

to the renter alone, and would be placed entirely under his orders, had not the Zemindar an interest in their appointment. This want of good economy in the management of the estates will be considered as more glaring, if we bring into account the enormous charges that the tenantry pay to messengers, which I am persuaded often amount to 5 per cent. on their rent. Such is the nature of Indian economy, that no man pays his rent, nor indeed discharges any engagement at the regular period, nor until a bill has been presented; nor is the whole almost ever paid at once. The bill is always therefore sent twice a month until discharged, and the tenant must always pay the messenger from 1 to 4 anas each time, according to his rank, and the distance he has come; and he gets no receipt, none of the messengers being able to write. Having premised so much on both estates and farms, I shall conclude with a review of the different estates or *pergunahs*, into which this district is divided; and, where an opportunity offered of gaining more particular information, I shall take occasion to explain more fully the nature of their management.

**ESTATES IN SUBEH BENGAL.** *Serhar Jennutabad*.—*Sersabad* (*Sersabad*, Gladwin's *Ayeen Akbery*), is a very fine estate in the division of *Sibjung*, of which it is said to occupy about sixty-one-sixty-fourth parts, or little short of 300,000 of bigahs or 100,000 acres. It includes a large portion of *Gaur*, is all in the immediate vicinity of that capital, and is almost all arable land. This noble estate, with many others, formerly belonged to the family which performed the office of register-general (*Kanungoe*) for ten-sixteenths of Bengal, and the same family still retains a considerable part of this estate, where it formerly resided; but some time ago it retired to *Moorshedabad*.

*Chaudra Nurayan*.—The present representative of the family is now a minor. On this estate the whole lands are let in perpetuity at a certain rate (*Hari*) for each bigah of 80 cubits, but 4 are deducted for what is called *Gajinda*. Some tenants have leases which are called *Mokurruri Pattahs*, others none; but whenever the rent has been fixed to a tenant, by his name, the number of bigahs he occupies, and the rate having been entered in the books of the estate, no alteration can be made. This tenure is called *Jumabundi*, which may be called copyhold. The tenant pays for his land, whether he cultivates it or not; and if any is carried away by rivers, he is allowed a proportional reduction, or is allowed an equal quantity of waste or newly formed land. Reeds and grass for thatch are not rented, but the produce is sold annually to those who wish to cut it. There is no evidence for the rate at which the lands are let, except the books of the estate, which from favour or corruption are liable to be reduced to the lowest rate, which I understand is only 2 anas a bigah, and a very large proportion is now fixed at that value. I understand, that should a new tenant enter, no maximum is fixed; but no higher rent than 8 anas a bigah has been demanded. The whole has been so mismanaged, that there is a great doubt whether the rents will equal the revenue paid to government. The estate therefore will soon probably fall into the hands of the collector; for, so far as relates to the present proprietors, the rents are now fixed, and the people seem to think, were the leases set aside when the estate is sold, that they would suffer injustice. If such practices however are admitted, it is evident that the whole landed revenue may be gradually frittered away.

*Amirabad*—is an estate in *Bholahat*, which is said to contain about 27,000 bigahs; but about 2000 have been granted free of revenue, 1300 of which are in one estate named *Chak Korbanali*, and belong to *Mir Mozufur-ali*, a Moslem who resides. *Amirabad* is not mentioned in the *Ayeen Akbery*, and seems to have been taken from some other estate, and given to the register-general (*Kanungoe*). The houses, gardens and plantations (*Bastu*



and Udbastu) have been let on leases in perpetuity (Mokurruri) at the following rates. Houses from 1 to  $7\frac{1}{2}$  rs. a bigah, gardens from 4 anas to 1 r. a bigah, bamboos from  $\frac{1}{2}$  ana to 6 anas a clump. Common mangoes from 4 anas to 1 r. a bigah, fine (Khasa) mangoes from  $\frac{1}{2}$  ana to 8 anas a tree. Plantains from 4 anas to 1 r. a bigah. Mulberry from 3 anas to  $1\frac{1}{2}$  r. The rent having been fixed by these rates at the time of entry, cannot afterwards be altered. The rate has no sort of connection with the quality of the land, but depends entirely on the various degrees of favour that the landlord had for the tenant. The fields are let by what is called Husbulhaseli, and a rate is fixed for each crop. It is supposed, that each field should be measured when it produces a crop. If no crop is taken, there is no rent. The leases mention only the rate of the various crops, and in forming these also there has been no other rule, but the favour of the landlord or his agent. With such a system the landlord has gone to decay, and this estate has been sold.

*Kakjol*—is a large estate in the divisions of Kaliyachak, Gorguribah, Manihari and Sayefgunj of this district, and part is in Dinajpoor. The great mass of the estate is in Manihari, where it may occupy 284,000 bigahs; but of this about 47,000 bigahs are not assessed. In Sayefgunj there are said to be about 11,000 bigahs which retain the name, and 18,000 which are now called Baragangga. Both the brothers who possess this estate are said to have the manners of gentlemen, to be polite to strangers, and not only to be moderate in their expense, but uncommonly just towards their tenants, so that none of their servants dare to oppress them; yet their tenantry are uncommonly poor, and their estates are badly cultivated, much being totally waste. The reason might be supposed to be too high a rent; but that would not appear to be the case. No tenant who cultivates fields (Jotdar), pays any rent for his house or garden, and is only charged for his arable land. The most common measure is the Calcutta bigah; but in some places one-twentieth part is added free of rent to each field, and in others one-eighth part is added to the rope. The greater part (ten-sixteenths) is let at a certain sum annually for each bigah, and the field pays whether it is cultivated or not. The rent is said to be only from 1 to 3 anas a bigah, the rate depending on the favour which was shown to the first occupant. This tenure is here called Kampuran; in other places it is called Juma Zemin and Mokurruri. The remainder is let by what is here called Halhaseli, which is the same with Husbulhaseli of other parts. The field pays only when cultivated, and if the tenant chooses to neglect half of his farm, the master can neither give it to another, nor take rent. Every crop on each field ought to be measured annually, and the rent would scarcely pay the expense, for the rate varies according to favour, from 1 to 3 anas for each crop. The Zemindar therefore is content to take anything rather than ruin himself by such a plan. Both tenures are in perpetuity (Mududi); but, if a tenant deserts his farm, the Zemindar may let it at whatever rate he and the new tenant agree.

The revenue I presume, is almost nothing; for I had an opportunity of learning, that a man, who purchased a lot called Sanbarra, of 1200 bigahs, pays to government 12 rs. a year, or 1 r. for 100 bigahs. This man is a Rajput, named Kisori Singha. He gave 1500 rs. for the property, and probably makes a good income, as he has got rid of most of his tenants, and cultivates the land on his own account.

Mr. Ellerton, treating in a general way concerning this vicinity, informed me that he thought the average rent really paid for land in actual cultivation amounted to one rupee a bigah. The bigah by which he reckons is only equal to seven-eighths of the Calcutta standard, which will raise the rent somewhat: but then there is a good deal of land sown without ploughing, which pays a rent, but Mr. Ellerton allows that to go





towards making up the deficiency of some poor cultivated lands, that pay little.

Mr. Ellerton thinks, that the land, paying such a rent, may amount to almost one half of the whole measurement. I allow 1028 square miles of land in five of the divisions in which Mr. Ellerton has concerns, and say that seven-sixteenths pay this rent it should amount to 110,272 bigahs or rupees. Now the whole occupied land, houses, gardens, plantations and fields good and bad in these divisions I have allowed to be 124,528 Calcutta bigahs. So that the average rent on each bigah will be almost 13½ anas. Mr. Ellerton however includes in this all illegal charges, and all voluntary contributions beyond the avowed rent, both of which kind of charges are called *Khurchah*; and he seems to think, that these may amount to about 23 per cent. (three-thirteenth) of the whole payments, which would reduce the real avowed rent to nearly 10 anas a bigah, the common rate, so far as I could learn in Dinajpore.

That such an average rent for the whole of these *serkars* might be actually raised, were it laid on in proportion to the respective value of the lands, I have no doubt; and I am firmly persuaded, were all vexations and illegal demands avoided, that such a rent, by stimulating the industry of the tenants, would tend greatly to increase their profits. I must however say, that the accounts, which I in general procured from the natives, differed very widely, from those of Mr. Ellerton, and except in *Kaliyachak*, I suspect, that his rule will not apply.

The lands in these two *serkars* are usually let in perpetuity (*Mududi*); partly by so much a bigah, whether cultivated or not; but mostly by a certain rate on each crop, that is actually sown. The whole is divided into *Turufs*, each consisting of from one to five *Mauzahs* or collections of farms. In each *Turuf* an accomptant (*Patwari*) resides, and receives the rents. If his charge is large, he is allowed a clerk (*Mohurer*), and at any rate a proportional number of messengers (*Gorayit* or *Atpahariyas*), generally one for each *Mauzah*. In most places there is a *Mandal* for each of these collections of farms. He is one of the chief tenants, and is a kind of agent for the others, to settle between them and the *Patwari*. There are besides *Dihidars*, who can tell the boundaries, and whose duty it is to exhort the tenants to work, a very necessary occupation, but attended with little success. The pen-men usually receive money wages, the messengers and *Dihidars* are rewarded in land, and the *Mandal* is generally allowed his farm at a low rate.

In each *Pergunah* again there is a steward (*Nayeb* or *Gomashtah*), a keeper of the rental (*Juma Navis*) an accomptant (*Shomar Navis*) a valuer of money (*Fotdar*), one or more land measurers (*Amins*), and one or more keepers of papers (*Dufturis*) with guards (*Burukandaj*), all paid in money wages. When the rents are farmed, the *Mostajir* undertakes to pay the whole rent, after deducting these charges, and a certain sum called *Surunjami*, which here is usually a sum fixed on each *Turuf*, and is not rated by a given per centage. In the division of *Sibgunj* most of the land was said to be let by the bigah, whether occupied or not. The rate for houses 2½ rs, for gardens 1 to 1½ rs., for fields from 2 to 8 anas.

In *Kaliyachak* the greater part seems to have been originally let by the plan of measuring each crop, and a rate for each was then specified in each agreement: but I found, that in practice very little attention was paid to this, and in two leases, that I with great difficulty procured, I found that the tenant was bound to pay rather more than 18 anas a bigah for land, that produces two crops, and rather more than 9 anas for what produced only one. In this division there is much good cultivation, and I heard little or no complaint of oppression. The landlords were uncommonly civil, seemingly because they were conscious, that they had no



recourse to illegal means, their fair demands giving them a sufficient profit.

In Bhulabhat the rate on each crop is nominally nearly the same as in Kaliyachak; but, so far as I can learn, the people there in general continue struggling to levy their rents in the old manner. The actual rents are therefore lower, the country is worse cultivated, and there are more complaints of oppression.

In Gorguribah the lands are usually rated very low, at from  $1\frac{1}{4}$  to 4 anas a bigah, which pays whether cultivated or not: they pay no more for their houses and gardens, and the high castes, being uncommonly numerous, have seized on a large proportion of the best land. The Zemindars have therefore very little avowed profit. Although 40 reside, I saw only one of them, a young Brahman, entirely under the control of his servants. The native officers of government said, that this shyness proceeded from a consciousness of their violence. That the Zemindars had so beaten and harassed the poor, that the country was daily more deserted, and that the tenantry were so much terrified, that no formal complaint was made, without which the officers of government could not interfere. Appearances seemed to justify these assertions.

In Manihari the rates of rent are so miserable (1—3 ana a bigah, often very large), that the Zemindars seem to have little or no profit, although they pay to government next to nothing. Deductions of revenue have already been necessary; and, unless a new settlement is made, still more will be unavoidable. The people, having no adequate inducement to labour, are uncommonly poor and indolent, although I heard no sort of complaint against their masters.

In the part of Kharwa, that is in these two serkars, the same is nearly the case. The land is everywhere measured by a rope, and the bigah, where not mentioned otherwise, is rather less than the Calcutta standard, sometimes one-seventh less, but generally there is not so much difference.

The whole of the great estate of *Mathurapoor* (480,000 bigahs) is managed much in the same manner as *Tajpoor*. There are two manners of fixing the rent. One is by *Gusbundi*. The master and tenant agree on such or such a rent for such or such a farm, without any measurement, or regard to the manner in which it is to be cultivated. The leases being short, and at rack rent, the plan answers well, and is that which is mostly followed. The other plan is called *Darbundi*, and the lease specifies the number of bigahs, and rate. The rope is 90 cubits of 17 inches; but, in measuring, four are deducted, so that the bigah is very little larger than that of Calcutta (1.031.) Where the land is let by measure, it generally pays from 9 to 16 anas a bigah. It is of course well cultivated and occupied, and on the whole is the finest part of the district. In the time of Akbur it probably paid no revenue, as it is not mentioned in the *Ayecn Akbery*, and has long been the property of the present family, the first of which seems to have been a saint, and therefore may have been exempted from tribute.

