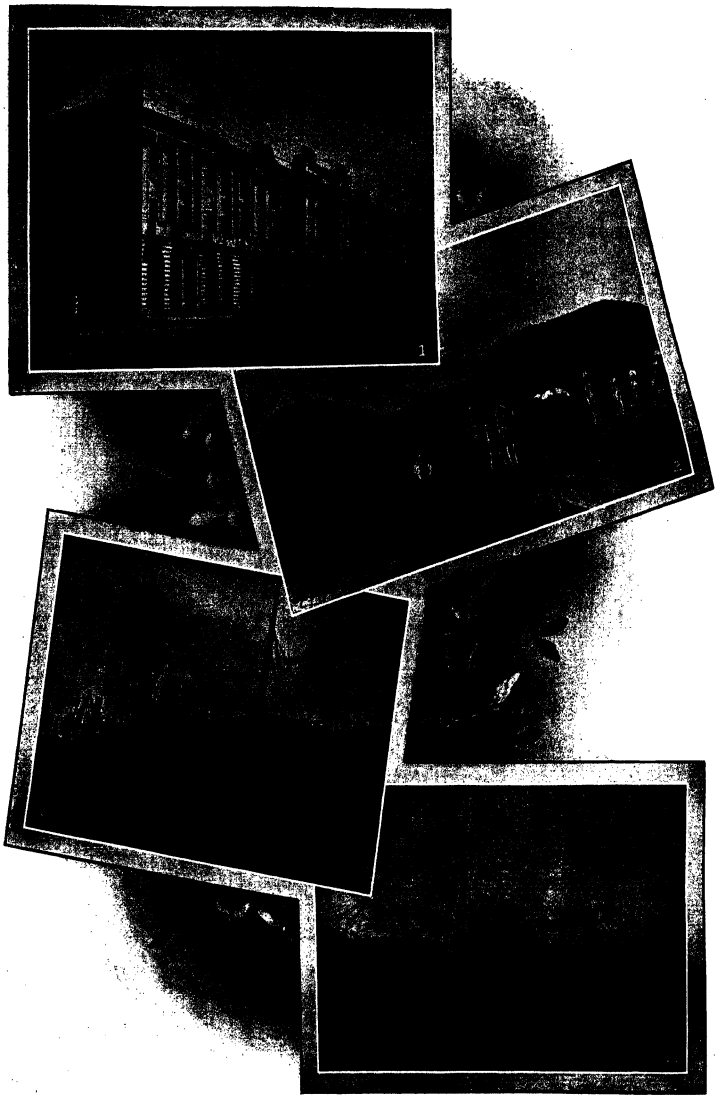
They have coal depots at Baba Island and Stowell Yard, Kimari.

Mention may now be made of testimonials and letters of commendation bearing upon the satisfactory manner in which Messrs. Cowasjee & Sons have executed work entrusted to them.

In March 1896 the port engineer, Karachi, prior to going on leave, said: "I have much pleasure in placing on record my approval of the way Messrs. Cowasjee & Sons have carried out the work entrusted to them by the engineering department of the Port Trust. During the past five years they have been the contractors for the delivery of Welsh coal from steamers, and the largest cargoes have been disposed of by them without the slightest hitch, labour and lighters having always been provided in abundance and at a very moderate rate."

A certificate given in October 1903 by the officiating Port Officer, Karachi, stated that the firm had been of the greatest assistance in the dispatch of eleven transports to Barbera, Somaliland. The charges for supplying labour, sanding camel-ships, and any other work were most reasonable. The work was carried out most expeditiously and at the shortest notice, Mr. Cowasjee, the senior partner, being always present to hurry on the dispatch of the steamers. Commander Hewett in April 1905 wrote: "This is to certify that Messrs. Cowasjee & Sons have been employed by me in connection with the work of erecting and fitting out the ship's segregation camp at Manora. Owing to the outbreak of small-pox on board the R.I.M.S. *Hardinge*, the entire ship's company of nearly three hundred officers and crew were ordered into camp by the principal medical officer. Messrs. Cowasjee & Sons supplied all necessary furniture and fittings, and in several ways rendered prompt and valuable assistance in preparing the camp at extremely short notice. They also made the necessary arrangements in connection with the disinfection of bedding, and supplied boats and coolies for the discharge and return of commissariat stores, . . . and the whole of the above work was carried out promptly and most efficiently."

On the occasion of the visit to India of their Royal Highnesses the Prince and Princess of Wales in the year 1906, the Commodore of H.M.S. *Renown* wrote that Messrs. Cowasjee & Sons arranged for the importation of best Welsh coal for His Majesty's ships *Renown* and *Terrible*, and that the arrangements were entirely satisfactory. The Marine Transport Officer, Karachi, in April 1908 certified that Messrs. Cowasjee & Sons had supplied coal to R.I.M. vessels and hired-transports for many years past, and that



COWASJEE AND SONS.

1. Cowasjee and Sons' New Buildings, "Mulbe Mansions," Kiamari. 2. Coal Depot. Baba Islands.
3, 4. Coaling H.M.T. *Soudan* from Trucks and Lighters.

they always carried out their engagements in a satisfactory manner. Before retiring from the post of chief engineer to the Karachi Port Trust in March 1909, Mr. Edward Jackson, M.Inst.C.E., testified that he had every confidence in Messrs. Cowasjee & Sons that whatever they contracted for they would do their best to carry out, and that he considered them thoroughly business-like, reliable, and satisfactory.

Among the vast number of vessels which have been bunkered, painted, disinfected, or supplied with provisions and other stores, are all the R.I.M.S. vessels, H.M. transports *Rohilla, Kewa, Ionian, Dongola, Assaye*, and *Sicilia*, and H.M. ships *Pomone, Naiad, Fox, Argonaut, Proserpine*, and many others, exclusive of a host of vessels belonging to private companies. In all of these instances the commander or captain has referred in terms of highest praise of coal or other goods supplied by this firm, and for the invariable courtesy, attention, promptitude, and energy displayed in the discharge of all duties.

COX'S SHIPPING AGENCY, LTD.

This agency is a department of the well-known firm of Messrs. Cox & Co., army bankers and agents of 16 Charing Cross, London, S.W., which was established in the year 1758, and is an adjunct of the Karachi branch of the bank.

Its primary functions are to attend to the shipping, passage, and insurance business of the bank's clients, and to undertake the import, export, or storage of cargo, baggage, and personal effects, and to engage in agency matters generally. A speciality is made of the shipment of hides, skins, wool, cotton, ore, and other merchandise on behalf of up-country exporters to all parts of the world, and of the import clearance of machinery, stores, and all kinds of goods on behalf of mills, messes, clubs, and other importing concerns. Agency is also held for all lines of passenger steamers, and the company is therefore in a position to obtain the best accommodation and reliable information with regard to sailing and arrival of steamers.

Branches have been opened at Southampton and Liverpool in England; at Bombay, Karachi, Calcutta, Rawalpindi, Murree, and Srinagar in India; and at Cairo, Port Said, and Alexandria in Egypt. In addition to these, Messrs. Cox & Co. have lately organized and opened a new bank in France under the style of Cox & Co. (France), Ltd., with branches at Paris, Marseilles, Havre, Boulogne, Rouen, and Amiens, and the ordinary business of Cox's Shipping Agency (France), Ltd., is carried on in those places.

It will thus be seen that this firm, with efficient and highly trained staffs at all these places, is in a specially unique position to attend to the requirements of their clients.

In order to meet the large growth of business which has taken place during the last few years, Messrs. Cox & Co. are erecting more commodious new bank premises and warehouses in one of the most prominent positions of the business quarter of Karachi near to the harbour. They have been designed by Messrs. Hoare & Wheeler, architects, of Portman Street, London, S.W., and the building operations are in the hands of Messrs. Dove Brothers, of Westminster, London, who act under the supervision of the architects.

The bank premises consist of ground, first and second floors, and are built on a concrete foundation heavily reinforced with steel bars. The approach to the office is on a semicircular front, which is enriched by an order of Doric columns carrying a heavy cornice, and the line of these is taken up in square piers which carry the main cornice, projecting 7 feet from the wall over the first floor, which forms the most striking feature of the design. The accommodation on the top floor is set back behind a veranda, the outer wall of which is supported on an order of Ionic columns.

All the facing work of the bank premises will be in Jodhpur stone, which is pale pink in colour and of great durability and beauty. The interior of the main offices will be finished with white marble Ionic columns, floors, and dado, and a specially designed ceiling in fibrous plaster. The warehouses will provide 20,000 square feet of storage accommodation, and specially constructed strong rooms have been erected for the safe custody of mess plate and other valuable articles. The upper floors in both buildings will be served by electric lifts.

It is interesting to note that Messrs. Cox & Co. have been one of the first firms in Karachi to build modern offices of handsome and original design, and they are to be congratulated on their enterprise in being the pioneers of a movement which will do much to improve the architectural beauties of the town and port.

T. COSSER & CO., LTD.

Karachi, or Kurrachee, as it was originally known to Europeans, is the most westerly harbour in India, and therefore the nearest point to Europe of all British possessions in that country. Situated on the northern border of the Arabian Sea, the small fishing village, as it was in the fifties and early sixties of the nineteenth century, has grown into a flourishing city and seaport containing more than 150,000 inhabitants. It is in the Province of Sind in the Bombay Presidency, and when railways were being constructed in Sind in 1859, Mr. T. Cosser arrived there in order to take charge of the mechanical department of the works.

There were no wharves or landing stages at that time, and the handling of heavy railway materials was a most tedious operation, taxing to the fullest extent the patience as well as the skill of all concerned in development. Incidentally it may be added that the principal commercial houses of the city now stand upon what was originally nothing but a huge swamp.

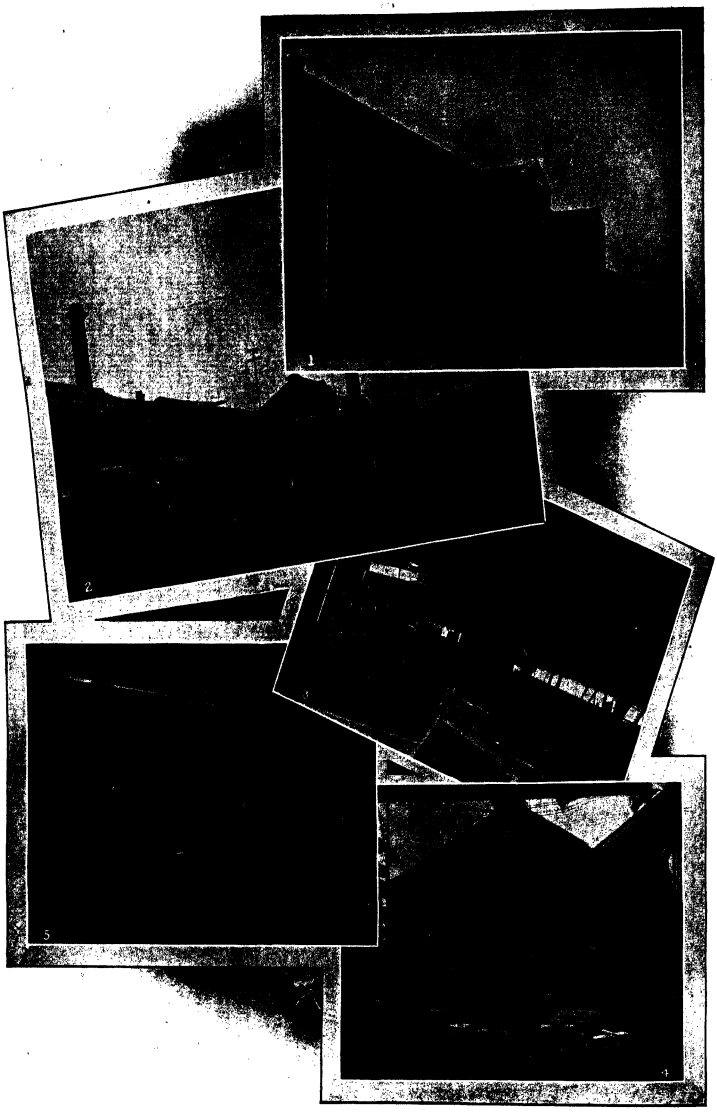
In the year 1866 serious floods did considerable damage to the line, and partially wrecked the fine bridge over the Malir River, about 9 miles distant from Karachi, carrying away several of the piers and spans. Mr. Cosser was contemplating a return, on leave, to England when that calamity occurred, but he was approached by the agent and chief engineer of the railway with a view to his taking up the contract for the repair of the bridge and for raising the structure a further 6 feet in order to safeguard it against future damage by floods.

In partnership with Mr. D. Mackenzie, Mr. Cosser undertook the contract and carried it out successfully, and he subsequently founded the first engineering works in Karachi under the name of Mackenzie, Cosser & Co.

Shortly afterwards they built the Scotch Church and reconstructed a portion of the Napier Barracks.

The firm then began to build canal bridges and sluices, and to carry out other work of a similar character for the Public Works Department, and in 1873, when a commencement was made with the construction of the Indus Valley Railway, they secured contracts for dealing with earthworks. The partners subsequently went farther afield and executed contracts in Baluchistan, and on the Harnai Railway between Sibi and Quetta. While the latter work was in progress in

COX'S SHIPPING AGENCY, LTD.
New Premises at Karachi.



T. COSSER & CO., LTD.

1. Head Office and Godowns, Wood Street, Karachi. 2. Works Yard, showing Riveters. 3. Machine Shop. 4. Foundry.
5. Blacksmiths' Shop.

1875 Mr. Cosser's partner died, and the former then carried on the business on his own account. In 1882 he entered into an undertaking to construct the Merry-weather pier, which was the first development of Karachi as a port, and the foundation stone of this structure was laid by the Marquis of Ripon, then Governor-General of India. Following this, special attention was devoted to the business in the direction of marine engineering, and an extensive trade was carried on in the building of barges. But the erection of structures in the town was not neglected. Among other edifices constructed was the Sind Club and the lighthouse at Manora, while an active part was subsequently taken by the firm in connection with the water supply and drainage of Karachi.

The engineering works, which are on the site originally selected, cover an area of 15,100 square yards, with frontages on McLeod and Burns Roads, and are divided into separate departments, comprising the ironfoundry, machine, blacksmiths', fitting, and carpenters' shops, a riveting department, and a copper and brass foundry.

The principal work done in normal times is the building of bridges and all kinds of tanks, and in the latter connection it might be mentioned that the firm has recently completed, under contract, the construction of a large reservoir at Keamari, for the storage of petrol in bulk. The company undertake repairs to the British Indian Steam Navigation Company's vessels, to His Majesty's transports, and to other ships used for marine transport. They have extensive connections in the Punjab, and with the Public Works Department for canal requisites, and their connections with the military authorities extend to the frontier of India. One of the most important contracts of the firm in recent years was the erection of a new Customs House, offices, and godowns at Bushire on the Persian Gulf, but owing to the war these were closed when only about two-thirds of the work had been completed.

Apart from the engineering works an extensive merchant business is carried on in iron and steel, machinery, tools, and general engineering and other stores, of which large stocks are held in premises situated in Wood Street. These cover an area of 21,500 square yards, and are served by a private railway siding.

In 1909 the firm was converted into a private limited liability company under the style of Messrs. T. Cosser & Co., Ltd., with registered offices at the Wood Street premises.

The directors of the company are Messrs. Thomas Cosser, M.I.M.E. (chairman), W. R. Carstairs (managing director), R. H. Young, J. Nicholson, and W. D. Young. The manager of the works is Mr. J. Nicholson, and Mr. R. H. Young is secretary; while the home correspondents of the company are Messrs. Hendry Brothers, Ltd., of Glasgow, and Messrs. Alexander Lawrie & Co., of London.

DINSHAW NANABHOY PATEL.

The *Sind Observer* newspaper, published for many years in Karachi, and the printing business connected therewith, were purchased in 1912—lock, stock, and barrel—by Mr. Dinshaw Nanabhoy Patel, a well-known resident in that city. After the plant and stock-in-trade had been removed to more commodious and suitable premises in Bunder Road, the principal commercial thoroughfare in Karachi, Mr. Patel decided to modernize the whole undertaking by installing up-to-date machinery and plant, and to substitute electricity as the motive power in place of manual labour, which had previously been employed. These improvements have been gradually completed, and the press is now able to execute all kinds of plain and fancy printing work, bookbinding, ruling, and colouring, for Government departments, commercial houses, public institutions, or private individuals.

Many contracts have been entered into for the supply of various kinds of blank forms used in Government and railway offices, and the greatest satisfaction has been invariably given not only at the manner in which the work has been carried out, but also with regard to promptitude in despatch and moderation in price.

The *Sind Observer*, formerly a weekly, but now a bi-weekly journal, has a large circulation in Karachi as well as in the several districts of Sind, the Province of the Punjab, and in Baluchistan, and it contains excellent local news, foreign cables, and articles of interest to all classes of readers.

The paper is an independent journal dealing with every phase of passing affairs and particularly with matters affecting the interests of Karachi and Sind.

In addition to the above-named undertakings, Mr. Patel, trading as Patel & Co., is sole agent in Sind and Baluchistan for the sale of the famous Scotch whiskies manufactured by Messrs. Daniel Crawford & Sons, for the renowned original stout and beer made at the Meux Brewery in London, which has held a deservedly high reputation for about two hundred years, and for the choice Oporto wines now handled by the successors of Messrs. Wiese & Krohn.

Mr. Patel is also a dealer in wool and goat-hair, and for the past twenty years he has consigned large quantities of these commodities, at regular intervals, to his correspondents, Messrs. John Taylor & Sons, Ltd., of 2 Marsden Street, Manchester.

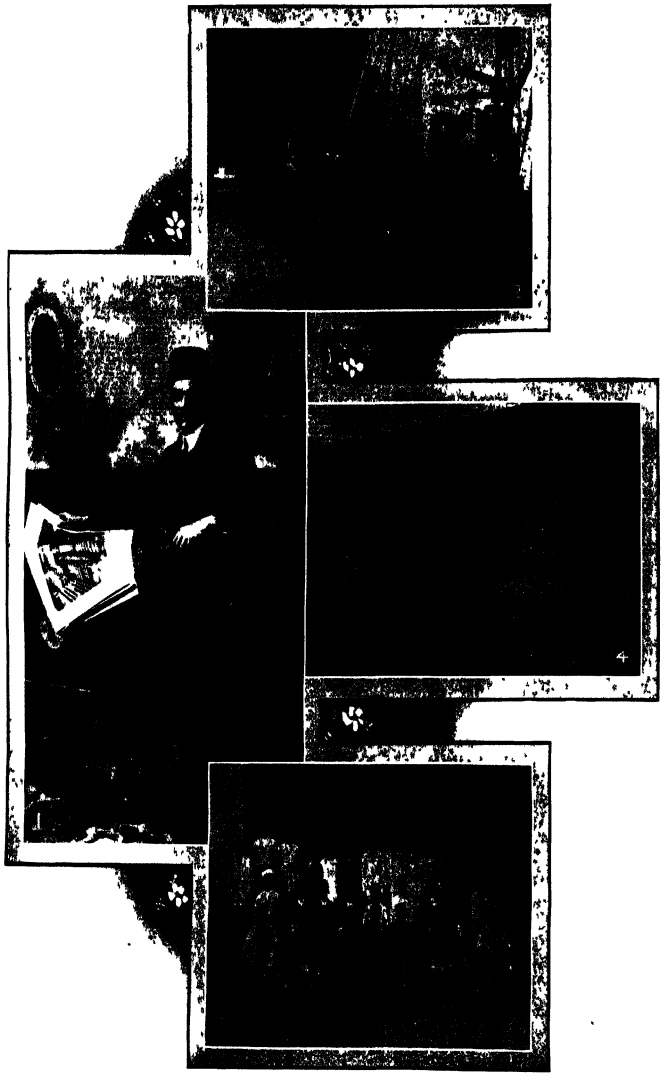
In addition to this he negotiates in a most satisfactory manner for the sale or purchase of land and household property.

The success which this gentleman has attained in his business career has been achieved entirely by his own persevering efforts; he did not inherit wealth nor did he succeed to any flourishing industrial concern; he just made the most of his opportunities, and by his straightforward conduct has won the confidence of his customers and the respect of his personal friends.

As a good citizen of Karachi, he is ever ready to associate himself with any sound scheme evolved for the improvement of the trade of the port, or for the social welfare of his fellow-townsmen, while his open-handed charitable gifts prove that his benevolence is not restricted to any particular caste or creed of men. His telegraphic address is "Avesta," Karachi.

DORABJI NANABHOY & CO.

More than fifty years ago a young man named Mr. Dorabji Nanabhoy commenced business in Karachi with his elder brother, Mr. Burjorji Nanabhoy, under the style of Burjorji Nanabhoy & Co., as general import and export merchants, their chief undertaking being the consignment of wool, hair, hides, skins and other produce to Europe. Mr. Burjorji manifested keen commercial ability, and during the course of a long and active life, he not only achieved financial success, but he also won for his firm a high reputation for straightforward business-like trading. He died in 1899, and a reconstruction of the firm took place in 1901, when the title of Dorabji Nanabhoy & Co. was adopted, the partners consist-



D N PATEL

1 D N. Patel 2 Machine Room, "Sind Observer" 3. "Sind Observer" Staff 4 Patel & Co s Wool Clearing Godown

ing of Mr. Dorabji Nanabhoy and his sons.

A large trade, similar to the one originally started, is carried on by the proprietors, and they specialize in the export of raw wool and hair, commodities which are used for various purposes in many important industries. The new firm rapidly succeeded in gaining the confidence of a greatly extended circle of customers, chiefly by the prompt and methodical manner in which they carried out all transactions. They are always ready to enter into negotiations with the promoters of new enterprises, or to become the representatives in India of well-known manufacturers in other parts of the world. They are now agents for Messrs. George Scriven & Co., of London, Messrs. McKerrow Brothers, Ltd., of Liverpool, and several other leading mercantile firms.

It is worthy of note that the late Mr. Dorabji Nanabhoy (who died in 1914) was the founder of the oldest newspaper in the Province of Sind. It was originally known by the name of the *Sind Times* (which was incorporated with the *Sind Gazette*), and now, as the *Daily Gazette*, it is the recognized medium for the publication of news concerning the political, commercial, legal and social life of the province.

In private life Mr. Dorabji Nanabhoy was greatly endeared to the members of his own community, while as secretary and treasurer, or as a member of committee of various charitable institutions, his transparent honesty of purpose and genial manner were of inestimable advantage in the consideration of questions affecting the welfare of the citizens of Karachi.

LOUIS DREYFUS & CO.

This firm of grain merchants, whose head offices are at 4 Rue de la Banque, Paris, have more than four hundred branch establishments in the Argentine, Russia, Roumania, North America, Australia, and India, all exporting countries, as well as in the leading ports of importing countries of Europe. These branches export annually about five million tons of grain, while in normal times over half a million tons of wheat, barley, *gram*, and seeds are handled in a season at Karachi, the headquarters in India.

The concern, which has now reached huge dimensions, was established in Paris in the year 1850 by the late Mr. Leopold Louis Dreyfus, but the firm was not directly represented in India until the Karachi offices were opened in the year 1907. Other branches in India are in existence at Calcutta, Bombay, and a number of places in important up-country grain-producing centres.

Modern plant, driven by motor power, has been erected at Kiamari, in Karachi, for the cleaning of all grain prior to shipment, but considerable additions will be made to it as soon as the necessary machinery can be procured.

Extensive godowns, covering an area of about 100,000 square yards, necessary for dealing with so large a quantity of grain, have been established at Kiamari, and at other places within the city of Karachi, whence all consignments from the Punjab, the hinterland of Karachi, are despatched in chartered steamers.

It is necessary to explain that the particulars given above relate to the business of the firm as conducted in normal times, but the exigencies of war requirements now claim the undivided attention of the firm as far as grain is concerned.

A banking house was several years ago added to the business operations of Messrs. Dreyfus & Co., in Paris, and that concern has now become one of the leading financial establishments in that city.

The partners at the present day are Mr. Louis Louis-Dreyfus and Mr. Charles Louis-Dreyfus, both of whom are Chevaliers de la Légion d'Honneur.

Mr. I. Pedersen is general manager for India, and manager of the offices in Karachi, in which about a hundred clerks, including a dozen Europeans, are employed.

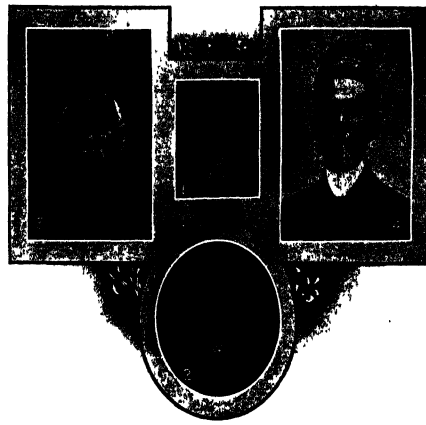
THE EASTERN ELECTRIC AND TRADING COMPANY.

This company, whose premises are situated in Elphinstone Street, the leading thoroughfare in the Camp, Karachi, have been conducting an electrical business of every kind since the year 1909.

The business was until recently owned by Messrs. Motwane Brothers, the senior of whom, Mr. G. C. Motwane, founded the concern and is director at Karachi, but they have latterly taken into partnership Seth Isardas Assanmal, a merchant prince of that city, who has added 2 lakhs of rupees to the already large capital of the firm.

They have exceedingly fine showrooms and a well-equipped office at headquarters, together with a branch at Amritsar, in the Punjab, controlled by Mr. R. C. Motwane, and about two hundred agencies throughout India, Burma, and Ceylon.

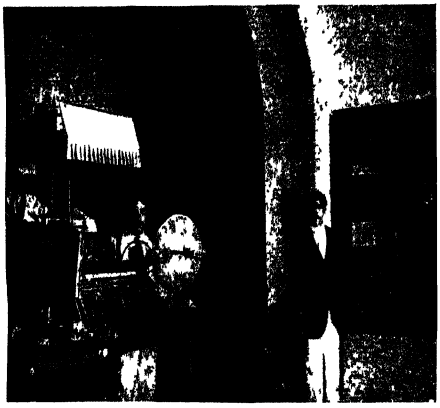
The capital being large, and credit consequently good, the company is in the unique position of holders in Karachi of the largest stocks of electrical goods of every description, such as complete electric lighting fan and power plants, wires, lamps, fans, accessories, fittings,



DORABJI NANABHOY & CO.

1. H. D. Sethna. 2. R. D. Sethna. 3. Dorabji Nanabhoy. 4. K. D. Sethna.

telephones, electric novelties, and medico-electric apparatus, while a special feature



THE EASTERN ELECTRIC AND TRADING COMPANY
INTERIOR

is made of portable electric apparatus in the form of battery fans and lights, and pocket and other electric torches The major portion of these goods are imported through Mr Motwane s own agents, from England, America, Japan, and the Continent of Europe

The company prepare and submit estimates for any class of electrical work, but particularly in the fixing of wires in private residences and in public buildings, and among the latter which have been efficiently wired by them may be mentioned the Central Telegraph Office, the General Post Office, and nearly all the banks in Karachi, as well as the office of the Commissioner in Sind Special inverted fittings were used for the installation at the Telegraph Office with the object of minimizing the glare of the light, and it may be added that this is the only instance in Karachi in which such a novel improvement has been successfully carried out The Central Telegraph Office at Bombay also decided to erect the same kind of fittings, and the authorities have already bought these from the firm Isolated plants and complete telephone installations in native States and for private persons and public bodies are also undertaken and successfully carried out.

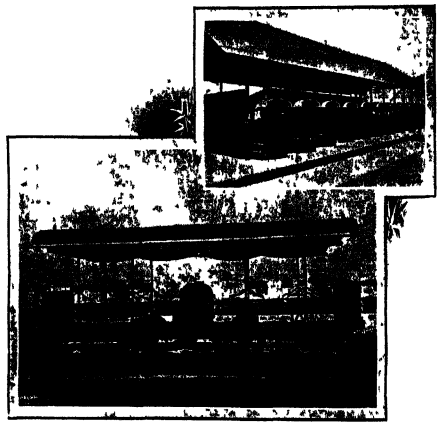
The company are prepared to execute repairs of all descriptions, and their well-equipped workshops are staffed by fully qualified employees

THE EAST INDIA TRAMWAYS COMPANY LTD.

In the annual report of the East India Tramways Company, Ltd , for the year 1912, it is stated that the improvement in the company's position is "no doubt principally due to the 'Simplex' motor traction, which was commenced experimentally during 1909, and has entirely superseded the system under which horses were employed."

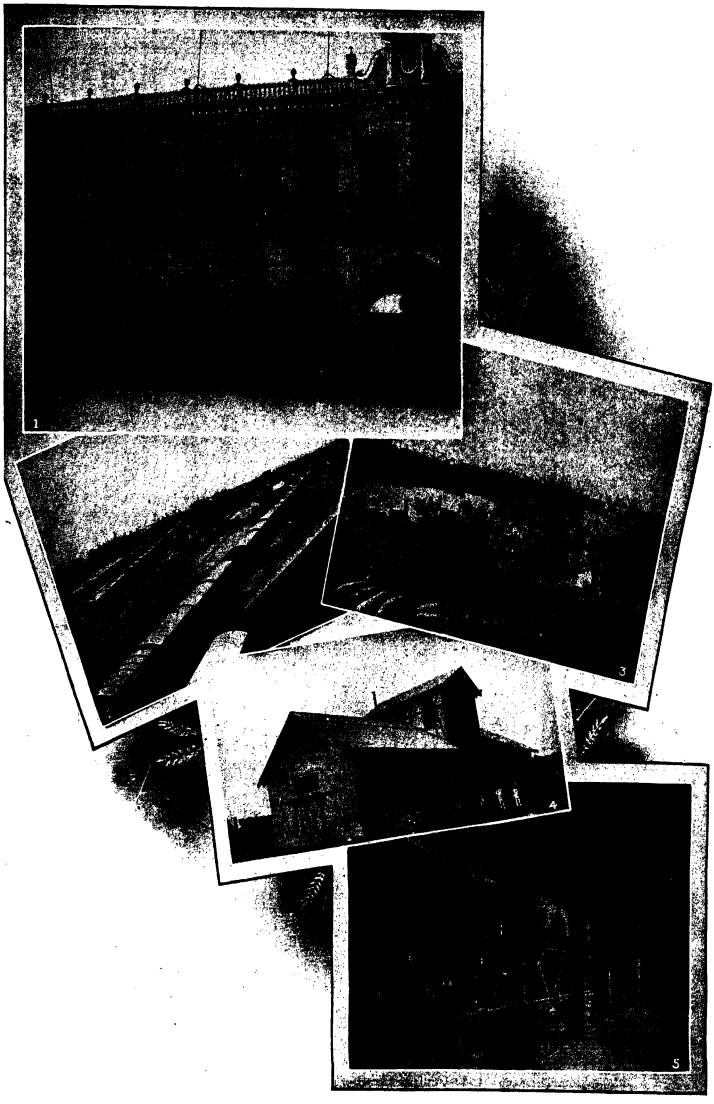
The company was incorporated in London in the year 1882, when a concession was obtained for the construction and working of the Karachi Tramways Company The main line—five miles in length—was laid in 1885, and the motive power was at first obtained by the use of steam locomotives, but as this method proved to be unsatisfactory it was decided to make use of horses for traction purposes Very little success attended this innovation, although it was followed in 1892 by an extension of the company's system on the opening of a branch-line some two miles in length Owing to continued losses the company was reconstructed in 1901, but on resuming work with horses no better results were obtained

It now became necessary to introduce some radical changes in order to prevent further disasters, and after considerable discussion and the carrying out of investigations it was decided in 1909 to introduce the 'Simplex" petrol tramcars, of which the sole manufacturers and patentees are The Motor Rail and Tram Car Company, Ltd , of 79 Lombard Street London, E C



EAST INDIA TRAMWAYS COMPANY, LTD.
1. TYPE OF CAR. 2. CARS GARAGED ON TRAVERSER SYSTEM.

It soon became apparent that the new cars appealed to the public of Karachi, as in the first twelve months of their use no fewer than 5½ millions of passengers



LOUIS DREYFUS & CO.

1. Office Premises. 2. Export Yards, Keamari. 3. Export Yards, Keamari.
4. Barley Extractor and Cleaning Plant Export Yards, Keamari. 5. Interior, Barley Extractor and Cleaning Plant, Keamari

were carried over the lines. Since the introduction of these cars the cost of working expenses has been 4·93d. per car mile, inclusive of an allowance of ·82d. per car mile for depreciation, and this sum is considerably lower than the expense of any other type of self-propelled rail or road vehicle of equal carrying capacity.

The company now have thirty-seven of these petrol cars, each of which has seating accommodation for forty-six passengers, and they are capable of maintaining a speed of from twelve to eighteen miles an hour.

The annual statement of accounts of the company for the year 1913 shows that the total working expenses represented 57 per cent. of the gross receipts for the year, showing a net profit of 43 per cent. of such receipts.

The company's *depôt* and offices cover an area of about 8 200 square yards, and they employ about 100 men in the workshops, together with about 180 drivers, conductors, and office staff.

The management is in the able hands of Colonel H. J. Mahon, C.I.E., who has had great experience in the working of tramways, and who has been associated with the company for more than twenty years.

The financial position of the company is now in a very satisfactory condition, and various improvements have been effected which tend to increase the comfort of passengers; but the directors are now considering a proposal to introduce a more attractive style of car and one which will give increased protection against wind and rain without in any material way adding to the weight of the vehicle, which is about 3½ tons.

EDULJEE DINSHAW.

Many conjectures might be offered as to the reason which prompted the late Mr. Eduljee Dinshaw, when a youth of eighteen years of age, to leave Bombay for Karachi in the early sixties of last century, but whatever the real reason may have been the step then taken was the preliminary to a career of marvellous prosperity.

Young Eduljee had doubtless heard of a place called Karachi, "somewhere up the coast," but he said farewell to the "gate of the west," and after knocking about on a sailing vessel on the waters of the Arabian Sea for more than a fortnight he landed—at a fine seaport and a thriving business city? Not a bit of it. He saw a mere fishing village, sparsely inhabited, and with scarcely any evidences of commercial enterprises.

But the new arrival did not hurry back to Bombay, where he had received a good business training under his uncle, who was the proprietor of large provision stores; he just took a hand in several enterprises in his new home, and manfully stuck to his post.

Famous engineers had already reported more or less favourably upon the possibility of deepening the large harbour at Karachi and of building suitable dock and wharfage accommodation for the large merchantmen which it was hoped would arrive there in days to come.

Realizing that when overseas trading commenced there would be a keen demand for places of business, Eduljee began to buy land whenever and wherever he heard of any for sale- preferably, however, in the vicinity of the sea coast—and he forthwith began his share of development by erecting buildings which would be needed for a busy port.

Many of the largest structures in Karachi at the present time owe their existence to him, and it is said that his descendants are owners of nearly two-thirds of the properties in that quickly growing seaport.

As soon as Mr. Dinshaw's son, Nadirshah, had completed his educational studies, he entered into partnership with his father, and the new firm in 1878 embarked in industrial enterprises, one of the first ventures being the erection of the Eduljee Dinshaw factory for pressing cotton and wool for export. It should be added that this was one of the first, if not actually the first, concern of its kind in the Karachi district of the Bombay Presidency.

Several minor projects were soon afterwards initiated, and then followed the Eduljee Dinshaw ice factory, erected at Karachi some twelve or fourteen years later. That structure was subsequently demolished, and a new one which has replaced it is fully equipped with modern fittings, including a CO_2 plant.

The buildings erected by Mr. Dinshaw upon land acquired by him include private residences, offices, and godowns, which are to-day a lasting memorial to his enterprising energy.

That gentleman died at sea in the year 1914 while on his way to England, and his real estate and business interests were taken over by his son, Mr. Nadirshah E. Dinshaw, who thereupon admitted his own two sons, Mr. Hoshang N. E. Dinshaw and Mr. Minocher N. E. Dinshaw, as partners in the firm.

The late Mr. Eduljee Dinshaw was an exceedingly benevolent man, but what is more to the point is the fact that in dispensing his innumerable charities he was never influenced by any narrow sectarian spirit, his sole object being to help needy or suffering persons of any caste or creed. Chief among his gifts to the city of Karachi were three large free dispensaries for all classes of people and the Lady Dufferin Hospital, the latter being equipped with medical and surgical appliances and all necessary furniture by Mr. Nadirshah Dinshaw.

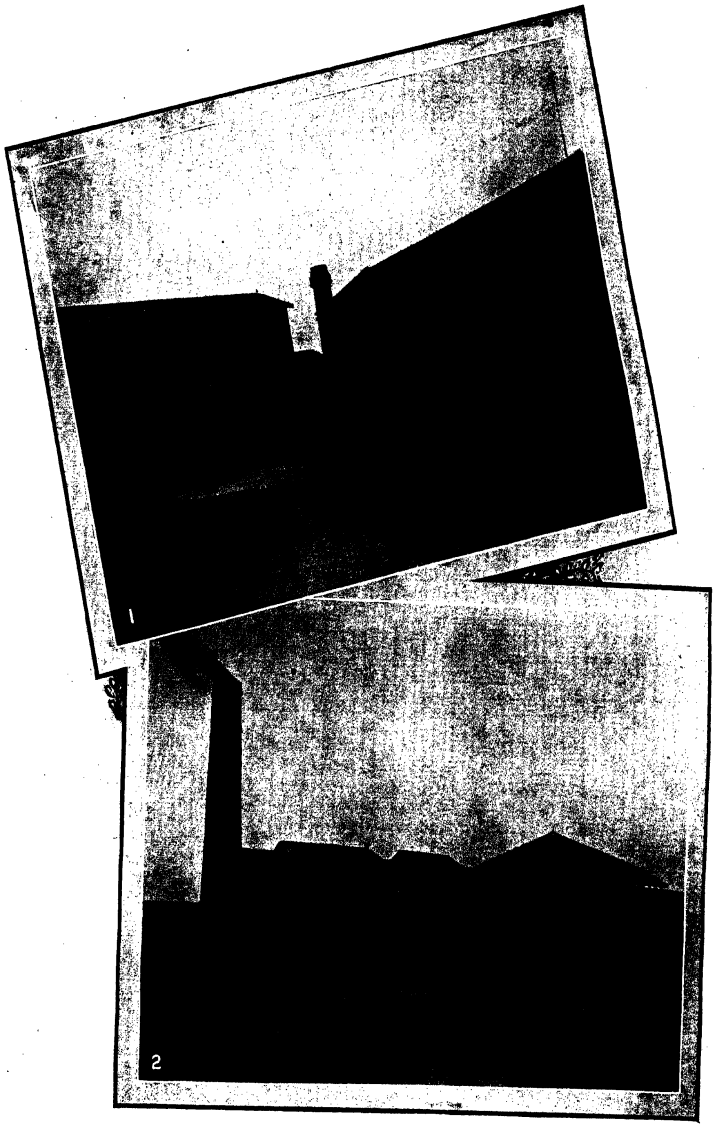
THE EMPIRE HARDWARE AND METAL MART.

Although the above metal mart, in Bunder Road, Karachi, was only established in the year 1911, the undertaking has proved to be a singularly successful one, and the progress made is very largely due to the thoroughly practical experience of its founder, Mr. Bherumal Lekhraj Chandiramani. At a comparatively early age that gentleman manifested a natural propensity for the study of mechanical and structural problems, and he joined the well-known firm of Messrs. T. Cosser & Co., Ltd., merchants, engineers, and contractors, of Karachi, with whom he served for several years. The metal mart was therefore commenced under auspicious circumstances, as Mr. Bherumal's excellent training was a more valuable asset than even the capital placed in the concern.

The present partners are Mr. Bherumal Lekhraj Chandiramani, Mr. Wadhumal Fatechand Bhojwani, and Mr. Wadhumal Lekhraj Chandiramani.

The business carried on consists of the importation of metals and hardware, comprising engines, boilers, engine-room requisites, railway plant and tools, industrial and agricultural machinery, door and carriage fittings, wire for fencing purposes, cement, British and American beams, pumps, pipes, tees, rounds, angles, squares, hoops, and sundry other effects. Nearly all of such goods are imported from England, but a few specialities are purchased in America, while the major portion of them are obtained direct from the manufacturers.

A large stock is always carried at the mart and at the firm's own godowns in the Machee Miani portion of the city,



EDULJEE DINSHAW.

1. The Eduljee Dinshaw Press. 2. The Eduljee Dinshaw Ice Factory.

while other extensive stores are rented in Queen's Road.

The firm supply the Government with hardware and other goods, and they are constantly executing commissions for the Public Works Department, the military authorities, several railway companies, municipalities, and other public bodies.

Mr. Bherumal's business abilities and the deep interest taken by him in the progress of the city and port of Karachi have been recognized by his occupancy of the presidential chair of the Karachi Metal and Hardware Merchants' Association, and by his appointment to a seat on the directorate of the Karachi Bank, Ltd.

The firm are sole agents for Messrs. N. J. Fenner and H. B. Alder, Ltd., of Milwall, London, E.C., for paints, oils, and varnishes; Messrs. Alexander Shanks & Co., of Arbroath, Scotland, for high-class oil-engines and lawn mowers; Messrs. Allan Whyte & Co., of Rutherglen, Scotland, for wire ropes; Messrs. Edward Hope & Co., London, for bitumistic paints; Messrs. Thomas Firth & Sons, Ltd., of Sheffield, for tool steel; for "Reliance" rubber roofing; for "Hindustan" rice hullers; and for "Simpitrol" gas light.

Their bankers are the Karachi Bank, Ltd., the Alliance Bank of Simla, Ltd., Messrs. Cox & Co., and the Punjab National Bank, Ltd.

Messrs. W. Menzies & Co., of Fenchurch Street, are their London agents, and the telegraphic address is "Hope," Karachi.

FORBES, FORBES, CAMPBELL & CO., LTD.

This firm has been established in Karachi since the year 1880 when (under the style of Sir Charles Forbes & Co.) a branch of the Bombay firm was opened by the late Mr. T. L. F. Beaumont, in a small office on the Bunder Road. The firm were then mainly concerned in the export of wool to Liverpool and the importation of manufactured cotton goods from Manchester and Glasgow. Mr. Beaumont very quickly interested himself in local affairs, and the formation of a lighterage company to facilitate the shipping and landing of goods to and from ocean-going steamers was one of the first of his many successful achievements. The owners of the *Hall* Line of steamers of Liverpool, Messrs. Robert Alexander & Co., were induced to establish a service of steamers to and from Karachi; and, by an agreement between the Secretary of State for India (through the North-Western State Railway of India, Headquarters, Lahore) and Sir Charles Forbes & Co., of Karachi (negotiated by Mr. Beaumont in 1889), a regular monthly service of steamers to Karachi from Liverpool, and to Marseilles and Liverpool from Karachi, for both goods and passengers, was first established. Three fine boats—the *Branksome Hall*, the *Rufford Hall*, and the *Locksley Hall*, were specially built under the agreement for this service; and they ran regularly to and from Karachi for nearly twenty years. This consistent service to and from the United Kingdom did much towards the building up of trade in Karachi, and of the North-Western State Railway, whose main outlet and inlet was, and is still, via that rapidly growing port on the north-west coast of India.

In 1895, for family reasons, the name of the Indian firm—Sir Charles Forbes & Co.—was changed and assimilated with that of the London house, Messrs. Forbes, Forbes & Co., and the concern was then converted into a private limited company and subsequently enlarged by amalgamation with the old-established firm of Messrs. Ritchie Steuart & Co., of Bombay and Karachi, being known thereafter as Forbes, Forbes, Campbell & Co., Ltd.—the present style of the house.

From that date onwards the business of the firm rapidly expanded. In addition to wool, other Indian produce was shipped; whilst on the import side, not only was every branch of the cotton goods trade developed and expanded, but timber, metals, sugar, and other manufactured goods were also handled. Agencies of various kinds, including marine, fire and life assurance, banking, shipping, railway, industrial, and forwarding were undertaken, and the firm also engaged in the flotation, formation, management, and maintenance of new industries, and in the list given below are included several local railways and other Indian concerns which have been floated and constructed by Messrs. Forbes, Forbes, Campbell & Co., Ltd., and are managed by them at the present day. Chief among these are: Sind Light Railways, Ltd.; Mirpur-Khas-Jhudo Feeder Railway Company; Mirpur-Khas-Khadro Feeder Railway Company; Upper Sind Light Railways; Jacobabad-Kushmore Feeder, Ltd.; Larkhana-Jacobabad (Sind) Light Railway Company, Ltd.; the Kashmir Rail and Ropeway Survey; the Kangra Valley Rail and Ropeway Survey; the Sind Lighterage Company, Ltd.; the Karachi Electric Supply Corporation, Ltd.; and the Eastern Express Company, Ltd.

The original offices had to be abandoned in 1890 for more commodious offices on the same piece of ground but immediately adjoining the Bunder Road. These have been enlarged several times, but still being insufficient, they are now in their turn being supplemented by a handsome three-storied building with a 460-feet frontage on both the Bunder and Dunolly Roads.

Messrs. Forbes, Forbes, Campbell & Co., Ltd., are now agents of the following firms and companies, etc., in addition to those already mentioned:—

Banking.—The Union of London and Smith's Bank; Sir Charles R. McGrigor, Bart., & Co.; Messrs. Lee, Higginson & Co., Boston; Messrs. Brown, Shipley & Co., London; Messrs. Brown Brothers & Co., New York; Messrs. Henry S. King & Co.; Messrs. Grindlay & Co.; Messrs. Holt & Co.; and Messrs. Coutts & Co.

Railways.—The Shire Highland Railway, Ltd.

Steamers.—Ellerman's "Hall" and "City" Lines, Ellerman and Bucknall Steamship Company, Ltd.; the Toyo Kishen Kaisha; Messrs. Edw. Bates & Sons; and the Borneo Company, Ltd.

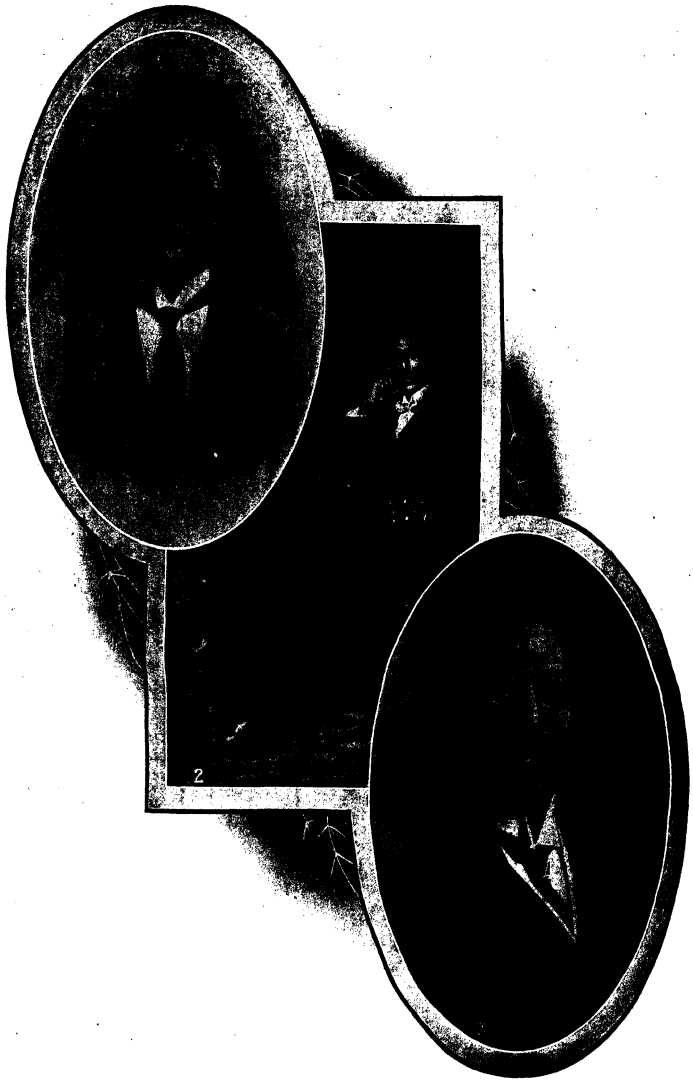
Industries.—The Karachi Safe Deposit Company; the Algudda Coal Company; Messrs. Goodlass, Wall & Co. (paint); Messrs. Horrockses, Crewdson & Co.; Messrs. Eduljee Dinshaw (for wool, cotton, and hide presses); and the Northern India Portland Cement Works and Industries.

Forwarding Agents.—The American Express Company; Messrs. G. W. Wheatley & Co., Ltd.; Messrs. Neale & Wilkinson, Ltd.; Army and Navy Stores; Messrs. Thos. Cook & Son; and Messrs. Pitt and Scott, Ltd.

Insurance.—The Liverpool and London and Globe Insurance Company, Ltd.; the Scottish Amicable Life Assurance Society; the Ocean Marine Insurance Company, Ltd.; the Marine Insurance Company, Ltd.; the Phœnix Assurance Company, Ltd.; and the Sea Insurance Company, Ltd.

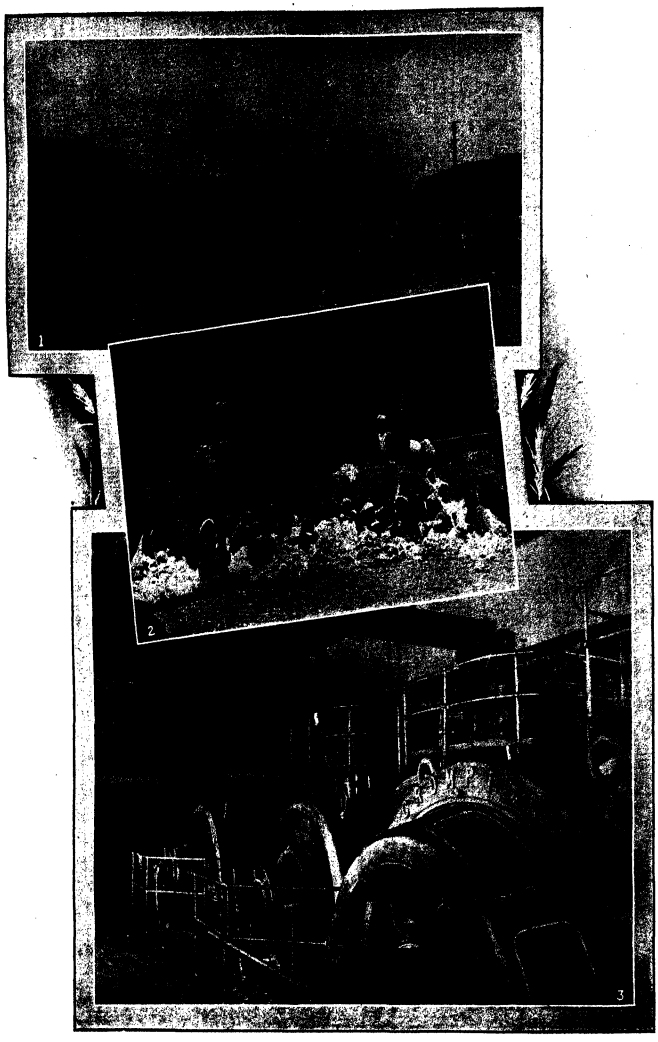
FRAMROZE R. PUNTHAKEY.

Mr. Framroze, one of the leading citizens, and president of the Parsi community in Karachi, was born in Bombay in July 1849, and while still young in years he was taken by his uncle, who had adopted him, to the city where he still resides. *In 1868, after completing his*



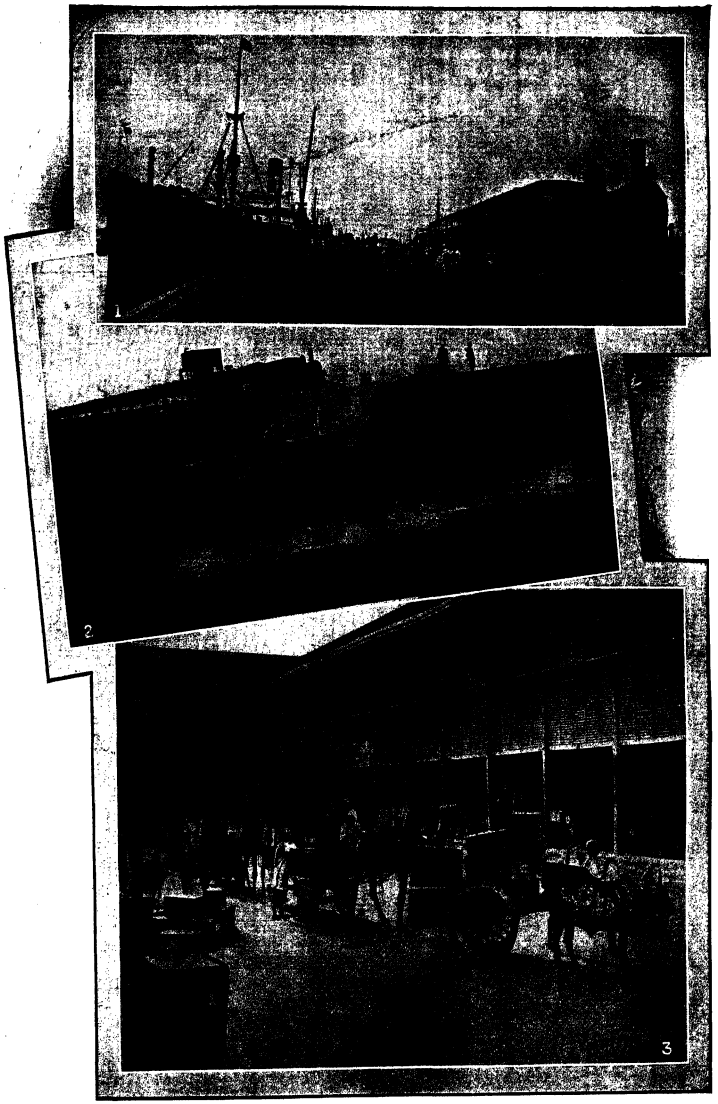
EMPIRE HARDWARE AND METAL MART.

1. B. L, Chandiramani. 2. W. L. Chandiramani. 3. W. F. Bhojwani.



FORBES, FORBES, CAMPBELL & CO., LTD.

1. Office Extension, Bunder Road, Karachi. 2. Corner of Wool Godown
3. Portion of the Power House of the Karachi Electric Supply Corporation.



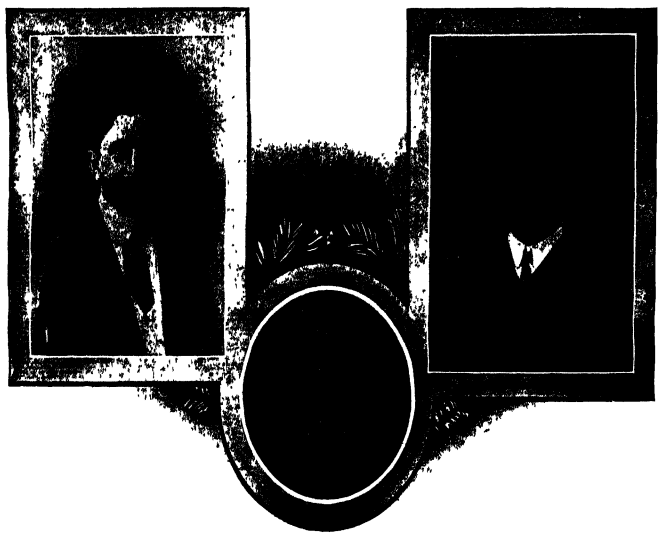
FORBES, FORBES, CAMPBELL & CO., LTD.

1. Ellerman Steamer with Special Train from Lahore Alongside. 2. Sind Light Railways—Bridge over the Khadro Line.
3. Eastern Express Company Loading Packages for Shipment.

education, he entered the service of the Government, being assigned to a position in the currency department, but he was shortly afterwards transferred to the revenue department. For a number of years he held the post of *mukhtyarkar* of Karachi and other places, but in 1897 the Government appointed him to fill the newly-created office of deputy collector, and collector of income tax at Karachi, he being the first Parsi to occupy such a position in Sind. During his tenure of a grant to this gentleman of 1,000 acres of unoccupied land situated on the banks of the Nasrat Canal.

Upon the termination of this special work, Mr. Framroze was chosen as the first occupant of the temporary post of Additional Sessions Judge at Hyderabad (Sind), and the manner in which he disposed of a very heavy accumulation of arrears of work was so highly appreciated by the Government and the members of the Bar, that he was the guest of honour at a number of public banquets and receptions.

Mr. Framroze served the Government faithfully in several capacities for more than thirty-six years, and on his retirement in 1904 Europeans and Indian citizens united in entertaining him at the Government gardens in Karachi. Mr. Framroze was the only citizen in Sind who had the honour of a personal interview with Their Royal Highnesses the Prince and Princess of Wales, when they visited India in 1906. It appears that Mr. Framroze had received a letter written by Sir Walter Lawrence from Lucknow intimating that His Royal Highness, who is an enthusiastic collector of postage stamps, was anxious to secure some of those issued in Sind, and in response to this request Mr. Framroze attended at Government House, Karachi, and was permitted to present to His Royal Highness an album containing a number of old Sind stamps, which was graciously accepted. Their Royal Highnesses were good enough to express their appreciation of the album, and further honoured Mr. Framroze by handing to him autograph photographs of themselves. It should be mentioned that Mr. Framroze is an expert judge of stamps, and particularly of the Sind Dawk variety, and his large collection is said to be the most valuable in Sind.



PUNTHAKEY & CO.

