



in that neighbourhood, which, from the beginning, he warmly encouraged and supported, and which he really initiated. But, as I have already told that story in my book, *Our Coffee Room*, and as this is the memoir of my father's life, I only allude to the work I have been able to do to show that it had his most eager and interested support.

A rumour spread throughout the neighbourhood one day that a very large number of troops and militia were to be mobilised on one of our commons. A sense of our responsibility moved us to consider what was to be done. "We cannot do anything for so many," was my father's first remark. The next question, however, was: "What are we to do?" Finally, we decided to put up a large wooden room that might be occupied by the troops and militia during their leisure hours. It had to be erected without delay, as the regiments were expected within a couple of days. A carpenter whom we knew in the neighbourhood promised that it should be up and ready for use when the men arrived. We had just met on the common to arrange for the site, when an officer rode up to make his inspection of the ground. Not knowing who he was, we stopped him. He proved to be General Kirby. We told him our plan, namely, the erection of a recreation room for the troops. He said: "You could not have applied to a better person, for I am the officer in command, and I assure you that such a provision for the men exactly meets my views. I will do all I can to help you. Where would you like to place it?"

"As near the tents, as possible and near to the pump, too," was our reply.

He smiled, dismounted, and walked with us through the furze bushes to a clearing that almost adjoined the central road on the common. "I think you could not have a better place than this," he said, and at once gave permission for the erection. Within half-an-hour the workmen were on the spot and the work had begun. We had scarcely put the finishing touch to our hall of delights



when the bugle sounded, and a great crowd of men filled it from end to end. Every day my father was there helping me. So great were the numbers who used to come that an application was made to the War Office, which the kind General endorsed on our behalf, with the result that first three tents, and then five, were lent to us to increase the space for the men's requirements, recreation, and shelter.

The men listened eagerly when night by night we read to them; they were thankful for these opportunities, and many of them expressed themselves in the very warmest terms of gratitude for all we had done.

The principle of meeting our fellow-creatures at the point of their threefold need is one that cannot fail of success. My father and I used often to discuss this matter, and we agreed that if we really want to reach the masses, and to satisfy them and help them for time and for eternity, we must follow closely in our Saviour's steps who Himself laid down for us the highest maxims, and left us the plainest, and at the same time the brightest and the most practical, Example. He met the needs of the human race in considering and supplying :—

- | | | |
|------|-----------------|----------|
| 1st. | Their spiritual | } wants. |
| 2nd. | Their mental | |
| 3rd. | Their bodily | |

Sometimes, indeed very generally, He reversed this order, meeting first the bodily wants of the people, and proceeding upward in His dealing with them.

At last a day came when both soldiers and militia were to be moved in a body to Aldershot. We thought our work finished, and were about to take our leave of them, when telegrams came, offering us tents in the camps there, and requesting that we would accompany the men to Aldershot, and continue to carry on the friendly work that had been commenced at Dorking. Of course my father rose to this demand. He said that there should be no difficulty in the way of our carrying out this fresh undertaking. An officer kindly lent us his hut at Aldershot, and our tents



for the men were large and commodious. They came to us in such numbers that, to the very end, our only difficulty was the one of accommodation.

Our last meeting, on the Sunday night before they dispersed, was a memorable one, and numbers of men stood up to express their thankfulness, and to say what a blessing their visit to England had been to them. My father spoke to them as one of themselves, telling them that there was no profession like that of the army, alluding to his early experiences in the Burmese war, and exhorting them to become good soldiers of Jesus Christ.

The rapid spread of ritualism and its insidious approaches occasioned my father the deepest anxiety and most constant thought. With that certainty of victory, which buoyed him up through every phase of difficulty, he wrote as follows :—

“I am not one of those who fear for the fall of the Church of England ; I feel fully assured that He who planted the truth so firmly in every parish by the thirty-nine Articles and the Liturgy will not suffer the gates of hell to prevail against it. I am satisfied that this is the grand bulwark of the truth in the world, and that the ordinances of the Church are in God's hands exactly what the temple-worship was at Jerusalem, only in a different form suited to the present new dispensation. And, therefore, it is that all the Pharisees, Sadducees, and Herodians of the present day, who thrust themselves into the ministry, are still compelled to use in the ordinances the language of pure scriptural, gospel truth.

“But if we are to contend earnestly for the faith once delivered to the saints, the times most urgently require us to watch and do our utmost to save whatever parish we are connected with from returning to ‘the weak and beggarly elements whereunto so many are desiring again to be in bondage.’

“The beginning always is by substituting music for worship, introducing some mummerly such as intoning, pretty dresses, or ornament. Here, therefore, never was a time when it was more imperative to keep to the utmost simplicity in our worship, and we cannot possibly be too much on our guard against every movement in the direction of ritualism, which is Popery in a



slight disguise. The fact is, multitudes do not consider, and are not sensible that the spirit that dwelleth in us lusteth not only to envy, but in the same way and degree to idolatry, and therefore it is that so many godly men are carried away by the torrent of evil that is now pervading the Church of England.

"They do not keep in mind that great warning: 'Searching diligently lest any bitter root springing up trouble you, and thereby many be defiled'; and therefore they enter upon a course which they do not perceive contains the rudiments of this fatal heresy of ritualism.

"If they did, how could they possibly endorse, for instance, such an abomination as whining before God, or what is called intoning, and other such things with which a beginning is usually made in the downward course, of which there is not a trait in the Articles and Liturgy, and which are entirely contrary to the spirit of them, which is the spirit of the Bible.

"'God made man upright, but he has sought out many *inventions*,' and we cannot, therefore, possibly be sufficiently on our watch against *inventions*."

His own views on the advance of Romanism were distinctly free from the depression that at this time was colouring so much of the writing that emanated from Protestant pens. In a letter to one of the Church journals he said :—

"In a recent periodical I see a statement showing the progress of Popery, which seems to me to call earnestly for some consideration.

"The facts given are stated to be startling, but nothing misleads like facts if they are not thoroughly considered. Bare facts may appear to show what is exactly contrary to the truth.

"In this case it is stated that in 1780 there were 70,000 Roman Catholics in England, in 1845 328,000, in 1871 2,200,000, and in 1885, according to Romanists, 2,500,000.

"If this is truly stated, it leaves the impression that Popery has increased thirty-five-fold in one hundred years in England. But Popery and Papists are two essentially different things.



"First, these figures tell us nothing unless we are informed what number of Irish and Continental Papists are now resident in England. The fact is that the English Roman Catholics form a very small proportion of this two and a half millions—perhaps a tenth, but I don't know exactly. While England is, by God's mercy, such a harbour of refuge as it is, of course multitudes will come from other countries to partake of its blessings. But the increase of Papists does not show the increase of Popery.

"Secondly, the population of England is increasing amazingly. I forget what the increase has been in one hundred years, perhaps two and a half fold; so that, if all these two and a half millions were English, it would be two and a half millions out of fifteen millions. Probably not a thirtieth part of the increase is in English Roman Catholics.

"Again, the Papists state that there are two thousand converts from Protestantism every year. First, of course, this is an exaggeration, for no trust can be placed in Roman Catholic statements of this sort. Secondly, the increase of population is about three hundred thousand a year, so that two thousand would be the one hundred and fiftieth part of it. At this rate how long would it take for Popery to predominate in England? Thirdly, how many Roman Catholics become Protestants every year?

"We need not stop here to think that these two thousand converts, if there were so many, surely represent men turned from one form of ignorance to another; whereas the great majority of Roman Catholics who become Protestants are men who have turned from darkness to light from the power of Satan unto God. . . .

"The Papacy is, indeed, making desperate efforts to recover its lost ground, but they are utterly vain. We cannot be too watchful against those efforts, and they call for incessant fighting; but there is a wide difference between fighting a losing battle and a winning one! Men don't carry on the war with less spirit in the latter case than in the former."



CHAPTER XX

The Eventide of Light and Peace

THE days at Woodcot were spent, as has been already stated, in the study of various subjects and correspondence upon them with a number of friends. In the evening, after his frugal dinner, he would sit in the drawing-room with us, his eyes fixed on the pages of a Bible, in very small print, which he delighted in reading. Owing to his deafness, the conversation around him was no interruption to his thoughts; he would sit perfectly absorbed in the subject before him, sometimes a smile lighting up his face, sometimes with an expression of intense thought as he searched deeply into the Word.

One of us said to him one evening: "You seem very fond of your Bible; I do not think you ever get tired of it." His reply, raising his hand with one of his impressive gestures, was: "I feel like a little child playing on the margin of a lake; all my life I have been studying this book, and I seem hardly to have touched it yet. There are such depths and heights beyond all that I have ever seen or known."

Then would come an interval, after nine o'clock, when he would play his favourite game of Patience. He not only played it regularly, but kept a note-book, in which all his winnings and losings were jotted down, and he would say with mock sadness: "I have lost two games to-night." It seemed to be a relief to his busy, active brain to concentrate it on the numerical problems which this simple recreation afforded him.

It was during one of these peaceful years at Woodcot



THE EVENTIDE OF LIGHT AND PEACE 561

that my father heard the tidings of his brother Richard's death. The Provost was a man whose activity and strength were so great that, at the age of eighty-seven, he was doing the same work that he had done thirty years before, attending five services on Sunday and carrying out all the duties of his Provostship.

His life was brought to a close very suddenly. Whilst sitting at dinner one evening, he raised his hands in adoration, and in a low voice began to utter sentences of praise and gratitude to God for all His goodness to him during a long life. He then bowed his head, and, as he did so, seemed to fall forward. One of the members of his family went to him, and asked if he felt ill. He made no reply; his spirit had in that moment passed away. My father felt intensely the loss of his brother, and, as was always the case with him whenever any bereavement or grief crossed his path, he could not utter one word on the subject.

Not very long after this loss, his brother, Sir Sydney Cotton, Governor of the Chelsea Hospital, was taken ill and died, his last hours being as remarkable as the rest of his life. He always used to come into that immense drawing-room about five o'clock to tea, after which we all gathered round him for music, conversation, or merry games. But there came a day when at the usual hour Sir Sydney entered the room, but instead of taking his seat by the tea-table, he said: "I am going upstairs to rest; I am tired." He went to bed, and in a short time it was found that his heart was beginning to fail. Many times in that last illness he spoke of the "glory" into which he was about to enter. He was a good man, respected and honoured by all who knew him, but he was not one who had ever been heard to speak much on religious subjects. I remember, however, his saying to me the last time that I saw him, a fortnight before his death: "I want you to come and pay me a long visit here, and then you can read to my sick men in the infirmary. You shall be my chaplain, and I will give you a pass, that you may read the



Bible to them." During the short time during which his illness lasted—I think only about thirty-six hours—his conversation was most interesting. He appeared to have thought he was entering the gates of glory with a victorious army, and expressed himself somewhat in these words :—
"I hear it ; yes, I hear it ! Music ! such music as I never heard before,—and songs ! Yes ! they are songs of victory and triumph ! I am going, going now ; I am ready. The Captain waits to meet me—the great Captain." Then, again, he would exclaim,—
"Oh, such flowers ! I have never seen such flowers !" With a clear, distinct voice he said,—
"I know whom I have believed ! I am persuaded that He is able to keep that which I have committed to Him. . . . I have finished my course ; I have fought a good fight !" It was an unspeakable loss to us all when Sir Sydney passed away. No one could ever fill his place amongst the large circle of friends and relatives, who loved him so much and enjoyed his genial kindness and hospitality.

My brother Alfred, who had been appointed to serve on the Boundary Commission between Afghanistan and Central Asia, under Sir West Ridgeway, now Governor of Ceylon, wrote at this time to his father :—

"My party of sixty-seven men is to form Ridgeway's escort. The calvary escort he had from Zulficar to Marchak does not seem to have been a success.

"I don't think my men will give much trouble. They are great, strong fellows—very cheerful, and it is a point of honour never to admit that they feel tired, or to make an excuse to get off anything. On the other hand, they require to be kept under strict discipline. Of course, my very small command does not occupy me much, and, in addition to my military duties, I have been a member of the political staff since November. Among the people reduced was the commissariat officer, and that part of the work falls to me at present. Ridgeway, however, says he will give some one else a turn of it, after a bit. My first job was to collect the winter supplies for the mission, with



very short notice, and I had to get over a good many difficulties. This place belongs to the Wali of Mamiana, who is only a tributary of the Amir. The people are Nabaks and hate the Afghans, and the present chief's government is weak. Thus, between the local authorities fearing that the Afghans would think too much was being done for us, and their inability to force their subjects to do enough, it was hard work to obey a sudden call. However, the work was done all right, and Ridgeway expressed his satisfaction."

Again, Alfred writes from Chilik :—

"Our camp will be five thousand feet high, and we are going there to escape the heat, while we are waiting to hear what Government is going to do with us. While on the move, there is not much time for anything except unavoidable work. We march at 1 a.m., to get as much of our stage as possible done before the sun gets up, so one wants a good sleep in the day, while the march takes about a third of the day, when one does twenty-one miles, as we did this morning, so, as the result, mother's correspondence suffers.

"The present plan, if we can get off, is for Ridgeway, with the cavalry and bulk of the mission, to go by Kabul to Peshawur, while I escort Durand through Chitral, Gilgit, and Kashmir. If we do not do that pretty soon, the high passes will be snowed up, and a new programme will be necessary. It is dreary work waiting about like this, and we had a bad month of it at Karkin.

"It was very hot, and when one stays long in a camp the flies increase in a terrible way. They became so bad that I could do nothing all day except knock them off, until I put my table and chair into a mosquito curtain, which was given me by our geologist, who had a second set. We managed to cool ourselves by making a hedge of green camel-thorn, on the north side of the tent, and engaging a Turk to keep throwing water on it. If the wind blew, and if the Turk did his duty, this arrangement made me quite cold. I have known it to bring the tem-



perature down 30° , but on still days we have no remedy. At Kelig, where we halted yesterday, is the position of the principal ferry, where the main road from Afghanistan to Bokhara crosses the river. The boats are large ones, capable of carrying camels, donkeys, merchandise, and people. The means of propelling is probably unique. Two ponies pull the boat by swimming! They have a single broad surcingle, and to this a rope is fastened, and the other end tied to the boat. A man in the stern does what steering he can by rowing with a long pole, and during the whole passage two assistant mariners in the bows belabour the wretched ponies unmercifully. The current is strong, and takes the boat a long way down in the crossing.

"Talbot, one of the surveyors, is next door, and I have just been to look at his thermometer, which I find stands at 107° now, at 3 p.m. I need not say that I rejected his base suggestion that I should 'put on 10° ' for your benefit!

"When describing the boring of an Alpine tunnel the other day, they say 'they reached the limit of human endurance at 96° .' But we are kept going by a wind, though a hot one. In a tunnel there would be no breeze.