The whole estate of *Dehalla* is under the management of a person (*Surburahkar*) who collects the rents (for the proprietor, a minor), pays the revenue, and accounts for the balance. The division of *Udhraill* forms about a half of the whole estate, comprehending about 700,000 bigahs, Calcutta measure, of which about 500,000 may be occupied. It is said that about one-sixteenth of this is not assessed, so that the Zemindar's occupied lands will be about 470,000 Calcutta bigahs or 340,000 bigahs of the *Pergunah* measure (100 cubits, deducting  $1\frac{1}{4}$  Katha). The whole is let on short leases at rack rent, to tenants (*Gachdars*), all of whom find security, so that there is no loss. The land is not measured, and each tenant, before he begins to cultivate, makes a fixed agreement, and obtains a



lease. It is therefore impossible that the leases can be on a better footing, and the land is well occupied, although of a poor light soil. Many of the farms are large, and are let to under tenants at from 8 to 16 anas a bigah, but the greater part is cultivated by those who receive one-half of the crop for their labour, and who are here uncommonly prudent, many of them being entirely free of debt. The tenants are mostly low Muhammedans, or men who do not despise the plough, and the rent should be paid by four equal instalments. Why with such a system almost the whole rents should be farmed, I am at a loss to know; but it so happens. The reason seems to be the wish of keeping a low rental, a circumstance always most eagerly sought. The rental is kept just a little higher than will pay the revenue, but the person who farms the rent pays for his place, and either takes a fair rent from the tenants, or sells them a permission to occupy, at a low rate, for the time that his engagement lasts.

The renters are paid by the tenants a certain percentage (one-eighth) in addition to the rent, the whole of which without any deduction is remitted to the Zemindar; but he furnishes some land, that is given free of rent to the messengers (Gorayit and Payiks), that are kept in the villages. There are no chiefs of villages (Mandals). The clerks (Patwaris) and remaining messengers are paid by the (Mostajirs) people who farm the rent. Those, who farm a large amount of rent, remit what is due to Krishnagunj. Those farming small portions pay their engagements to an agent (Tahasildar) at Udhraail, who also collects from the few farmers, whose rents are not farmed. It was said, that the whole money remitted to Krishnagunj, is only 95,000 rs. Even allowing this to be accurate, it will give no idea of the Zemindar's profit, unless we take into the account what is paid by those who farm the rents for their appointments. In all probability the nominal rents are very low, and the tenants have all given security for its payment, and in fact none is alleged to be lost; yet, as usual, no man pays his rent without the dunning of messengers, who are sent with bills twice a month. These messengers and bills are not sent by the renter (Mostajir) but by orders of the Zemindar's agent (Tahasildar), and are a grand source of revenue. The chief establishment, which is kept at Udhraail to superintend a collection said to be only of 50,000 rs., and to assist the renters, who are said to pay 45,000 rs. at Krishnagunj, is as follows:— 1 Tahasildar or steward. 1 deputy (Nayeb). These represent the Surburahkar or manager.—1 Gomashtah or agent, who represents the Zemindar, and applies his seal to all public acts. 1 chief accountant (Seresh-tadar). 9 Clerks (Mohurers). 1 Treasurer (Khazanchi). 1 Valuer of money (Fotdar). 1 Tabkush, who melts money suspected to be bad. 1 Munshi, or writer of Persian letters. 25 Guards (1 Jumadar 24 Burnkandajs) at the treasury. 4 Watchmen (Chaukidars) at the office (Kachahri). 2 Keepers of papers (Dufturis). 1 Chief (Jumadar) of the principal messengers (Dhaliyats), who are sent to obstinate debtors, and who are paid from 2 to 4 anas each message, according to the distance. He employs people, that hang on, generally voracious curs, who are glad to give him a large share. Eight chiefs (4 Mirdhas and 4 Gomashtah Mirdhas deputies of the former) who employ the swarm of starving tatterdemajons that are sent, at the rate of from 1 to 2 anas, to dun ordinary creditors. 1 sweeper.

Such an establishment, and the system of farming the rents are sufficient to ruin any estate, on however good a plan the settlement of its rents may have been made.

The other great portion of this estate, situated in the division of Krishnagunj, may contain 680,000 bigahs Calcutta measure, equal to 495,000 of the customary standard. Of these probably 400,000 are fully occupied, but about one-sixteenth must be deducted for lands that are not assessed.



The farms and management are exactly the same, only the rents are higher. It is said, that including charges, great tenants pay on an average 8 anas for the customary bigah, from which, on account of these charges, one-eighth is deducted by those who farm the rents. The under tenants pay about 1 r. a bigah. One, whose lease I saw, paid 21 rs. for 18 bigahs, but his farm was of a very good soil. The lands in Dulalgunj are managed in the same way, and are still better.

*Haveli Puraniya* is an immense estate, which belonged to the Rajas of that title, and is now disputed by several claimants, none of whom, I imagine, could prove any propinquity to the last Raja. In the meantime two of the claimants have been appointed managers (*Dukhilkars*), and are bound to deliver the net profits to the judge, who keeps the amount in deposit, until the suit is decided. These persons, *Srinarayan* and the widow of his brothers *Lalit*, have never, I believe, interfered farther in the management, than to go round the country begging from the tenantry, although they have a very large patrimony, and in this mean practice they have had considerable success. The whole management has been left to *Baidyanath*, a banker of *Puraniya*, who is their security, and has been already mentioned as proprietor of an estate in *Serkar Tajpoo*. He is a man of good abilities, but I presume has made no attempt to correct the numerous abuses that prevail in the management of the estate, which indeed could not reasonably have been expected.

This *Pergunah* is scattered through the divisions of *Haveli*, *Dangrkhora*, *Dulalgunj*, *Nehnagar*, *Matiyari*, *Arariya*, and *Gondwara*, and may contain between 10 and 11 lac of bigahs *Calcutta* measure. The measure in three-fourths of the estate is 90 common cubits, from which one-tenth is deducted in measuring. In one-fourth the measure is 100 cubits, with the same deduction. This I suspect is the free land, as that is the proportion said to have been alienated. The 81 cubits used in the greater part is a very little more than the *Calcutta* standard (1.025). The lands, that have been alienated free of tax are said to amount to not a great deal less than one-fourth of the whole, and may be about 212,000 bigahs, leaving a balance of 870,000: almost the whole is rented, because even pasture pays somewhat; but the land fully occupied by houses, gardens, and fields, and assessed, probably may be 508,000 bigahs.

About 35 tenants have *Estemurari* leases, on a fixed rent for ever. Their leases mention either that they have a certain number of bigahs, or certain villages. The remainder is let in two manners, one *Darbundi*, and the other *Bigahti*: the former is, when it pays so much on each bigah, according as it is cultivated with different crops; the other is when it pays so much for every bigah, with whatever it may be cultivated. If a *Darbundi* *Raiyat* has cultivated 50 bigahs, so as to pay a certain sum, less will not be taken during his lease, except in a few leases called *Kasht*, some of which are in perpetuity, others for life. Tenants who have such can be compelled to pay only for what they actually cultivate. The others are called *Kumkasht*. The *Bigahti* lands should be measured every year, in order to see, that no new lands are cultivated.

It is said, that in a few places *Mr. Colebrooke* settled a rate, both for lands let by the bigah, and for those let by the nature of the crop. Perhaps he may have done so for the whole, but, if that was the case, the shackles have been entirely cast off by the *Zemindars*, and, except in a few leases signed by that gentleman, there is now no authority for the rate but the books of the estate, which are liable to be altered; and accordingly of 50 persons occupying one village the rate of no two for the same kind of land will be the same, and the worst land is often highest rated. Neither measure nor rate is mentioned in the lease, the master only engages to take no more than the usual custom. When the new tenant has cultivated his



lands, if any attention is paid to form, they are measured, and the rent is fixed by what appears by the accounts of the estate, to have been paid by his predecessor, for which there is no evidence, but that of an accountant, liable to corruption, always from poverty, and too often from inclination. It is difficult to say, whether the frauds on the masters or tenants are most numerous. Almost all the leases are for three years, or at least are very short, and are called *Meyadi*, or leases for a term of years; and the *Zemindars* allege, that if a new tenant offers to raise the rate, the old one must either go out, or pay as much as the other offers. In fact I learned, that in most places it was usual to consider the whole, except that held by the leases called *Estemurari* and *Kasht*, as let at rack rent. The ceremony, however, in many parts, is performed of keeping the accounts, as if the whole were actually measured annually, and valued at a certain rate, and even this costs an immense sum, as the books are both kept in Hindi and Persian.

In many parts again such methods of raising a rent being intolerably expensive and troublesome, the *Zemindars* endeavour to let farms, on a short lease without measurement, which are here called *Benapi*, as in *Ser- kar Tajpoor* they are called *Guzbundi*. This tenure should by all lawful means be encouraged, and the others checked.

The tenants are not required to find security before they enter; as is wisely and properly done on the estate of the *Krishnagunj Rajas*, but security is demanded, when the crop is ripe, a most villainous practice, which ought to be prohibited under the most severe penalties; and all such securities should in law be considered as void; for, the crop being in danger of spoiling, the agent may compel the tenant to accede to whatever terms he pleases, otherwise he will raise objections to the security. In fact the clamour, at least, of the tenants on this estate are very loud against such illegal demands; and it is obvious, that this practice opens the door for their being exacted with impunity.

The whole of the rents are farmed, and the expense of collection is great. The farmer or *Mostajir* is allowed 6-16 per cent. on the amount of the gross rental, besides all lands out of lease, and whatever additional rent he may impose; but this seldom appears on the books, because he usually takes a present, and avoids giving trouble either to himself or the tenants, and the *Zemindar* does not urge him, because he also receives his presents, and thus makes a profit without raising his rental. The *Mostajir* in fact has only 2-1-8 rs. per cent.: and the other profits to answer for bad debts and his establishment; for he allows to the village clerks 4-1-4 rs. per cent., for the village establishment of messengers (*Gorayits* and *Peyadas*), and chiefs of villages (*Mandals*), where such are employed, which is not every where the case, and also for stationary. The village clerk is also avowedly allowed to take 1-4 *ana* (*Paiya*) on the rupee from every tenant; but of this he pays a share to the *Zemindar*, which I suppose does not appear on the books. Where the *Mahal*, or land farmed to a *Mostajir* is small, as is usually the case in this *Pergunah*, he is allowed to act as clerk (*Patwari*), and receives all the emoluments. There is not much land granted to the establishment, but a good deal to the domestic slaves (*Khawas*) belonging to the family.

*Sultanpoor* (*Sultanpoor Glad.*) in the time of Akbur was a subdivision of *Puraniya*, but it has since received great additions from *Morang*, and may contain about 455,000 bigahs. It is said, that above 80,000 bigahs are not assessed, and of the remainder about 268,000 bigahs may be fully occupied, but almost the whole pays rent.

A Persian of some distinction, now in his native country, has a lease in perpetuity and transferable by sale, of 30 villages, for which he pays only 21,000 rs. a year. He has also 12 *Mauzahs* free, but these are estimated



to contain only 9000 bigahs, but the bigah is exceedingly large, being nearly an acre. His whole net proceeds, as managed by a Brahman at such a distance, is 22,000 rs. a year, which does very great credit to the manager. The remainder is let in the same manner as Haveli Puraniya. The whole rents of the part of this estate, remaining to the heirs of the Puraniya family, have been farmed to Bhairav Dat Mallik, a scribe of Mithila, for 48,590 rs. 5 anas 7 pice. He has let the whole to under-renters, who each pay from 200 to 700 rs. Those, who pay under 500 rs., collect for themselves. Those, who pay from 600 to 3000 rs. rent keep one clerk (Patwari). Those, who hold more, keep from one to two assistants (Mohurers). One half of the messengers (Gorayits) are paid in land, at the cost of the landlord; every other expense is paid by the farmer of the rents, for which he is allowed one ana on the rupee, and is answerable for all arrears. The renter always takes the estate, at what it appears rented in the books, and his profit is to arise from the difference between that, and what he can let it, and from the deduction of 1-16 allowed for the expense of collection. The gross rental should therefore be 51,829 rs. 11 anas; but the tenants pay 1-4 ana on the rupee more to the clerks, which they should give as a private bonus to the landlord, under the name of miran. This amounting to 809 rs. 13 anas 8 gandas the tenants should pay only 52,639 rs. 8 anas 8 g. which is at the rate of very little more than 3 anas a bigah, Calcutta measure; for the rent of fallow land of pasture, and of grass for thatch are fully adequate to make up for the lands given to messengers, and to the domestic slaves of the family. This is nothing like, what the greater part of tenants pay. The high ranks may indeed pay at such a rate, but the lower classes, and tradesmen pay at least 8 anas bigah, and the difference is taken by the chief renter, for the under renters are, I suppose contented with the 1-16 of the rent, for their expense and profit. Were we to inspect the books of the estate we should perhaps only find a small part let to tenants; but the whole of what is occupied, either pays a regular rent to the Mostajir, or the tenants give him a consideration to wave his rights of altering the nature of their payments. We cannot, as I have said, allow to the under renters less than 1-16 of the actual payments to make up their expense and risk of bad rents, with a reasonable profit; and we may judge of the great amount of the surplus, that the chief renter draws, by the size of his establishment, which I am told is as follows

1 Steward (Tahasildar) per mensem 50 rs.; 1 deputy (Nayeb) 25 rs. 1 Persian letter writer (Munshi) 15 rs.; 1 Persian accountant (Seresh-tahdar) 15 rs.; His clerk (Mohurer) 10 rs.; Hindi accountant (Amanut Navis) 10 rs.; His assistant (Peshkar) 7 rs. 8 anas; 1 chief guard of the treasure (Jumadar). 6 rs.; 5 guards under him (Burukandajs), 12 rs. 8 anas; 1 Valuer of money (Parkhiya), 3 rs.; 2 Chief messengers (Mirdhas), 6 rs.; their deputies (Nayeb), 3 rs.; 64 Messengers (Payiks) have land; 2 Watchmen have land (Pashwan); 2 other watchmen, 3 rs. 8 anas; 1 Keeper of papers (Dufturi), 2 rs.; 1 Sweeper 1 r.; 1 Torch bearer (Mushalchi,) 2 rs.; Oil and stationary, 7rs.; Total 178 rs. 8 anas. 2142 rs. a year.