1. JEHANGIR F. PUNTHAKEY. 2. FRAMROZE E. PUNTHAKEY. 3. HOMER F. PUNTHAKEY.

these posts Mr. Framroze worked indefatigably in collecting and despatching transport animals and stores for the Suakim and second Afghan expeditions, and he was warmly thanked by the Government and military authorities for his efficient discharge of such onerous duties. While thus engaged upon this work the terrible diseases of cholera and plague made their appearance in the district, but Mr. Framroze responded nobly to the call of duty, and he rendered invaluable services to the people at large as well as to the Government by the formation of segregation camps and by securing medical relief for sufferers. In recognition of these services the Government made

Mr. Framroze is held in high esteem in Karachi, and as a consequence he has occupied many important positions in connection with the social life of the city. After being elected to a seat on the Municipal Board, he became vice-chairman of it; and he has subsequently held office as a Trustee of the Port; a member of the Victoria Memorial Fund Committee; trustee and secretary of the Diamond Jubilee Fund in the reign of Her Majesty the late Queen-Empress, Victoria; secre-

tary of the Society for the Prevention of Cruelty to Animals; secretary of the Sudder Bazar Library; secretary of the Sind Masonic Benevolent Association; secretary and treasurer of the Poor Asylum; treasurer of the Lodge, "Harmony"; treasurer of the Chapter, "Faith and Charity"; and secretary—and at a later date, president—of the Karachi Parsi Institute. He is not only one of the oldest Freemasons in Sind, but he is also honorary substitute grand master of all Scottish Freemasonry in India.

The firm of Punthakey & Co., of which the partners are Mr. Framroze E. Punthakey, Jehangir F. Punthakey, and H. F. Punthakey, was established in the year 1901, and they have extensive dealings in shares, stocks, and other commodities, while they are also agents for Messrs. P. Chrystal & Co., cotton merchants, of Hornby Road, Bombay, as well as for many share brokers of Bombay.

FRERE & CO.
EXTERIOR.

FRERE & CO.

This firm was established at Karachi in the year 1916 for the sale of general provisions, confectionery, oilmen's stores of all kinds, proprietary preparations, tea, piece-goods, teats, hosiery, soft goods, second-hand clothing, sugar, and sundries. The founder of the business had had more than twenty years' practical experience of the Indian trade in each of these departments, and as he held a good financial position, he had reasonable ground for confidence in his ability to reap a fair share of success in his venture. He obtained suitable premises in Rustomjee's Building, in Bunder Road, which is close to banks, markets, customs, and Port Trust offices, and the railway station—in fact, in the very best business centre. This establishment he furnished with an excellent assortment of the goods already referred to, while he is also a manufacturer and represents, with monopoly, manufacturers of proprietary preparations and condiments, including mango preserved in syrup, vinegars, cordials, chutneys, pickles, and other goods, for which a good demand has already been created by him in India, Mesopotamia, and oversea ports in other countries.

It is a common axiom in commercial circles that "an article which has been bought well is already more than half sold," and the proprietor of the firm is a man who knows where, when, and how to purchase his stock-in-trade, and how to place it upon the market in the most attractive manner.

Served by an efficient staff at the head office, and with very able and trained canvassers, as well as correspondents and agents for orders which have also been appointed in different districts in India, a really remunerative trade has now been established with the principal seaports in Europe, America, and the Far East. These overseas connections have been of the greatest benefit to foreign manufacturers who desire to dispose of their goods in India, and on the other hand the firm are able to deal with accredited representatives in other countries for the sale of unique Indian specialities, which are highly prized by Westerners.

Various manufacturers, shippers, merchants, and agents are very satisfactorily represented in India by Messrs. Frere & Co., who receive commodities from them on a consignment basis, and dealing with them as if they were their own goods, they have shown that they are able to carry out all transactions to the mutual advantage of vendors and purchasers.

Messrs. Frere & Co. have fine showrooms, containing samples and specimens of the innumerable wares in which they deal, and they are always glad to receive travellers and other visitors, to whom the greatest courtesy and attention is shown.

The vast experience, combined with energy, tact, integrity, and ability of the sole principal and the manager of this firm, has been the prime cause of the extraordinary growth of the business, and although great success has been obtained, there is abundant evidence that still further progress is assured.

The Chartered Bank of India, Australia and China, the Alliance Bank of Simla, Ltd., and the Central Bank of India, Ltd., are the chief bankers of this concern.

The telegraphic address of the firm is "Frereco," and the code books in special use with them are Bentley's Phrase Code, A.B.C. 5th edition, and Liebers.

GULAMHUSSEIN ISMAILJI & BROTHERS.

He would have been a bold prophet indeed who, forty-five years ago, dared to predict that a working tinsmith making ordinary boxes for household purposes would, in less than half a century, become the chief partner and proprietor of a large factory in which nearly 100 hands are employed.

Yet such was the case with Mr. Gulamhussein Ismailji, who in the year 1874 opened a shop, measuring twelve feet square, opposite the Parsi Fire Temple in Karachi, and began to make his boxes for sale to the inhabitants of the small village, which has grown to be a large and thriving seaport.

Rather than depend upon outsiders for assistance, Mr. Gulamhussein Ismailji founded the above-named firm, which included the founder and his three brothers, Messrs. Abdulhussein, Yusufalli, and Lookmanji Ismailji. All of them had been given primary education,

but the last-named partner remained at school until he had passed the fourth standard in the English language. From this it will be seen that the brothers were not blessed with the advantages of a collegiate or high school course of study; but they had brains, and they made use of them; each one was endowed with a spirit of persevering energy; and it was the common aim of all to show that they were thoroughly skilled workmen. By a combination of these qualifications they literally compelled the development of their business, and in less than ten years the name of Gulamhussein Ismailji had become a household word in Karachi. They deservedly secured the support of the leading European families in the town, and this led to their being entrusted with contracts by the Sind Club for supplying tinware, and for painting, decorating and other work.

They desired to be up-to-date as far as possible, and thus from tin boxes they decided to pass on to the making of others suitable for holding deeds, cash, uniforms, and other articles of clothing.

They had many difficulties to face in initiating this proposed expansion of their activities, as they did not know whence the necessary raw materials were to be obtained; they were ignorant of the names of manufacturers from whom paints and enamels could be purchased; and they were entirely unacquainted with the art of mixing and applying them.

They, however, were fortunate in obtaining the help of friends through whose agency necessary materials were obtained, and from whom they received valuable advice in carrying out their new enterprise. A considerable improvement was soon manifested in the quality of the work turned out, and it is the pride of the partners that the articles manufactured by them to-day are equal in every way to others made in Europe, while many experts have declared that they are more durable than those imported from overseas. In order to illustrate the rapid development of the firm's activities it may be said that three-fourths of the total number of steamers arriving at Karachi from Europe at the present time carry consignments of tin plates, paints, enamels, and other accessories for the firm of Gulamhussein Ismailji & Brothers.

The firm specialize in various kinds of despatch and other boxes, and in ice-chests, but in order to give an idea of the diversity of the goods which they are called upon to supply one may refer to a single order given by the commanding officer of the Karachi Brigade in the year 1917, in which were mentioned: bedside tables, dressing-tables, glass cabinets, dressing wagons, washstands, dressing trays, cabinets for instruments, instrument table, and 250 ice-boxes.

Early in the present century the firm began to receive invitations from committees of industrial and other exhibitions to forward some of their manufactured articles for open competition, and since they yielded to these requests they have been awarded gold medals at Ahmedabad in 1902, Madras in 1903, Bombay in 1904, Benares in 1905, Pandharpur in 1906, Calcutta and Baroda in 1907, Bhavnagar and Nagpur in 1908, Hyderabad (Sind) in 1909, Allahabad in 1910, Navsari in 1911, Bombay in 1912, and at Mysore and Baroda in 1915.

Hundreds of unsolicited testimonials have been received from customers, among them being one from Captain W. H. Dickinson, I.M.S., in which he says: "In every case I have been very well satisfied with the finish, workmanship, lasting quality, and price of articles supplied." The Superintendent of the Bombay Railway Police said in March, 1915: "I consider your boxes are preferable to similar types made in leather or canvas for India, and they have the additional advantage of being cheaper." Major C. Montgomery, 1st Bombay Grenadiers, wrote: "The two uniform cases arrived to-day. They are beautifully made and were well packed, and so arrived in perfect order; your work is good throughout." Colonel G. C. Grant, District Judge, Karachi, said: "I have been in the habit of employing Gulamhussein Ismailji & Brothers for about ten years for making all kinds of tin work, and I have always been very well satisfied with their work, their charges are moderate." The Commander-in-Chief of the State forces, Jammu, Kashmir, in acknowledging the receipt of a despatch box, said that "the construction is good, it has been nicely finished, and I am glad to have it as a specimen of your workmanship." And lastly, the firm were honoured by being appointed manufacturers of despatch boxes to His Excellency Sir George Sydenham Clarke, G.C.M.G., G.C.I.E. (now Baron Sydenham), Governor of Bombay from 1907 to 1913.

Although the dislocation of trade caused by the Great War prevented Messrs. Gulamhussein Ismailji & Brothers from importing goods from Europe—and this referred especially to the plates which were monopolized by the Minister of Munitions—the firm continued to the utmost of their ability to manufacture goods as usual, but their loyalty to king and country caused them to give preference to orders received from the Government for supplies to the military authorities and to hospitals. They began to make hospital furniture, chests capable of holding 1 cwt. of ice, and hundreds of dozens of aerated water bottles, and to the firm's credit be it said that all this work was carried out at actual cost price to themselves.

Mention might be made here of the firm's "Alps" air-tight ice-box, which is constructed in such a manner that there is a specially-provided receptacle for aerated water-bottles which can be withdrawn by lowering the front portion of the chest, while it also possesses this advantage, that one lock suffices for securing the whole box.

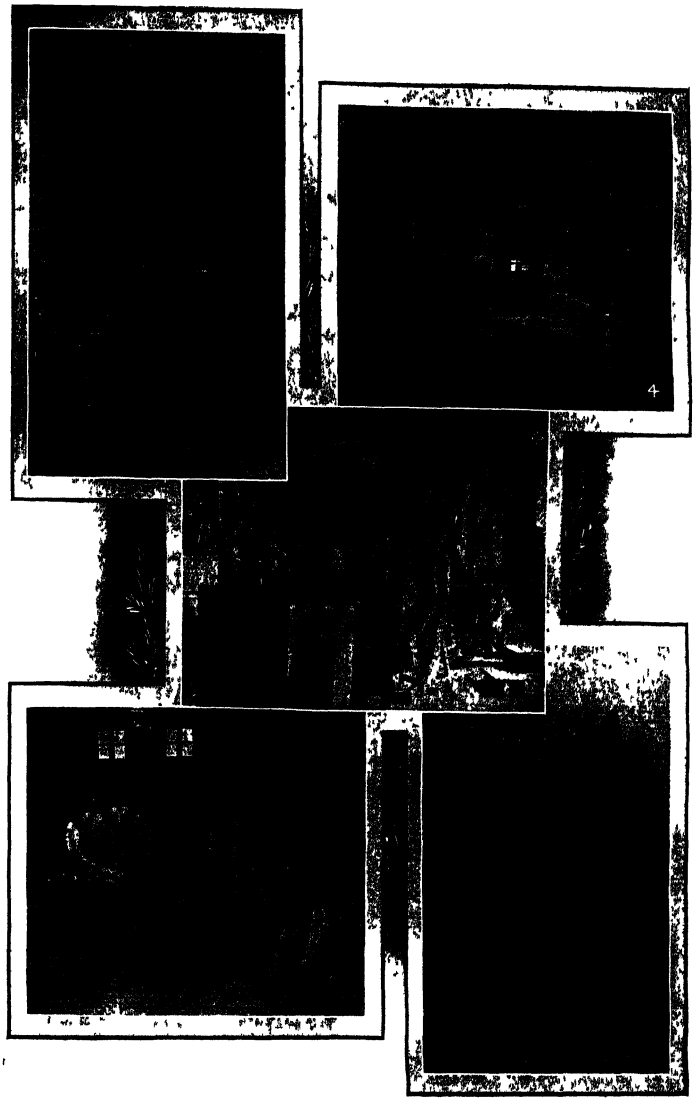
Although the four partners are well advanced in years, they are still actively engaged in furthering the interests of the firm, and in order to relieve themselves of a portion of the responsibilities they have enlisted the services of three of their descendants, namely, Mr. Hussamally Gulamhussein, Mr. Karimbhoy Abdulhussein, and Mr. Ebrahim Yusufalli.

The factory of Messrs. Gulamhussein Ismailji & Brothers is in the Rambag quarters in Karachi; the showrooms are in Elphinstone Street in the same city; and a branch has been opened at 287 Hornby Road, Fort, Bombay.

H. GREENFIELD.

One of the most enterprising and best-known men of business in Karachi is Mr. H. Greenfield, who is the proprietor of the Palace Theatre, and the owner of large electric works, and of an electrical soap factory. He was the first to establish a permanent place of amusement in the city, and although this growing seaport is somewhat out of the route usually taken by touring theatrical companies, the public of Karachi have reason to be grateful for the high-class character of the artists who occupy the stage from time to time. When plays are not being produced, Mr. Greenfield exhibits high-class cinema pictures known as "Exclusives."

The theatre has its own installation of electricity, and therefore the lighting



GULAMHUSSEIN ISMAILJI AND BROTHERS

1 Machinery Room and Working Department 2 Painting Department 3 Elphinstone Street Shop Karachi
4 Bombay Shop, 287, Hornby Road 5 Various Articles Manufactured by the Firm

effects are of the most satisfactory character. It possesses a very fine stage and elaborately-fitted boxes, and it has accommodation for 1,100 persons, for whom "tip-up" plush chairs are provided. The building, which is thronged to the doors at each performance, is situated in the centre of the European and military quarter of the city.

Mr. Greenfield has also introduced a special feature of open-air cinema entertainments, and has fitted up for the Army fitted on a motor lorry, which also conveys the screen, films, and the working staff from one camp to another. It redounds greatly to the credit of the enterprising proprietor that the whole "show," designed for the pleasure of "exiled Tommies" can be fixed up anywhere for exhibition within an hour's time.

A few years ago Mr. Greenfield established electric works under the name of Greenfield and Greenfield, and the firm is now one of the leading contractors for

"Fairy" brand of bar-soap has earned a great reputation in Mesopotamia as well as throughout India. The factory has been constructed on an extensive scale and in a thproughly scientific manner, and it is possible for one boiler alone to give an output of fifteen tons of soap at a single discharge. Soaps made in India frequently deteriorate very considerably owing to peculiar climatic conditions, but Mr. Greenfield's Electric Soap Works' productions compare very favourably with

H. GREENFIELD.

1. Interior of Palace Theatre. 2. Greenfield and Greenfield Electric Works. 3. Electric Soap Works.

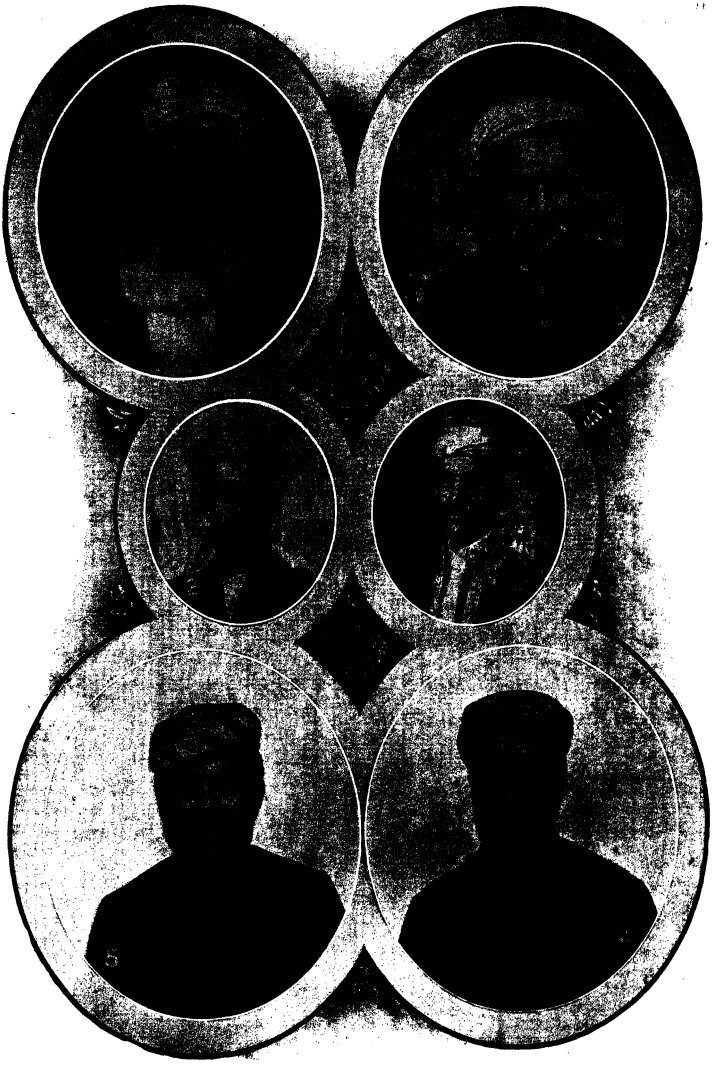
Welcome Committee at Karachi an *al fresco* theatre capable of accommodating fifteen thousand visitors at a time. Some hundreds of thousands of officers, non-commissioned officers and men have, during the past six months, attended these exhibitions, which are held in the "rest" camp. Another theatre of a similar character has been provided in the "Gaza" lines.

At the request of the military authorities Mr. Greenfield has, further, designed a "travelling" cinematograph for the benefit of British troops on the north-western frontier. The outfit is absolutely self-contained, as the cinema plant and the electrical installation appliances are lighting in Sind, having special appointment from the Government, military authorities, and the local municipal board. The firm make a speciality of the "Henley" wiring system, which they introduced into Karachi, and they hold a large stock of all kinds of electrical appliances, including motors, dynamos, and vans and equipment, for installations. All electrical repairs are carried out by experts in a well-equipped workshop.

The Electric Soap Works were inaugurated by Mr. Greenfield in the year 1916, and at the present time European experts are manufacturing various kinds of soaps for ordinary household, toilet, and other purposes, while their famous samples imported from European and American markets.

HAJEE ABOOBUCKER & SONS.

There is nothing in the world—not even the wind—more fickle than the craze known as fashion when associated with the garments and hats of our womenfolk, and this craze, be it remembered, is not confined to the courts of kings, the drawing-rooms of London, or the *salons* of the continent of Europe; it manifests itself in Oriental cities, and even in outlying villages in which it might be regarded as an unpardonable sin to don a *sari* of a texture or colour different



HAJEE ABOOBUCKER AND SONS.

1. Hajee Aboobucker Hajee Ebrahim. 2. Umer S. Hajee Aboobucker. 3. Hajee Esmail S. Hajee Aboobucker.
4. Osman U. S. Hajee Aboobucker. 5. Alimohomed H. E. S. Hajee Aboobucker. 6. Ebrahim U. S. Hajee Aboobucker.

from that which has received the sanction of popular approval. This never-ceasing change is a valuable industrial asset, as it tends to the development of sericulture, the cultivation and milling of cotton, and the manufacture of woollen and other goods, while it provides employment for hundreds of thousands of weavers, spinners, lace-workers, flower-makers, and other hands

Dame Fashion, therefore, wields the sceptre of authority and the necessity for the production of goods of new styles has been met by the establishment of large bucker & Sons, importers of drapery, millinery, haberdashery, and hosiery Then they will know that Karachi ladies, and those in the *Mofussil* too, have at their own doors an emporium stocked with a choice selection of the latest creations in gowns, the most up-to-date styles of millinery, really attractive hosiery, and the most generally approved patterns of laces, ribbons, frills, and fripperies so dear to the heart, and so essential to the happiness, of a woman

The original business house opened in 1843, just after the first Afghan War, dantly justified in asserting that they are able at all times to meet the requirements of even the most fastidious purchasers.

The founder of the firm, Seth Hajee Aboobucker Hajee Ebrahim, died in the year 1891, and the business was then conducted by his grandsons, Seth Oomer S Hajee Aboobucker and Seth Hajee Esmail S Hajee Aboobucker Seth Oomer died in 1906, and the concern then passed to his brother, Seth Hajee Esmail S Hajee Aboobucker, his only son, Ali Mahomed, and his nephews, Osman and Ebrahim, sons of Seth

A. HAJEE DOSSUL AND SONS

1 Lyterior of Premises 2 Interior of Showroom

and small factories and houses of business in which such articles are made or sold

The city of Karachi is not comparable with the leading centres of Europe, but it has its own fashionable world, and it has, too, the means for supplying the wants of that very select circle

Let visitors to the rapidly-growing seaport of Karachi stroll along Elphinstone Street, the most fashionable business quarter in the city, and they cannot fail to have their attention attracted by the ornate and handsomely-fitted premises occupied by Messrs. Hajee Aboowas unpretentious in appearance, but it served the purposes of the firm until 1892 when the partners erected the fine structure to which reference has already been made.

The name of the firm is a household word for style and quality of goods, for promptitude in attending to country orders, for obliging attention to all customers, and especially for reasonable prices.

Messrs Aboobucker & Sons are continually importing new goods from the principal manufacturing houses of Europe, and therefore they are abun-

Oomer Osman Oomer passed away in 1915 and the present partners are Ali Mahomed and Ebrahim Oomer

HAJEE DOSSUL & SONS.

Various members of the well-known Dossul family have been connected with the commercial life of Karachi for about eighty years, and during the whole of this long period there has not been a single partner of the firm, styled A. Hajee Dossul & Sons, who has not won respect in business circles, and something akin to affection among his own relations and

close personal friends. The founder himself, Seth Abdullah Hajee Dossul, started his commercial career as a general merchant in the year 1840, and rapidly succeeded in establishing sound commercial relationships, which were the basis of the huge undertaking now so successfully carried on by the present partners. Seth Abdulla was still a comparatively young man when he passed away, and the business devolved on Seth Haji Haroon, Seth Jan Mahomed, and Seth Abdul Rehman, who worthily maintained the high reputation for honesty, ability, and perseverance gained by their predecessor.

The unfortunate death of Seth Abdul Rehman was a sad loss to the firm, as well as to his own community and the public generally, and from this date Seth Jan Mahomed, with whom were associated Seth Haji Haroon, Seth Hajee Abdul Latif (his son), and Mahomed Hashim and Abdulla (his nephews), took upon his own shoulders the responsibility and management of the whole concern. The death of Seth Jan Mahomed took place in 1914, and the business devolved on Seth Hajee Haroon, and his brothers and nephews.

Naturally this expansion necessitated enlarged premises, and the firm are now owners of an exceedingly commodious and imposing structure in Elphinstone Street, which is the main thoroughfare in the city, and virtually the centre of the residential quarters of the civil and military population.

The building has been designed to meet present-day requirements; it has a large quadrangular hall, in addition to godowns, offices, and auction-room, while huge archways and substantial iron Corinthian pillars, supporting the lofty roof, lend dignity and stability to the structure, which is illuminated at night with three hundred electric lights.

The establishment has been referred to by visitors as the "Whiteleys" of Sind, and perhaps the designation is not undeserved, seeing that the firm are prepared to supply almost anything from the proverbial "needle to an anchor."

A word or two may be added in praise of the excellent department devoted to the sale of fancy goods and toys, and to the ammunition department, which is replete with rifles, guns, and ammunition to meet the varied requirements of sportsmen.

B. R. HERMAN & CO.

The Vulcan Iron Works were established in McLeod Road, Karachi, by Mr. B. R. Herman, M.I.M.E., in 1883, and he laid down modern and useful machinery sufficient to cope with the character and the comparatively small quantity of engineering work obtainable in Sind at that period.

By careful direction through a long period of hard times, Mr. Herman has by honest dealings and good work brought his firm to a leading position among engineering concerns in India. To go through a list of the firm's many important undertakings would take up considerable space, but a few are mentioned to show the varied description of works successfully carried out. Complete bulk oil installations have been provided at Keamari for: (1) The Royal Dutch Petroleum Company; (2) the Burmah Oil Company, Ltd.; and (3) the Standard Oil Company, of New York; while bridge girders of various spans for the North-Western Railway, over-bridges, broad and metre gauge wagons, well curbs, high service tanks, and other works have also been completed.

Numerous large grain sheds have been built by the firm for Karachi merchants, including one 1,200 feet in length by 60 feet in width for the Karachi Port Trust.

Messrs. B. R. Herman & Co. were entrusted by the Government of India to design and build the British Residency at Bagdad, and the work was carried out by Mr. B. R. Herman personally, who went to that city and there prepared complete drawings and estimates, which were approved by Government. Work was started in 1902, and completed in 1904, including a new river wall. It is just now interesting to note that the Turks did not destroy the British Residency building owing to its usefulness as a hospital, and on the British troops entering Bagdad the Residency was found intact, though filthy.

Another Government building carried out by the firm was the British Consulate at Bunderabbas, one of the hottest stations in the Persian Gulf. The stone for this building had to be brought by boat a long distance from the island of Hormuz, celebrated for its enormous deposit of a fine quality of red oxide of iron. The stone was obtained from an old quarry in that island, which was originally opened by the Portuguese for building a fort, barracks, and houses for officials, in the fifteenth century, the ruins of which are still to be seen. The whole of the woodwork for the Bagdad and Bunderabbas buildings was prepared by the firm in Karachi, and shipped to their respective destinations.

Besides steam and motor launches, and numerous sailing and rowing boats, Messrs. B. R. Herman & Co. have lately built outright in their works at Karachi six large steel cargo barges for service in Mesopotamia.

The great drawback that most engineering firms in India have to contend with is the spasmodic way that work is offered, making development more or less a much harder task than it should be.

A few years ago Messrs. B. R. Herman & Co. started the Karachi Motor Car Company, with an up-to-date garage, where motor repairs of almost any description can be properly and quickly executed under skilled supervision.

The Karachi Motor Car Company are sole distributors for Sind, the Punjab, Baluchistan, the North-West Frontier Provinces and Kashmir, for the celebrated "Overland" cars as well as for others from the leading manufacturers in England.

THE HAYDN COMPANY.

To be "the only manufacturers of pianos in India," a country with a population equivalent to one-fifth of the human race, is an honour which can be claimed exclusively by the Haydn Company of Dundas Street, Karachi, the proprietor of which is Mr. Francis Paul de Sousa, who has had more than thirty years' practical experience in the trade at Rawalpindi and Murree.

Pianofortes especially built for the Indian climate are frequently imported from Messrs. John Broadwood & Sons, Messrs. Chappell & Co., and Messrs. George Rogers & Sons, of London, and from Messrs. Erard and A. Bord et Cie, of Paris.

It is, however, with the unique position of the Haydn Company as the sole manufacturers of pianos in this vast country that one would wish to dwell. All wood used in the workshops, including beech pine, Rangoon teak, and Punjab *deodar* is imported direct by the company, and it is specially seasoned by a process, evolved by Mr. de Sousa, which has been proved to be a preventive against the ravages of a tropical climate and to be proof against the terrible destructiveness of white ants and other insects.

B. R. HERMAN & CO. (VULCAN IRON WORKS).

1. Cargo Barges under Construction in B. R. Herman & Co.'s Works. 2. Steam Launch *Anson*, Built entirely by B. R. Herman & Co.
3. Launch *Anson* doing Twelve Miles an Hour. 4. Beacon Buoys Constructed by B. R. Herman & Co. for the Karachi Port Trust.
5. Metre-Gauge Wagons under Construction in B. R. Herman & Co.'s Works.

The staff consists of experts, trained in the leading pianoforte factories in England and on the Continent of Europe, who are always busily employed in making new instruments or in thoroughly repairing old ones, as well as violins and banjos, of which a special feature is made. The materials used in the repair-

violins and banjos, strings, fittings, music-stands, and other necessaries is kept on hand, and inquiries by post receive prompt attention

The tuning of pianos and organs is a special feature of the company's business, and they are agents for the "His Master's Voice" Gramophone Company

lively, without any flaking, even on the last reduction The finished flour is bright and pure, and I can well understand that the demand is greater than they can supply if the price is the same as other millers, for certainly the "households" grade is to my mind well above the standard I have seen in other mills, and

THE HAYDN COMPANY

1 Premises of the Haydn Company 2 Showrooms 3 Workshop

ing shop, including steel and copper-covered strings, are made upon the premises, and are supplied to the trade and private customers.

The company are in constant communication with the leading music warehouses in London, so that they are always able at the shortest notice to supply band-masters as well as private individuals with full scores of all the latest publications of the most eminent Continental and English composers. A large and well-selected stock of sheet and other music, Italian mandolines, French and English

THE INDIA FLOUR MILLS, LTD.

It is no meaningless compliment to the construction, equipment, quality of output, and the general management of a steam flour mill when an expert, writing in one of the leading milling journals in England in connection with a visit paid by him to the India Flour Mills at Karachi, says "I have been all through the India mills, and I am very pleased indeed with the way the miller is working this mill He has all the rollers working, and the feeds are very evenly distributed throughout the buildings The grinding is even, true, and

decidedly above that produced in another local mill"

The buildings of the India Flour Mills, Ltd, were completed in the year 1910, and they are erected on land more than six acres in extent

The main block consists of a massive four-storeyed stone structure, 150 feet in length and 75 feet in height, comprising the ground roller, purifier, and centrifugal floors The whole of the machinery, erected on a system known in the milling trade as "Turner's," is driven by steam power, developing 450 indicated h.p., which

is transmitted by 18 ropes from a huge flywheel. The screen and washing rooms are equipped with complete dust-extracting, grading, washing, and conditioning machinery, and are provided with bins for holding 600 tons of wheat.

The roller floor is fitted with Turner's heavy pattern fluted and smooth roller mills, 27 in number, and the capacity of the plant is 30 sacks (each of 280 lb.) an hour of best white flour. Turner's dustless purifiers are installed on the second floor, and scalpers and the majority of the centrifugals are on the top floor.

All modern improvements in constructional work have been incorporated in the mills, and the material are of the best-known quality- for instance, the flooring and spouting is made of selected teak wood; and electrical plant has been installed for lighting the buildings; double fire-proof doors on each floor give communication across the rope race from the screen rooms to the mill; and the race is surmounted by a tower for the purpose of fitting up a sprinkler installation reserve water tank.

The engine and boiler-house is situated at right angles to the milling and wheat-cleaning department, and there are several large godowns and sheds for the storage of wheat and flour and other products.

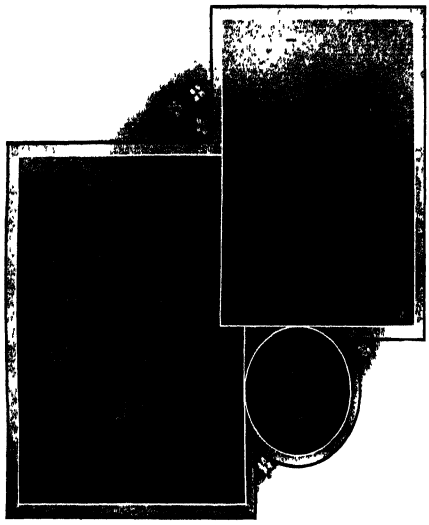
With an up-to-date mill and a well-trained staff working under expert supervision, it is but natural that only the finest samples of flour-making wheat are accepted for grinding purposes, and when the grain has been passed through several processes in the course of cleaning and has finally emerged from the rollers in the shape of flour of first-class quality, it is not surprising to find that the demands made upon the India Mills are so great that it is almost impossible for the directors to satisfy them.

The latter, however, are doing all in their power to avoid disappointing their numerous patrons, as they are running the mill continuously, day and night, excepting Sundays, and they are obtaining an average output in twenty-four hours of 1,000 bags of flour (each of 196 lb.); 270 bags of *atias* (164 lb.); and 450 bags of sharps and bran (112 lb.). The term "flour" includes semolina, or *sooji*, the high-class "patent," "superfine," and the bakers' grade known as "households."

The authorized capital of the company is Rs. 6,00,000 made up of 6,000 shares of Rs. 100; the subscribed capital stands at the same figure, and the amount paid up is Rs. 5,10,000.

The directors are: Mr. E. Raymond, B.A., LL.B.(chairman), Dr. George Pires, Bar.-at-Law, L.R.C.P., M.R.C.S., Mr. I. Sequeira, Mr. P. V. Castellino, Mr. I. J. Carneiro, and Mr. A. N. Menezes.

The mills are situated in Lawrence Road, Cincinnatus Town, in Karachi, and the telegraphic address is "Ifmill."



I. SEQUEIRA.

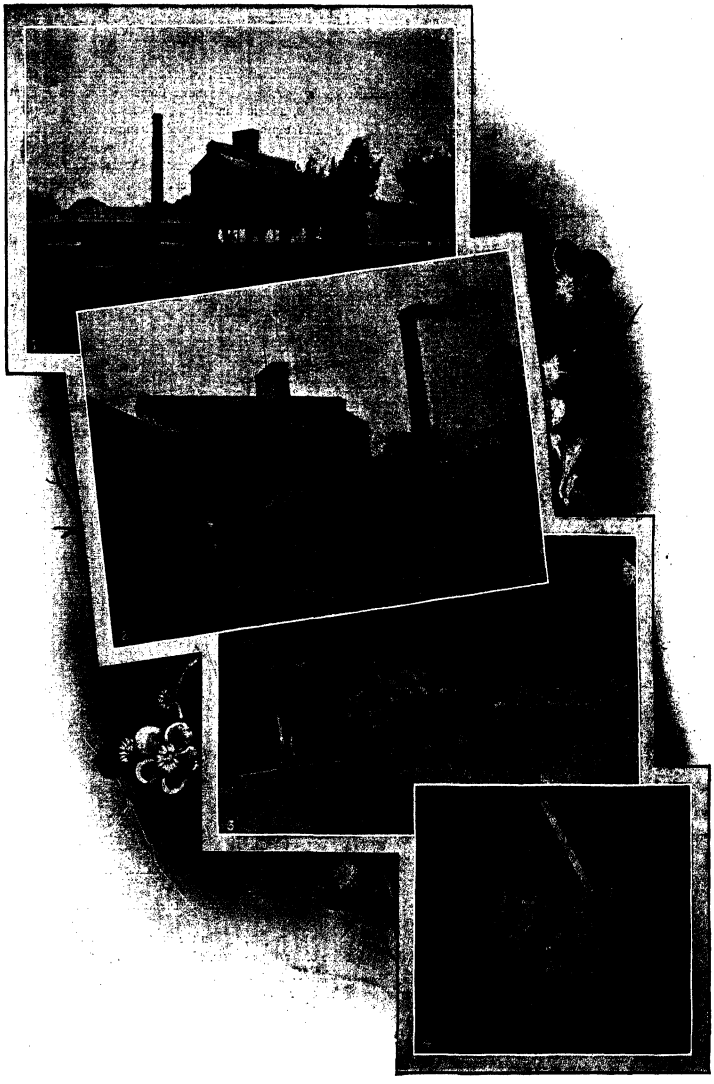
1. I. Sequeira 2 Premises. 3. Display of Kodaks.

IGNATIUS SEQUEIRA.

The art of photography as practised to-day can, with difficulty, be compared with preliminary efforts suggested by the old-fashioned magic lantern, and it may, indeed, be said that it has now reached the stage when the higher principles and practices of science must be fully utilized in order to obtain the magnificent productions now seen in the picture-galleries of the world.

Mr. Ignatius Sequeira entered the Sir Jamsetjee Jeejeebhoy School of Arts, Bombay, in the year 1883, and two years later he was appointed drawing master at the grammar school at Karachi. After serving in that capacity for a period of three years he joined the locomotive department of the North-Western Railway as mechanical draughtsman, but he could not ignore the attraction which his natural love for photography held out to him, and he accordingly started on his own account in a small way in Karachi in the year 1900. By diligent attention and practical skill in his work, he quickly gained the confidence of the public, especially the civil and military authorities, who were his principal patrons.

In 1902 Mr. Sequeira was fortunate enough to obtain by purchase a most valuable square plot of land known as 1 Staff Lines. In this square, or compound, on three sides of which run Elphinstone Street, Inverarity Road, and Somerset Street, the busiest thoroughfares in Karachi, a remarkably well-built double-storeyed residence, now used as the New Café, has been erected. In addition to that building, Mr. Sequeira has constructed a detached spacious double-storeyed photographic studio at the angle formed by the junction of Inverarity Road and Somerset Street. This studio is intended primarily to meet a long-felt



INDIA FLOUR MILLS COMPANY, LTD.

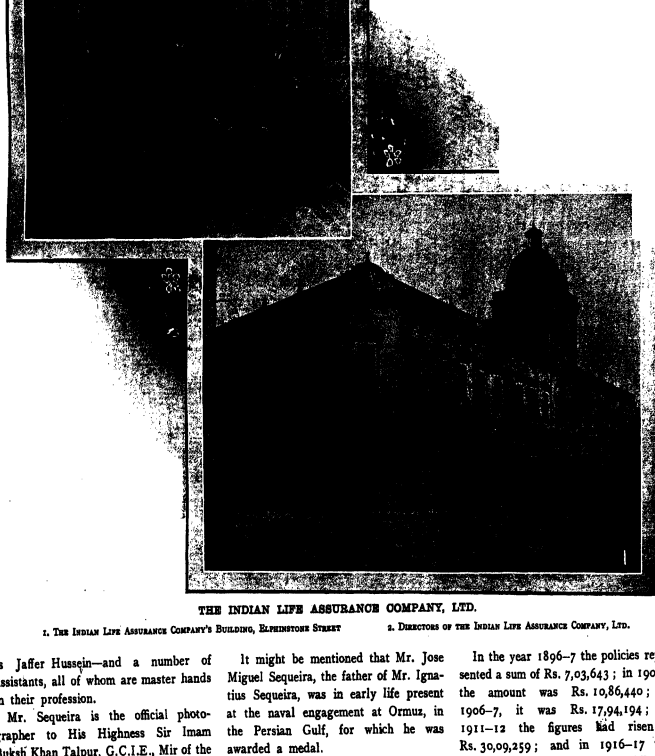
1. Front View. 2. Back View. 3. Wheat and Flour Bags in Transit. 4. Interior, Roller Floor.

want of a suitable place in Karachi for the exhibition of photographic work by amateurs. It has no superior in India for the completeness and the thoroughly up-to-date character of its equipment, including accessories and appliances, all of which are displayed in the most artistic manner.

Mr. Sequeira employs a large staff of experienced artists—at the head of whom is Jaffer Hussein—and a number of assistants, all of whom are master hands in their profession.

Mr. Sequeira is the official photographer to His Highness Sir Imam Buksh Khan Talpur, G.C.I.E., Mir of the native state of Khairpur, in Upper Sind. He is also owner of valuable property in "Cincinnatus Town," a rising suburb of the city, while he is a director of the Indian Life Assurance Company, Ltd., the India Flour Mills, Ltd., the Union Press, Ltd., and secretary of the Baluchistan Coal Company, Ltd.

From a very early age Mr. Sequeira has, during spare moments, given much attention to the collection by purchase or exchange of postage stamps, and in following this hobby he takes especial pleasure in securing Ceylon early pence issues, and those belonging to Queensland.



THE INDIAN LIFE ASSURANCE COMPANY, LTD.

1. The Indian Life Assurance Company's Building, Elphinstone Street 2. Directors of the Indian Life Assurance Company, Ltd.

It might be mentioned that Mr. Jose Miguel Sequeira, the father of Mr. Ignatius Sequeira, was in early life present at the naval engagement at Ormuz, in the Persian Gulf, for which he was awarded a medal.

THE INDIAN LIFE ASSURANCE COMPANY, LTD.

The growth of the business of a life assurance company cannot be better exemplified than by showing the value of existing policies at certain periods in its history. There have been five quinquennial valuations made by the Indian Life Assurance Company since its foundation in 1892, and the following figures are indisputably strong evidence of the sound basis of the company and of the efficient and economic manner in which it is conducted.

In the year 1896–7 the policies represented a sum of Rs. 7,03,643; in 1901–2 the amount was Rs. 10,86,440; in 1906–7, it was Rs. 17,94,194; in 1911–12 the figures had risen to Rs. 30,09,259; and in 1916–17 they had reached Rs. 57,08,002; while for the year 1917–18, the total was Rs. 68,32,290.

The establishment of the company was the outcome of a scheme propounded by a number of gentlemen in Karachi for

organizing a mutual aid association, embracing a modified form of assurance, but after full consideration had been given to the proposal it was discarded in favour of the foundation of the Indian Life Assurance Company, upon an actuarial basis.

The company, which was designed especially to meet the needs of people having moderate incomes, was registered on the 7th March, 1892, its head offices being situated in Elphinstone Street, Karachi. The promoters, but particularly Messrs. C. F. D'Abreo and L. C. Duarte, the present chairman of directors and secretary of the company respectively, strove their utmost to avoid heavy preliminary and working expenses, and that they succeeded in their object may be gauged from the fact that during the first fifteen months of the company's existence the total expenditure did not exceed Rs. 2,431.

The authorized capital was originally fixed at Rs. 1,00,000, divided into 1,000 shares of Rs. 100, but this amount was increased in 1907 to Rs. 4,00,000, while the paid-up capital is Rs. 1,45,000, comprising 600 shares fully paid up amounting to Rs. 60,000, and 3,400 shares on which Rs. 25 per share have been called up, making Rs. 85,000.

Policies are issued for all kinds of insurance business usually conducted by life insurance companies, but the directors have from time to time devised several attractive schemes which have been greatly appreciated by the public.

The company's balance sheet for the year ending on the 31st May, 1918, shows that new policies had been issued during that period for Rs. 10,82,930, with an annual premium of Rs. 55,720, bringing the total amount under assurance to Rs. 68,32,290 (including bonus additions), yielding a premium income of Rs. 2,65,374 per annum.

The greatest care has been exercised by the directors in the investment of the company's fund, and at the present time the sum of Rs. 22,40,050 has been invested in British and Indian War Loans, while other amounts have been advanced upon sound securities, such as the Karachi four per cent. municipal debentures, loans or mortgage of property, and upon the company's own policies, making a total of Rs. 40,70,000, including house property owned by the company.

The trust fund, after deduction of all claims, now amounts to Rs. 16,56,504; the net profit for the past year was Rs. 36,895; and the directors at their 26th annual meeting held on the 8th December, 1918, proposed to pay dividends to the shareholders at the rate of 18 per cent. free of income tax on the paid-up capital; Rs. 5,000 to the shareholders' reserve fund; Rs. 5,000 to the investment fluctuation account; and the balance to be carried forward to the following year.

The company made its first large investment in house property in 1907, and the premises then purchased, in Elphinstone Street, have increased in value very considerably since that date. The offices of the company are situated in this building, and other occupiers include the Haydn Company, the Union Steam Press, Ltd., and other mercantile firms.

The company have a local board of management at Bombay, where they have recently purchased a large building, known as "Carnac House."

The directors in Karachi are Mr. C. F. D'Abreo (chairman), Mr. P. V. Castellino, Dr. Geo. Pires, M.R.C.S., L.R.C.P., D.P.H. (Lond.), Mr. C. M. Lobo, B.A., LL.B., Mr. S. A. C. Vaz, Mr. I. Sequeira, and Dr. E. A. Mascarenhas, L.M. and S., L.R.C.P., M.R.C.S. (London); and the bankers are the National Bank of India, Ltd., Karachi and Bombay.

JEEWANJI EBRAHIMJI & CO.

Before a contract for the carrying out of any important work can be given, whether it be the construction of a railway line, a stately mansion, or a commercial warehouse, or a ship, even for the supply of any class of goods, there are certain essential qualifications which are always expected, by those who are financing the project, to be possessed by the firm who are to be entrusted with the undertaking.

First of all it must be shown that the contractor has sufficient capital at his back, but as capital without practical experience is useless, it must be clearly demonstrated that an unquestionable personal ability to fulfil obligations is a characteristic as strongly marked as the possession of a good banking account. Further than this, however, the question of a constant supply of efficient labour is a problem which, especially in India, is surrounded with so many difficulties that it has frequently been the rock upon which the contractor has found his doom.

It is therefore satisfactory to be able to point to a number of firms who combine these primary qualifications in a marked degree, and these notes have reference to the well-known firm of Messrs. Jeewanji Ebrahamji & Co., of 398 Frere Road, in the city of Karachi, which was established in the year 1866.

Their business cards state that they are engineers, founders in brass and iron, suppliers of engineering stores, such as British rolled steel beams, angles, tees, plates, galvanized, corrugated, and plain sheets, and builders of water and night soil carts, latrines, iron roofs, bridges, water tanks, culverts, pipes, and every description of machine-work in brass, copper, metal, and iron. They are also trusted contractors, and many undertakings of a most important character have been carried out by them to the entire satisfaction of engineers and others who have had charge of the works.

For more than thirty years Messrs. Jeewanji Ebrahimji & Co. have been connected with the commercial life of Karachi, Lahore, and other places in the Bombay Presidency and the Punjab, and they have received unstinted praise for the manner in which they have discharged heavy responsibilities placed upon them.

In January 1886, for instance, the agent of the Sind, Punjab, and Delhi Railway Company wrote a letter stating that he had known Mr. Jeewanji Ebrahimji for nearly twenty years, during which period he had been supplying stores and materials of every description to the Indus Steam Flotilla and to the Sind Railway, and that, with scarcely an exception, the quality of the goods had been fully approved by the various departments concerned. The Port Engineer of Karachi reported in April 1890 that Messrs. Jeewanji Ebrahimji & Co. had been contractors on the harbour works for several years. They had supplied large quantities of timber for wharfage and other works, together with miscellaneous stores for workshops and other purposes, and it was added that the work was carried out in a very satisfactory manner. In the same month the executive engineer of defences and of the Sind Military Works, Karachi, stated that the firm had then recently carried out from 3 to 4 lakhs worth of work under the Defences, and that they had done the work well and quickly. Colonel Crawford, Chairman of the Karachi Port Trust, in December 1894 gave a certificate to the effect that Messrs. Jeewanji Ebrahimji & Co. had carried out by con-

tract the erection of iron and timber work of the James Wharf to their credit and to the satisfaction of the Trustees of the Port of Karachi. It was added that the foregoing certificate was presented by His Excellency Lord Harris, G.C.I.E., Governor of Bombay, on the occasion of the ceremony of opening the wharf in question. The Port Engineer of Karachi, prior to leaving India on furlough in May 1896, wrote that he had pleasure in certifying that Messrs. Jeewanji Ebrahimji & Co. had been contractors on the harbour works for the previous thirty years. They possessed every qualification of contractors, fair in dealing, prompt in execution, and obedient to the orders of the inspecting officer, even though it might involve a loss to them. They had a staff of trained men in their employ, and carried out engineering works of magnitude, such as the erection of wharves, jetties, and sheds. The letter added that besides being engineering contractors the firm was well known as suppliers of engineering and miscellaneous stores and timber, and that they had furnished the harbour works with such goods for the past thirty years. The superintendent of the locomotive works of the North-Western Railway Company, Karachi, in March 1898, forwarded to Messrs. Jeewanji Ebrahimji & Co. a letter stating that their firm had been contractors to the Indus Steam Flotilla and railway works for several years, that they had supplied large quantities of timber for steamers, as well as miscellaneous stores for workshops, and that they had given every satisfaction with regard to quality and prices.

The testimonials have been culled at random from a large number of similar documents which have been received by this eminent firm, and it redounds to their credit that they still hold the high reputation which their excellent work has gained for them.

The firm have regularly supplied all kinds of materials to the North-Western Railway Company, the Military Works Departments, the Government Public Works Department, the Mechanical Transport Fleet, and to several municipalities and local boards in Sind, Punjab, North-West Frontier Province, and Baluchistan.

Messrs. Jeewanji Ebrahimji & Co. commenced a motor establishment in the year 1912, and they have secured agencies for Ford motor-cars of Canadian manufacture, the "Empire" motor-cars, "Chase" motor-lorries, and Ferrow row-boat motors, while they are now supplying a large quantity of motor spare parts to the Ambulance Department, Karachi.

The management of the business was in the hands of Mr. Abdool Hoossein Shaikh Jeewanji until 1903, when that gentleman unfortunately died and was succeeded by Mr. Tyebali Abdool Hoossein Jeewanji.

THE KARACHI METAL AND HARDWARE MERCHANTS' ASSOCIATION.

Co-operation for trade purposes is a subject which has received much attention in recent years, in India as well as in Europe. Recently an important step in this direction was taken at Karachi in the formation of an association of metal and hardware merchants for mutual protection. The credit for initiating this scheme belongs to Mr. Chainrai Basrai, of the firm of Messrs. Chainrai & Co., who on commencing business in Karachi and finding that there was no organization in existence for furthering the interests of the trade, set to work to fill the gap. Ably assisted by Mr. Bherumal Lekhraj, the managing director of the Empire Hardware and Metal Mart, Karachi, Mr. Chainrai conferred with dealers in metal and discussed with them the desirability of co-operation. Force was lent to the arguments they used by the action of the Government of Bombay in appointing a priority committee for the purpose of advising as to whom among the metal merchants of Karachi certificates should be given entitling them to receive supplies of merchandise from the United Kingdom.

The discussions resulted in the formation, on the 18th March, 1917, of the Karachi Metal and Hardware Merchants' Association, whose objects were declared to be :—

(1) To create unity and sympathy among its members, as well as between them and other communities of dealers in metal, in order to give an impetus to the trade, and to safeguard their interests generally.

(2) To systematize, alter, or amend the manner of selling metals, and to frame regulations, according to law, to enable the association to give effect to such procedure.

(3) To obtain annual returns of exports, imports, revenue, and expenditure of European and other countries, to summarize and distribute such particulars to members, and to consider them in their relationship to the metal trade.

(4) To discover and take steps for the removal of obstructions or difficulties threatening the interests of members, and to settle disputes affecting the hardware traders.

(5) To correspond with or interview the Government, public bodies, merchants, and other associations, with the objects of extending the business operations of its members.

One of the first acts of the newly-formed association was to forward to His Excellency the Governor of Bombay a protest against the constitution of the Government Priority Committee, which did not include a single member of the metal trade, and also against the nature of some of the questions set forth in the form of application for certificates, which have been already referred to.

The association is composed of a number of wealthy hardware merchants, who found that the exigencies of the Great War caused such a revolution in prices and in the methods of carrying out transactions in metals of all kinds that nothing less than a union among themselves would enable them to carry on their businesses successfully.

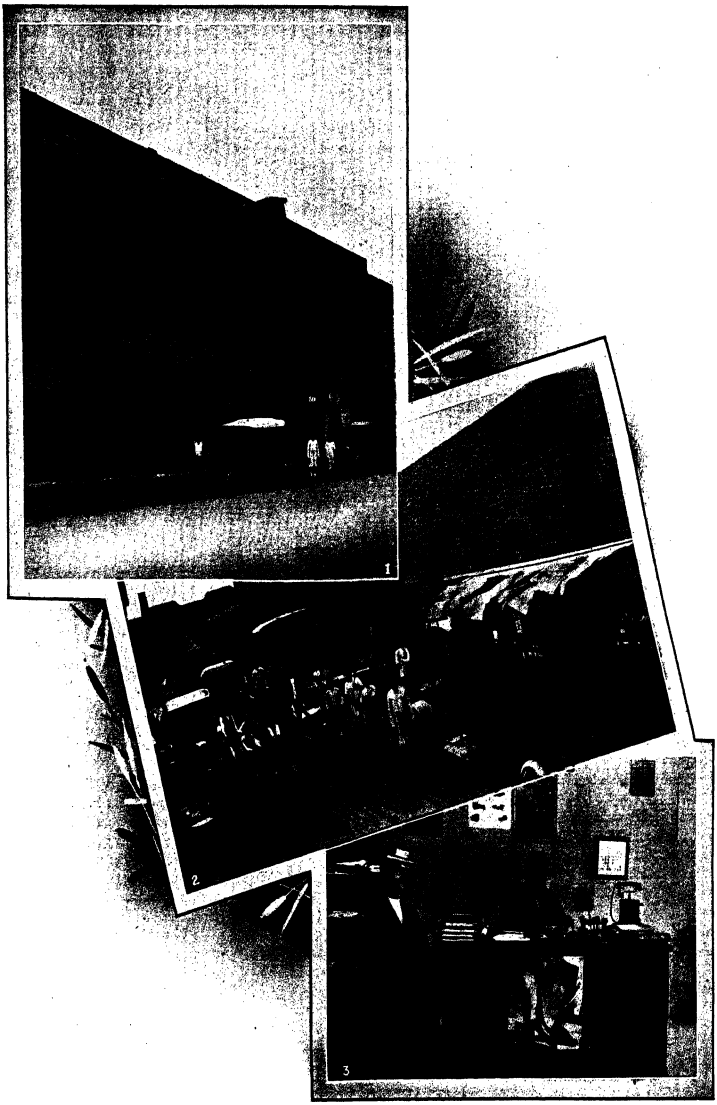
It might be mentioned incidentally that one member of the association, Mr. Lala Madhowram Hardeodas, has subscribed Rs. 100,000 to the War Fund, and that others are expected to follow his lead.

The honorary secretary, Mr. Chanirai Bakasrai, has had a large and varied experience in the commercial world, and his sound judgment has caused him to be selected to fill several important positions in life. For ten years he was editor of a weekly English newspaper, called the *Karachi Chronicle*, and he subsequently became branch manager of a local banking company, but he has latterly devoted his whole time and attention to the hardware trade, in which he is a recognized expert.

The president, on the other hand, has had a life-long connection with the same line of business, and the success attained by the Empire Metal Mart is solely due to his skilful management.

The ordinary members of the association are shrewd men of business, and many of them are now conducting establishments which were formed several years ago by their ancestors.

The office bearers of the association are: President, Mr. Bherumal Lekhraj, managing director of the Empire Hardware and Metal Mart, Karachi; vice-president, Seth Ghulam Hussein N. Lotia; honorary secretary, Mr. Chainrai

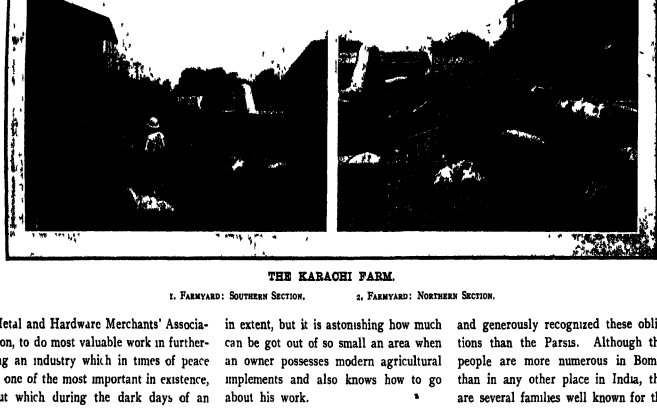


JEEWANJI EBRAHIMJI & CO.

1 Office and Workshop Building. 2. Erecting Yard—Motor Cars and Iron Works.
3. Tyebali A. Jeewanji, Managing Proprietor, and Sudicali A. Jiwanji, Partner.

Bakasrai; and the members of the committee are: Lala Sree Naraın, of Messrs. Nannemal Benarsidas; Seth Tyabli, of Messrs. Jeewanji Ebrahimji & Co.; Seth Mohanlal, of Messrs. Mahtabrai Chuhamal; Seth Adamji Budhabhoy; Lala Kasheram, of Messrs. Beharimal Jaggamal; Mr. T. Mirchandani, representing Messrs. Mahomed Ali Alibhoy Karemji & Sons, Lala Laburam, of Lala Madhoram Hardeodas; Mr Ramchand Jethmal; Mr. Essaji Ebrahimji Lanewala; Messrs. Dhanıram & Sons, through their managing director; Seth A. K. Marvi; and Mr. Chapsi Umersi.

It is safe to predict that with such a strong body of capable officials, there is a great future in store for the Karachi Metal and Hardware Merchants' Association, to do most valuable work in furthering an industry which in times of peace is one of the most important in existence, but which during the dark days of an upheaval which is shaking the world, is calculated to be of immense benefit to the community at large.



THE KARACHI FARM.

1. Farmyard: Southern Section. 2. Farmyard: Northern Section.

THE KARACHI FARM.

It must be admitted that, speaking in a general way, the climatic conditions in the majority of the districts of India are not favourable for securing the best possible returns from the keeping of milch cows, pigs, and poultry. Yet many of the difficulties which are presented to a beginner may be overcome by any one who makes himself acquainted with the characteristics of the animals under his care, the principles of scientific breeding, proper feeding, and the approved methods of dealing with milk, eggs, and other produce.

Absolute cleanliness and perfect sanitation are necessities, and an owner who insists upon having these two prime essentials has made a bold bid for success in his venture.

The Karachi Farm, beyond the New Jail, about five miles distant from the city, may be pointed to as a model dairy and piggery, and as every detail of management falls under the supervision of the proprietor, Mr. Francis Paul de Sousa, who is an expert in these matters, there is little wonder that good results have followed.

The land is only about eighteen acres in extent, but it is astonishing how much can be got out of so small an area when an owner possesses modern agricultural implements and also knows how to go about his work.

The pigs consist of pure-bred Yorkshires and Berkshires—two of the best bacon-producing types in the world—and they are fed twice daily on ricebran, *gram*, green grass, potatoes, maize, and fruit.

The cattle belong to good milking strains, and as their food is of the best quality procurable, it follows that the milk gives the greatest satisfaction to purchasers. Mr. de Sousa is in a position to supply well-fed fat pigs weighing from 300 to 500 lb., sucklings averaging 15 to 25 lb., geese, ducks, fowls, and pigeons, as well as butter and eggs. Fresh pork is offered for sale during the winter season at the "Pork Stall," situated behind the Empress Market, in Karachi.

The undertaking was started in the year 1914 with the object of meeting a distinct want of such a farm in Karachi, and at the end of five years' working there is abundant justification for the confidence with which Mr. de Sousa started his enterprise.

Regular employment is found for about forty hands.

KHAN BAHADUR K. H. KATRAK.

It is a common saying that wealth imposes responsibilities upon its possessors, and there is perhaps no community of persons in India which has more readily and generously recognized these obligations than the Parsis. Although these people are more numerous in Bombay than in any other place in India, there are several families well known for their public and private charities residing in various portions of north-western districts.

In Karachi, for example, one of the most prominent citizens and one of the most benevolent, too, is a Parsi named Khan Bahadur K. H. Katrak, the founder of the noted firm of Messrs. Katrak & Co., importers of wines, spirits, and general stores. This gentleman, of priestly descent, was born in Bombay in the year 1856, and after studying at the Sir Jamsetjee Jejeebhoy Parsi Benevolent Institution, he matriculated at the early age of seventeen years, taking a scholarship which entitled him to enter any one of the colleges in the city. He selected

KHAN BAHADUR K. H. KATRAK.