"I could not write without the assistance of a small vessel of wet shot, to damp my pen in, every word or two. In the night we crossed the belt of sandy desert that borders the river. At least ten miles of loose sand out of a twenty-one-mile march is no joke, and carrying a rifle and accoutrements, but every one of my men came in smiling! They are a most cheerful lot, but they are very anxious to get away from here now. It is quite unusual to keep native troops so long as this away from their homes."

It may well be imagined that my brother's letters were a constant interest and pleasure to us all. His father looked for them eagerly, and welcomed with a special joy his return on leave at the close of his wanderings. When he returned to England he married May, the eldest daughter of Admiral Sir Leopold Heath, and they returned to India together. It was only a few years after that my brother,



on his way home from India, became very ill, and, all remedies failing to bring alleviation to his sufferings, he died on the voyage, leaving his widow to arrive alone, while his parents, who were expecting him to spend Christmas with them, were overcome with grief at the loss of their dearly-loved son. Sir West Ridgeway wrote: "It is with great sorrow that I have read in *The Times* of the sad loss which has fallen on you. I had learned to respect and admire your son's character and worth, and therefore you will pardon my intruding on you at this moment. The Government has lost a most promising officer, who could be always relied upon to do loyally, thoroughly, and well, any work confided to him."

My father at first seemed almost stunned with this succession of bereavements, but he rallied to continue his work of correspondence on the many great topics of universal interest that always absorbed him.

The life of this gallant soldier, ever brave in fighting for the cause of right, whether on the battle-field of war or on the often more severe battle-field of the world, was now drawing to a close, and it is truly wonderful that to the end, and during all the latter years of his greatly prolonged life, he was able to keep pace with the times, interesting himself in all the questions of the day, and ever maintaining touch with the joy and sorrow that fell to the lot of both friends and relatives.

In some of my mother's letters there are interesting passages, which give a little home picture of his thoughts and feelings, and work, too, during these latter years.

"Your father is well and the wheat is gathered in; a finer crop of straw than of grain, he says. However, the tall stalks and good-sized ears look very fine. He has still his maize and sugar beets to watch. A farmer is coming from Rugby to-day to visit him."

After a short absence from home:—

"Your father went straight from the carriage to his dear



wheat and Indian corn and sugar beet, which were all much the same as when he left them. . . .

"Your father and I were much interested in your engineering letter, and he hopes to answer it very soon, to-day if he has time, but this is the long-thought-of day of harvest. The precious wheat is to come down to-day, and every separate plant and the produce of each grain sown has to be calculated, registered, and ticketed—such a business for the dear father, who sits watching the process."

It is interesting to note that my father's last communications to the Press were in the form of letters to *The Times* concerning famines in India. The final words which, for public purposes, came from his pen, were in condemnation of "giving India iron instead of water." "This," he declared, "was the sole cause of all this awful loss of millions of lives and hundreds of millions of money in the value of crops and cattle."

Then, an appeal to *The Times*: "I am sure this terrible question is worthy of the paper that is really at the head of the earthly powers."

Within a few months of his death my father's mind was as much concerned with the good of the Indian people as at any former period, while his grasp of the various schemes he advocated was not less firm. This will be seen by a perusal of a short series of letters which were all addressed to my husband. The letters range from Feb. 26, 1897, to April 20, 1898, and are as follows:—

WOODCOT, DORKING, *Feb. 26, 1897.*

MY DEAR ANTHONY,—

. . . About India and its famine, I cannot tell you my feelings, almost the whole loss of life being due solely to the Government's obstinate rejection of irrigation. There is no want of water or land in the worst of years; the famine is caused by the water being allowed to run to waste in the sea.



About 3 per cent. of the rich monsoon river water is led out upon the land, and 97 per cent. still is lost. The infatuation about this in official circles is wonderful. The few districts in which they have cut canals of irrigation and navigation are at this moment selling a large surplus of rice at famine prices, instead of dying by tens of thousands in each, and have done so three and four times in the last thirty or forty years, and nothing will induce the Calcutta Government or the India Office to hear or utter a word about the remedy that is in their hands.

You will observe that these two words, irrigation and navigation, do not appear in any official paper lately published on the famine.

They have spent £250,000,000 in railways to carry grain, and they are now to spend £45,000,000 more on further railways, while the whole question is about grain to carry, not one bushel of which will railways produce.

— has made you a copy of my letter to *The Times* about the Government history of the Godavari works, which are about the most successful engineering works in the world, but no mention of them must be made in anything said or written on the famine!

If £50,000,000 had been spent in distributing river water throughout India, the whole country would be now sprinkled over with immense tracts of rice, producing food for 30,000,000 of people for a whole year, and including some 10,000 miles of perfect steam-boat canal, carrying at one-tenth of the cost of railways.

Mr. Bright, Mr. Lowe, and Lord Shaftesbury all separately sent for me two or three times to discuss this subject, but all three ended by concluding that they could not take up the matter without giving up home questions, which involved all their time. It's an extraordinary thing that no member of parliament has seen his way to fight this battle as yet. Mr. Dixon, M.P. for Birmingham, came here a few days ago and took an interest in the subject, but whether he will be able to enter upon it in the House, I don't know.



I am in hopes that amongst your acquaintances you may find some one who could apprehend the immense importance of the subject, with these millions dying before our eyes, and compel the Government to look it in the face. I must tell you that it is now, I believe, a personal question with the great majority of the Civil Service.

A lady said to my wife, "I should think so, indeed, when the whole of our property is invested in railways."

The Government works now in operation provide water for 11,000,000 acres of rice and wheat, and, in the Punjab, through the determined stand made by the local officials, some considerable works are being carried out at present.

What is wanted is that irrigation and navigation should be made one of the very first matters at the India Office. But nobody who has not, like me, fought this battle for forty years, can conceive the difficulty of the task.

Even in the Godavari district itself, where there are 700,000 irrigated acres and 500 miles of steam-boat canal, there are still about 500,000 acres unirrigated, including, in their range, 200 or 300 miles of navigation. Lord Wenlock, late Governor of Madras, has been lecturing on his province, but not a word does he say about the incalculable effect the five extensively watered districts of his presidency have upon the present famine.

This Godavari work was begun entirely by the individual effort of Lord Tweeddale, when Governor of Madras, in spite of the whole body of officials at Calcutta and Madras.

. . . What a grievous thing it is that we have not one great man connected with India at this terrible time! But "the Lord reigneth," and He can both send a gracious rain and say to the pestilence—"Be still," and of one thing I am sure, He will deliver us out of all this confusion.

With respect to railways, I may mention that I consider that 600 or 800 miles of main line to connect the capitals with the ports, and with each other, were an absolute necessity; but to spend hundreds of millions on small branch lines, while the irrigation and navigation were



THE EVENTIDE OF LIGHT AND PEACE 569

neglected, was a great wrong, as is shown by actual results at this time.

Ever yours affectionately,
ARTHUR.

DORKING, *Mar.* 29, 1898.

MY DEAR ANTHONY,—

I have to thank you much for your letter of the 8th, and have not yet answered it, not being sure it would find you.

Thank you also so much for getting the letter to *The Times* reprinted, and for the copies you sent me. Mr. Price, M.P. for East Norfolk, came to talk to me about irrigation.

He is giving time to the matter, and has been to the India Office about it. I hope he may be able to take up the question in the House, but it would require much time and trouble to force the matter upon public attention.

The religious paper in which my letter was, was *The Friend of China*. It was the same letter as that to *The Times*.

With respect to Sir W. Muir's paper, after his speaking of tracts, where irrigation cannot be applied,—Is the question about such tracts, or about such as can be watered? What should we think of a paper on railways which began by saying that rails could not be laid across the Channel? There are many millions of acres that can be watered from unfailing rivers. So, Lord Harris says the irrigation works near Bombay only pay one per cent. Do famines pay one per cent. profit?

The pamphlet I send you now contains much information both on irrigation and navigation. I should be so glad if you could find time to run your eye over it. It will give you some idea of the strange fear of the railway men; but the subject should be really investigated.

I am trying to write a short memo. of what I think is now wanted in this matter, and hope to send you a copy.

The most terrible news I have yet heard is that China



has completely surrendered to Russia. She has agreed to its making three lines of railway in China, with any number of soldiers resident on them that she may deem necessary to defend them. This will bring Russia into direct contact with us, in a way in which we must choose between defending our missionaries or leaving them to the same treatment as Englishmen are receiving in Madagascar, for the Greek Church will no more permit Protestant missions than Papists do.

I hope you will be able to give some time to the Indian water question, to see Mr. Price and Mr. Dixon now; the future of India immensely depends upon it.

Nothing else can deliver it from its famines and satisfy the people that we are equal to the task God has set us, and above all deliver us from the insane idea that nothing can provide for the expenses of Government but that which is the cause of all our failures, the cursed Opium Trade, the one grand disgrace of our present national position, and the real source of all these judgments of God. "Yet will I not leave you wholly unpunished," is what He says in the midst of all the endless blessings which He promises us.

I find no end of papers of mine going fully into every point of the subject of water for India.

With great affection, yours,

ARTHUR.

DORKING, *April 9, 1898.*

MY DEAR ANTHONY,—

In compliance with B.'s telegram, I have sent some papers on irrigation. I find no end of papers that I have written, containing in every form all I have to say on these subjects upon which I am fully persuaded that the temporal well-being of India entirely depends, that water is as completely the great treasure of India as it is of Egypt, and that what is now wanted in the former is exactly the sort of a man who was sent to Egypt, Lord Dufferin, who had the statesmanship to say, Before we proceed to other matters we must lay our foundation by



the water, as that on which all depends, as being the only thing which can give us standing ground by setting the finances to rights. Nay, it is still more than that in India, because it is that alone on which the lives of its hundreds of millions depend.

They have spent hundreds of millions on railways, and are there not now tens of thousands of lives being lost notwithstanding ?

There are millions of cubic yards of water, all loaded with vegetable food, flowing into the sea, and millions of square miles of land, scattered over all India, in which it ought to have been distributed, and might have been at practicable cost. Nothing but the removal of this opposition from the Indian Council and the Civil Service can save India, either as to life or finance. I am trying to write for Mr. Price a short memo. of what I am sure ought to be done now, without a moment's delay, in the way of navigation and irrigation ; but I cannot write such a paper effectively immediately.

I hope, however, to send you a copy of it soon.

Think of its having actually cost only Rs. 18 an acre to water 700,000 acres in Godavari, including 500 miles of the finest internal navigation in the world, while the increase in value of crop due to it is 40 rupees per acre, and there are about 500,000 acres more in that small district, capable of irrigation by means of works which would, at the same time, provide about 350 miles of canal and 150 of river navigation.

I think the irrigation in the upper non-delta districts would cost, perhaps, double what it has done in the delta ; but if it cost five times as much, it would be nothing in comparison to its benefits, even in money only, while for life it is essential.

It is true that three of the great Government works are not now paying to the Treasury interest for the cost, but this is solely because they were not in the hands of those who were determined that they should pay. Nothing ever succeeds in the hands of men who have previously made up their minds that they shan't succeed. In every work mistakes are made and difficulties are met with, which can



only be overcome by enthusiasts who are determined that they shall succeed.

In Godavari we made plenty of mistakes and have had abundance to learn, and our success is entirely due to the determination and indomitable patience of the long succession of engineers that have had charge of the works.

All the non-paying works are really paying enormously in fact, though so small a proportion reaches the Treasury directly. The Government are not mere investors but rulers, and the question is not, What returns reach the Treasury? but, What are the profits to the people, without speaking of life? It is not even a question of what reaches the Treasury in water-rates only, but what in revenue generally.

The water-rates in Godavari are 5 rupees per acre, 35 lacs a year, but the increase of revenue is 80 lacs, all due to the works. I am fully persuaded that all the non-paying works would abundantly pay interest to the Treasury, if they were fully carried out.

For instance, the vast head-works in the Mahanudi command some 2,000,000 acres of delta, while the water is distributed only over some 200,000 acres. Of course nothing can ever pay if carried on in this way. And not one of the great works, even of those which are acknowledged successes, are yet provided with a most important aid in large tanks in the upper country, which could provide a store of water for the dry season; this could be done at a very trifling comparative cost. Immense reservoir sites have been reported on to supply these great works, but none have yet been executed. India has abundance of openings in this way, if the India Office would but look into the matter. But the whole subject is ignored, and everybody who dares to mention the subject must expect to meet with the treatment I have experienced; and the Government allow things to continue in this state! Pray bear with me.

Ever yours affectionately,
ARTHUR.

DORKING, *April 20, 1898.*

MY DEAR ANTHONY,—

I am sending you copies of a memo. I have written for Mr. Price, as to what I consider is wanted to *prevent* famines in India.

There is a long article in *The Times* to-day about the Agricultural Commission in India, in which everything is spoken of, except the one on which all depends, Water. Nothing can be more certain and obvious than that the whole of the famines depend upon one thing, the want of water; and the ablest men were sent out, at any expense, to consider eighteen years ago on the subject, and the one point on which they, and those who appoint them, are all agreed is, that they shall not mention the word *water*. Who can measure the perverseness of this? A moment's investigation shows certainly that there is no want of water in India in the worst year, and there is no want of land over which it can be taken at a practicable cost, and we have now eight or ten immense works in actual operation, not only supplying millions with food in the midst of this present famine, but even yielding enormous profits on the capital, taking only the direct water-rates and leaving out the principal returns to Government in the general increase of revenue, the result solely of those works. And this, without taking note of by far the largest part of the result in the profits gained by the people.

The cost in interest and management per acre in Godavari is one rupee, and the increase of value of produce about forty rupees.

And all this leaves out the incalculable benefits of cheap carriage by water, the one thing that India wants after securing peace and food.

Among the printed papers sent you is the account of my contest at Manchester with Lord Salisbury, which I had quite forgotten, but which really contains all the great points of the question, all the unaccountable misstatements made by my opponents, and the simple facts stated by me. I shall be glad, indeed, if you can see your way to give some time and attention to this subject, which is indeed a



great one, in view of the millions of lives dependent upon it and the hundreds of millions of money that we are losing by neglecting irrigation and navigation, while we are incurring God's judgment in raising a few millions by the Opium Traffic, the greatest disgrace ever brought upon itself by any Government, and bringing reproach upon the name of Christianity throughout China.

Ever yours,
ARTHUR.

Even after he had attained the age of ninety-six he suffered from no illness whatever. "His eye was not dim nor was his natural force abated."

One Saturday in June, 1899, he was very much delighted at receiving a visit from his brother Fred and one or two other friends, and conversed with them freely on every topic brought forward. So well he seemed that we were greatly surprised when, on the next Monday, he said he felt very weak and could not get up. It was evident that his strength had suddenly left him, and though, during the next three weeks, he rallied more than once and was even able to come downstairs, we all saw that a great change had come over him.