The 48,590 rs. paid by the farmer of the rents, is not all clear profit to the landlord. Besides a heavy establishment, which he supports at Puraniya, he has on this estate as follows — 1 Agent (Gomashtah) who signs and seals all public deeds, 41 rs.; 1 Deputy (Nayeb), 15 rs.; 1 Clerk (Mohurer), 10 rs.; 1 Deputy, Ditto, 5 rs.; 1 Chief messenger, who sends (Mohasels) messengers to dun the tenants, 3 rs.; Monthly 74 rs. These collect only the Miran, which nominally would only pay their wages.

*Tirakharda* estate may contain 276,000 bigahs, of which perhaps 22,000 are not assessed. Of the remainder perhaps 149,000 are fully occupied.





The bigah was originally a square of 100 cubits each side, or was equal to 1.56, Calcutta measure. Mr. Colebrooke, it is said, settled, that the leases should be in perpetuity, and that the whole lands of each village should be let at one rate (Ekduri), which varied from 10 to 12 anas, according as there were more or less of a good soil. This, although a much better plan than the attempting to fix a rent on each bigah, according to the nature of the crop, leaves great room for oppression and fraud, a favourite getting all his land good, while those who will not agree to be squeezed, get nothing but fields of the worst quality. The evil of leases in perpetuity had probably existed before the settlement made by Mr. Colebrooke, so that it was indispensable. The tenants having complained, that this assessment was too heavy, they and the Zemindars agreed, that the bigah should be extended to 120 cubits, and that the rate should rise to from 16 to 20 anas, in which the tenants were grossly deceived; for in place of lowering the rent it was considerably raised, this being at the rate of from 11 to 13 anas for the old bigah, in a place of from 10 to 12 anas. Not that this is by any means too high, being at the rate of from 7 to 8 anas a Calcutta bigah. Not only what is actually cultivated, but a good deal, that is fallow, pays this rent, which may raise the average rent of the cultivated land to about 10 anas, a rate which in present circumstances is sufficient to incite industry without being oppressive, provided it is levied fairly, as Dular Singha practises. The estate now contains about 66,000 large bigahs fully occupied, with about one-fifth more in fallow, making in all 79,000, which should be rented at from 16 to 20 anas a bigah, with an addition of 1-64th part (Paiya, i. e. one quarter ana) given to the clerk; but in two or three villages near the frontier of Morang some deduction is allowed, herds of wild animals pouring in from the wastes of that country.

Dular Singha keeps in his own management a farm (*Khamar*) of 5000 of these bigahs, one half of which he cultivates by his slaves and hired servants and the other, by those who take one half of the crop for their trouble. The losses, which even a man of his activity must suffer by fraud, should allow little profit on such a concern; but he has vast herds of cattle, for which it is necessary to provide, and from which he derives a solid gain; and at the same time diminishes his rental (*Hustbud*), a circumstance most eagerly attended to by even the most intelligent Zemindars. Besides he is probably in hopes of being able to withdraw these lands from the assessed estate, as would appear to have been done in the estates of the Raja of Tirahoot as will be afterwards mentioned. He has given 1800 bigahs to about 50 men called Jaygirdars, who are fellows of some courage, and who pay only 250 rs. a year; but are bound to oppose the incursions of wild beasts from Morang. They also pretend, that they oppose the passage of thieves, although scandal gives a different turn to the nature of their employment, especially in the time of his father. He gives about 500 bigahs free of rent to 20 messengers (*Payiks*) that attend him, and 50 to their chief called a *serdar*. What remains from 4000 bigahs of lands granted for service goes to his slaves. The remaining 70,000 bigahs is divided into Taluks, in the size of which there is no very material difference, which is of much importance towards economy. On most estates one Taluk will be 200 bigahs, and another 15,000, so that the person, who has charge of the one, cannot live by fair means; and he who has charge of the other, cannot perform a half of the duty. In each Taluk he allows only one clerk (*Patwari*) and one messenger (*Gorayit*), who are paid in money, in proportion to the value of their receipts. The clerk receives 1-64th part of the amount of collections, which, although paid by the tenants, actually comes from the master,



and, if he collects 1000 rs., he gets 24 rs. a year, in all 39 rs. 10 anas. The messenger gets 12 rs. a year, and of course begs or takes from the tenants, a poor but general economy, from which even Dular has not been able to escape. The village expense of collection is therefore a trifle more than 5 per cent. No part of the rents are farmed. His own steward and servants receive the money from the village clerks, and account to a master who narrowly inspects their conduct. I heard no estimate of the expense of this establishment; but I have no doubt, that it is under 5 per cent. on the rental. Being on the immediate frontier of Morang, to which every rogue can with facility escape, he no doubt loses by arrears; but his people are so little oppressed, when compared with those of all the neighbouring estates, whose rents are farmed, that his lands are immediately occupied. I have entered into this detail to explain the proper management of an estate, in which the only defect is the perpetuity of the leases.

Now, when the rents are farmed to a new man for a few years, he endeavours to enter into what is called a Bejuribi agreement. By this he agrees with the tenants, for a certain term of years, not to measure any farm, but in consideration of a general average per centage, on what each man paid when he agrees to give him a lease for a certain number of years at that increased rate. It is understood, that those, who pay only one-half or three-fourth of the full rate, are entirely exempt from this increase, and therefore use all their influence to bring about the agreement, which saves them from measurement. The rent is therefore always rising on the lands, that are assessed at the high rate, because the additional per centage is added to the rent, until it becomes so high, that the tenant runs away, and then the farm is let for a trifle to induce a tenant to enter; but this trifle is called Pardurah, in order to subject it to the rise, that is always going on. Thus even in the full rate there is no regularity, all intermediate stages may be found, from a very trifle to such a rate, as is no longer tolerable. This Bejuribi agreement is the excess of evil management on an estate let by a measurement of crops. No owner of an estate exempted from assessment permits it, and it should be rendered totally illegal; but it is one of those evils, which naturally result from the system of leases in perpetuity. The rates on Pardurah land, I understand, are as follows. Sali land, which produces two crops or one crop of rice, from 20 to 40 anas a bigah; Ekfusli land, which produces one crop of Turi, Sarisha, Arahara or Maruya, from 18 to 36 anas; Chaumasi land, which produces one crop of wheat, barley, linseed or the finer kinds of pulse, from 12 to 24 anas; Janggala, or land producing coarse pulse after one ploughing, from 5 to 12 anas; kitchen gardens from 24 to 42 anas; ground rent of houses for labourers 160 anas, from tradesmen 128 anas; pasture or grass for thatch from 4 to 8 anas.

Having now treated of all the estates,\* which the Puraniya family possessed at the demise of the last occupant, I shall now give a general recapitulation.

The revenue is almost 3,74,000 rs., and the net actual profit, under the present mismanagement, is said to be 1,30,000 rs., or rather more than 342½ per cent. on the revenue.

---

\* A considerable detail is necessarily omitted.—Ed.





Pergunahs.	Extent in Calcutta Bigahs	
	Total exclusive of Free Land.	Actually occupied.
Haveli . . . . .	8,70,000	5,08,000
Sripoor . . . . .	7,51,000	6,24,000
Futehpoor . . . . .	2,44,000	2,00,000
Sultanpoor . . . . .	3,75,000	2,68,000
Harawat . . . . .	58,000	40,000
Nathpoor . . . . .	2,47,000	1,64,000
Gorari . . . . .	1,25,000	81,000
Katiyar . . . . .	98,000	62,000
Kamaripoor . . . . .	1,41,000	94,000
Baragang . . . . .	7,000	4,000
Amirabad . . . . .	25,000	16,000
Kamlavari . . . . .	10,500	6,700
Sambalpoor . . . . .	49,000	31,300
Rekunpoor . . . . .	a small portion in Kharwa.	
Total . . . . .	30,00,500	20,99,000



## CHAPTER VIII.

### ARTS, COMMERCE, &c.

**THE ARTS.**—For an estimate of the number of each class of artists, I in general refer to the Appendix. In this no respect is had to caste. For instance some milkmen (Jat) are Moslems, some Goyalas, Hindus; both are included under one head: but there are many both of the Jat and Goyalas, who do not prepare curds nor Ghi; in the table such are not mentioned.

**FINE ARTS.**—In my account of the topography and condition of the people I have said all that has occurred to me, concerning the state of architecture, ancient or modern. In the whole district there certainly is not one decent native building, nor is there one erected by Europeans, that has the smallest claim to merit as a work of elegance; and, so far as we can judge from the remains, the case has always been the same.

Sculpture, statuary, and painting, are on as bad a footing as in Ronggopoor. The painters mentioned in the table are employed to draw representations of the gods, as monstrous as their images, to the last degree rude, and very often highly indecent.

The Hindi women of low rank frequently sing, when they make offerings to the gods, and at marriages, and some of the impure tribes in this manner greet strangers, who are passing their village, when from the rank of the passenger they expect a present. Persons of high rank, except a few dissipated young men, never either sing or perform on any musical instrument, to do either of which is considered as exceedingly disgraceful.

**COMMON ARTS.**—Tent makers (Khimahdoz) at Puraniya form a separate profession; and are a principal kind of artists, who hire many tailors to work under them. The tents which they make, are usually of the kind called Be-choba, which has 4 poles, one at each corner of the roof,





which rises in a pyramid, and is supported by bamboo splits reaching from the bottom to the summit. Such tents cannot be large, and they are only of use in fine cool weather, as they can have no fly to turn either sun or rain; but in the cool season they are easily carried, and easily pitched, and the natives of rank, when on their pilgrimages find them very convenient. Some are exported. The same people make neat enough bodies for the carriages, in which the people of rank travel. Those of an ordinary sort are made by the common tailors.

The barbers are not so much respected as towards the east; but are exceedingly numerous. Some of them are Moslems, and some condescend to weave, when they are in want of more honourable employment. The farmers usually contract for a quantity of grain, others pay in money; in the western parts at least they do not frequent markets. They pare the nails of women; but never cut their hair, an operation to which no woman of the least decency would submit.

Those who prepare tooth powder (Missiwalehs) are on the same footing as in Dinajpore. Many people make their own, and there seem to be various other ingredients besides those I have mentioned before; but these seem to be the most approved. The fruit called Tai in Dinajpore, here called Tairi, is the pod of the *Cæsalpinia*, that is used in dying.

As the most common female ornament is a thick layer of red lead covering the whole forehead, the quantity used here is very great. Accordingly a good many people live by preparing this paint. It is made of 2 qualities, and at 2 different places I procured estimates of the charges and profit. At Puraniya the charge for one Ghani or grinding is as follows:—

15 sers 64 (s. w.) of lead 6 rs. 20 sers of Khari (a coarse Glanders' salt. 10 anas; 1 ser unrefined salt petre 2 anas grinding 8 anas a pot 2 anas firewood, about 480 sers. 1 r. 4 anas. Total 8 rs. 10 anas.

The whole operation occupies 4 days, and gives  $30\frac{1}{16}$  sers of red lead, which sells at  $2\frac{1}{2}$  sers for the rupee = 12 rs. 4 anas, leaving a profit of 3 rs. 10 anas.

The materials for the coarse kind are 8 sers of lead,



32 sers of the impure sulphate of soda, and 2 sers of the impure nitrate of potash. This gives 1 *man* of the red lead. The expense of fuel is probably much less. I could not procure a view of the operation. The proportion of the ingredients at Dhamdaha was stated differently. The charges for making the best kind were said to be as follows: the man usually grinds 5 times a month, and keeps a servant; for he does nothing himself but superintend. The servant's wages are 3 rupees, coming to 9 anas, 12 gandas on each grinding. Then the materials are as follows:

30 sers of lead 12 rs. 10 Sers impure sulphate of soda 6 anas. 2 sers impure nitrate of potash 6 anas. Pots 4 anas. Grinding 2 anas. Servant's wages 9 anas. 12 gandas. Firewood 6 anas. Total 14 rs. 1 anas. 12 gandas. This gives 41 sers of red lead worth at 16 rs. a *man*. 16 rs. 6 anas, 8 gandas. Profit 2 rs. 4 anas. 16 gands.