1 Khan Bahadur K H. Katrak 2. Sorab K. H. Katrak. 3. Mrs. Dinbai Hormusji Vajifdar. 4 Katrak Villa.
5 Katrak Buildings (Office).

the Medical College, but he had scarcely commenced his studies when he was attacked by illness of so serious a character that, his "terms" being interrupted, he accepted an appointment as a teacher in the Parsi Boarding School at Bandra. The life of a pedagogue did not, however, appeal to one who had a natural aptitude for a business career, and, therefore, about twelve months later, he became an assistant, and subsequently manager, in the firm of Messrs. Jamasjee & Co., of Rawalpindi, whom he served for fourteen years.

Having gained great commercial experience, his desire to become his own master led him to undertake the agency for the sale of Little's soluble phenyle in Calcutta. He met with considerable success in his venture, but he realized that Karachi was a rapidly-developing seaport, that it was being connected by railway with nearly every part of the Punjab where he was well known, and that his opportunities were greater in that province than in Bengal.

Acting upon this idea, Mr. Katrak arrived in Karachi in the year 1891, and commenced business on his own account as clearing, forwarding, and commission agent, trading under the name and style of Katrak & Co.

His industrious habits soon resulted in a larger annual turnover and increased capital, whereupon he began to import small quantities of merchandise from Europe, but it was not long before the manufacturers from whom he was obtaining goods invited him to become sole agent for them in the various districts of the Provinces of Sind, the Punjab, and Baluchistan. The important manufacturers whose agencies were then, and to-day are, held by Mr. Katrak's firm, include Messrs. Lever Brothers, Ltd., for their famous soaps; Messrs. Brunner Mond & Co., Ltd., for chemicals; Messrs. C. and E. Morton, Ltd., for provisions; Messrs. Stevenson and Howell, Ltd., for essences; and Messrs. James Buchanan & Co., and Messrs. Denis Mounnie & Co., for spirits. The representation of these famous firms brought vast wealth to Mr. Katrak, and the remaining portion of these notes will not deal with the continued successful conduct of the large business of which this gentleman is the head, but will refer only to the manner in which the fortune thus accumulated has been, and still is, being distributed for the common good.

One of the earliest notable benevolent acts of Mr. Katrak was to convert the Garrikhata Parsi "fire" temple into "Atask Adran," and to contribute a substantial sum of money for its perpetual maintenance. At a subsequent date the Parsis of Karachi, realizing that a need existed for a well-appointed swimming-bath, began to collect funds for the purpose of providing one, but when they discovered that the amount given or promised was not sufficient for constructional work, they appealed to Mr. Katrak, who generously subscribed the balance required, the building being eventually named after him.

In the year 1906 Mr. Katrak had the misfortune to lose his devoted wife, and, with the object of commemorating her name, he built a Home for middle-class and poor Parsis, for whom accommodation was provided at a merely nominal rent, the amount thus received being charitably given to the Parsi Virbaijee School for educational purposes, after a deduction of ten per cent. for maintenance of the Home, and of a sum of Rs. 75 to be spent in annual ceremonials in honour of his late wife. This institution is named the "Bai Khorshedbai Katrak Parsi Home," thus introducing the name of the deceased lady. This noble example set by Mr. Katrak was soon followed by the erection of *chawls* at the expense of other benevolent Parsis in Karachi.

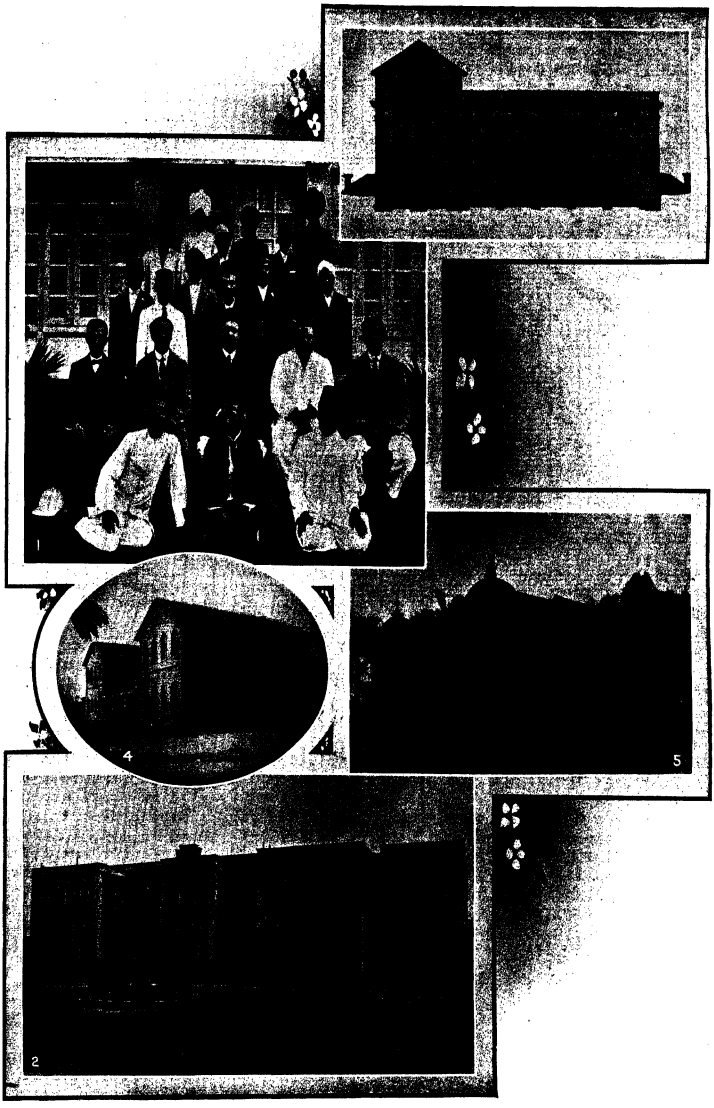
The funds of the Virbaijee School have since that time been materially consolidated by a donation of a sum of Rs. 5,000 from Mr. Katrak, who also subscribed Rs. 4,000 to the Gulbhai Mehta Parsi Maternity Home in order that two wards might be known by the names of his late wife and his daughter-in-law, Mrs. Dina Sorab Katrak. The next object of this gentleman's charity was the Lady Dufferin Hospital at Karachi, in which a ward was reserved for Parsi ladies in honour of his late mother, which was named the "Virbaijee Katrak Parsi Ward." At a later date Mr. Katrak generously gave Rs. 50,000 to form an endowment for the above-named Maternity Home, whereupon the whole building was styled the "Bai Virbaijee Katrak Maternity Wing." This donation was announced on the occasion of a visit to Karachi by His Excellency Lord Willingdon, G.C.I.E., then Governor of Bombay, who, in the course of a congratulatory speech, said: "Mr. Katrak has already proved that he has a head to acquire riches, and he has now shown that he has also a heart to spend them worthily."

The Government then showed its appreciation of the munificence of Mr. Katrak by bestowing upon him the title of Khan Bahadur.

It was only natural that the Parsis of Karachi should evince a desire to recognize the honour thus conferred upon one of their own community, and they accordingly entertained the Khan Bahadur at a garden party, when he expressed his wish to offer a sum of Rs. 20,000 for the construction of a suitable hall for the Young Men's Zoroastrian Association, to be named after his late father, and of a library to be called after his son, Mr. Sorab K. H. Katrak. It is intended that the hall shall also be used on the occasion of banquets in connection with marriages or *Navjote* ceremonies, and thus meet a long felt want by Parsis. The necessary plans for the building have been prepared, and as the estimates show that the unusually high prices of materials now prevailing will necessitate an expenditure of at least Rs. 50,000, the Khan Bahadur has, with his customary generosity, undertaken to bear the enhanced expense. The foundation stone of this hall was laid by the Hon. Mr. J. L. Rieu, I.C.S., Commissioner in Sind, on September 16, 1914, in the presence of a very large cosmopolitan gathering.

Among other benefactions may be mentioned the presentation of a cup to the most efficient Parsi volunteer in each year; of a scholarship to any Parsi boy or girl who passes the matriculation examination with the highest number of marks; and the gift of Rs. 15,000 towards the erection of a bandstand at Clifton, a suburb of Karachi.

The innumerable calls made upon the purses of Britons throughout the Empire during the Great War seemed only to add zest to the Khan Bahadur's resolve to give needed help whenever possible, and some particulars may now be given with regard to the financial and other aid rendered by him. Subscription lists opened in Karachi for (*inter alia*) the Imperial War Relief Fund, the Aeroplane Fund, "Our Day" Fund, the Victory Celebration Fund, the Army Welcome Fund, the Soldiers' Entertainment Fund, and the Sind Women's Branch of the Relief Fund, contained the name of the Khan Bahadur, who was always the most generous contributor, and this gentleman gave his valuable services, too, to the several committees of these funds by acting in the capacity of vice-president or treasurer. He subscribed Rs. 15,000



KHAN BAHADUR K. H. KATRAK.

1. Staff Group. 2. Bai Virbaijee Katrak Maternity Wing. 3. Young Men's Zoroastrian Association.
4. Khurshedbai Katrak Parsee Home. 5. Katrak Swimming Bath.

to the military authorities with a request that they would pay the annual interest thereon in equal shares to the Sind Women's Branch and the Indian Soldiers' Entertainment Fund during the continuance of the war, and he further stipulated that on the declaration of peace the principal sum should be handed over as a donation to Queen Mary's Home for disabled soldiers and sailors.

When the members of the Karachi Y.M.C.A. required a building for recreation purposes for the use of Indian soldiers, the Khan Bahadur cheerfully erected a suitable hut for them at a cost of Rs. 6,000; and when an institution for teaching handicrafts to blind and infirm soldiers was projected, the same gentleman not only gave Rs. 3,000, but also rendered great assistance in obtaining other subscriptions. He was appointed chairman of the local committee of the Second Indian War Loan, while he personally purchased scrip to the value of Rs. 50,000.

The Khan Bahadur is highly respected by the Government and the public at large, and his abilities have been recognized by his appointment as an Honorary Magistrate of the second class, and a member of the Jail Visiting Committee, a nominated Councillor of the Karachi municipality, President of the Young Men's Zoroastrian Association for several years, and as Trustee of the Parsi *Panchayat* and other trust funds, while there is not a single charitable institution in the city just named of which he is not either a governor or member for life.

Mr. Sorab K. H. Katrak, son of the Khan Bahadur, was, in the year 1912, at the age of 19, sent to England to become acquainted with business principles, and after he had spent three years with the well-known firms of Messrs. Tullock & Co., and Messrs. C. and E. Morton, Ltd., he returned to India, in order to join the commercial house of Messrs. Katrak & Co.

A few words must be added in reference to Mrs. Dinbai Hormusjee Vajifdar, another member of this well-known family, and a daughter of the Khan Bahadur.

This energetic young Parsi lady rendered great help to the Sind Women's branch in connection with war work, such as the making of garments and providing comforts for troops in Mesopotamia and elsewhere. She formed a party of ladies belonging to her own community who continued their noble work for about five years, when it was found that the articles of clothing completed by them were greater in number than the total of those contributed by all other parties in Karachi. Mrs. Vajifdar took a leading part in raising money for the Second Indian War Loan, succeeding in collecting nearly Rs. 200,000; and she has also manifested a deep interest in work of a public character in several other ways, as, for example, by serving on the committees of the Lady Dufferin Hospital, the Sind Women's Branch of the Relief Fund, and the Karachi Health Association.

In acknowledgment of her meritorious work, the Government awarded to Mrs. Vajifdar the Kaiser-i-Hind medal of the second class, she being the only lady in the Province of Sind to be thus honoured.

KHAN SAHIB MAHOMED ALI ALIBHOY & SONS.

This firm is well known in Karachi, and even in surrounding districts in North-Western India, for the very valuable services they have rendered to the Government, the military authorities, and others through their extensive business connections as general merchants, contractors, and auctioneers.

The founder of the firm was Mahomed Ali Alibhoy, who acted as contractor for supplies during the Afghan war of 1843, and the very satisfactory manner in which he discharged his duties was recognized in testimonials given by Government and army officials, and by his special appointment as contractor to the arsenal at Quetta. He was a man of unexceptionable integrity, and in every instance in which he undertook to deliver stores of a certain standard quality within a definite period, his employers found that he was prompt in the execution of orders, and that the goods were in every way satisfactory. As an acknowledgment of his valuable services extending over a number of years, the Government of India, in 1909, conferred upon him the title of Khan Sahib.

When Mr. Ali Alibhoy passed away after serious illness in 1914, the conduct of the business devolved upon his sons, Messrs. Fida Hussein and Asghar Ali, who had for some years been associated with their father in management, and the style of the firm was then changed to Khan Sahib Mahomed Ali Alibhoy & Sons. The present partners have inherited the characteristic shrewdness and capability in dealing with large commercial transactions which were so forcibly displayed by their predecessor, and as a result of their diligence, perseverance, and urbanity of manner, they have fully maintained the high reputation of the firm. They belong to the Bohra caste, whose astuteness is as proverbial as that of the "canny" Scot, and like the men from the land of "kilts and cakes" their thrifty habits, tending to the enlargement of credits with bankers, enable them to arrange the most favourable terms—whether in buying or selling—in the markets of the world.

A very large business is also carried on in the export and import of all descriptions of merchandise, the operations of the firm extending throughout India and as far as Europe, America, Japan, and the Far East.

As one of the leading inhabitants of Karachi, Mr. Fida Hussein labours energetically for the improvement of the city, and takes active part in all public movements. He was a prominent promoter of the Provincial Urdu Conference, and is a staunch advocate for the recognition of Urdu as the *lingua franca* of the whole of the Province of Sind.

Reference may be made to a few of the hundreds of testimonials which have been received in praise of the efficient manner in which the late Khan Sahib, and subsequently the firm, have performed the various duties entrusted to them.

Major Malcolm Campbell, R.A., in a latter dated July 15, 1901, said: "During my charge of the Quetta arsenal I always found Mahomed Ali Alibhoy a reliable and useful contractor. He is an honorary magistrate, and his influence and position were of great service in doing business, often under considerable difficulties"; and Col. K. S. Dunsterville, Inspector-General of Ordnance, Southern Circle, Poona, wrote, on January 29, 1908, that: "I have known Mahomed Ali Alibhoy nearly twenty years, and I have great pleasure in recommending him as a most punctual and reliable contractor for the supply of military stores, both at Quetta and Karachi, and elsewhere if necessary. He is a contractor of the old school, and if he undertakes a supply he carries it out punctually and satisfactorily. He never gave or caused trouble in supply, but was always ready and helpful. He is a man of means, and is a railway contractor in a large way of business. He is a municipal commissioner, honorary magistrate, and leading man in Quetta City and Karachi, and highly thought of."

KHAN SAHIB MAHOMED ALI ALIBHOY AND SONS.

1 Khan Sahib Mondali Alibhoy. 2. Fida Husain Mondali. 3 Asgarali Mondali 4 Residence.

NAWAB SALAR

The late Khan Sahib raised himself to an honourable position in the business world of Karachi, Quetta, and elsewhere, but he was no less successful in gaining the approval of his fellow-citizens by his devotion to their interests. The following letters have special reference to this aspect of his career.

Sir H. S. Barnes, agent to the Governor-General and Chief Commissioner, Baluchistan, writing from Quetta in October 1900, said: "Mahomed Ali town as honorary magistrate and municipal commissioner."

The head offices of the firm are situated in Karachi.

KHAN SAHIB ABDUL SATAR.

The father of the subject of these notes —Khan Bahadur Haroon—set up in business at Karachi in the year 1880 as a general contractor, but concerned himself chiefly in constructional work on

have been extended so as to include branches at Quetta and Delhi; the main responsibility now rests upon his son, Khan Sahib Abdul Satar.

The latter joined his father in 1898, when he entered into contracts with the military authorities at Quetta, where he also constructed a large number of the principal buildings.

In 1916 he established—quite as a side-line—the Quetta Motor Garage, and in 1918 he opened another one at

KHAN SAHIB ABDUL SATAR.

1. Exterior, Quetta Picture Palace. 2. Interior, Quetta Picture Palace.

Alibhoy is a very useful and enterprising merchant of Quetta, where he is the head of the Bohra community. He is one of the municipal commissioners of Quetta, and an honorary magistrate, in both of which capacities he has done very useful and excellent work. He is always ready to help in any work of charity, or for the public good. I wish him and his firm every prosperity."

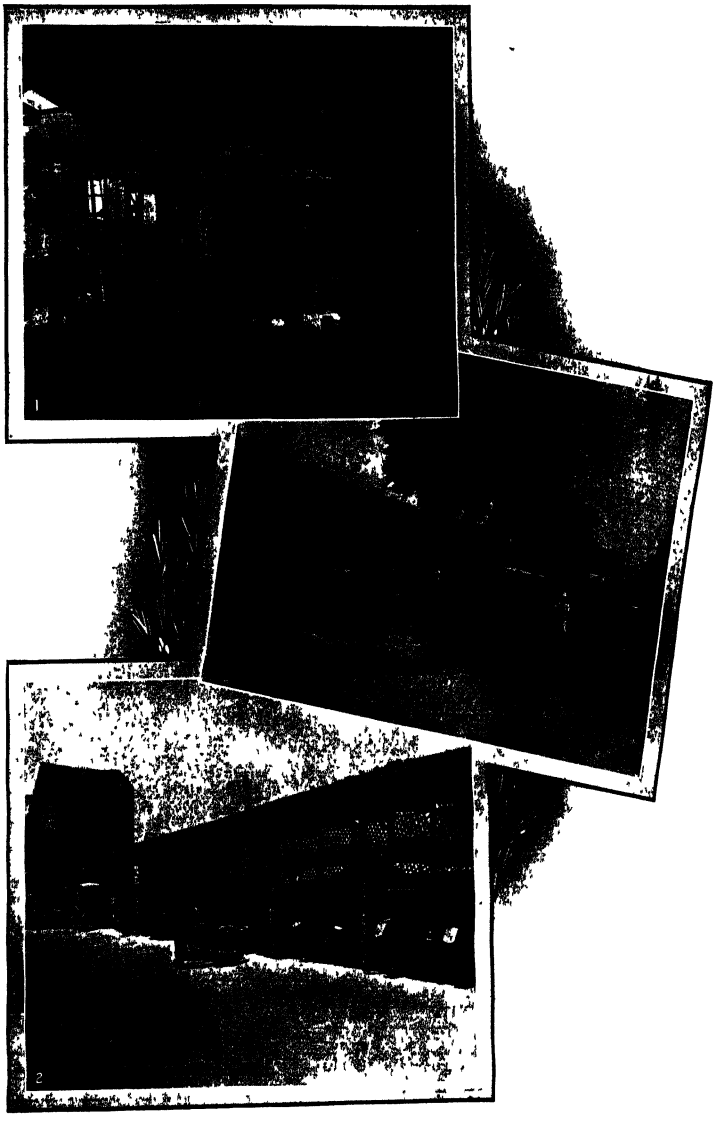
In February 1911 Sir A. H. McMahon, a successor of Mr. Barnes, stated as follows: "Mahomed Ali Alibhoy is the head of the Bohra community in Quetta, and has done much good work in that

railways, and in supplying all kinds of stores, materials and other goods for the various departments of the companies by whom he was employed. Year by year he continued to carry out his undertakings in a most efficient manner, and it was in recognition of his valuable and faithful services that the Government bestowed upon him the title of Khan Sahib, to be followed at a subsequent date by the more distinguished honour of Khan Bahadur. Although this gentleman is approaching his sixty-fifth year, he still takes an active part in the conduct of his business operations, which

Karachi, but this venture has been developed to such an extent that it has outgrown the promoter's original conceptions and has become one of the best-known motor agencies in Northern India.

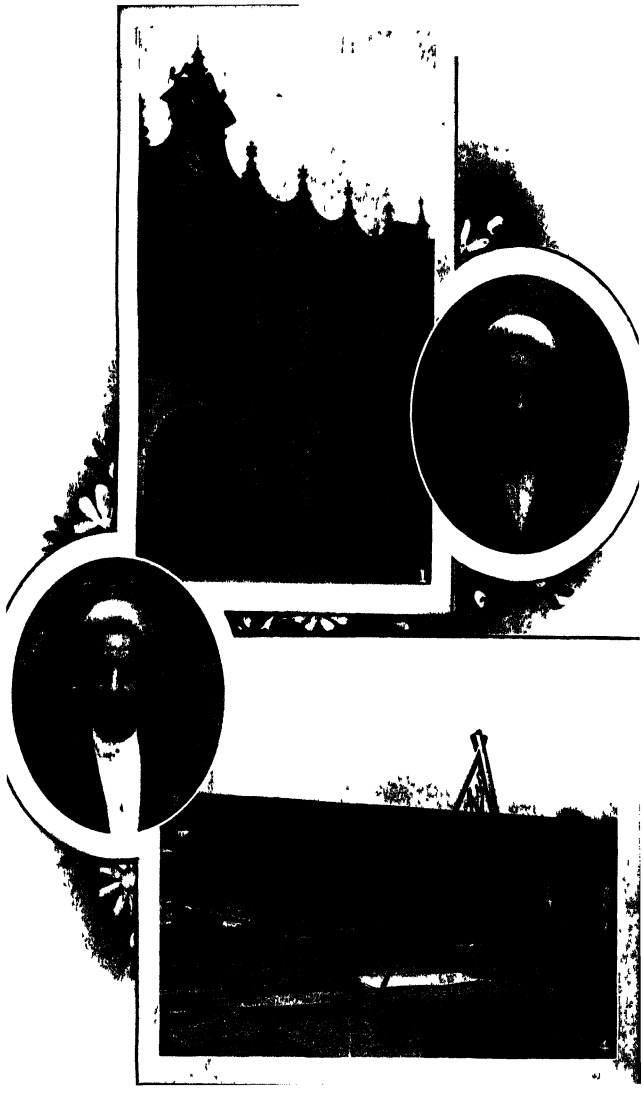
Karachi, now the headquarters of the motor business, has a very extensive garage and workshops fitted with up-to-date machinery for repairs, and for the manufacture of all descriptions of spare parts or replacements for any kind of motor vehicle, all of which are made by expert European workmen at Karachi and Quetta from the best imported metals.

The Khan Sahib deals in English, Con-



KHAN SAHIB ABDUL SATAR.

1. Machine Shop, Sind Garage 2. Repair Shop (Temporary). 3 The Quetta Garage



MOHAMEDALI ALLIBHOY KARIMJI AND SONS.

1 Office Building 2 Seth Hasanally Mahomedally, Sole Proprietor. 3. Seth Adamally Mahomedally

tinental and American cars exported by leading manufacturers, and it has been his aim to meet any requirements which may be made upon him from any part of Sind, Baluchistan, the Province of the Punjab, and the northern portion of India generally.

Khan Sahib Abdul Satar is also the proprietor of the Quetta Picture Palace, which is declared to be the theatre *de luxe* in Baluchistan. The structure is a really handsome specimen of modern architecture, and although a site of waste ground had to be put in order for the work, the building was erected in the incredibly short period of thirty-seven days, with the result that a most careful inspection of it did not reveal anything lacking in the way of decoration, furnishing, or comfort for patrons. It is situated in Circular Road, adjacent to the important thoroughfare known as Bruce Road, and quite near to the Quetta Club, the whole of the premises covering an area of 12,000 square feet. It has been designed in such a manner as to be easily adaptable for variety as well as operatic performances, and there is ample accommodation for fully 600 persons.

The electrical plant employed is of the most up-to-date character that could be procured, and it is capable of illuminating 1,000 lamps of 110 volts, each of 25 candle power, but a second installation has been provided for use in case of emergency.

All films, which are of modern production, are rigidly inspected before being placed before the public, and thus it follows that there is never the slightest likelihood of offence being given to the most fastidious adults or even young children.

The theatre supplies a long-felt want in this part of Quetta, and the crowds of people who throng to the performances are loud in their praises of the excellent judgment of the Khan Sahib in his selection of the entertainments provided.

It only remains to be added that the members of the staff have been trained to perform efficient service, and that the proprietor is always on the alert to secure the fullest approval of his numerous supporters.

MOHMEDALI ALLIBHOY KARIMJI & SONS.

This firm of merchants, dealing in building materials of all descriptions, engineering plant and tools, with specialities in general and marine hardware, was established in the year 1861 by the late Mr. Allibhoy Karimji, who set out on his business career from Mandvi, on the Cutch coast, with brass and copper goods, eventually opening a small shop in the Camp at Karachi. He shortly afterwards engaged in supply and transport work for the military authorities, and when the Afghan War broke out he obtained a contract to supply stores to troops, the goods being purchased in Bombay and forwarded thence to their destinations. That may be said to mark the real commencement of the huge undertakings in which the firm are now concerned.

A further opportunity for the extension of Mr. Allibhoy's business occurred in 1870, when he agreed to provide materials and general stores for the construction of the Indus-Punjab railway section, and that contract was a particularly profitable one to him, as he at that time possessed the only hardware stores in Karachi. All stock-in-trade had up to 1895 been drawn from Bombay, but Mr. Allibhoy, realizing that he laboured under considerable disadvantage by so doing, determined to import direct from England and thus to place himself in a position to accept Government work generally throughout the Punjab and Baluchistan.

Mr. Allibhoy did not, unfortunately, live long to enjoy the fruits of his endeavours, and he was succeeded by his son, Mr. Mohmedali Allibhoy, while on the latter's retirement in July 1916, the whole concern was transferred to his two sons, Messrs. Hussan Ali and Adam Ali Mohmedali, they retaining the original style of Mohmedali Allibhoy Karimji & Sons.

The partners soon after their assumption of control established a department for the sale of marine machinery, hardware and general stores, and structural engineering, and they continue to import all their goods, practically all of which are obtained from British firms. Their names are on the list of Government contractors, and they are constantly supplying stores of all kinds to Public Works Departments, the military authorities, several native States, the Ordnance Department, the Karachi Port Trust, the North-Western, the Oudh and Rohilkhand, the Jodhpur-Bikaner, and other railway systems, together with municipalities throughout the north-western portion of India.

The headquarters of the firm cover an area of 6,000 square yards on the Bunder Road, opposite the Max Denso Hall, and they have branch offices in Preedy Road within the Camp boundaries, while their godowns, standing on 20,000 square yards of land, are situated in Queen's Road.

The above-named premises, together with other property in Karachi, are owned by the Allibhoy family.

MOOLJEE MORARJEE SOONDERJEE.

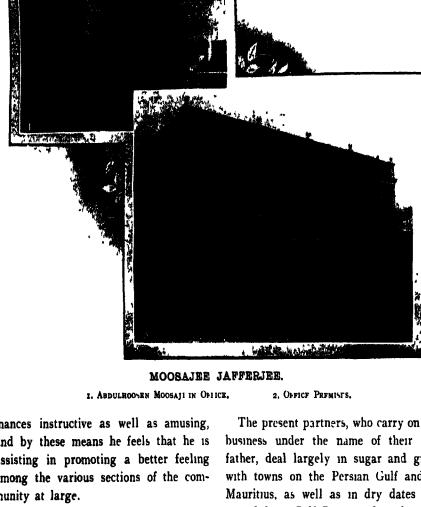
The founder of the firm of Mooljee Morarjee Soonderjee was Morarjee Soonderjee, who was born at Cutch, on the western coast of India, and removed to Karachi, where he established and developed a large business as a wool merchant. He died in 1918 at the age of seventy-five years, and was succeeded by his sons, Mooljee Morarjee Soonderjee and Gordhandas Morarjee, who trade under the name at the head of these notes as general merchants, commission and financial agents, and also as agents for the Persian Gulf Stream Navigation Company, Ltd., whose vessels run between Gulf ports and Bombay and Karachi, connecting at the two latter places with steamers belonging to other companies.

The senior partner in the firm was educated at the Narain Jagannath High School at Karachi, and commenced his business career at the early age of twenty years, taking over full control of the undertaking in which he is now the moving spirit, seeing that his brother does not take any active part in management.

The firm did not escape the hardships and inconvenience which fell upon commercial houses generally during the Great War, but their unwavering loyalty to the British Government was plainly manifested by their readiness to assist the military authorities in every possible way. They contributed liberal sums to various war funds, and invested a considerable amount of money in war loans and bonds, but even during this period of abnormal strain upon their financial resources, they did not neglect their practice of supporting local charitable institutions or of relieving individual cases of suffering and poverty.

Mr. Mooljee Morarjee is also proprietor of the "Kohinoor" Cinematograph Theatre, which covers an area of about 1,000 square yards and has seating accommodation for 1,000 persons. The building was furnished and fitted throughout in a thoroughly up-to-date manner, and every imaginable device cal-

culated to ensure the comfort of patrons has been skilfully carried out. The decorative work has been executed by experts, and special attention has been devoted to arrangements for maintaining an abundant supply of fresh air even during the most unfavourable atmospherical conditions. The proprietor is persistent in his determination to avoid the exhibition of films to which the most fastidious persons could object, and parents of children have no hesitation in permitting their offspring to visit the "Kohinoor." Mr. Mooljee endeavours to make his performances instructive as well as amusing, and by these means he feels that he is assisting in promoting a better feeling among the various sections of the community at large.



MOOSAJEE JAFFERJEE.

1. Abdulroosen Moosaji in Office. 2. Office Premises.

MOOSAJEE JAFFERJEE.

It is well known that trading was carried on several hundreds of years ago between the Red Sea and the Persian Gulf and certain ports on the north-western coast of India, chiefly, however, with Surat, though in course of time Karachi began to be famous for its extensive imports of grain and other agricultural produce.

Old histories of India state that Karachi was "a small fishing village" three-quarters of a century ago, but about the year 1845 Mr. Ismailjee Karimjee (who was born in Cutch) had sufficient confidence in the future of the place to establish himself there in business as a merchant and commission agent.

By persevering habits the founder succeeded in building up a sound connection in the purchase and sale of commodities of a general character, and on his death his son, Moosajee Jafferjee, greatly extended the operations of the business, with the result that when he died in the year 1912 he bequeathed to his sons, Abdul Hoosein Moosajee and Ismailjee Moosajee, a really thriving undertaking.

The present partners, who carry on the business under the name of their late father, deal largely in sugar and grain with towns on the Persian Gulf and in Mauritius, as well as in dry dates imported from Gulf Ports, and at the present time they are negotiating for regular shipments of various descriptions of goods to and from Europe and America.

They are thoroughly progressive commercial men, and they keep themselves well informed as to the fluctuations in market prices in order that they may give complete satisfaction to the large number of persons who send consignments to them for disposal on commission. Acquaintance with the English language, too, is of the greatest advantage to them in carrying out transactions with firms in Great Britain, and as they enjoy the confidence of those with whom they have had dealings, they are fully justified in inviting correspondence from new patrons in the chief trading centres of the world.

Each of the brothers is highly respected in Karachi, not only in business circles, but also in the community of Borah Mahommedans to which they belong.

The firm are owners of a considerable quantity of landed property in Karachi, and they are so public-spirited that they are ever ready to support sound schemes for the improvement of the port and town in which they reside.

NARAINDAS & CO.

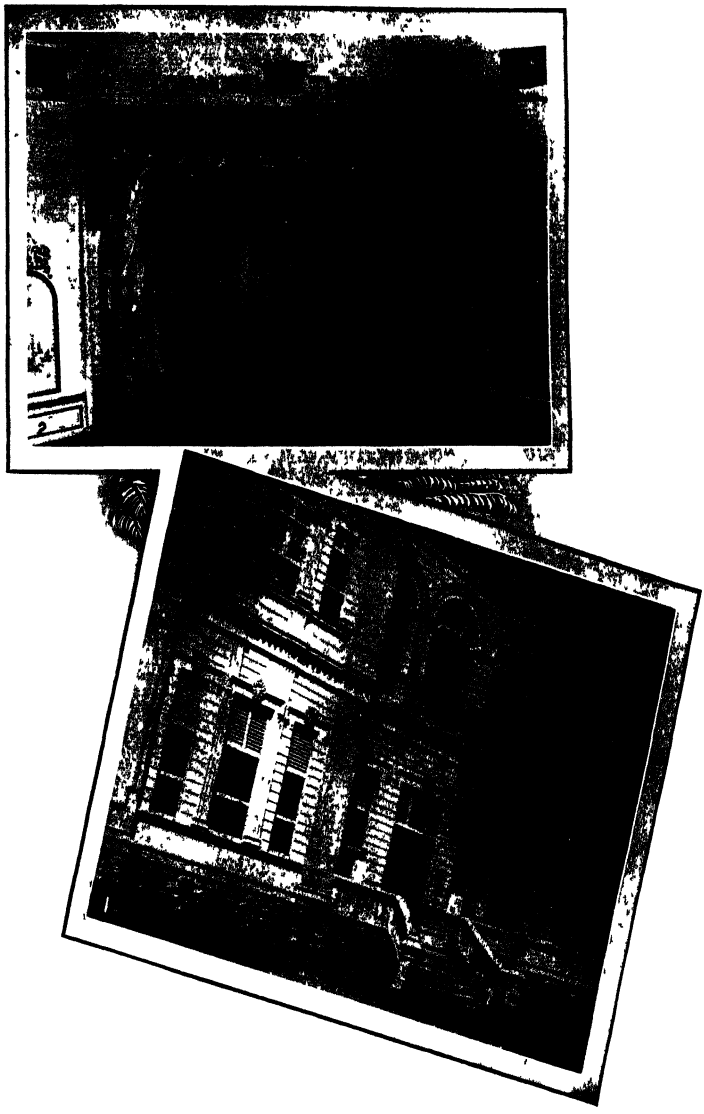
This firm was originally established in Quetta in the year 1905, and they were the founders of the cycle and motor trade in Baluchistan. In 1916, however, the firm removed their headquarters to Karachi, although they retained an interest in the Quetta concern until the following year, when they devoted their energies entirely to the business in Karachi, a seaport of very great importance.

Before the business of automobile engineers and wholesale importers of motor-cars, cycles, and accessories was established by Messrs. Naraindas & Co., at Karachi, in the year 1916, all goods connected with the motor industry had to be ordered through Bombay or Calcutta. Therefore, by their enterprising spirit the firm took the lead in the introduction of motor vehicles into the capital city of Sind.

It required no small amount of courage on the part of the firm to make a new beginning at Karachi at a time when the disordered state of trade, caused by the late war, prevented the importation of motors, but they opened their premises with such cars as they had in hand, together with a very substantial stock of spare parts and accessories.

The public were quick to realize that the partners were experts in the motor line, and as the firm manifested tact in business matters and mature experience of their work, they soon secured a large number of permanent patrons. Their undertaking proved so successful that, in a short space of time, cars in Karachi were trebled in number, and cycles were counted in hundreds instead of units.

The business developed so rapidly that the firm have already been compelled to extend their garage and workshops, and they now occupy extensive buildings at



MOOLJEE MORARJEE SOONDERJEE

1 Residence 2. Interior, Koh-i-noor Cinema

NARAINDAS & CO

1. New Premises (Under Construction) and Old Premises 2 Motor Garage and Workshop 3 Corner of Showroom. 4 Staff Group

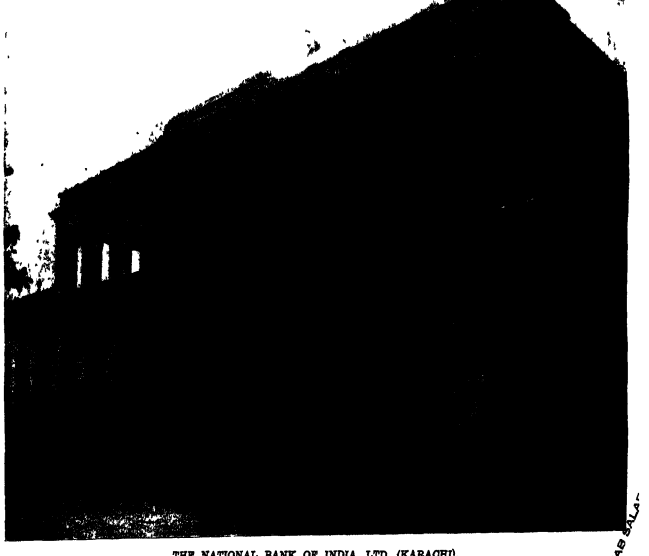
the corner of Garden and Bunder Roads. This is an admirable situation, being not only central and within a short distance from the principal business quarters of Karachi and the civil and military residential quarters, but also near to the parks and public gardens, which are greatly favoured by motorists.

Messrs Naraindas & Co. deal only in the best English, Continental, and American cars and cycles, and as their showrooms are always well stocked with spare parts and accessories of all kinds, they are fully justified in claiming that they are able, at the shortest notice, to satisfy the requirements of their customers in the sale or exchange of cars or in the supply of any movable or fixed fittings, however complex the order may be. The name of the firm is well known and highly respected in Karachi, as well as throughout the Provinces of Sind, Baluchistan, and the Punjab, including the North-Western Frontier, and this reputation has only been gained by honourable dealings, skilled workmanship, and promptitude in all matters of business.

Adjoining the main premises are repairing shops, equipped with an adequate quantity of up-to-date machinery and tools, and all work undertaken in these departments is executed by highly-trained specialists.

The partners, who are Sindhi gentlemen hailing from Shikarpur, in the district of Sukkur, are as popular in private as in business life, and they are greatly respected, not only by their own community, but also by the public at large.

The telegraphic address of the firm is "Automobile, Karachi."



THE NATIONAL BANK OF INDIA, LTD. (KARACHI).

THE NATIONAL BANK OF INDIA LTD., KARACHI PREMISES.

THE NATIONAL BANK OF INDIA, LTD. (KARACHI).

This bank was originally established in Calcutta on September 29, 1863, as the Calcutta City Banking Corporation, Ltd., the name being altered to the National Bank of India, Ltd., on March 2, 1864. A branch was opened at Karachi on March 10, 1884, and there are now others at Bombay, Madras, Amritsar, Lahore, Cawnpore, Delhi, Chittagong, Tuticorin, and Cochin in India; at Colombo, Kandy, Newera Eliya, in Ceylon; at Rangoon and Mandalay, in Burma; at Aden and Steamer Point, Aden, in Arabia; at Zanzibar, Mombasa, Nairobi, Entebbe, Kampala, Nakuru, Kisumu, and Jinja, in Africa; and at Tanga and Dar-es-Salam in the occupied territories of the late German Colony in East Africa.

Interest is allowed at the rate of Rs. 2 per cent. per annum on the daily balances of current deposit accounts up to Rs. 1,00,000, but no interest is allowed on total credits of less than Rs. 1,000. Fixed deposits are received on favourable terms, which may be ascertained on application at any of the offices. General banking business connected with India and England is conducted; interest, dividends, Western Frontier, and this reputation has the safe custody of valuable documents is

NUSSERWANJEE & CO.

1. Head Office and Stores, Elphinstone Street. 2. Interior, Elphinstone Street Stores. 3. Bonded Warehouse.
4. City Branch Stores. 5. The Flour Mill.

undertaken. Indian Government securities, stocks and shares are purchased or sold, and bills payable in Europe, Africa, America, Australia, India, Burma, and Ceylon are negotiated or collected. Drafts are granted at the exchange of the day on the bank's London office, 26 Bishopsgate Street, E.C., and on its branches and agencies, and when required, the first of exchange will be forwarded direct to the payee, free of charge. The bankers of the company in Great Britain are the Bank of England, the National Provincial Bank of England, Ltd., and the National Bank of Scotland, Ltd.

The ninety-ninth report of the directors (together with a statement of accounts to December 31, 1916) was submitted to the shareholders at the annual meeting in London on March 27, 1917, and, notwithstanding the crippling effect upon commerce caused by the Great War, the very satisfactory position of the bank was shown by the fact that the net profits for the previous year, after providing for bad and doubtful debts, amounted to £400,613 15s. 1d. An *ad interim* dividend at the rate of 16 per cent. per annum, free of income tax, and amounting to £80,000, had been paid for the half-year ending on June 30, 1917, and the directors then recommended a further dividend at the rate of 16 per cent. per annum, making 16 per cent. for the whole year. They further proposed to add £50,000 to the reserve fund, raising it to £1,250,000; to write off £10,000 from the house property account; and to place £10,000 to the officer pension fund; leaving a balance of £106,689 8s. 5d. to be carried forward. The amount of the subscribed capital is £2,000,000, of which the sum of £1,000,000 has been paid up by 1,328 shareholders.

The chairman at that meeting said: "Since the outbreak of the war 151 men from the head office and 11 from the eastern staff have joined the forces, the great majority of them being now on active service. Of these, I regret to say that we have to deplore the loss of seventeen killed. It is very sad to think that so many of our fine young men should have been called upon to lay down their lives in their country's cause, each at the outset, one may say, of a promising career, and our heartfelt sympathy goes out to their bereaved families. Twenty-nine of the number have been wounded more or less severely, some of them more than once, and one and all have borne themselves with credit and distinction in whichever field they have been called upon to serve. One has gained the Military Cross, and several have been mentioned in dispatches."

The board of directors consists of Mr. Robert Campbell (chairman), Mr. Robert Williamson (deputy-chairman), Mr. C. C. McLeod, Sir John P. Hewett, G.C.S.I., and Messrs .Robert Miller, Alfred Simson, J. N. Stuart, and J. A. Toomey.

The manager in Karachi is Mr. T. J. Stephen, and the office in that city is situated in McLeod Road, next to the city terminus of the North-Western Railway, and almost opposite to the Currency Office on the same road. Large and commodious godowns are attached at the rear of the bank in the compound, and the clearing, storing, and forwarding of all goods for constituents is taken in hand. The bank building has recently been considerably enlarged and improved. At the time of writing, the Karachi branch has placed the whole of its resources at the disposal of Government for the purpose of assisting them to finance shipments of wheat.

The bank is represented in Basrah by the Imperial Bank of Persia and the Imperial Ottoman Bank, and throughout Persia by the Imperial Bank of Persia, and every endeavour is being made in conjunction with those banks to facilitate trade between Karachi and Gulf ports. The bank is represented in Mauritius by the Mauritius Commercial Bank, and in Egypt by the National Bank of Egypt and the Anglo-Egyptian Bank, and in America by the Anglo-South American Bank and the Bank of British North America.

NUSSERWANJEE & CO.

Little more than half a century ago Karachi was a small fishing town, but its unique position as the most westerly of Indian harbours, and the natural outlet for the Punjab and the North-Western Provinces, has converted it into a growing seaport and city of more than 150,000 inhabitants, and the official headquarters of the Commissioners of Sind.

Its expansion has been phenomenal, as in the year 1838 there were only about 14,000 inhabitants; in 1872 the population had reached 56,000; in 1891 statistics showed 105,000 residents; and in 1901 the figures had risen to 117,000.

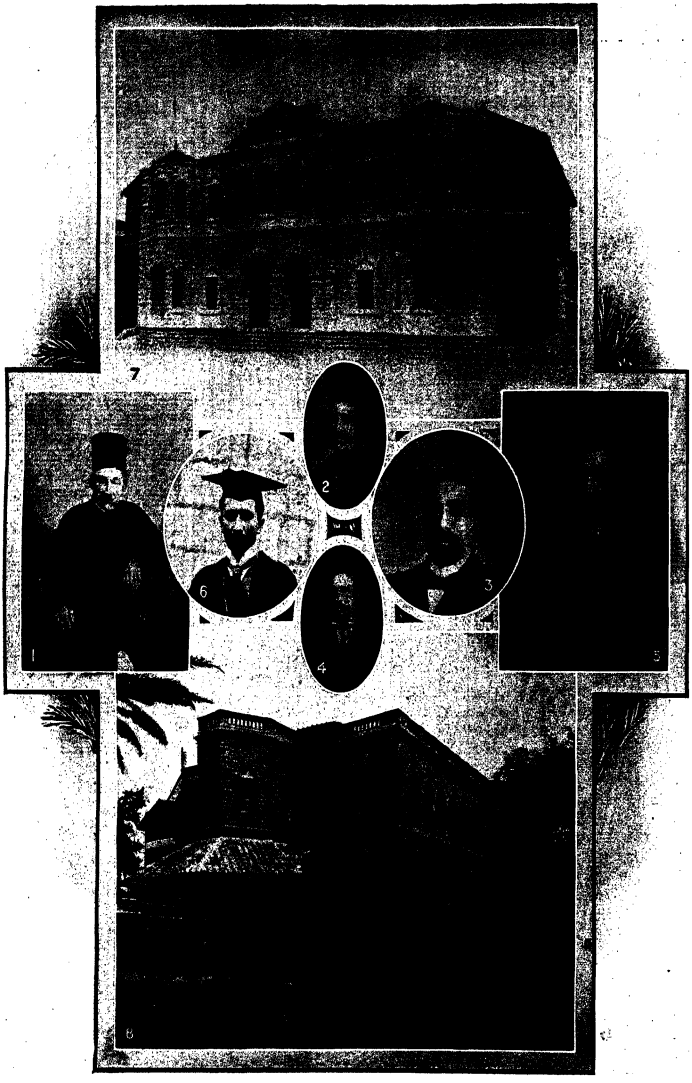
Commercial enterprises of small dimensions have become vast undertakings, and traders have developed into full-blown merchants.

Among those who have taken part in the upbuilding of Karachi is Khan Bahadur Nusserwanjee R. Mehta, the head of the firm of Messrs. Nusserwanjee & Co., who established himself in a small way of business in the year 1879 as a general merchant. The proprietor devoted all his energy to his venture, and he had the satisfaction of witnessing its growth until its expansion necessitated greatly increased accommodation. He therefore in 1903 obtained a plot of land, about 3,000 square yards in extent, with frontages upon Elphinstone and Dundas Streets, and built upon it handsome double-storeyed premises, of Karachi stone, containing retail stores and head offices. Since that time Mr. Nusserwanjee has added a wholesale and bonded warehouse in Machimiani Street, near to the Customs House and railway offices, together with a branch establishment in another portion of the city, and a further one at Kiamari, a suburb of Karachi.

The concern is divided into three departments, namely: (1) a retail store; (2) wholesale stores, which despatch supplies to merchants in districts between Karachi, Peshawar, and Quetta; and (3) the indent department (carried on under the name of the London, India, and Persian Gulf Trading Company), through which goods for local and *mofussil* merchants are obtained direct from manufacturers in various parts of the world.

The firm are holders of a contract to supply refreshments on the North-Western Railway system, this service being conducted from a branch office in Lahore, and they are also contractors with Government for the manufacture of country liquor in Sind, for which purpose they have their own distillery at Kotri, distant about 100 miles from Karachi. Large stocks of goods of a general character are kept in the Elphinstone Street depot, such as wines, provisions of all kinds, fancy articles, and numerous other sundries, while in order to be in touch with the times, the firm import motor-cars and accessories of various kinds.

An aerated water factory has been erected on the main premises, and the steam-driven machinery is capable of turning out about 200 dozens of bottles per hour. The whole of the output is consumed in Karachi, a considerable portion being disposed of under contract to clubs, hospitals, military messes, as well as to private individuals.



PESTONJEE BHICAJEE.

1. Pestonjee Bhicajee.
2. Pherozshaw Pestonjee.
3. Sorabji Pherozshaw.
4. Jehangeer Pherozshaw.
5. Byramjee Pherozshaw
6. Pesnoton Sorabji.
7. Pestonjee Bhicajee's Office and own Building.
8. Gulistan, the Home of Sorabji Pherozshaw.

Messrs. Nusserwanjee & Co. are owners of the Sind Patent Tiles Company, of Karachi, who manufacture tiles of any design or colour for the flooring of public institutions, banks, offices, churches, and private residences, and as those products are absorbent they possess the inestimable advantage of being able to counteract the extremes of climate. All tiles are made of the best materials, and they have been greatly increasing in popularity for many years past. The firm have supplied tiles for many buildings in Karachi, and throughout Sind and adjacent territories, including: Government House, the "Armadale," the skating rink, the convent, the National Bank of India, and the Railway Institute, all in Karachi; an engineer's bungalow in Hyderabad; the convent, Mooltan; the cathedral, Saharanpur; the Masonic Hall, Sukkur; the agricultural building, Mirpur Khas; the Punjab Bank, Quetta; and various other structures.

The enterprising spirit of the firm has recently led them to launch a concern styled the Sind Chemical Company for the manufacture of carbonic acid gas.

The business qualifications of the partners are further manifested in their position as secretaries and treasurers of the Karachi Steam Roller Flour Mills Company, Ltd.

The mills were established in the year 1904 by Mr. Nusserwanjee, and were worked by him with considerable success until expansion of business demanded further capital. A limited liability company was therefore formed in 1907, and the mills are now one of the most flourishing and well-managed concerns in Sind. The building is equipped with up-to-date Rochdale machinery, and the plant has a daily grinding capacity of 1,500 maunds. The motive power is at present supplied by a steam engine and boiler, but it is proposed to substitute a Diessel crude oil engine in the near future.

The several departments of this extensive undertaking are controlled by Khan Bahadur Nusserwanjee Mehta, who is assisted by his two sons, Messrs. Hormusjee and Jamshed Nusserwanjee Mehta.

The head of the firm was honoured with the title of Khan Bahadur during the visit of His Majesty the King-Emperor to India on the occasion of the Durbar at Delhi in 1911.

The telegraphic address of the firm is "Ascendam, Karachi."

THE "PARSI SANSAR" AND THE "VICTORIA PRINTING WORKS."

The *Sansar* was established in May 1909 as a monthly journal, comprising only four pages of foolscap size, but as it continued to increase in popularity it was increased to six pages and was issued fortnightly from the 1st October, 1911. On the 1st December, 1912, the paper was printed in the "Victoria Printing Works," which had been acquired by the proprietor of the journal, and on the 1st March, 1913, it was issued weekly instead of fortnightly.

The present proprietors of the whole concern, Mr. Jehangir F. Punthakey and Mr. H. F. Punthakey (carrying on business under the name of Punthakey Brothers), had an interest in the journal as well as the printing offices in the year 1912, but they did not become sole owners until the 1st August, 1917.

The newspaper was of little consequence as a literary production for a long time after its establishment, but it is now regarded by the Government and in commercial and social circles as an admirable agent for the dissemination of news, and it has a large circulation in other countries than India.

As a well-known Anglo-Gujarati weekly, the *Sansar* publishes breezy articles on current economic, social, and religious topics, and it is as popular in the warehouse and shop as in the palaces of the nobility or the homes of the working classes.

The journal is conducted in an able manner by Mr. Phirozshaw H. Dastoor Meherjerana, who has had more than fifteen years' experience as an editor.

PESTONJEE BHICAJEE

When Sir Charles Napier was engaged in the conquest of Sind in the year 1855, his army was accompanied by Mr. Pestonjee Bhicajee, who undertook in a private way to supply provisions and stores under military protection.

After completing this task in a most satisfactory manner, Mr. Pestonjee established himself at Karachi, in Sind, and he continued to carry on the business until he was succeeded by the late Mr. Peerozshaw Pestonjee, who was sole proprietor until his death in 1891, when his second son—Mr. Sorabji Peerozshaw—who had assisted his father for about seven years, took over the whole concern, at the same time admitting into partnership his brothers, Messrs. Jehangir Peerozshaw and Byramjee Peerozshaw, these three being the present proprietors.

The three brothers carried on the business under the name of Pestonjee Bhicajee, and they are now one of the best-known firms in Karachi, trading as Stevedores, Admiralty and general contractors, and ship chandlers. The firm have been regularly employed in one or more of these capacities by the British India Steam Navigation Company, Ltd., for more than sixty years, by the Bombay-Persia Steam Navigation Company, for a similar period, by the Asiatic Steam Navigation for more than twenty-five years, and by the Hansa line of steamers and the Austrian Lloyd Steam Navigation Company, for about twenty-five years prior to the Great War. They have also been entrusted with work, or orders, for supplies for about two-thirds of the demands made during the past fifteen years by the numerous "tramp" steamers which have visited Karachi.

Notwithstanding the great diminution in the number of vessels available for ordinary cargoes as well as passengers since August 1914, the firm have cleverly maintained the highly satisfactory character of their business. The late Mr. Peerozshaw Pestonjee, the father of the present proprietors, was an exceedingly able man of business, and he succeeded in a very great degree in securing the confidence of all the European and other firms with whom he had transactions. He was equally honoured and respected among his own community, of which he was an orthodox member, and it was not until he was removed by death at the early age of forty-seven years that his generous yet unobtrusive charitable actions, and his upright relations with his fellow men, were appraised at their true value.

This gentleman possessed a keen and well-balanced mind, and his judgment was invariably so correct that leading commercial men in Karachi were frequently glad to consult him when confronted with difficult problems. The highest ambition of the partners is to follow the example of their late father, and that they have succeeded so well is evidenced by the fact that the volume of business now passing through their hands annually is more than 300 per cent. greater than it was when they became proprietors.

The partners have recently constructed a number of sea-going craft of the *Kotia dinghey* type with the object of meeting

the great need for cargo space at a time when the Government have requisitioned the major portion of the accommodation in steamers which are in the habit of calling at Karachi.

During the war of 1914–18 Messrs. Pestonjee Bhicajee did admirable work for the British, French, Italian, Belgian, and Portuguese Governments, and the following certificate testifies to the general ability of this firm, especially with regard to its specialities of stevedoring and *dubashing*.

1. Offices. 2. Residence. 3. Ramchand Jethmal.

"Messrs. Pestonjee Bhicajee have been of great assistance to the embarkation staff when it was impossible to procure coolies, and had it not been for them the work would have been stopped, especially at night. I therefore recommend them with pleasure as a reliable firm who can be depended upon in cases of emergency. They have been working a large number of transports. Signed. B. Winter, Major. The Embarkation Commandant, Keamari."

The telegraphic address of the firm is "Jehangeer," Karachi.

RALLI BROTHERS.

The city of Karachi had grown in commercial importance at an exceedingly rapid rate during the past quarter of a century, but there are several merchant firms who were established there when the now flourishing seaport was undeveloped and when the inhabitants did not exceed 15,000 in number.

One of such firms is that of Messrs. Ralli Brothers, who commenced trading in the year 1865, and who to-day have numerous agencies in Sind, the Punjab, and other up-country territories. A very large business has been built up by them in the export of wheat, food-grains, oil-seeds, cotton, hides, and other indigenous produce, while their importing operations—which are equally as extensive—embrace piece-goods, sugar, and a variety of commodities of a general character.

Their offices are situated in Wood Street, one of the leading thoroughfares in Karachi.

RAMCHAND JETHMAL.

Fifteen years' practical experience intelligently acquired with a prominent European firm of general engineers in Karachi, enabled Mr. Ramchand Jethmal to commence business on his own account in the same line and in the same city. At the outset he occupied premises of a comparatively insignificant character, but as his persevering efforts resulted in the widening of his sphere of operations, he subsequently removed to a more commodious building in Bunder Road, which is in the centre of the commercial activities of this rapidly growing seaport.

Mr. Ramchand deals largely in metals, machinery, and general hardware goods, engineering stores, paints, oils, varnishes, and other goods, while he makes a speciality of galvanized and wrought-iron pipes and necessary fittings. He is a direct supplier to several railways, Public Works Departments, the military authorities, municipalities, and the Port Trust at Karachi, from whom he has recently accepted a contract for the delivery of a very large quantity of metals.

The stores are always well stocked with an excellent assortment of goods in order that the proprietor may at all times meet the rapidly increasing requirements of his numerous customers.

Mr. Ramchand received excellent testimonials from the firm by whom he was in early life employed, and his characteristics to which they refer, namely, attention to duties, trustworthiness, capability as a salesman, and zeal in work, have been manifested in a still greater degree as he has advanced in years, and have consequently resulted in the building up of an undertaking which has reached very considerable dimensions.

Mr. Ramchand enjoys the full confidence of his employers, as they can always depend upon him for giving "good value for money," and above all they can rely upon punctual execution of all orders entrusted to him.

RAMJI PETHABHAI.

It falls to the lot of few firms, even in India, where a rapid expansion of a concern is frequently met with, to have the experience of commencing in a very small way of business as petty dealers half a century ago, and of now being mill and shipowners and general merchants carrying on large commercial undertakings with nearly every country in the world.

That is, in brief, the history of the firm started by Pethabhai Ratansi, the father of the present partners, at Karachi in the year 1868.

One of the earliest signs of progress was given when Mr. Ramji began to purchase sugar, dates, and other commodities for the market at Jamnagar, in Kathiawar, but this venture has been so largely developed that consignments are now sent to the Far East, South Africa, Basra, and other ports on the Persian Gulf, while wool is being exported to Marseilles, Alexandria, and Red Sea ports.

The firm formerly held the agency in

Karachi for the Burma Oil Company, but owing to a change in the managing agency of that company for India, the firm relinquished their position in order to become representatives of the Standard Oil Company, whose products are exported to various places on the Kathiawar coast ports and the Persian Gulf. They are also owners of several country ships running between India and East and South Africa, Madagascar, Arabia, and the Persian Gulf, and cargoes of Indian goods of all kinds are exchanged for the products of countries to which the vessels are sent.

The Sind Ginning and Oil Manufacturing Company, Ltd., was established by the firm in 1910, but owing to the difficulty in procuring cotton at the present time the factory is used entirely for pressing coco-nut and other oils. Another mill has recently been erected at Karachi and is being worked in a similar manner, and now a new building in the Lyari quarter has been constructed upon an area of nearly two acres.

The management of the whole business is in the hands of four sons of Mr. Pethabhai, namely, Messrs. Ramji, Bhimji, Alibhoy, and Meharally, having their headquarters at Jamnagar under the name of Pethabhai Ratansi, at Karachi, where the style is Ramji Pethabhai, and at Basra and Mohamerah as Meharally Pethabhai.

THE SIND FLOUR MILLS COMPANY, LTD.

Although India is now producing a large quantity of wheat, particularly in the north and north-western districts, reports show that the bulk of it is exported to England. Economists urge that such a practice is detrimental to the best interests of India, seeing that the development of the flour-milling industry would necessitate the making of more machinery, would find remunerative employment for thousands of workers, and would increase the quantity of locally manufactured food products, thus keeping in the country a large amount of money which is now spent elsewhere for imported goods.

Blame for the slow growth of milling does not, however, lie at the door of capitalists, merchants, or agriculturists, *per se*, as railway companies in India quote more favourable rates for the carriage of wheat to seaports for exportation than they do for the same commodity when sent to mills to be ground into flour. Complaint is also made that in those days when railway traffic was inconsiderable and profits were not forthcoming, deficits had to be made up by the people of India, but that at the present time, when dividends are satisfactory and when the country is crying for greater industrial reforms, the companies turn a deaf ear to legitimate grievances.