My mother writes of those days :—

"On Sunday, July 9, he lay on his sofa downstairs, very cheerful and bright, reading his Bible a good deal, but not inclining much to any other book. The exertion of sitting up through the whole service in church had become too great for him, and latterly he had gone only for the Communion service.

"That Sunday we were at home together, and, in the evening, he said he would try to walk in the garden. With the help of a stick and my shoulder, he reached a seat under the trees, and sat long there enjoying the lovely summer air, the beauty of the scene, and the sweet quiet.

"His heart was full of praise for God's great goodness, especially dwelling at that time on the comfort we had had in this house and garden. 'Exactly suited to us,' he said,



and then he spoke of the beauty of the flowers, and the various interests so graciously given, as well as the kindness of dear friends. He did not appear at all conscious that his end was so near.

"Walking up and down stairs had become too great a fatigue, and he was carried for a few days longer from his bed to the sitting-room; but during that week his strength gave way so much that he could no longer leave his room. He was still pleased to see visitors for a few moments.

"Early one morning," my mother wrote, "he looked up at me with a strangely earnest expression on his face, as he used these words: 'I have had such a wonderful night,—a wonderful night,—a revelation, a manifestation of God to my soul. He showed me, in a way that I could never describe, the finished work of Christ upon the Cross, the completeness of salvation,—all is done. I could never tell you what it was; no words can paint it.'"

On the following day, he, the second time, referred to some such experience, fresh and real, and differing slightly from the previous one, but of a similar character.

The cheery smiles and loving hand-clasp with which he greeted those whom he loved were always ready up to the last hours of his life. The welcome we received was ever a warm one. But he would fall asleep again, dozing continually. Gradually the power of speech seemed to forsake him. Even in those hours of intense weakness he would rouse himself to ask about the probabilities of war in the Transvaal, the height of his wheat, the last Protestant or missionary news, and any scraps of information that we could convey to him in large writing in his note-book.

My mother again writes:—

"On the night of the 14th July he was feverish and restless, and it may have been that he became aware then how ill he was. He poured out a remarkable prayer—pleading God's promises, and committing himself and those he loved to the gracious Promiser in a way never to be forgotten; the remembrance is full of comfort to



those who remain. After that his strength rapidly declined and his speech became unintelligible, but, up to the very last, there were loving, recognising looks, and the end was 'perfect peace.'"

On the day of the funeral the warmest sympathy and love were shown by our neighbours, both rich and poor, who came in large numbers to the picturesque cemetery, near Dorking, in which he was laid to rest. The touching pathos of the hymns sung, and the words spoken, were all in keeping with the memories of the past, as well as the Union Jack that covered the coffin and the volley fired at the open grave by the Volunteers, symbolising his life-long devotion to his country and his loyalty to the army in which he had served, and of which he ever spoke with the utmost enthusiasm. A beautiful wreath of white hot-house flowers was sent by the Corps of Royal Engineers with a few much-valued sentences.

A friend, Mr. Francis W. Fox, who knew him well, and who had been engaged with him in different phases of work, a few months afterwards, wrote as follows :—

"As I had the privilege, between the years 1874 and '99, of occasionally meeting Sir Arthur Cotton, I had some opportunity of appreciating his fine Christian and lovable character, how rare an order were his mental endowments, and with what power and clear perception he grasped the details and general surroundings of any new problem or complicated question that was laid before him !

"The remarkable success of his great irrigation works in the Madras Presidency, with which his name will be for ever associated, naturally formed a prominent subject of conversation in connection with the development and extension of similar works in India. As his life was so prolonged, he was permitted, in an exceptional manner, to witness the beneficent and altogether brilliant results which flowed from his great works, and he was always most earnestly desirous that the Government of India



THE EVENTIDE OF LIGHT AND PEACE 377

should introduce the blessings and realise those splendid financial results that he had seen developed in his own works, in other parts of India.

"When the severe famine visited India during the years 1877 to '79, he felt it his duty to deliver addresses in several English towns on irrigation, showing, by statistical facts, how India could be effectually protected against famine by the judicious construction of irrigation canals.

"He addressed at this time a large and influential meeting at the Victoria Rooms, Clifton, and from Clifton he proceeded to Rochdale, where he was guest at the house of the late Right Hon. John Bright, M.P. Subsequently a meeting was held at Manchester, presided over by his distinguished host, who cordially sympathised with him in his views on irrigation, and supported them, in and out of Parliament.

"He had the deepest sympathy for all objects and lines of policy which were calculated to spread in the world the blessings of the Gospel.

"I recollect how especially interested he was in the opening up of the Dark Continent of Africa during the years '74 to '79, for it was during these years that the later discoveries of Livingstone, as well as those of Stanley and Cameron, were made known to the world.

"His friend, the late General Gordon, was also then Governor-General of the Soudan, and I remember the intense pleasure it was to him to hear occasionally from Gordon about the great possibilities of the Nile Basin, and the immense responsibilities which had been placed upon him in these vast regions.

"Sir Arthur Cotton, in connection with his own engineering labours and investigations, ever seemed to be earnestly anxious that these should be the means of ameliorating in some way the moral and material condition of his fellow-men.

"On another occasion, when Sir Arthur Cotton was staying at Grove House, Stoke Bishop, in order to carry out some experiments in connection with a steam turbine



engine he had designed, the late Admiral Sir James Hope joined him there on his way from Torquay, where, as Chairman of a Royal Commission of Inquiry into the stability of the "Invincible Class" of battleships, he had been the guest of the late Mr. Froude (brother of the historian), to investigate the result of some naval experiments that Froude had been making with models on the artificial lake at his Torquay house.

"Sir James Hope accompanied Sir Arthur Cotton on this occasion to witness, at some works near Bristol, his steam turbine working at several hundred revolutions per minute, a speed so great that the arms of the turbine itself became quite invisible.

"During one of Sir Arthur Cotton's sojourns at Grove House, a visit was paid to the late George Müller, the founder of the great orphanages on Ashley Down. Sir Arthur Cotton, when a young man, had stopped at Bagdad on an overland journey to India, where he became acquainted with the well-known missionary family of the late Anthony Groves, one of whose sisters became the first wife of George Müller. Both Sir Arthur Cotton and George Müller were pleased to form each other's acquaintance for the first time, and, by a curious coincidence, he met, a few hours after this visit, at the Bristol railway station, Francis W. Newman (the brother of Cardinal Newman), whom he had not seen since those early days at Bagdad, where F. W. Newman was then assisting Anthony Groves in missionary work.

"In concluding these few brief and imperfect reminiscences of your much esteemed father, may I be allowed to say that Sir Arthur Cotton's gentleness and sympathy, combined with an intense force of character, an invincible determination to follow what he believed to be his duty, and a hatred of evil in all its manifestations, that all these characteristics united in giving him the influence which he acquired over the hearts and minds of those who knew him best and who gladly recognised that he, like the original 'King Arthur of the Round Table,' was a true knight that all loved and revered."



Sir Richard Sankey, R.E., K.C.B., in his letter of sympathy to my mother, remarked:—

“ Though from your husband’s extraordinary health and vitality, the result of a really temperate life, we might have all expected him to survive the century ; still, at his very great age, the sorrowful event could not have been very long deferred ; but I need hardly say how much, now that it has happened, I, and all who knew your husband, sympathise with you in your affliction. His was a life which, judged by any test, was one of true greatness, such as is only given to very few to attain in this world. He has left behind him a fame and a name which must endure to all time ; whether as a scientific officer, or as a practical philanthropist,—the creator of those splendid works along the East coast of India which have already saved thousands of lives, and will continue to do so as long as the world lasts.”

These must be the final words of this Memoir. They are the noblest words which can be spoken of any man, and constitute the grandest testimony which can be desired ; for only things such as these endure:—

“ His works . . . have already saved thousands of lives, and will continue to do so as long as the world lasts.”



Index

A

- Abyssinia : Expedition, 502.
Acre : 532 ; 533.
Adam's Bridge : 15.
Aden : 453 ; 503.
Administrative Experience Recorded in Former Famines, 1874 :
434.
Administration Reports :
Bengal, 346.
Bombay, 347.
Central Provinces, 346.
Madras, 338 ; 345 ; 424 ; 425 ;
433.
North-West Provinces and Oudh,
345.
Punjab, 345.
Adyar : 386.
Aeration of Soil : wonderful results
by Sir A. Cotton, 536-547.
Afghanistan : 563 ; 564.
Africa : 297 ; 513 ; 517 ; 524 ; 529 ;
577.
— Central : 530.
— North : 551.
— North-West : 514.
— South : 508 ; 550.
— West : 516.
Agnew, R. Vans : 264 ; 395.
Agra : 320 ; 462.
Agriculture : Indian, 464 ; 573.
— Implements, 412 ; 413.
— New hope for British : 541-547.
Agricultural Statistics for British India, 1888-89 : 412.
Agriculturalists : 413.
Ahmadabad : 406.
Ahmednagar : 406.
Ajmere-Merwara : 358.
Akbar Shah Badshah, 1568 : "God
has said, 'From water all things
are made' " : 209 ; 427.
Aldershot : 556.
Alexandria : 27 ; 28 ; 29 ; 527 ; 528 ;
534.
Allahabad : 75 ; 407 ; 447 ; 450 ;
454 ; 470 ; 473.
Amalapur : canal, 89.
Ambravatty : 294.
America : 228 ; 297 ; 402 ; 490 ;
541.
Amritsar : 406.
Andaman Islands : 71.
Andrews, Mr. : Sind Railway, 483.
Anglo-Israelite Theory : 550.
Anicuts :
Cauvery, 63 ; 473.
Cheyaru, 340.
Coleroon, Lower, 341 ; 473.
Dowlaisweram, 370 ; 548.
Godavari, 102 ; 140.
"Grand Anicut," 102 ; 139 ; 473.
Marudur, 341.
Mehmattur, 340.
Palar, 340.
Pelandorai, 341.
Pennéru, 338.
Poinay, 340.
Sangam, 339.
Shatiatope, 341.
Srivaikuntam, 339.
Tirukkoyilur, 340.
Valluru, 340.
Vriddhachalam, 340.
Annesley, Lord and Lady : 496.
Aqueduct over Godavari : 143 (pic-
ture).
Atabia : 503 ; 517 ; 533 ; 534.
Arabian Railway : to Busrah, 532-3 ;
534.
—, Sea : 78.
Arabic Primer by Sir A. Cotton :
169 ; 522.
Arabs : 33 ; 34.
Aralam : 421.



- Arbuthnot, Sir Alexander : *re* Mr.
 W. N. Kindersley, 52.
 Canveri Works, 56.
 Arcot :
 Nawab of, speech by Edmund
 Burke, 61.
 North, 240 ; 241 ; 362 ; 363 ; 425 ;
 426 ; 465.
 South, 62 ; 196 ; 425 ; 452.
 Argyll, Duke of : 220.
 Promised consideration of Sir A.
 Cotton's proposals, 456.
 — shire : 514.
 Arkenkota : 339.
 Arkwright, R., 80.
 "Arthur, King, of the Round
 Table" : 579.
 Arts, Society of : 226 ; 499 ; 532.
 Ashantee : 531.
 Ashburner, Mr., paper on Berar
 Cotton, 374 ; 375.
 Ashbury, Mr. James : 264.
 Ashley Down : 578.
 Asia : 311 ; 393 ; 447.
 Asiatic Society, the Royal : paper by
 Mr. Ashburner, 374.
 Assad Shidiak : 30 ; 31.
 Assam : 366 ; 402 ; 421 ; 426.
Athenæum : Madras newspaper, 150.
 Attaly : 399.
 Australia :
 Discovery of gold, 44. Manna,
 43. Visits of Captain Cotton,
 38 ; 40 ; 41 ; 42 ; 70 ; 117.
 Water storage, project of Capt.
 Cotton, 46-49.
 Gen. refs. : 142 ; 237 ; 289 ; 311 ;
 548 ; 550.
 Avignon : 27.
 Ayrton, Rt. Hon. A. S. : Chn. Parl.
 Com., 1872, 211.
- B**
- Babel : Tower of, 534.
 Babylon : 534.
 Bacon, Roger : 408.
 Bakerganj : 406.
 Bagdad : 26 ; 29 ; 31 ; 32 ; 34 ; 35 ;
 36 ; 37 ; 503 ; 534 ; 578.
 Bahrein : 534.
 Bajra (Bulrush millet) : average
 price of, 1873 and 1897, 403 ;
 405.
 Balasur : 317.
 Balfour, Rt. Hon. A. J. : 264 ; 267 ;
 291.
 Balfour, Gen. Sir George : 223 ;
 speech supporting Sir A. Cotton,
 262-264 ; 519.
 Ball, Mr. : author of *Economic Geo-
 logy*, 272.
 Ballarat : 190.
 Balmoral : 179.
 Baluchistan : 348 ; 349 ; 350.
 Bangalore : 156 ; 166 ; 269 ; 420 ;
 422.
 Bank Canal : 89.
 Barbour, Sir David : 369 ; 410.
 Barclay, Robert : 410.
 Bari-Doab Canal : 331.
 Barley : average price of, 1873 and
 1897, 403 ; 405.
 Barnet : 172 ; 173.
 Barnstaple : 182.
 Barrage, Egypt : 137 ; 509 ; 510 ;
 512 ; 525 ; 526.
 Barur : 342 ; 343.
 Bastar : 489.
 Bay Islands : 421.
 Beckenham : 169.
 Bedford, Duke of : 547.
 Behar : 247 ; 251 ; 252 ; 332 ; 358 ;
 384 ; 385 ; 426 ; 438 ; 447.
 Belgaum : 362 ; 406.
 Bellary : 294 ; 362 ; 363 ; 393 ; 395 ;
 396 ; 397 ; 398 ; 406 ; 412 ;
 425 ; 465 ; 466.
 Benares : 280.
 — Maharajah of, 502.
 Bengal : 176 ; 222 ; 225 ; 231 ; 233 ;
 234 ; 235 ; 249 ; 250 ; 251 ; 252 ;
 278 ; 287 ; 289 ; 296 ; 298 ; 320 ;
 322 ; 324 ; 332 ; 334 ; 343 ; 344 ;
 348 ; 349 ; 350 ; 351 ; 358 ; 366 ;
 386 ; 388 ; 391 ; 392 ; 403 ; 404 ;
 407 ; 414 ; 421 ; 424 ; 426 ; 433 ;
 443 ; 460 ; 464 ; 471 ; 472 ; 688.
 Bengal :
 Bay of, 78 ; 130 ; 167.
 Berar : 75 ; 358 ; 363 ; 373 ; 378 ;
 421 ; 426.
 Betwa : 345 ; 385 ; 386.
 Bevan, Mr. and Mrs. R. C. L. : 175.
 Beyrout : 29.
 Bezwada : 127 ; 282 ; 283 ; 284 ;
 460.
 Bhagavati, river : 176 ; 451.
 Bheema : 294 ; 302.
 Bhowany : 295.
 Bhurtapore : 8.
 Bible : Reading, Sir A. Cotton's
 delight in, 19 ; 20 ; 168.
 — Society : 496 ; 551.
 Bilaspur : 404.
 Bimlipatam : 95.
 Bingen : 78.