In the bad kind, at Dhamdaha, equal quantities of lead and impure sulphate of soda are used. The people never work in the highest part of the floods, the soil being then too damp, so that the operation will not succeed. They only therefore work 10 months in the year; and with very little capital, and no labour, make a very good profit, of perhaps 90 or 100 rupees a year.

Those who make ornaments of Lac (Lahari) are pretty numerous, and the profession is followed by both Hindus and Moslems. The women work as well as the men; but from their other avocations, such as beating rice, do not find time to make so many bracelets. At Puraniya the following estimate was given of a man's monthly labour and charges.

7 sers of shell lac, at from 3 to 4 anas, 1 r. 8 a. 10 g; colours 1 r. 5 a. = 2 r. 13 a. 10 g; 28 pairs of bracelets at from 3 to 5 anas, 7 rs. Profit 4 rs. 2 a. 10 g.

At Dhamdaha are said to reside 3 families (Churigar) who prepare glass bracelets or rings from the impure Soda (Usmati) of the country. I could not see their operation; but it probably does not differ materially, from that described in my account of Mysore. The glass is very opaque and imperfect, and is called Kangch, while proper glass is called, Sisi. Even our wine bottles are called Sisi; but China ware, from its opacity is called Kangch. At Puraniya are 2 families, who melt broken European glass, and blow small bottles, in which the natives hold scented oils; I did not see their process.





Except in the eastern part of the district shells are not used as ornaments, and even there the artists, who work in this kind of material are rude and unskilful. In this district many of the Hindus, (ordinary sinners) do not think it necessary to wear beads; and it is only true worshippers (Bhakat) that show this external sign of religion. Accordingly the bead makers are confined to the eastern parts of the district, where the manners of Bengal prevail. Dabgars make leathern bags for holding oil and prepared butter (Ghi), using for the purpose ox-hides, although when they sell to a Hindu they pretend that the hide of the buffaloe has been used; the Hindus' conscience is satisfied, and he uses the Ghi without scruple; although strictly speaking, I believe his food ought to be considered as defiled by having been kept in a bag of any leather. A sight of the bags in use here would satisfy any reasonable European of the soundness of the Hindu doctrine, in considering them unclean.

No persons live by making wax candles, or matches; but at the capital some people (Mushalchi) live by making torches of an exceedingly rude nature, such as are commonly employed in India. Some old rags are bound up into a roll, about 18 inches long and 4 inches in circumference. This is kindled at one end, and oil is occasionally poured on it from a brass bottle, while the torch is fastened on a sharp pointed iron by which it is held. The distillers are very numerous and well employed; they distil from rice alone.

The milkmen, who prepare curds and butter, are of both religions and of several castes. Those who follow these professions, in order to distinguish them from their brethren, who merely tend the flocks, are here called Dahiyars or Curdmen. Although they have some cattle, they are not near so wealthy as many of those who tend the cattle, some of whose herds are very numerous. Cows milk in this district is very seldom made into butter. It is boiled, and allowed to become acid, and to curdle, and then is sold. The buffalo's milk is almost always made into butter. Some of the curd-men boil it, others do not, and adhere obstinately to their custom. A man, whose father did not boil the milk, when he was going to make butter, would incur severe disgrace, were he to introduce into his economy this innovation; and on the contrary he, who once has boiled milk, will on no account omit that



operation; neither has he any objection to make curds of boiled milk, the point of difficulty lies entirely in the butter. The natives consider the Ghee, that has been prepared from boiled milk, both as of a superior flavour, and less liable to injury from being long kept; yet by far the greater part is here prepared in the other manner. The usual practice here is for the curdman to deliver to the owner of the herd, 1 ser of Ghee for every 12 sers of milk, that he received from the man, who tends the cattle; the remainder of the Ghee, and the curds, are the profit. It is said, that in the winter 8 sers of milk give 1 ser of Ghee, while in spring 10 sers of milk, and in the rainy season 12 sers are required. At the latter time the cattle are always in the villages, and the curds or butter-milk can be sold, while in the former period the cattle are generally in Morang, and there is no sale, except for the Ghee. The curd-men often pay for the milk in advance, and are enabled to do so by money, which merchants advance, for few have a capital sufficient. The people use a good deal of milk merely boiled; for as it comes from the cow, it is considered too insipid; but they still more commonly use what has curdled by being allowed to stand, until it sours.

At the capital are seven houses of bakers (Nanwai), who prepare bread after the Muhammedan manner, which is fermented or leavened. They are also a kind of cooks, and sell ready-dressed meat, beef and mutton. Their oven is just the reverse of the European kind. It consists of a large jar of coarse potters' ware, in which a fire is kindled. The bread is stuck on the outside of the jar. It is well-raised good bread, but always in flat cakes, the oven would not be sufficient to bake a thick loaf.

In the capital are 10 families of cooks (Bawarchi), who on great occasions are employed by the Moslems. We may judge of their skill by knowing, that they are paid by the *man* weight. The usual rate is 8 anas for about every 82 lbs. of rice that they boil, the other articles go for nothing. Where lean tough fowls, kids, or goats are the only materials that can be procured, no doubt the Hindustani cookery answers better than the European, especially than the English; but where the meat is tolerable, I observe few Europeans that partake of these eastern dishes.

Those who work in durable materials are pretty numerous;





but the quantity of household furniture is very small, and the proficiency of the workmen still less than that of those towards the east. The chief occupation of the carpenters is the making carts, or other wheel-carriages, in which they have shown considerable ingenuity, especially in fastening the wheels. These are suspended on a small iron spindle, supported between the carriage on the inside, and on the outside by two sticks, that are hung from above. The plan seems to have many advantages. Its principal excellence seems to consist in the method of suspending the wheels, by which the friction is made to fall equally on both sides, whereas with an axle-tree the friction is chiefly oblique, by which its effects seem to be greatly increased. A small Puraniya cart with two little wheels, and two oxen, will with ease carry 12 *mans*, (96 s. w.) when travelling at the rate of 12 miles a day. For short distances, they take a half more, and the driver always rides on his cart. The roads, although level, are exceedingly rough, being either altogether unformed or miserably cut by the wheels, as they consist entirely of earth. The carriage used by persons of rank for travelling in, is exactly on the same principle; but the carpenter does not make the body; that is constructed by tailors, or tent-makers.

The workers in the precious metals are numerous; but are said to have little employment. One man, I was informed by the officers at Krishnagunj, was one of the best native workmen that they had ever seen; but this is a very uncommon case. In general their work is extremely rude, and they have no capital. Several of the goldsmiths in this district engrave seals; but also practise the other branches of their profession. There is none who lives by engraving alone. Here, as well as in Dinajpoor and Ronggopoor, among the Muhammedan copper-smiths are some artists, who tin the inside of vessels used in cookery. They also work in other branches of the art, and do not form a separate class of tradesmen. This is an art introduced by the Moslems, and the Hindus have not yet had the sense to use vessels secured in this manner, from the deleterious effects of the copper.

At Puraniya in Abdullahnagar are 10 houses of copper-smiths, descended from Mohan Saha, who only make the covers (Serposh) for the bowls of the implement used for smoking tobacco. They are considered as very fine workmen,



and will not instruct any interloper. Their work is chiefly used in the country, but in Calcutta is in high repute, and sells dear. It is often inlaid with silver.

At Puraniya, I had a full opportunity of examining the process for making the compound metal called Bidri, in which the workmen of that town have acquired some celebrity; and by a sub-division of labour, very unusual in India, have acquired some dexterity. I soon learned that I had been totally misinformed with regard to the ingredients, and that the metal contains no iron. The workmen are usually divided into three classes, and sometimes into four. One set melt and cast the metal; another turn it to complete the shape; a third carve and inlay the work with the silver; and a fourth give it a final polish, and stain the metal black, which is done in order to show the inlaid figures to advantage, and to conceal the tarnish, which in time the metal would acquire. The same set of workmen often finish both of the last mentioned operations.

The grand component part of the Bidri is the metal called by the natives Justah, which is imported by sea, I believe, from China. In my account of the former districts I have called it pewter; but, I believe, it is a tolerably pure zinc, and the same with the Tutenago of the older chymical writers; but I have had no convenience for assaying it. The other ingredients are copper and lead. In the experiment that I saw, the workmen took 12,360 grains of Justah, 460 grains of copper, and 414 grains of lead. The greater part of the Justah was put in one earthen crucible, the lead, copper, and a small quantity of Justah were put in a smaller, which was covered with a cap of kneaded clay, in which a small perforation was made. Both crucibles were coated outside and inside with cow-dung. A small pit was dug, and filled with cakes of dry cow-dung, which were kindled, and when the fire had burned sometime, the crucibles were put in, and covered with fresh fuel. When the workman judged that the metals were fused, he opened the fire, took up the small crucible, and poured its contents into the larger, where the surface of the melted matter was covered with yellow scorix. He then to prevent calcination, threw into the crucible a mixture of resin and bees' wax, and having heated the alloy some little time, he poured it into a mould, which was made





of baked clay. The work is now delivered to men who complete the shape, by turning it in a lathe.

It then goes to another set of workmen, who are to inlay flowers or other ornaments of silver. These artists first rub the Bidri with blue vitriol (super sulphate of copper), and water, which gives its surface a black colour, but this is not fixed, and is removable by washing. It is intended as a means of enabling the workman more readily to distinguish the figures that he traces. This he does with a sharp-pointed instrument of steel. Having traced the figure, he cuts it out with small chisels of various shapes, and then with a hammer and punch, fills the cavities with small plates of silver, which adhere firmly to the Bidri. The work is then completed either by the same men or by another set. A final polish is given to the whole by rubbing it, first with cakes made of shell lac and powdered corundum, and then with a piece of charcoal. When the polish has been completed, a permanent black stain is given to the Bidri by the following process. Take of Sal ammoniac 1 Tola, of unrefined nitre  $\frac{1}{4}$  Tola, of a saline earth procured from old mud walls  $1\frac{1}{4}$  Tola. These are rubbed with a little water into a paste, with which the Bidri is smeared. Then it is rubbed with a little rape-seed oil, and that with powdered charcoal. These are allowed to remain four days, when they are washed away, and the Bidri is found of a fine black colour, which is not affected by water, nor is the metal subject to rust. It yields little to the hammer, and breaks when violently beaten; but is very far from being brittle. It is not nearly so fusible as tin, or as Justah; but melts more readily than copper.

The articles chiefly made of Bidri are various parts of the implements used for smoking tobacco, and spitting pots. Many other things are made, when commissioned; but these are the only articles, for which there is a common demand. The art seems to have been introduced by the Moguls from the west of India. The melters and turners make but poor wages, the inlayers and polishers receive high pay. The goods are usually made entirely by the people, who sell them, and who hire the workmen from day to day.

None of the blacksmiths have any celebrity. The common run merely make the ordinary implements of agriculture, and finish the wooden work as well as the parts made of iron. They



are commonly paid in grain, make good wages, and are constantly employed. The better workmen make very coarse knives and scizzors, swords, spears, lamps, locks, and such other hard ware as is in demand; but all, that has any pretension to goodness is imported.

The Dhunaru, or those who clean cotton by an instrument like a bow, are in this district very numerous. In some parts, as in Dinajpoor and Ronggopoor, these people prepare that cotton only, which is intended for quilts, but in some places they also fit it for being spun. They take a little cotton at a time, beat it, and give it at the markets to the women that spin, from whom they in exchange receive thread. The thread they again give to the merchant, and receive more cotton, and a little money for surplus value of the thread. They have no capital, and are in general most abandoned drunkards. At Puraniya it was said, that they bought the cotton wool at  $3\frac{1}{4}$  sers (85 s. w.) for the rupee, and sold the clean at  $2\frac{1}{2}$  sers ( $82\frac{1}{2}$  s. w.) for the rupee. In cleaning, each ser of 85 s. w. is reduced only to  $82\frac{1}{2}$  s. w. for the operation is not done completely, so as to fit the wool entirely for being spun. On every rupee's worth of cotton they have therefore a profit of  $4\frac{1}{2}$  anas; and a woman can daily sell from 1 to 2 rs. worth, which her husband has cleaned. When they choose to be sober and work, they therefore make very large profits, from 4 to 8 anas a day.

No caste is here disgraced by spinning cotton, and a very large proportion of the women spin some every day, when their other occupations permit; but no great number sit constantly at their wheel. In the south-east corner some fine thread is made with the small iron spindle (Takuya), but by far the greater part is coarse, and is spun by a wheel. At Bholahat it was stated, that a woman, who does not beat rice, and does no work but spin, cook and look after her family, can in a month spin on the wheel  $1\frac{3}{4}$  sers of middling fine thread, which sells at  $1\frac{1}{2}$  ser for the rupee = 1 r. 2 anas 8 pice. She buys 5 sers of cotton with the seed, which costs 8 anas, and goes herself through all the operations of cleaning and spinning. Her gain is  $10\frac{2}{3}$  anas. The ser is 75 s. w. (1,925 lb.). A woman, spinning fine thread with a spindle (no distaff), buys 1 ser of rough cotton, which gives  $\frac{5}{18}$  of wool prepared for spinning, and this gives  $\frac{5}{18}$  of a ser of





thread, worth one rupee. The wool here being worth  $1 \frac{7}{12}$  anas. Her monthly profit will be  $14 \frac{6}{17}$  anas. It is chiefly women of rank, who spin in this manner, and these do no other work.