Milling concerns carrying on business within a short distance from seaports do not suffer so severely as others from enhanced wheat and flour rates, and the Sind Flour Mills Company, Ltd., of Dhobie Ghat Road, Karachi, is a case in point.

The company was formed in 1896, and in the following year the mills were started, having been equipped throughout with first-class modern machinery and plant supplied by the eminent firm of Messrs. Henry Simon, Ltd., of Manchester.

All wheat used in the mill is purchased in local markets, and practically the whole of the output of flour, which can be ground at the rate of 750 sacks daily, is consigned to ports on the Malabar coast, the Red Sea, Ceylon, Egypt, and Mauritius.

Only the best samples of wheat are accepted, and the flour and other products of the company are regarded as being of a high standard of excellence.

The authorized capital of the company is Rs. 3,00,000, of which Rs. 2,87,000 have been paid up in 574 shares, each of Rs. 500.

The Directors are Messrs. Thomas Cosser (chairman), W. D. Young, Donald Miller, and George Miller (*ex officio*). The agent and director is Mr. George Miller; the mill manager is Mr. William Miller; and the chief engineer is Mr. J. W. Seager; while the company employ about a hundred workmen.

SETH HAJEE ABDULLAH HAROON

For the origin of the important business conducted by Seth Hajee Abdullah Haroon in Karachi, one must revert to the year 1844, when his grandfather, Seth Aboobuckar Hassan, arrived in that city and established himself as a general merchant, dealing in all classes of goods. His efforts were rewarded with considerable success, and on his death he was succeeded by his son, Haroon, who proved to be as capable in business matters as his father.

Haroon passed away in 1877, leaving three minor sons, Saleh Mahomed Oosman and Abdullah Haroon, who were placed under the guardianship of their late brother-in-law, Seth Saleh Mahomed Oomer Dossul. The latter was ably assisted by the mother of the boys in giving them suitable educational facilities, which were backed up by a good home training in the principles of rectitude and morality in their every-day life. The business was temporarily closed during the minority period, but when

RAMJI PETHABHAI & CO.
PROPRIETORS, AND INTERIOR OF OIL MILLS.

Abdullah Haroon was of full age he became proprietor and commenced business as an export and import commission agent. His capabilities have been proved by the rapid growth of his undertaking, he having now established trading relationships with Java, Mauritius, and South Africa, as well as with London and other important centres in Europe.

Seth Hajee Abdullah Haroon is a public-spirited leader of the Mussulman community in Karachi, and his untiring efforts to render assistance to his less fortunate fellowmen have been recognized by his having on two occasions been chosen as a municipal councillor, and by his appointment as Hon. Magistrate. He is an enthusiastic supporter of the cause of education, and for many years he has been a member of the Sind Madressah-t-ul-Islam, while in 1911, on the visit of the Muslim University deputation to Karachi, his valuable advice and help were of the greatest assistance, and his donation of a sum of Rs. 5,000 in aid of the cause was much appreciated. This gentleman recently offered Rs. 25,000 to the Sind Arts Collage for the erection of a hostel and mosque for Muslim boys, additions which are urgently needed by that institution, and throughout the Great War he has subscribed most liberally to various relief and other funds.

HAJEE ABDULLAH HAROON.

1. Hajee Abdullah Haroon and Children. 2. Residence. 3. Drawing Room.

K. J. SOPARIVALA & CO.

Consideration of the history of this firm leads one to hark back to the year 1852, when Mr. Shapurjee Hormusjee, a native of Surat in the Bombay Presidency, was attracted by the commercial possibilities of Karachi, which at that time was little more than a comparatively small fishing village. This gentleman may be described as a pioneer merchant in the seaport, which has grown into a busy and prosperous city, not inappropriately styled "the future Liverpool of India." Mr. Shapurjee commenced business by carrying out small contracts from Government, but the thoroughness with which he performed all work entrusted to him caused greater responsibilities to be placed upon his shoulders, with the result that the modest undertaking soon became a concern of considerable magnitude. In due course of time Mr. Shapurjee's two sons, the late Mr. Cowasjee Shapurjee Soparivala and Mr. Jamsetjee Shapurjee Soparivala, joined the firm, who adopted the style of Messrs. K. J. Soparivala & Co., and traded as grain and fodder merchants and Government contractors. Their premises were then, and still are, situated in Preedy Street, Camp, in Karachi, and the large number of important transactions now successfully carried through by the firm are a striking testimony to the high business capabilities and the staunch co-operation of the present managers, Mr. Eduljee Cursetjee and Mr. Dossabhoy Jamsetjee, sons of Messrs. Cursetjee Shapurjee and Jamsetjee Shapurjee respectively, who have had the advantage of the experience and guidance of Mr. Jamsetjee Shapurjee Soparivala, though that gentleman has recently ceased to take quite such an active part in management. The various members of the family have always, in private social life as well as in business circles, enjoyed the esteem and confidence of all with whom they have come in contact, and their constantly orthodox lives have

SIND FLOUR MILLS COMPANY, LTD.

1. General View. Front. 2. General View. Back. 3, 4. Mill and Godowns.

been rewarded by the formation of friendships of long standing among rich and poor of all creeds.

The late Mr. Cursetjee was well known for his generosity, and Mr. Jamsetjee is in no respect a less generous benefactor in private as well as public charitable gifts, and mention may be made of the Parsi Verbaijee Anglo-Vernacular school at Karachi, which was founded some sixty years ago by Mr. Shapurjee Soparivala. The major portion of the cost (about Rs. 2,00,000) of this handsome structure has been borne by the Soparivala family in memory of the late Mr. Shapurjee, the husband of Mrs. Verbaijee. This institution, which is shortly to be raised to the status of a high school, was originally erected upon land in Frere Street, but about fifteen years ago it was rebuilt upon a more suitable site in Victoria Street. This fine edifice, of substantial construction and pleasing architectural design, is a speaking testimony to the kindly spirit of this highly-esteemed family. Messrs. Eduljee and Dossabhoy, who are cousins, are still in the prime of life, and they are worthily upholding the best traditions of their ancestors.

The telegraphic address of the firm is "Soparivala," Karachi.

K. J. SOPARIVALA.

1. Shapurjee H Soparivala. 2. The Parsi Verbaijee A.V. School.

THE "STAR" CINEMA

There are possibly few promoters of healthy amusements for the public who have had more prodigious difficulties placed in the way of carrying out their project than the gentlemen who formulated a plan for providing an up-to-date cinema theatre in Karachi and formed themselves into a company.

In the first place they encountered bitter opposition from their parents, relatives, and members of their own—the Borah—community generally, who held conscientious objections to the stage and its connections.

When this bigotry had to some extent been allayed, it was discovered that the owner of the site selected for the structure which he had agreed to build was unable to proceed with the work owing to lack of funds. He, however, secured a loan of money on mortgage, and the foundations were laid in February, 1916. The partners thereupon congratulated themselves on seeing that a commencement had already been made, but alas for their newly-born hopes, construction proceeded in such a dilatory manner that at the close of nearly two years' work not more than one-half of the building had been erected, although the contract provided for completion within a period of four months.

This aroused the promoters so much that they took the building work into their own hands, and to their credit, be it said, the first exhibition of pictures was given on the 27th April, 1918.

The building, which is situated in the heart of the city of Karachi, immediately opposite the town hall, occupies an area of about 3,000 square yards. It is a handsome structure with façade of American style of architecture, and the interior, which is nicely decorated, has a number of well-furnished boxes and excellent seating accommodation for 600 persons, while 2,000 lamps and 30 fans ensure a brilliantly-lighted hall filled with a sweet and deliciously cool atmosphere. The whole of the theatre is washed and disinfected daily, so that the most scrupulous cleanliness may always be relied upon.

The boxes and dress-circles are chiefly patronized at each performance by a most appreciative audience composed largely of Government officials and the leading families of Karachi, and in the main portion of the theatre there is rarely a vacant seat. The British soldier is generally regarded to be the most astute judge of public entertainments, and it speaks well for the exhibitions at the "Star" that the Tommies from the camp, notwithstanding the fact that their quarters are a considerable distance away from the hall, are invariably present in large numbers whenever the doors are open.

The management are always placing clean and wholesome films before the public, and steadfastly refuse to pander to the lower tastes of second-rate patrons.

Hundreds of testimonials have been received from supporters of the "Star," and it is curious to note that the large majority of these refer in terms of the highest praise to the excellent arrangements made for throwing the pictures on the screen without the slightest flickering of the light, a fact which goes a long way to establish the reputation of a really good picture-house.

The partners are now reaping the reward of their patient perseverance sorely tried at the commencement of the undertaking, and the increasing support of a discriminating public is sufficient proof of the excellence of the programmes.

The names of the proprietors are: Messrs. Tyebally Ebrahimji, Gulamhusen Noorbhoy, Hoosenbhoy Abdulally, and Abdulrahim Tyebhoy.

THE STUBBS ENGINEERING COMPANY

It can safely be said that with the exception of Government undertakings,

there are not any larger or more completely equipped engineering workshops in Sind than those belonging to the Stubbs Engineering Company, of Keamari, Karachi. The concern was established by the late Mr. H. H. Buckland on December 1, 1907, under the style of "The Engineering Company," and in April 1915 it was taken over by the present proprietor, Mr. J. S. Stubbs, who is directly responsible for the management of the whole business. The importance of Karachi as a seaport has been steadily but surely increasing for many years past, and Mr. Stubbs, foreseeing still further developments, decided, in 1917, to transfer his workshops to a site at Keamari, which is within five minutes' walk of the principal berthing accommodation. This contiguity to the harbour greatly facilitated the rapid execution of new work or repairs, and thus the proprietor has greatly assisted the port authorities in securing a more prompt despatch of sea-going vessels. During the past two years the shops have been considerably enlarged, additional ground having been obtained by reclamation, the work being undertaken by the company and the cost thereof being borne by them.

Shops are provided for coppersmiths, blacksmiths, carpenters, pattern-makers, boiler-makers and fitters, and in addition there are iron and brass foundries and machine shops. The last-named buildings are fully equipped with thoroughly up-to-date machinery and plant, including lathes, planes, drilling, punching and shearing machines, power-hammers, grinders, and slotting, curving, plate-bending and milling machines.

The company rendered most valuable assistance to the Government during the late great war by their promptitude in effecting repairs to transports, and not in a single instance was a ship delayed by reason of the inability of the company to carry out work within the time specified. In many instances gun platforms were specially erected under Government orders, but even this extra labour did not involve delay to ships. Prior to the year 1917 shops requiring certain descriptions of repairs had to be sent to Bombay in order to be overhauled there, but these can now be efficiently carried out by the company at Keamari.

The company have for many years past supplied fittings and accessories for the drainage and waterworks systems completed by the Karachi Municipality, and they have also constructed about twenty-five over-bridges for the main lines of the North-Western Railway Company.

In addition to a competent staff of acetylene welders working under expert supervision, the company employ a number of fully-qualified Europeans and about 150 to 200 ordinary hands.

With the object of facilitating work generally, the company have transferred their offices to McLeod Road, the main business thoroughfare of Karachi.

The telegraphic address of the company is "Enterprise," Karachi.

THE UNION PRESS, LTD.

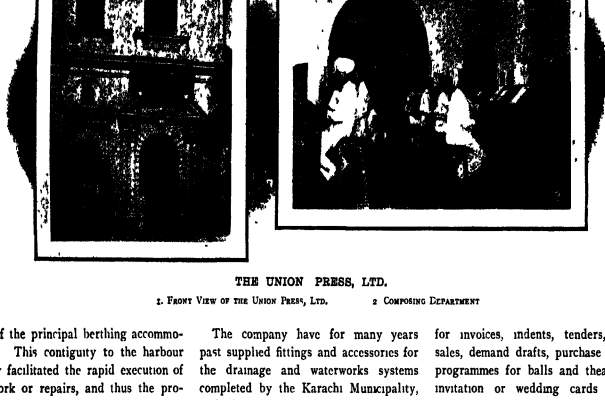
A proprietary printing establishment was founded in Karachi in the year 1897, and considerable success was achieved by reason of the excellence of the work carried out and the promptitude attending the execution of orders.

In 1906 the concern was converted into a joint-stock company, and registration was obtained under the name of the Union Press, Limited, its head offices being situated in Elphinstone Street, in the same city.

The works are equipped with modern machinery and plant, and consequently the directors are able to undertake artistic printing of every description, including letter-heads, price lists, circulars, forms for invoices, indents, tenders, account sales, demand drafts, purchase and sale, programmes for balls and theatres, and invitation or wedding cards in gold, silver, or colours. They also manufacture journals, ledgers and account books which are ruled, paged, and bound in the best possible style, while they have recently imported copper-plate printing and die-stamping machinery. Applications for estimates are attended to at the shortest notice, and instructions for printing work sent by customers residing in the *mofussil* receive careful and immediate attention.

The company employ a large staff of expert workmen, and thus their productions have gained unstinted praise from leading commercial firms in Karachi, Northern India generally, and even in Mesopotamia.

The chief officer of the Karachi muni-



THE UNION PRESS, LTD.

1. Front View of the Union Press, Ltd. 2 Composing Department

STUBBS' ENGINEERING WORKS.

1. General View of Works, showing Extensions. 2. Interior of Workshops. 3. Another View of Workshops. 4. Interior of Foundry Shops

cipality expressed his high appreciation of the printing done by the Press when in August 1911 he wrote: "The Union Press carried out the municipal printing contract for the year 1910–11, which included agenda papers, resolutions, annual budget and report, and all the rules and bye-laws which had then recently been revived. The work was heavier than usual, but it was carried out in a most satisfactory manner, and, in fact, all work entrusted to the Press was invariably done in a highly creditable way."

Similar commendatory remarks were made concerning the carrying out of the municipal contract for the following year, and on another occasion it was stated that the printing of the Karachi municipal election roll for the twenty-four wards of the city had been carefully and expeditiously completed within the period of fourteen days.

The twelfth annual meeting of shareholders of the company was held on the 15th December, 1918, when it was shown that the revenue, including interest and other items, for the year ending on the 30th September, 1918, amounted to Rs. 73,134; and the expenditure was Rs. 53,209, leaving a balance of Rs. 19,925.

It was resolved to pay a dividend at the rate of Rs. 7 and a bonus of Rs. 3 on each share, which would absorb Rs. 10,000; and it was further agreed that Rs. 7,500 be transferred to the revenue fund (which then stood at Rs. 9,000), and that the balance should be carried forward to the following year.

The authorized capital amounts to Rs. 1,00,000; the subscribed capital is Rs. 1,00,000; and the sum of Rs. 50,000 has been paid up. The directors are: Mr. C. F. D'Abreo (chairman), Dr. G. Pires, L.R.C.P., M.R.C.S., D.P.H. (London), Mr. I. Sequeira, Mr. M. Misquita, and Mr. C. M. Lobo, B.A., LL.B., while the manager is Mr. A. Fonseca.

1 A POLITICAL CEREMONY, BALUCHISTAN
2 QUETTA GYMKHANA
3 AN OCTROI POST IN BALUCHISTAN
4 [illegible]

Photos. Ivo Lawrence

BALUCHISTAN AND THE NORTH-WESTERN FRONTIER PROVINCE.

THE territory of Baluchistan, bounded on the north by Afghanistan, on the east by Sind, on the west by Persia, and on the south by the Arabian Sea, is extremely important from a political and strategical point of view, seeing that it is on the extreme western portion of India, and that it has in past years been subjected to frequent invasions by Afghans, and, further, that peaceable relations between it and the British Government have been, and still are, essential for the protection of India from possible attack

The country comprises three main divisions, namely. (1) British Baluchistan, consisting of tracts assigned to the British Government by treaty of 1874, (2) Agency territories, brought under control at various times, and placed in charge of British officers, and (3) the native states of Kalat and Las Bela, the total area being about 134 638 square miles in extent

The British had political connection with Baluchistan from the commencement of the first Afghan War in 1839, but it was not until 1876 that action was taken by Sir Robert Groves Sandeman, K C S I, which resulted in the actual foundation of the Baluchistan Province as it exists to-day

That officer, by purely pacific tactics, succeeded in putting an end to a twenty years' war between the Khan of Kalat and his confederate chiefs, and, in a treaty then concluded, the supreme influence of the British Government in the territory of that ruler was assured, while Quetta was at the same time occupied by British troops On the conclusion of the war, certain districts were assigned to the Khan of Kalat, and others ceded to the British have since been known as British Baluchistan, the administered territory now comprising an area of 46,960 square miles and having a population of about 380,000 persons

Administrative powers are vested in the Agent to the Governor-General and Chief Commissioner, and subordinate to him are political agents (each of whom has control over a district), assistant political agents, and a number of revenue and judicial officials The several Political Agencies are as follows Quetta-Pishin, Sibi, Loralai, Zhob, Kalat, and Chagai The chief principle laid down by Sir Robert Sandeman, when engaged in the reorganization of administration after his settlement of the country, was that Government should, as far as was consistent with the supervision and supreme control of British officials, be carried on by the tribesmen themselves in accordance with their recognized tribal laws This

policy proved to be eminently satisfactory, as it drew together in friendly conference, for the consideration of subjects calculated to promote the best interests of the province, a number of chiefs who had previously been antagonistic to each other, but who then evinced a desire to co-operate with the British Government in their programme of reform and progress.

The province is exceedingly mountainous in character, and is connected by a series of high ranges with the hilly portion of Southern Persia. At the same time, however, there are arid deserts, as well as level valleys, which under irrigation from a large number of streams yield good crops of wheat, barley, millet, rice, lucerne, maize, and potatoes.

Prior to the advent of the British, the majority of the people were engaged in pastoral pursuits and in transport work, as in those unsettled days there was always the probability that a cultivator of land would not be permitted to reap his own crops.

Improved conditions, following upon British protection and British progressive measures, have, moreover, encouraged the establishment of agricultural and industrial enterprises, and already locally manufactured goods comprise salt, weapons of war, agricultural implements, pottery, flour, patent coal fuel, rough blankets, and rugs.

Bearing in mind the fact that it is little more than a quarter of a century since the major portion of Baluchistan came under British control, one could scarcely expect to find thriving industries carried on according to modern ideas, but a good commencement has been made, and strong hopes are entertained that this important territory on the north-western frontier of India will, in a few years, become a great manufacturing centre.

Primitive methods of making agricultural implements, rugs, blankets, pottery, and other sundries are still in vogue, and during recent years Quetta has become the home of a brewery, flour mills, sawing and mortar mills, and factories for making block ice and patent fuel.

Interest is centred to-day, however, in what may be accomplished in the future by a proper development of indigenous materials, and by manufacturing them according to scientific principles into valuable marketable commodities.

An excellent report on these possibilities, together with business-like suggestions for the development of industries in the country, was prepared in 1917 by Mr. J. W. N. Cumming, city magistrate, Quetta, and the following remarks are based upon facts given in that publication.

Baluchistan, with its long spells of cold and snowy weather, is essentially a country for the manufacture of warm clothing, but up to the present time there is not a single woollen factory in the whole of the province. A large quantity of excellent wool is obtained annually from Afghanistan and Kalat, and it is practically certain that if this raw material could be retained and woven into warm wearing apparel in Quetta, a ready sale would be found for the goods in the cantonments and elsewhere.

Comparatively little is yet known regarding mineralogy, but coal mines are being worked in the neighbourhood of Quetta; copper is exported near Robat; gypsum, useful in the form of plaster of Paris for building purposes, is found in large masses in the Mashalak range of mountains on the western side of Quetta; lead mines exist near Khozdar, in Kalat; lime is met with practically in every part of the province; manganese mines are awaiting development; petroleum, valuable in itself and for its by-products of asphaltum, paraffin, benzine, and naphtha, is obtained in large quantities; gold and silver quartz has been discovered at Nushki and other places; and sulphur is obtainable at Sunni, among the Marri hills.

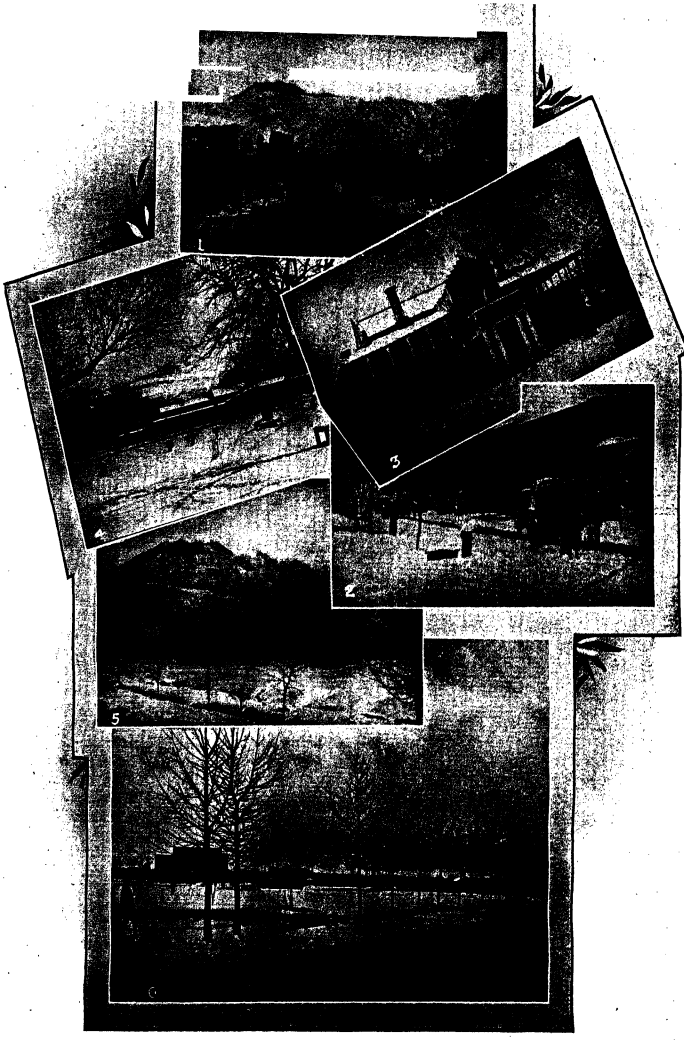
Several experiments have been undertaken with the object of ascertaining the suitability of clay for the manufacture of pottery and earthenware, and it is reported that various kinds of this substance have been turned into fine specimens of drain pipes, roofing tiles, flower pots, and other articles of a similar character.

The orchards of Baluchistan yield large quantities of fruit of excellent quality, and while there is a steady export trade of freshly-plucked crops, there is not any modern system for bottling, canning, crystallizing, or drying in evaporating ovens. It is held that by making these processes the basis of a new industry, practically all the surplus of the crops could be profitably utilized.

The chief products of the orchards are: almonds, apples, apricots, cherries, currants, damsons, figs, grapes, melons, mulberries, nectarines, peaches, pears, plums, pomegranates, quinces, raspberries, strawberries, and walnuts.

In all parts of Baluchistan, mountains as well as valleys, there is an unlimited quantity of trees, plants, and herbs, from which curative medicinal properties could be extracted, but manufacturing chemists are necessary to prepare the drugs for sale to the public. This matter is receiving the attention of the Government, but a more ambitious—but equally as important—scheme which is now being considered, is the establishment of a chemical laboratory at Quetta for the analysis of

THE TREASURY AND COURT, QUETTA.



1. QUETTA, BAZAAR. 2. BRUCE ROAD, QUETTA (WINTER). 3. THE RESIDENCY, QUETTA, IN WINTER.
4. QUETTA CLUB IN WINTER. 5. ENGLISH CHURCH, QUETTA. 6. WINTER IN QUETTA.

1, 4, 5, 6. Photos by Brenner.

soils, foodstuffs, water, minerals, and other natural products.

The chief exports of the administered portions of the province are wool, food grains, and seeds, while the imports include piece-goods, hay, grass, *ghee*, and fruits. A large number of horses, ponies, and sheep, in addition to a considerable quantity of agricultural produce, are obtained from Afghanistan and Persia.

The mineral wealth of the territory has not yet been ascertained, but iron, lead, chromite, and sulphate of aluminium have been discovered in payable quantities, while oil-springs are being worked at Khattan, in the Mari country.

The construction of roads was an absolute necessity in connection with the development of trade, but it was of vital importance to the Government in order to enable them not only to establish, but also to maintain garrisons in various parts of the frontier. There are now more than 900 miles of good metalled and partly metalled thoroughfares, and nearly 3,000 miles of unmetalled ones, thus linking together the principal places in the province.

Education, one of the chief aids in the development of a country, has been systemically supported since the advent of the British, and in 1912 such advance had been made that there were 157 Government and aided schools in the province, in which 4,129 pupils were receiving instruction. The teaching institutions in Quetta include the Sandeman High School and the Lady Sandeman School for girls, and middle schools have been opened at Sibi and elsewhere; but when it is observed that there is in the province only one school for about every 300 square miles of territory, it is obvious that much remains to be done in the way of providing greater educational facilities.

A Superintendent of Education and inspectors have been appointed, and during their visiting tours they devote a considerable portion of their time in endeavouring to induce minor chiefs and leading landowners to instil into the people a greater desire for educational facilities, especially for primary schools, which are urgently needed in almost every part of the province.

IN THE FRUIT MARKET, QUETTA.

The North-Western Railway system, entering Baluchistan, near Jhatpat, has been extended to Quetta, Bostan, Chaman, Sibi, Harnai, and other places of importance, and a line from Quetta to Nushki, nearly 108 miles in length, was opened in 1905, the cost of construction being about Rs. 70,00,000.

The Medical Aid Department is under the control of the Residency Surgeon and Chief Medical Officer for Baluchistan, and there are civil surgeons at Quetta, Sibi, Chaman, Loralai, and Fort Sandeman, together with assistant surgeons at Quetta, Mekram, Panjgur, Sibi, Mach, and Sharigh.

QUETTA.

Quetta, or "Kwatta," an Afghan word signifying "Fort," is the capital of British Baluchistan. Although situated 5,800 feet above the level of the sea, it stands at the northern end of a valley bearing the same name, and is on the Bolan route from Jacobabad to Kandahar.

Quetta Valley, about 20 miles in length and five miles in breadth, is surrounded by a series of mountains, including Zerghun, 11,738 feet in height; Takatu, 11,375 feet; Chittan, 10,860 feet; and Murdar, 10,390 feet.

The city is handsome in appearance, it has most attractive surroundings, and it contains a large number of really splendid public buildings, as well as houses of business and charming private residences.

Mention may be made of the Residency, a fine two-storeyed building standing in grounds more than 40 acres in extent, in which there is an exceedingly choice collection of flowering shrubs and plants. Although the structure partakes somewhat of the English style of architecture, the wide balconies and verandahs, together with massive Corinthian pillars, gives to it that touch of Orientalism which is so pleasing to the eye.

As Quetta is the headquarters of the Political Agency of Baluchistan, it is appropriate that the Residency should possess portraits in oil of men who took a large share in the work of pacification and subsequent development of the country. Among the paintings are those of the Right Hon. the Earl of Northbrook, P.C., Colonel Sir Robert G. Sandeman, K.C.S.I., Major-General Sir James Browne, K.C.S.I., C.B., R.E., Sir Hugh S. Barnes, I.C.S., K.C.S.I., K.C.V.O., and several others.

The Sandeman Memorial Hall, a very handsome building, was erected in honour of one who accomplished more than any other man in establishing British authority in the province. It is purely Oriental in character, and has five domes and marble floors, while its doors, made of teakwood, are beautifully carved, the rich glass and other ornamentations being carried out from designs prepared in the School of Art, Lahore.

Underneath the large central dome is a spacious hall, in which durbars and other ceremonial functions are held, while the building, erected about 20 years ago at a cost of Rs. 1,08,305, stands in most attractive grounds.

The hall was opened by His Excellency the Viceroy and Governor-General, Lord Curzon of Kedleston, in April 1900, the function being attended by a distinguished gathering including European and Indian officials.

The administration offices are located in a spacious building which was constructed in 1912 at a cost of nearly Rs. 2,00,000. Accommodation is provided for Courts of Justice, the Treasury, the official headquarters of the Political Agents, the Municipal Chambers, the Superintendent of Police, the Court of the Hon. Magistrate, and the Public Record and other departments.

The Staff College, for the special training of officers, was formerly situated at Deolali, but in the year 1907 it was transferred to a new building erected by the military authorities. About fifty officers avail themselves annually of the privileges of the institution, and instruction is given to the men to enable them to become better acquainted with up-to-date methods of warfare, and to render them qualified for positions on the General Staff.

The Parsi fire temple, built by public subscriptions in the year 1883, is under the able management of Khan Bahadur B. D. Patel, C.I.E., who has made arrangements whereby all religious ceremonies enjoined by the Zoroastrian creed and practice may be performed.

When it is remembered that Baluchistan is a very mountainous country, with few roads available for transport purposes, and that up to a comparatively recent date it was not subjected to actual British control, nor had it the opportunity of being influenced to any extent by modern customs, one is naturally somewhat surprised to behold in Quetta such a remarkably fine edifice as St. Mary's Church. It is a cruciform building, with a nave 115 feet in length and 33 feet in width, with side aisles, transepts, and chancel. The Gothic style of architecture has been adopted, and the stone used in construction was obtained from Kolapore, in the Bolan Pass, while the woodwork consists of teak, from the forests of Rangoon.

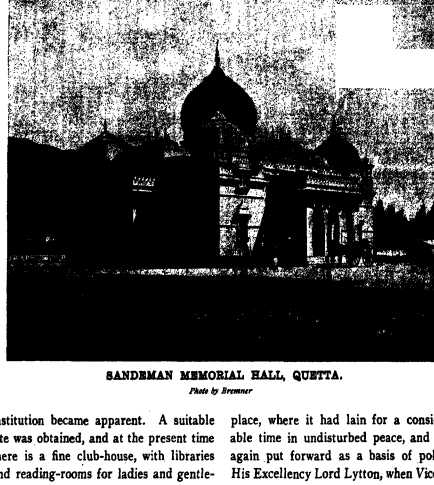
The chancel is adorned by a very beautiful stained window, placed there in memory of Sir Robert Sandeman.

The church, which has seating accommodation for 1,200 persons, was erected at a cost of Rs. 2,65,000.

It may be taken for granted that wherever Britons are in sufficient number to form even a small colony, their strong inherent characteristic of sociability is always manifested by the formation of a club, and as Quetta advanced from the stage of a mere outpost on the north-western frontier to an important city of considerable size, the necessity for the establishment of such an institution became apparent. A suitable site was obtained, and at the present time there is a fine club-house, with libraries and reading-rooms for ladies and gentlemen, and the extensive surrounding grounds have ample space for gymkhanas, tennis, Badminton, and other games, while in immediate proximity to the buildings are nicely laid out gardens.

The Roman Catholic Church, built in 1898, is Romanesque in character, and it is constructed of bricks and Kolapore stone, while teakwood has been used for the interior fittings.

The Soldiers' Home is one of those institutions which have been established in military centres in nearly every part of the world. The one in Quetta was opened in the year 1897, and it is supported by Government funds and donations from Great Britain. The Home provides pleasures and comforts which men from the Old Country do not find in ordinary barracks, and the English ladies who are in charge are unremitting in their desires to make the life in India of "Tommy Atkins" as pleasant as possible.



SANDEMAN MEMORIAL HALL, QUETTA.
Photo by Bremner

THE NORTH-WEST FRONTIER PROVINCE.

It is not quite twenty years since the question of the better government and the further protection of the north-west frontier of the Indian Empire was metaphorically withdrawn from its resting-place, where it had lain for a considerable time in undisturbed peace, and was again put forward as a basis of policy. His Excellency Lord Lytton, when Viceroy and Governor-General of India in the seventies of last century, propounded a scheme for carrying out certain proposals, but it fell to the lot of Lord Curzon to take the decisive steps which resulted in the formation of the North-West Frontier Province.

For many years it had been realized that the Government of India was not so closely in touch with the border territory as was deemed advisable, and therefore, in 1901, the trans-Indus districts of the Punjab were separated from that province, and, together with certain political charges, were formed into the North-West Frontier Province, and were placed under a Chief Commissioner and Agent to the Governor-General, responsible, not to the Government of the Punjab, but to the Government of India direct.

The province was, in common with practically the whole of Northern India, affected by the invasion of Alexander the

Great, and it subsequently came under Mahomedan, Sikh, and numerous other powers, while in 1894 it was annexed by the British and placed under the Government of the Punjab.

range, 11,580 feet; the Kagan peaks of the Himalayas, varying from 10,000 feet to 16,000 feet in height; and on the northern border of the Chitral Agency are other peaks, attaining an elevation of

The climate of the province is exceedingly variable, extremes of cold and heat being experienced in the mountain tracts and the district of Peshawar respectively.

1. KHOJAK TUNNEL. 2. CHAPPAR RIFT BRIDGE, SIND-PISHIN RAILWAY.
3. THE ARCADE AND LOUISE MARGUERITE BRIDGE, SIND-PISHIN RAILWAY. 4. A VIEW IN THE BOLAN PASS.
Photos by Bremner.

The divisions of the province now are: Peshawar (the seat of the Commissioner), Hazara, Kohat, Bannu, Dera Ismail Khan, and the Political Agencies of Tochi, Wana, Kurram, and Dir, Swat, and Chitral.

Subordinate to the chief commissioner are assistant and deputy commissioners, political agents, and other officials, including a judicial commissioner and two divisional and sessions judges. A deputy commissioner has supervision over a district, which contains two or more sub-collectorates in charge of *tahsildars*, who are entrusted with powers in civil, criminal, and revenue matters.

The territory covers an area of about 39,000 square miles, and it contains a mass of high mountainous ranges and peaks, those on the frontier including: the Sulaiman range, in which the summit of Takht-i-Sulaiman reaches an altitude of 11,290 feet; the Pir Ghal, in the same

18,000 feet, the one known as Tirich Mir being more than 25,000 feet in height.

The province is situated on the direct trading route between India and Afghanistan, Central Asia, and the territories occupied by numerous tribes. Nearly all of the inhabitants, who are about 4,600,000 in number, subsist entirely upon some form of agricultural pursuits, as there are not any manufacturing or industrial enterprises.

Less than 35 per cent. of the land has been brought under cultivation, but vigorous action has been taken by the Government to improve and develop the practice of agriculture according to modern ideas. In the first place should be mentioned the construction of the Upper Swat river, and the Paharpur canals, which have tended to increase the area under cultivation, and further to improve the quality of the products.

The civilizing influence of British control has been manifested in the clearest possible manner by the making of roads, the establishment of a system for granting medical relief, and by the gradual introduction of measures for the spread of education.

There are five native states connected with the Government of the North-West Frontier Province, namely, Amb, Chitral, Dir, Nawagai (Bajaur), and Phulera, and reference may now be made to three of these.

DIR.—This state, consisting of an area of nearly 5,000 square miles, extends along the right bank of the Swat river. The inhabitants are mainly pastoralists, good grazing ground being obtained in valleys, especially the one known as Panjkora, which is traversed by the river of the same name. Nawab Badshah Khan, the present chief, exercises authority over

a number of petty rulers of small territories.

CHITRAL.—This state has had a turbulent existence for more than three hundred years, its inhabitants being almost continually engaged in quarrels and skirmishes with their neighbours. A subsidy was granted to the Chief Amam-ul-Mulk by the British Government in 1889, on condition that he undertook to keep faith with the Government—through the Political Agent at Gilgit—in connection with the defence of the frontier. In 1895 a religious war broke out on the death of the above-named chief, and a relieving force had to be sent by the Government to liberate the Political Agent, who had been despatched to make a personal investigation into the matter.

The state, which is more than 4,000 square miles in extent, consists principally of three extensive valleys of rich productive soil, which is cultivated for wheat, barley, pulses, and other crops. The present chief is Shuja-ul-Mulk, C.I.E.

NAWAGAI, bounded on the west by the Kuna river, which skirts the border of Afghanistan, is included in territories called by the one name of Bajaur, but Nawab Safdar Ali Khan, of Nawagai, exercises control over the whole area. He has created a number of small divisions, over which he has placed petty rulers, whose powers are so limited that they practically end with the levying of tithe.

PESHAWAR, the headquarters of the district of Peshin, situated near the left bank of the River Bara, is about 10 miles distant from the Jamrud fort, which is built at the entrance to the Khyber Pass leading into Afghanistan.

It was the capital of ancient Gandhara province, and there are still to be seen interesting Buddhist remains, which prove that it was an extensive city in the early days of the Christian era.

The city at the present time is surrounded by a mud wall, built by the Sikhs, and although it cannot boast of any buildings of architectural beauty, much has been done in the way of improving the general condition and cleanliness of the streets. The main thoroughfare, 50 feet in width, is lined with good shops, in which the chatter of vendors and purchasers seems, like Tennyson's brook, to "go on for ever."

The district of Peshawar is a valley, which is surrounded by hills rising to a height of 5,000 feet, and its produce consists largely of wheat, tea, and *ghee*, but the city itself obtains its commercial importance from the fact that a great quantity of goods is forwarded to Central Asia, Afghanistan, and other places, while importations from Kabul and Bokhara include silver thread, raw silk, worsted, skins, hides, and fresh and dried fruits. The area immediately surrounding the city is famous for its remarkably fine orchards and gardens, which produce choice specimens of quinces, apples, peaches, plums, and other fruit in great abundance.

The four-sided fort, named Bala Hissar, outside of the northern walls of the city, rises to a height of 90 feet above the level of the ground, and its heavy guns, stationed at each corner, are able to cover a very wide range of country.

DERA ISMAIL KHAN.—It is said that the original town in the North-West Frontier Province was founded during the fifteenth century by Ismail Khan, but that in 1823 the River Indus, when in flood, swept away all the buildings, together with the fort of Akalgarh. The present town, which is of a modern character, is situated about 4½ miles from the right bank of the Indus, and its commercial activities are concerned chiefly with caravans of Afghan merchants, who visit the town twice or thrice yearly when purchasing English and Indian piece-goods, grain, wood, *ghee*, and other merchandise and produce. Dera Ismail Khan is the headquarters of the district of the same name.

ALLIBHOY & SONS

The sole proprietor of this firm—Mr. Allibhoy Dosajee—began a business career on his own account in the year 1880, when he became contractor for supplies to the 77th Fusiliers, with whom he marched from Kandahar during the second Afghan campaign.

Shortly after this he established himself in Bruce Road, Quetta, and became a general contractor and merchant dealing in hardware, brassware, engineering materials, timber, paints, oils, tools, and other stores, trading under the name of Allibhoy and Sons. Forty years ago Quetta consisted of a few insignificant shops built in a straggling manner; it had not a single properly-constructed road; and therefore the difficulties in the way of carrying on successful business operations were formidable enough to daunt anyone of a faint-hearted nature.

ALLIBHOY AND SONS.

1. PREMISES. 2. PROPRIETOR AND MANAGER.

Several splendid mosques and substantially-built tombs may be found in various parts of the city, and Gor Khhatri, successively a Buddhist monastery and a Hindu temple, is now used as a resting-place for travellers. The cantonment, divided from the city on its western side by the Sadr Bazar, is situated on one of the highest slopes of the valley, overlooking the Khyber, and covering an area of 3½ miles by 2 miles. Peshawar is 288 miles distant from Lahore, and it has a population of about 98,000 inhabitants.

But Mr. Dosajee was an optimist, and his confidence in his own business capabilities enabled him to forge his way through all obstacles, and ultimately to win a prominent position among the leading commercial men of modern Quetta, a city of 50,000 inhabitants.

Mr. Dosajee has received a large number of certificates together with articles of jewellery and other tokens of appreciation of the satisfactory manner in which he executed contracts of various kinds, and not the least important of these is a valuable gold watch presented publicly to him by General Sir H. L. Smith-Dorrien, G.C.B., G.C.M.G., D.S.O., for his admirable work in constructing the "Kitchener" market building in the cantonment at Quetta.

Mr. Dosajee is the owner of a considerable quantity of property in Quetta and Karachi, and although he has not been able to identify himself closely with the public life of the city, he nevertheless has its interests at heart, and he is always ready to contribute to charitable institutions and to relieve the suffering poor. He has three sons, the eldest of whom is a matriculation student of the Sanderman High School of Quetta, and is already rendering great assistance in his father's business, and two others who are being instructed in the old-established institution for Mahomedans–the Madrassa-tul-Islam—at Karachi.

J. BLISS.

Quetta, the headquarters of the Baluchistan Agency, is rapidly growing in size, and has become one of the principal military stations on the north-western border of India, and as one might expect, leading commercial men in the city are keenly alive to the fact that if they wish to retain the positions of importance which they have secured, it is incumbent upon them to be progressive too in order that the requirements of the inhabitants may be met.

About twenty years ago Mr. J. Bliss, who carried on business as a chemist and druggist at Karachi, decided to open a branch at Quetta, and after trading successfully until 1906 he disposed of the original concern, and took his nephew into partnership while he himself went to reside in Scotland. Development and progress became watchwords with the firm, for in June 1915 they absorbed the old-established business of Mr. C. J. Milne, chemist, and of Mr. Steinle, confectioner, both in Quetta. These undertakings were managed most efficiently, and stimulated by the success attending the ventures the firm in March 1918 purchased the stock-in-trade and goodwill of the business of Messrs. E. Achenwall & Co., also of Quetta. About the same date Mr. Bliss deemed it advisable to concentrate his many-sided interests in a single building, and with this end in view he secured the fine premises belonging to Messrs. A. Simon & Co., saddlers and boot and shoe manufacturers.

It is now proposed to open an up-to-date restaurant, equipped with modern fittings, for the conduct of a first-class catering establishment suitable for a city with a population of about 50,000 persons. Constructional alterations will be made which will include the erection of a handsome billiard saloon, and this will undoubtedly become one of the most comfortable and attractive resorts in Quetta.

Other schemes for development are

J. BLISS.

1. J. Bliss' Premises, Exterior. 2. Interior. 3. C. J. Milne (Exterior).

CHANDIRAM & CO.

1. Quetta Premises. 2. A Corner of the Showroom. 3. Establishment Group (Proprietor in Center).
4. Interior of "Indian Curio" Branch.

under consideration, but further time is necessary before they can be particularized.

It need only be added that, with the capacity for management already shown by the firm, the public have every right to expect that the success which has attended other enterprises will be secured by the new venture.

CHANDIRAM & CO.

A striking example of business development is revealed in the history of the cycle, motor, and electric mart established at Quetta in the year 1905 under the name of Messrs. Naraindas & Co. It was quite an insignificant concern in those days, dealings being entirely confined to appliances and accessories for ordinary cycles and fittings for installations of electricity.

In 1906 Mr. Chandiram, an expert mechanic, became a partner, and it was he who was the first to introduce the motor cycle into the city, while it was the firm to which he belonged who subsequently imported the first motor-car into Baluchistan.

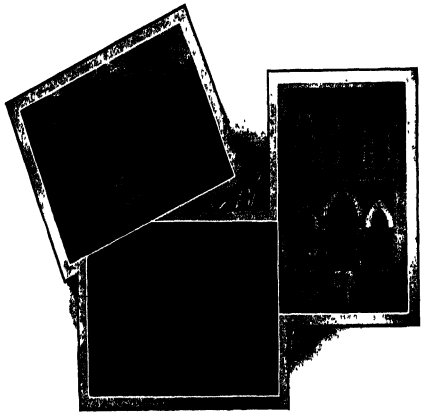
It redounded to the credit of the firm that they were pioneers of the motor industry in this extensive territory which has an area of about 135,000 square miles, but they are justified in being still prouder of the fact that they have not only maintained the lead which they then obtained, but have also greatly out-distanced all other competitors. The business grew by leaps and bounds, and as the original premises, some 300 square feet in extent, soon became far too small for their undertaking, the firm obtained possession of more suitable buildings, covering an area of about 15,000 square feet, and even now this increased accommodation is not really adequate for present requirements.

In February 1916 Mr. Naraindas established a business at Karachi, and about a year later, when he entirely severed his connection with the Quetta concern, the remaining partner became sole proprietor, the style of the new firm becoming Messrs. Chandiram & Co. A large and well-selected stock of motor-cars and cycles, manufactured by leading British firms, is kept on hand, and Messrs. Chandiram & Co. are sole agents in Baluchistan for the sale of well-known types, including the "Triumph," "Douglas," "Scott," "Calthorpe," "A.J.S.," "James," "Alldays," "New Hudson," and "B.S.A.," while by holding all kinds of spare parts and accessories they are able at the shortest notice to supply the needs of owners, even to the minutest detail.

The firm undertake to carry out repairs with the utmost despatch, and also can supply experienced drivers to their customers.

Messrs. Chandiram & Co. have been honoured by special appointment to the Hon. the Agent to the Governor-General and Chief Commissioner in Baluchistan.

Their telegraphic address is "Motivity," Quetta.



ESSAJEE AND SONS.

1. Premises, Quetta. 2. Showroom. 3. Store and Workshop.

ESSAJEE & SONS.

This, the oldest and best-known firm in Baluchistan, was established at Quetta in the year 1879. The partners are proprietors of general workshops, brick kilns, and coal mines. In the workshop, all kinds of jobs in connection with coach, ironmongery, furniture, iron and carriage building, are carried out upon moderate terms.

The firm may be described as being general merchants and contractors to Government departments, such as the commissariat, arsenal, military works services, workshops, and offices of British and Indian military authorities. They are also wholesale importers of engineering tools, plants, hardware, brassware, paint, oil, rope, varnishes, Portland cement, wire netting, zinc and brass sheets, wire of all kinds, copper, iron, brass and galvanized bolts and nuts, rivets, canvas white and green waterproofing in different widths (for tarpaulins and other purposes), white and coloured glass for windows, shovels, English pickaxes, flat, round, square, and half-round iron angles, tee, plates, steel, iron sheet, corrugated and plain sheets, and steel (for piping and culverts).

In the timber stores may be found *deodar*, Burma teak, ceiling boards, mango planks, sisu wood, bamboos of all sorts, bullies, spars, lashing and wire rope. A large stock is kept of tools for blacksmiths, carpenters, farriers, goldsmiths, watchmakers, and jewellers, together with other workshop requisites. Waterworks stores comprise galvanized and iron piping of all sizes, galvanized fittings, brass cocks, copper and brass pipings, screw-wrenches, meters, ball cocks, and push cocks. Among garden tools are forks, spades, rakes, flower and grass shears, lawn mowers, and watering cans. Carriage accessories include axles, springs, shafts, bolts, nuts, rubber tyres, lamps, channels, whips, rein-holders, whip-sockets, rubber matting, chamois leather, motor canvas, press and turn buttons for motors and bells. Sundries consist of coir matting, bath tubs, buckets, American cloth, linoleum, heating and "Primus" stoves, enamelware, lampware, glassware, brass curtain rods, rings, chains, steel and brass fire-irons, padlocks, door-mats, *durries*, spring balances,

hair and bass brooms, Aspinall enamel, picture mouldings, cutlery, and aluminium and electro-plated ware.

Messrs. Essajee & Sons undertake contracts for the construction of buildings, roads, and bridges, and as they have practically all necessary materials in their own hands, they are in a position to quote favourable terms, and are not subjected to annoying delays in completing their work by having to depend upon other merchants for supplies.

Constant employment is found for a large number of hands, and the management of the whole concern now rests practically with Mr. Ghulamhusain and Mr. Moosajee, sons of the founder of the business.

KHAN BAHADUR AIN-UD-DIN KHAN.

The gentleman whose name appears at the head of these notes entered the service of the Government telegraph department at Kandahar when only seventeen years of age, but even in this peaceful occupation he was confronted with difficulties and dangers which might have ended most disastrously but for the personal coolness and bravery displayed by him on two separate occasions. He had risen to the position of a sub-inspector of the second grade when, in November 1899 he was deputed to accompany Mr. Armstrong, assistant superintendent for survey of the Central Persian telegraph line, to Bompur and Gwadur. During these operations the party was molested by a gang of ruffians, who were successfully resisted, and at a subsequent date, when 450 Baluchis made a fierce attack, Mr. Ain-ud-Din, without any firearms of any description, calmly walked forward to meet them, and, after a *palaver*, he managed to induce them to withdraw. For this brave deed the Government of India conferred the title of Khan Bahadur upon him.

The director-general of telegraphs tendered personal thanks to the Khan Bahadur, whom he selected for various other important duties, and in 1907 he appointed him to be deputy-superintendent of telegraphs, a post which was held until July 1911, when he retired from Government service and commenced business on his own account at Quetta.

The Khan Bahadur became a commissioner of the Quetta municipality in 1913, he was made an honorary magistrate in 1916, and as senior member of the Board of Civil Supplies he has rendered most valuable help. Among many mementoes presented to him on account of his labours, the Khan Bahadur prizes very highly a certificate given by His Excellency the Viceroy, Lord Chelmsford, which was accompanied by a wristlet watch as a mark of personal friendship from Colonel Sir John Ramsay, C.S.I., C.I.E.

KHAN BAHADUR AIN-UD-DIN KHAN.

KHAN BAHADUR B. D. PATEL, C.I.E.

The Province of Baluchistan has been politically connected with the British since the outbreak of the first Afghan war in the year 1839, but the founder of the Province as it now exists was Colonel Sir Robert G. Sandeman, K.C.S.I., who organized a settlement of the country after the second war in 1879. The territory was then rugged and barren; its sun-burnt mountains were rent by huge chasms, and interspersed by plateaux and stretches of desert, and it had a sparse population of nomadic races who were a continual menace to North-Western India. British protection and control for a period of forty years has, however, done much to secure tranquillity in place of disorder: it has given the people the benefits of civilization; it has introduced railway facilities; it has encouraged the development of agricultural and pastoral land, and of industrial enterprises.

Among non-officials who have contributed in large measure to this new order of things, priority of place must be given to the Parsi community, who are known throughout India for their keen business instincts, their indomitable courage, and their persistent perseverance.

A prominent member of this race, Khan Bahadur Burjorji Dorabji Patel, commenced as a trader in Kandahar in 1878, and in the following year he established himself at Quetta as a merchant, but it was not the Quetta of to-day, which is now the headquarters of the Baluchistan agency under the Governor-General, a large British cantonment, the most popular station in the province, and a city with a population of nearly 35,000 inhabitants. This gentleman did not arrive in his new home with the proverbial

KHAN BAHADUR B. D. PATEL.

1. Khan Bahadur Burjorji D. Patel and Mrs. Patel. 2. Dr. K. N. Karanjia, F.R.C.S., M.R.C.S., L.R.C.P., and Mrs. Temmina Karanjia.
3. Temmeras K. Modi, B.A., LL.B., Barrister-at-Law. 4. Miss Gul. B. Patel. 5. Framroze B. Patel.
6. Jehanbeze B. Patel (Died, London, 1917). 7. Miss Banu Gorsasp Patel (Died, Quetta, 1910).

KHAN BAHADUR B. D. PATEL.

1. "Patel Villa."
2. St. John Mills, Quetta.
3. Patel Mills, Jacobabad.

"golden spoon in his mouth," nor was he in possession of a flourishing account at his bankers, but he had grit in him, he had great foresight, and he knew how to grasp opportunities when they came in his way, and by making the best use of these inherent qualities he has become the leading and most honoured man of business in Baluchistan.

At the outset of his career he realized that he was greatly handicapped by a sad lack of transport facilities which, by the way, were as urgently required for military emergencies as they were for commercial undertakings. His loyalty to the British Government and his earnest desire to promote the benefits of civilization caused him to enter into large contracts for constructing bridges, buildings, and earthworks for the Sind-Pishin Railway, and he even carried out a considerable proportion of the plate-laying on that system. The Khan Bahadur was quick to perceive that it would be greatly to the advantage of himself and the railway department as well as to the military authorities, who were equally anxious to establish improved communications with various parts of the province, if he could arrange for the production, at first hand, of the materials necessary for the completion of his work. With this end in view he constructed extensive kilns for the burning of bricks and lime, and by using coal-dust as fuel he introduced an innovation which proved to be of immense benefit to the country at large. But this step was only the first in his march of progress as he, in 1888, turned his attention to the development of the mineral resources of the country, and by opening coal and latterly chromite mines he fostered his own undertakings, while he at the same time contributed largely to the wealth of the province. But the working of mines with profitable results necessitated the use of suitable machinery, which the Khan Bahadur imported and erected with the expenditure of a considerable sum of money.

The Khan Bahadur was the founder, and is now the sole proprietor, of the St. John Mills at Quetta, the premises forming a comprehensive manufacturing centre, as the works comprise roller, flour mills, an ice factory, a patent fuel (briquettes) factory, and saw and mortar mills. He is, further, owner at Jacobabad, in Sind, of flour mills, rice mills, oil mills, and hydraulic wool and cotton presses. During the Great War these works have—according to the testimony of the Assistant Director of Supplies, 4th Quetta Division—been of the greatest assistance to the Imperial Government.

When it is borne in mind that these numerous enterprises were initiated at a time when the words "civilization" and "progress" were but little understood in Baluchistan, when industrialism had not called skilled labourers into being, and when the means of transport of all classes of goods were wholly inadequate, one can only wonder at the "master" mind which started them, and which has controlled them so successfully up to the present day.

It is to the indomitable energy and persevering spirit of this gentleman that the achievement of such marvellous results are due, and he richly deserves the popularity which he has gained and the honours bestowed upon him.

The Khan Bahadur was the first Parsi to have the honour of being appointed an Hon. Magistrate, an Hon. Lieutenant, Bengal Volunteer Force, and a Municipal Commissioner at Quetta; in 1889 he was created Khan Bahadur, at a later date he was granted the Kaisar-i-Hind medal; and the Government in 1904 voiced its appreciation of his meritorious public services by bestowing upon him the distinction of C.I.E.

But what of Quetta itself? The Quetta of 1919 is a beautiful city, with most charming surroundings, and while British influence in political and general administration, and British encouragement of progress and reform, have lifted Baluchistan, and therefore Quetta, from its former apathetic condition, one must not forget that Khan Bahadur Burjorji Dorabji Patel has been one of the most courageous and loyal supporters of those who laboured for the social and material salvation of the province.

With regard to the Khan Bahadur's support of charitable causes in Quetta, reference may be made to remarks made on one occasion by the late Major-General Sir James Browne, K.C.S.I., C.B., R.E., who held an important executive Government position in Baluchistan, which were as follows: "There is not a work of public utility, or a charitable or religious institution of any kind in Quetta with which Mr. Patel's name is not associated, and which has not shared substantially in his liberality."

The Khan Bahadur gained the confidence and appreciation of the whole population of Quetta—civil and military—by his large-hearted gifts to all deserving causes, and among those objects which have specially benefited by his boundless generosity may be mentioned: the Victoria Memorial Soldiers' Home; the "Sclater" Infirmary for Animals; a lectern in St. Mary's Church; the "Lady White" annual prize for children educated in schools for soldiers; cups for football and billiards played by European soldiers; he contributed liberally to the Sailors' Home fund; the Soldiers' Club and Home; freemasonry; the Young Women's Christian Association; the European station hospital; he presented the "Lady Sandeman" Girls' School (his gift); the "Browne" gymkhana pavilion; the "Patel" Hospital for Women; the Parsi guest-house; a female ward (Mission Hospital); and the Theosophical Hall. In addition he subscribed handsomely to the Queen Victoria Memorial; the King Edward Memorial; the "Sandeman" Memorial; the Sir James Browne Memorial; the Sir Hugh Barnes Memorial; the Volunteer Drill Hall; the Queen Victoria Jubilee fund; the Coronation celebrations; the "Countess of Dufferin" fund; the "Lady Minto" nursing fund; and the St. John's Ambulance Society.

A glance at the list just given will show that in his munificent benefactions the Khan Bahadur has manifested a fine catholicity of spirit, for while he has worked unceasingly for the welfare of the Parsi community in which he is a leader, he has never allowed considerations of caste or creed to interfere with his exercise of true charity. He has contributed liberally to the Church of England and other religious objects, to the support of temples, orphanages, schools of every description, maternity, leprosy, and other hospitals, to funds in aid of wars, relief in times of plague, famine or other disaster, not only in Baluchistan, the Punjab, Sind, and Gujerat, but also in Italy, Japan, and other places, and he was one of the founders of the Pasteur Institute at Kasauli.

The innumerable acts of kindness shown to the military by the Khan Bahadur elicited the highest commendation from His Excellency General Sir George White, when Commander-in-Chief in India; from Sir John Hudson, formerly Commander-in-Chief of the Bombay Army; and from General Sir Reginald Hart, K.C.B., V.C., when Officer Commanding Quetta Division.

THE MURREE BREWERY COMPANY, LTD. (QUETTA BRANCH).

Reference is made elsewhere to the Murree Brewery Company, Ltd., whose celebrated ales and stouts, in spite of severe competition from England, have justly earned for themselves a very high reputation in Northern India. The Quetta brewery, a branch of the above-named company, is situated near Kirani, on the slopes of the Chiltan range of mountains, about five miles distant on the western side of the city of Quetta.

Land and water rights were purchased in 1884, but brewing was not actually commenced until two years afterwards.

The brewery is equipped with a 20-quarter plant, and when it is worked to its utmost capacity, it is able to turn out from 1,000 to 1,200 hogsheads monthly during the cold season, but there is naturally a considerable reduction in this quantity during May, June, July, August, and part of September, when the water attains too high a temperature.

Owing to the premises being built on the side of hills, the major portion of the brewing process is conducted on the gravitation principle, which reduces to a minimum the quantity of essential machinery, but as the necessary water is derived from a spring discovered below the base of the mountain, a supply has to be pumped up to the top storey.

The present maltings, which were erected in 1904 (as those originally in use were unable to meet a greatly increasing trade)—which, by the way, had been doubled in volume since 1886—are of a 50-quarter capacity, and they have an output of nearly 3,000 bushels a month for about nine months in the year. The dry climate of Quetta is extremely suitable for malting, but it is impossible to continue this process during June, July, and August owing to the exceedingly high temperature.

Barley, for malting purposes, was obtained locally from cultivators in the Pishin Valley, prior to the Great War, but as soon as the military authorities claimed the whole of the yield of this grain in the neighbourhood of Quetta, the directors were compelled to procure their supplies from the Punjab.