- Birmingham : 215 ; 216 ; 221 ; 264.
Blackwood's Magazine : 11 ; 139.
 Blackwood, Sir Arthur : 495.
 Blandford, Mr. : 420.
 Boat designing, by Sir A. Cotton :
 519-521.
 Bokhara : 564.
 Bombay : 35 ; 37 ; 38 ; 78 ; 213 ;
 253 ; 254 ; 265 ; 302 ; 333 ; 347 ;
 348 ; 349 ; 350 ; 351 ; 358 ; 363 ;
 366 ; 374 ; 377 ; 378 ; 384 ; 385 ;
 386 ; 389 ; 403 ; 406 ; 412 ; 414 ;
 420 ; 421 ; 422 ; 426 ; 465 ; 488 ;
 505.
 Books : Capt. Cotton's advice on, 24.
 Bosworth-Smith, R., M.A. : *Life*
 of Lord Lawrence, 9.
 Bowden, Mr. : 153.
 Brahmputra : 75 ; 233 ; 273 ; 315 ;
 386 ; 483.
 Brereton, Mr. : 458.
 Bridgewater Treatises : 50.
 Bright, Rt. Hon. John : 215 ; 216 ;
 221 ; 232 ; 258-261 ; 415 ; 461 ;
 567 ; 577.
 Brighton : 264 ; 554.
 Brindisi : 26.
 Bristol : 578.
 B.I.S.N. Co. : 513.
 British Rule in India : 393.
 British Supremacy in India : 381.
 Brown, Gen. : 551.
 Brownlow, Mr. : 463.
 Bruges : 26.
 Brussels : 27.
 Bryansford : 495.
 Buckingham and Chandos, Duke of,
 Governor of Madras : 286 ; 411 ;
 412 ; 459.
 Buckingham Canal : 134 ; 282 ; 342.
 Buckle, Henry T. : 501.
 Bundelkhand : 385 ; 386.
 Bunyan, John : 549.
 Burdwan : 243 ; 450.
 Burke, Edmund : 61 ; 65.
 Burma : 298 ; 348 ; 349 ; 350 ; 358 ;
 366 ; 403 ; 420 ; 426. First
 War : 16 ; 17 ; 18 ; 557.
 Bushire : 37 ; 38.
 Bussorah : 35 ; 532.
- Cairo : 28 ; 78 ; 343 ; 509 ; 528.
 Calcutta : 102 ; 130 ; 233 ; 234 ;
 235 ; 238 ; 243 ; 244 ; 276 ; 277 ;
 280 ; 293 ; 296 ; 316 ; 317 ; 322 ;
 373 ; 375 ; 388 ; 406 ; 420 ; 422 ;
 447 ; 450 ; 451 ; 452 ; 454 ; 455 ;
 457 ; 460 ; 463 ; 464 ; 465 ; 486 ;
 490 ; 493 ; 528 ; 568.
 Caldwell, Colonel : 51.
 California : 458.
 Camels : 33 ; 417.
 Cameron, Lieut. : 515 ; 577.
 Campbell, Sir George : 203 ; 393 ;
 395 ; 400 ; 463 ; 500 ; *Me-*
 moirs of My Indian Career,
 265 ; *Obiter Dicta*, 388-393
 (see *Obiter Dicta*) ; opposition to
 irrigation extension : speech in
 Parliament, 261 ; 262 ; Select
 Committee, 264 ; reasons, 265 ;
 266.
 Canada : 550.
 Canals : 212 ; 277 ; 282 ; 284 ; 291 ;
 292 ; 384-386 ; 388 ; 415 ; 427 ;
 428 ; 429 ; 457 ; 458 ; 461.
 Compared with railways : 67-69 ;
 234 ; diagram, 379.
 Cost of deep, 448.
 Attaly, 399.
 Bari-Doab, 331.
 Chenab, 384 ; 386 ; 428 ; 430.
 Coast : East, 213 ; 282 ; 295 ; 302 ;
 502
 North, 294 ; 301.
 West, 294 ; 301.
 Cochrane, 437.
 Contour, 301.
 Erie, 237 ; 279 ; 529.
 Forth and Clyde, 450.
 Ganges (see Ganges).
 Indus, 447.
 Inundation, 429.
 Irrigation, 294.
 Italian, 398.
 Junction, 460.
 Manchester, 505.
 North-Western and Behar, 447.
 Panama, 447.
 Suez, 289, 447.
 Canara, South : 425.
 Canning, Lord : 10.
 Cape Town : 508.
 Capital : and interest, loss of, during
 famine, 1877-1878, 413 ; 429.
 Carmel, Mt. : 29 ; 532.
 Carnatic : 27 ; 61 ; 247 ; 273 ; 294 ;
 296 ; 298 ; 335 ; 395 ; 421 ; 450 ;
 461 ; 465 ; 466 ; 532.
 Cattle : loss of, during 1877-78 famine,
 412 ; 428 ; 429 ; 430.
- C
- Caird, Sir James : 325 ; 402 ; 404 ;
 405 ; 461 ; 463 ; 464 ; 465.
 Caird, Mrs. : 464.



- Cautley, Sir Proby : engineer, 178 ; 433 ; Ganges Canal Controversy with Sir A. Cotton, 469-474.
- Cauveri : Capt. Cotton appointed to charge of works, 20 ; Col. Caldwell's opinion, 1804, 51 ; nature of river, 52, 58 ; Col. Baird-Smith's, Mr. Kindersley's, Col. Sim's, opinion, 52, 53 ; state of district, 52 ; scheme of work, 57 ; expected results, 59 ; opinion of Board of Revenue, after ten years, 63 ; official figures after fourteen years of Upper and Lower Coleeroon anicuts, 63 ; opinion of Hon. John Sullivan, 64 ; of Principal Collector of Tanjore, 64.
- Gen. refs. : 93 ; 139 ; 230 ; 231 ; 294 ; 296 ; 306 ; 333 ; 334 ; 339 ; 343 ; 344 ; 385 ; 427 ; 433 ; 435 ; 461 ; 471 ; 473 ; 509 ; 542.
- Cawnpore : 280 ; 406 ; 454 ; 470.
- Ceded Districts : 94 ; 299 ; 466.
- Census Report : 413.
- Central Provinces : 75 ; 220 ; 346 ; 358 ; 366 ; 385 ; 388 ; 389 ; 403 ; 415 ; 421 ; 424 ; 426 ; 436 ; 460.
- Attempt to open up, by river and canal navigation, before 1860, 372-380.
- Stoppage of irrigation in, by Sir George Campbell, 265.
- *Report on Famine in*, 404 ; 409 ; 410.
- Ceylon : 15 ; 16 ; 438 ; 447.
- Ceylon*, by Sir E. Tennent, 198.
- Chad, lake : 515.
- Chalmers, Rev. F. : in Burmese War, 169 ; rector of Beckenham, 169.
- Chambal : 385.
- Chanda : 254 ; 294 ; 295 ; 296 ; 302.
- Changras : 55.
- Chapman, Mr. : 370.
- Chatham : 14 ; lectures, 57 ; 370 ; 485.
- Chembrambakam Tank : 340.
- Chenab : 384 ; 386 ; 428 ; 430.
- Chesney, Col., R.E. : 221 ; 259 ; 456 ; "Irrigation extension extorted by famine suffering," 419.
- Cheshire : 18 ; 486.
- Cheyaru : 340.
- Childers, Rt. Hon. H. : 264 ; 267 ; 300.
- Chumars : 490.
- Chilik : 503.
- Chilka lake : 295, 302.
- China : 262 ; 311 ; 481 ; 551 ; 570.
- Chinese : 490 ; 524.
- Chingleput : 425.
- Chinnoor : 150.
- Chittoor : 465.
- Chitral : 563.
- Cholera : 432.
- Chota-Nagpur : 426.
- Chronicle, Daily*, The : 416.
- Church Missionary Society : 496 ; 503.
- Circars, Northern : 248 ; 421.
- Civil Service, Indian : 229 ; 250.
- Clyde : 457 ; 458.
- Coal : 232 ; 233 ; 253 ; 277 ; 296 ; 316 ; 323 ; 455 ; 457 ; 460 ; 534.
- Coanud : 59.
- Coblentz : 78.
- Cocanada : 82 ; 89 ; 91 ; 134 ; 135 ; 254 ; 275 ; 282 ; 283 ; 293 ; 295 ; 302 ; 325 ; 334 ; 455 ; 460 ; 464.
- Cochrane's Canal : 437.
- "*Coffee Room, Our*" : 555.
- Coimbatore : 16 ; 27 ; 255 ; 294 ; 302 ; 362 ; 425.
- Colair Lake : 131 ; 145.
- Coleroon : 22 ; 44 ; 52 ; 57 ; 58 ; 59 ; 63 ; 93 ; 124 ; 139 ; 146 ; 211 ; 231 ; 341 ; 385 ; 433 ; 473.
- Colgong : 451.
- Combermere : Abbey, 7. Baron : 8.
- Commons, House of : 501 ; 503 ; 577.
- Select Committee, 1872, 211-214.
- Queen's Speech, 1878 : 214 ; Speech on Address, Wilbraham Egerton, 215.
- Debate on motion for Select Committee : Lord George Hamilton, 216-224 ; Henry Fawcett, 257 ; John Bright, 258-261 ; Sir George Campbell, 261, 262 ; Sir G. Balfour, 262-264.
- Select Committee, 1878 : terms of motion, 216-217 ; Sir A. Cotton's defence of his integrity, 210. Members of, 204 ; Sir G. Campbell as judge and witness, 265, 266 ; *First day's examination*, 267-291 ; *Second day*, 291-300 ; *Third day*, 300. Report of Committee, 304 ; 306-308 ; Memorandum in reply by Sir A. Cotton, 309-327 ; extracts from evidence of Sir G. Campbell, Col. Fischer, 388-399 ; general refs., 328, 354 ; 464.
- Select Committee on extension of railways, 1884 : 359 ; 360 ; 361 ; 363.
- Commons, Remonstrances of the : 408.



Comorin, Cape: 290; 294; 295;
296; 297; 301; 302; 462; 465.

Congleton, Lord: 31; 37.

Congo States: 513; 514; 515.

Congress, International: 486.

Connemara, Lord: 135; 503.

Constantinople: 36; 535.

Control, Board of: 199; 205; 378.

Coomassie: 517.

Cooper's Hill: 430; 456.

Coorg: 366.

Coringa: 82; 89; 135; 142; 145;
150; 163; 378.

Cornwallis, Lord: 191.

Coromandel coast: 79; 344.

Cotswold Hills: 170.

COTTON, GENERAL SIR ARTHUR T.:

Summary of character in Prologue,

3, 4, 5; birth, parentage, de-

cent, 7; early characteristics,

canal-making as amusement, 12;

fearlessness, 12; cadetship for

India, 13; Addiscombe Military

College, 13; appt. to Royal

Engineers, 14; Chatham, 14;

Ordnance Survey in Wales, 15;

Madras, 1821, 15; appointment

to Tank Dept., 15; survey of

Paumben Pass, 15; supervision

of Tank repairs in Southern Dis-

trict, 16; work on military

buildings, St. Thomas' Mount,

16; First Burmese War, 16-18;

dislike to card-playing, 18; be-

ginnings of religious life, 19;

appointed superintendent en-

gineer central division Tank

Department, 20; breakdown in

health, 20; Paumben Pass im-

provement, 20; promoted to

Captain, 20; appointed to charge

of Cauveri irrigation, 20; plans

for work evolved and sanctioned,

21; assistance of Lieut. Fred

Cotton, 21; repeated attacks of

jungle fever, sick-leave to Europe,

21; absent two and a half years,

21; serious tastes in life, 21;

return to India overland through

Belgium, Switzerland, France,

Egypt, Syria, Palestine, Damas-

cus, Bagdad, 26-31; stay at

Mission House, 31; letter from

Bagdad, 32-37; left for Bom-

bay, May 21, 1833, 37; serious

illness at Bushire, "grave dug,"

37; arrival in India, resumption

of work on Cauveri, 38; steady

work for six years, controlled

and utilised river by means of

COTTON, GENERAL SIR ARTHUR T.,

continued:—

anals, 51-61; Madras Harbour

Scheme, 65; report to Board of

Revenue on duties of Irrigation

Department and value of Tanks,

65; superintendence of construc-

tion of railway, Madras to Red

Hills, 38, 66; completion hin-

dered, 67; breakdown in health,

visit to Tasmania, 78; Hobart

Town, experiments—centrifugal

steam engine, serious accident,

39; engagement to Miss Lear-

month, 23; met Sir John and

Lady Franklin, great favourite,

40; arrival in Tasmania of South

Pole Expedition, 40; return to

Madras, 23; doctors ordered

extension of leave, 23; return to

Tasmania, 23; marriage, 23;

return to India, 24; health not

robust, 70; appointed to Vizaga-

patam, 70; cyclone on voyage,

71; erection of church, 72; con-

struction of groynes, 72; deep

religious convictions, 73; in-

fluence over Hindus, 74; saved

vessel from wreckers, 74; pro-

ject to make Vizagapatam a

principal port of India, 74-76;

appointed to Rajahmundry, 77;