The greater part of the thread is however made from the cotton wool, that is imported from the west of India. At Dulalgunj the most common thread is worth  $1 \frac{3}{4}$  sers (80 s. w. or lb. 2. 05 the ser) for a rupee. The weaver usually gives  $1 \frac{1}{2}$  ser of the clean wool for 1 ser of thread.  $1 \frac{1}{2}$  Chhatak or  $\frac{1}{18}$  part is lost in the operation; the women therefore for spinning  $1 \frac{1}{2}$  ser of wool has  $6 \frac{1}{2}$  Chhataks of thread worth almost  $14 \frac{1}{2}$  anas; but she takes 2 months to spin this quantity.  $3 \frac{1}{4}$  sers of wool selling for a rupee, every 100 rs. worth of this will produce 174 rs. worth of thread. This is about a fair state of the coarser kind of thread. The native agents dependent on the Company's factory at English bazar, whom I found very intelligent men, and, from the kindness of Mr. Seton, very attentive, agreed sufficiently near with the accounts given by the spinners of Bholahat, because they dealt in the fine threads, which sell at from 10 to 16 s. w. for the rupee. They say, that the women in the vicinity of Kaligang spin with a fine spindle, made of bamboo, to which weight is given by a little ball of unbaked clay. The material is the cotton wool from the west of India, which in cleaning, for such fine thread, loses  $\frac{1}{4}$  of its weight, and scarcely amounts to more than  $\frac{1}{18}$  part of the value of the thread. Women, according to these people, at their usual rate of spinning, clear only 4 anas a month, but, if a woman sat close, and did no other work, she would clear 15 anas.

We thus have the proportion of the value of the raw material to that of the thread varying from  $\frac{1}{16}$  to  $\frac{100}{171}$ . From the ignorance of accounts, under which most of the manufacturers labour, it becomes almost impossible to draw general results, except by vague conjecture, and I often find occasion on such subjects to change my opinion. I am persuaded, that in Dinajpoor I have made the average rate of profit too high; having taken my estimates from the chief manufacturing places, where the goods are far above the average value. I do not however think, that I have overrated the total amount of the thread, and must therefore suppose, that the quantity of raw material is greater, and the profit of the spinners less. The merchants dealing in cotton were indeed



said, in a general way, to be very rich, and to deal largely; but the quantity they stated as imported was small, and probably they were afraid, and concealed a great part.

In this district, I suspect, the same has taken place. If indeed we allow the thread spun here to be worth 13,00,000 rs. and I do not think, as I shall afterwards state, that it can be less, and the value of the raw material to be 3 lac, it would leave a profit somewhat adequate to the number of women, that are supposed to be employed; but this would raise the proportion of the value of the thread to that of the raw material as 13 to 3. The value of the thread used in finer goods is said to be about 3,57,000 rs. and of this the raw material probably does not exceed  $\frac{1}{16}$  part. The remaining 9,43,000 being coarse, the raw material may make a half of the value; so that in all the raw material may be worth 5,12,000 rs. A vast deal more than the merchants and farmers stated. Both probably concealed a part, but I must confess, that any increase of the raw material would, on such a quantity of thread, so much curtail the profits of the spinners, that I doubt it cannot be admitted, without increasing also the quantity of cloth and thread manufactured. I shall afterwards have occasion to mention, that the weavers state the produce of their looms uncommonly low, indeed so low, as to be totally inadequate to provide for their subsistence. They endeavour to account for this in a different manner; but I suspect, that they weave more than 13,00,000 rs. worth of yarn, and that more raw material is used; for I do not think, that we can allow the raw material to make less than 38 per cent. of the thread, as before stated; nor that the vast number of women, who spin in this district, can gain less than 10,00,000 rs. a year, which would require at least to the value of 6,00,000 rs. of the raw material. All these circumstances however being conjectures incapable of proof, I shall adhere to the statements, that I received, especially as they are on the safe side of moderation.

Dyers are on the same footing as in Dinajpoor. In the south-east corner about 50 houses (Rangkar) are employed for the weavers to dye silk thread with indigo and lac. The remainder (Rungrez), scattered through the country, are chiefly employed to dye turbans and girdles with perishable colours (turmeric and safflower), which are renewed occasion-





ally, as the cloth becomes dirty. These men make high wages, from 6 to 8 rs. a month. In many parts the women on festivals dye their own clothes with safflower. The women also give a yellow colour to the old clothes of which they make quilts, that are used in cold weather. This is done with the flowers of the *Nyctanthes arborescens*.

The men, who weave silk alone, possess only 125 houses, and are said to have 200 looms. They work chiefly thin coarse goods for wrapping round the waists of women and children, and worth from  $1\frac{1}{16}$  rs. to  $1\frac{1}{8}$  rs. The silk costs about  $1\frac{5}{16}$  rs. A man can make usually 12 pieces a month. The total value of the goods will therefore be 48,600, and of the raw silk required 34,200. These people are said to make 3,000 rs. worth of the Chikta silk, which is spun from the cocoons, that have burst.

The weavers who make the cloths of cotton and silk mixed, which are called Maldehi, are nearly on the same footing as in Dinajpoor. They work almost entirely the smaller pieces, from 3 to 6 rs. value, which are sent to the west of India by the Gosaing merchants. An estimate, which I procured from a very intelligent man, so nearly agreed with the statement made at Dinajpoor, that I place great reliance on its accuracy. He said, that the journeymen as there, received one-eighth of the value of their hire, and usually made from 2 to  $2\frac{1}{2}$  rs. a month, which would make the average rate of a loom, working these coarser goods, 18 rs. a month. Of this the value of the silk is  $\frac{1}{2}$  and of the cotton thread  $\frac{7}{8}$ . The whole manufactures of the banks of the Mahanonda near Maldeh, although situated in different districts, are so intimately blended, that even after having examined both, I find it very difficult to form a conjecture concerning the share each possess; and, while in Dinajpoor, I laboured under difficulties, the effects of which I must now endeavour to obviate. I have reckoned the whole raw silk, made on the banks of the Mahanonda in both districts to be worth 7,43,000 rs. of which 1,50,000 rs. belong to Dinajpoor; in that district to the value of 63,000 rs. and in this district to the value of about 34,000 rs. are used for making cloths entirely of silk, while to the value of 6,000 rs. may be used in borders, strings, &c. leaving to the value of 6,40,000 rs. which is entirely woven into mixed goods; and, as this part of the material forms one-half of the cost, the





whole amount will be worth 12,80,000 rs. Now I was assured by a Gosaing, who had made a fortune by trade, and had purchased an estate, that his brethren residing in this district annually send about 1000 bales to the west of India. These are commonly valued at 650 rs. a bale, because they pay the transit duties by value; but their actual cost here is 800 rs. making in all 8,00,000. The exports from Maldeh were stated at 2,50,000 making in all 10,50,000 rs. and leaving a deficiency of 2,30,000. Perhaps 30,000 rs. worth is used here and in Dinajpoor, some is sent from this district to Moorshedabad and Calcutta, and the goods said to have been exported from Maldeh, have probably been valued at the custom-house rate. These accounts therefore derived from agricultural and commercial calculations agree so well, that they strongly confirm each other. Allowing therefore the exports and internal consumption of Dinajpoor in mixed cloth alone to amount to 300,000 of rupees, which would consume the whole silk raised on that side of the river, we must allow, that about 67,000 rs. worth of raw silk are sent to Dinajpoor for goods made entirely of silk and for borders; but this was not mentioned in my account of that district. We must also suppose, that about 10,80,000 rs. worth of mixed goods are woven in the district of Puraniya. It was stated, that in the vicinity of English Bazar, about 7000 looms are employed in this manufacture belonging to about 4300 houses; but of the 7000 looms only about 3000 are constantly employed. These will make annually 6,48,000. Allowing the others to be employed half the year, they will make 4,32,000, in all 10,80,000 rs. I am inclined however to think, that the export of raw silk to Dinajpoor from this district is more considerable, and that the proportion of the goods woven there is greater, for the people in making their estimates of the exports seemed to be guided entirely by the place where the merchant resided. The difference however, would be so immaterial, that it will not be necessary to make any alteration; the surplus silk imported, and not noticed in my account of Dinajpoor, would nearly balance any addition to the export of cloth that could be allowed, I shall not therefore in this district mention the cloth imported from Maldeh, nor the silk exported. Almost the whole silk weavers are extremely necessitous, and involved in debt by advances.





The Patwars, who knit silk strings, are much on the same footing as in Ronggopoor. None of them are good artists. The weavers of cotton are pretty numerous, and are mostly employed to work very coarse goods for country use. The only fine manufacture is that of a beautiful white calico called Khasa, about 40 cubits long, and from 2 to 3 cubits broad, and worth from 6 to 15 rs. a piece. Formerly the Company dealt to a considerable extent in this kind of manufacture; but in the year 180 $\frac{3}{4}$  the cloth sent to English Bazar was only 1,100 pieces, worth unbleached 8,000 rs. and I believe, that this was chiefly, if not solely intended to supply the private use of individuals. The weavers of these goods live in the divisions of Kharwa, Fehnagar, Dangrkhora and Gorguribah, that is on the low lands near the Mahanonda and Nagar, and may have about 3500 looms, of which 2400 are wrought by men who could weave such goods as the Company would receive. These formerly were wont to make one piece a month for the Company, and at their spare time wrought common goods for country use. The money advanced by the Company was a regular supply, which they were anxious to receive, although, whenever they got other employment they made higher wages; but they finished their engagement with the Company, when no other employment offered. Several private native traders from Moorshedabad and Calcutta, now make advances for about 1,50,000 rs. some is sent to Dinajpoor and Patna, and a good deal is consumed in the district. They may now weave in all to about the value of 3,00,000 rs. of which the value of the thread will amount to three-quarters. At other times they work for the weekly market, chiefly pieces 36 cubits long by 2 $\frac{1}{4}$  broad, which contain from 800 to 900 threads in the warp, and are worth from 2 $\frac{5}{8}$  to 3 $\frac{1}{2}$  rs. Two-thirds of the value arises from that of the thread. A man, his wife, and a boy or girl, can make 12 rs. worth in a month, and has 4 rs. profit. This class of weavers on the whole may make to the value of about 12 rs. a month, and the thread will probably cost about 8 $\frac{1}{2}$  rs. The advances have rendered them necessitous, and a large proportion have no capital to buy thread; but, when they do not receive advances, work by the piece, the good women of the vicinity furnishing the material.

In other places the goods are all coarse for country use,



the greater part of the thread is purchased, and the weaver sells at the market what he makes every week. The following estimates were given of the annual labour of a man assisted by his wife to wind and warp. The estimate was formed on the cloth most commonly woven in the vicinity.

Value of cloth annually made, Sibgunj Saris, 112 rs. 8 anas; value of thread required, 73rs. 2 anas. Ditto, Bhunis, do. 120 rs.; do. 82rs. 8 anas. Ditto, Dangrkhora, 112 rs.; do. 68 rs. Ditto, Dulgunj, 112rs.; do. 84 rs. 6 anas. Ditto, Bahadurgunj, 84 rs.; do. 60 rs. Ditto, Gondwara, 120 rs.; do. 88rs. 8 anas. Ditto, Udhraill, 112rs. 8 anas; do. 78 rs. 12 anas. Ditto, Haveli, 120 rs.; do. 97 rs. 8 anas. Ditto, Krishnagunj, 120 rs.; do. 90 rs. Ditto, Dhamdaha, 76 rs. 8 anas; do. 42rs. 12 anas.—Total value of cloth annually made, 1,089 rs. 8 anas; Total value of thread, 765 rs. 8 anas.

This gives on an average rather less than 109 rs. a year, for the value which is made by each loom. The reason of so small an amount is alleged to be the uncommon sloth of the people. By the small profits of their business they can pay the rent of a good farm, which they cultivate by means of those who take a share of the crop, and they live on the remainder. It is probable, however, that they are not quite so lazy as they pretend, and that in fact they weaved more than they allowed.

On the above grounds 3500 looms, employed occasionally in finer work, will make cloth to the value of 5,06,000 rs. of which the thread costs 3,57,000rs. The 10,000 looms employed on coarse goods will make cloth to the value of 10,89,500 rs. of which the thread costs 7,65,500. Even allowing the weavers to have reported the full amount of their labour, and total value of the thread must therefore be at least 11,22,500 rs. besides a very considerable quantity (1,57,500 rs.) used in mixed cloth, and some for various other purposes, so that the total amount, exclusive of a little imported, cannot be less than 13,00,000 rs.