Kentish and Californian hops of the finest quality are always used, and it will be admitted that finer hops could not be obtained in any other part of the world.

The question of expense has not deterred the directors from equipping the whole of the brewery with thoroughly up-to-date machinery and plant, and in this matter they have acted upon the best advice of modern experts.

The company are now manufacturing pale ales, champagne ale (a liquor of light gravity), and stout for bottling purposes, as well as ales specially suitable for canteen and private customers. These productions are distributed far and wide throughout Baluchistan and Sind, and there is a particularly good demand for them at Quetta, Chaman, Loralai, Fort Sandeman, Shahrig, Much, Sibi, Jacobabad, Sukkur, Hyderabad (Sind), and Karachi.

The plant has been strained to its utmost capacity during the past four or five years in order to meet the requirements of the abnormally large number of troops stationed in Sind and Baluchistan, and it has been shown that British soldiers invariably call for the ales from the Quetta brewery in preference to those imported from other countries.

The whole concern is in charge of a managing brewer, who has also control over a competent office staff and more than a hundred ordinary labourers.

Owing to the comparatively isolated situation of the brewery, certain measures have been rendered necessary with the object of securing protection for life and property, and therefore a high wall and barbed wire entanglements have been erected round the premises, in which, by the way, residential quarters have been provided; arms and ammunition have been supplied to the staff; a police guard has been stationed near the office, and direct telephonic communication has been established with Quetta.

NOORBHOY ALLIBHOY & SONS.

This firm carry on business in Bruce Road, Quetta, as general merchants and Government contractors, and they deal extensively in electro-plated ware, cutlery, lamps and fittings, crockery, glassware, and high-class boots and shoes, as well as in sundry other goods. The concern was founded in 1881 by Mr. Mahomed Alli Allibhoy, who opened a small establishment in another part of Quetta, but the more commodious premises now occupied were erected in 1891 in order to meet the necessities of a rapidly-increasing volume of trade. In the early days of the firm they were given the sole right to supply all materials required in the construction of the line of railway between Sind and Quetta, and they also completed in an exceptionally satisfactory manner the boring of the long Panir tunnel on the same line, notwithstanding the fact that the work was of an extremely difficult character.

These are merely two instances of successful work performed for the railway authorities, but they are sufficient to illustrate the reason why the firm have continued to enjoy the patronage of those employers, and were probably the cause of their being entrusted by the official Military Department with numerous important contracts, all of which have been faithfully carried out.

The partnership was dissolved in the year 1906, and the firm's interests in the business were transferred to Messrs. Noorbhoy Allibhoy & Sons. The senior member of the firm died in 1914, and his eldest son, Mr. Hasanalli Noorbhoy, has, single-handed, maintained the well-earned reputation gained for efficiency and promptitude.

The latter gentleman is the owner of a considerable number of commercial buildings and private residences in Quetta, of which city he is a Municipal Commissioner, and he also possesses valuable property in Karachi.

Mr. Hasanalli, as a good citizen of Quetta, is prepared at all times to contribute of his wealth to any deserving charitable institutions, and many poor persons can bear testimony to the valuable help so generously given to them.

The telegraphic address is "Alhilal." Quetta.

E. A. PELLIER.

The gentleman concerning whom these notes are written has succeeded in cramming into a business life of little more than twenty years a series of experiences which fall to the lot of few, and in his wanderings over a considerable portion of the world, both by sea and land, he has maintained a reputation—acquired in his youth—for "thoroughness" in all his undertakings.

Edouard Arsene Pellier was born in the year 1876 at Casteljau, in the Department of Ardeche, in the South of France, and after passing through a complete course of studies at L'Ecole des Arts a Metiers in Aix en Provence, he entered the French Mercantile Marine Service as a junior engineer. After spending about eighteen months in this capacity, gaining the esteem of his superior officers, and expanding his mind by visits to various seaports in other

MURREE BREWERY COMPANY, LTD.

1 View of the Murree Brewery, Quetta. 2. Manager's Bungalow, Quetta.

NOORBHOY ALLIBHOY AND SONS.

1. Exterior of Premises. 2. Interior of Showrooms. 3. Oriental Stores. 4. The Quetta Furnishing Company.

E. A. PELLIER

1. Empire Cinema, Lahore. 2. Interior, Empire Cinema, Lahore. 3. E. A. Pellier. 4. Empire Cinema (Soldiers' Club), Quetta.
5. Empire Cinema, Chaman: Headquarters Baluchistan Field Force Third Afghan War, 1919.

countries, he returned to France and took up an appointment as an engineer on the cruiser *Carnot*, then lying at Toulon. On his discharge from naval ranks Mr. Pellier rejoined the merchant service, and soon rose to the post of chief electrical engineer.

In 1897, when only twenty-one years of age, and possessed of the enthusiasm of an adventurous spirit which looks for a wider field for the expenditure of restricted energies, Mr. Pellier retired from a seafaring life, and after travelling extensively in the United States of America and Canada, he joined a small party who had resolved upon undertaking the arduous and daring feat of travelling on horseback through South America from the north-west coast to the south-eastern shores at Buenos Ayres, in the Argentine. The very idea of the hardships and dangers of such a long and perilous ride would have daunted the courage of any but the most determined men, but the travellers sent all doubts and fears to the winds and bravely set forth from Cartagena, a seaport, and the capital town of the Department of Bolivar, on the northern coast of Columbia.

The route taken was along the full length of Columbia, Ecuador, Peru, Bolivia, Uruguay, and thence to their destination. Mr. Pellier subsequently proceeded to South Africa, and was employed in the Transvaal during the Boer War, but his desire for roaming being still unquenched he sailed for Madagascar, Mauritius, the Straits Settlements, Japan, and eventually for Saigon, in French Cochin China, where he remained for a few years as chief electrician at the central electrical station in that town.

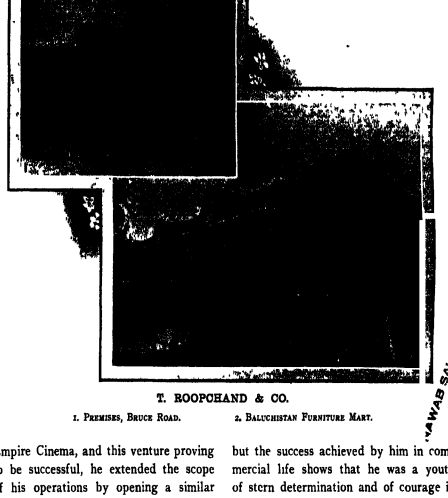
In 1893 Mr. Pellier decided to return to France, but on passing through India he was so impressed with the commercial possibilities of that country and with the charms of Oriental life, that in the following year he arrived in Calcutta and worked for some time as an electrician in various parts of Bengal.

Removing to Bombay shortly afterwards, he took up an appointment as chief engineer of the Finlay Mills, Ltd., in whose premises he erected and controlled the monster Diesel engines by which these mills are worked. He also designed and constructed a cooling tower for Messrs. James Finlay & Co., who warmly congratulated him upon the most efficient manner in which the work had been carried out.

In 1913 Mr. Pellier became general manager of the newly-formed Cinema de Luxe Theatres Company, Ltd., but he subsequently erected a picture-house for himself at Lahore which is known as the Empire Cinema, and this venture proving to be successful, he extended the scope of his operations by opening a similar establishment in a portion of the Soldiers' Club at Quetta, which had been granted to him by the military authorities. This building was unfortunately destroyed by fire in 1917, whereupon the Empire Cinema was temporarily transferred to the garrison gymnasium.

Mr. Pellier has now arranged to take over all that is left of the old Soldiers' Club, and further to erect at his own cost a thoroughly up-to-date picture palace, a skating rink, billiard saloons, and supper-rooms. A stock of portable engines for cinema performances in Native States is kept on hand, and arrangements are now being made under which Mr. Pellier will acquire modern equipment which will enable him to prepare films of scenes and incidents in Northern India.

In addition to the above enterprises he recently opened a tobacconist's shop at Quetta, which is being well supported by the civil as well as the military inhabitants of the city, and of the outlying stations on the Persian and Afghan frontiers.



T. ROOPCHAND & CO.

1. Premises, Bruce Road. 2. Baluchistan Furniture Mart.

T. ROOPCHAND & CO.

The educational career of the founder of the firm of Messrs. T. Roopchand & Co. was unfortunately curtailed owing to the death of his father in the year 1878, but the success achieved by him in commercial life shows that he was a youth of stern determination and of courage in face of difficulties. He obtained an appointment in the Indus Valley State Railway Department and filled with credit to himself many important positions until the year 1900, when a desire for a wider career led him to become a partner in the firm of Messrs. Tahelmal & Co., who has established themselves at Khojak Shallabagh and Chaman, in Baluchistan. Constructional work which was undertaken did not prove remunerative, therefore the partnership was dissolved in 1901, and Mr. Roopchand entered into business relationship with Messrs. Gobindran & Co., of Fort Sandeman, but the distance of this place from the nearest railway station was such a serious matter in connection with the transport of merchandise that he decided to remove to Quetta in 1906, where he inaugurated the firm of Chabaldas Roopchand & Co.

In 1913 Mr. Roopchand purchased the whole concern, changing the style of the firm to T. Roopchand & Co., and becoming contractor for supplies and transport as well as dealers in wines, spirits, provisions, furniture, cutlery, crockery,

glassware, lamps, millinery, and other goods.

Mr. Roopchand is ably assisted by his three sons. Tekchand, the eldest, manages the provisions and liquor department; Viroomal, the second son, exercises oversight of the jewellery and fancy goods; and Bhagchand, the third son, has sole charge of the furniture mart, which was purchased in December 1915 for Rs. 66,000.

A drapery business was in 1916 opened at Karachi under the name of Bhagchand Roopchand & Co., a cloth store has been started under the name of R. Motoomal, and the proprietor has initiated other undertakings of a similar character at Nushki, Dalbandin, and other places on the Seistan and Persian trade routes.

Contracts are entered into with the Government in connection with requirements for commissariat, irrigation, and Public Works Department, as well as the Government distillery at Quetta, and Messrs. Roopchand & Co have also considerable dealings with old-established firms in the leading European markets.

YOUSUFF BROTHERS.

During the second Afghan campaign (1875) the British troops were accompanied by Hamid Yousuff, who acted as contractor for the supply of certain provisions, and his sons, Mahomed Yousuff and Noor Mahomed, established the drapery and outfitting business now carried on at Quetta and Karachi by their descendants, Mahomed Seedick and Mahomed Essa, and by H. Hamid, their uncle.

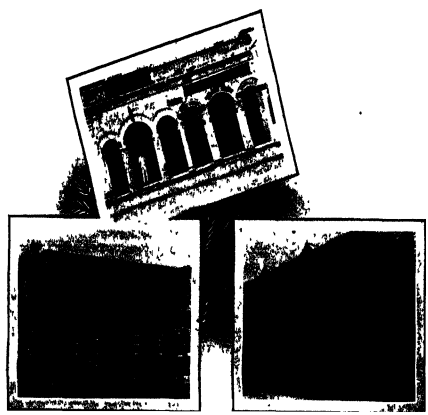
The firm are dealers in tweeds, flannels, serges, muslins, laces, ribbons, shirts, collars, ties, hats, vests, blankets, rugs, and boots and shoes for ordinary wear, shooting and other purposes, together with a large assortment of goods of a miscellaneous character usually met with in a well-managed drapery concern.

By carefully attending to the requirements of their customers, the partners have achieved great success in their business undertakings, but during the Great War they found many opportunities of showing their support of the Allies, more especially in connection with "Red Cross" work in Quetta.

Numerous letters testifying to the assistance given by the firm during that trying period have been received by them, but reference need be made to only one or two of these. On January 18, 1918, the superintendent of the Seistan branch of the Baluchistan Red Cross and Comforts Fund wrote these words: "I certify that Messrs. Yousuff Brothers are suppliers and agents to the above fund, and their representative is now travelling for the purpose of procuring goods for it." Again: "Messrs. Yousuff Brothers have supplied materials for the Red Cross working parties. They have always been most obliging and business-like, and very ready to help as much as possible by giving materials at low rates."

The principals of the firm are Mahomedans, from the district of Cutch, and they are highly respected in Quetta and Karachi for their broad and liberal-minded views upon social and other subjects.

Mahomed Seedick is in charge of the business at Quetta, Mahomed Essa controls the branch in Elphinstone Street, Karachi, and H. Hamid is responsible for the boot and shoe stores at "Hamidia Boot House" in Napier Road, Karachi.



YOUSUFF BROTHERS.

1. Quetta Premises. 2. Residence. 3. Karachi Premises.

SPORT

WESTERN INDIA TURF CLUB

THIS club, which was founded in the year 1837, controls racing held in all places under the civil control of the Bombay Government, or in Baluchistan, Rajputana, or Central India, and it now owns two raccecourses, one being at Mahaluxhmi, Bombay, and the other at Poona.

From about the year 1828 until 1882 all horse racing in Bombay was held at Byculla, the winning-post on the old course being situated in front of the present Byculla Club, the balcony of which building served as a private stand for members. Racing in those days was practically confined to a few naval and military officers and European merchants of the city, as well as to some Arabian and Persian dealers in horses.

By the courtesy of the secretary of the Royal Calcutta Turf Club, a perusal of the first copy of the *India Sporting Review*, published in 1845 by H. E. Abbott, has been permitted, and it contains "Rules and Regulations of the Bombay Course," which were based upon *Wetherby's Racing Calendar*, the standard work of reference in English turf circles. The *Review* also gives particulars regarding the Bombay meeting, which commenced on the 11th February, 1845.

The first race on the card was the Derby, run over a distance of a mile and a half, for all Arabs that had never started previously, with weight for age conditions. This was "the race of the year," and it is said to have excited an immense amount of interest for many months prior to the eventful morning. The following horses were entered: Mr. Howard's *Feramorz*, 7 st. 12 lb.; Captain McMahon's *Don Juan*, 8 st. 5 lb.; Colonel Brough's *Vibration*, 8 st. 5 lb.; Major Blood's *Cavalier*, 8 st. 12 lb.; Colonel Hervey's *The Hermit*, 8 st. 5 lb.; and Mr. Forbes' *Glaucus*, 8 st. 5 lb.; and they finished in the order now given, in the good time of 2 minutes 57 seconds.

The same horses—excepting that *Paulo Post* took the place of *Glaucus*—met again on the following day in a sweepstakes of 2 miles at even weights of 8 st. 7 lb., and on this occasion *Feramorz* again proved his metal in winning by more than a length from *Vibration*, with *Don Juan* a good third. The time taken was 3 minutes 58 seconds.

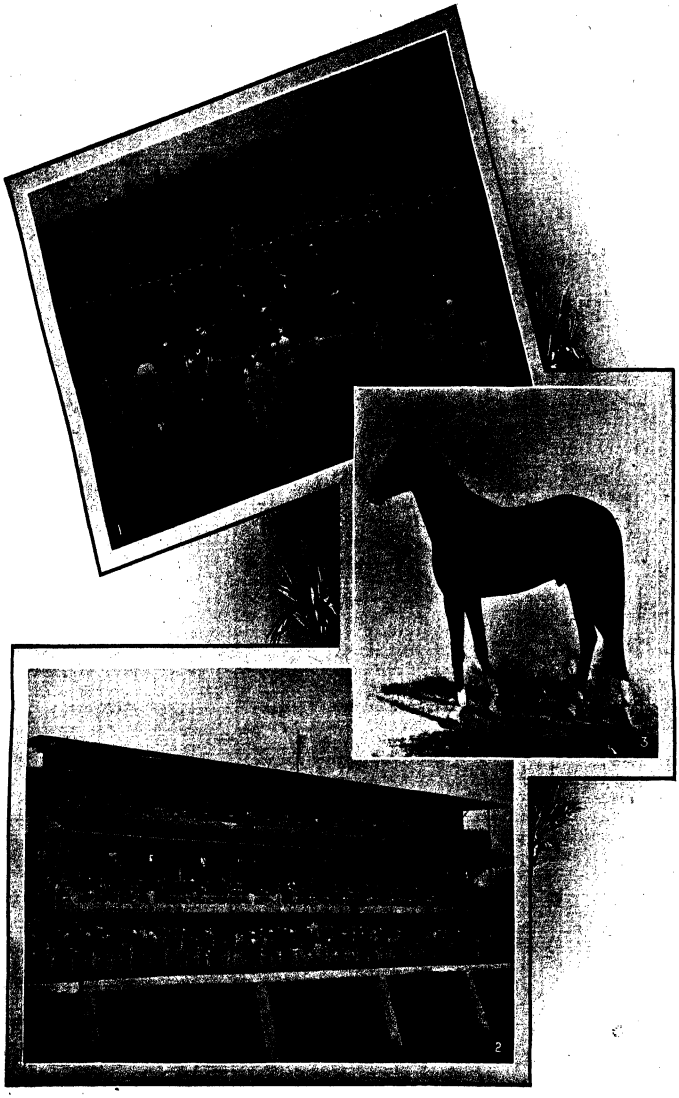
Considerable interest was manifested on the third day in the Ladies' and Bachelors' Purse, Rs. 300 from the fund, together with a sweepstakes of ten gold mohurs each, for all Arabs at 8 st. 7 lb. There were two heats of a mile in this race, and the order of placing at the finish of each of the two attempts was *Waverley*, *Amato*, *Hoffman*, and *Conrad*. The distances were respectively covered in 1 minute 55 seconds and 1 minute 56 seconds. The winner's handicap of two miles, held on the sixth day, brought out a field of five runners, some of which were already winners, and the judge's decision placed the horses as follows: *Don Juan*, carrying 8 st. 5 lb.; *Feramorz*, 8 st. 7 lb.; *Conrad*, 7 st. 12 lb.; and *Amato*, 9 st. 2 lb., with *Paulo Post*, 7 st. 12 lb. disqualified.

Practically only one class of horse—the Arab—was catered for at that fixture, but it is observed that at other meetings in North-Western India held in the same year the conditions were more elastic. For instance at Meerut, in the United Provinces, in February 1845 there was a division charger stakes for Arabs at 11 st.; country-breds, 11 st. 7 lb.; Cape and New South Wales horses at 12 st.; and English burdened with 13 st. 7 lb.

Other records than the *Indian Sporting Review* are in existence, which show that a club called the "Bombay Turf Club" was established about the year 1860 with the view of encouraging the breeding of horses by gentlemen in Bombay and its dependencies, the founders of this institution being Sir Charles Forbes, Messrs. G. Hall, A. Campbell, P. Hadow, and others.

In 1883 the venue of racing in Bombay was transferred from Byculla to Mahaluxhmi, where it remains to the present day. The Mahaluxhmi flats were in those days a wide, dreary expanse of marsh land, covered with water in the rainy season and exceedingly dusty in dry weather, and in spite of all the efforts of the stewards to make the place as pleasant as possible, the general opinion appears to have been that the races were held in a somewhat unpleasant locality.

Events during the course of succeeding years, backed up by the secretaries of the Western India Turf Club, have wrought many changes in the appearance of the Bombay racecourse, and have made a portion of the enclosures at any rate a thing of beauty. The distance round the course itself is 1¼ miles, and there is in addition a straight run of five furlongs which is much appreciated by owners and trainers, though perhaps not so much by



1. ARRIVAL OF H.E. THE GOVERNOR AT POONA RACES. 2. THE GRAND STAND, POONA, ON CUP DAY.

3. "UNION JACK,"

WINNER OF THE SINGUM PLATE, GOVERNOR'S CUP AND RS. 10,000, POONA, 1919. OWNER, H.H. THE MAHARANI OF COOCH BEHAR; TRAINER, P. J. FIRTH.

Photo by Ruckmans & Co.

the public as the finishing post of these sprint races is a considerable distance from the stands.

The first enclosure contains a private stand for members of the club, a public stand with seating accommodation for about 1,500 people, a tea pavilion for the use of H.E. the Governor of Bombay, four club tea pavilions, and two for the general public; also two large totalizator houses, one for "win" and one for "places." There are in addition sumptuously-appointed dressing and bath-rooms for jockeys, and a well-fitted surgery with up-to-date medical and other appliances. In the second enclosure there is seating accommodation for about 6,000 persons, and two totalizators which are much patronized by a large number of Indians who flock to the course on each race day.

The character of the racing at Bombay has undergone considerable change during the past twenty or twenty-five years; the European owner, civil or military, has almost disappeared, and the sport is now largely in the hands of Indian noblemen and of native traders and merchants in the city. The gentleman rider has also gone, and in his place may now be seen the best professional jockeys that England and Australia can produce. The chief reason for this state of affairs is the great increase in the stakes-money offered by the Turf Club at the Bombay and Poona meetings, which has resulted in prohibitive prices being asked by dealers for race horses with any pretensions to class. The altered conditions of military life in India, too, with its multifarious duties and restricted leave, may also have tended to make British and Indian cavalry officers, who were the backbone of racing in this country twenty years ago, forsake the game for the more economical sports of polo, pig-sticking, and hunting.

No authentic records are available as to when the present Poona racecourse was laid out, but it would appear that this was done in the early seventies of last century, and that the work was completed under the superintendence of the late Lieutenant-General Sir Charles Burnett, K.C.B., who took much interest in the project. From small beginnings the Poona races have grown to be nearly the largest in India.

This may be due to the proximity of the city to the large Presidency town of Bombay; to its light rainfall, and also to the fact that all classes of horses may be kept in Poona in good condition throughout the whole of the year.

The enclosures are much after the style of those at Bombay, but the stands and other buildings are smaller and less pretentious in every way. The course is 1½ miles in length, and is situated in most picturesque surroundings.

Races are held during the season from August to October, and are largely attended by visitors from Bombay, special express trains being run for the convenience of the public.

The best Arabs imported into India during the last twenty years are perhaps *Precious*, *Abdul Malik* and *Bay Middleton*.

The two former were greys and belonged to the Chief of Kagal, the brother of H.H. the Maharajah of Kolhapur. *Bay Middleton*, a rich bay, was the property of Mr. Mathradas Goculdass, one of the most ardent supporters of the turf in Western India.

All three horses were the idols of the Indian racing public, and invariably received a great ovation on winning a race.

In 1912 a great commotion was caused in racing circles in Western India when the Bombay Government, by an act of law, ordered the exclusion of bookmakers from the enclosures at Bombay and Poona, and substituted in their place the contrivance known as the "totalizator." Columns of correspondence hostile to the new idea appeared in the local press, from which it was evident that the large majority of these self-appointed critics genuinely believed that the totalizator as a means of betting was doomed to failure. The machines, however, after a year's working, have very effectively silenced their detractors, and are now firmly established in the public favour. Moreover, the large revenue derived from this source has enabled the stewards of the Turf Club almost to double, within the short period of four years, the stakes-money given for all classes of races at these two centres.

No history of the Western India Turf Club would be complete without mention being made of Mr. Cecil Gray, the late secretary, who retired in 1911 after holding office for fifteen years. From very unpromising materials Mr. Gray has evolved a racing club which is second to none in Asia, and has founded an institution which in later years has proved to be a valuable economic asset of the State, seeing that it has in the two and half years or so since the beginning of the war in 1914 given the large sum of Rs. 26,31,000 (or nearly £175,400 sterling) to various relief and other funds and charities both in England and India, and it has further undertaken to allot to the Government of India a sum of Rs. 30,000 (£2,000) per annum for five years for the encouragement of the breeding in this country of horses suitable for army remounts.

VIEW OF DEVGAD CHAT FROM THE LAKE

Photo by G I P. Rly.Co

RAJPUTANA

EARLY HISTORY

By ARNOLD WRIGHT

THE romance of India reaches its culminating point in Rajputana. Here, in this rugged and inhospitable land, in which the desert merges into the barren rocky highland, and the parching heat of summer is succeeded by the piercing cold of a winter devoid of snow and the other picturesque attributes of the cold period of more northern latitudes, is the home of the great race which has given India a characteristic chivalry, a race great in war and splendid in peace – one whose deeds are written large over the history of India in the past four centuries.

Records of Rajputana's early history are scanty and unreliable. As usual with the better known parts of Northern India, the narrative properly begins with Asoka, one of whose rock inscriptions of the period about 250 B.C. is to be seen near Bairat, in Jaipur State. The next landmark is an invasion of the Bactrian Greeks, who entered the province from the north and the north-west, and captured the old city of Nagari, near Chitor, and the country round about the Kali Sind river. Thereafter, in the early years of the Christian era, the Scythians held sway, and in succession we find the territory associated with the Gupta dynasty of Magadha, and the White Huns under Raja Toramana. It is not until the eighth century that we find any distinct connection between the province and the great race with whom it is now identified. In the first half of that century Harshavardhana, a Rajput of the Vaisha, or Bais clan, ruled at Thanesar and Kanauj, and conquered the country as far south as the Narbada. From this period the rise of the Rajput clans was progressive. By the time of the first Mahommedan invasion of India (1001–26), the Rajputs had planted themselves as rulers in many of the chief centres of Northern India, including Lahore, Delhi, and Kanauj. At the outset the new influence was withstood, but in 1193 Muhammad Ghori drove the Rajputs out of Delhi and Ajmere, and they were forced to take up their residence in the less fertile tract of country which is still their home. There is no need here to describe the many vicissitudes which distinguished Rajput history in the period when the earlier Mahommedan conquerors were invading India. The energies of the race were centred on repelling the attacks of the Mahommedan kingdoms of Gujarat and Malwa, which had grown out of the developments of those years. Rajput pride had always irked under the domination of the intruders, and when the opportunity came, as it did at the begin-

ning of the sixteenth century, they rose under their famous chief Rana Sangram Singh, of Mewar, and drove out the intruders.

United and victorious under a gallant leader, there seemed now to be opening up for the ancient race a period of prosperity and happiness. But the advent of Babar to the throne of Delhi brought into sight a new and formidable danger. Rana Sanga, as he is known, went forward to meet the foe, and won an initial success against him at Bayana. But Babar had taken the chief's measure, and brought against him an overwhelming force which, after a terrific battle at Khanua, in Bharatpur, drove the brave Rajputs once more into the wilds. This defeat, with the death the same year of the splendid old warrior who had been instrumental in bringing about the Rajput revival, led to a serious eclipse of the Rajput cause. There followed a period of humiliation and defeat, redeemed by splendid acts of heroism and an invincible belief in the high destiny of the Rajput people. Attacks made on the Rajputs in the mid-period of the fifteenth century led to the capture of Chitor by Bahadur Shah, of Gujarat, and to the transfer of the centre of Rajput power from the Sesodia clan to the Rathors of the West, headed by the chief of Jodhpur. An attack made on this prince near Ajmer by Sher Shah of Delhi was repulsed with such heavy loss to the invaders that the invasion of Rajputana was not persisted in. But the victory of Khanua had so broken the power of the Rajput clans that they were unable to offer a steady resistance to the gradual growth of the Mahommedan power.

On Akbar's accession as Mogul Emperor, the Rajputs were, to a large extent, split up into tribal groups, who had inadequate forces to meet the numerous and highly-trained levies of the great and growing forces of the new empire. In succession, Ajmer, Chitor, and Udaipur fell under the emperor's sway, and other less important centres were also brought into the imperial system. Akbar set great store on Rajput support, and gave high command in his armies to some of their leading chiefs, and, as a further mark of his admiration for the qualities of the race, wedded the daughters of two famous Rajput chiefs. From these unions came Jehangir, Akbar's successor on the throne. This emperor extended and consolidated the ties with the Rajputs, and there was a constant stream of men of the race into the imperial service, either as civil governors or as commanders in the field. Shah Jehan was also prominently identified with the clans to whom he was related by kinship on his mother's side. When in exile before his accession, he found a safe home in Ndaipur, and he was always mindful of his obligations to the great race from which he partly sprang. Under the rule of Aurangzeb, the old ties between two races deteriorated. The emperor was a fanatical oppressor of Hinduism, and during a great part of his later life was at violent enmity with the Rajput people. In this connection may be recalled the historic protest of Raja Jaswant Singh, of Jodhpur, against the iniquitous poll tax—a declaration breathing a remarkable spirit of toleration and couched in language of great nobility. On Aurangzeb's death, the leading Rajput clans—the Sesodia, the Rathor, and the Kachwaha—formed an alliance, but it had in it the seeds of disagreement, and finally came to an end in consequence of trouble over a clause giving Sesodia princesses the right of succession over the females of other clans.

During the anarchy which supervened on the downfall of the Mogul empire, Rajputana suffered with the rest of India, Jodhpur and Ajmer at the outset rather extended their limits, but about the middle of the eighteenth century the Mahrattas established themselves in Ajmer, and thenceforward the Rajput position degenerated. "The Rajput States," says the *Gazetteer of India*, "very nearly went down with the sinking empire. The utter weakness of some of the chiefs and the general disorder following the disappearance of a paramount authority in India, dislocated the tribal sovereignties and encouraged the building of strongholds against predatory bands, the rallying of parties round petty leaders, and all the general symptoms of civil confusion."

From the fate which so seriously threatened it, Rajputana was rescued by British arms. When the whole of the Rajput territory was under the heel of the remorseless conquerors, Lord Wellesley struck a deadly blow at the Mahratta power, and General Lake's subsequent victories completed the overthrow of their ascendancy, and with it terminated their hold on Rajputana. Alliances formed between the Rajput States and the British Government in this important period formed the basis of the understanding ultimately permanently reached. But before final peace was secured there was a rather protracted interval during which plundering bodies of Mahrattas and Pindaris wasted the territory of the Rajput chiefs. By 1818 treaties had been concluded by the British with all the States in Rajputana except Sirohi, whose treaty is dated September 1823, and Jhalawar, which did not come into existence until 1838.

Favoured by the *pax Britannica*, Rajputana has prospered on the whole. What troubles have arisen have been due either to disputes relative to the succession of States or famine brought about by the arid conditions under which this part of India is placed. During the Mutiny, however, there were several thrilling incidents associated with the rising in some of its numerous forms. Generally speaking, the Government of India left to the chiefs the responsibility of maintaining order in their dominions, and, on the whole, they behaved very well. After the fall of Delhi, material assistance was given to the British forces by some of the chiefs, and notably by the ruler of Jeypur. When the clouds of the Mutiny had disappeared, the Government of India, in 1862, granted to every ruling chief in Rajputana a *sanad* guaranteeing to him and his successors the right of adoption in the event of failure of natural heirs. This charter of Rajputana's liberty has confirmed and strengthened the ties with the imperial power, and there is to-day no more loyal part of the empire than that included within the historic limits of Rajputana.

1 TEMPLE AT UDAIPUR 2 SACRED TANK, ALWAR 3 ANASAGAR LAKE AJMER

Photos by B B & C I Rly Co

THE CENTRAL INDIA AGENCY

THIS is the name given to the collection of native states under the political supervision of the Agent to the Governor-General of India whose headquarters are at Indore

The territory of the Agency is bounded on the north-east by the United Provinces of Agra and Oudh, on the north-west and west by states of the Rajputana Agency, and the eastern and southern borders abut upon the Central Provinces The total area is 78,772 square miles, and the inhabitants are about 9,357,000 in number

For administrative purposes the states, which are 153 in number, are divided into the following seven groups, namely (1) the Baghelkhand Agency, comprising 12 states, the principal one being Rewa, (2) the Bhopal Agency, with 19 states, the chief one Bhopal, (3) the Bhopawar Agency, with 21 states, the principal one Dhar, (4) the Bundelkhand Agency, 22 states, the principal ones being Orchha and Datia, (5) the Gwalior Agency, 32 states, the principal one Gwalior, (6) the Indore Presidency, 9 states, the principal one Indore, and (7) the Malwa Agency, with 38 states, the principal one being Jaora

The history of the Central India States is most difficult to trace owing to the complex character of the numerous tribes which in very early days struggled with each other for the possession of territory The *Rig Veda* and ancient Buddhist writings lend very little aid in coming to any conclusion with regard to the settlement of any prominent race of people, but there are existing proofs, according to the *Imperial Gazetteer*, that about the year 300 B C, the Mauryan Empire extended from the Himalayas to the River Nerbudda, on the southern border of the Agency, as it is defined at the present day This dynasty lost its power after the death of the Emperor Asoka (231 B C), and this event was the forerunner of various tribes who fought their way into the tottering empire, some to the north, and others to the east and south. The states comprising the Malwa Agency in the west appear, however, to have had the greatest fascination for the intruders, and it is noted that the Sakas, from Central Asia, held sway for about 500 years These people were followed by the Guptas (320 A D), and in the eighth century the whole of Central India was controlled by the Gurjaras, who settled in that portion now known as Gujarat This régime lacked security of possession owing to the increasing power of the Paramaras, Parihars, the Chandels, and other tribes, who overthrew the Gupta dynasty, divided the conquered territory among themselves, and enjoyed comparative peace until the early days of the thirteenth century, when they began to quarrel with each other, thus paving the way for the extension of the rule of Kutb-ud-din, the Mahomedan King of Delhi, as far as the Vindhyan range, in the extreme south of the present Agency In less than a hundred years fresh troubles had arisen, and at the close of the fourteenth century, the territory was divided among a number of petty rulers The

Suri dynasty, established in 1539 by Sher Shah, witnessed a reconstitution of the divided areas, but about the year 1660 serious disturbances occurred regarding succession to the throne, and the powerful Mahrattas made the utmost of the opportunity to overthrow the Moghul power. From this time forward, the whole country was, with rare intervals of peace, racked by rebellions and invasions, and this state of affairs continued until Lord Hastings, who had become Governor-General of India, formed alliances with friendly chiefs in 1871 and proceeded to drive out all intruders.

These operations were almost entirely successful within the short space of four months, and the native inhabitants received an assurance as to security of possession of their holdings on the understanding that they would assist the British in quelling local disturbances. The State of Gwalior caused the greatest trouble owing to serious differences as to control, and in 1843 a Political Officer was stationed there by the British, who supported the authority of their representative by a force of 10,000 troops. The unfortunate Mutiny of 1857, however, produced disaffections in Gwalior, but Sir Hugh Rose, who was in command of an expedition for suppression, eventually restored tranquillity. Steps were subsequently taken to reconstruct the geographical areas of the several states, to promulgate rules to be followed in disputes regarding boundaries, to develop railway and road communications, foster the cause of education, and to adopt progressive measures of a general character for the well-being of the people.

The chief states mentioned in the early portion of these notes are in direct treaty engagements with the British Government, about thirty others are in similar relationship, but without treaties, and the remainder have feudal relations with one or other of the larger states, while the rulers hold their possession under the immediate guarantee of the British Government.

The representative of the Imperial Government is the Agent to the Governor-General, residing at Indore, who is the head of local administration, and who exercises, through his Political Officers, a general control over the whole Agency, being thus the medium of communication between the Government of India and the states.

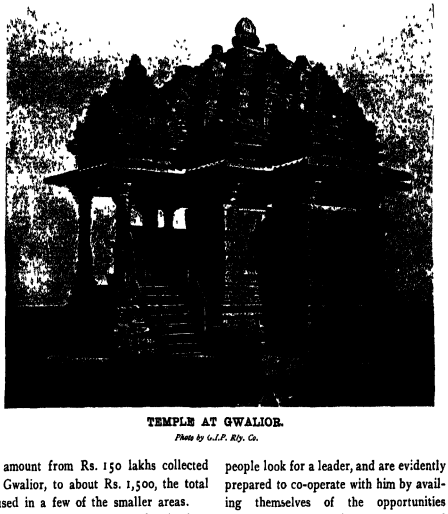
In the event of the minority of the heir in succession, or of any chief manifesting gross misconduct, or inefficiency to govern, the Political Officer is immediately placed in control of the affairs of the state.

These officials exercise the powers of district magistrates and sessions judges under the criminal procedure code, but appeals from their judgments are reviewed by the Agent to the Governor-General. The chiefs of about half a dozen states have final authority with regard to capital sentences, but, as a general rule, the proceedings relating to all serious offences are submitted to Political Officers.

The revenue of the several states varies in amount from Rs. 150 lakhs collected in Gwalior, to about Rs. 1,500, the total raised in a few of the smaller areas.

Absolute ownership of the land is claimed by each state, but grants and leases are made or entered into according to certain defined regulations, and it is quite a common practice to allow cultivators to be yearly tenants only. The construction of public works in the states is controlled by a superintending engineer, who is responsible to the Agent to the Governor-General.

Fully qualified engineers are also employed by many of the principal states, and several very important works have been undertaken, including the construction of palaces, hospitals, colleges, systems of waterworks and drainage, and buildings of a public and private nature. Municipal government has been established in several of the principal towns, and the benefits which have accrued are acting as an incentive to the inhabitants of other places to receive similar powers. The absence of desire for knowledge of even the primary principles of education has been an unmistakeable proof of indifference, if not absolute apathy, on the part of the people generally, and Government investigations into the question have revealed the fact that the literary qualifications of the inhabitants depend to a very large extent upon the amount of personal interest taken in the subject by the chiefs of the various states. The people look for a leader, and are evidently prepared to co-operate with him by availing themselves of the opportunities afforded by the opening of colleges and schools. It is noteworthy, however, that during the past few years there has been an awakening, and many schools have been opened, while institutions have also been established for the teaching of technical subjects and handicrafts.



TEMPLE AT GWALIOR.
Photo by G.I.P. Ry. Co.

Many portions of the Agency are hilly in character, and there are several peaks running up to 3,000 feet in height, but the only range which can be termed mountainous is in the south-west, and is known as the Satpuras.

The principal river is the Nerbudda, which rises in the Maikala range, in the Central Provinces, and is partially navigable, traversing a considerable portion

of the Agency and eventually flowing into the Gulf of Cambay, near the city of Broach. There is great variety in physical aspects and productiveness of the territory. Upon the Malwa plateau, for instance, which has an area of more than 34,000 square miles, one sees undulating plains interspersed with hills covered with trees, and also valleys of rich pasture and luxuriant crops, but in the more mountainous parts the scenery consists of dense jungle and weather-beaten rocky heights, down which rushing torrents of water fall as cascades and serve an excellent purpose in the irrigation of the lower valleys.

There are some sixty towns with populations of more than 5,000 inhabitants; three cities, Lashkar, Bhopal, and Indore, each having more than 70,000 inhabitants; and about 33,000 villages, of which 30,000 are occupied by fewer than 500 people. More than 50 per cent. of the inhabitants are dependent for a livelihood upon some form of agricultural pursuits, and it is a noteworthy fact that a very large proportion of these are actual cultivators.

The practice of agriculture depends to a great extent upon a sufficient rainfall, as there is not yet any systematized scheme of irrigation. Black soil of considerable fertility is most abundant in Malwa, and it is capable of producing satisfactory yields of the majority of the crops usually grown in India, but in more southern, and some eastern, districts the land has a greater composition of stones and sand. Cultivation for autumn crops is preceded by ceremonials, which include worship of farm implements, but, on the other hand, occupiers have not yet adopted thorough tillage, as they rarely plough at a greater depth than six inches, while in some portions of the Agency there are other individuals who have not discarded the primitive and objectionable method, known as *dahiya*, which consists of felling and burning trees, and subsequently taking a "catch" crop from seed sown in the ashes. The principal products of the soil are: Indian foodstuffs of various kinds, wheat, barley, maize, gram, fibres, hemp, cotton, tobacco, poppies, and a general assortment of vegetables. Wheat and maize yield about 4¼ cwt. to the acre.

The chief vegetables grown include potatoes, cucumbers, gourds, cauliflowers, cabbages, onions, and carrots, and fruits comprise mangoes, loquats, peaches, custard-apples, plantains, figs, and melons.

The breed of cattle known as "Malwi" stands high in the estimation of breeders throughout India, and they are decidedly superior to the Nimari animals, which are used almost entirely for military transport service, as their chief characteristics are size and strength.

Forests in Central India are shown in Government statistics to be rather more than 15,000 acres in extent, and they contain a large number of trees of a superior kind, including teak, acacia, sandalwood, *sisu*, *sal*, mimosa, and many others. It is not many years since the whole of this valuable tract was entirely at the mercy of any tribe or man, who indiscriminately felled such trees as were required, and, as a rule, the cutting down was productive of unwarrantable waste, scarcely a single instance occurring in which there was any attempt to replant the land.

Minerals of a more or less valuable character are distributed in practically every part of the Agency. Coal-mining has been developed in the State of Rewah, iron is found in the Vindhyan range, and manganese, sandstone, asbestos, corundum, diamonds, agates, and jasper are obtained in various places.

Nearly all species of wild animals common to India are in evidence, but it is to be regretted that the lion has become extinct, and that elephants, once the sport of Moghul emperors, have been driven from the territory. The capable hunter need not, however, visit the Agency and return with an empty bag, as he will be able to meet tiger, leopard, hyena, nilghai, black buck, the four-horned antelope, spotted deer, bison, buffalo, and wolf, in addition to a large variety of game birds.

The most profitable industry in Central India is the cultivation of the poppy, and the subsequent manufacture of "Malwa" opium. The plant is grown chiefly in the States of Gwalior, Indore, Bhopal, Jaora, Dhar, Ratlam, Mewah, and Kotah. China has been the largest purchaser of opium, but negotiations have been conducted with the view of decreasing, if not entirely suppressing, the introduction of this product into that country.

The manufacture of beautiful muslins, embroideries, and fine cloth, for which India has been famous for many hundreds of years, has not the place in industrial art that it had formerly, but Indians possess a natural capacity for this characteristic work, and the machine-made substitutes, elegant though they are, have not been able to crush this native industry. It is still carried on in various towns and villages in the Agency. Cotton-spinning mills, presses, and ginning factories have been established in Malwa, Indore, and Bhopal states, and flour mills have been erected in other parts. Other crafts include stone-cutting, inlaid metal work, and the making of cloth. The chief centres of trade are Lashkar, Indore, Ujjain, Ratlam, Mhow, Satna, Nimach, Bhopal, Sehore, and Barwaha. Imports include salt, sugar, *ghee*, kerosene oil, hardware, machinery, European piece-goods, and oilman's stores, and the principal exports are grain, oilseeds, cotton, opium, poppy seeds, hides, timber, and building stone.

The Agency is well served by railways, as it is crossed by three of the main routes between Bombay and Northern India, but there is a perfect network of branch lines, forming a combination which gives one mile of railway for every 73 square miles of country. The deficiency in metalled roads, not fully realized until the Mutiny of 1857, made it imperative that better means of communication between military stations were an absolute necessity, and since that time various states have rendered assistance to the Government in supplying the need.

Further than this, it was found that the extension of railway compelled the states to construct highways for the transport of produce to newly-opened stations.

There are now altogether about 1,560 miles of good hard roads, 900 miles of which are maintained by the Government.

The states in Central India contain a considerable number of interesting archæological remains and of fine architectural monuments, while ancient coins and epigraphic records have been discovered near the sites of many of the oldest remains, some of which are believed to belong to the early years of the Christian era. The most noteworthy feature of these relics is their great variety, and one may, without difficulty, meet with traces of several of the dynasties which one after another were connected with the formation of the Agency.

The oldest constructions, probably completed in the third century B.C., are of Buddhist origin, and some of the finest examples of these may be seen in and near to the town of Bhilsa, in the state of Gwalior. Other places at which are both buildings and ruins worthy of inspection are: Ujjain, Sanchi, Bhojpur. Rewa, Barwani, Mandu, Orchha, and Mandasor.

THE CENTRAL INDIA AGENCY

Mahomedan tombs, mosques, and other buildings, erected between the fifteenth and sixteenth centuries by the kings of Malwa, are still to be seen at Dhar and Mandu, and others of a more modern character are found at Sarangpur, Gwalior, Gohad, Narwar, and Chanderi. A large number of the architectural designs of the past half-century or longer are sadly lacking in uniformity, and there are flagrant instances of palaces in which Oriental and Western ideas are united, but combined in such a manner as to produce incongruous features.

The native state of BHOPAL is in the Bhopal Agency, under the political superintendence of the Agent to the Governor-General of India, and it has an area of 6,902 square miles, and a population of 728,453 inhabitants. It was founded by Dost Muhammad Khan, an Afghan, who, in 1708, obtained possession of considerable quantity of territory, and, after founding the towns of Islamnagar and Bhopal, and greatly extending his dominions, he assumed independence and adopted the title of Nawab.

The history of the state shows that in subsequent years there was an unusual failure of male heirs to succeed on the death of rulers, and on several occasions a widow of a Nawab not only acted as Regent, but was also the actual head of the state. Mamullah, the relict of Yar Muhammad Khan, who died in 1779, was a woman of great intellectual power, and proved to be a wise administrator for about fifty years. About forty years later, Kudsia Begam held the reins of power; in 1847 Sikandar Begam inaugurated many salutary reforms; in 1868 she was succeeded by Shan Jehan, whose daughter, Her Highness Nawab Sultan Jehan Begam Sahiba, G.C.S.I., G.C.I.E., C.I., is the present ruler. The greater portion of the state is situated in the Malwa plateau, which consists largely of rich black soil, but in the southern and south-eastern districts a series of sandstone hills occurs.

Agricultural operations include the cultivation of wheat, gram, maize, sugar-cane, and oilseeds, and the export trade has increased since the extension of railway and road facilities, the principal items being grain, seeds, cotton, lac, gum, hides and horns, while imports consist of hardware, boots and shoes, kerosene oil, cloth, and salt.

The city of BHOPAL is picturesquely situated at the head of two large lakes, and its houses, built upon terraces on the side of a ridge some 500 feet in height, are surrounded by fine trees and gardens, while occupying a central position in this charming panorama are the gold-tipped minarets of the Juma Masjid of Kudsia Begam. None of the public buildings are of exceptional merit as regards architecture, even the palace buildings of the Nawab Begam have been constructed at various dates, and have not been designed with any apparent relationship to each other. At the same time one might be interested in the Taj-ul-Masjid, the Prince of Wales and Lady Lansdowne Hospitals.

Industries, though few in number, comprise the weaving and printing of cotton cloth, the making of jewellery, cotton ginning, and the milling of flour and timber. A considerable import and export trade is carried on in grain, salt, sugar, hardware, cotton, seeds, hides, horns, and piece-goods.

The city is the junction of the Midland section of the Great Indian Peninsula and the Bhopal-Ujjain Railways, and is about 520 miles distant from Bombay.

GWALIOR is the largest treaty state in the Central India Agency under the political supervision of a Resident at Gwalior. The state has an area of 25,133 square miles, and a large portion of its inhabitants, more than three millions in number, are employed in connection with the production of cotton and in ginning, pressing, and spinning the raw material in the numerous factories which have been erected. The chiefs of Gwalior trace their ancestry to a family who held an hereditary position under the Emperor Aurangzeb. Ranoji Scindia, when in the service of the Peshwa, Balaji Baji Rao, rose to prominence by reason of his capabilities and his forcefulness of character, and in appreciation of his meritorious conduct, he was given the right to collect certain revenue in Malwa, a portion of Gwalior. He was the actual founder of the state, and on his death, in 1745, he was succeeded by his second son, Jankoji.

The latter was put to death after the battle of Panipat, his place being filled by his brother, Mahdaji Scindia, who in 1782 entered into a treaty with the British, under which he became an independent chief, although an English Resident to the court of Gwalior was appointed,

His Highness the Maharaja Mukhtar-ul-Mulk, Azim-ul-Igtidar, Rafi-ush-Shan, Wala Shikoh, Mohatasham-i-Dauran, Umadat-ul-Umara, Maharajadhiraj, Hisam-ul-Saltanat, Major-General Sir Madhava Rao Scindia, Alliah Bahadur, Srinath, Mansur-i-Zaman, Fidwi-i-Hazarat-i-Malik-i-Muazzam-i-Rafi-ud-Daraja-i-Inglistan, G.C.S.I., G.C.V.O., A.D.C. to His Majesty the King-Emperor, LL.D. (Cambridge and Edinburgh), D.C.L. (Oxon.), succeeded to the *gadi* in 1886, and obtained full ruling powers in 1894.

GWALIOR, the old capital of the state, claims attention chiefly by reason of its great antiquity as a Jain place of worship, and also on account of its fortress on the summit of a rock more than 1,000 feet in height. The older portion of the city lies at the base of the Gwalior Rock, and it contains some remarkably interesting relics of splendid buildings, which won the admiration of the Emperor Akbar during the last portion of the sixteenth century.

On the face of the huge rock there are about a hundred sculptures, varying in height from about 5 feet to more than 50 feet, which were cut between the years 1440–70.

The fort extends from east to west for a distance of nearly two miles, although its greatest width barely reaches 300 yards, and it is surrounded by a rampart to which access is gained by a series of steps cut in the solid rock.

The palace—erected by Man Singh about the close of the fifteenth century—and considered to be one of the finest examples of Hindu architecture in India, is about 300 feet in length and 160 feet in width, and on the eastern side it is about 100 feet in height. Gwalior is the centre of a district which produces excellent crops of grain, cotton, and opium. It is about 763 miles distant from Bombay and 195 miles from Delhi.

LASHKAR, the modern capital, was a mere village in 1810, when Daulat Rao Sindhia selected it as the site of his camp, and eight years later the place could not be described as anything more than a huge encampment.

When another year had passed away, however, a great change had been effected, as new palaces had been erected, good streets had been laid out, and a considerable number of substantial buildings of a public and private character had been erected. The city now presents a picturesque appearance, situated as it is in a fine valley, and it is recognized as an important centre of banking and exchange business, while at the same time many of its inhabitants are largely engaged in the carving of stone, and the export of building stone and various kinds

of grain. The city is built on the south-eastern side of the great rock of Gwalior.

INDORE is one of the principal native states in Central India in political relationship with the Government of India. The rulers of Indore have always borne the name of Holkar, probably derived from the village of Hol, the ancestral home, about 40 miles distant from Poona. The founder, Malhar Rao I, was the son of a peasant, but his great courage gave him opportunity for joining the Peshwa, and his victories soon secured for him a large area of territory. The *Imperial Gazetteer* says that in the year 1760, Malhar Rao had great domains in the Deccan, a large estate in Khandesh, townships and forests in the valley of the Nerbudda, castles among the jungles of the Satpura hills and on the bleak slopes of the Vindhya mountains and on the table-land, as well as far-spreading territories in Malwa. The state now comprises an area of about 9,506 square miles, and its inhabitants exceed a million in number. Malhar Rao II, who was ruler of the Holkar territory in 1817, joined the Peshwa when he led his forces against the British, and in a great battle the Holkar was defeated, he in the following year signing a treaty, which provided for the reduction of the Indore territory, as well as of the greater portion of its army.

His Highness the Maharajadhiraja Rai Rajeshwar Sawari Tukoji Rao Holkar, Bahadur, the present ruler, was invested with full ruling powers in November 1911, and during the short period which has elapsed since that date, many useful measures of reform and progress have been inaugurated.

The most conspicuous object in the capital city of Indore is the lofty many-storeyed gateway of His Highness's palace, but other attractions include the public garden with its summer palace, handsome private residences of fine architectural designs, and a number of cotton spinning and weaving mills.

The city is on the Ajmer-Khandwa section of the Rajputana-Malwa Railway system, and it is 542 miles and 922 miles respectively from Delhi and Bombay.

REWA, the second largest treaty state in the Baghelkhand Agency, rises from the Ganges valley in three plateaux resting on the Bundachal, Ranna, and Kaimor hills, and it has an area of about 13,000 square miles and a population of 1,500,000.

The rulers of the state are Baghel Rajputs, descended from the Solankis, who occupied Gujarat between the tenth and thirteenth centuries.

In the year 1812 the Pindaris, starting from Rewa territory, made a raid upon Mirzapur, but the British Government, who strongly suspected that the attack had been made with the full knowledge of Raja Jai Singh, the ruler of Rewa, interfered in the matter and compelled Jai Singh to enter into a treaty, under which he acknowledged the supremacy and protection of the Government.

The present ruler, His Highness Maharaja Lieutenant-Colonel Sir Venkat Raman Singhji, Bahadur, G.C.S.I., is proud of the loyalty of the Rewa House to the throne, which was specially manifested during the Sepoy Mutiny, when Maharaja Raghuraj Singh rendered valuable assistance to the British by maintaining order in his own state and by sending troops for the preservation of peace in adjoining territories.

DHAR.—This state, under the Bhopawar Political Agency, and in direct treaty relationship with the British Government, is 1,775 square miles in extent, and its inhabitants are about 155,000 in number.

The name of the state was appropriated from Dhar, the chief town, and the rulers are Pawar Mahrattas, being descended from the Paramaras, who ruled over Malwa from the sixth to the twelfth century. Most interesting archæological remains, belonging to Mahomedan as well as early Hindu periods, have been discovered, and near to the town is the old fort of sandstone, at an elevation of about 1,900 feet.

The Vindhya mountains bisect the state

ADHAI-DIN-KA JHONPRA, AJMER.

into two parts, which vary greatly in physical features and products, but in practically every portion there are dense jungles inhabited by tiger, panther, bear, and numerous species of deer. The present ruler, His Highness Raja Sir Judaji Rao Puar Sahib, Bahadur, K.C.S.I., underwent a thorough training in administrative duties, and since his elevation to the *gadi* he has manifested great aptitude in controlling departmental affairs, with the result that he has gained the affection of his subjects as well as the esteem of his brother chiefs.

The town of DHAR is 33 miles distant by the Bombay-Baroda and Central India Railway from the cantonment of Mhow, in the State of Indore.

DATIA, a treaty state under the Bundelkhand Political Agency, was, in 1626, granted in *jagir* to Bhagwan Rao by his father, the chief of the Orchha state, and, after various vicissitudes, it is now about 911 square miles in extent. A considerable portion of the surface consists of rocky soil, covered, for the most part, with stunted jungle.

The inhabitants, about 154,000 in number, are composed chiefly of Hindus, and the majority of them are engaged in agricultural pursuits. There were constant disturbances in the state after the year 1857, owing to claims of right to succession being made by the *Thakurs* of Baroni, but in 1882 the British Government decided that "the claimants held their lands in *jagir* from the Moghul emperors, but that they were politically subordinate to Datia."

The town of DATIA is built upon a rocky eminence, and it is crowned by a fine palace of most imposing appearance owing to its handsome architectural design. Several old temples and other archæological relics are abundant in the neighbourhood.

The rulers of the state are Bundela Rajputs, descended from the House of Orchha, and the present chief is the Maharaja Lokindra Govind Singh Bahadur.

ORCHHA.—The chiefs of the State of Orchha claim descent from the Gaharwar Rajputs of Benares, who were rulers over territory, which included Orchha, during the eleventh century. Sohai Pal was the first occupant of the *gadi* of Orchha (1231), and during the reigns of himself and his successor, considerable additions were made to the area, but in 1592, on the death of Madhuka Shah, his eight sons divided the state among themselves. This was the commencement of endless troubles, in which the Moghuls were concerned, but the chief dissensions were of an internal character. The Emperors Akbar, Shah Jehan, and Jehangir, and subsequently the powerful Mahrattas, were responsible for the great variations in the political welfare of the state, and the confusion which occurred was only partially dispelled when Vikramajit entered into a treaty with the British in 1812.

The present ruler is His Highness Saramadi Rajhat Bundelkhand Maharaja Mahendra Sawai Sir Pratap Singh, Bahadur, G.C.S.I., G.C.I.E., who succeeded his brother in 1874.

The state, in the Bundelkhand Political Agency, is about 2,080 square miles in extent, and it consists largely of a plain interspersed with hills lying between the Belwa and Dhasan rivers. The inhabitants were about 330,000 in number, about 95 per cent. of whom are Hindus. His Highness the Maharaja resides at Tikamgarh, the capital town since 1887.

MHOW, a large British cantonment in the State of Indore, in the Central India Political Agency, is built upon a ridge of rocky hills at an elevation of nearly 2,000 feet. The town was founded in the year 1818 by Sir John Malcolm, who made it his headquarters during his political control over Central India. There was only a small garrison at Mhow at the outbreak of the Sepoy Mutiny in 1857, but the trouble, which never became serious in the camp, was quickly suppressed.

The cantonment and railway station on the Ajmer-Khandwa branch of the Rajputana-Malwa Railway, and near to the River Gambri, are situated at an elevation of nearly 2,000 feet.

As Mhow is purely a military station, there are not any local industries beyond those which are connected with the domestic life of the people, but a very large quantity of merchandise, provisions, and other goods is imported for the use of the inhabitants, who are about 30,000 in number. Educational institutions, including Parsi, Convent, railway, and other schools, as well as civil and military hospitals, are maintained by joint public and private grants.

STREET SCENE, BURHANPUR.
Photo by G.I.P. Rly. Co.

1 THE MAYO COLLEGE, AJMER. 2. JAIN TEMPLE, AJMER.
3 NAYA BAZAAR (NEW MARKET) STREET, AJMER.

RAJPUTANA

DESCRIPTIVE

RAJPUTANA, signifying 'the Dwelling of Princes," is usually described in Government documents as 'the name of a great territorial circle which includes eighteen native states, two chiefships, and the small British Province of Ajmer-Merwara" The total area of 130,462 square miles is bounded on the north and north-east by the Punjab, on the east by the United Provinces of Agra and Oudh, and the State of Gwalior, on the west by Sind, on the north-west by the State of Bahawalpur, in the Punjab, and on the south by Central India States and a portion of the Bombay Presidency

The Government of India is now represented in Rajputana by a political officer, known as the Agent to the Governor-General, who is also Chief Commissioner of the British Province of Ajmer-Merwara. Subordinate to the Agent are Residents and Political Agents, who exercise a kind of general supervision, but the administrative organization of each state is, under ordinary circumstances, vested in the several rulers

Rajputana is divided into five residencies and one British district as follows (1) Mewar Residency, comprising the States of Banswara, Dungarpur, Partabgarh, Shahpura, Udaipur, including Oghna, Panurwa and Durab, Thanah and Jewas, (2) Jaipur Residency—Jaipur, Kishengarh, Rewa and Tonk, (3) Haraoti Agency—Bundi, Kotah and Jhalawar, (4) Eas'ern Rajputana States Residency—Alwar, Bharatpur, Dholpur, and Karauli, (5) Western Rajputana States Residency—Bikanir, Jaisalmer, Jodhpur, and Sirohi, and the British District—Ajmer-Merwara.