Godavari—Before and After, 77-

92; report on control of river

and irrigation of delta, 94-98;

letter to Fred Cotton, 98; de-

tails of proposed work, estimates,

107-111; approval of Court of

Directors, 112; work begun on

Godavari, 1847, 115; hindered

for want of artizans, 115; huge

establishment, 115; fears from

freshes, 116; satisfactory pro-

gress, 117; breakdown in health,

sick leave to Australia, 117;

letter to Fred Cotton, 117-120;

visit to Mauritius, Melbourne,

40-44; further progress on Go-

davari works, 120; difficulties

overcome, 121; splendid com-

pletion, 122; report to Board of

Revenue, 123-126; congratula-

tions from Madras Government,

126; also from Court of Direc-

tors, 146; a Hindu overseer,

Veenem Veranah, 128, 129;

appointed chief engineer of

Presidency, 129; extended works,

131; development of navigable

channels, 131-134; founder of

COTTON, GENERAL SIR ARTHUR T.,
continued :—

cheapest school of engineering in the world, 137; opposition of Government, 138; recognition of success of works, 134; 135; 139; constant activity, 142; family life during progress of Godavari works, 151-163; sick leave to the hills, 164; disappearance of Ootacamund lake, 165; home at Palaveram, 165; help to missionary and philanthropic work, 158; 159; 167; health affected, furlough to England, 167; account of voyage, 168; visit to Penge, 169; to Rev. F. Chalmers, 169; to Tunbridge Wells, 170; to Weston-super-Mare, 170; to Cotswold Hills, 170; assistance given to clergy, 170; notes of missionary address, 170-172; return to London, 172; home at Barnet, 172; return to India, 172; chief engineership not kept for him, 176; Commandant of Engineers, 176; letter from Madras Government respecting Colonel Cotton, 177; visit to Major Colin Mackenzie, 175; scheme for control of Bhagavati, opposed, 176; attendance on Gen. Sir P. Grant during Mutiny, 176; guest of Governor of Madras, 177; praise from Sir C. Trevelyan, 1858, 177; report to supreme Government on Orissa Irrigation, 178; visit to Calcutta, 178; lecture on work at Rajmahal, 178; report on Ganges Canal, 178; retired, 1860, 178; banquet in London, 178; knighthood, 179; work for India in England, 181, 184-203; stay at Barnstable, 182; humour, 204-208; witness before Parliamentary Committee, 1872, 211-214; House of Commons debate, severe attack on an absent man, 214-224; reply to adverse criticism, 224-247; discriminating advocate of irrigation, 225; recent results not ignored, 226; why the Tungabudra works were only partially successful, 227; delta works in Northern and Southern Madras, 230; navigation canals throughout India, 232; Godavari navigation, 235; Orissa and Tungabudra works,

COTTON, GENERAL SIR ARTHUR T.,
continued :—

237; irrigation sources to be tapped, 239; singular statements, 241; delusion as to transit in India, 243; navigation connecting links, 244; works urgently required, 245; an appeal and a pathetic defence, 246; Select Committee of 1878: hostile attitude of committee, 265; complete answers to all questions, nine hundred questions asked, summary of views, irrigation, navigation, what railways do *not* do, objections to irrigation, range of mountains invented, Godavari works unfinished in 1878, official dread of cheap transit, £30,000 for irrigation in every district per annum, steamboat canals in every way cheaper than railways, vacillating policy, authorities not justified in stopping supplies, Kurnool canal mismanagement, neglect by authorities reaffirmed, great storage reservoir, defence of same, support by Gen. Fischer, the Godavari "as empty as that," 267-291; *Second day's examination*: no navigation canal ever completed, detailed statement of main lines of navigation all over India, twenty-five schemes for Madras, "many hundred millions of acres fit for irrigation," declines discussion of financial provision, 291-300; *Third day's examination*: rivers proposed to be utilised, sketch of works, estimate of cost, £50,000,000, Sir George Campbell's concession, expert v. non-expert, 300-303; 567; report of Committee, 304; 306-308; unfairness to Sir A. Cotton, 304; railway receipts and losses to 1878, 304; capital expenditure on railways and irrigation, 305; frivolous mode of questioning, 305; Memorandum by Sir A. Cotton on Report of Select Committee: estimated gain to India by public works, 309-327; no precious metal to be compared for value with water, 367; more precious than gold in Australia, 367; sixty times as valuable, 368; detailed statements regarding the opening of the Central Provinces by river



COTTON, GENERAL SIR ARTHUR T.,

continued:—

and canal, 372-381; enthusiasm, 415; money, moral, material value to India of Sir A. Cotton's work, 433-436; storage of salt water, 438; the Orissa visit, 1862, 439; project to supply the Carnatic Tanks, 465; Indian tributes, 466-468; "Father of the Godavari delta," 467; controversy with Sir Proby Cautley, regarding Ganges Canal, 469-474; reply to Sir James Stephen, 475-477; addresses Manchester Indian Association, 477-482; do. Edinburgh Literary Institute, 484; visit to Sheffield reservoir, 494; stay in Ireland, Bryansford, Tollymore Park, 494-496; settling at Dorking, 496; committee work, 496-7; curious coincidence concerning plans of Woodcot, 498; letters to Miss Florence Nightingale and others, 499-508; letters to Sir Bartle Frere, Sir Colin Scott-Moncrieff, 508-512; Nile navigation which would have saved Gordon, 525-529; trip to Norway and Sweden, 513; visit to Ballinakill, Scotland, 514; temperance work, 518; suggested Presidency of Sewage Commission, 519; experiments with boats, 519-521; improved tricycle, 521; various writings (see pp. 525-566); death and funeral, 574-76; tributes from Mr. F. W. Fox and Gen. Sir R. Sankey, 576-579.

Extracts from writings and letters:

Poverty of India, its cause, 186; value of water, 189; neglect of ancient irrigation works, comparison of British with irrigation policy of ancient rulers, 193; comparison of irrigated district (Tanjore) with unirrigated (Guntoor), 199; Tanjore—results of liberal treatment, 202; great putty case, 204; road-making, 206; pamphlet on public works in India, 294, 437; river v. railway, to tap Central India, 372-378; on Orissa, 439; irrigation and navigation, 441; East India Irrigation Co., 442; enormous value of river water over well water, 445; navigation topics and schemes, 447-452;

COTTON, GENERAL SIR ARTHUR T.,

continued:—

beneficial effect of reducing land-tax, 452; on various works in India, 453-460; salt tax, the poor man's income-tax, 486-489; Tungabudra works, English internal transit, communication with Soudan by the Congo, opium revenue, study of living languages, Indian finance, 485; prevention of famines, International Congress at Manchester, navigation of Kareen river, 486; N. W. African expedition, 514-517; Arabic Primer, 166, 522; Nile navigation that would have saved Gordon, 525-531; cultivation and aeration of soil, 536-547; letter to *Manchester Guardian*, 537-540; letter to *The Times*, 566.

Cotton, Arthur, steamer, 135.

Cotton family, the: chief members of, since 1535, 7; 8; 9; 10; 11.

Mrs. Calveley Cotton: mother of Sir Arthur Cotton, 12.

Charles Conyers Cotton: brother of Sir Arthur Cotton, Indian civilian, 10.

Francis Vere Cotton: brother of Sir Arthur Cotton, Admiral, 10.

Frederick Calveley Cotton: brother of Sir Arthur Cotton, retired Major-General, C.S.I., 10; article in *Blackwood's Magazine*, May, 1900, 11; Cauveri works, 21; letter on Sir Arthur's opinions regarding railways and irrigation, 67-69; letter to, from Capt. Arthur Cotton, 117-120; appointed to charge of Godavari works, 129; dams in sandy beds, 139; population in Sind, 462; 574.

Henry Calveley Cotton: father of Sir Arthur Cotton, 7.

Hugh Calveley Cotton: brother of Sir Arthur Cotton, Indian irrigation works, Kurnool aicut, 10; 493.

Richard Lynch Cotton: brother of Sir Arthur Cotton, Provost of Oriel, 10; 35; died at 87, 561.

Sydney Cotton, Sir: brother of Sir Arthur Cotton, services during Mutiny, 8; letter from Lord Lawrence, 9, 10; Governor of Chelsea Hospital, 561; his last hours, 561-2.

- Lady Cotton: wife of Sir Arthur Cotton. 117; reminiscences, 151-156; Bangalore, 156; recollections of Sir Arthur's last illness, 574-576.
- Alfred Cotton: son of Sir Arthur Cotton, "left Sandhurst with flying colours," 498; served on Boundary Commission, Afghanistan, 562-4; married Miss May Heath, 564; letters from, 562-4; died on voyage to England, 565; Sir West Ridgeway's testimony, 565.
- Combermere, Baron: 8.
- Cotton plant: profitable growth, transit of, 373-376.
- Cradock, R. H.: 404; 409.
- Cranbourne, Lord, 501. (*See* Salisbury).
- Cranbrook, Lord: Sir A. Cotton's appeal to, 224; 257.
- Crawford, Capt. R. D.: 168.
- Cromer, Lord: 369; 488; 489.
- Cronin, Mr.: 31.
- Crops: 422; 429; 430.
- Loss of, during 1877-78 famine, 409. Enormous returns from deep cultivation in England, 542-7.
- Cross, Mr. John: 264; 397.
- Crozier, Capt.: 40.
- Crusades: 408.
- Cuddapah: 286; 287; 294; 301; 342; 357; 362; 425; 460.
- Cultivation: Deep, 542-547.
- Cumbum Tank: 339; 394.
- Cure Pipe, Mauritius: 41.
- Curzon, Lord, of Kedleston: area for profitable irrigation, 209, 210; speech on Indian Budget, March, 1900, 382; incomplete figures, *re* irrigation, 382; increased expenditure on irrigation, 384.
- Customs Revenue: 313; loss of, during 1877-78 famine, 409.
- Cutch: 420; 421.
- Cuttack: 238; 275; 317; 322; 439; 454.
- Cyprus: 464.
- Dalyell, Hon. A. R.: 434.
- Damascus: 30; 32; 34; 464; 503; 532.
- Dams: 104; 139.
- Damuda: 233; 277; 388.
- Danvers, Sir Juland: 483.
- Darling, river: 47; 48; 49.
- Darwar: 293.
- Dawkins, Hon. Clinton: 384.
- Dead Sea: 29.
- Dharwar: 362.
- Deakin, Hon. A., M.L.A.: 50; 55; 58; 66; 84; 87; 88; 93; 180; 274; 288; 328; 343; 345; 351; 381; 474; 484.
- Deccan: 128; 353; 358; 385; 386; 421.
- Dehra Doon: 358.
- Delhi: 406.
- Delki: 62.
- Deltas: treatment of, 439, 440.
- Denny, T. Anthony: four letters from Sir Arthur Cotton, 566-574.
- Derby, Lord: 68; 219; 243; 328; 372.
- Derwent river: Tasmania, 39, 40.
- Devonshire: 182; 493.
- Dhaupat Rai: 128.
- Dickens, Col.: 438.
- Dictionary, Econ. Prod.*: 273.
- Dictionary of Statistics*, Mulhall: 364.
- Dixon, Mr., M.P.: 567; 570.
- Doab: 231; 331; 450.
- Dod's Parl. Comp.*: 264.
- Dolphin's Nose: 72; 73; 75; 76.
- Dondapad: 343.
- Doomagoodien: 465.
- Dorking: 496; 497; 536; 556.
- Dowlaisweram: 53; 79; 103; 120; 123; 124; 129; 136; 137; 148; 211; 370.
- Draper's Intellectual Development of Europe*: 407; 408.
- Duff, Sir M. Grant: 127; 217; 264; 267; 291.
- Dufferin, The Marquis of: 495; 525; 570.
- Dunleath, Lord: 264.
- Durand, Sir Mortimer, K.C.S.I.: 563.
- Dutt, R. C., C.I.E.: 85.
- Dykes, Mr.: 194.

D

- Dacca: 280.
- Dalhousie, Lord: 216.
- Dalrymple, Mr., M.P.: 359.

E

- East Coast Canal: 213; 282; 295.
- East India Association: 54, 482, 483, 499.



- East India Canal and Irrigation Company : 438 ; 442 ; 443 ; 460.
 East India Company : 36 ; 80 ; 150 ; 205 ; 208 ; 250.
East India Currency Enquiries : Donald Graham, C.I.E., 410.
Economic Condition in N.W.P. and Oudh : 407.
Economic Geology : Ball, 272.
 Eden, Sir Ashley : 317 ; 322 ; 323 ; 325 ; 460 ; 463 ; 465.
 Edinburgh : 137.
 Literary Institute, 484.
 Edward I. : 407.
 Edwardes, Sir Herbert : 9 ; 73 ; 74 ; 173.
 Egerton, Wilbraham : 213.
 Egypt : 28 ; 137 ; 343 ; 510 ; 511 ; 512 ; 525 ; 530 ; 535 ; 570 ; 577.
 —, Khedive of : 515.
 Ekrookh : 320 ; 449 ; 459.
 Ellore Canal : 89 ; 91 ; 142 ; 213 ; 282.
 Elphinstone, Sir James, Bart., M.P. : 16.
 E. L. K. : 82.
 England : 36 ; 78 ; 167 ; 187 ; 253 ; 292 ; 319 ; 378 ; 407 ; 447 ; 457 ; 462 ; 481 ; 486 ; 488 ; 490 ; 493 ; 499 ; 505 ; 510 ; 519 ; 524 ; 525 ; 550 ; 557 ; 559.
 —, Church of : 515.
English Hearts and English Hands : Dr. Marsh, 169.
 Engineers in India : 442.
Erebus : 40.
 Erie Canal : 237 ; 279 ; 529.
 Esdraelon : 36.
 Euphrates : 33 ; 34 ; 36 ; 532 ; 534.
 Europe : 297 ; 311 ; 393 ; 408 ; 534.
 Excise Revenue, 313.
 Loss of, in 1877-78 famine, 409.
 Expenditure : Government on, in 1877-78 famine, 409.
 Ezekiel : 550.
 Ezion-geber : 550.
- F**
- Famines :
 Record since 1853, 357-8.
 Forty famines or scarcities in nearly fifty years, 359.
 Railways not preservative, 362-3.
 Insurance fund, 364.
 "Once in a hundred years," 388.
- Famines, *continued* :—
 Remarkable frequency now, 389.
 Bengal, of 1770, 392.
 Determination to save life, 401.
 In England, 407.
 Alleged insufficiency of rath, 413-27.
 Camps, 428 ; 431 ; 432.
 Prevention of, 486.
 — *Campaign in Southern India*, 387 ; 411 ; 412.
 — Commission 1880 : 357 ; 359 ; 420 ; 424.
 Alleged irrigation failure, 286-7.
 Irrigation to have "FIRST PLACE," 329 ; 336 ; 351.
 All irrigation works justified, 330 ; 331 ; 334 ; 337.
 Irrigation in Punjab, N.W. Prov., Bengal, Behar, 332 ; Orissa, Deccan, Sind, Madras, 333.
 Better crops, higher rentals, 334.
 Mysore blameable, 335.
 Recommendations neglected, 351 ; 356.
 "Great advantage to State," 357.
 — Commission, 1898 : 5,000,000 acres irrigable, 298 ; food prices, 404.
 — Cost of, 1877-8 :
 Govt. Expend., 409.
 Loss land revenue, 409.
 „ crops, 409.
 „ excise revenue, 409.
 „ customs „ 409.
 „ salt „ 410.
 Country silver and silver ornaments sold, 410.
 Increased price of food, 411.
 Loss cattle, houses, agricultural implements, 412.
 Loss wages, 413.
 „ capital, interest, 413.
 „ profits, 413.
 Total cost, money and lives, 414.
 Water wasted, 386-7.
 — Cost of, 1900 : partial, 416-7.
Famine Histories, 357.
 Gen. refs., 60 ; 80 ; 214 ; 289 ; 357 ; 431 ; 432 ; 477 ; 478 ; 504.
 Fawcett, Henry, M.P. : 216 ; 257 ; 264 ; 267 ; 292.
 Fenwick, Capt. : 374.
 Ferozepur : 448.
 Feudatory States : 335.
 Fever : 247 ; 256 ; 257 ; 366 ; 396 ; 444 ; 476.
 Fife, Mr. : 433 ; 493.
 Finances, Indian : 485.