Among the cotton weavers, above mentioned, there are in the north-east corner of the district about 80 houses of Chapals, who are said to have 90 looms employed in weaving checkered cloth, such as I have described in giving an account of the adjacent parts of Ronggopoor. This manufacture seems to be almost entirely confined to the small space near the upper parts of the Karatoya and Mahanonda, which is to be regretted, as it forms a much neater dress for the women than





plain unbleached linen. Besides these professional weavers, some farmers, towards the frontier of Dinajpoor, keep a loom, and occasionally, when at leisure, weave cotton cloth; but this custom is not near so prevalent, as in the district above mentioned. I heard indeed only of 500 such persons, the whole of whose labours do not probably exceed the value of 10,000 rs. In this district also about 100 Barbers keep a loom, for weaving cotton cloth at their leisure hours.

The number of women, who flower muslin with the needle, is quite inconsiderable, and they are confined to English Bazar. The weavers of cotton carpets (Sutrunji) are confined to the capital, and the nature of their manufacture is much the same as at Ronggopoor. The most common size is 4 cubits by two, and such are used for bedding. There are two men to each loom, and these take 2 days to make a piece. The thread costs 9 anas, the dyeing 1 ana, and the carpet sells for a rupee, allowing the men therefore to work 300 days in the year, they will in that time make only 150 rs. worth, of which 84 rs. 6 a. will be the value of thread, 9 rs. 6 a. the charge of dyeing, and 56 rs. 4 a. the price of labour, giving only 28 rs. 2 a. for each man; but this is greatly underrated. These men have no land, and their annual expenditure is certainly not less than 42 rs. and more probably is 48.

The tape-makers (Newargar) are entirely confined to the capital. Their work is exceedingly coarse, mostly like girths for horses' saddles, but greatly inferior to that in strength and neatness. The same people make also tent ropes of cotton. In the north-east corner of the district the manufacture of sackcloth from the *corchorus* is very important, and gives employment to a very great proportion of the women in that part.

On all the eastern frontier a great proportion of the women are clothed in the coarse linen made of this material, of which there may be annually consumed to the value of 70,000 rs. none of it is dyed. In the cold weather the poor cover themselves by night, and often by day with a sackcloth rug, and the rich usually put one under their bedding, but the demand for this purpose is not so general as in Ronggopoor. The annual consumption may be 30,000 rs. The quantity required for tobacco bags is very trifling, and



does not exceed in value 1000 rs. The quantity required for the exportation of grain is not great, because wheat, pulse, and oil seeds, and even a great deal of rice are usually stowed in bulk; but a great deal of this description of sack-cloth is sent to Calcutta, Patna and Pachagar in Ronggopoor. To the former is sent to about the value of 25,000 rs. to the second 12,000 rs. and to the latter and its vicinity 35,000 rs. The quantity required for grain, sails, &c. in the district may be worth 15,000 rs. Total 87,000 rs.

For pack-saddles the quantity required may be worth 1500 rs. What is used for packages and packsaddles in this district, amounting to 18,000 rs. is chiefly made by the petty traders (Sungri), who are employed to purchase the commodities. There is a little (perhaps 8,000 rs.) imported from Morang, the remainder is wrought by the women of the Koch tribe. The number of looms, which they are said to employ, is mentioned in the table. The chintz makers are on the same footing as in Dinajpore. Blanket weavers are of two kinds 1st. the Gangregi, who rear the long-tailed sheep. Some men have no flocks, and live entirely by weaving, others have both looms and flocks, and others have flocks and no looms. All however rent arable lands, because owing to the frequency of disease, the produce of their flocks, and consequently of their looms, is extremely uncertain. At present, owing to the scarcity of wool, few can find employment as weavers.

The wool of the two first shearings, from every young sheep, is separated into white and black, and is woven into fine blankets. That of the first shearing, and some of the finest of the second is woven without dying; but some of the second shearing, that is white or of an indifferent black, is dyed of the latter colour. All the wool of the subsequent shearings is mixed, and is spun and woven without distinction, so that, if properly mixed, the colour should be grey, but no pains is bestowed on this, and in the same blanket some threads are black, some grey, and some white, all irregularly disposed. The goods are indeed very unseemly, but of great advantage to the poor, who are exposed to the winter cold, or to the rain. There are two processes used for dying the wool black; 1st. Take  $\frac{1}{2}$  ser (lb. 1.) of the Babur fruit (trees No. 73), beat it, and boil it, for 3 hours, in





10 or 12 sers of water, so that one-fourth evaporates. Pour this upon the blanket, which is put in a small pit in the earth, and is then covered up. Before the blanket is put into the earth, it is first washed with cold, and then with hot water. When it is taken out, it is washed again with cold water. The dye I presume is the iron contained in the earth, which the astringency of the Babur pods fixes. The second dye is the fruit of the Tairi used in the same manner. The Tairi is the same species of *Cæsalpinia*, that in Dinajpore is called Chamolloti. The women tease, and spin the wool on the common small wheel; the men warp, and weave on the same miserable loom, that is used for making sackcloth. The cloth is therefore woven in very narrow slips (Patis), from seven to five of which are usually stitched together to form a blanket. The blankets made of the first quality of wool usually contain seven breadths, and are from  $3\frac{1}{2}$  to  $3\frac{3}{4}$  cubits wide by  $5\frac{1}{2}$  or 6 in length. They weigh, when ready, about  $3\frac{1}{2}$  sers, or 7 lbs., and require 4 sers or 8 lbs. of wool. They sell from 2 to  $2\frac{1}{2}$  rs., and a man and woman require 15 days to make one. Wool of the second quality is woven into blankets of 6 breadths, being from 4 or  $4\frac{1}{4}$  cubits long by  $2\frac{3}{4}$  broad. One requires 3 sers of wool, and occupies the man and woman 10 days. This kind sells from 24 to 22 anas each. The third kind requires 2 sers of wool, and contains 5 breadths. It is 4 cubits long by  $2\frac{1}{2}$  broad, and is worth  $1\frac{1}{4}$  r. A man and woman make 6 in a month. This being made of the coarse wool, is by far the principal object. The wool, good and bad, is bought at 3 sers for the rupee, and afterwards sorted. The wool for six coarse pieces will cost 4 rs., and the price of the goods being  $7\frac{1}{2}$  the man and woman have  $3\frac{1}{2}$  rs. for profit. They make a little more on the finer goods; but not enough to make up for times when they cannot work, the above estimate allowing for no leisure time. These weavers are very inferior in skill to those of the south of India.

The other blanket weavers do not keep sheep, but purchase the wool of the common sheep of Bengal (Bhera Bheri). Their blankets are as bad as those made by the shepherds; but it is to be regretted, that the people have not extended toward the east, where the wool is entirely lost. The women buy, wash, and dry the wool; the men spin and weave it.



They give one pan of cowries for the wool of each sheep, and it requires from 20 to 25 fleeces to make a blanket 5 cubits long by 3 wide. The blanket sells at from 12 to 16 anas. The raw material, therefore, amounts to  $\frac{4.5}{11\frac{1}{2}}$  parts of the value of the goods. If they could procure a sufficient quantity of wool, each man and woman might make four blankets a month, which would give about 2 rs. for their wages. The number of sheep in their vicinity, however, does not always admit of a constant employment, and at intervals they collect shells, and make lime, or work as day labourers. There is, indeed, another reason for their working merely at intervals. The blankets are only saleable in the cold weather, and they are too necessitous to be able to work at any thing, for which they have not an immediate demand.

The manufacture of sugar is at a very low ebb, and is conducted on the same plan as at Ronggopoor; but about one-half of the raw material is procured from Dinajpoor. The whole is consumed in the country, and is far from being adequate to its supply.

The people who manufacture salts are called Beldars, that is men who use the hoe; but all Beldars do not make salt, many are employed to dig tanks, and to make roads. The number of those who can make salts, is estimated at above 500 houses. Their chief employment in the fair season is to make saltpetre. In the rainy season they weed, reap, and perform other operations of husbandry for daily hire. Some years ago the Company suddenly withdrew the advances for saltpetre, and the monopoly in that article rendered the business illegal. The people, of course, made privately as much as they could sell; but this quantity not giving them sufficient employment, they betook themselves to prepare culinary salt (muriat of soda) from a saline earth, that is found in many parts of the district. It may indeed be convenient, and in some respects economical for the Company, when a reduction in the quantity of the saltpetre investment is necessary, to abandon entirely a certain number of the factories, especially those that are the least productive; but this will not only distress exceedingly many individuals, thrown on a sudden totally out of the employment, to which they have been accustomed, and which thus becomes illegal; but will also be always attended with consequences similar to





those above mentioned. The people will not choose to starve, and will run many risks in contraband work. Throwing into prison people in this condition is doing them a kindness. The whole of the Company's advances for cloth were always so trifling, when compared with the demands necessary for clothing the people, that any change made in their system of advances could only produce temporary evils, such as arise to all manufacturers from the occasional stagnations of trade, to which they are always subject; but with the Beldars, the suddenly withdrawing the advances, is to deprive them of the means of subsistence. They are not only unemployed by the Company, but are prohibited from working for any other person. The Company also by the illicit business, that of necessity follows, is a considerable loser. When the investment of saltpetre is therefore to be diminished, a certain deduction from each factory, I am persuaded, would be more advisable; as then a few men only in each place would be suddenly thrown idle, and these would readily find other employment. This year, 1809-10, the Company has restored the manufacture to this district. It was not therefore known, when I travelled through it, to what extent the produce would attain.

In this district nitre is never found in the soil at a distance from houses. The natives consider it as entirely the produce of cow's urine, and, during the whole dry season, where the soil is favourable, and wherever cows are kept, it effloresces on the surface. The only thing requisite seems to be a clay soil, which prevents the animal matter from being suddenly absorbed. The Beldars therefore frequent the farmyards, and scrape the surface of the ground, wherever the cattle have stood, and this may be repeated every third or fourth day. The people, who have most cattle, being either pure Hindus, or Moslems of rank, have an aversion to allow this operation, as they either abominate the Beldars as impure, or are jealous of their prying near the women. The Beldars, therefore, meet with considerable difficulty in procuring a quantity sufficient; and would obtain very little in that way, were not they in the employ of the Company, whose agent protects them. They have therefore recourse to another method. Between the middle of July and the middle of Sep-



tember they repeatedly plough a plot of ground, and throw on its surface all the earth, from which saline matter had been separated by filtration. This earth is called Sithi. They then daily collect as many cattle upon the plot as they can, and keep them there as long as possible. About the end of October the nitre begins to effloresce, and the surface of the plot may be scraped once in four days, so long as the fair weather continues. The earth scraped from the field gives less nitre than that procured from farm yards, but the nitre of the latter contains more impurities. In order to avoid offence, the method of procuring the saline earth, by ploughing a field, seems to be preferable. The quantity of ground and expense is considerable, for from one to two acres are quite insufficient to supply a Kuthi or set of works, and a great deal of labour would be saved, which is now bestowed in bringing the saline earth from a distance. The lands for the purpose now belong to the Company. The only difficulty is to procure cattle; but the whole people of the village would, in all probability, consent to allow their cattle to stand on the plots half an hour, morning and evening, rather than submit to the intrusions of the Beldars, which however constitute a service, that long-established custom has rendered legal. The Beldars allege, that they have another process, by which they can procure nitre. After having boiled the brine twice, and taken from it the saline matter that subsides, there remains a thick brine, which they call Jarathi. The Beldars say that they spread out some of the earth procured in filtering the brine, and on this pour the Jarathi. After two day's exposure to the air this may be again lixiviated, and produces a brine containing saltpetre. The native agent of the Company at Gondwara, however, assured me, that the Jarathi is chiefly employed to obtain an impure culinary salt, which the natives call Beldari Nemak, the use of which being prohibited, it is of course smuggled, and mixed with the salt procured from the south. This indeed some of the Beldars confessed was the case, although they alleged, that they usually mixed the Jarathi with the earth left by lixiviation (Sithi), as above described. The saline earth procured by mixing the evaporated brine (Jarathi) with the Sithi is called Bechuya; and, before water is





filtered through it, is usually mixed with the Cheluya, or earth procured from the farm yard or cultivated plot; but both it is said would separately give saltpetre.

The whole operation of filtering and boiling is performed in the open air, by which occasional losses are suffered, especially in spring, when there are often heavy showers, that curtail the season. A shed, 25 cubits long by 16 wide, would enable a family to reserve as much saline earth as would give them employment to boil the whole year. At present in general they work only six months; but in the remainder of the year there is abundance of employment in agriculture. The chief advantage of the shed is, that it enables them to turn the Jarathi, or ley, remaining after evaporation, to better advantage. The Beldars say, that if mixed with the earth called Sithi, exposed for some days to the air, and then collected in heaps for some weeks or months, the produce of nitre is great, and some rich men have sheds for this purpose.