With such an extensive area in the states, there is considerable diversity in physical features in different portions of the territory In a general way one might describe the country as a semi-desert tract, but in the south-eastern districts the land is fertile, good crops being cultivated The Aravalli range extends from the ridge of Delhi, on the north-east, to Mount Abu in the south-west, and some of its peaks rise to a height of about 3,440 feet

The Chambal, the largest river in the states, flows for a distance of nearly 200 miles through the territory, and after passing through Kotah, Karauli and Dholpur, it becomes lost in the waters of the Jumna There are several artificial lakes in Mewar, but the only natural sheet of water is the great Sambhar salt lake, which belongs jointly to the States of Jaipur and Jodhpur

The inhabitants of the states are nearly 12,000,000 in number, and about 56 per cent of these obtain their means of sustenance from some form of agricultural pursuits Cultivation of land in the northern and north-western states is carried on under considerable difficulties, as unless there is a river in the vicinity or some form of irrigation can be utilized, it is almost an impossibility to raise really profitable crops. There is a heavier

THE DILWARA TEMPLE, MOUNT ABU.

1. 2. Carved Ceiling. 3 Carved Marble Ceiling. 4. Carved Pillars.

Photos by Clyton & Co

rainfall in the eastern portion of the territory, and the light soil of the west is displaced by alluvial loam and, in some parts, a rich black mould, the latter yielding good returns of wheat and barley. The system of cultivation practised by landholders is generally of a primitive character, but it should be stated that in many progressive states modern implements are used, care is exercised in the selection of seed, and attention is given to classification and analysis of soils. The principal vegetables cultivated include beet, cabbage, cauliflower, carrot, celery, onion, egg-plant, tomato and turnip, while in orchards may be seen fine crops, guavas, custard apples, apricots, mangoes, figs, limes and melons. There are not any large timber forests in Rajputana owing to the exceedingly small quantity of rain, but in the neighbourhood of the Aravalli range there are hilly tracts which are fairly well covered with mangoes, *mahua*, bamboo and occasionally teakwood trees. Many of the states have not established a regular forest department, and therefore statistics showing the aggregate area of forest lands, of the various species of trees, and of the protective measures taken collectively, but it is an encouraging fact that several ruling chiefs have in recent years taken a deep interest in the work of afforestation.

The making of salt is carried on in almost every part of the territory, and many occupants of almost every village are employed in weaving coarse cotton cloth for local use. Other industrial work includes the dyeing and stamping of cotton cloths, the weaving of muslins, the manufacture of excellent woollen carpets, rugs, and other fabrics, as well as the making of earthenware pottery and working in ivory and metals of various kinds.

The chief exports are wool, woollen goods, oilseeds, raw cotton, salt, marble, *ghee*, hides, and livestock, while the imports include cotton goods, tobacco, sugar, food grains, metals, kerosene oil and timber.

Rajputana is well favoured in regard to means of communication, especially as to railways, which extend to a length of 1,576 miles, 759 miles of which belong to the British Government. The most important native states' railway is the Jodhpur-Bikaner line, which is the property of the Darbars of those states. According to an authoritative account it covers a distance of nearly 700 miles, namely, 445 miles to Jodhpur and 250 miles to Bikaner, while it has a permanent way of 124 miles in British territory. The line commences at Marwar junction, on the Rajputana-Malwa system, and runs in a north-westerly direction for 44 miles to the River Loni, whence two branches strike off, one to Hyderabad (Sind), where it meets the North-Western Railway, and the other going north-eastwardly past Jodhpur, Mala Road and Biakner to Bhatinda, in the Punjab. From Mala Road, another branch joins the Rajputana-Malwa line at Kuchawa Road.

The Jodhpur-Bikaner Railway was constructed gradually between the years 1881 and 1902. The total capital outlay, two years after the opening of the line, was Rs. 1,73,00,000, and dividends have been paid at the rate of eight per cent. per annum.

The Rajputana-Malwa (Government line) runs from Ahmedabad to Bandikui, branching from there to Agra and Delhi.

It is impossible to exaggerate the value of railways to the inhabitants of Rajputana; they have not only opened up the markets of India to producers and manufacturers, but in times of severe famine they are the means by which food-grains can be transported with such rapidity that the lives of thousands of human beings are undoubtedly saved. Rajputana is also provided with 1,190 miles of metalled, and 2,360 miles of unmetalled roads.

In 1863 a Rajputana circle of the Imperial Public Works Department was formed and placed under the charge of a superintending engineer, who was also secretary to the Agent to the Governor-General and to the Chief Commissioner, but at the same time several of the principal states have their own departments, under fully-qualified officers. As regards education it must be said that sixty years ago there seemed to be little disposition on the part of Darbars to make systematic provision for the teaching of the young.

Parents appeared to be satisfied with the giving of instruction of the most elementary character, and the pedagogues of those days might be seen sitting in the shade of a temple, on the steps of a building, or on the side of the road, surrounded by half a dozen or a dozen boys for whose benefit he inscribed certain characters or figures upon a white board by means of a stick dipped in charcoal. The first public teaching institution was opened in 1842 at Alwar, and the example thus set was soon followed by Jaipur and other states. As soon as the necessity for a knowledge of the English language was recognized by those engaged in commerce, its study was made possible in many schools, and at the present time it is greatly sought after. There are arts

THE DILWARA TEMPLE, MOUNT ABU.
DETAIL OF CARVED PILLARS.
Photo by Clifton & Co.

colleges at Jaipur and Jodhpur, both of which are affiliated to the university at Allahabad.

Medical aid was given at a few dispensaries which were opened between the years 1855–60, but the number of these has increased very considerably, the major portion being maintained by the Darbars of the several states.

Archæologists and antiquarians in search of relics will be greatly interested in inscriptions on rocks by the great king, Asoka, belonging to the middle of the second century B.C. These may be seen at Bairat, in the State of Jaipur, at which place there are also remains of the Buddhist period. Several temples cut in the solid rock may be found at Kholvi, in the State of Bharatpur, as well as other shrines in Partabgarh, Kalinjar, Banswara, and several other places. The principal relic of Hindu architecture is a stone pillar bearing inscriptions dating from about the middle of the fourth century A.D.

Mahomedan memorials consist chiefly of interesting mosques and tombs in the States of Jodhpur and Alwar.

The largest of the states is JODHPUR, which is under the political charge of the Western Rajputana States Residency and the Government of India. It has an area of 34,963 square miles, and it consists chiefly of a sandy plain with hills of red sandstone, connected with the Aravalli range of hills, which intersect the whole of the province. His Highness the Maharaja claims descent from Rama, the deified King of Ajodyha. Jodhpur was founded as a state in the early part of the thirteenth century, and the capital city, Jodhpur, owes its origin to Rao Jodha, in the year 1459. The city is surrounded by walls six miles in length, intersected by seventy gates, and it possesses a large number of very fine residences, while at Mandor, a former capital, three miles distant, are rudely-carved tombs of the Parihar rulers who preceded the Rathors at Jodhpur. The inhabitants of the state are about 2,057,553 in number.

Bikaner, with an area of 23,311 square miles, is the second largest state, and it consists almost entirely of a huge sandy tract, with a wholly insufficient natural supply of water, but after the ordinary rains the brushwood is clothed with vegetation, refreshing to the eye, and the salvation of cattle and other livestock. The state was founded about the year 1488 by Bika, a Rathor Rajput who gained supremacy over the various clans who controlled the territory at that time. The first ruler was Rai Singh, one of the ablest of Akbar's generals, and it was he who built the main fort. The city of Bikaner is surrounded by a wall 3½ miles in circumference, and it presents an imposing appearance with a fort and palace overlooking it, and the older fort of Rai Singh on the summit of the hill.

THE DILWARA TEMPLE, MOUNT ABU.

INTERIOR.

Photo by Ranchand Godar.

About three miles from the city is the crematorium of the rulers of Bikaner, and in the vicinity may be seen a number of tombs of noted Maharajas.

Jaipur.—The ruler of this State is the acknowledged head of the Kachwaha Rajputs, and the present occupant of the *gadi* is His Highness Sir Sewai Madho Singh Bahadur, G.C.S.I., G.C.I.E., G.C.V.O., LL.D. (Edin.). The dynasty in Eastern Rajputana was established in the twelfth century, and a small state was formed with Amber as the capital, but in 1728 Sawai Jai Singh II built the modern city of Jaipur. The latter is one of the most beautiful cities in India; it is encircled by a wall of solid masonry with lofty towers, its streets are laid out on a rectangular plan, and many of its handsome buildings are constructed very largely of marble. The palace of His Highness the Maharaja is situated near the centre of the town, and the surrounding gardens present one of the most lovely scenes in Rajputana. Jaipur city has a population of about 137,000 inhabitants, and the State is 15,579 square miles in extent.

Jaisalmer, in the Western States Residency of Rajputana, extends over an area of 16,062 square miles, and it is inhabited by some 89,000 inhabitants. The State consists of sandy desert land with the exception of a comparatively small area surrounding the capital. The chiefs

belong to the Jadon clan of Rajputs, and they claim descent from Krishna.

The city of Jaisalmer, founded in 1156 by Rai Jaisal, is built on a rocky hill, and at a greater altitude are the fort and palace, both of which are famous for their fine carvings in stone. There are many valuable specimens of archæological remains in various parts of the State, among these being the village and fort of Birsilpur, which were founded in the second century.

Udaipur, or Mewar, in the Mewar Residency, was founded as a state about the year 1559. It has an area of 12,053 square miles, and its inhabitants are nearly 1,300,000 in number. His Highness the Maharana stands first among Rajputs as heir to the throne of the legendary Rama, representing the elder branch of the *suryabansis*, or "children of the sun."

The present ruler, His Highness Maharajadhiraja Maharana Sir Fateh Singh Bahadur, G.C.S.I., G.C.I.E., traces his descent from Kusa, the elder son of Sri Rama of the Ramayana.

The city of Udaipur is very beautifully situated on the slope of a hill, on the summit of which is the chief's palace, overlooking a pretty lake in the centre of which are two island palaces. Numerous archæological remains may be seen in various parts of the State, and discoveries have been made of stones bearing inscriptions attributed to the third century.

BUNDI.—This State, in the Haraoti-Tonk Agency, is 2,220 square miles in extent, and at the census of 1911 the inhabitants were 218,740 in number. The territory is mountainous in character, the Bundi double range of hills traversing its whole length. His Highness Maharao Raja Sir Raghubir Singh Bahadur, G.C.I.E., G.C.V.O., K.C.S.I., is the head of Hara sept, of the Chauhan clan of Rajputs, and the country under the rule of this particular sept has been known by the name of Haroti for several hundred years.

It would, perhaps, be impossible to find a more picturesquely situated city in Rajputana than Bundi, the capital, which covers an area of about two square miles of the steep side of the hills, and its fine buildings, constructed on a series of terraces, are overlooked by the palace on the summit.

KOTAH.—The ruler of this State, His Highness the Maharajdhiraj Maharaj Mahimahendra Maharao Raja Lieutenant-Colonel Sir Umed Singh Bahadur, G.C.S.I., G.C.I.E., belongs to the Hara sept of the Chauhan clan of Rajputs. The State was founded in the year 1625, and it came under British protection in 1817.

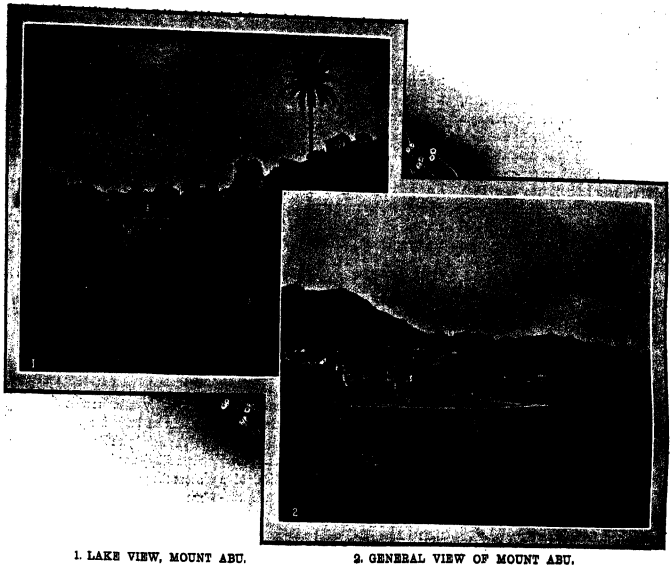
Internal troubles in connection with the right of succession necessitated armed intervention in 1821. The chief city, Kotah, occupies a very strong position on the right bank of the River Chambal.

The State has an area of 5,684 square miles, and is inhabited by about 640,000 persons.

AJMER-MERWARA.—The British district in Rajputana comprises the two tracts known as Ajmer and Merwara, and it has an area of 7,210 square miles and a population of more than 501,000 inhabitants. The territory was in 1818 ceded, under treaty, by Daulat Rao Scindia to the British, and it is now administered by a chief commissioner, who is also the agent in Rajputana of the Governor-General of India.

Ajmer, the chief city, is said to have been founded by Raja Aja in the year A.D. 145, and it is charmingly situated in a valley surrounded by picturesque rocky hills. It is protected by a strong masonry wall, which is pierced by five strong gateways. Ajmer is a station on the Rajputana-Malwa Railway, and is a junction with the Malwa section of the Bombay-Baroda and Central India system, while it is 615 miles and 235 miles distant from Bombay and Delhi respectively. There are, naturally, many objects of interest to be seen in a city of such antiquity, these including the Taragarh hill and fort at an elevation of 2,853 feet; the Dargah, the burial-place of a noted saint who is credited with having performed several miracles; marble pavilions in the public gardens; the handsome building of Mayo College, and a mosque on the slopes of Taragarh hill which is noted for the beautiful carvings with which it is adorned.

STREET SCENE, JAIPUR.
Photo by B.B. & C.I. Railway.



1. LAKE VIEW, MOUNT ABU.
Photo by Kaichand Gadur.

2. GENERAL VIEW OF MOUNT ABU.
Photo by B.B. & C.I. Ry. Co.

MOUNT ABU

MOUNT ABU, the headquarters in Rajputana of the Agent to the Governor-General in India, situated in the centre of the native state of Sirohi, is a hill, or rather a cluster of hills, 4,500 feet in height, and seven miles distant from the western face of the Aravali range of mountains. Delhi, the capital of India, lies 425 miles to the north, and Bombay, the chief port of this vast country, and the gateway for Western visitors, is about the same distance in a southwardly direction.

The original name of Abu was Arbuda, signifying "wisdom," and there is a legend in the *Mahabharata* to the effect that it was bestowed after the creation of the Mount by the holy Himachal, i.e. the Himalayas. Here, however, is the story. "One day the cow Nandini, favourite of the sage Vasisthas, fell into a deep abyss in that region, which at that time was in other respects a level plain. The *Muni* sought the help of the River Saraswati, and the latter, in response, saved the sacred cow by flooding the land and thus bearing Nandini on her aquatic bosom. Vasisthas, fearing that the accident might occur again, prayed the mighty Himachal to fill up the great fissure, and the mountain, calling his hundred sons together, asked which of them was ready to carry out the sage's wish. Nandivardhan, the youngest of all, offered himself for the mighty task, but being lame he persuaded his friend the snake Arbuda to carry him on his back. The snake agreed to the proposal, and placed Nandivardhan on the present site of Mount Abu, and thus there came into existence over the great chasm a lofty hill, to which the name of Arbuda was given in order to perpetuate the memory of the snake god."

Mount Abu enjoys a remarkably healthy climate, and even in the summer months the heat is not overpowering, as the temperature rarely exceeds 90 degrees Fahr., while in winter it ranges between 59 degrees and 69 degrees. The 17 miles journey along a good metalled thoroughfare from Abu Road station, on the Bombay-Baroda and Central India railway system, is accomplished by motor service or by *tongas* drawn by hardy hill ponies which cover the distance in about two and a half hours. It is advisable that application for seats should be made in advance to Mr. H. Merwanji, the proprietor of the famous Rajputana Hotel at Mount Abu.

Long rides in trains are usually monotonous and tiring, and therefore the drive to the Mount provides a most welcome change, affording the keenest delight to travellers by reason of the magnificent scenery continuously presented. The rugged precipitous rocks, at times covered with luxuriant vegetation; the most beautiful flowers of almost every conceivable colour; and hills and valleys, with the adjacent plains distinguishable by growing crops, combine to form a panorama of unexampled splendour.

There is much to be seen and admired at Mount Abu, but pride of place must be given to the Dilwara white marble

temples, which form one of the principal shrines in India of the wealthy Jain community. There are four of these edifices, each of which stands in a quadrangle measuring 100 square feet.

The first of these to be noticed is the Adinath temple, which, according to an inscription, was built in the year 1032 by Vimalsah, a viceroy of the King of Gujarat, and it is said that the work of construction covered a period of fourteen years, and, further, that the cost of it was not less than £12,400,000. At the entrance may be seen an equestrian statue of Vimalsah, and on entering the porch the attention of visitors is rivetted by the magnificent dome, supported on four pillars, with its handsomely-carved pendant and circular rims, all of which present an example of the exceedingly chaste art of Indian sculptors of those early days. The most striking feature of this architectural gem is the extreme delicacy of the carving, solid marble having been so skilfully chiselled that the traceries have the appearance of being shell-like in their transparency.

Passing through the portico the visitor is brought face to face with a colossal figure of Adinath, the chief Tirthankar, or saint, of the Jains, which is richly ornamented with jewels of priceless value. Around the quadrangle are fifty-two cells, in which are images of other deified saints, and the ceilings in the porticoes leading to these cells are richly carved with figures or with incidents illustrating portions of Hindu holy writings. Representations, by way of example, are given of the *Lila*, or sports, of Krishna; of Ambaji, the goddess at whose instigation the temple was built; of Saraswati, the goddess of learning; of Lakshmi, the goddess of wealth; of Nar Sinha (man-lion), Avatar, the fourth incarnation of Vishnu; and of other figures connected with various episodes in Jain and Hindu mythology.

The Nemnath temple, constructed in 1231 by Vastupal and Tejpal, ministers of the King of Gujarat, is practically a replica of the first-named edifice, but in many respects it is superior. Colonel Tod refers to it as follows: "The design and execution of this shrine and all its accessories are on the model of the Adinath temple, which, however, as a whole, it surpasses. It has more simple majesty, the fluted columns sustaining the portico are loftier, and the vaulted interior is fully equal to the other in richness of sculpture and superior to it in execution, which is more free and in finer taste; the dome in the centre is the most striking feature, it is a magnificent piece of work, and has a pendant cylindrical in form and about three feet in length that is a perfect gem, and which, at the point where it hangs from the ceiling, appears like a cluster of the half-disclosed lotus, whose cups are so thin, so transparent, and so accurately wrought that it fixes the eyes in admiration."

The central shrine contains a mammoth statue of Nemnath, and on each side of the door leading to this apartment are beautifully carved cells, built, it is said, by the wives of the two founders of the temple. The corridors contain forty-two cells, in which are images of some of the most famous Jain *tirthankars*. The porticoes at the entrances to these cells are most elaborately carved, depicting scenes connected with the life of Nemnath, his marriage and deification, also of an army starting forth on an expedition, of a battle, the home-coming of the conquerors, the victors living peacefully in their homes, and other subjects.

There is, further, a masterpiece in sculpture of a miniature tank encircled by a number of steps, and it is believed that this representation has elicited greater praise from experts than any other portion of these exquisite works of art.

Near to this temple is the *hathikhana*, or elephant house, in which there are beautiful models in marble of ten elephants, and one cannot help noticing the marvellous skill displayed in the carving of the ornamental trappings, adornments, and ropes on the backs of the animals.

The two remaining temples of this group, Santinath and Parsvanath, would receive greater attention if they were not contiguous to such handsome structures as those already referred to herein. There is, however, very great beauty in the symmetrical pillars ornamented with the "bell-and-chain" carvings, which are so frequently in evidence in Jain and Buddhist temples, and in the figures of *gandharvas*, or "musicians of heaven," with instruments of various kinds in their hands.

Not on any account should visitors fail to see the Achalgarh Fort and Temples, which are situated about five miles from the Mount. On either side of the road one sees the most luxuriant vegetation, and as the ascent is made one obtains magnificent views of endless plains below, interspersed with villages and rivers, while towering skywards is the huge rocky eminence upon which the historic fort is built. Before reaching the summit one notices the Mandakini tank, upon the bank of which stands a group in marble of three life-size buffaloes, said to represent demons which the hero Adipal Parmar destroyed. Among the shrines in the immediate neighbourhood is the Saivite temple of Achleshwar, "the god of immovability." In the interior there is a large hole in the ground, and at the bottom of it is a yellow stone which is alleged to be the toe-nail upon which a deity steadied the Mount during an earthquake.

Another temple constructed in the year 1513 is also dedicated to the saint Parsvanath, and it is famous for a remarkably fine marble floor and a number of brass images of Jain deities.

The Achalgarh Fort (or the Fort of Immovability) was built by Parmar Rajputs about the year 1900, but the shrines were not constructed until the early part of the thirteenth century. On the summit of the hill is an old tank called Sawan-Bhadon—the Hindu months corresponding to August and September—by reason of the fact that it is always full of water at that period of the year. That may be perfectly true from a physical point of view, but there is a tradition to the effect that it was so named because when Siva was separated by the demon Rawan from her husband in Sawan-Bhadon, she filled the tank with her tears.

"The counterpart of the lake, three miles above Andernach, on the Rhine," is a brief description given by Colonel Tod of the extremely picturesque Nakki (finger-nails) lake at Mount Abu. Tradition has it that this strange name was bestowed on account of a belief that certain deities excavated it with their finger-nails. The lake, about half a mile in length and not more than about 440 yards in width, is most charmingly situated between high hills clothed with luxuriant trees, and richly does it deserve the praise given by the great traveller Ferguson, who said of it: "There is no other spot in India so exquisitely beautiful."

All visitors to Mount Abu regard it as obligatory upon them to ride or walk to Sunset Point, from which the most enchanting views of the surrounding country may be obtained. Down below are cultivated plains, intersected by the River Banas, and dotted about with numerous giant trees; far away in the

distance is the huge block of marble known as Selwara; and beyond it the hills of Jaswantpura attract the eyes; while the crowning beauty of the panorama is added as the gorgeous sun, radiating in all the colours of the rainbow, sinks slowly below the horizon.

In the south-western portion of the hill is Gau Mukh, or "cow's mouth," named in this manner from the fact that on the outer wall of a shrine is affixed the marble head of a cow through whose mouth a constant stream of pure water flows into an adjoining tank.

The temple, built in the year 1337, contains a brass image of the sage Vasisthas, who is believed to have resided here. Near to the wall of the shrine is the famous "Agni Kund," or "fire-pit," from which Vasisthas created the four principal Rajput races for the destruction of the demons who were then troubling the inhabitants of this region.

Within a short distance from the fire-pit is the temple of Arbuda Devi, the "mother of Abu," whose image, placed in a small shrine cut out of the solid rock, appears at that great elevation as a guardian deity over the whole Mount.

Guru Sikhar (Hermit's peak) is 5,600 feet above the level of the sea, and is the highest point of the Aravali range. It is situated about seven miles distant from the Mount, but the magnificent view obtained from its summit amply repays visitors for their difficult climb along a path which is beset with a considerable number of formidable obstacles.

Trevor Tal is a picturesque tank near the Dilwara temples, and was constructed about twenty years ago with the object of providing a supply of water for the township of Mount Abu.

It will be readily imagined that in a district in which the vegetation is so rich, there are numerous walks and drives which afford an endless variety of captivating scenery, but it is impossible to describe them all. Among them may be mentioned Anadra Point, which is gained by traversing a footpath running along the western side of the Nakki lake; the Craggs, and Nun Rock, behind the Rajputana clubhouse; Palanpur Point; and the Four Mile Circle; a surpassingly lovely path commencing near the Dilwara temples.

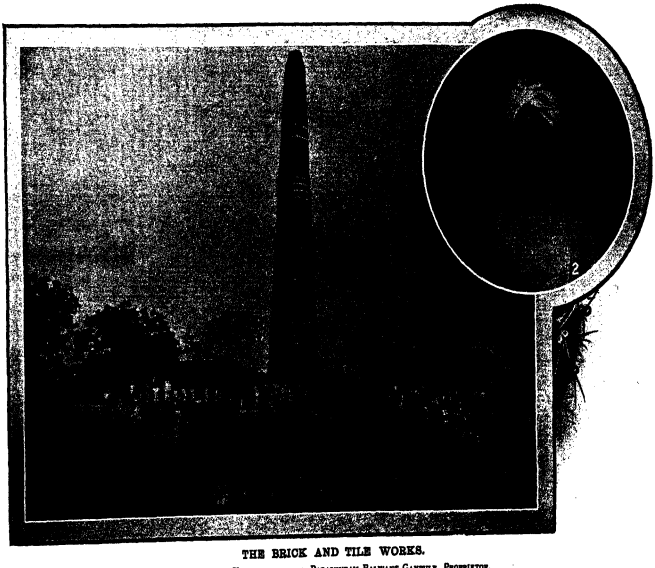
Mount Abu is not, however, merely one of the chief beauty spots in India, as it furnishes excellent sport for hunters of large and small game, including tiger, bear, panther, sambhar, hare, all kinds of wildfowl, partridge and other birds.

A very fine clubhouse has been erected for Europeans at a cost of about Rs. 80,000, and facilities are provided for tennis, racquets, cricket, polo, and golf, while boating may be enjoyed on the lake.

Travellers from all parts of the world, rulers of native states, and European residents in India throng to the Mount in order to revel in the exhilarating climate and enchanting scenery, and there is not a descriptive history of India in which its many and varied attractions are not praised in the highest terms.

BRICK AND TILE WORKS.

The roofing of buildings in India is one of the most important items in constructional work, owing to the intense heat and the severity of the monsoon rains, and the difficulty in the past has been to manufacture tiles which can be fitted together in such a manner as to minimize the heat of the interior of the structures



THE BRICK AND TILE WORKS.

1. A General View. 2. Parashuram Balwant Ganpule, Proprietor.

and at the same time to withstand the heaviest downpour.

Several companies have made bricks and tiles for many years past, but until comparatively recent times the only tiles worthy of their name were manufactured at Mangalore, on the west coast of the Madras Presidency, where superior clay existed.

One of the early brick-making works was established about the year 1887 by the Government of the State of Baroda at Sayajiganj, and that factory was worked by the State until the year 1907, when Mr. P. B. Ganpule became the purchaser and continued the business on similar lines.

That gentleman had for a long time been aware of the fact that Mangalore tiles held a practical monopoly even in the northern districts of India, and his efforts, extending over many years, to find suitable clay to enable him to compete with them were rewarded by his discovery of beds of clay near Bilimoria station, about one hundred miles distant from Baroda, on the Bombay-Baroda and Central Indian Railway system. The right of utilizing this clay for the manufacture of tiles has been acquired by Mr. Ganpule.

A complete tile-making plant of modern design was installed in the Sayajiganj works, and various kinds of clay are blended by machinery, including grinders, pug-mills, and rollers, with the result that the products have attained as high a degree of soundness and general excellence as their competitors of the south

The output of the works now includes pressed bricks, machine-made and wire-cut bricks, arch bricks, bull-nose bricks, roofing tiles (Mangalore type), ventilators, ridge tiles, cornices, pillars, bases and caps, while other earthen articles suitable for building purposes can also be manufactured according to order.

The works cover an area of about 15 acres and are quite near to the railway station at Baroda, and in order to facilitate the removal of clay and made-up goods a light railway has been constructed through the premises. Bricks and tiles from Sayajiganj have been used in the construction of the principal State and other buildings in the city of Baroda, and they are daily growing in favour in more distant places. The proprietor now holds a contract for the supply of his products to Government for a period of ten years.

A gold medal was presented to Mr. Ganpule for the excellence of his tiles shown at the Industrial and Agricultural Exhibition held at Baroda in January, 1917.

Further extension of the works is now contemplated, owing to the largely increasing demands made upon them.

Mr. Ganpule personally supervises the work in each department, and during his busiest season he employs about three hundred hands.

THE BANK OF BARODA, LTD.

This bank, with head offices at Mandvi, Baroda, was registered, with limited liability, on the 20th July, 1908, under the Baroda Companies Act No. 3 of 1897, with a capital of Rs. 20,00,000, divided into 20,000 shares, each of Rs. 100. The institution is greatly indebted to H.H. the Maharaja Gaekwar of Baroda for entrusting to it the official treasury and other banking business of the State. The report issued by the directors for the year ending on the 31st December, 1909, showed that the paid-up capital amounted to Rs. 6,92,700 consisting of 13 924 shares, each of Rs. 50, less Rs. 3 500 representing calls in arrears, and that the sum of Rs. 18,52,078 had been received on deposit accounts. An *ad interim* dividend at the rate of five per cent. per annum had been paid for the half-year expiring on the 30th June previously, and the directors then recommended that the net profits for the year, amounting to Rs. 51,002, should be disposed of by the formation of a reserve fund of Rs. 10,000, by the transfer of certain amounts to depreciation and other accounts, and the payment of a final dividend at six per cent. per annum.

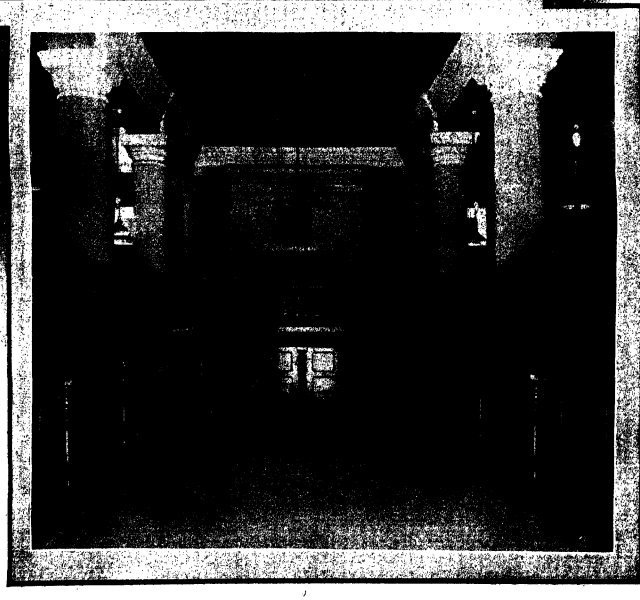
At the close of the succeeding twelve months Rs. 50 had been paid upon all the 20,000 shares, and as no further calls have been made the paid-up capital still remains at Rs. 10,00,000. In the latter portion of 1911 a financial depression occurred in India which was felt for the space of nearly two years, but the statement of accounts for the year 1913 was most satisfactory in spite of the crisis through which the whole of the country had passed. The net profits for 1913 were Rs. 2,48,131, and approval was recorded at the annual meeting of shareholders in February 1914 of the half-yearly dividend of seven per cent. which had been paid in the previous July, and it was also resolved to pay a final dividend of seven per cent. together with a bonus of one per cent. Fixed deposits amounting to Rs. 69,07,015 had been received and current accounts and savings bank deposits had accumulated to Rs. 25,99,925, while the reserve fund had risen to Rs. 2,25,000.

The operations of the bank continued to grow steadily, and the following particulars culled from the report for the year 1916 reveal an eminently satisfactory state of affairs. The net profit for the year amounted to Rs. 2,20,601, and this sum, added to the balance brought forward from 1915, gave an amount of Rs. 2,52,087 available for dividend. The directors pointed out that this represented more than 22 per cent. of the paid-up capital as against 17 per cent. earned during 1915, and further, that this amount had been arrived at after writing down the investments to low market rates. It was also stated that the bank's reserve fund, which was Rs. 5,75,000 and represented 57½ per cent. of the paid-up capital, had been established during the short period of eight years. An interim dividend at the rate of eight per cent. per annum was paid for the half-year ending on the 30th June, 1916, and the management then proposed to apportion certain amounts to reserve and other funds, and to declare a final dividend for the remaining six months' working at the rate of ten per cent. per annum. The balance of the fixed deposits account on the 31st December, 1916, was Rs. 92,56,196, and the current accounts and savings bank deposits amounted to Rs. 49,44,288.

The present value of the shares, of which Rs. 50 have been paid, is Rs. 70.

With the object of giving extended banking facilities to customers the directors have opened branches at Ahmedabad, Surat, Navsari, and Mehsana.

The directors of the company are: The Hon. Mr. Lalubhai Samaldas, C.I.E. (chairman), Sir Vithaldas Damodar Thackersey, Kt., Mr. Gunajirao R. Nimbalker, B.A. (Sur Subah, Baroda State), Raj Ratna Sheth Maganbhai P. Haribhakti (Nagar Sheth, Baroda), Sheth Manilal Revadas (Vadnagar), Mr. Bhaskarrao Vithaldas Mehta, M.A., LL.B. (Advocate, High Court, Bombay), Mr. Maganlal H. Kantawala, M.A. (Agent for the Maharaja Mills Company, Ltd., Baroda), and Mr. Raoji Raghunath Shirgaoker, B.A., LL.B. (Naib Subah, Baroda State), while Mr. C. E. Randle is manager at headquarters.



THE BANK OF BARODA, LTD.

1. Exterior. 2. Interior.

THE BOMBAY PRESIDENCY, UNITED PROVINCES, PUNJAB, ETC.

THE BINOD MILLS COMPANY, LTD.

This company was formed in January 1914 in response to the frequently expressed desire of H.H. the Maharajah of the Treaty State of Gwalior, in the Central India Agency, that industrial enterprises should be encouraged with the object of placing within reach of his subjects means of employment which would not only assist in raising them socially but would also be of considerable pecuniary value to them and the public generally.

A large cotton spinning and weaving mill was therefore erected at Ujjain, in the district of Malwa, upon land granted at a nominal rent by His Highness, and it was equipped with twenty thousand ring spindles and five hundred looms, the plant being obtained from well-known manufacturers in England. The mill was started in May 1915, but early in the year 1916 the company added a bleaching and dyeing department.

GENERAL VIEW OF THE BINOD MILLS COMPANY, LTD., UJJAIN.

Although the directors have had to face difficulties owing to the outbreak of the Great War and to the occurrence of plague on two occasions, the mill has been well supported, and the present monthly consumption of cotton is no less than 2,80,000 lb., while 2,30,000 lb. of yarn are produced, the greater portion being used in the weaving shed, which has an output of 1,65,000 lb. of cloth, consisting of satin, domestic, naincloth, tent-cloth, *chadars*, bedsheets, shirtings, cashmirs, duck, drill, towels, napkins, twill, checks, *dhoties*, and longcloth.

When the mill was opened, the price of raw cotton was fairly reasonable, but in the latter part of the year 1917 it was 125 per cent. higher, yet, notwithstanding this abnormal advance, the company paid a dividend equivalent to 4 per cent. to the end of December 1915; 6 per cent. for 1916; and 12 per cent. for the year 1917.

Agencies for the sale of yarn and cloth have been established at several commercial cities, where there is a good demand for the company's goods, and a retail shop has been opened at Ujjain, but the directors feel that greater encouragement should be given to the provision of other local markets.

The directors are shrewd men of business, taking a real personal interest in the welfare of the company, while Messrs. Binodram Balchand, of Jhalrapatan City, who were the promoters of the concern and are now secretaries, treasurers, and agents of the company, are a tower of strength in general control.

The mill is under the direct, able, and clever supervision of Mr. Madanmohanji Loonkaram Jain, who has been much interested in industrial questions from his youth, and he is assisted by a staff of competent and experienced hands, including Mr. J. G. Hamett, M.I.M.E., a well-known engineer, who is manager of the mill, Mr. W. Baldwin, a capable weaving master, and Mr. Samuel Clay, spinning master.

It should be added that the Maharaja has been pleased to make certain concessions with regard to duties, and in various other ways he has shown himself to be a staunch supporter of the company.

DWARKADAS & CO.

The members of the family who are associated in commercial undertakings of various descriptions and under different names, one of which is Messrs. Dwarkadas & Co., belong to Chirawa, in the Khetri *jagir* of the Jaipur State in Rajputana.

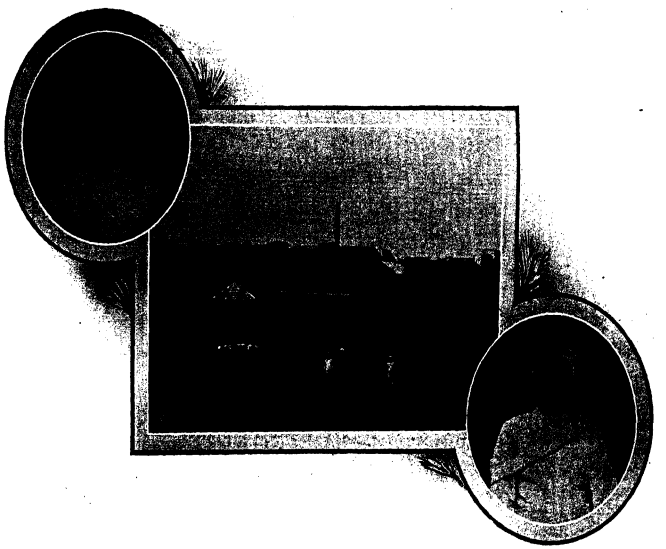
The actual founder of the business was the late Mr. Rang'al, and his successors have extended the operations of the firm to such an extent that for the sake of convenience their enterprises may be given in the following form. At 11 Tamarind Lane, Fort, Bombay, the business of stock and share brokers is conducted under the name of Messrs. Dwarkadas Benarsilal; at the same address Messrs. Dwarkadas & Co. are bankers and cotton brokers, making a special feature of dealing in "forward" and "ready" deliveries of all kinds of cotton on commission. Messrs. Basantlal Gorukhram have offices in Marwari Bazar, Bombay, and carry on business as bankers, brokers, commission agents, exporters, importers and military and general contractors, their principal transactions being in wheat and seeds. At Jhansi, a town in the Central Provinces of Agra and Oudh, Messrs. Dwarkadas Benarsilal are bankers, commission agents, exporters, importers and military contractors. Messrs. Dwarkadas Benarsilal are proprietors of the "Datia Ginning and Spinning Company," having one complete cotton-pressing factory with forty single gins at Datia, the chief town of the State of the same name in the Central India Agency. The authorized capital of the company is Rs. 2,00,000.

Under the same name and in the same town the firm conduct business as bankers, commission agents, exporters and importers. A business of a precisely similar character is carried on at Morena, in the State of Gwalior, in Central India, under the name of Messrs. Gorukhram Dwarkadas, and at Kasganj, in the district of Etawah, under the style of Messrs. Basantlal Dwarkadas. Under

the same name and style they are bankers, commission agents, exporters, importers and military contractors at Ujhani, in the district of Badaun.

The head office of the firm is at Chirawa, the ancestral home, where banking operations are transacted by Messrs. Ranglal Basantlal, while Messrs. Dwarkadas Shankerlal are exporters and importers.

Mr. Basantlal is the present guardian and the oldest member of the family,



DWARKADAS & CO.

1. Seth Dwarkadas. 2. Seth Banarsilal. 3. General View of the Factory.

Mr. Gorukhram and Mr. Dwarkadas are the second and third sons of the late Mr. Ranglal, and Mr. Benarsilal is the eldest son of Mr. Basantlal.

THE HUKAMCHAND MILLS, LTD.

It is quite a common observation among commercial men that the Province of Central India has made fewer attempts than any other province or state in this country to take advantage of the rapid development of industrial enterprises which has been one of the outstanding features in the history of India during the past twenty or thirty years. It is therefore an encouraging sign of awakened interest to learn that, in connection with the Hukamchand Mills, Ltd., the company was formed and financed at Indore, and the mills were erected and are now worked, owned, and managed by local men.

The company was registered in the year 1915 (under the Indore Companies' Act of 1914) at Indore, the chief town of the Native State of the same name, the promoters being Messrs. Sarupchand Hukamchand & Company. The capital of the company is Rs. 15,00,000, divided into 15,000 shares, each of Rs. 100, all of which has been fully paid.

The foundation stone of the mills was laid on the 10th April, 1914, by H.H. the Maharaja Tukoji Rao Holkar, Bahadur, Ruler of the State of Indore, and the machinery was set in motion on the 26th March, 1916. In addition to the mills, the premises, which cover an area of forty-five acres, comprise the company's offices, residential quarters for officials and general hands, godowns, warehouses, and sheds.

The equipment of the mills consists of 22,000 spindles and 595 looms, and the entire machinery is driven by an engine of 1,450 h.p. supplied by the well-known English manufacturers, Messrs. Hick Hargreaves & Company. About 38,400,000 lb. of Malwa cotton of different local varieties are used annually in the production of grey and fancy cloth, chiefly in the form of drills, longcloth, twills, checks, *dhotis*, and *chaddars*, and practically the whole of the output is consumed locally, although a quantity of grey cloth is acquired by the military authorities.

A dyeing department, which has been rendered necessary to meet present demands, has been attached to the mills.

The premises are conveniently situated near to the railway, but in order to facilitate removal of produce, sidings have been laid to the very doors of the mill, coal sheds, and godowns. European experts—obtained locally—have been installed in the offices of engineer, and spinning, carding, and weaving masters, and Mr. Puranik, a local gentleman, appointed the manager. The concern gives employment to about 1,400 men.

The Company may congratulate themselves upon the pronounced success which has attended their efforts in so short a

time, as for the nine months' working of the mills in the year 1916 they were able to pay a dividend at the rate of three per cent. per annum, while for the six months ended on the 30th June, 1917, the shareholders received the eminently satisfactory return of 12 per cent

It should be added that nearly the whole of the concern is financed by Messrs Sarupchand Hukamchand & Co

M. R. G. HUSSAIN & SONS.

This firm was established at Mhow in the year 1852 by Haji Gulam Hussain are situated at 714 Clive Road, and the principal shop is located at 72 Main Street, in the same town

The firm are Government contractors, general merchants, carriage builders, and makers of saddlery and harness They are also dealers in timber, iron, hardware goods, paints, colours, and varnishes, and are direct importers of high-class English saddles, harness, stirrup-irons and leathers, girths, knee-caps, bits, spurs, driving and riding whips, leggings, ' Sam Browne belts, dog-collars, hold-alls, sporting requirements, including cricket, tennis, golf and hockey balls, polo sticks, and other authorities have been executed by them in a very satisfactory manner.

A host of complimentary letters have been received by the firm, and a brief reference may be made to some of these.

Lieutenant-Colonel H C. E. Lucas, of the Supply and Army Transport Service, in a letter dated November 15, 1898, said "I have much pleasure in testifying to the excellent work done by Rasool Goolam Hussain when making up a thousand sets of bullock equipment for field service" He has also carried out the auctioneering in a most satisfactory manner Captain Moore, in December 1904, wrote.

M. R. G. HUSSAIN AND SONS.

1 Head Office 2 Showroom, Workshop and Garage

Kaderbhoy, who began to trade under the name of Messrs G Kaderbhoy & Sons and the firm, whose activities increased annually to a very considerable extent, continued under that style until 1910 when the business was divided, the original portion being continued by Mulla Rasoolbhoy Haji Gulam Hussain (eldest son of the founder) under the title of Messrs M. R. G Hussain & Sons, although the name Rasool Gulam Hussain is occasionally used by clients for the sake of brevity.

The workshops, garage, and showrooms footballs, and other sundries, while the firm have an excellent assortment of carriage rubber-tyres, lamps, bells motor-car and cycle tyres, tubes, petrol, lubricating oils, carbide, tools of all descriptions, and accessories of a general character

Furniture is manufactured for bungalows and tents, and this branch is conducted under skilled supervisors who employ workmen of their own training

Messrs M R G Hussain & Sons are however, more widely known as Government contractors, and a large number of most important commissions from military

"Rasool Gulam Hussain carried out contracts for transport gears for years. I have known him since 1896, and he has always performed his work punctually and has given good materials and workmanship" Major Anderson, R.H A, certified in December 1898 that "Rasool Gulam Hussain accompanied "I" Battery R H A, from Mhow to Aligarh as contractor for grass, grain, and miscellaneous ration supplies. He has done his work very well and entirely to my satisfaction. He is the best and most satisfactory contractor with whom it has been my lot

to march in India." Lieutenant-Colonel Ogilvie, R.E., Mhow, on March 26, 1914, stated: "Rasool Gulam Hussain has had contracts for annual repairs in the north subdivision of Mhow for all road works in the cantonment, and for petty supplies during the two years I have been in this district. He is a good contractor, and has command of capital and labour, and has carried out all his contracts satisfactorily." Colonel Maunsell, P.M.O., of Mhow, wrote in a letter dated September 24, 1900, that "Rasool Gulam Hussain has worked for me for five years, and is a good saddler. He has contracted for many sanitary works, such as new latrines for natives in the Bazaar, and I strongly recommend him as a good workman." Major Rooke, Cantonment Magistrate of Mhow, stated in July 1901 that "Rasool Gulam Hussain is a very respectable man; he is a contractor in the commissariat, and has supplied the C.M.'s office for the past seven years in a very efficient and trustworthy manner. Everything he supplied was good and moderate in price." Major E. Wake, writing from the Club of Central India, Mhow, in 1904, said: "Rasool Gulam Hussain is a coach-builder and contractor, and has done a great deal of work for the cantonment. I have always found him just in his dealings and punctual." Major Hughes, Commandant, Remount Training Depot, Mhow, on January 19, 1917, wrote: "Messrs. R. G. Hussain & Sons, contractors, Mhow, have been engaged by me for various buildings for the supply of petty stores, line gears, etc., for the depot since its formation over two years ago. They have carried out the above work to my satisfaction, and I can recommend them as contractors to any regiment, battery, or depot."

The telegraphic address of the firm is "Hussain," Mhow.

JAVAHIRMAL & GAMBHIRMAL.

Heredity is, without doubt, a potent factor in determining the characteristics of a man, and also in influencing him in his choice of a career in life. In a country such as India, with its ancient family records, it is interesting to observe an almost unbroken continuity of qualities which have been transmitted from one generation to another, and the ancestral house to which attention is now being directed may well be proud in having in their genealogical tree the names of such eminent men as Rai Bahadur Seth Mool Chand and Rai Bahadur Nemi Chand.

The family belong to the Khandelwal community of the Digambar sect of the Jains, and they have sprung from Seth Jogidas, who, about 150 years ago, held a good position at Kishungarh, the chief town of the Native State of the same name in the Jaipur Political Residency of Rajputana. Seth Jogidas was succeeded by his second son, and Javahirmal, who removed to Ajmer, also in Rajputana, and died there in the year 1858. The latter's second son, Seth Mool Chand, born in 1830, was left to carry on the family traditions, and in accordance with the custom then prevalent, he was married when ten years of age, but owing to the lamented death of his wife while still young he married a second time in 1850, and a third time ten years later.

Seth Mool Chand was exceedingly keen and shrewd in all matters of business, and it was chiefly through his instrumentality that his father advanced a large sum of money on loan to the British Government during the serious days of the Indian Mutiny of 1857, when it was extremely difficult to obtain financial assistance and when the lives of Europeans were daily in jeopardy. Owing to these and other valuable services rendered to the Government, he was in January 1882 honoured by the bestowal of the title of Rai Bahadur, by being appointed an Honorary Magistrate and by being elected as Municipal Commissioner.

That the Rai Bahadur was highly respected among the nobility of Rajputana is proved by the fact that on the occasion of the marriage of his grandson, now R. B. Seth Tikam Chand, His Highness the Maharaja of Jodhpur presented rich attire and a palanquin, and when His Highness the Raja of Kotah ascended the *gadi* the Seth Sahib received a gift of beautiful apparel and a well-bred horse.

The Rai Bahadur amassed great wealth by his banking business not only at his headquarters but also at branches which he established at Calcutta, Bombay, Agra, Jaipur, Jodhpur, Udaipur, Bharatpur, Dholpur, Karauli, Neemuch, Segoli, Shergarh, Panwar, Kekri, Nasirabad, and many other important towns in India. The Government of the day relied upon him to such an extent that they handed over to him the transactions of the treasuries of the residencies at Gwalior and Neemuch Cantonment. Further than this the ruling chiefs of the Native States of Bharatpur, Dholpur, Karauli and Kotah placed their financial matters in the hands of the Rai Bahadur. He had unbounded faith in the principles of his religion, and in consequence he visited nearly all of the sacred places in India, from north to south, and east to west, a difficult pilgrimage, as there were not at that time facilities for travelling such as exist to-day, nor were the roads—such as they were—safe from parties of marauders.

In 1847 the Rai Bahadur, accompanied by a number of his co-religionists, started on a journey to Parasnath Hill, in the Province of Behar, which is 4,479 feet in height. The hill is named after Parasnath, the twenty-third *Tirthankar* or deified saint of the Jains in chronological order, and on the summit—called the Peak of Bliss—are a number of temples to which pilgrimages are made in the cold season of each year.

On returning, the Rai Bahadur, when at Jaipur, met *Pandit* Sadasukh Kasliwal, who advised him to represent in material form the *Samavasaran Rachua*, which the minor gods perform on the attainment of *Kevalugyanan* or "all-knowledge" by the Tirthankars. Accordingly on the 29th April, 1855, the Seth Sahib completed the image and placed it in the Mahaputa Jinalaya temple in the centre of the city. This beautiful shrine is an important structure on account of the *Samavasaran Rachua*, and by reason of its walls being inscribed in large letters with selections from holy scriptures.

In 1867 the Rai Bahadur proceeded on a pilgrimage to Girnar in Kathiawar (the journey covering a period of about four months), where may be seen the rock upon which are inscribed edicts of Asoka (260–223 B.C.).

Sacred to the Jains in Southern India is a place called Jain Badrik Mul Budri, and although few devotees are able to pay a visit to it, the Rai Bahadur had the privilege of going there in 1891, and when at Bombay on returning homewards he organized *Rathajatra Mahotsava*, for which his automobile chariot was sent from Ajmer.

In the year 1859 the Rai Bahadur laid the foundation of another large shrine outside the Agra gate of the city, and when it was only half finished in 1865 he consecrated and placed in it the image of Adinath, the first *Tirthankar*.

While reading the holy scriptures he was very much struck with curious ceremonials called *Panch Kalyan Rachuas*, viz. (1) of "*garbh*," or pregnancy; (2) *janam*, or birth; (3) *tap*, renouncement

JAVAHIRMAL AND GAMBHIRMAL.

* 1 Rai Bahadur Seth Mool Chand. 2 Rai Bahadur Seth Nemi Chand. 3 Rai Bahadur Seth Tikam Chand and Sons.
4. Digamber Jain Temple (Siddhakot Chaityalaya).

of the world; (4) *gyan*, or perfect knowledge; and (5) *mokeh*, or perfect relief from all pains. He ordered these five representations to be constructed in material form at Jaipur, along with numerous models of artistic beauty such as an automatic fancy chariot, life-sized elephants, horses, and other animals. Simultaneously with these the shrine was enlarged to admit of a double-storeyed extensive hall being erected there.

These *Rachuas* are made of copper, gilt with gold, and when completed they were shown in a very large fair held at Jaipur under the patronage of His Highness the Maharaja at Jaipur, and afterwards they were placed in the well-decorated hall on the second storey, the lower floor being occupied by the models above referred to. This temple is visited daily by both European and native gentry.

A book is kept there in which are recorded the names of notable visitors, including the late Lady Hardinge, Sir George S. Clarke (now Baron Sydenham), Governor of Bombay, H.H. the late Amir of Kabul, H.E. General Sir O'Moore Creagh, V.C., G.C.B., G.C.S.I., A.D.C., the late Lord Kitchener, Sir Elliot Colvin, H.H. the Maharajas of Jaipur, Gwalior, Kotah, and numerous other European and native celebrities.

In addition to the Rai Bahadur's handsome donations to purely religious objects, he contributed large sums of money towards public institutions, especially such as were designed to improve the social and moral status of the people.

By way of illustration one might mention that the Rai Bahadur Sahib constructed a *Bhojanshala* near the Agra gate, in which many hundreds of persons can assemble together when partaking of a feast.

The lack of facilities for affording education of a secular as well as a religious character to children induced this gentleman to open a school, which was intended primarily for the purpose of giving instruction in the evenings, but which has now developed into the Digamba Jain middle school. He also started a school for girls, and although this was not at first a success, the promoter had the satisfaction of observing the good progress made.

The Rai Bahadur was also most zealous in inaugurating measures of reform among the members of his own community, and the action taken by him in putting an end to the custom of early marriages is worthy of all credit. This gentleman practised what he preached, and he caused the matrimonial alliance of his grandson, now Rai Bahadur Seth Tikam Chand, to be postponed until he had reached the age of sixteen years. He objected, too, to the waste of money, and incidentally to the danger to life, caused by displays of fireworks at weddings, and here again he set an example and was true to his principles, so that the marriages of both his son and grandson were celebrated without display of fireworks and lights.

Rai Bahadur Mool Chand, throughout the whole of his life, maintained a stainless moral character, and he worked energetically for the attainment of his high ideals until his death in 1901, when he was mourned by a very large circle of relatives and friends, both European and native.

His son, Seth Nemi Chand, who was then about forty-four years of age, had derived inestimable advantages from close association with his revered father, and even during his father's lifetime, he had already proved that he was worthy of the numerous honours which were conferred upon him. He was elected a Commissioner of the Ajmer municipality, of which he subsequently became vice-chairman; he was created a Hon. Magistrate, and in the year 1907 the title of Rai Bahadur was conferred upon him by the Supreme Government. He was an invited guest at the Durbars held at Delhi in 1903 and 1911, and he was so highly respected that, on the marriage of his daughter and granddaughter, Sir E. G. Colvin, agent in Rajputana to His Excellency the Viceroy, and other European and native gentry graced the occasion with their presence.

The Rai Bahadur, by his aptitude for business, added large sums of money to the vast fortune already amassed by his predecessors, and following in their footsteps he was ever anxious to contribute liberally to the relief of the deserving poor. At the suggestion of Lord Kitchener, he built a balcony of pure marble round the famous Jain temple Sedhkoot Chelyalaya.

The Rai Bahadur inherited his father's strong faith in his religious principles, and notwithstanding his busy life he devoted three or four hours daily to the performance of sacred duties. This trait in his character was also exemplified by the fact that annually in the sacred month of *Bhadon* he recited the *shastras* in the presence of his co-religionists, and his explanations of those sacred truths were so intelligently given that every individual in the gathering could understand each word.

Rai Bahadur Nemi Chand died on the 25th September, 1917, and all the principal markets and public offices in Ajmer were closed as a mark of respect. He left a widow, his son Seth Tikam Chand (now Rai Bahadur), three daughters, two grandsons, and two granddaughters surviving him. The removal of the head of the household was indeed a sad blow, but further misfortunes were to follow, as three days after the death of the Rai Bahadur his widow passed away three hours after giving birth to a son, who only lived for four months.

Seth Tikam Chand, his sole male survivor, thus succeeded his late father as the managing member of the undivided joint Hindu family according to the tenets of Hindu law.

The Seth conducts the colossal business in a thoroughly efficient manner, and he stands high in the opinion of Government officials, leading commercial men, and a large circle of relatives and friends. In social and religious matters he is a recognized leader among his fellow-men, and he has already been honoured by his election to a seat on the Municipal Board of Ajmer, and by his appointment as a Hon. Magistrate. The Seth is not a whit less loyal to the British Government than his forefathers, and his devotion to the cause of the Allies in the Great War was manifested by his liberal contributions to various relief and other funds, and also by his large investments in war loans and bonds.

Among the birthday honours conferred by His Majesty the King-Emperor in the present year (1919) is the title of Rai Bahadur, graciously bestowed upon Seth Tikam Chand.

In memory of his revered father the Rai Bahadur has decided to set aside, as a *dharmshala* for *bonâ fide* pilgrims, a fine building situated opposite the Victoria Hospital in Ajmer, which is at present loaned, free of all rent or other charges, to the Education Department of the Government.

G. KADARBHOY & SONS.

The Indian Mutiny of 1857 was the occasion for the sacrifice of thousands of valuable lives, but one of its minor evils was the looting and destruction of a large number of business houses as well as

private residences One of those whose goods and chattels were plundered by the rebels, and who was ruined by them, was a Mr Gulamhusain, who shortly before that year had opened a small dealer's shop at the Indore Residency, in the Central India States Determining to make a fresh start in life, he removed to Mhow in the State of Indore, and again commenced business in a small way owing to his very limited means His unpretentious shop in Bombay Bazaar in that town

full control It was about this date that the partners (who had adopted the style of G Kadarbhoy & Sons in 1900) began to import from England, through the office of their London correspondents, all kinds of goods, and they also added a department for the manufacture of household furniture, and a factory in which harness and leather articles of various descriptions were made according to English patterns

The eldest son, Mr Rasoolbhai, separated from the firm in 1910 and com-

contracts with the military works for the delivery of various hospital and barrack furniture, while the Imperial Service troops from Indore obtained practically the whole of their equipment from stock made in the firm's own workshops

Agencies are held for all classes of the Dunlop Company's motor goods, and a depot has been opened for the storage and sale of the Asiatic Petroleum Company's petrol and of the Vacuum Oil Company's lubricating oils

G KADARBHOY AND SONS.

1 Shop and Offices 2 Workshop and Staff

contained goods of a general character, but small as was his stock-in-trade, his perseverance had its reward in the building up of a business which by the year 1890 had attained considerable importance The proprietor practically retired from work in 1893, but he had previously taken into the concern each of his five sons on their respectively arriving at a suitable age In 1894 a coachbuilders' workshop was established, and a large connection was obtained among military officers and with residents in neighbouring Native States

The youngest son, Mr Mahomedally, died in 1905, leaving his four brothers in

menced business on his own account, while a similar step was taken five years later by the second son, Mr Kadarbhoy, thus leaving the present partners, Mr Hyder Ali, B A, and Mr Hassanally, as sole owners

The firm are now direct importers of all classes of English goods, a speciality being made of sporting requirements, saddlery, high-class boots and shoes, and a large variety of fancy and leather articles

For the past twenty-five years Messrs Kadarbhoy & Sons have constantly met the requirements of supply and transport corps, and more recently they have held

The partners, whose business te'egraphic address is "Kadarbhoy," personally supervise every branch of work in their establishment at 73 & 74 Main Street, Mhow, which adjoins the building originally occupied by their father.

KHAN BAHADUR FRAMJI N. SUNTOOK

For a period of more than forty years the name of Framji has been a household word in Rajputana, and especially at Mount Abu, in the Native State of Sirohi, where he commenced business in 1876 as a general merchant and dealer in provisions, wines, and spirits. His energy,

tact, and obliging manner, coupled with the reliable quality of his stores, soon earned for him the support of a very large circle of customers, and he began to enter into contracts for supplying goods to public institutions.