- Fischer, Gen. : 269 ; 281 ; 290 ; 361 ; 393-99 ; 437 ; 455.
 Fitzgerald, Vesey : 502.
 Fodder : 412 ; 428 ; 429 ; 430.
 Food : 403-405 ; 411 ; 428.
 Forbes, H. : 129 ; 130 ; 147 ; 148 ; 250 ; 251.
 —, Mr. : 502.
 Forest Dept. : 429.
 Fort St. George : 150 ; 179.
Fort St. George Gazette : 179.
 Forth Canal : 457.
Fortnightly Review : 419.
 Fouracres, Mr. : 454 ; 461.
 Fox, F. W. : 576-579.
 — Rev. H. : C.M.S., 153.
 France : 26 ; 46 ; 292 ; 511.
 Franklin, Sir John : 40.
 Frere, Sir Bartle : 449 ; 455 ; 464 ; 499 ; 501 ; 508.
Friend of China : 569.
 — — *India* : 440.
 Froude, Mr. : 578.
 Fullerton, Capt. : 15.
 Fyzabad : 406.

G

- Gainsborough, Countess of : 495.
 Gambia : 516.
 Gandak : 384 ; 385.
 Ganges : canal, plains, river : 75 ; 78 ; 79 ; 178 ; 190 ; 219 ; 223 ; 225 ; 231 ; 233 ; 235 ; 244 ; 245 ; 273 ; 280 ; 288 ; 289 ; 293 ; 296 ; 297 ; 300 ; 320 ; 421 ; 441 ; 443 ; 449 ; 450 ; 455 ; 462 ; 469-474 ; 476 ; 500 ; 501 ; 503 ; 504.
 Ganjam : 90 ; 295 ; 339 ; 343 ; 358 ; 425 ; 460.
 Garwhal : 358.
Gascoyne : S.S., 525.
 Gautami : 79 ; 135.
Gazetteer of India : 363.
 Geelong : 42.
 Geneva : 27.
 Geographical Society, Royal : 515.
 Germany : 490.
 Ghauts : Eastern, 78 ; 295 ; 421 ; 465 ; 493.
 — : Western, 290 ; 420 ; 421.
 Ghent : 27.
 Gibson, Milner : 519.
 Gilgit : 563.
 G. I. P. Railway : 253 ; 427.
 Gladstone, Rt. Hon. W. E. : 511.
 Gloucestershire : 170 ; 172.
 Goalunda : 233.
 Godavari : description river, 77-9 ; factories, 80 ; "Great Famine," 1833, 80-2 ; cyclone, 1839, 82 ; Sir H. Montgomery, 83 ; increase population, revenue, 84 ; do. revenue, 480 ; imports, exports, wealth, 85 ; improved condition of people, 86-7 ; succour to distressed regions, 88 ; testimony native Indian official, 89-92 ; works : 40 ; 44 ; 53 ; 75 ; 76 ; sugar cultivation, irrigation, 94 ; general state of irrigation, 96 ; details of proposed work, 103-111 ; economy in dam construction, 104 ; estimate of cost, probable profits, 107-9 ; approval, 112 ; damage to anicut, 120-2 ; "veritable triumph of engineering skill," 122 ; report, April, 1852, 123-6 ; congratulation, Government, Directors, 126 ; enthusiastic praise from beneficiaries, 127 ; "liquid gold," 128 ; steamers necessary, 130 ; development navigation, 131-134 ; "cheapest school of engineering in world," 137 ; Government indifference, 138 ; recognition of success, 1882, 139 ; 1883, 134 ; 1890, 135 ; extensions, 142 ; summary history project, 150 ; singularly accurate prediction, 192 ; works unfinished even in 1878, 315 ; railway to Bombay v. river to Cocanada, 379 ; Gen. Fischer on Godavari works, 398 ; success of works, 437 ; District Association, address to "the Father of the Godavari Delta," 467.
 — General refs. : 40 ; 44 ; 53 ; 75 ; 76 ; 151 ; 157 ; 160 ; 163 ; 165 ; 190 ; 203 ; 213 ; 220 ; 225 ; 230 ; 231 ; 235 ; 239 ; 242 ; 246 ; 247 ; 249 ; 250 ; 251 ; 254 ; 255 ; 257 ; 265 ; 270 ; 273 ; 275 ; 276 ; 277 ; 278 ; 280 ; 281 ; 282 ; 283 ; 284 ; 291 ; 293 ; 294 ; 295 ; 296 ; 300 ; 301 ; 306 ; 308 ; 310 ; 312 ; 315 ; 316 ; 318 ; 323 ; 325 ; 327 ; 333 ; 334 ; 338 ; 343 ; 344 ; 361 ; 368 ; 369 ; 370 ; 373 ; 374 ; 375 ; 376 ; 377 ; 385 ; 395 ; 396 ; 398 ; 415 ; 425 ; 427 ; 433 ; 435 ; 437 ; 438 ; 441 ; 443 ; 446 ; 447 ; 449 ; 450 ; 451 ; 455 ; 456 ; 459 ; 460 ; 462 ; 466 ; 467 ; 468 ; 469 ; 473 ; 476 ; 478 ; 480 ; 482 ; 484 ; 489 ; 480 ; 501 ; 507 ; 503 ; 506 ; 507 ; 519 ; 520 ; 527 ; 528 ; 529 ; 531 ; 532 ; 542 ; 567 ; 568 ; 571 ; 572.



- Godavari, History of, J. H. Morris : 144-149.
 Gold : water "liquid gold," 128 ; 149.
 — coast : 515.
 Gopalpur : 343.
 Gorai : 451.
 Gordon, "Chinese" : 525 ; 526 ; 527 ; 528 ; 577.
 Gordon, Mr. : 394 ; 395 ; 459.
 Government : orders of, 2 : 126 ; 279 ; 438.
 Graham, Donald, C.I.E., 410.
 Grain : stores, 391 ; 393 ; prices of in 1873-97, 403 ; trade in, 447.
 Grant, Gen. Sir P., 176.
 Grostête, Bishop : 408.
 Groves, A. N. : 31 ; 37 ; 578.
 „ Henry : 37.
 Groyne : 72 ; 176.
 Guernsey : 498.
 Guildford : 264.
 Gulf Stream : 182.
 Gunnaram, Aqueduct, The, over Godavari river : facing 143.
 Guntoor : 80 ; 81 ; 127 ; 199-201.
 Guyon, Madame : 157.
 Guzerat : 421 ; 428.

H

- Haig, Gen., R.E. : 119 ; 236 ; 321 ; 322 ; 365 ; 456 ; 465 ; 490 ; 493.
 often referred to in letters as H.
 Halifax, Lord : 179 ; 212 ; 501.
 Hali-shahar : 257.
 Hamilton, Lord George : speech in debate, 1878, official review of irrigation, 216-224 ; questions during '78 enquiry, *passim*, 264-303, 391 ; 305 ; 310.
 Hansard : Parl. Debates, 216.
 Hanuman, the Monkey God : 15.
 Hardcastle, Mr. : 264.
 Harris, Lord : 569.
 Hastings, Mr., Rev. : 43.
 de Haviland, Col. : 65 ; 498.
 Hay, Andrew : 458 ; 459.
 Hay, Sir H. : 410.
 Heath, Sir Leopold : 564.
 — Miss May : 564.
 Helena, St. : 45.
 Henry of Richmond : 407.
 Henry VIII. : 7.
 Himalayas : 272 ; 421 ; 429 ; 470.
Hindu, The, Madras : neglected tanks, spacious reservoirs, 335-6.
 Hissar : 209 ; 427 ; 428 ; 430 ; 431 ; 432.
 Hit : bitumen spring, 533.
 Hobart Town : 23 ; 36 ; 39 ; 70.
 Hogg, Sir J. W. : 112-115 ; 258.
 Hope, Admiral Sir J. : 578.
 Horace : 150.
Hour, The : newspaper, 202.
 Huggry : 204 ; 301 ; 397.
 Hughes, W. : 283-4.
 Hughli : 233 ; 235 ; 245.
 Humphreys, Mr. : 431-2.
 Hunter, Sir W. W. : railways alleged preservatives from famine, 359-60 ; 363.
 Hutchinson, Capt. : 123.
 Hyderabad : 94 ; 208 ; 269 ; 293 ; 294 ; 296 ; 297 ; 358 ; 374 ; 421 ; 466 ; 490 ; 505 ; 552.
 Hyndman, H. M. : 462.
- I
- Ibrahim, Pasha : 30 ; 31 ; 34.
 Income : average Indian, 369.
 Indee : 412.
 India : its influence on English thought, 73 ; creates special type of Christians, 73 ; "mine of wealth," 142 ; 462 ; poverty of, 186-191 ; special responsibility of Sec. of State to limit expenditure (Lord G. Hamilton), 221 ; "India perishing for want of British capital," 228.
 Gen. refs. : 228 ; 358 ; 366 ; 421 ; 424 ; 426 ; 434 ; 447 ; 457 ; 474 ; 481 ; 487 ; 488 ; 490 ; 491 ; 496 ; 497 ; 502 ; 504 ; 505 ; 509 ; 510 ; 525 ; 526 ; 529 ; 530 ; 534 ; 542 ; 548 ; 550 ; 564 ; 565 ; 570 ; 571 ; 576 ; 579.
India in 1880, by Sir R. Temple : 384-6 ; 433.
India Irrigated : see Deakin.
 — Office : 232 ; 241 ; 316 ; 330 ; 351 ; 363 ; 392 ; 454 ; 456 ; 493 ; 499 ; 501 ; 503 ; 504 ; 508 ; 567 ; 568.
 Indian trustworthiness, 128-9.
 Indies : West, 547 ; 550.
 Indus : canal, river, valley, railway, 78 ; 214 ; 273 ; 293 ; 297 ; 385 ; 447 ; 448 ; 455 ; 462 ; 513.
 Ingaram : 82.



Ingdulpur, 489.
Innocent III. : IV. : 408.
Intellectual Development in Europe.
408.

Inundation Canals : 429.
Ireland : visit to Lord Roden, 493 ;
495 ; 496.

Gen. refs : 490 ; 502 ; 524 ; 525 ;
551.

Irish Church Mission : 496 ; 551.

Irrigation : Egyptian inferior to Indian, 29 ; needed in Australia, 43 ; ancient works, 58 ; 61 ; 193 ; 198 ; 471 ; 473 ; gain all round from, 60 ; 196 ; 299 ; letter from F. Cotton, 67-69 ; ancient and modern systems contrasted, 194-5 ; responsibility of government, 198 ; comparison --irrigated and unirrigated districts, 199-201 ; objections to, answered, 271-3 ; "many hundred millions of acres perfectly fit for irrigation," 298 ; Sir A. Cotton's £50,000,000 scheme for Madras Presidency, 301-3 ; capital expenditure on, to 1898, 305 ; report Select Committee, 306-8 ; memorandum in reply to report, 309-327 ; Famine Commission, 1880 : strong commendation irrigation everywhere possible, 329 ; "FIRST PLACE," 329, 336, 351 ; results in Punjab, 331 ; N.W. Prov., Bengal, Behar, 332 ; Orissa, Deccan, Sind, Madras, 333 ; mileage, area, financial results works under P.W.D., 348-9 ; expenditure all sources, all objects, 1882-3 to 1897-8, 352-355 ; summary, 356 ; area protected, '78-9-96-7, 356 ; Sir J. Lyall on success of works, 357 ; railway served and irrigated districts contrasted, 360-3 ; lectures at Chatham, 370 ; Lord Curzon's speech, 382 ; increased expenditure promised, 384 ; Sir R. Temple on, 384-6 ; extracts in appendix IV., 388-399 ; expenditure on, 414 ; "irrigation works extorted by famine," 419 ; irrigation involves regulation, 423, 426, 444 ; Hissar, 427-32 ; money and material value Sir A. Cotton's work, 433-436 ; neglect, 441-3 ; results of, 479 ; "10,000 tanks could be supplied from one reservoir," 479.

Gen. refs. : 210 ; 242 ; 249 ; 289 ;

298 ; 433 ; 437 ; 438 ; 449 ; 458 ;
460 ; 464 ; 465 ; 466 ; 468 ; 475 ;
476 ; 478 ; 481.

J

Jacob, Col. : 128 ; irrigated a country without rivers, 371 ; 372.

Jacobabad : 420.

Jaffa : 29.

Jaipur : 128 ; a country without rivers, but with one hundred and fifty irrigation works, 371.

Japanese : 524.

Jellandu : 490.

Jerusalem : 29 ; 557.

Jessore : 500.

Jeypore : 493.

Jhansi-Manikpur railway : 360.

Jhelum : 386 ; 430.

Jocelyn, Nassau : 485.

John o' Groats : 416.

Johnstone, Sir Henry : 531.

Jones, Mr. : 253.

Jordan, river : 532.

Joseph : famine minister of Egypt, 390.

Jowar : average price, '73 and '97, 403 ; 405.

Jubbulpore : 406 ; 420 ; 422 ; 424.

Jumna : canal, river : 223 ; 275 ; 288 ;
291 ; 293 ; 310 ; 331 ; 449 ; 450 ;
470 ; 472.

Junction Canal : 460.

K

Kabul : 563.

Kakien : 16.

Kaladgi : 362 ; 363.

Kala-Nuddee : 293 ; 461.

Kalingarayan : 340.

Kanhan : 295 ; 302.

Karachee : 293 ; 406 ; 447.

Kareen, navigation of : 486.

Karkin : 563.

Karwar : 293 ; 295 ; 296 ; 301 ; 302.

Kashmir : 290 ; 563.

Kelig : 564.

Kene : 385 ; 386.

Keppel, Admiral : 42.

Khandeish : 421.

Khartoum : 526 ; 527 ; 528 ; 530.

Kindersley, W. N. : 52 ; 64 ; 250.