The apparatus, as usual, is very simple. A circular vessel, called a Kuthi, about 3 feet in diameter, and 1 foot deep, is formed of unbaked clay on the surface of the ground. A small hole in the bottom at one side allows the water poured into the vessel to flow into a pot, which is placed in a hole formed by the side of the vessel. A little straw having been put on the bottom of the Kuthi, it is filled with saline earth, which is well trodden with the feet, and a quantity of water is filtered through it, sufficient to produce a strong brine. The people do not seem very careful to extract the whole saline matter, nor by repeated filtrations to saturate the water. The last is a gross neglect in the economy of the operation, the former is perhaps of little consequence, as the same earth is always again used, and owing to the saline matter, which it is allowed to retain, in all probability, becomes the sooner impregnated. At any rate it is notorious, that all earth, which has once contained nitre, more readily than any other favours its generation.

Some of the Beldars inform me, that they always mix the ashes of straw with the saline earth in the proportion of one-twentieth part. Others allege, that this is by no means necessary, and that the operation may be performed without any addition. They however confess, that they usually put



a small quantity of ashes on the straw, that lines the bottom of the filtering vessel (Kuthi), which, they say, makes the brine flow more readily. They also add some ashes when the saline earth is very dry. It is very doubtful whether there is lime in the soil, and most certainly none is ever added. In India, therefore, lime would not seem to be necessary to the generation of nitre, as is alleged to be the case in Europe.

The brine procured by filtering water through the earth is called Ras. This is evaporated in earthen pots of hemispherical form. Six for each Kuthi are supported contiguous to each other, in two rows, over a cavity in the earth, that serves as a fire place, and the fuel, chiefly stubble, is thrust under by a small slope at one end, while the smoke goes out by an opening, that is formed opposite. While the brine is boiling, a woman, who attends the fire, stirs the pots occasionally with a small broom, fixed at right angles to a stick. This removes the froth called Khari, which like the ley (Jarathi) is mixed with the earth called Sithi, and according to the native agent greatly increases the quantity of nitre, which that yields; but the Beldars allege, that it might be made into a kind of salt called Khari nemak, which is prohibited. I suspect, that this prohibition has arisen from an idea of the Khari and Beldari salts being the same. That such a mistake has been made, I think highly probable; because in a correspondence between the Secretary to the Board of Trade and Mr. Smith. I observe, that the salt, which is prepared by the Beldars, of this district is by both gentlemen called Kharu Neemuck or Caree noon. Both the native agent of the commercial resident and the Beldars assured me, that the two salts are different, and that the whole Khari Nemak used in the district is imported from Patna. They could have no interest in deceiving me, as the preparing culinary salt is still more illicit than making nitre.

The Khari nemak sold in the markets is an impure sulphate of Soda, and could never be employed as a seasoning for food; but is highly useful as a medicine both for man and beast; and, if I am right in supposing, that the prohibition has arisen from this mistake, it should certainly be removed.

When the evaporation has been carried to a certain length, the brine is taken out, and allowed to cool. Then the nitre subsides, leaving a brine, which is again put into the boilers,





and treated in the same manner. When the evaporation, is complete, this brine is again cooled, and deposits more saltpetre, which is called Kahi. The brine or ley, that remains, is again evaporated, and deposits a third kind of nitre called Tehela; but all the kinds are sold intermixed. The ley, that remains after the third boiling, is the Jaralhi above mentioned. The saltpetre (Abi) thus procured is exceedingly impure, and is delivered to the Company's native agent at 2 rs. for the *man*. The native agent at Gondwara and the Beldars differ very much concerning the weight. The former says, that the *man* contains 40 sers of 92 s. w. or is nearly  $94\frac{1}{2}$  lb. (94.45); the latter maintain, that the *man* contains 8 Pasures, each holding  $7\frac{1}{2}$  ser of 72 s. w. or is near 111 lb. (110.88). The Company's agent dissolves the crude nitre (Abi) in water, frees it from many impurities, and again evaporates it, producing the Kulmi, or common saltpetre, such as is exported by the Company. In this operation the salt loses  $\frac{1}{4}$  part, and the expense may be accurately known by the books of the factory.

The proper attendants at one Kuthi, according to the company's agent, are three men to collect, and lixivate the saline earth, and one woman to collect fuel and manage the fire; and where he sees, that a family is active and has such a number of hands, he advances 40 rs. He therefore expects that, in the course of the season, they will make 20 *mans*. This is a very poor reward for 6 months labour of 4 people, and implies clearly to me, that the Beldars carry on an illicit gain. I was indeed assured by one of the Beldars, that a man his wife and a boy or girl able to work, the usual strength of a family, could make from 4 to 6 *mans* a month. A good deal is therefore probably smuggled, especially to Nepal.

The account, which the workmen give of the manner of making the culinary salt, called Beldari Nemak, is as follows. They observe, that in certain places, especially old Mango groves, the cattle, in dry weather, are fond of licking the surface of the earth, and then they know that the earth of the place is saline. Every old Mango grove contains more or less; but it is also found in many waste places. The Beldars scrape off the surface, lixivate, pour the brine on some straw, and allow it to evaporate, when the straw is found to be covered with a saline efflorescence. The straw is then



burned, the ashes are lixiviated, and the brine evaporated to dryness. The result is the Beldari-Nemak, which, although it must be a very impure material, is sold for 4 rs. a *man*, and mixed with the sea salt brought from Calcutta.

I have already mentioned, that the ley remaining after the extraction of nitre (Jaralhi) may be mixed with earth; and if treated in the same manner with the saline matter found in old Mango groves, will yield the culinary salt called Beldari Nemak; but it is alleged, that, by a long exposure to air, the saline matter of the earth and ley mixed is converted into nitre.

The whole subject relative to the Beldari and Khari-Nemak, both being illicit, is very difficult of investigation. Once when in Tirahoot I heard a similar process given for the preparation of the latter; but the cattle licking the earth is a pretty clear proof, that the saline earth here contains a muriate, and not a sulphate of Soda. And the Beldars here allege that the Khari-Nemak is made from the scummings, and not from the ley. The process in both cases may probably be similar. The use of burning the straw in this operation is not evident, the basis of both Khari-Nemak and culinary salt being Soda, and not potash.


I have procured specimens of all the saline substances, to which I have alluded, and their analysis will throw much light on the subject; but as yet I have had no opportunity of having the processes conducted with the accuracy, that would be necessary.

*Exports and Imports.*—Here, as in the two districts formerly surveyed, I have been under the necessity of proceeding by conjecture, founded on what was stated by the merchants, and other intelligent people. Such statements, as might be naturally expected, often are widely different from each other. I have selected such as appeared to me most probable. Here I have included the cattle, and the goods sold at the fairs on the banks of the Ganges. The former are too important to be with propriety omitted, and the fairs are the chief means of intercourse between the two neighbouring districts of Puraniya and Bhagulpoor.

Canoes are a considerable article of import from Morang, and a large proportion of them remain in the country, but many are exported to various places down the Mahanonda





and Ganges. They are exceedingly rude in their shape, and are not opened by fire as those of the eastern parts of Ronggopoor; but the tree is flattened on two sides, in one of which the excavation is made, so that the transverse section is somewhat thus . There are two kinds; Sugis, which are sharp at both ends, and Saranggas, which terminate in a blunt kind of goose-tail head and stern. These last are by far the most common, and by far the greater part of both is made of Sal timber.\* Both kinds are between 18 and 22 common cubits in length. The Saranggas are from  $1\frac{1}{2}$  to  $2\frac{1}{4}$  broad in the beam, at midships, and are worth from 6 to 16 rs. each, where delivered in the Company's territory, near the residence of the merchant. The Sugis are from  $\frac{3}{4}$  to  $1\frac{1}{4}$  cubit wide, and sell from 5 to 6 rs. They are most miserable conveyances; nor is there any of the Saranggas so fine as many procured near Goyalpara, where the timber is probably larger. Canoes made of Sal last 10 years.

The cotton wool is all from the west of India. Part of it comes from Mezzapoor, Kanpoor, and Patna, and part by the way of Bhagawangola. A small quantity is sent to Dinajpoor, and a little to the territory of Morang. The cotton in the seed comes from Morang. A little of it (Kukti) is of the colour of nankeen. Some is sent to Maldeh from the vicinity of English Bazar.

The sugar comes from Dinajpoor, Tirahoot, and Patna. The greater part is fine sugar, made in imitation of what we called clayed, and which the natives call Chini; but there is a very little of a kind called Sukkur, which comes from Tirahoot. It is very inferior in quality to the Chini. A small quantity of Chini is sent to Nepal. The extract of sugar-cane (Gur) comes from Dinajpoor and Patna. The molasses treacle (Math and Kotra) come from the same places. The only external commerce, which Puraniya possesses, is with the territories of Gorkha or Nepal.

In the parts of the district, where fine cloths are manufactured, there are some Dalalsor brokers. Some of them have small capitals, and make purchases as Paikars; but are still employed by merchants to procure goods at a proper value.

---

\* A considerable timber trade is carried on through Puraniya, of which Dr. Buchanan gives a lengthened account.—[Ed.]



At Dulalgunj, where much grain is exported, there are brokers for its purchase ; and in some parts there are brokers for the sale of cattle ; but, as I have mentioned, these are in fact dealers.

The bankers, who give bills of exchange for money, are called Kothiwalehs. There are seven houses at Puraniya, and one of these has an agent at Nathpoor. Two of the principals, the houses of Jagat Seth and Lala Meghraj, reside at Moorshedabad. The agents of these and Baidyanath of this district will both grant bills for money paid to them, and will discount the bills of others. The others, all natives of the district, deal only in the former manner. Their great profit lies in dealing with the landlords, keeping their rents, and discharging the taxes. If large exchanges of gold and silver are required, they can only be procured from these Kothiwalehs. Jagat Seth's house will draw at once for 100,000 rs. The others will not exceed half that sum. Jagat Seth and Meghraj do not deal with the Zemindars. The former will grant bills on any part of India, the others only on Calcutta, Dhaka, Moorshedabad, and Patna.

The Surrafs of this district exchange gold and silver, but do not deal in bills. They are entirely confined to the capital, and have stocks in trade of from 500 to 1000 rs. They not only deal in exchanging money, but purchase and sell wrought bullion. They are not however, gold or silver smiths. One of them is a jeweller.

The Fotdars, who exchange cowries and silver, are here more usually called Surrafs, and are not numerous, most of the shopkeepers giving change to those who purchase, and supply themselves with cowries from the hucksters, who retail fish, greens and other trifling articles. Both classes of Surrafs advance money to those, who are living on monthly salaries, or wages.

The money-lenders called Rokari Mahajans, that is merchants who keep accounts in cash, or Nagadi Mahajan that is dealers in ready money, are on the footing as in Ronggo-poor. Some Sannyasi merchants deal exactly in the same manner, but are not called by either of these names.

*Places where Commerce is carried on.*—I heard very heavy complaints, concerning the illegal exactions made at market places, and I was assured by many people, that those who





attended suffered less when there were regular legal duties, than they now do. The goodness of the Company, in the government of Lord Cornwallis, has raised the Zemindars to the rank which the European landholders obtained in the 10th and 11th centuries, when the fees of land became hereditary. The next step in improvement would be to give the towns and markets a privileged municipal government, the want of which in all eastern monarchies seems to have been the grand check, that has hitherto prevented the people of Asia from making great advances in civilization. Whether Bengal is sufficiently matured for such a plan, I will not venture to assert; but it must be recollected, that in Europe the grant of a municipal government to towns, followed immediately that of the hereditary right of succession to lands. Of course I would not propose to establish at once privileges similar to those which London or other great cities enjoy. Such must be the work of much time; privileges similar to those which were granted by early kings to their towns and cities, would as a commencement be sufficient.

*Coins, Weights and Measures.*—On the subject of coins, most of what I have said in Dinajpooor is applicable to this district. The old unmilled coinages of rupees usually called Sunat or Purbis, are still pretty numerous, and in many markets are current for the same value with the milled money (Kaldars) lately coined at Calcutta. The reason of this seems to be, that a batta, or certain allowance for the coin being worn, is taken by all persons in power, whether the rupees be of the present coinage or not. It is of little consequence therefore to the poor what rupees they take. As I have said in Ronggopoor, there can be little doubt, but that the coinage of these Sunat rupees is going on some where or other, and is by all possible means encouraged by the bankers and money changers. These people are happily, however, daily losing ground, and the present abundance of silver, and the introduction of bank notes have greatly diminished their profits. In a country so exceedingly poor, a gold coinage is highly distressing to the lower classes, and in my humble opinion ought to be entirely discontinued. Even a rupee in this country is a large sum; for being a ploughman's money wages for two months, it may be considered as of as much importance in the circulation of this country, as three or four





pounds sterling are in England. In the present circumstances of the country, nothing larger than 4 ana pieces ought probably to be coined. The gold has fortunately almost vanished, and perhaps should never be allowed to return, by being no longer held a legal proffer of payment. In most parts of the district the currency consists entirely of silver and cowries. Towards the western parts a few of the copper coins called Payesa, worth about  $\frac{1}{6}$  of a rupee, are current; but even these are too large for the small money of a country, where two of them are equal to the comfortable daily board wages of a man servant. On the frontier of Nepal, the silver currency of that country occasionally appears in circulation. All that I have said concerning weights, in my account of Dinajpoor, is applicable to those of this district, only that here the Paseri varies from 5 to  $7\frac{1}{2}$  sers.