In 1881 Mr. Framji was induced to enter into a contract with the Sirohi Durbar for the conveyance of passengers and their luggage between Mount Abu Road railway station—a distance of seventeen miles—the mode of conveyance being by riding ponies, rickshaws, and *jhampans* for passengers, and coolies and bullock carts for goods. It required a considerable amount of courage to undertake such management, as several persons had previously failed in their attempts to overcome the numerous difficulties with which they had to contend, the road up the hill, which had just been opened, having a steep gradient in those days and not being so well maintained as it is now.

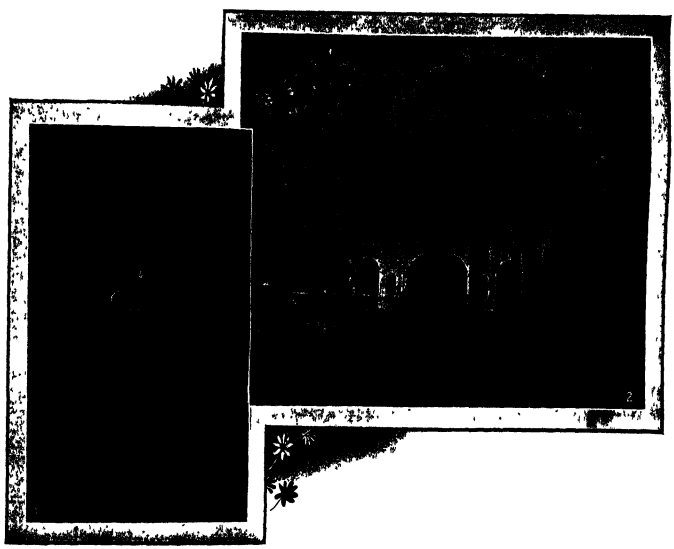
Mr. Framji succeeded, however, in giving the utmost satisfaction to the Sirohi Durbar as well as to the thousands of passengers who availed themselves of the service during the twenty-one years of this gentleman's control. In 1894 the Government of India recognized the valuable work performed by Mr. Framji, chiefly in connection with the transport agency, but also with regard to the manner in which he carried out his engagements as a general contractor, by conferring upon him the title of Khan Bahadur.

The *sanad* attesting the title was presented by the then Agent to the Governor-General, Colonel G. H. Trever, C.S.I., at the Residency, Mount Abu, in the presence of a large assembly of European officers, Parsi gentlemen, and state officials, and during his speech he remarked: "You have held contracts for the supply of liquor and provisions, and for carts, coolies, and ponies, in the discharge of which, and by the excellent shop you have established, you have benefited the public considerably, and contributed to the general convenience of Mount Abu. You are fairly entitled to recognition from the Government, and therefore my pleasure in handing you this *sanad* is enhanced by the feeling that it is well deserved. It shows, moreover, that the Government of India is glad to acknowledge in this way services from others besides its own officials, and officials in Native States, and I congratulate you, and the enterprising community to which you belong, upon the honour conferred on a merchant in Rajputana."

The Khan Bahadur has received hundreds of testimonials from distinguished persons with whom he has had business relations.

Want of space forbids lengthy extracts, but in a perusal of some of the testimonials one finds such sentences as the following: "Both as a contractor and purveyor I have formed a high opinion of Mr. Framji." "During the visit of the Viceroy, Lord Lansdowne, Mr. Framji gave great assistance in the conveyance arrangements, which were very satisfactory." "You have earned a reputation for liberal dealing and courtesy which is well deserved." "I am now leaving Abu after a residence of twenty years, and should like to say how highly I have esteemed you all the time."

The Khan Bahadur carried on his very extensive business on his own account



KHAN BAHADUR FRAMJI N. SUNTOOK.

1. KHAN BAHADUR FRAMJI N. SUNTOOK. 2. EXTERIOR OF PREMISES.

until 1916, when he retired into private life and transferred the whole concern to his son, Mr. Kaikhusro, who is trading under the name of K. Framji Suntook & Co.

The father is a prominent Freemason, and he was one of the founders of Lodge "Rajputana" in Mount Abu, of which he is a Past Master. In the Chapter he is a P.Z. and also one of the founders of Chapter "Sir Ganga Singh" in Mount Abu and of Tyrrell Leith at Baroda.

KHAN BAHADUR DARASHAW N. MODI.
LATE ATTACHÉ TO THE HON. THE A.G.G., RAJPUTANA.

KHAN BAHADUR DARASHAW N. MODI.

The subject of this sketch was born and educated in Bombay, and he began his business career by entering Government service as an assistant in the Rajputana Agency office at Mount Abu. His capabilities were duly appreciated, and he was promoted to be *attaché* to the Agent to the Governor-General, a position which is invariably given in Rajputana to relatives of Indian princes and noblemen. He remained in this post for ten years, and then for nearly a year was assistant to Mr. E. V. Gabriel, C.V.O., C.S.I., Secretary of the Delhi Coronation Durbar Committee.

Mr. Modi retired on pension in July 1912, and shortly afterwards he became *musahib* of the Shahpura State in Rajputana, but he resigned from that office in 1916 and took up an appointment on special duty with His Highness the Maharaja of Bikaneer; he then became diwan of the Sirohi State, from which he recently retired.

Mr. Modi was honoured with the title of Khan Bahadur in 1914, and now at the age of fifty-eight years he is enjoying that rest which he has earned by his consistent work in positions of great responsibilities. He is a good rider and a keen sportsman even at this age, his shikar trophies including some very good skins of tigers and panthers.

As a Freemason the Khan Bahadur is a Past Master of Lodge "Rajputana" No. 2,800 E.C., of which he was one of the founders. He is also P.Z. of Chapter "Sir Ganga Singh," which is named after His Highness the Maharaja of Bikaneer.

KHAN SAHIB NAZERALLY HAJI ALLABUXJI.

More than half a century has passed since the above-named gentleman commenced his business career at Ujjain, a town of some importance in the State of Gwalior, in Central India. He was but a young man at the time, but his abilities attracted the attention of the Gwalior Darbar, and this welcome recognition very materially assisted him in establishing commercial undertakings which proved to be most successful concerns.

In 1888 he started a cotton-ginning factory at Ujjain—the first of its kind in Malwa—and about ten years later he erected spinning and weaving mills in the same town, which are now equipped with 15,000 spindles and 264 looms. The major portion of the yarn spun in the mill is consumed on the premises in the manufacture of cloth, only a small surplus being sold for consignment to various Indian markets.

The present partners, who trade under the name of the founder of the business, are now owners of no fewer than twenty-two ginning factories in different parts of the Malwa Agency.

An iron foundry and workshops have recently been added to the mill premises, and the firm are now not only carrying out practically all repairs to their own machinery and plant, but they are also developing a considerable connection and carrying out orders for the execution of similar work for other companies.

Khan Sahib Nazerally, who died in 1914, was a man of a remarkably charitable disposition, spending large sums of money in relieving distress and in the support of various institutions. He began the construction of the "Rojah" mosque at Ujjain, but owing to his death the work was completed by his eldest son, Khan Sahib Lookmanbhai Nazerally, the total cost being not less than Rs. 2,00,000.

It is built of very fine marble, and is one of the finest and most famous structures of its kind in India. A very large number of pilgrims are attracted to it annually during the festival of "Uras," which continues for about a week, and its beauty is greatly enhanced when it is brilliantly illuminated at night.

KHAN SAHIB NAZFRALLY ALLABUXJI.

1. General View of Mill. 2. Khan Sahib Nazerally Allabuxji (late Founder of the Mill).
3. Khan Sahib Lookmanbhai (Managing Proprietor) and Sons.

Khan Sahib Lookmanbhai took over the whole business on the death of his father, and one of his first acts was to finish the building of the Ujjain *Bhora* Yard. He subsequently built five yards or wards in connection with the King Edward Hospital at Ujjain at a cost of nearly Rs. 25,000, two yards for the Mission Hospital at Indore Camp, and he opened a school for the *Bhora* community in the same camp at an expenditure of Rs. 10,000.

In addition to being an honorary member of the Board of Economic Development, the Khan Sahib was appointed an honorary magistrate at Ujjain; in 1912 the title of Khan Sahib was conferred upon him; and the head priest of the Bhora community also granted him the title of *Muniruddin*.

The second son, Seth Mahomed Hussein, is managing the spinning department in the Ujjain mills; the third son, Abdealli, is in business on his own account at Indore; and there are two others who are still minors.

Khan Sahib Lookmanbhai was recently appointed an honorary member of the Board of Economic Development of the State of Gwalior.

RAI BAHADUR SETH ONKARJI KASTOOR CHAND KASLIWAL.

There is no country in the world outside of India in which there is such a widely spread, profound belief in the prognostications of astrologists, palmists, and other so-called seers who profess ability to foretell important events in the future history of mankind. They may speak of storms brewing on the horizon which will cause untold sorrows, or they may prophesy unclouded skies, untold wealth, and unalloyed happiness, but it is probable that not one of them would have been bold enough a quarter of a century ago to have gladdened the heart of the subject of these notes with a promise of great prosperity in business, or with a guarantee that he would live to enjoy the unbounded confidence and respect of a very large circle of friends and acquaintances. And yet this is precisely what has occurred.

Seth Kastoor Chand Kasliwal was born of exceedingly poor parents at Kaloo, in Marwar, in the year 1884, and eight years later he might have been seen assisting his aged and blind mother in household duties and in attending to the wants of his infirm father, while his elder brother, Chunnilalji, was earning a paltry sum of money daily which barely sufficed for the barest necessities of life. In 1893 the boy was adopted by the late Shri Seth Onkarji, second son of Seth Magniramji, the well-known Jain, *Digamber* and *Siravak* belonging to the prosperous Manakchand Magniram family of Malwa. Seth Magniramji had three sons, namely, Seth Saroopchand, Seth Onkarji (already mentioned), and Seth Tilokchand.

The brothers were devoted to each other, not only sharing in the fortunes of commercial life but also uniting in forming one household with one common board. They were diligent in business (dealing chiefly in opium), and as a consequence they amassed a considerable amount of money, a large portion of which was expended in giving assistance to the poor and suffering people of Indore, where they were popularly known as the "Hable Kable Brothers."

Each of the brothers lived a quiet and unostentatious life, but this retiring disposition seemed to increase the respect in which they were held in the city. In addition to private benefactions many thousands of rupees were spent by them in the construction of Jain temples.

Shortly after the death of Seth Onkarji in 1900, the partnership affairs were divided into three equal portions, one of which fell to Seth Hukamchand, son of Seth Saroopchand; another was taken by Seth Kastoor Chand, adopted son of Seth Onkarji; and the third was received by Seth Kalyanmal, adopted son of Seth Tilokchand, who was born in the year 1885.

At the present time these successors occupy a leading position among the principal merchants in India.

Rai Bahadur Seth Kastoor Chand is a man of strong personality, and this characteristic manifested throughout the whole of his life has, without doubt, had the greatest influence upon him in his business and private career. Shortly after the death of Seth Onkarji the *Munims* endeavoured to obtain undue authority over the fatherless youth, but the latter had been cradled in adversity and had learned at an early age the bitter experiences which poverty brings in its train; therefore he resented the overtures made to him, and with self-reliance and self-respect he courageously took into his own hands the entire management of his promising business. Courage, a strong feature in him, was never illustrated better than in the years 1904 and 1906, when, owing to abnormal conditions of trade, he bravely bore the loss of Rs. 5,00,000 and Rs. 4,00,000; and in 1910 his losses in cotton alone amounted to no less than Rs. 8,00,000. Yet his strong faith in his own high principles, coupled with a remarkable persistency in his efforts, enabled him to weather the storm, and he now controls huge undertakings, including trading in general merchandize, with cotton and corn as specialities; he is owner of a sugar factory, a cotton ginning plant, and several clothing stores; while general banking transactions are carried on at his Indore and branch establishments. He erected a spinning and weaving mill at Ujjain, but in this concern he holds a half-share in partnership with Messrs. Binodiram Balchand, the famous bankers of Jhalrapatan, the chief city of the Rajputana State of Jhalawar.

In addition to his brilliant business capabilities, Rai Bahadur Seth Kastoor Chand can read, write, and speak fluently in Marwari (his native tongue), and in the Hindi, Marathi, Gujrati, Urdu, and English languages, and it should be borne in mind that he has acquired these accomplishments by sheer hard work in spare hours snatched from business affairs. His chief recreations are music and gardening, of which he is passionately fond, and his friends attribute his refined and kindly nature to his intense love for the first-named of these two pursuits.

The Rai Bahadur was first married in 1900 to the accomplished only daughter of Seth Balchand, of the firm of Messrs. Binodiram Balchand above referred to, but this lady, to whom he was fondly attached, unfortunately died in 1914 while still in the prime of life. In 1915 he married the daughter of Seth Sohanlalji, of the firm of Sohanlal Prabhudayal, of Delhi. The partners in the noted banking concern of Binodiram Balchand are shrewd men of business, and have amassed a fortune of many millions of rupees, while their chief *Munim*, Mr. Loonkaranji, who had served them faithfully for nearly fifty years, is generally regarded as one of the most capable commercial men in Central India and Rajputana.

The spirit of sympathy manifested by the Rai Bahadur towards those in straitened circumstances has frequently been extended to medical and other institutions of a similar character, e.g. he gave the munificent sum of Rs. 17,000 to the Roberts Nursing Home at the Indore Cantonment; he presented Rs. 5,000 to the King Edward Memorial Hospital, and

RAI BAHADUR ONKARJI KASTOOR CHAND KASLIWAL.

1 Rai Bahadur Seth Kastoor Chand 2 Bank in the City. 3. Residence in the City 4 Jinharmandir at Muktagiri

bore the cost of a new ward at an expenditure of Rs. 1,00,000, for the same building at Indore; he constructed a special ward for European consumptives at a cost of Rs. 5,000; he, in conjunction with his brothers, built a *Mahajan* ward at the Maharaja's hospital at Indore at a cost of about Rs. 25,000; he also constructed a *dharamsala* and *goshala* at Kherigrh (costing Rs. 60,000) in memory of his adoptive father, Seth Onkarji; a Jain temple at Indore at an expenditure of Rs. 1,50,000, the cost of which was borne by his brothers and himself; a hall for the Lady O'Dwyer Girls' School at the Indore Residency; he spends Rs. 7,000 yearly in feeding poor persons, and in 1910 and 1914 he bore the whole cost of two pilgrimages made by his co-religionists which amounted to Rs. 40,000.

He presents every year two gold medals for the most successful students in general medical knowledge and in midwifery respectively at the King Edward Memorial School of Medicine at Indore.

The Rai Bahadur was a guest at the Imperial coronation Durbar held at Delhi in 1911, and he expended a sum of Rs. 50,000 in the preparation of his own camp and in the entertainment of visitors. He is, further, held in high esteem by His Highness the Maharaja Tukoji Rao Holkar, the ruler of Indore, and he celebrated the safe return of His Highness from England by presenting the latter with a sum of Rs. 20,000 to be expended on the furtherance of education in the State.

It will readily be understood that a man of such a sympathetic nature as the Rai Bahadur has contributed most generously to various funds in connection with the Great War, and among other gifts may be mentioned a handsome motor-car of the value of Rs. 7,500.

The title of Rai Bahadur was conferred by the British Government upon Seth Kastoor Chand on January 1, 1912, in recognition of his loyalty to the throne, and of his large-hearted benevolence, which has been manifested in so many different ways. He is a comparatively young man yet, and great hopes are therefore entertained by his numerous friends and admirers that he will rise to still greater honours in the district in which his name is a household word.

RAI BAHADUR SETH SAROOPCHAND HUKAMCHAND.

That it is easier to spend money than to make it is a statement which few people would care to contradict, and a remark that the right way of distributing wealth is not understood by the majority of millionaires would meet with general approval. This thought is engendered by a study of the life and history of Rai Bahadur Seth Saroopchand Hukamchand of Indore, the capital city of Malwa, in the Central India Agency, who is a prince among merchants, and withal one of the most generous and equitable benefactors in the whole of India.

The Rai Bahadur belongs to the Kasliwal Gotra of the Digamber Jain Khandelwal community, and was born in the year Sambat 1931. The family have been engaged in trading for many generations, and they have not only gained the respect of the leading inhabitants of their native place, but they have also been honoured from time to time by the royal house of the State of Indore. The grandfather of the Rai Bahadur, Manakchand, who was the proprietor of the business carried on in the name of Manakchand Magniram, was so successful in strictly straightforward transactions that His Highness the late Maharaja Shivaji Rao Holkar in 1886 granted him a *parawana* entitling him to one-half of the customs duties, and at the same time presented him with an address of honour. Manakchand had five sons, two of whom died prematurely, and the remaining three acquired considerable wealth by trading jointly in opium. When the partnership was dissolved each of the brothers carried on business on his own account for a considerable time, and they were ultimately succeeded by their sons, Saroopchand being followed by Rai Bahadur Seth Saroopchand Hukamchand.

The educational course given to the last-named enabled him to obtain a fair knowledge of Hindi and English in addition to his other attainments, and he proved his business capabilities by becoming manager to his father at the early age of fifteen.

Establishments are now open at Indore, Indore Camp, Ujjain, Bombay, and Calcutta under the name of Saroopchand Hukamchand, the chief departments being opium, banking, cotton, grain, jute, and ready-made goods. The Rai Bahadur is an enterprising merchant possessed of great abilities, and he has gained such control over buying and selling markets that it may almost be said that he even rules current prices.

It is frequently said—nay, it has become a proverb—that Hukamchand goes to bed with gains or losses of thousands of rupees. Between the years 1909–10 he secured the sole right of importing opium into China, and in less than three years he had made a profit of more than ten million rupees. He is unrivalled as a prosperous man of business in Malwa, and newspapers have described him as "the merchant prince and philanthropist of Malwa."

The private life of the Rai Bahadur may be summed up in a few short phrases: Temperate in habits, an advocate of clean physical development, highly moral, an intelligent student of the Jain scriptures, and a regular and devout worshipper. Spare time—and even such a busy man as he can find some—is spent in the study of books on history, astrology, theology, and other subjects, and he is always ready by voice or pen to urge the importance of improving the mind. His calm judgment and persuasive manners have found scope in his presidency of the All-India Digamber Jain Mahasabha, the Teerth Kshetra committee, the Malwa Provincial Sabha, the Syadwad Mahavidyalaya of Benares, and the Hindi Literature Society of Central India.

He is, further, a loyal subject of the Throne, and the British Government in appreciation thereof conferred upon him the title of Rai Bahadur in the year 1915, while the Maharaja Bahadur of Indore honoured him by granting him a *sirdarship* in the Durbar and by permitting him the use of an elephant with howdah.

He has been married three times, and his present wife, Kanchanbai, keenly interested in the cause of female education, has established the Kanchanbai Shravika-Ashram, or Jain Women's Home, which is under her personal supervision.

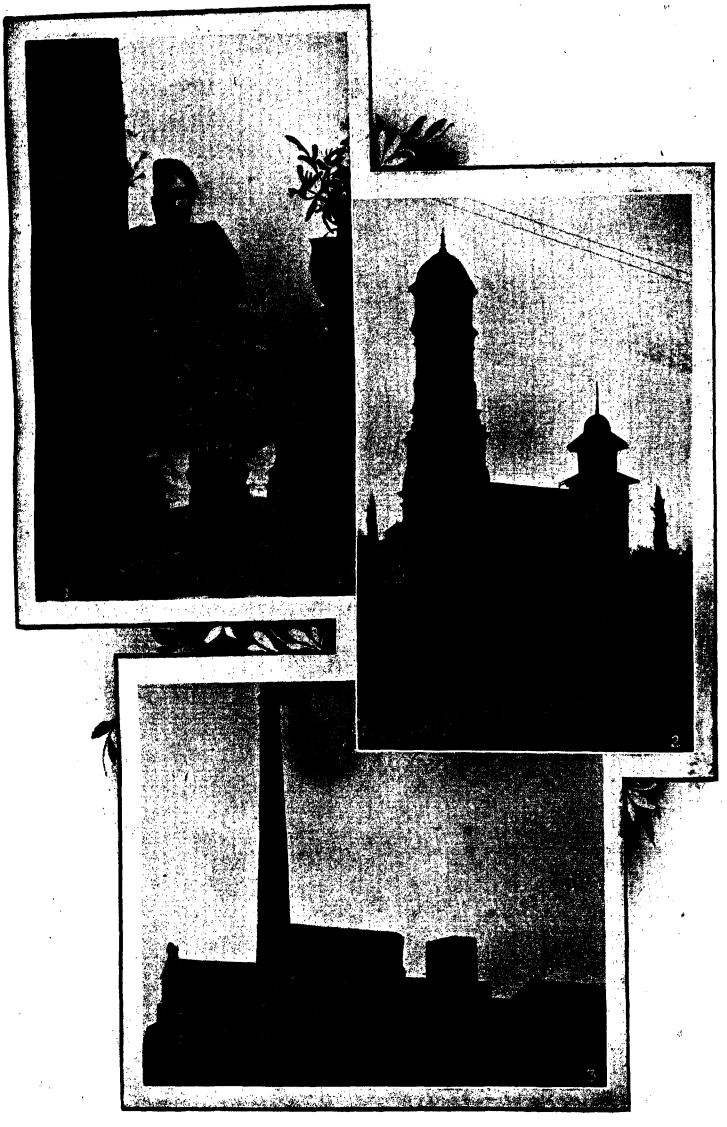
Conspicuous as are the business abilities of the Rai Bahadur, he excels in the magnitude of, and the sound judgment which he displays in bestowing, his charitable bequests.

On the outbreak of the Great War he contributed Rs. 8,000 to the Imperial Relief Fund, and when it was announced that Government loans would be received he at once stepped forward with a noble contribution exceeding in amount what was expected from the most wealthy rulers in India.

It would be difficult to enumerate all the magnificent gifts of this estimable man, but the following may be cited: Rs. 5,000 for the construction of a

RAI BAHADUR SETH TILOKCHAND KALYANMAL.

1 Rai Bahadur Seth Kalyanmal. 2. Tukaganj (Kothi) Bungalow. 3 City Residence and Bank. 4 Tilokchand Jain High School.



RAI BAHADUR SETH SAROOPCHANDJI HUKAMCHAND.

1. Rai Bahadur Sir Hukamchandji, Kt. 2. Bungalow. 3. The Hukamchand Mills, Indore.

temple at Kacchalya; Rs. 6,000 for mounting a gold *kalash* on the Jain temple at Indore; Rs. 4,000 for repairing and mounting a gold *kalash* on the old temple in the Indore Camp; Rs. 2,00,000 for building a public *serai* together with a temple and well near the Indore railway station; Rs. 10,000 for opening a charitable hospital; Rs. 3,000 for starting a provident fund for Jain widows and invalids; Rs. 32,000 for scholarships to students of English in the Hukamchand Jain boarding house; Rs. 25,000 to the permanent fund for the management of the temple and *dharamsala* at Indore; Rs. 7,000 for the building of the "Mahajan" ward in the Tukojirao hospital at Indore; Rs. 1,000 for the Lady Minto hospital; Rs. 10,000 for the management of the Digamber Jain Mahasabha; Rs. 1,000 for the permanent fund of the Jain Women's Home of Bombay; Rs. 3,000 for the Protection Fund of the Parasnath Hill; Rs. 5,000 for the advancement of education at Indore; Rs. 16,000 for repairing and rebuilding *dharamsalas*; Rs. 20,000 towards the opening of a public institution at Indore; Rs. 2,500 for the Jain Preachers' Fund in the Malwa Province; Rs. 10,000 for the erection of a temple in Bombay; Rs. 10,200 to the Rishabha Bramhacharya Ashram deputations; Rs. 150,000 for the building of a Jain temple in the Dilwara Bazar at Indore; Rs. 25,000 for the construction of a *pucca dharamsala* near the Indore railway station; Rs. 2,500 for the current fund of the Muttra Mahavidyala; Rs. 2,100 for repairing the ancient idol of Bawan Gaja at Barawani; Rs. 3,66,500 for building a Jain Sanskrit Mahavidyalaya and boarding house in Indore; Rs. 1,00,000 for the Kanchanbai Ashram, or the Jain Women's Home in the same city; Rs. 40,000 for the King Edward Hospital; Rs. 10,000 for the Lady O'Dwyer's Girls' School at Indore Camp; Rs. 92,000 for the construction of a large *dharamsala* in the Dilwara bazar at Indore; Rs. 2,000 for the building of the Central India Hindi Literature Society's hall at Indore; Rs. 10,000 for Udaseen Ashram, or the Jain Recluses' Home; Rs. 30,000 for the Jain boarding house on the occasion of his birthday celebrations; Rs. 25,000 for the purchase of a building for the Medical College of Indore; Rs. 10,000 for the establishment of an *ayurvedic* hospital at Indore; and Rs. 1,50,000 made up of miscellaneous sums for other charitable purposes. The above sums, totalling nearly thirteen lakhs of rupees, or more than £86,000, have been expended by the Rai Bahadur not alone for his own Jain community but also for the benefit of others, and these munificent gifts clearly reveal the large-heartedness of this noble man.

The Rai Bahadur is the owner of several very fine properties in Indore, among which may be mentioned "Haweli," his private residence; "Ghantagar," his delightful suburban retreat; "Javeribag," his public *serai*, for the accommodation of strangers; and the "Mahavidyala," the Jain Sanskrit College. Further than this, he is continually erecting new buildings with the object of providing work for the labouring classes, and he has also started a cotton mill at Indore in which some thousands of hands are given employment.

THE RAJPUTANA HOTEL.

"I am sure if people generally knew what a charming and restful place it is, more would prolong their stay, and I am writing this in the interest of fellow tourists who may require advice." These words were penned some years ago by an English gentleman who in the course of his travels through India was a resident at the Rajputana Hotel, Mount Abu, a famous hill station 4,500 feet above the level of the sea, in the Native State of Sirohi, in Rajputana.

Before referring specifically to the famous hostelry just mentioned, a few words should be written about the mount and its surroundings, concerning which a well-known author has written: "It was nearly noon when I cleared the Pass of Sitla Mata, and as the bluff head of Mount Abu opened upon me, my heart beat with joy, as with the sage of Syracuse, I exclaimed, '*Eureka.*'" Mount Abu is 17 miles distant from Abu Road, a station on the Bombay-Baroda and Central India Railway system, and is 425 miles from Bombay and Delhi respectively. It is the headquarters of the Governor-General's Agent for the Rajputana States, and is one of the most delightful, salubrious, and beautiful holiday resorts in India. It possesses a fine club for Europeans, tennis, racquet, and Badminton courts, polo and cricket grounds, golf links, and the hill abounds in large and small game, including tiger, panther, bear, sambhur, hare, wildfowl, partridge, and many other species of fur and feather. But the chief attraction for many visitors is the group of Dilwara white marble temples, with their matchless carvings of the 11th century, referred to by Tod in these words: "Beyond controversy this is the most superb of all the temples of India, and there is not an edifice besides the Taj Mahal at Agra that can approach it."

A more complete description of the romantic scenery and the varied attractions of this magnificent hill station is given elsewhere in this volume, and therefore one need only now allude to the Rajputana Hotel, the property of Mr. H. Merwanji, whose well-conducted house provides a perfect haven of rest for visitors.

The hotel comprises four blocks of buildings, all of which are particularly well ventilated, and it contains thirty-four single and double rooms with bath and dressing-rooms attached to each, in addition to the usual apartments for writing, reading, dining, and other purposes. There is also a large room in a separate building which is used for private dinner and supper parties. There is ample accommodation for more than fifty persons, but tourists are advised to communicate with the proprietor at least forty-eight hours before the expected time of their arrival, in order to avoid disappointment and consequent inconvenience.

The furnishing has been carried out with the object of obtaining the maximum of comfort for visitors, and yet such exquisite taste is displayed everywhere that one cannot help being struck by the harmony which prevails. The *cuisine* is really excellent, and the assertion that the civility and attention of the management is beyond all praise is based upon acknowledged facts and is not a meaningless phrase culled from a highly-coloured advertisement.

The hotel, picturesquely situated amid charming scenery, is one of the principal buildings in the station, and it contains a choice selection of wines, spirits, cigars, and cigarettes. There is a most satisfactory motor service for passengers and their luggage between Mount Abu railway station and the hotel, and applications for seats should be made, in advance, to Mr. Merwanji.

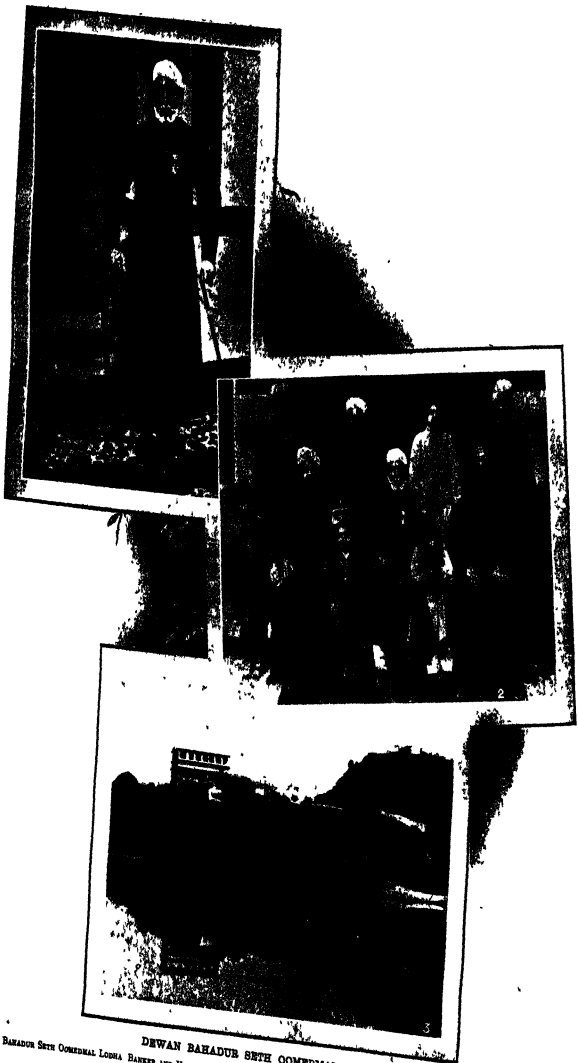
The proprietor and his able manager spare no pains in their endeavours to make their visitors feel that they have found a real home in a strange land, and the numerous testimonials received from patrons are richly deserved.

A few extracts therefrom are now given.

THE RAJPUTANA HOTEL (H. MERWANJI)

1. Rajputana Hotel (New Block) 2 Rajputana Hotel, Block No 1 3 Interior of Drawing-Room. 4 Fleet of Motor Cabs.

T. SETH BALCHANDAJI, PROPRIETOR.



DEWAN BAHADUR SETH COMEDMAL LODHA

1. Dewan Bahadur Seth Comedmal Lodha Banker and Hon. Magistrate.

2. Family Group.

3. Residency Bungalow on Anna Sagar Lake.

The Right Hon the Marquis of Bute wrote "I have been here for two days, and have been quite satisfied with the accommodation and food. The management have been very obliging, and all arrangements very satisfactory" Baron Maurice de Rothschild said "Have found the proprietor and manager most obliging, the hotel very comfortable, and the food excellent, specially delighted with the courtesy of the manager Major W Mould, R A M C, officer commanding station hospital and civil surgeon, Mount Abu, stated that he had resided in the Rajputana Hotel for nine months and that he was perfectly satisfied, and he continued, "the rooms are comfortable and the food excellent" Major F Pritchard "During our six weeks' stay here the management has extended to us the greatest consideration and courtesy, the *cuisine* leaves nothing to be desired, and the accommodation is superior to that found usually in hotels on the hills" "One of the finest places in all the world, said Dr Colvin Fletcher, of the United States Many other visitors from America speak in equally laudatory terms of Mount Abu and the hotel, e g 'We have enjoyed our visit very much 'We have found the hotel comfortable the food and service excellent, and the proprietor most genial" "Passed a very pleasant week here' "The place is charming and the temples wonderful, have found the Rajputana Hotel most comfortable and the food excellent." "Lovely place, very good treatment, would like to stay a month" "We were enchanted with Mount Abu, and found the Rajputana Hotel very comfortable and well managed, only wish we could have stayed longer," and 'This is like an oasis in the desert, climate delightful, scenery beautiful, hotel clean and comfortable"

The telegraphic address is "Hotel," Abu

TRADE AND COMMERCE OF WESTERN, NORTHERN AND CENTRAL INDIA

By A. R. BURNETT-HURST, B.Sc. (Econ.), F.S.S., I.E.S., Professor of Economics, Muir Central College, Allahabad, and Fellow of Allahabad University.

EARLY TRADE WITH THE WEST.—Throughout the ages, Western India has played a very important part in the economy of the country. The earliest records show that there existed three main external trade routes which connected India with the West, and all of these had their starting-point in the provinces which are now known as the Bombay Presidency and Sind, and the North-West Frontier Province. Probably the oldest of these trade routes was the one which traversed the Persian Gulf, and which commenced at a port situated at the mouth of the River Indus. There was another sea-route, more circuitous in its course, which linked Suez with the ports of the western coast, while yet a third was an overland route which penetrated the natural barrier in the north-west by means of the passes in that region.

PORTS AND ARTICLES OF TRADE IN EARLY TIMES.—Barbarikon, at the mouth of the Indus, was the first port reached in a coastal voyage from Arabia or the Persian Gulf to India, and for this reason it gained prominence. It conducted a large export trade in ointments, spices, gems, indigo and skins. The *Jatakas* mention other ports—Bharukaccha (the modern Broach), and Suppara—as carrying on a considerable trade in ivory, cotton goods, gold, silver, jewels, and valuable Sind horses. Besides these ports, there were those which are mentioned in the Periplus of the Erythrean Sea,[1] too numerous to name here. Nelkynda, the most prominent among them, became the chief port in India after the decline of Bharukaccha about 50 A.D. The trade of these western ports consisted mostly of goods of small bulk and great value, for example, precious stones, condiments, spices and rich ointments, fine muslins, ivory, pepper, indigo, skins, valuable timbers, and other goods.

MEDIAEVAL TRADE.—For nearly fifteen hundred years the three routes, mentioned above, remained the principal channels of communication between India and the western world. The fall of Constantinople in the middle of the fifteenth century resulted in a search for new routes to the East. However, it was not until the rounding of the Cape of Good Hope by Vasco da Gama at the end of the century that an alternative route was found. Even the discovery of the Cape route did not displace Western India from its position of pre-eminence in the foreign trade of the country. The character of the trade had by this time changed, and many of the old trade centres had declined, but the western ports still maintained their supremacy. Goa was now the chief port, and trade was no longer in the hands of Egyptian, Persian, Arab and Moor merchants, as they were gradually displaced by the Dutch, French and English. The struggle for supremacy among the European traders is well known, and can be dismissed in a few words. During the seventeenth century the Portuguese were gradually displaced by the Dutch, who in turn came into conflict with the East India Company. The latter, finding that it could not assail the strong position held by the Dutch traders in the "Spice" islands, confined its attention to the mainland, and founded "factories" or settlements at Surat, Hughli, and Fort St. George (Madras).

BOMBAY IN THE SEVENTEENTH CENTURY.—Up to this time little mention was made of Bombay, although towns in the vicinity, e.g. Kalyan, Bassein, and others, had figured prominently in Indian commerce. It was even maintained by a writer at the close of the seventeenth century that it was impossible "that Bombay, from its situation, could ever become a place of trade, notwithstanding the great attention paid to it by the English Government." This attitude could not, at the time, be regarded as unreasonable, in view of the fact that "under the rule of the Portuguese, the trade of Bombay was infinitesimal and was confined to the sale of dried fish and coco-nuts to neighbouring coast towns." With the cession of Bombay to the British Crown, upon the marriage of Catharine of Braganza to King Charles II, Bombay was brought into political prominence, but the value of its possession in those days is strikingly indicated by the rental at which the Crown transferred it to the East India Company in 1668—an annual rent of £10 sterling. As soon as the company took over the island, it immediately set about to improve its natural harbour, to construct dockyards, and to facilitate

[1] Written at the beginning of the Christian Era, the Periplus contains the personal experiences of a navigator who made a coasting voyage from the shores of the Arabian Sea to Nelkynda, a port in Cochin.

shipbuilding. The success which attended its efforts at improvement can well be imagined, for within twenty years Bombay developed into the chief centre of English commerce with Western India, and the company decided to transfer the headquarters of their trade from Surat to the island.

BOMBAY'S TRADE IN THE EARLY EIGHTEENTH CENTURY.—Trade at this time was not of any considerable magnitude. On the contrary, owing partly to the rivalry between the London and the East India Companies and partly to the hostility of the Moguls, Mahrattas and Portuguese, a period of depression set in at the beginning of the eighteenth century. This hostility to the merchants resulted in a new system of trade being introduced. Indian agents of the company were sent inland to distribute its goods and to purchase Indian products for export. This system was most beneficial to Bombay, which became, by the middle of the century, the centre of trade between Western and Northern India on the one hand, and the Red Sea and Persian Gulf on the other. In addition, the chief cities of India were trading with her while commercial intercourse was carried on with Europe, Africa, Malacca and China. A large number of merchantmen were engaged in the Bombay trade, which consisted chiefly in the exchange of "Surat goods" (cotton piece-goods manufactured in Broach and other parts of Gujarat), raw cotton and pepper, for the products of western countries and the Far East. Bombay also became the centre of an important *entrepot* trade in raw cotton.

THE COTTON FAMINE AND THE SHARE MANIA.—The abolition of the exclusive trade of the company in 1813 was the first of a series of important events which had resulted in placing Bombay among the chief seaports of the world. As soon as the trade of India was thrown open to private merchants, there commenced a period of considerable expansion in the exports of raw cotton. The rising price of cotton in America assisted this expansion, but it was not until the sixties that the exports reached their maximum, the outbreak of the American Civil War leading to a cotton famine in Lancashire. The vast wealth which the war indirectly brought to Bombay is estimated at seventy-five millions sterling. Premchand Raichand, the famous broker, took the opportunity of utilizing the flood of wealth which poured into the city for floating a number of companies, and then commenced the period of wild speculation known as the "Share Mania." The crisis which followed rid Bombay of a number of unsound concerns and rendered the public more chary of being beguiled by fascinating schemes. People looked to more substantial enterprises for the investment of their capital, and the cotton industry benefited, over seventeen new mills being established between 1870 and 1875. It was at this time there commenced the great growth of the industry which has earned for Bombay city the title of the "Manchester of India," and has assisted the vast expansion of its trade.

THE EFFECTS OF RAILWAY DEVELOPMENT, AND THE OPENING OF THE SUEZ CANAL.—Meanwhile, other events of far-reaching importance to the port were taking place. It was realized that no rapid progress in the development of Bombay could result unless improved and rapid communication could be established with the interior. Engineers were, however, faced with the immense task of carrying a railway over the *Ghats*. This feat was accomplished, and by 1870 "through" communication was established with Calcutta, and a year later with Madras, leading to a great expansion in goods traffic, chiefly in raw cotton. At the same time the opening of the Suez Canal, in 1869, and the application of steam power to ocean transport, reduced the voyage to London from six or eight months to less than thirty days. The effects of these changes can be seen by the extraordinary expansion of trade which followed. Imports which were of the value of Rs. 15 crores in 1870–71, rose to Rs. 36 crores in 1900–1, while the corresponding figures for exports were Rs. 26 crores and Rs. 34 crores. The course of trade was also altered by the opening of the Canal. Once again trade connections were established with the Mediterranean ports, and in the eighties with Germany, Belgium and Russia.

CONSTRUCTION OF DOCKS.—Yet handicaps to the development of the port remained, for trade was not possible during the monsoon owing to the absence of docks. It was essential that the improvement of the harbour and the construction of docks should be undertaken if Bombay was to progress. In 1858 the Elphinstone Land and Press Company was formed for this purpose, but before it could accomplish very much it was purchased by Government in 1870, and a Port Trust was established three years later. One of its first acts was the construction of the Prince's Dock (completed in 1880) and its equipment, with warehouses, sheds and cranes. The dock covered an area of over 30 acres, and was constructed on the "central jetty" system. It afforded accommodation for 16 vessels, but as it was only 24 feet in depth, vessels with deep draught could not enter it. Accordingly a new dock, the Victoria Dock, was undertaken and opened in 1888. This, though smaller in area than the Prince's Dock—only 25 acres—had a depth of 27 feet. It was built on the "comb" principle, three jetties of 400 feet in length protruding from the western side. But the results were not satisfactory, as steamers soon outgrew the length of the jetties. Moreover, both docks possessed the drawback of being tidal. The expanding trade of the port at the beginning of the century necessitated the provision of more accommodation. Fortunately large profits had been made in recent years by the Trust, which was thus enabled to undertake extensive schemes of port improvement. The Alexandra Dock, covering an area of $49\frac{1}{2}$ acres, with a depth varying from 35 to 37 feet, was completed in 1914. It is a non-tidal dock at any time. There is a central jetty, 1,500 feet in length, and accommodation is provided for 17 vessels. The dock has been constructed on the most modern principles, and has the latest equipment for the handling of cargo. All the berths are provided with travelling cranes worked by hydraulic power, transit sheds and warehouses. The Trust has also built its own railway, leading to the main lines of the Great Indian Peninsula and the Bombay-Baroda and Central India Railways. Extensive reclamation works, covering nearly 600 acres, had also been undertaken for providing accommodation for the export trade in cotton, grain, and other produce. But owing to the War, the Alexandra Dock has not been fully utilized as yet for commercial purposes.

RAILWAY CONNECTIONS.—At the present time, Bombay ranks on a level with Calcutta as a commercial centre. The development, which has resulted in its attaining this position, has not only been brought about by the opening of the Suez Canal and the building of docks, but also by the construction of railways. It is true that there was considerable traffic by road prior to the development of railways, but the condition of the roads was

bad and pack animals had to be used. The steep heights of the *Ghats* had also to be negotiated before reaching the Deccan. Now, Bombay is the western terminus of railways from all parts of India. The Bombay-Baroda and Central India Railway runs due north and skirts the coast for nearly two hundred miles. It passes through rich cotton tracts on its way to Delhi *via* Rajputana. At Delhi it joins the North-Western Railway and the railway systems of Northern India. The Great Indian Peninsula Railway traverses the cotton districts of the Central Provinces and Berar, and effects a junction at Jubbulpore with the East Indian Railway main line to Calcutta. A more direct route from Bombay to Calcutta is by the Bengal Nagpur Railway. The Great Indian Peninsula Railway also traverses the Deccan plateau, and joins the Madras and Southern Mahratta Railway at Raichur. It will be seen that railways radiate in all directions from Bombay, and they draw supplies from the vast cotton hinterland, which lies north, east and south-east of the island, for the export trade in that product and for the mills of the city.

STEAMSHIP ROUTES.—Bombay is similarly well served by steamship lines which visit the chief ports of Europe, Asia, Australia and Africa. Most prominent among the lines are the Peninsular and Oriental and the British India, the City, the Hall, the Anchor, the Marittima Italiana and the Nippon Yusen Kaisha. Recently two other Japanese lines have commenced a service, the Osaka Shosen Kaisha and the Toyo Kisen Kaisha. Before the War the Messageries Maritimes also visited Bombay. The Mogul and British India lines both maintain services to Red Sea ports, the Persian Gulf, and elsewhere, while the Asiatic Steam Navigation Company has a fortnightly line to Colombo, Calcutta, and coast ports. Another important coastal service is maintained by the Bombay Steam Navigation Company along the west coast. Country craft also engage in this traffic, bringing to Bombay raw cotton, rice, coco-nuts, spices, fruit, and other produce, in exchange for yarn and piece-goods, and sugar. The boats ply chiefly between Bombay and the ports of Gujarat, Kathiawar, Sind, the Konkan, and Malabar.

TELEGRAPHIC COMMUNICATION.—The establishment of telegraphic communication with the chief cities of India in the fifties and sixties; the laying of the submarine cable to Europe *via* Turkey, in 1864, by means of which Bombay was placed in touch with European markets, and subsequently with those of the world; the selection of Bombay as the port of arrival and departure of the English mails (1867), are events of importance in the commercial history of the city.

THE COMMERCIAL CLASSES.—The commercial spirit of the people has also greatly assisted the development of trade. Parsis, Bhattias, Banias, Jains, Bohras, Jews, Marwaris and Europeans had all contributed their share to the general progress.

THE PORT TRUST.—The administration of the port is entrusted to a board of trustees, ten members of whom are appointed by Government, while the remainder are elected representatives from the Chamber of Commerce, the Native Piece-Goods Association, and the Millowners' Association. The activities of the Trust are many, and include the general work of controlling the trade of the port, the levy and receipt of port dues and other fees, the administration of the properties vested in the board, the construction and maintenance of the docks, railway, roads and buildings, the reclamation of large tracts of land, the recruitment and control of the supply of labour for all commercial and Government traffic, and, in connection with the War, the handling of large quantities of Government stores, munitions, etc. The revenue receipts from all sources (excluding special receipts) amounted, in 1917–18, to Rs. 178 lakhs, while the expenditure under all heads (excluding special expenditure) was Rs. 162 lakhs, giving a surplus of Rs. 16 lakhs.

The enormous expansion of the work of the port during the last ten years is shown by the following statistics:

Year.	Vessels Docked.		Vessels Dry Docked	
	No.	Tonnage.	No.	Tonnage.
1908–09	869	2,225,000	187	612,090
1916–17	1,583	4,630,000	276	1,195,000
1917–18	1,587	4,245,000	341	1,454,000

GROWTH OF FOREIGN AND COASTAL TRADE.—The growth of the foreign trade of the port has been rapid, and, but for the temporary check in 1914–15 and 1915–16 caused by the Great War, would have been continuous. The following table gives the latest available figures for Bombay and the other chief ports of India:

TOTAL IMPORTS AND EXPORTS.
Value in Crores of Rupees.

Year.	Bombay.	Calcutta	Karachi.	Rangoon.
1908–09	83	110	20	22
1916–17	133	153	37	28
1917–18	140	148	44	27
1918–19	148	175	34	30

The coasting trade of Bombay port exhibits a similar expansion. The total imports and exports, which averaged Rs. 32 crores for the five years ending 1913–14, rose to Rs. 53 crores in 1918–19.

A part of this increase in trade is more fictitious than real, being due to a rise in prices. Nevertheless, the War has brought considerable wealth to Bombay. New regions for the enterprise of her merchants have now been opened to her, and already several Bombay firms have established close trade connections with Mesopotamia and East Africa. If the schemes that are contemplated for developing the city and port are carried out, there is no doubt that a further great expansion in trade and industry will be witnessed in the next few decades.

BOMBAY PRESIDENCY

The trade of the Presidency, including that of the port, can be classified as "seaborne" (foreign and coastal) and "inland," the latter being almost entirely trade by rail with other parts of India.

SEABORNE TRADE—EXPORTS.—The seaborne trade is chiefly centred upon Bombay, the principal port. Foreign merchandise which enters the port is only partly consumed within the Presidency, as the greater portion of it is despatched by rail to other parts of India, especially the north and west. Bombay is also the centre of distribution of foreign merchandise to countries bordering on the Persian Gulf. The total imports (including re-exports) in 1917–18 were valued at Rs. 63½ crores, of which about Rs. 6½ crores were re-exported to Persia, Aden, Asiatic Turkey, Arabia, and East Africa. Nearly half of these re-exports consisted of cotton manufactures, whilst refined sugar to the value of over a crore of rupees was the only other article which figured prominently. Similarly, large quantities of goods which enter the Presidency by rail go direct to the port for shipment abroad.

The total value of the foreign seaborne goods (excluding re-exports) imported into the Presidency in 1917–18, was

nearly Rs. 57 crores. A quarter of these were cotton manufactures valued at Rs. 1,472 lakhs. The other principal articles imported, the values of which are expressed in lakhs of rupees, were: sugar (Rs. 490), metals and ores (Rs. 330), silk manufacture (Rs. 235), machinery and mill work (Rs. 167), woollen manufactures (Rs. 141), oils (Rs. 140), cotton twist and yarn (Rs. 127), chemicals (Rs. 123), matches (Rs. 123), dyeing and tanning substances (Rs. 114), paper and pasteboard (Rs. 109), raw silk (Rs. 105), and hardware (Rs. 103). Coal, which was in pre-war days one of the chief imports, has greatly declined owing to the cessation of supplies from abroad. For the same reason, there has been a great diminution in the imports of railway plant and rolling stock.

INLAND TRADE—EXPORTS.—It is of interest to trace the distribution of these imports. Reference to the statistics of exports by rail from the Presidency to other parts of India will, to some extent, serve as an index, as about 40 per cent. of these exports consist of goods consigned direct from Bombay Port to places outside the Presidency. About half the total exports are cotton goods—both Indian and European—India's share having greatly increased during the War and ranging between 40 per cent. and 50 per cent. in recent years. Foreign twist and yarn is exported mostly to Madras, the Central Provinces and Berar, while piece-goods are consigned in large quantities to the United Provinces and the Punjab. Metals stand next in order in the list of exports, and are despatched mainly to the Punjab, the Central Provinces and Berar, Rajputana and Central India, the United Provinces, and elsewhere. These provinces also purchase the bulk of the foreign imports of dried fruits and nuts. These are also produced within the Presidency—in Gujarat and Kathiawar—but trade in them is much smaller, forming, as they do, about 15 per cent. of the whole. Salt is a product of the Presidency, being manufactured in large quantities and exported to the Central Provinces and Berar, the United Provinces and Hyderabad State. Only about one quarter of the foreign sugar which enters Bombay port goes beyond the boundaries of the Presidency. Grain is another of the commodities which is produced within the Presidency and railed to different parts of the country. Gram and pulse is largely sent to Madras and Mysore; *jowar* and *bajra* to Hyderabad; wheat to Mysore, Madras, the Central Provinces and Berar and Hyderabad; while Rajputana, Central India, and Karachi take the greatest share of "other grains." Kerosene, a foreign import, while retained to some extent within the Presidency, is exported in large quantities to the Central Provinces and Berar, Rajputana and Central India and Hyderabad. Oilseeds, chiefly cotton-seed, and tobacco, are both exported from the Presidency, the former to Madras and the Punjab and the latter to Rajputana, Central India, the Central Provinces, and Berar. The table above shows the principal articles of export by rail and their value in recent years.

VALUE OF PRINCIPAL ARTICLES EXPORTED BY RAIL FOR THE BOMBAY PRESIDENCY.

Value in Lakhs of Rupees.

Article.	Triennial Average. 1911-12 to 1913-14.	1914-15.	1915-16	1916-17.	1917-18.
Cotton manufactures—European ...	12,53	11,23	12,31	13,59	17,72
" " —Indian ..	6,38	6,30	7,87	10,90	14,97
Metals	4,19	3,55	2,95	2,87	2,82
Dried Fruits and Nuts	1,99	1,99	2,02	2,14	2,81
Salt	1,19	1,18	1,37	1,49	1,92
Sugar	1,62	94	1,68	1,62	1,14
Raw cotton	56	55	84	93	1,87
Wheat and other grains	49	1,13	92	92	1,25
Kerosene	77	92	91	1,02	91
Spices	71	78	76	82	91
Oilseeds...	31	49	47	30	89
Gunny Bags and Cloth	74	57	75	61	63
Tobacco, unmanufactured	44	55	43	55	56
Hides and Skins	45	26	26	57	50
Railway Plant and Rolling Stock ...	97	1,07	94	70	49
Total (including other articles)...	39,29	37,42	41,32	47,06	57,74

Central Provinces and Berar, also from Rajputana and Central India, Hyderabad, and the Punjab. It is partly used in the mills of the Presidency, but is mostly shipped abroad. Wheat from Rajputana, Central India, the Central Provinces and Berar; rice from Calcutta, Madras, and the United Provinces, and gram and pulse from the last-named province, also from the Punjab, Rajputana and Central India, are the most important of the grain imports. Owing to conditions of war resulting in smaller receipts of foreign coal, the trade in the Indian article has expanded. Bombay port now receives the bulk of her supplies by rail from Bengal, Behar, and Orissa. The quantity of metal

VALUE OF PRINCIPAL ARTICLES IMPORTED BY RAIL INTO THE BOMBAY PRESIDENCY.

Value in Lakhs of Rupees.

Article	Triennial Average 1911-12 to 1913-14	1914-15	1915-16.	1916-17.	1917-18.
Cotton (raw)	2 034	1,191	2,085	2,230	2,538
Wheat and other Grains	488	540	872	864	1,493
Coal and Coke	71	120	190	385	550
Metals	166	120	161	297	415
Provisions	104	170	230	353	407
Oilseeds...	947	340	482	623	325
Railway Plant and Rolling Stock ...	37	55	110	280	312
Hides and Skins	75	94	122	278	201
Sugar	71	69	70	93	174
Oils	23	33	30	44	158
Wool, raw	56	45	117	93	134
Jute	29	87	112	177	128
Spices	79	76	100	91	119
Total (including other articles)...	5,106	3,431	5,373	6,823	8,272

INLAND TRADE—EXPORTS.—One-third of the imports by rail into the Presidency consist of raw cotton. Wheat and other grains rank next in importance. The raw cotton is obtained very largely from the imports diminished, but, owing to the great rise in prices, values show an increase. The bulk of the trade consists of wrought iron and steel imported from Calcutta, Behar and Orissa and Karachi.

Coco-nuts from Madras and Mysore, and *ghee* from the Central Provinces, Berar, Rajputana and Central India comprise the greater part of the provisions imported. The trade in oilseeds, the bulk of which, before the War, used to be shipped to the European continent, has declined. Linseed imports from the United Provinces, and castor-seed from Hyderabad, still continue to enter the Presidency in large quantities for export abroad. The imports of railway sleepers, rails, and fish-plates have greatly increased owing to the War. Almost the entire quantity supplied by Behar and Orissa and the Central Provinces has been despatched in recent years to the eastern theatres of war. Similarly considerable quantities of raw hides and skins have been imported from the United Provinces for military requirements. Shortage of foreign supplies of sugar has led to heavy imports of unrefined sugar (*gur, rab, jaggery*, etc.), for local consumption in Gujarat, Kathiawar, and the Eastern Deccan. The oil trade, imports of raw wool, of jute, spices, dyes and tans, and opium, all show considerable expansion.

These increases are partly to be attributed to inflation caused by the rise in prices. The table on the preceding page shows the principal imports by rail stated in the order of their importance.

SEABORNE TRADE—EXPORTS.—Over 70 per cent. of the total imports in 1917–18 represented dealings with the port of Bombay. While large quantities of these goods were consumed in the city itself, the bulk was shipped to foreign countries. The principal articles exported every year in this manner are agricultural produce. More than half the value of the total shipments consists of raw cotton, the figures for 1917–18 being Rs. 39 crores out of a total export trade of Rs. 76 crores. The other exports valued in lakhs of rupees and stated in their order of importance are: grain, pulse and flour (Rs. 757); cotton twist and yarn (Rs. 723); seeds (Rs. 531); cotton manufactures (Rs. 441); raw wool (Rs. 305); raw hides and skins (Rs. 176); tea (Rs. 73); dyeing and tanning material (Rs. 55); coffee (Rs. 54); spices (Rs. 53).

TRADE CENTRES.—The chief centres of trade in the Presidency, apart from Bombay, are Ahmedabad, Surat, Bhusawal, Poona, Sholapur and Hubli. Trade is largely in the hands of the Marwari from Rajputana, the Bohra, Vani and Memon in Gujarat; the Parsi, Bhatia, and Khoja in Bombay; and the Lingayat Banjig in the south.

COMMERCIAL ASSOCIATIONS.—The leading commercial association is the Bombay Chamber of Commerce, founded in 1836. Among its most important functions are the work of arbitration in commercial disputes and the publication of statistics connected with the trade of the port, daily trade returns, bi-weekly import and export manifests, monthly trade returns, and an annual report in which the trade of the port is reviewed. The Chamber also maintains a staff of measurers. As the Chamber is very largely a European body, another association, the Indian Merchants Chamber and Bureau, was established in 1907 to promote and protect the special interests of Indian merchants. Other bodies, which have been formed to regulate special trades and to safeguard the common interests of persons engaged in those trades, are the recently established Cotton Contracts Committee, the Bombay Native Piece-Goods Merchants Association, and the Bombay Grain Merchants Association.

THE PUNJAB

TRADE DEVELOPMENT DUE TO SECURITY AND RAPID TRANSPORT AND IRRIGATION.—There was little commercial intercourse between the Punjab and the rest of India after the decline of the Moghul Empire. The anarchy and disorder which prevailed during this period was only terminated by the annexation of the province in 1849. Thereafter, the establishment of peace and security made trade possible. No direct encouragement was, however, given to trade until the railways were opened in the sixties and seventies, and rapid means of communication were provided within the province. The lines which were constructed were soon extended to other parts of India, and by 1883 railway connection had been established with Calcutta and Bombay. Although the economic development of the province has been partly the result of security and improved communications, the most important factor which has contributed to the progress of the Punjab has been the extension of canal irrigation.