Kinnaird, Lord : 175.
 Kirby, Gen. : 555.
 Kircaldy : 263.
 Kistna : 21 ; 75 ; 112 ; 124 ; 127 ;
 134 ; 145 ; 150 ; 190 ; 230 ; 231 ;
 239 ; 247 ; 278 ; 280 ; 282 ; 294 ;
 295 ; 298 ; 300 ; 301 ; 302 ; 306 ;
 315 ; 318 ; 323 ; 326 ; 333 ; 334 ;
 338 ; 343 ; 344 ; 368 ; 385 ; 395 ;
 396 ; 425 ; 427 ; 433 ; 449 ; 450 ;
 459 ; 462 ; 465 ; 466 ; 467 ; 473 ;
 478 ; 507 ; 519.
 Klondike : 546.
 Kodon : 404.
 Konkan : 420 ; 421.
 Koondal : 397.
 Kotaphali : 80.
 Kujoree : 439.
 Kumaon : 358 ; 490.
 Kurnool : 251 ; 286 ; 287 ; 301 ; 342 ;
 354 ; 357 ; 361 ; 362 ; 363 ; 394 ;
 397 ; 425 ; 507.
 Kushlea : 484.

L

Labourer, English : 488.
 — Indian : 402 ; 404 ; 405.
 — Negro : 402 ; 404 ; 405.
 Lachlan, river : 48.
 Lahore : 296.
 Laing, S. : 486 ; 487 ; 489.
 Lancashire : 219.
 Land Colonisation Society : 525.
 — Revenue : 188 ; 313.
 Loss of, in 1877-8 famine, 409.
 Effect of reduction of, 452-3.
 Land's End : 417.
 Languages, Study of Living : 485 ;
 523.
 Laulgoody : 59.
 Launceston, Tasmania : 40.
 Lawe, Lieut.-Col. : 115.
 Lawrence, Lord : 73 ; 217 ; 289 ;
 454.
Lawrence, Lord, Life of, by R. Bos-
 worth-Smith, M.A. : 9.
 Learmonth, T. : 23.
 —, Miss E. : 23.
 Lebanon : 30.
 Leese, Mr. : 481.
 Lennon, Lieut. : 150.
 Leslie, Mr. : 233 ; 234 ; 243 ; 246.
 Letchee : 159.
 Levinge, Mr. : 461.
 Lister, Mr. : 286.
 Livingstone, Dr. : 173 ; 577.

Lloyd, Sampson : 264 ; 281 ; 398.
 London : 137 ; 169 ; 172 ; 178 ; 245 ;
 269 ; 457 ; 462 ; 496 ; 528 ; 531 ;
 554.
 Lords, House of : Queen's Speech,
 214 ; address in reply, Earl of
 Wharnccliffe, 214 ; Earl of Lou-
 dou, 215.
 Loudoun, Earl of : 215.
 Lowe, Robert : 201 ; 567.
 Lucknow : 269.
 Ludiana : 450.
 Lurgan, Lord and Lady : 495.
 Lushington, Gen. : 9.
 Lyall, Sir James : President Famine
 Com., 1898 : remunerativeness
 of irrigation works, 308 ; 357.
 Lyons : 27.
 Lytton, Lord : 387 ; 459 ; 464 ; 465.
 Famine Insurance Fund, 364.
 "Human life to be saved at any
 cost and at any effort," 401.

M

Mackenzie, Gen. Colin : 175 ; 176.
 — Mr. : 94.
 — Donald : 514 ; 517.
 Mackinnon, Sir W. : 164 ; 484 ; 513 ;
 514.
 M'Kenna, Sir Joseph : 264 ; 267 ;
 291.
 Madagascar : 570.
 Madhee : 412.
 Madras : 38 ; 65 ; 66 ; 75 ; 78 ; 102 ;
 134 ; 140 ; 163 ; 164 ; 165 ; 167 ;
 176 ; 179 ; 184 ; 205 ; 206 ; 208 ;
 218 ; 219 ; 222 ; 225 ; 229 ; 230 ;
 239 ; 240 ; 248 ; 255 ; 259 ; 263 ;
 264 ; 265 ; 266 ; 268 ; 269 ; 272 ;
 275 ; 278 ; 284 ; 285 ; 286 ; 287 ;
 289 ; 290 ; 294 ; 296 ; 297 ; 301 ;
 302 ; 306 ; 307 ; 308 ; 311 ; 318 ;
 320 ; 326 ; 333 ; 334 ; 335 ; 336 ;
 337 ; 338-345 ; 348 ; 349 ; 350 ;
 351 ; 357 ; 358 ; 363 ; 366 ; 384 ;
 386 ; 387 ; 403 ; 406 ; 411 ; 412 ;
 413 ; 414 ; 420 ; 421 ; 424 ; 425 ;
 426 ; 427 ; 433 ; 434 ; 435 ; 437 ;
 441 ; 443 ; 460 ; 461 ; 462 ; 464 ;
 465 ; 466 ; 471 ; 472 ; 473 ; 476 ;
 477 ; 479 ; 488 ; 503 ; 505 ; 508 ;
 532 ; 568 ; 576.
 — Army : 551.
 — Government of : 134 ; 146 ; 295.
 — Irrigation and Canal Co. : 178 ;
 217 ; 219 ; 227-230 ; 278 ; 285 ;
 286 ; 287 ; 308 ; 343 ; 354 ; 357.



- Madras Mail*: 269.
 Madras Water Supply and Irrigation System: 340.
 Madura: 16; 302; 343; 384; 386; 425.
 Mahanudi: 220; 231; 275; 316; 385; 439; 440; 449; 450; 455.
 Mahratta, South: 452; 458; 459.
 Mahrattas, The: 94.
 Maine, Sir H. S.: 73.
 Malabar: 425.
 Mallet, Sir Louis: 499.
 Mamien, Wall of: 563.
 Manchester: 216; 221; 243; 254; 258; 259; 260; 373; 376; 378; 415; 477; 481; 482; 531; 573; 577.
Manchester Guardian, The: 128; 372; 427; 537-540.
 Mandapeta Canal: 89.
 Mangies, Mr.: 258.
 Manikpur: 360.
 Manna in Australia: 43.
 Marmalong: 386; 387.
 Maronite Monastery: 30.
 Marseilles: 27.
 Marsh, Rev. W., D.D.: 169.
 — Miss: 169; 495.
 Marudur: 341.
 Marwar: 371; 416; 617.
 Massey, Right Hon. W. N.: 264.
 Masulipatam: 135; 142; 147; 148; 208.
 Mauritius: 38; 41; 42.
 Mayo, Lord: 220; 232; 233; 234; 235; 243; 449; 455.
 Mediterranean: 532.
 Medlicott, Mrs.: 273.
 Meerut: 406.
 Megasthenes: 58.
 Megna: 386.
 Mehmattur: 340.
 Melbourne: 40.
Memoirs: Sir G. Campbell: 265.
 Mergui: 16.
 Mesopotamia: 534.
 Meteorological Reports: 420; 421; 422; 426.
 Midat Pasha: 464.
 Midlothian: 543.
 Midnapore Canal: 232; 233; 238; 243; 280; 315; 320; 321; 324; 334; 365; 462; 463; 500.
 Military, Board: 205; 217.
 Mirzapur: 375.
 Missionary Address: 170-172.
 Mississippi: 99; 375.
 Mitahari: 256.
 Moabite Stone: 549.
 Mohal: 412.
 Mohumra: 534.
 Mombazi: 515.
 Moncrieff, Gen. Sir Scott: 286; 465; 509; 511; 526; 577.
 Money lenders: 391; 392; 413.
 — moral, material value: 433-436.
 Montgomery, Sir H., Bart.: 83; 93; 96; 99; 225; 248; 250; 251.
 — Sir R.: 452; 455.
 — Project: 431.
 Mootah Moolla: 320.
 Morocco: 516.
 Morris, Henry: *Descriptive and Historical Account of the Godavari District*: 70; 80; 83; 93; 144-149; 150; 250.
 Muddoor: 116; 125; 141; 451.
 Muir, Sir Wm., K.C.S.I.: 569.
 Mulhall, *Dictionary of Statistics*: 364.
 Müller, Geo.: 578.
 Mullins, Gen., R.E.: 134.
 Munera: 343.
 Muhamed Salim Sultan: 427; 430.
 Murray river, Australia: 48.
 Murshedabad: 176.
 Murrumbidgee river, Australia: 48.
 Muscat: 503.
 Mutiny, Indian: 173; 176; 217; 219.
 Mylapur: 66.
 Mysore: 27; 166; 222; 269; 296; 297; 335; 358; 363; 366; 420; 422; 424; 505; 550.
- N
- Nagpur: 75; 237; 246; 254; 277; 295; 302; 323; 373; 385; 386; 404; 406; 420; 422.
 Namur: 26.
 Nandyar: 342.
 Naoroji, Dadabhai: 483.
 Napier and Ettrick, Lord: 484.
 Napoleon, tomb: 45.
 Narsapur: 89; 91; 398.
 Nash, Vaughan: 3; 128; 372; 427-432.
 Nathamuni S. Mudaliyar: 89.
 Navigation: importance of navigable channels all over India: 132; 135; 143-4; Mr. Walch on, 212; main lines of, 293; 295; 328-337.
 Gen. refs.: 243; 244; 245; 350; 398; 415; 438; 441; 447; 454; 457; 458; 460; 479.
 Negro: wages of, 402; 404; 405.
 Nellgherries: 20; 62; 77; 165; 293; 295; 302; 480.



- Nellore : 294 ; 295 ; 296 ; 301 ; 302 ; 396 ; 397 ; 425 ; 450 ; 465.
 Nerbudda : 290 ; 385 ; 386 ; 390 ; 421 ; 490.
 Newman, Cardinal : 578.
 — F. W. : 35 ; 578.
 New South Wales : 345.
 New York : 137.
 Nicholson, Brigadier : 9 ; 10.
 Nicolayson, Mr. : 30.
 Niger : 515.
 Nightingale, Miss Florence : 504.
 Nile : 28 ; 29 ; 78 ; 269 ; 344 ; 503 ; 509 ; 510 ; 528 ; 529 ; 531 ; 577.
 — Navigation that would have saved Gordon : 525-531.
 —, White : 515.
 Noel, Ernest, M.P. : 265 ; 291.
 — Hon. and Rev. Baptist W. : 265.
 Norfolk plains, Tasmania : 40.
 Norris, Mr. : 220.
 Northcote, Sir Stafford : 440 ; 501 ; 502.
 North Coast Canal : 294 ; 301.
 North Pole : 40.
 North-West Provinces : 270 ; 289 ; 298 ; 332 ; 338 ; 345 ; 348 ; 349 ; 350 ; 351 ; 358 ; 366 ; 403 ; 414 ; 420 ; 421 ; 424 ; 426 ; 454 ; 464 ; 472.
 Norton, J. Bruce : 150 ; 196 ; 199 ; 201 ; 378.
 Norway : 513.
 Nubar Pasha : 510.
 Nuddea : 388 ; 483.
 Nugent, Mr. and Mrs. Richd. : 495.
 Nungumbaukum : 66.
 Nunja lands : 336.
 Nyassa : 515.
- O
- Obiter Dicta* by Sir Geo. Campbell :
 Sir A. Cotton and Bengal civilians and engineers, Famine once in one hundred years, Grand canals for Bengal, Railways in famine times, Remarkable frequency of famines, Grain stores, ancient and modern, Famine of 1770 exaggerated, Why he opposed irrigation extension, Hoards of grain in ancient scarcity, 388-393.
 Olives, Mount of : 29.
 Onslow, Denzil, M.P. : 264 ; 285 ; 300 ; 393.
 Ootacamund : 165.
 Opium Question : 300 ; 480 ; 485 ; 535.
 Orange River : 508.
 Ornaments, Silver : melted down, 1877-78, 410.
 Orissa : 178 ; 217 ; 220 ; 225 ; 237 ; 239 ; 247 ; 250 ; 251 ; 252 ; 270 ; 274 ; 277 ; 280 ; 291 ; 295 ; 300 ; 308 ; 315 ; 316 ; 317 ; 320 ; 321 ; 322 ; 324 ; 325 ; 326 ; 333 ; 343 ; 358 ; 385 ; 386 ; 391 ; 424 ; 439 ; 440 ; 442 ; 443 ; 447 ; 449 ; 462 ; 463 ; 484 ; 500 ; 551.
 Orr, Capt., R.E. : 120 ; 122 ; 123 ; 125 ; 129.
 Ostend : 26.
 Outley, Col. : 430.
 Oudh : 272 ; 298 ; 345 ; 348 ; 349 ; 350 ; 366 ; 384 ; 403 ; 426 ; 442 ; 464.
- P
- Pactolus : "Every river in India a," 136.
 Paddy : cultivation of, 89.
 Palar : 62 ; 240 ; 294 ; 301 ; 340 ; 472.
 Palaveram : 165.
 Palestine : 460 ; 464 ; 532 ; 533.
 Palghant : 293 ; 295.
 Palmer, Messrs. : 150 ; 374.
 Panama Canal : 447.
 Paradise : 428 ; 430.
 Parliamentary Bill of 1376 : 408.
 Patna : 280 ; 406.
 Paumben Pass : 15 ; 20 ; 65 ; 435 ; 438 ; 447.
 Pease, Sir J. : 264 ; 267.
 Pegu : 420 ; 421.
 Peishcush : 92 ; 110.
 Pelandori : 341.
 Pelly, Sir Lewis : 442 ; 459.
 Pench : 295 ; 302.
 Penge : 169.
 Peninsula : 290.
 Pennair : 231 ; 294 ; 295 ; 301 ; 343 ; 344 ; 384 ; 386 ; 465.
 Pennelather, Rev. W. : 172.
 Penneru : 338.
 People of India, improved condition : 434 ; 435 ; 436 ; 444.
 Pentecost : 491.
 Periyar : 302 ; 342 ; 343 ; 384 ; 386.
 Persian Gulf : 532.
 Peshawur : 8 ; 9 ; 10.