IRRIGATION WORKS AND THEIR BENEFITS.—The whole of Central Punjab is a vast alluvial plain, intersected by the five main rivers which give the province its name. The soil is a sandy loam, and valuable crops can be grown provided there are facilities for irrigation. Owing, however, to the deficient rainfall and the absence of irrigation works, large tracts of land have for centuries remained desert areas, "alkaline wastes often covered with low bushes of the saltwort tribe," or stretches of bare soil relieved occasionally by jungle scrub. When the British took over the country, the improvement and extension of irrigation was immediately undertaken. Among the various schemes which were carried out were the extension of the Upper Bari Doab Canal (1851–61), the improvement of the Western Jumna Canal, and the opening of the Sirhind Canal (1884). Canal construction and improvement was at first confined to the populous parts of the Punjab. Subsequently, a new policy was adopted in the eighties, when the drier districts and waste lands began to be developed, and the colonization of these areas was commenced. The Lower Chenab and Lower Jhelum Canals were completed early in this century. Then followed the Triple Canal Project, which was successfully completed in 1915, after overcoming great engineering difficulties. The progress accomplished during the last half-century is strikingly shown by the following figures. In the early seventies, just over a million acres were irrigated; now, more than nine million acres are watered by the Government irrigation works. This great increase in the irrigated area has entirely changed the economic life of the Central Punjab. The recent Government report on "Irrigation in India" states: "Before the advent of the Lower Chenab, Lower Jhelum and Lower Bari Doab Canals, the tracts which they now serve were practically waste land. The soil was good in most parts, but owing to the scanty rainfall and low water table, crops could be cultivated only in drainage depressions, and the rest of the country was covered with scrub jungle. The inhabitants were few, and they depended for their existence on their camels and cattle, whilst they did a fairly brisk business in cattle-stealing. Canal water has transformed these unfruitful areas into highly cultivated tracts, containing well-built villages and large towns and markets. The enormous output of grain has led to a rapid extension of the railway system, and roads have been provided for in the system of land demarcation adopted as a preliminary to successful colonization and distribution of water. The original colonists, drawn from the congested districts of the Punjab, have supplied the necessary cultivators for the

greater part of the crown waste land, whilst even the original nomads of the tract have taken to agriculture and honest livelihood." The landscape is no longer sandy plains with scanty vegetation and stunted bushes, but, as harvest approaches, field after field of golden wheat can alone be seen, bringing wealth to the cultivator and resulting in the large export trade in grain, which is a feature of the commerce of the province.

RAILWAY COMMUNICATION.—The Punjab is well served by railways. In the Central Punjab the commercial lines run for the most part parallel to the great rivers, while the strategic railways run across these to the north-west frontier. The commercial lines have very largely assisted the canals in revolutionizing the economic life of the province by providing a ready means of marketing the surplus agricultural produce—grain (chiefly wheat), cotton and oilseeds. The North-Western Railway alone serves the canal colonies and connects them with Karachi, the natural channel for the trade of the province. It also connects Lahore, Amritsar, Ferozepore, and other centres with the same port. The eastern Punjab is traversed by several railways, of which the North-Western is the chief. The Bombay-Baroda and Central India Railway and the Great Indian Peninsula Railway both connect Delhi with Bombay, while the East Indian Railway links Delhi with Calcutta. In addition, there is a network of branch lines which covers this portion of the province.

ROADS.—The roads, too, are good, although for the most part they act as feeders to the railway. The most important thoroughfare is the Grand Trunk Road, which serves as a main channel of communication through the province from Delhi in the south to Attock in the north. Its importance has largely declined since the construction of the railroad. The metalled roads from the plains to the hills are still of considerable importance as commercial routes for the traffic to Kashmir (*via* the Murree-Rawalpindi road), to Tibet (*via* the Hindustan-Tibet road), in tea and other hill products (*via* the Kangra valley cart road). Bullock-carts and pack-animals are a feature of these roads, while, in the sandy plains, the camel is the chief means of transport.

RIVER TRAFFIC.—Water traffic is considerable on the Indus, and the navigable portion of the other important rivers. The Indus alone conducted a trade of one crore of rupees with Sind in 1917–18. The exports, to the value of Rs. 75 lakhs, chiefly consisted of wheat (Rs. 32 lakhs) and other grains (Rs. 11 lakhs) and timber (Rs. 21 lakhs). The imports, valued at Rs. 26 lakhs, were more varied, consisting of refined sugar (Rs. 6 lakhs), cotton piece-goods (Rs. 4 lakhs), wrought iron and steel (Rs. 4 lakhs), gunny bags, tobacco, kerosine, rice, etc. The goods are conveyed entirely in country craft. Timber traffic is most important on the other rivers.

RAIL-BORNE TRADE AND TRAFFIC.—The bulk of the inland trade of the province is, however, conducted by rail. Half the exports are despatched to Karachi, while the United Provinces supply the largest quantity of imports. The above tables show the sources of imports and destination of exports in recent years.

EXPORTS.—The value of exports in 1917–18 was 39 crores of rupees, showing an increase compared with pre-war figures. This increase is, however, more apparent than real, because of the recent great rise in prices. Of the exports, about one-half consists of grain and pulse, 10 per cent. raw cotton, while among the other chief commodities exported are hides and skins, raw wool, oilseeds, railway plant, provisions, metals, timber, sugar, salt, and apparel.

Grain is the chief source of wealth of the province. Of the total value of Rs. 18½ crores exported in 1917–18, nearly half was wheat despatched to Karachi, while Rs. 4½ crores of gram and pulse were consigned chiefly to the same port. Three-quarters of the exports of raw cotton are sent to Bombay port for shipment abroad. Cawnpore takes about half the raw hide exports of the province, while raw skins are railed chiefly to Karachi and Calcutta. Karachi also takes the bulk of the raw wool exports. Of Rs. 129 lakhs of oilseeds exported in 1917–18, rape and mustard comprised Rs. 119 lakhs, Calcutta purchasing most of the latter, while large consignments were also made to Karachi and the United Provinces. The shortage in imports of foreign railway plant has resulted in a greater demand for Indian stock. This probably accounts for the great increase in exports under this head. The United Provinces imported carriage and wagon stock to the value of Rs. 23 lakhs from the Punjab, while about Rs. 45 lakhs of miscellaneous materials were exported to Karachi. Of the exports of provisions, the most important articles were dried fruit and nuts to Bombay port and *ghee* to Karachi. Exports of metals consist principally of iron and steel manufactures. Timber is chiefly consigned to the ports of Karachi and Bombay and to Sind and Baluchistan. Rs. 36 lakhs of *gur* (unrefined sugar) were despatched to Rajputana and Central India in 1917–18. The immense beds of rock salt which are found in the Salt Range provide supplies

EXPORTS BY RAIL AND RIVER FROM THE PUNJAB.

Value in Crores of Rupees.

To.	1914–15.	1915–16.	1916–17.	1917–18.
Karachi Port	11.5	13.0	16.0	19.1
Bombay Port	1.6	3.4	4.4	6.0
United Provinces	7.1	6.5	6.2	5.9
Rajputana and Central India	2.7	2.3	2.7	2.0
Calcutta Port	1.5	1·8	1·0	1.6
Sind and British Baluchistan	1.0	1.3	1.5	1.6
Total (including other provinces)	27.6	31.3	33.9	38.6

IMPORTS BY RAIL AND RIVER INTO THE PUNJAB.

Value in Crores of Rupees.

From.	1914–15.	1915–16.	1916–17.	1917–18.
United Provinces	7.3	7.8	7.4	8.2
Calcutta Port	2.6	3.3	4.5	6.6
Bombay Port	4.3	4.3	4.9	6.5
Karachi Port	9.1	9.5	7.9	6.3
Rajputana and Central India	1.7	1.7	2.5	2.2
Bombay Presidency	1.3	1.4	1.4	2.0
Behar and Orissa	1.4	1.4	1.7	2.0
Bengal	1.2	1.6	1.5	1.7
Total (including other provinces)	31.2	33.6	34.3	38.5

for export to Behar and Orissa and the United Provinces.

The table given at the bottom of the page shows the principal exports arranged in the order of their comparative importance in 1917–18:

IMPORTS.—The imports are headed, as in the case of most provinces, by cotton manufactures. Supplies of foreign piece-goods are obtained from the seaport towns—Bombay, Calcutta and Karachi—but increasing quantities of India piece-goods are being received from Bombay Presidency, the western ports and the United Provinces. Unrefined sugar from the United Provinces and foreign supplies of refined sugar obtained from Calcutta, also figure prominently in the imports. Iron and steel manufactures from the seaports, also from Behar and Orissa and Bengal, are imported to the value of nearly Rs. 3 crores. Dried nuts are obtained from Bombay and Karachi, while *ghee* comes from Rajputana, Central India, and the United Provinces. Timber is imported in very large quantities from Kashmir, the trade being valued at over Rs. 90 lakhs. Imports to the value of nearly Rs. 40 lakhs are also obtained from the United Provinces. Since the foreign supplies of coal *via* Karachi have not been available during the War, imports have been received almost entirely from Behar and Orissa and Bengal. The last-named Presidency, including Calcutta, supplies the Punjab with gunny bags, which are used for exporting grain. Raw hides and skins are imported from the United Provinces, while skins are also obtained in large quantities from Rajputana and Central India. Grain, including wheat, gram and pulse, also figures amongst the imports, especially in those years when the harvest is poor. The United Provinces furnishes the bulk of the supply.

The chief articles of import into the Punjab are as follows:

Value in Lakhs of Rupees.

Article of Export.	1914–15.	1915–16.	1916–17.	1917–18.
Grain and Pulse	1,739	1,671	1 449	1,854
Cotton, raw	184	200	438	404
Cotton manufactures	91	115	143	192
Hides and Skins	120	190	320	174
Wool, raw	47	82	83	168
Oilseeds	95	104	123	129
Railway Plant and Rolling Stock	37	48	76	126
Provisions	32	60	66	86
Metals	61	71	88	82
Wood and Timber	22	26	35	74
Sugar	40	29	44	71
Salt	18	44	62	63
Total (including other articles)	2,758	3,129	3,390	3,864

TRADE CENTRES.—The large towns of the province—Delhi, Lahore, Amritsar, and Multan—are centres of considerable trade. The development of the canal colonies has brought into prominence a number of smaller towns, which play an important part in the grain trade of the Punjab: Lyallpur, Gojra, Sangla, Rohtak, Kaithal, Bhatinda, and Abohar.

TRADE ORGANIZATION.—The chief trading castes are Aroras in the west, Khattris in the centre and north, and Banias in the east. The poor cultivator usually sells his surplus produce to the village *bunnias*, who act partly as money-lenders and partly as shopkeepers. He is more or less compelled to do this as frequently he is heavily indebted to the bunnia, and in his attempt to liquidate the debt and pay off the heavy interest—an attempt which seldom meets with success—he is forced to take his produce to the shopkeeper for disposal. He is also compelled, for similar reasons, to make his purchases from the same shopkeeper, otherwise the loans made to him would be recalled. It is for this reason that rising prices seldom benefit the cultivator, who is forced to accept the prices offered by the *bunnias*. The larger cultivator, who can afford to wait for a favourable market, and who is also able to market the produce himself, usually takes the grain direct to the *mandi* or market, where he meets the agents of export houses and other buyers. These grain markets are to be found in nearly all towns of any size in the canal tracts.

TRADE WITH KASHMIR.—Trade with Kashmir is conducted along several routes. The following are the most frequented: from Rawalpindi *via* Murree, the route up the valleys of the Jhelum and Punch rivers, from Gujarat *via* Bhimbar, and from Sialkot *via* Jammu. The imports in 1917–18 were valued at Rs. 101 lakhs, nine-tenths of which were timber. Other imports included *ghee*, drugs, skins, dried fruit and grain. Exports were valued at only Rs. 21 lakhs, and consisted of railway rolling-stock to the value of nearly six lakhs; salt of over two lakhs; also grain, cotton piece-goods, apparel, oilseeds, Indian spirits, and raw silk. A small trade with Chinese Tibet is also conducted *via* the Hindustan-Tibet road *via* Ladakh.

Value in Lakhs of Rupees.

Article of Import.	1914–15.	1915–16.	1916–17.	1917–18.
Cotton manufactures	9 48	10,71	10,50	13,16
Sugar	3,02	3,05	4,48	4 49
Metals	2,53	2,15	2,26	2,81
Provisions	1,00	1,20	1,16	1,74
Wood and Timber	1,00	82	95	1,41
Coal and Coke	1,14	91	1,43	1,37
Gunny Bags and Cloth	1,15	1,35	1,16	1,36
Hides and Skins	47	94	1,97	1,20
Grain and Pulse	2,44	1,70	1,27	1,16
Apparel	91	93	1,23	1,05
Oilseeds	1,17	1,00	76	90
Total (including other articles) ...	31,23	33,63	34,29	38,52

THE UNITED PROVINCES OF AGRA AND OUDH.

The United Provinces carry on a much larger business in purely inland trade than any other province in India. This is mainly due to the large population which they support, and the excellent system of railways by which they are served.

DENSITY OF POPULATION.—More than half the total area of the provinces is in the great Indo-Gangetic plain, and the alluvial soil of this tract, together with the favourable climate, maintains a greater population per square mile than any other part of the country. While the average density for the provinces is 440 persons per square mile, there are

some districts in the eastern portion which have a density of nearly 900—an exceptionally high figure for an agricultural area.

TRANSPORT FACILITIES.—Before the development of railways, goods were carried by river and road. The Ganges, the Gogra, the Gumti, the Rapti, and the Jumna rivers were all important commercial waterways. The roads, on the other hand, were few. In the middle of the eighteenth century, for instance, there were only two main routes through the provinces. The first of these started at Delhi and proceeded *via* Muttra, Agra, and Etawah, to Allahabad. The other passed through Moradabad, Bareilly, Shāhjahanpur, Rae Bareli, and Benares, to Patna. With the advent of the British, apart from the construction of "strategic" roads, for example, the Grand Trunk Road, important commercial thoroughfares were opened. Among the latter were the roads from Agra towards Bombay and from Mirzapur to the Deccan. The introduction and extension of railways led to the decline of river-borne trade and traffic. Road-traffic was also lost to railways where, in some instances, the latter utilized the existing road routes, but, in other cases, the roads developed into feeders for the railways. At the present time there exists a veritable network of railways traversing the provinces, passing through the chief commercial centres and linking them up with the large seaports and cities of India. The principal rail-route is the main line of the East Indian Railway, which maintains direct communication with Calcutta. The line runs parallel partly to the Jumna and partly to the Ganges. It passes through Mirzapur, Allahabad, Cawnpore, Hathras and Aligarh, and joins the North-Western Railway—the most direct route to the north—near Delhi. The Oudh and Rohilkhand Railway has a main line from Moghal Sarai to Saharanpur, also a loop line. It is linked with the East Indian Railway by important cross connections. Several large commercial and industrial centres, e.g. Benares, Allahabad, Lucknow, Cawnpore, Bareilly and Moradabad, are served by the line. The Bengal and North-Western Railway, a metre-gauge line, connects Bengal with the north-eastern portion of the provinces and with such centres as Lucknow, Allahabad, Benares, Gorakhpur, etc. Communication with Bombay is maintained by three routes. The first of these is the East Indian Railway line to Jubbulpore, whence it joins the Great Indian Peninsula Railway main route. The second is the Delhi-Agra-Gwalior-Jhansi route, and the third the Cawnpore-Jhansi route, both of which are part of the Great Indian Peninsula system. It will be seen that the United Provinces form, as it were, the meeting-place of the chief commercial thoroughfares from North, East, West, and Central India. These extensive railway connections are supplemented by an excellent system of roads, maintained by the Public Works Department and by local authorities. In 1916–17 there were 7,176 miles of metalled roads and 25,714 miles of unmetalled roads.

RAIL AND RIVER-BORNE TRAFFIC.—The bulk of trade nowadays is carried by rail. The total value of imports by rail was over 40 crores in 1917–18, while exports to the value of nearly 50 crores were despatched from the provinces in that year. Accurate statistics are not available for river and road traffic, but a record is kept of the river-borne trade with the Calcutta "block." In 1917–18 imports were valued at nearly *Rs.* 75 lakhs and consisted almost entirely of foreign piece-goods, while exports, chiefly *ghee*, grain and refined sugar, were only valued at Rs. 4 lakhs.

PREDOMINANCE OF AGRICULTURE.—The character of the trade of a province depends very largely upon the occupation of the people. The fifty million inhabitants of the United Provinces obtain their livelihood almost entirely, whether directly or indirectly, from agriculture. The exports of the province are, in consequence, chiefly agricultural products—grain, oilseeds, raw cotton, sugar, opium, and other goods, while the imports are mainly those commodities which are required to meet the simple needs of an agricultural community (e.g. cotton goods, sugar, salt, kerosene, and spices), and to a less extent materials for manufactures (e.g. metals, coal and coke, raw cotton, raw wool, and railway plant). When, owing to unfavourable climatic conditions, there is a partial or total failure of the crops, grain and foodstuffs which in normal years form the chief articles of export, find a prominent place in the imports of the province. The absence of minerals, with the exception of saltpetre, results in considerable importation of coal and metals.

DIRECTION OF TRADE.—From the accompanying summary table it will be seen that trade is chiefly carried on with Calcutta, although to a less extent than formerly. Bombay's trade connection with the United Provinces has grown, while practically all other provinces show increases in the amount of goods exported to them. The United Provinces has been importing less goods recently from certain provinces, e.g. the Punjab.

IMPORTS.—About one quarter of the imports are cotton piece-goods. These are largely of foreign origin, but since

RAIL-BORNE TRADE OF THE UNITED PROVINCES.

Value of Total Imports and Exports in Crores of Rupees.

	1913-14		1914-15		1915-16.		1916-17.		1917-18.	
	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.	Imports.	Exports.
Calcutta	12.1	11.8	10.7	8.1	10.1	11.1	9.8	11.6	9.9	11.1
Punjab	8.1	5.7	7.1	7.3	6.5	7.8	6.2	7.4	5.9	8.2
Bombay Port	4.8	0.7	3.6	2.7	4.6	5.6	4.3	8.0	5.8	8.4
Behar and Orissa	3.9	2.5	3.9	2.7	3.8	2.6	5.0	2.9	5.4	3.7
Rajputana and Central India	3.9	2.9	3.3	3.1	3.8	3.9	4.7	4.1	5.0	4.4
Bengal	1.7	1.2	1.9	1.0	1.9	1.2	2.8	1.5	3.3	1.5
Bombay Presidency	1.9	0.9	2.2	0.9	2.0	1.2	2.5	1.5	2.7	1.8
Central Provinces and Berar	1.3	0.9	1.1	0.8	1.0	0.9	1.2	1.1	1.2	1.6
Karachi	0.7	2.5	0.4	0.3	0.5	1.9	0.3	2.4	0.3	5.6
Total (including other provinces)	38.7	35.7	34.6	27.5	34.6	37.4	37.2	42.3	40.1	48.0

the War the consumption of Indian manufactures has increased. Heavy imports of refined sugar from Java, *via* Calcutta, and of the unrefined *gur* from the Punjab, Behar and Orissa, figure next in importance, but as against these imports must be balanced a larger export of country-made sugar to the Punjab, Rajputana, and Central India. Among the other imports which are consumed by the people as a whole are salt from Rajputana, and to a less extent from Bombay Presidency and the Punjab; rice from Behar and Orissa and Burma; gram and pulse from the Punjab; *ghee* from Rajputana and Central India; dried fruit and nuts from Bombay port; and kerosene from Bengal. The chief raw materials imported for the industries of the provinces are wrought iron and steel, hardware and cutlery, and other metals, chiefly from Calcutta and Bombay port; coal from Behar and Orissa; raw wool, nearly the whole of which is imported into Cawnpore city from Bengal; raw cotton from Rajputana and Central India; railway plant and rolling-stock, which before the War was imported very largely from abroad, is now obtained from Behar and Orissa, Punjab and Bengal; gunny bags, used for exporting grain, are received from Calcutta and Bengal; while raw hides are chiefly purchased from the Punjab. In famine years there is usually a considerable importation of grain, especially gram and pulse, from the Punjab.

The principal articles of import by rail in 1917–18, and previous years, are shown in the table at the top of the page.

EXPORTS.—The chief exports are grain and pulse, which are, in prosperous years, despatched in large quantities to the ports for shipment abroad. The quantity exported fluctuates considerably from year to year owing to the variations in production and the presence or absence of famine. Generally the bulk of the exports are forwarded to Calcutta, but in 1917–18 large quantities of wheat, gram, and pulse were sent to Karachi. Sugar stands next in importance after grain, and, except in recent years, oilseeds and raw cotton have also figured very prominently. Calcutta and Bombay are the chief importers of the oilseeds, while most of the cotton is consigned to the latter port. Both these commodities are shipped abroad. The export of a number of articles has been stimulated as a result of the War; the most important of these are cotton goods, hides and skins, railway plant and rolling stock, lac, dyes and tans, wood, saltpetre and leather. Indian yarn and piece-goods were taken by the countries is conducted on primitive lines. Barter is the chief method of exchange, and the goods are transported by pack-animals—by sheep and goats to Tibet, and by ponies and bullocks to Nepal. The value of the imports from Tibet is Rs. 15 lakhs, and of the exports Rs. 5 lakhs. The chief imports are borax, salt and wool, which are exchanged for cotton goods, gram, sugar, and other merchandise. Trade with Nepal is on a larger scale. Imports were valued at Rs. 145 lakhs in 1918–19, and exports at about Rs. 50 lakhs. The principal imports are grain (chiefly rice), *ghee*, mustard and rape seeds, and spices, while exports include cotton piece-goods, salt, metals, sugar, spices, and *mahua*.

IMPORTS BY RAIL INTO THE UNITED PROVINCES.

Value in Lakhs of Rupees.

Article.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.
Cotton manufactures	10,11	7,80	8,79	8,73	11,02
Sugar	2,82	2,04	3,00	2,82	2,81
Metals	3,74	2,85	2,25	2,58	2,46
Coal and Coke ..	1,31	1,28	1,03	1,45	1,88
Salt	1,05	1,18	1,21	1,81	1,90
Grain and Pulse .	7,61	8,94	5,41	3,83	1,81
Cotton, raw	1,03	78	75	1,34	1,67
Wool, raw and manufactured ...	34	40	60	80	1,50
Railway Plant and Rolling Stock... ...	1,25	1,06	1,07	1,56	1,39
Provisions	62	69	71	80	1,28
Gunny Bags and Cloth	74	79	69	1,05	1,20
Apparel	81	66	1,03	1,24	1,18
Kerosene	84	87	86	97	1,05
Hides and Skins	47	40	65	94	1,01
Total (including other imports) ...	38,69	34,65	34,64	37,17	40,06

The value of the principal articles of exports is shown in the table below.

The trade of the provinces has shown considerable expansion. In 1880–1 the imports and exports were valued at only Rs. 13 crores and one crore respectively. The corresponding figures for 1917–18, the latest trade year for which information is available, are Rs. 40 crores and Rs. 48 crores.

FOREIGN TRADE WITH TIBET AND NEPAL.—Mention should be made of the foreign trade which is carried on with Tibet and Nepal. Trade with these Punjab, Behar and Orissa, Rajputana and Central India; raw skins were despatched to Europe; saltpetre and lac were in great demand for military purposes, while the shortage in dyes led to increased production and export of indigo to Calcutta. The United Provinces also supplied railway material to meet the deficit arising from the decrease in foreign imports.

EXPORTS BY RAIL FROM THE UNITED PROVINCES.

Value in Lakhs of Rupees.

Articles.	1913–14.	1914–15.	1915–16.	1916–17.	1917–18.
Grain and Pulse	7,12	4,25	8,72	8,23	13,45
Sugar	4,00	4,41	5,40	5,43	4,55
Opium	1,06	1,03	1,84	1,52	2,84
Cotton, manufactures . .	1,18	1,23	1,22	1,35	2,82
Hides and Skins	2,16	1,85	2,65	4,22	2,71
Oilseeds	5,80	3,82	4,20	4,69	2,43
Cotton, raw	4,75	3,34	2,94	3,27	2,32
Railway Plant and Rolling Stock ...	49	42	44	69	2,05
Provisions	1,56	1,15	1,34	1,74	1,84
Metals	83	69	68	1,05	1,44
Lac	72	44	55	1,11	1,32
Apparel	75	83	1,01	1,23	1,21
Total (including other exports) ...	35,72	27,52	37,39	42,32	48,02

The trade of the Cawnpore city formed about 12½ per cent. of the total external trade of the

COMMERCIAL CENTRES.—The chief centres of trade in the United Provinces are Cawnpore (which is well known as the most important inland town in India from the commercial and industrial point of view), Agra, and Hathras.

provinces in 1917–18. The chief trading classes are Banias or Vaisyas, but other castes are entering commerce in increasing numbers.

ORGANIZATION OF TRADE.—Trade organization is very simple. Markets are held periodically at the principal trade centres in the rural districts, when the inhabitants of neighbouring villages meet to sell their surplus produce. Frequently the cultivator sells his crops direct to the *bunnia* (grain merchant) or an itinerant buyer. In many cases, these persons act as agents for large mercantile houses. As soon as they have purchased a sufficiently large quantity of produce, they forward it to the local representatives of the export houses, who in turn consign the goods to the port of shipment. Similarly, imports pass through the hands of a number of intermediaries. The *ryot* (cultivator) usually meets his requirements either from the retail shopkeeper in the village, at a market, or from an itinerant vendor.

CHAMBER OF COMMERCE.—There are two trade associations in the provinces. The older and more important organization is the Upper India Chamber of Commerce. The Chamber, which is largely an European body, was founded in 1889 in order to safeguard the interests of merchants and manufacturers and to promote trade and industry in the provinces. A similar association of Indian merchants was formed in 1914 under the title of the "United Provinces Chamber of Commerce."

THE CENTRAL PROVINCES AND BERAR

IMPORTANCE OF RAILWAYS TO THE PROVINCE.—Railways have played an even more important part in the development of commerce in the Central Provinces than they have done in the United Provinces. Before the construction of railroads, the Central Provinces were a land-locked territory. Owing to the dense forest tracts which covered a large part of the country, internal trade on any large scale was impossible except along a few main roads. At the time of British annexation there existed a fairly large volume of trade in grain, cotton, and other produce, which was carried on between Nagpur and Bombay by means of pack-animals and bullock-carts. But even this trade was handicapped by the feeling of insecurity which existed, and to which all travellers and traders were exposed in those days. It was only when the chief centres in the provinces were linked by rail to the seaport towns that a new era in the commercial history of the provinces commenced.

HANDICAPS TO TRADE DEVELOPMENT.—In the Central Provinces the density of population is low, being only 122 persons per square mile. This may be partly the result of the political conditions of the past, but it is more probably the effect of the physical characteristics of the country. The sparse population, coupled with the few needs of the many backward communities which inhabit the provinces, are doubtless the cause of the comparatively small imports and the great excess of exports over imports. The export balance occurs in all years except those of famine. In 1917–18, for instance, while the value of exports was Rs. 24 crores, imports were only Rs. 14 crores, the excess of exports over imports being Rs. 10 crores. Fifty years ago the combined value of imports and exports was Rs. 3½ crores, now it is nearly ten times as great.

RAILWAYS.—This remarkable expansion in trade has been brought about by railways. The province is served by two main lines connecting Calcutta and Bombay. The first of these to be partly constructed was the Great Indian Peninsula Railway route to Nagpur. This was opened in 1867, and three years later Bombay was linked to Jubbulpore. The East Indian Railway effected a junction of their line from Calcutta with the Great Indian Peninsula Railway at Jubbulpore, while the Bengal Nagpur Railway formed a company in 1867 to extend the railway from Nagpur to Calcutta. Subsequent railway development has taken the form of connecting lines between the two main routes, e.g. from Katni to Bilaspur, from Jubbulpore to Gonda and to Nagpur.

ROAD TRAFFIC.—Prior to the construction of railways, traffic, so far as it existed, passed along a few main roads, e.g. from Nagpur to Jubbulpore, Nagpur to Chanda and along the old Bombay road from Jubbulpore. These roads acted at first as feeders to the trunk railway lines, but with the construction of connecting lines many of them have been superseded. The important roads at the present time are those connecting producing areas with the railways. In recent years a large number of new roads have been made, and this has resulted in new areas being opened for development.

DIRECTION OF TRADE.—One-third of the import trade and more than half the export trade is conducted with Bombay port, as the following figures show. The value of imports in 1916–17 from Bombay port was Rs. 504 lakhs. Similarly the imports (stated in lakhs) from the other parts of India were as follows: Bombay Presidency, Rs. 236; Behar and Orissa, Rs. 140; Calcutta port, Rs. 125; Rajputana and Central India, Rs. 119; United Provinces, Rs. 112; Bengal, Rs. 94; and the Madras Presidency, Rs. 50. Corresponding statistics of the export trade for the same year were: Bombay port, Rs. 1,434; Behar and Orissa, Rs. 148; the United Provinces, Rs. 125; Bombay Presidency, Rs. 123; Rajputana and Central India, Rs. 85; Punjab, Rs. 59; Bengal, Rs. 49.

IMPORTS.—Twenty per cent. of the total imports into the Central Provinces consists of yarns and piece-goods. Normally, England supplies more than two-thirds of the total value, but the difficulty of obtaining consignments during the War has resulted in increased imports from the Bombay mills. Nevertheless, the supremacy of Lancashire products in high counts still remains unassailed. Sugar stands next in importance, and consists chiefly of foreign supplies of refined sugar, together with *gur* and unrefined sugar from Bombay Presidency, Behar and Orissa and the United Provinces. Considerable quantities of wrought iron and steel manufactures imported from Europe reach the Central Provinces from Bombay port. In recent years Bengal and Behar and Orissa have forwarded increasing amounts of these manufactures. The total trade in wrought iron and steel goods was valued at nearly Rs. 90 lakhs in 1916–17 out of a total metal trade of Rs. 108 lakhs. Dried fruit and nuts, chiefly coco-nuts, are imported from Bombay port and Madras. Increased imports of railway material are being received chiefly from Behar and Orissa, also from Bombay port and Bengal. Two articles of general consumption—salt and kerosene—form about 5 per cent. each of the total imports. Four-fifths of the salt consumed in sea-salt, from Bombay, while the kerosene-oil is obtained from Bombay port and Bengal. The Bengal and Behar coalfields have been supplying the provinces with an increasing quantity of fuel to meet the shortage due to smaller imports of foreign coal. The spices imported are chiefly betel-nut and chillies, the former from the sea-port towns and

the latter from the Madras Presidency. Gunny bags, which figure in the list of imports, are used for transporting grain.

The values of the principal articles of import are as follows:

Value in Lakhs of Rupees.

Articles.	Triennial Average. 1911-12 to 1913-14	1914-15.	1915-16.	1916-17
Cotton Manufactures	3,01	2,47	2,84	2,90
Sugar	1,46	1,26	1,81	1,64
Metals	1,42	1,10	90	1,08
Dried Fruit and Nuts	80	95	93	92
Railway Plant	49	51	69	69
Kerosene Oil	47	53	56	69
Salt	50	49	51	58
Gunny Bags and Cloth ...	51	34	46	52
Coal and Coke	29	39	42	51
Spices	51	50	56	48
Total (including other imports)	13,21	12,59	13,79	14,38

EXPORTS.—More than three-quarters of the population of the provinces are engaged in agriculture, and this fact accounts for the greater part of the exports being agricultural produce. At one time grain was the chief item of export, but now nearly half the exports consist of raw cotton, which is mostly sent to Bombay port for shipment abroad. Grain, largely wheat, gram and pulse, come next in importance. Two-thirds of the grain is consigned to the sea-port towns for export, and Behar and Orissa also import large quantities. The grain trade fluctuates considerably, although on the average it forms 15 per cent. of the total exports. Formerly large quantities of oilseeds were despatched to Mediterranean ports, but since the outbreak of war exports have greatly diminished. Yet linseed, cotton-seed, rape and mustard-seeds and sesamum still figure prominently in the trade. The Punjab takes most of the cotton-seed, while the other oilseeds are consigned very largely to Bombay, Calcutta and Behar and Orissa. The Punjab also obtains piece-goods from the Central Provinces. Provisions, chiefly *ghee*, are consigned to Calcutta, Bombay port and Presidency, Behar and Orissa and Rajputana and Central India. Bombay imports most of the raw hides and skins.

The chief exports are given below.

Value in Lakhs of Rupees.

Articles.	Triennial Average 1911-12 to 1913-14.	1914-15	1915-16.	1916-17.
Cotton, raw	11,46	7,15	10,79	9,67
Grain and Pulse	3,69	2,35	3,00	3,85
Oilseeds	2,75	1,30	1,73	1,54
Cotton Manufactures	1,01	1,01	1,25	2,03
Provisions	93	78	69	1,21
Ghee	21	16	24	42
Manganese	93	74	96	1,17
Hides and Skins	57	45	57	58
Total (including other exports)	23,77	16,06	21,75	23,92

TRADE CENTRES.—The trade centres of the provinces are almost entirely concentrated along the railways. Nagpur, apart from its importance as an industrial and administrative centre, is also an important cotton market. It is also a distributing centre for grain and metals. Among the other principal trade centres are Kamptee, Hinganghat, and Khandwa for cotton, and Kamptee, Raipur, and Jubbulpore for grain. The chief trading classes are Marwaris and Banias. The import trade is largely in the hands of Bombay merchants, Parsis, Bohras, and Cutchis.

KARACHI

RISE OF KARACHI.—Before the eighteenth century there is no mention of Karachi. A place named Kharak, situated on the River Habb, was at that time carrying on considerable trade, but when, in 1729, it became silted up, migration to Karachi (then known as Kalachi Kun) followed. The silting of other ports and the decline of trade centres in the vicinity led to commerce being diverted to Karachi, and with the encouragement given to the trade of the town by the Talpur chief, imports and exports increased and were valued at 40 lakhs in 1837. A decrease in opium traffic resulted in a fall of these figures to 12 lakhs by 1843, in which year the British came into possession of the town. Since then trade has expanded, and the modern Karachi, which is practically a creation of British rule, has risen.

Karachi has benefited very largely from the same factors as have been the making of Bombay. The American Civil War, the opening of the Suez Canal, the construction of railways, have all contributed to the development of the port. But, in addition, the construction of harbour, the extension of irrigation works in Sind, and the rise of the Canal Colonies, have greatly assisted its expansion.

EFFECTS OF THE CIVIL WAR IN AMERICA AND THE OPENING OF THE SUEZ CANAL.—The American Civil War gave a great stimulus to the trade of Karachi. Imports and exports which five years before the War were valued at one crore of rupees, each rose to two crores and four crores respectively. With the restoration of peace, trade returned to the normal level. A decade later the effects of the opening of the Suez Canal and the construction of railways began to be felt. The great reduction in freights and the shortening of the distance between Europe and India made possible a wheat traffic with Europe after 1873. Heavy exports of wheat began to be made from India, and soon Karachi became the chief wheat market in the country.

HARBOUR WORKS.—When it was first annexed, Karachi only provided accommodation for small country craft. The entrance of steamers and large ships into port was obstructed by the tidal bar projecting from Manora Point. Largely owing to the strenuous exertions of Sir Bartle Frere, schemes for harbour improvement were carried through. The Napier Mole, connecting Karachi to the

island of Kiamari, was constructed in 1854, and this was followed by the Kiamari groyne in 1863 and the Manora Breakwater in 1873. These works, aided by extensive dredging, have resulted in the deepening of the entrance channel. Accommodation for vessels has also been increased by the construction of the Merewether Pier (1882), the Erskine and James wharves (which together provide berths for ten large steamers), a special pier for oil steamers, and import and export yards, with storage facilities, and covering about 75 acres. The North-Western Railway also runs goods trains on to the quays and wharves. These improvements have converted Karachi into a first-class harbour capable of accommodating the largest vessels. Further schemes for improvement have been approved, and some have already been commenced, but owing to the War, work has been temporarily suspended since 1916. The West Wharfage scheme will provide sixteen new berths, and the Lower Harbour Improvement scheme will enable any ship passing through the Suez Canal to enter the harbour, for it will increase the depth of the entrance channel to over 32 feet. The port authorities also contemplate a large reclamation scheme, and the establishment of large up-to-date dry docks and additional storage space. The port now provides on the eastern wharfage 17 ship berths, 1 coasting-steamer berth, and 1 bulk-oil steamer berth, with 20 moorings in the stream. The first instalment of the west wharfage will give six more large ship berths and two coasting-steamer berths. With its present facilities, the port can deal with an export up to 400,000 tons per mensem without interfering with imports.

Previous to the construction of harbour works, the trade of Karachi was almost entirely with Bombay, but the provision of a safe harbour and railway connection with the Canal Colonies have altered the nature and direction of its commerce. A considerable export trade in wheat, oil-seeds, and wool shipped direct to foreign countries has resulted. The trade fluctuates considerably, according to the nature and harvests in the Punjab.

The total value of the trade of Karachi averaged about Rs. 40 crores before the War, as against Rs. 35 crores during the conflict. In a recent review of the work of the port during the past five years, Sir Charles Mules, chairman of the Port Trust, stated: "Ninety acres of virgin soil had been converted into a river-craft building yard and subsequently transformed into a military coal and fodder dump, while piers were provided at a cost of 2½ lakhs. From August 1, 1914, to September 30, 1919, 648,851 troops and followers were embarked and landed, and 1,700,738 tons of military stores and 8,391,618 tons of merchandise were exported and imported. The merchandise included vast quantities of grain shipped on Government and the Allies' account. During this period 5,581 steamers entered the port, and approximately the same number left it. The year 1917–18 was the busiest of the period, during which 144,546 troops were landed and embarked and 579,658 tons of military stores and 2,641,847 tons of merchandise were exported and imported, while in the month of August 1917 the figures were 12,511 troops and followers, 51,962 tons of exports and imports of military stores, 313,063 tons of imports and exports of general merchandise."

IMPORTS.—More than half the imports into Karachi consist of cotton manufactures from the United Kingdom, Bombay, and Japan. Sugar from Java ranks next in importance. The value of the trade in these commodities, together with the other principal imports, are given in the table below.

From ten to twenty per cent. of the imports are re-exported each year. The more important items in this re-exported trade are raw wool, valued at Rs. 146 lakhs in 1918-19, sugar (Rs. 42 lakhs), and cotton coloured piece-goods (Rs. 35 lakhs). The wool is chiefly re-exported to the United Kingdom and sugar to the Persian Gulf ports. Part of the cotton piece-goods is forwarded to Persia. A feature of the re-export trade in recent years has been the increasing trade in Kandahar raisins and sultanas with the United Kingdom.

EXPORTS.—The chief exports consist of wheat and other grains, pulses, raw hides and skins, raw cotton and wool, oilseeds, etc. The table below shows the values of the principal exports of Indian produce and manufacture during the past five years.

It will be seen that trade has fallen off considerably since the cessation of hostilities. This is chiefly due to the reduced exports of wheat on Government account.

STEAMSHIP AND RAILWAY CONNECTIONS.—The steamship lines which serve Karachi include the British India, the Bombay Steam Navigation Company, and the Moghul Line for coastal voyages to Bombay, the Persian Gulf, and other places. Before the War direct sailings to Europe were also made by the Ellerman, the Austrian Lloyd, and other lines The North-Western Railway connects the port with the frontier and the Punjab.

Value of Imports in Lakhs of Rupees.

Articles.	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.	1918-19
Cotton Manufactures ...	7,29	4,66	6,05	6,05	7,79	6,37
Sugar	3,33	2,60	2,74	2,96	1,58	1,64
Metals and Ores ...	1,06	80	76	57	42	48
Liquors	22	20	20	30	34	36
Oils	46	41	43	50	35	36
Tobacco	12	8	6	11	22	28
Fruits and Vegetables ...	14	13	20	21	24	22
Machinery and Millwork ...	22	19	15	20	22	13
Wool	68	32	13	13	20	13
Cotton Twist and Yarn ...	20	19	17	15	16	8
Railway Plant and Rolling Stock	29	28	6	3	1	2
Total (including other imports)	16,28	11,59	12,52	13,02	13,14	11,53

Value of Exports in Lakhs of Rupees.

Articles.	1913-14.	1914-15	1915-16	1916-17.	1917-18	1918-19.
Wheat	9,78	8,15	6 79	8,21	14,08	5,74
Gram	50	18	27	34	3,37	3,16
Barley	1,07	26	1,68	1,89	3,92	2,64
Skins, raw	93	72	81	2,48	1,27	1,20
Wool, raw	1,29	1,26	1,85	1,09	1,03	1,19
Rice, not in the husk	73	60	70	1,14	1,23	1,69
Rape Seed	3,25	94	96	1,33	38	1,01
Hides, raw	56	60	1 21	1,78	44	74
Cotton, raw	5,61	4,73	1,61	1,46	19	11
Total (including other exports)	25,88	19 01	17,52	22,57	28,96	19,54

It also, by joining the Jodhpur-Bikaner Railway at Hyderabad (Sind), links the port with Rajputana.

PORT TRUST.—The port is administered by a trust consisting of a chairman, nine official nominees, three representatives of the Chamber of Commerce, and one representative of the municipality. The revenue receipts amounted to Rs. 64 lakhs in 1917–18, while the expenditure was Rs. 48 lakhs, leaving a surplus of Rs. 16 lakhs. During the past ten years the Trust has earned four and three-quarter crores and spent nearly four and one-quarter.

SIND AND BRITISH BALUCHISTAN

MARITIME TRADE.—The seaborne trade of Sind comprises the trade of Karachi port and the coastal trade of the subordinate ports of Keti Bandar and Sirganda. The latter are visited by country craft, which engage in coastal traffic with Karachi, Cutch, and even Zanzibar. The coastal trade of the province is considerable, being no less than one-fifth in value of the total maritime trade.

INLAND TRADE.—The inland trade of Sind and British Baluchistan is conducted very largely with the Punjab and the United Provinces. Four-fifths of the total imports by rail and river in 1917–18 were taken by Karachi, the total imports for the whole province being valued at Rs. 50 crores. The port, however, does not play such large part in the inland export trade, its share being only one-half. The exports were valued at Rs. 27 crores in 1917–18.

IMPORTS INTO KARACHI.—The chief imports into Karachi by rail and river, in 1917–18, together with their values in lakhs of rupees, were: wheat (1,234) and gram and pulse (485), three-quarters of which in each case came from the Punjab, also large quantities from the United Provinces; "other grains" (421), from the same provinces; raw wool (366), from Baluchistan, the Punjab, and Sind; and raw cotton (213), which, although entered as "Sind" cotton, includes large quantities imported from the Punjab. Among the other imports are "rice not in the husk" (199); raw hides and skins (99), chiefly from the Punjab; coal (94), from Behar and Orissa; and railway material (83), from the United Provinces and the Punjab.

IMPORTS INTO SIND AND BRITISH BALUCHISTAN.—Indian piece-goods, valued at Rs. 212 lakhs in 1917–18, are the most important of the goods which enter Sind (excluding the port of Karachi) and British Baluchistan. These goods come from Bombay *via* Karachi. Refined sugar (Rs. 78) and railway plant (Rs. 55) also come by the same route, while gunny bags (Rs. 48) are obtained from Bengal, including Calcutta. Other imports include railway material from the United Provinces, Punjab, Behar, and Orissa; foreign piece-goods, dried fruit and nuts, and apparel redistributed from Karachi; coal for railways, obtained from Behar and Orissa; and wheat from the Punjab. All the above values are expressed in lakhs of rupees.

EXPORTS FROM SIND AND BRITISH BALUCHISTAN.—Practically the entire export trade of Sind and Baluchistan, by river and rail, is with Karachi. In 1917–18 raw wool exports were valued (in lakhs) at Rs. 249, the greater portion being wool from Baluchistan and Afghanistan; raw cotton at Rs. 214; rice not in husk at Rs. 198; wheat (Rs. 113); railway plant (Rs. 42); raw hides and skins (Rs. 42); also *ghee*, dried fruits, and oilseeds.

EXPORTS FROM KARACHI.—The inland export trade of Karachi is chiefly with the Punjab, although very large exports are also despatched to Sind. Two-thirds of the Indian piece-goods, valued at Rs. 339 lakhs, are distributed in Sind and British Baluchistan, the remainder going to the Punjab. The last-named province also takes the bulk of the export of foreign piece-goods, valued at Rs. 222 lakhs. The Punjab and Sind share Karachi's exports (Rs. 156 lakhs) of refined sugar. Among the other exports from Karachi, the values of which are expressed in lakhs of rupees, are: wrought iron and steel (77); kerosene (75) and apparel (Rs. 38), mostly to the Punjab; and railway plant (52) and gunny bags (48) chiefly to Sind.

COMMUNICATIONS.—The important communications of the province include the North-Western Railway main line, which traverses Sind from north to south, a few branch railway lines, the River Indus, and many excellent roads. A junction is also effected between the North-Western and the Jodhpur-Bikaner Railways at Hyderabad (Sind). The Indus plays a more important part in trade than do most Indian rivers, as it is navigable for country craft throughout the year. In the middle of the nineteenth century Sir Bartle Frere found the province without metalled roads and masonry bridges. To him must be given the credit for laying the foundations of the road system of Sind. A complete network of roads now covers the whole province.

TRADE CENTRES, ETC.—The chief trade centres are Karachi, Hyderabad, and Sukkur, and the principal trade classes are Banias, Bohras, and Parsis. The Karachi Chamber of Commerce was established in 1860. Its activities include the promotion and protection of the general mercantile interests of the province, the publication of trade information, the nomination of surveyors for the settlement of disputes, and the appointment of a public measurer.

THE FOREIGN AND COLONIAL COMPILING AND PUBLISHING COMPANY

THE main purpose of these volumes is to arouse in the English-speaking peoples an intelligent and enduring interest in the King's dominions and colonies beyond the seas, and at the same time to give such an accurate picture of each section of the Empire as shall make them standard works of reference for all who desire a fuller knowledge of the enormous resources and commercial possibilities of each colony. To this end the compilers and editors have kept in view the Right Hon. Joseph Chamberlain's words, spoken when he held office as Secretary of State for the Colonies, and after he had returned from his colonial tour. "Books," said Mr. Chamberlain, "were required on the colonies, both for use within themselves and at home and abroad; books giving the history, commerce, industries, and resources of each country; to prove what industrial enterprise could attain under new and sometimes hard conditions."

Mr. Somerset Playne, F.R.G.S., founder of the Foreign and Colonial Compiling and Publishing Company, who is the compiler of these volumes, has now been associated with this class of publication for several years. The books themselves are compiled from information gathered by personal calls on planters, merchants, and industrial concerns, the country journeys involving many thousands of miles of travel and the expenditure of a large amount of money, and the information thus gained, together with any opinions expressed by the person interviewed, is entered in the work under that person's name. It is confidently believed that the first-hand information thus carefully collected, and presented in sumptuous and attractive form, with all the aid that lavish and artistic photographic illustration can give, will not only place the country before the world in a clearer and more favourable light, and in truer perspective than ever before, by fully revealing the general grandeur of its scenery and the magnificence of its resources, but will *ipso facto* render most material aid in its social and industrial progress and development.

Volumes have been graciously accepted by His Majesty King George V, His late Majesty King Edward VII, and H.R.H. the Duke of Connaught; while the Colonial and Foreign Offices, as well as the Governments of the various colonies and possessions, have invariably taken a keen interest in these books, having assisted by granting free railway passes and by the purchase of numerous copies of the works for libraries and general distribution.

The Foreign and Colonial Compiling and Publishing Company was started by Mr. Playne in 1908 for the purpose of compiling a standard work of reference on British East Africa. This volume was practically "off his own bat," but later works were produced with the very able assistance of Mr. F. Holderness Gale, who collaborated as editor until his lamented death in 1914, when the services of Mr. Arnold Wright, the present editor and historian, were secured. "East Africa," which received the highest encomiums from the London and Colonial Press, was followed in 1910 by "Cape Colony," a volume of some 800 pages, illustrated with upwards of 2,000 photographs. At this period Mr. J. W. Bond joined the staff as a compiler, and Mr. R. Vincent Solomon was appointed to the post of chief clerk and secretary, while later the literary department was strengthened by the addition of Mr. J. W. Kiddall. The services of Capt. H. H. F. Stockley, F.R.G.S., were then secured as another compiler for the "Orange Free State" volume, and as soon as this was completed the whole staff sailed for New Zealand, *via* Australia, and thence to India.

A few words regarding the mode of travelling in the various countries which were visited may be of interest. As far as the volume on East Africa was concerned, the whole of the work of compilation was done by Mr. Playne, not in a luxurious saloon railway car, nor even in a comfortable motor-car, but upon the back of a mediocre mule. The photographers, too, had to rely on this not too comfortable beast of burden, or, in the alternative, they had to make use of the ordinary "push-bike." Many adventures with lions and rhinos were recorded, and long journeys over native tracks through the bush frequently involved a night in the open without food, and also with grave doubts as to one's whereabouts.

Numerous hardships were experienced by the staff in Cape Colony and in the Orange Free State; nights had to be spent on the bleak hills, in unsavoury sheep-sheds, or under the Cape cart (which, however, is the most satisfactory method of transit in those parts); and one photographer was snowed up for a week on the mountains above Cathcart, without any means of communication. In negotiating the treacherous drifts across rivers serious dangers were encountered,

and on more than one occasion it was a case of stripping off one's clothing and of taking to the water in order to turn the frightened horses and bring the outfit safely to the opposite bank. Many breakdowns occurred to the Cape carts and horse, owing mainly to the abominable state of the mountain roads; but when it is realized that members of the staff covered some 15,000 miles, it will be considered singularly fortunate that mishaps were unattended by any serious results. New Zealand supplied a new set of experiences, and extended travelling under novel conditions was again the lot of the compilers; but thanks to the generous hospitality and freely-tendered assistance of the warmhearted inhabitants of the Dominion, rough paths were smoothed out and the work in hand was carried out under the pleasantest conditions. Southern India was the next field of operation, and here a tour of over 7,000 miles was done in a motor-car by Mr. Somerset Playne throughout the Anamalais, Nilgiris, Wynaad, and the West Coast, Coorg, and Mysore; while Mr. J. W. Bond and other members of the staff motor-cycled throughout Cochin, Travancore, and most parts of the Madras Presidency.

SOMERSET PLAYNE, F.R.G.S.

The life of the compilers, and, to a certain extent, that of the photographers, is one of constant change and excitement. Many a bad spill, resulting in a long walk, has occurred; many a tyre has had to be repaired in pelting rain or in excessive heat; and it will be admitted that motoring on unknown, and frequently bad, roads at night when flocks of sheep or herds of cattle are lying about, must occasionally be attended by disaster. To suddenly round a corner, and your headlights to show a wild elephant evidently contemplating whether to take your car as a personal insult or to retire into the jungle, is far from being a pleasant experience; and yet this happened on more than one occasion, but luckily the jungle was in each case favoured. But, after all, these misfortunes, though distressing at the time, are usually a source of amusement subsequently.

SOMERSET PLAYNE, F.R.G.S.

The compiler of works of the magnitude of "East Africa," "Cape Colony," "Orange Free State," "New Zealand," "Southern India," and "Bengal and Assam: Behar and Orissa: their History, People, Commerce, and Industrial Resources," must of necessity have had considerable experience of the world, and Mr. Somerset Playne has had a more varied career and can boast of a wider acquaintance with the Britains beyond the seas than most men. He was educated at Clifton College, and at St. Edward's School, Oxford. At the age of nineteen he paid his first visit to the United States, spending most of his time in the West, and indulging for some months in the joys of ranching and cowboy-life. He was called home to England, but the spirit of adventure reasserted itself, and Mr. Playne sailed for South Africa, where he spent some time on Angora goat and ostrich farms. The Matabele Rebellion was then a very recent memory, and Francistown was still the terminus of the railway; but Mr. Playne went up-country to the then new Rhodesia, and at Inyati took a hand in big-game shooting, storekeeping, and trading.

After having travelled in every part of Africa south of the Zambesi, Mr. Playne took part, in 1899, in an expedition into German East Africa, and on his return from this trip he made the acquaintance, for the first time, of British East Africa, travelling over the Uganda Railway from Mombasa to Voi, which was then the terminus of the line.

Another visit to the Old Country took place, and then Mr. Playne tempted fortune for the second time in South Africa, meeting with experiences not infrequently the lot of those who venture in "new" countries. Later he joined a firm which was engaged on the compilation of an encyclopædic work on Natal, and on the completion of the task in that colony he returned to England to superintend the passing of the volume through the press.

For the same firm Mr. Playne later

supervised the compilation of books on Ceylon, the Federated Malay States, Hong Kong and Shanghai, and visited Java, Labuan, Borneo, and Formosa. Then, having meanwhile severed his connection with the business which had carried him to the Far East, he travelled through India, and, sailing from Bombay, arrived in British East Africa in November 1908, on which country he then compiled his now well-known standard work.

A trip to Europe *via* Cairo followed; thence he sailed to Cape Colony, where he arrived in March 1910. Returning to England in 1911, the "Cape Colony" work was subsequently passed through the press. Having previously started on the "Orange Free State" volume, which had been carried on during his absence, another trip to South Africa was necessary; and after a stay of a few months he sailed, in 1912, for Australia, and later proceeded to New Zealand in order to compile his well-known work on that dominion. From there he journeyed, in September 1913, to South India, where he covered over 7,000 miles in one tour by motor-car for compilation purposes. In 1914 a short period of two weeks was spent in England, and in the following year he proceeded to the scene of his recent labours in Bengal, Behar, Orissa, and Assam, practically every part of which he has toured, mostly by road; whilst in 1916, in order to join the ranks of the benedicts, he again visited New Zealand for a short period.

Mr. Somerset Playne is a Fellow of the Royal Geographical Society, a Freemason, and a member of the Royal Societies and Sports Clubs.

CONCLUDING NOTE

A DEBT which must be discharged before this work is left in the hands of the printers is an acknowledgment of the compiler's obligations to many willing helpers who assisted him in his task. As had been the case with his operations in connection with the earlier volumes on Southern India and Bengal and Assam, Behar and Orissa, he met everywhere with the greatest kindness and consideration, and invariably where possible and public interests permitted, he received from those in official positions valuable assistance in the prosecution of his labours. The Great War and its aftermath of disorganization enormously added to his difficulties, and it was only through the kindness of his many friends and the tolerant acquiescence of a generous public in the protracted delays, inevitable in the peculiar circumstances of the time, that he was able to bring the work to what he hopes will be considered its successful close.

The compiler was fortunate in having the assistance of a staff whose competence had been demonstrated in other fields where conditions almost as difficult as those just referred to had to be faced. Once more he has to pay a tribute of gratitude and thanks to Mr. R. Vincent Solomon, who superintended the Calcutta office and carried out the onerous and responsible duty of supervising the letterpress and photographs prior to their despatch to Europe. His thanks are also due to Mr. J. W. Bond, Mr. J. W. Kiddall, Mr. E. T. Mungavin, for assistance in the work of compilation, and to Babu C. Chatterjee for clerical aid.

Throughout his protracted tours in India in carrying out his duties the compiler met with the most courteous treatment from those in high authority, and in this connection he would especially mention with gratitude the good offices of H.E. the Right Hon. Lord Willingdon, then Governor of the Bombay Presidency; the Hon. Mr. P. R. Cadell, C.I.E., I.C.S., Secretary to the Government of Bombay; Mr. J. Crerar, Private Secretary to H.E. Lord Willingdon; Sir L. P. Watson, of Cawnpore; Sir A. John, of Agra; Mr. J. W. N. Cumming, City Magistrate, Quetta; and Khan Bahadur H. M. Malak, of Nagpur. Thanks are also due to Messrs. T. Gavin Jones, A. B. Shakespear, C.I.E., T. Smith, J. Parker, C. O'Malley, and D. Macbeth, of Cawnpore, for their advice and kindly co-operation.

A valuable feature of the volume will be found in the series of special articles contributed by experts, each a master of his subject. Amongst the gentlemen who thus aided me and to whom I now tender my sincere thanks are Mr. Otto Rothfeld, I.C.S., F.R.G.S., contribution on the "Native Races of the Bombay Presidency"; Mr. A. R. Burnett-Hurst, B.Sc. (Econ.), F.S.S., I.E.S., Professor of Economics, Muir Central College, Allahabad, article on the "Trade and Commerce of Western, Northern and Central India"; Mr. Osborne Marshall, article on "Cotton"; Capt. C. H. Kirkpatrick, notes on the Western India Turf Club; Col. A. E. Ward, "Sport in Kashmir and Jammu"; Major H. R. Wigram, "Lake and River Fishing in Kashmir"; Mr. Fred H. Andrews, F.S.A.M., Principal of the A. S. Technical Institute, Srinagar, "The Artistic Crafts of Kashmir" and a note on the Amar Singh Technical Institute; Mons. A. M. Peychaud, contribution on "Horticulture and Viticulture in Kashmir"; Shenker Joo, M.A., article on "Hindu and Mahomedan Customs and Festivals"; and Mr. W. R. Macpherson, Notes on Forestry in Kashmir.

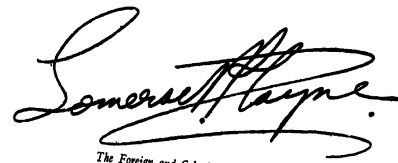
Thanks, too, must be given to Sir Lawless Hepper, of the Great Indian Peninsula Railway Company, and to Messrs. F. J. Clark and J. Scott of the same administration; to Mr. R. Woolcombe, Agent, and to Mr. A. C. Owen, Secretary, of the Bombay-Baroda and Central India Railway Company; to Sir Robert Gales, Agent of the North-Western Railway Company; and to Mr. Claude Ismay, of the Bengal-Nagpur Railway Company.

Photography plays a great part in the scheme of these works, and the pages could not possibly be adequately illustrated without the generous collaboration of many helpers. In this instance I was very fortunate in securing most efficient aid at all points, and I take this opportunity of acknowledging the services of Messrs. J. F. Peters and W. Vanderlowen, of the general staff. My thanks are also due to the Great Indian Peninsula and the Bombay-Baroda and Central India Railway Companies for excellent photographs; Messrs. Clifton & Co., of Bombay, for photographs of the Dilwara temples and other views; Dewan Alim Chand, of Srinagar, for Kashmir photographs; and to Messrs. T. Bremner, of Quetta; I. Sequeira and R. Jalbhoy, of

CONCLUDING NOTE

Finally, I would again offer to Messrs. Unwin Bros., Ltd., of Ludgate Hill, E.C., and Woking, my best thanks for the care and attention they have devoted to the work in all its stages, and for their indefatigable efforts to overcome the very serious difficulties of a situation of unexampled stress and anxiety in the printing and allied trades owing to the influences of the Great War.

Karachi; M. L. Shugan Chand, of Delhi; S. Day & Sons, of Lahore; and P. Vishinath & Sons, of Srinagar, for a number of photographs which illustrate the volume.



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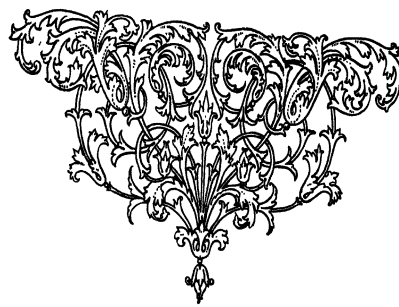

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