Piccottah : 110.
 Picot, Mr. : 531.
 Pillay, P. M. : 240.
 Pioneers : 206 ; 207 ; 208.
 Pitcher, Col. : 405 ; 407.
 Plymouth Brother : 531.
 Pogson, N. R., C.I.E. : 424.
 Poinay : 310 ; 340.
 Polaveram : 79.
 Ponang : 293.
 Ponany : 294 ; 295 ; 296 ; 302 ; 450 ;
 461 ; 462.
 Ponies as tow-boats : 564.
 Poona : 456.
 Poonamallee : 208.
 Poorneah : 275.
 Port Louis, Mauritius : 41.
 — Philip, Australia : 189 ; 190 ;
 191.
 — Said : 534.
 Poverty in India : 44 ; 186-191 ;
 389.
 Power, Mr. : 135.
 Prendergast, Mr. : 251.
 Price, R. J., M.P. : 569 ; 570 ; 571 ;
 573.
 Prices current : 402-5.
 Prince Consort : 10.
 Profit, loss of, during 1877 - 8
 famine : 413.
Progress in Madras Presidency dur-
ing past Forty Years. S.
 Srinavasa Raghava, Iyengar,
 C.I.E., Dewan Baroda : 89.
 Prologue : 3-5.
 Property : increased value of, 334.
 Provincial Minor Works : 341 ; 348 ;
 350.
 Public Works : Sir A. Cotton's
 suggestions, 294 ; 297 ; 313 ;
 437 ; 485.
 — : Commissioners' valuable
 report on irrigation published
 about 1852, 193 ; 195-9.
 — — Department : 176 ; 177 ;
 217 ; 218 ; 220 ; 223 ; 308 ;
 310 ; 348 ; 503.
 Puckle, R. K. : 464.
 Punjab : 75 ; 209 ; 272 ; 296 ; 298 ;
 329 ; 338 ; 345 ; 348 ; 349 ;
 351 ; 358 ; 366 ; 384 ; 385 ;
 386 ; 390 ; 403 ; 414 ; 421 ;
 424 ; 426 ; 427 - 432 ; 428 ;
 448 ; 454 ; 457 ; 462 ; 464 ;
 504 ; 568.
 Pushkaram : 79.
 Putty case, The great : 204-6.
 Pyramids : 28.

Q

Queen's Speech, 1878 : 214.

R

Raghava, S. S., Iyengar, C.I.E.,
 Dewan of Baroda : 89.
 Ragi : average price of, 1873 and
 1897, 403 ; 405 ; 476.
 Railways, Why Sir A. Cotton op-
 posed, in India (Fred. Cotton) :
 67-69 ; loss on, to 1876, 270 ; do.
 to 1878, 304 ; what railways do
 not do, 271 ; capital expenditure,
 to 1898, 305 ; *irrigation and*
navigation canals, 185 ; 243 ;
 244 ; 277 ; 282 ; 284 ; 328 ;
 372 - 380 ; 399 ; 447 ; 450 ;
 468 ; 505 ; 529.
 Expenditure all sources, all ob-
 jects, 1882-3 to 1897-8, 352-
 356 ; mistake of Indian Govern-
 ment that railways protect coun-
 try against famine, 360 ; rail-
 way-served and irrigated districts
 compared, 360-364.
 Gen. refs. : 214 ; 230 ; 232 ; 253 ;
 254 ; 255 ; 269 ; 281 ; 282 ; 388 ;
 427 ; 457 ; 461 ; 478.
 Rainfall : 80 ; 83 ; 419 ; 420-26 ;
 443 ; 444.
 — Famine in India not due to in-
 sufficiency of : 418-426.
 Raipur : 404 ; 406 ; 489 ; 504.
 Rajahmundry : 77 ; 80 ; 82 ; 91 ;
 93 ; 109 ; 113 ; 132 ; 135 ; 146 ;
 147 ; 148 ; 151 ; 175 ; 190 ; 192 ;
 203.
 Rajmahal : 451 ; 455.
 Rajputana : 269 ; 348 ; 349 ; 350 ;
 358 ; 414 ; 416 ; 421 ; 426 ; 428.
 Rallee : 116 ; 148.
 Rampur-Bauleah : 451.
 Ramsay, Sir Henry : 490.
 Rangoon : 16 ; 406.
 Rangpur : 406.
 Ranigunj : 232.
 Ratchiffe, R. : 173.
 Ravee : 300 ; 385 ; 449.
 Rawalpindi : 406.
 Red Hills : 38 ; 66 ; 67 ; 69.
 — Sea : 503.
 Rees, Hon. J. D., C.I.E. : 135.
 Reh : 271 ; 288 ; 478.
 Reservoirs : 46 ; 47 ; 61 ; 62 ; 292 ;
 297 ; 336 ; 393-399 ; 419 ; 427 ;
 479.



- Revenue: 193; 249; 344; 356.
 —, Board of: 94; 96; 101; 115;
 123; 130; 140.
 Rhodes, Cecil: 347.
 Rice, average price of, in 1873 and
 1897: 403; 404; 411; 430.
 Richey, Hon. J. B., C.S.I.: 411.
 Ridgeway, Sir West, K.C.B.,
 Governor of Ceylon: 562; 563;
 565.
 Rivers of India, value of: 325; 427;
 445.
 Roads: 206-8; 437.
 Robertson, W. R.: 255; 256; 446.
 Roden, Lord: 493; 496.
 Rohilkund: 298.
Romance: an Indian, 139.
 Rome: 408; 522; 552.
 Ross, Sir James: 40.
 —, Col.: 512.
 Rugby: 565.
 Randall, Gen. F. A.: 73; 88; 195;
 280; 493.
 Ruripur: 75.
 Rushikulya: 342.
 Russia: 570.
 Ryots, 144; 145; eagerness for
 canal water, 440; 466; 468.
- S
- Sagileru: 343.
 Sahibgunj: 452.
 Saidapett: 387.
 St. Helena: 45.
 St. Thomas' Mount: 16; 66.
 Salem: 194; 195; 406; 425.
 Salisbury, Lord: 222; 351; 477;
 481; 573. (*See Cranbourne.*)
 Salt, loss of revenue in famine,
 1877-78, 410; gen. refs., 297;
 300; 313; 438; the Poor Man's
 Income-tax, 485; 486-9.
 Samaria: 29.
 Samulcotta: 82; 147; 197.
 Sandhurst: 498.
 San Francisco: 137.
 Sangam: 339.
 Sankey, Sir R.: 579.
 Sanyassee: 74.
 Sarda: 384; 385.
 Sattara: 362.
 Scandinavia: 490.
 Scotland: 78; 292; 490; 513; 514.
 —, Church of: 515.
 Scott, R.: 489.
 Scott - Moncrieff, Sir Colin: (*see*
 Moncrieff).
 Seer, a Modern: 541-547.
 Selenkos Nikator: 58.
 Senargati: 256.
 Seringapatam: 294; 296.
 Seringam: 62.
 Sewage Commission, offer of Presi-
 dency to Sir A. Cotton: 519.
 Seymour, Danby: 519.
 Shaftesbury, Lord: 567.
 Shatiatope: 341.
 Sheffield: 368; 456; 493-4.
 Shevarays: 77; 150.
 Sholapur: 362; 363; 412.
 Short, Capt.: 439.
 Silver: country, and ornaments
 minted in 1877-80, 410.
 Sim, Col. Duncan: 53; 194.
 Sind: 298; 333; 351; 403; 420;
 448; 449; 462.
 — Sagar project, Punjab: 431.
 Sirhind Canal: 55; 244; 293; 300;
 310; 320; 448; 482.
 Sironcha: 489.
 Skinner, Major: 30; 35.
 Smith, Col. Baird: 52.
 —, Eustace: 264.
 —, Major Dunlop: 431.
 —, J. B., M.P.: 501.
 Snakes: 161; 174.
 Solani: 471.
 Sone: 231; 244; 251; 252; 300;
 320; 324; 325; 332; 370; 385;
 438; 449; 450; 454; 460; 461;
 462; 465; 500.
 Sonepur: 251.
 Soudan: 485; 525; 527; 577.
 South Pole: 40.
 Spain:
 Srivaikuntam: 339.
 Stamps: 313.
Standard, The: 215.
 Stanhope, Rt. Hon. E.: 264; 267.
 Stanley, Lord: (*see Derby*).
 —, Sir H. M.: 514; 515; 577.
 Statistical Abstract: 352-55; 366;
 382; 402; 403; 406; 409; 410;
 413; 414.
 Steamboats: 36; 130; 270; 450;
 451; 455; 459; 483.
 Stephen, Sir James: 211; 215; 475;
 477.
 Storage of water: 289; 290; 368;
 370; 393-399; 415; 425; 426;
 431; 438; 443; 459; 461; 479;
 480.
 Strachey, Gen. Sir R.: 213; 316;
 464; 465.
 Suakim: 527.



Suez Canal : 289; 311; 447; 517.
 Sugar cultivation : 89; 94; 202;
 430; 437; 440; 461.
 Sullivan, Hon. H. E. : 402; 405.
 — Hon. John : (1840), 64.
 — Mr. John : (1779), 150.
 Sunderbunds : 484.
 Surat : 275; 293; 296; 302.
 Sutlej : 275; 291; 293; 310; 385;
 390; 448; 449; 450.
 Sweden : 513.
 Switzerland : 26.
 Syria : 30; 464.

T

Tahvandi Rana : 432.
 Talbot, Mr. : 564.
 Tambragani : 344.
 Tamil : 524.
 Tanjore : 16; 21; 38; 51; 57; 59;
 61; 62; 64; 85; 102; 104; 105;
 114; 119; 146; 195; 199; 202;
 206; 225; 247; 248; 249; 250;
 257; 268; 273; 278; 326; 343;
 368; 425; 435; 438; 441; 449;
 471; 476; 507; 519.
 Tanks : 61; 65; 66; 240; 245;
 297; 301; 333; 335; 339; 340;
 342; 346; 370; 387; 397; 415;
 427; 428; 431; 456; 476; 477;
 479; 504.
 Tanganyika, Lake : 515.
 Tanuku : 113.
 Tapti : 293; 296; 384; 385; 386.
 Tarshish : 550.
 Tasmania : 22; 23; 38; 548.
 Tavoy : 16; 17; 18.
 Tayler, W. (of Patna) : 499.
 Taylor, Col. : 36.
 —, Hudson : 551.
 —, Mr. and Mrs. : 175.
 Tel : 493.
Telegraph, Daily, The : 499.
 Telugu : 153.
 Temperance : why Sir A. Cotton
 wore the blue ribbon; greatest
 possible interest in all temperance
 work, 518.
 Temple, Sir Richard, G.C.S.I. : 222;
 235; 241; 263; 264; 384; 386;
 412; 433; 504.
 Tennasserim : 17; 421.
 Tennent, Sir Emerson : 198.
Terror : 40.
 Testament, New : 491.
 Thadapalli : 339.

Thames : 78; 136; 267.
 — Navigation Commission, 519.
 Theburn, Bishop : 489.
 Thomas, C. E. G. : 469.
 Thomson, James : 184.
 Thornton, Mr. : 226; 241; 316.
 Tiberias : 532.
 Tigris : 34; 35.
 Timbuctoo : 515; 516; 517.
Times, The : 82; 186; 214; 224;
 225; 230; 268; 269; 427;
 475; 477; 524; 566; 567;
 569; 573.
 — of India, The : "railway cannot
 beat even Ganges," 450.
 Tinnevely : 16; 195; 329; 334;
 425; 465.
 Tintara : 547.
 Tippoo Tib : 514.
 Tirukkoyilur : 340.
 Todd, Mr. : 31.
 Tollymore Park : 494; 495.
 Torquay : 578.
 Toungoo : 406.
 Trad, Michael : 29.
 Transit, Water, in India : 143; 243;
 244; 277; 297; 308; 318;
 322; 372-378; 446; 447; 448;
 450; 454; 459; 462; 505.
 — English Internal : 485.
 Travancore : 275; 295; 296; 302;
 384.
 Trevelyan, Sir Charles, Bart. : 2; 78;
 177; 264.
 Trichinopoly : 16; 50; 59; 62;
 146; 195; 231; 241; 272;
 326; 425; 453.
 Tricycle : patent, invented by Sir A.
 Cotton : 521-2.
 Trieste : 511.
 Trimbak : 79.
 Tripoli : 515.
 Trotter, Capt. and Mrs. : 175.
 Tsawia : 420.
 Tunbridge Wells : 170; 492.
 Tungabudra : 227; 237; 239; 249;
 251; 290; 293; 294; 298; 300;
 301; 302; 385; 394; 395; 397;
 445; 449; 459; 461; 465; 479;
 482; 485; 492; 503.
 Turkey : 228; 464.
 Tuticorin : 343.
 Tyre : 550.
 Tyrrell, Lieut. : 194; 195.
 Tweeddale, Marquis of : Governor of
 Madras : 97; 542; 543; 544;
 568.



U

United States : 279 ; 292.

V

Vaal River : 508.
 Valluru : 340.
 Veneem Veranah : 129.
 Victoria, Australia : 345 ; 367 ; 368 ;
 474.
 Vigny, River : 295.
 Vijaiswaram : 116 ; 121 ; 123 ; 125 ;
 148.
 Vizagapatam : 70 ; 72 ; 74-76 ; 90 ;
 99 ; 425 ; 469 ; 504.
 Vriddachalam : 340.

W

Wages : average, 406 ; loss of, in
 1877-8 famine, 413.
 Walch, G. T., M.I.C.E. : 78 ; 85 ;
 134 ; 212 ; 463.
 Wales : 490.
 Waltair : 72.
 Water : storage in Australia, 43 ; 46-
 49 ; "National Bank of India,"
 61 ; "liquid gold," 128 ; 149 ;
 "more precious than gold in
 Australia," 189 ; 190 ; 368 ; 370 ;
 no want of, in India, 213 ; 297 ;
 420-6 ; 427 ; 480 ; "rain water
 poor, river water rich," 321 ;
 325 ; 445-6 ; regulation of, 423 ;
 439 ; 440 ; 444 ; "India's
 greatest treasure," 445 ; "rich
 monsoon river water," 567.
 Gen. refs : 292 ; 337 ; 368-370 ;
 386-7 ; 431 ; 438 ; 468 ; 476 ;
 478 ; 507.

Waterfield, Mr. : 499.
 Waterloo, field of : 27.
 Watt, James : 227.
 Warren, Capt. : 459.
 Webster, Forster : 286.
 Wellington, Duke of : 10 ; 418.
 —, Mount : 39.
 Wells : 429 ; 445.
 Wenlock, Lord : 568.
 West Coast Canal : 294.
 Westland, Sir J. : 384.
 Weston-super-Mare : 170.
 Wharnccliffe, Earl of, 214, 215.
 Wheat : average price of, in 1873 and
 1897, 403 ; 404.
Whitaker's Almanack : 506.
 Williams, Sir Monier, K.C.I.E. : 230 ;
 427.
 Women's work greatly helped by Sir
 A. Cotton : 553-557.
 Wood, Sir Charles : (*see* Lord Hali-
 fax).
 Woodcot, Dorking : 497 ; 498 ; 499 ;
 560.
 Wright, Surgeon : 247.
 Wundy : 197.
 Wurda : 246 ; 254 ; 255 ; 275 ; 279 ;
 294 ; 295 ; 296 ; 302 ; 377 ; 378 ;
 380 ; 385 ; 455.
 Wyllie, Mr. : 463.
 Wynganga : 385.

Y

Yeddah : 534.
 Yorkshire : 428.

Z

Zemindars : 84 ; 146 ; 238 ; 250.

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