It is only in a few places in the eastern and southern parts of the district that grain measures are used. These are of the same imperfect nature as in Dinajpoor, and the denominations are usually the same; but in the south-east corner the standard basket is called Ari, and in different places contains from 2 to 6 sers. In most parts of the district grain is on all occasions estimated by weight.

In some large marts there are grain measurers (Kayals), but they are not appointed by any public authority, give no security for the honesty of their dealings, and in case of fraud, can only be punished by an action at common law, which is totally inadequate to obtain fairness. They are in fact generally appointed by merchants, who have made advances to farmers for grain, and are commonly supposed to possess a considerable slight of hand.

No pains are taken by the officers of police for the regulation of weights or measures. Notwithstanding that by far the greater part of the rent that is due to the landlords, ought to be levied by an annual measurement of every field, the progress in practical geometry in most parts of the district is still less perfect than in Dinajpoor, and it is so, more especially in the parts that ought to be annually measured. The field is not measured with a chain, but by a rod; and this is not laid down, so as to make a mark to which the end of the rod may be again applied, until it is seen whether or not the rod is placed in the direct line which ought to be





measured. The measurer takes the rod by the middle, walks along hastily, putting down its fore-end at what he calls the length of the rod, from where he began, and makes a mark. He then puts the hind-end of the rod near the mark, and walks on, until he advances what he thinks another length of the rod, and then makes another mark, and so he proceeds until he has measured his line, which may thus contain almost any number of rods that he pleases.

Little or no pains have been taken to prevent frauds. The measurers are not professional nor sworn men, and indeed the ground is usually measured by some agent of the landlord, strongly interested to defraud the tenant. Application, it is true, may be made to the judge for a measurer deputed for the particular case; but the expense attending this is quite inconsistent with common practice; and from the character of those deputed the remedy is extremely uncertain. No public standards are kept, and in case of dispute a reference can only be made to the judge who must be guided by oral evidence, which in this district is of very little value. I have no doubt, that owing to a want of standards, government has been largely defrauded by the owners of free estates, who have contrived to establish a customary measure for their own lands, much larger than that used in the vicinity; and when their charters (Sunud) specify a given number of bigahs, thus hold much more than what is their due.

*Conveyance of Goods*—As will appear from the account that I have given of the rivers, this district is on the whole well provided with the means of using water carriage; and the natives possess more boats in proportion than those of either of the two districts towards the east. The most numerous boats of burthen in the district are the Ulaks. They carry from 200 to 1500 *mans*.

In the eastern low parts of the district the most common boats of burthen are called Kosha. They are clinker-built of Sal; both ends are nearly of the same shape ending in a sharp point, and rise very little above the water, or to use the technical term, the boats have no sheer. Their bottoms are perfectly flat without any keel. They therefore have a great resemblance to the Patela of Patna, but are not so broad in proportion to their length. They are therefore rather unsafe; but, drawing very little water, are exceedingly





convenient in the Mahanonda, and its numerous branches. The Koshas are from 50 to 1000 *mans* burthen. The hire for boats of these two descriptions, from the southern part of the district, and from the Mahanonda as high up as Dulalgunj, is to Moorshedabad about 7 rs. for 100 *mans* of the Calcutta weight, and to Calcutta 14 rs. The load is estimated by the quantity of grain she will carry; and much less than her nominal burthen of any valuable article is entrusted. From the capital in the rainy season, the boat hire is about 14 rs. for the 100 *mans* to Calcutta and Patna, and 9 rs. to Moorshedabad. No boats go in the dry season. From the upper parts of the Kosi, the boat hire to Bhagawangola in the dry season, varies from 5 to 10 rs.; to Patna at all seasons, from 15 to 18 rs.; to Moorshedabad in the rainy season from 5 to 10 rs.; to Calcutta at the same time, from 12 to 15 rs. The boat hire everywhere is liable to most enormous variations, according to the demand, for the persons called Majbis, having unlimited influence, occasion a complete combination whenever there is any extraordinary demand. At Duniya I have stated the usual limits, but at the other places I have only stated the rate when there is no extraordinary demand.

The boats used for floating timber are called Malni or Malnhi. They are long, low, and narrow at both ends. They are usually of two sizes; one carrying about 60 *mans* called Pangchoyat, and one carrying 80 *mans* called Satoyat; but some carry as much as 150 *mans*. They are occasionally employed to transport rice, and in some places indeed are kept for that purpose alone. They usually have no deck, even of bamboos, and no cover; but on long voyages to Calcutta a small platform of bamboos is made for the people at their middle, and is covered with a low arched tilt made of mats.

Dinggis are open boats used for fishing, for carrying goods from one market to another, and for ferries. They usually carry from 50 to 100 *mans*; but some employed in commerce carry from 100 to 300 *mans*, and those used to go from market to market are usually from 25 to 30 *mans* burthen. Such a boat with one man, will get 4 *anas* for a trip of 8 or 10 miles. Some of them in the eastern parts are built like the Koshas, and are called Kosha-dinggis; but in general the planks do not overlap, as those of clinker-built vessels do. On the





Ganges and Kosi where they are largest, they are very fine safe vessels, sharp at both ends, and widest abaft the beam, as in the Ulaks; but they have little sheer, that is their ends do not rise high above their middle; and they draw a good deal of water, so that in these large tempestuous rivers they are a safe conveyance.

There are boats called Palwar, but that word signifies a boat applied to a particular purpose, and not one of a particular construction. They are employed to attend those that are laden, to find out passages among the sands, and to carry out hawsers to assist in warping them off when they get aground. In fact they are a kind of pilot vessels. In some places they are large canoes, in others small Ulaks, or Dingis. Boats that row well are usually chosen.

The Pansi is shaped like a small Ulak, but in proportion to its breadth is generally longer, and over the after part has a tilt for the accommodation of passengers. It is for the conveyance of these alone, that this kind of boat is intended. They could carry from 50 to 100 *mans*. A Pansi of 80 *mans* burthen, 19 cubits long, 4 broad, and  $1\frac{1}{4}$  deep at the well, costs about 62 rs. Thus two Sal timbers 18 cubits by  $2\frac{3}{4}$  girth, 28 rs.; sawing the above, 5 rs. 8 anas; carpenters' wages, 10 rs.; ditto for board wages, 2 rs.; the Pengchra, who bends the planks, 3 rs.; 60 lbs. iron and nails, 10 rs.; ropes and bamboos, 3 rs. 8 anas; total, 62 rs. Such a boat lets at 3 rs. a month, besides the hire of the crew.

The Bhauliya is intended for the same purpose, and is of about the same size. It is sharp at both ends, rises at the ends less than the Pansi, and its tilt is placed in the middle, the rowers standing both before and behind the place of accommodation for passengers. On the Kosi, the Bhauliya is a large fishing boat, carrying six or seven men.

The canoes carry from 10 to 40 *mans*, and in the rainy season are in many parts almost the only good conveyance from market to market. Many people however, resort to a bundle of sticks or bamboos supported by earthen pots, and many cannot afford even this; but, when necessitated to go anywhere beyond their depth, tie together two or three stems of plantain trees, on which they can go to market with some small wares.

In the dry season a good deal of commerce is carried on



by means of floats (Ber or Singri) made of two canoes connected by a platform of bamboos. These are very useful, as even where the quantity of water is very trifling, they will convey from 80 to 100 *mans* of goods. At the capital, such floats are much used. In the dry season boats come no higher than Chuniyapoor, 22 coss south from the town; and all goods are transported to and from that place on floats, carrying about 100 *mans* (85 s. w. the ser) or 8,727 lbs. A float makes only two trips in a month, the windings of the channel being exceedingly numerous. The hire is 4 rs. or more than half as much as from Chuniyapoor to Moorshedabad. The float is attended by two men. In all the branches of the Mahanonda, canoes are much used, and are the largest and best in the district. A vast number of floats are employed in carrying down goods from Kaliyagunj to Nawabgunj, where boats of burthen at all seasons can reach. The hire is 1 ana a *man* (82 lbs.) the distance in a direct line being about 44 miles; but the river winds a great deal. A float of two canoes will carry 100 *mans*.

A great many of the boats of burthen belong to merchants, and, being reserved for the conveyance of their own goods, are not let to hire. Many however belong to men called Naiyas, who professedly let them. Most of these men are fishers, but some of them, especially in the eastern parts of the district, are farmers. In every part, however, it is very difficult to procure boats to hire, and everything seems to be under the authority of certain persons called Ghatmajhis, whose conduct is much the same as in Ronggopoor. Indeed in this district almost the whole persons of every trade and profession, in each vicinity, have submitted themselves to the authority of some leading man who is called a Majhi or Mandal, and without whose consent nothing can be done or procured. The great object of this seems to be to enable the company under his authority or protection to defraud those who want to employ them, which they attain by implicitly following the dictates of these men, who are generally the most cunning, litigious fellows, that can be found. They are, I believe, appointed by no one in authority, but generally endeavour to persuade the public that they have some powerful friend or protector, and do everything in his name.





Near the capital and some indigo works a few roads have been made; but in general, although carts are much in use, they are left to find a road in the best manner that they can. A great part of the country is high and sandy, and therefore carts do not absolutely sink, even after rain; but the roads are miserably cut, and the wheels soon make deep ruts, which require a constant change of place. In such lands this does little harm, because they are generally waste: nor would raising mounds in such situations do any good, no hard material being procurable except by burning bricks, an expense which has never been proposed. Even where the soil is rich, and by rain is converted into a sticky clay, through which a cart cannot be dragged, some people think that the raised mounds which I have proposed for roads do not answer; for in rainy weather the softness of the material does not enable them to resist the wheel, and if they are cut in any particular place there is no means of avoiding the ruts by going aside. This in some measure is undoubtedly true; but in such soils I am persuaded these mounds are the only roads that should be permitted: for first, without going to the expense of bricks, it is impossible that any road, consisting entirely of mould, should ever in rainy weather resist the action of cart wheels; and in that season no carts should be on any account permitted to travel where the road is not made of brick. If at the commencement of the rainy season all ruts were filled, the surface, strengthened by the grass roots that would spring, would continue a tolerable road throughout the dry season, which is all that can be expected. Secondly, from being well raised the occasional showers of spring produce little effect on such mounds, and at the close of the rainy season they become much earlier practicable. Thirdly, mounds answer one purpose of enclosures, and prevent travellers from encroaching on the fields, when they find a rut by which they are difficulted. This I know is a great nuisance to the carters and to gentlemen driving buggies, but it is of vast use to the farmer, to whose crops the natives in particular show no sort of regard.

Making roads, digging tanks, and planting trees, among the Hindus are religious duties, and almost every rich man performs one or other, and often the whole; but as the inducement is to obtain the favour of God, public utility on



these occasions is not at all consulted, nay the works often turn out nuisances. The plantation consists of trees totally useless, or of sour resinous mangoes, the worst of all fruit, and soon runs into a forest harbouring wild beasts: the tank is a dirty puddle, which is soon choked with weeds, and becomes a source of disease: the road is never intended for the traveller; it does not lead from one market-place to another, but usually from the house of the founder to some temple that he chooses to frequent, or to some tank or river where he bathes; and as it usually intersects some public routes, a breach must be formed to allow travellers to proceed, and this renders the road itself impracticable, even when it might happen to be in a line that was useful.

Little attention seems to have been paid by the magistrates in keeping up the great lines of communication, either with the military cantonment, or with the capitals of the adjacent districts. The convicts indeed occasionally work on them, but the effects of their labour is little perceptible, much of their time having been employed on less public roads. On this subject I have already had occasion to explain my opinion. In my account of the manufactures I have mentioned the advantages of the carts, and the load that they can take. A great part of them belong to people who live by letting them out to hire, but many of them belong to merchants. A great part is hired by the indigo planters for carrying home the crop. The usual hire is about  $4\frac{1}{2}$  anas a day, but they are often hired by the job; for instance, from Sahebgunj to Dimiyaghat at Nathpur, a distance of about six miles, they take according to the demand, from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  rs. for the 100 *man* ( $82\frac{1}{2}$  s. w. the ser) or 8483 lbs.

The horses (Tatus) for carrying loads are kept by the smaller traders, Paikars, and Bepares. They carry from 2 to  $2\frac{1}{2}$  *mans* each, and go much faster than oxen; but in this country where goods are only carried one or two stages to some place of embarkation, that is of little consequence to the merchant. One man manages two horses, three men only are allowed to ten oxen, which makes a most essential difference in the rate of hire. Mares are seldom employed, so that the number in the Appendix includes chiefly the males fit for work. Horses of this breed are usually worth about 5 rs. They commonly are allowed nothing but pas-





ture; when however this is entirely burnt up, and they are wrought, they sometimes get a little straw.

Very few live by keeping oxen for hire; but many who occasionally trade will let their cattle; in procuring which, however, there is always much difficulty, as indeed there is in finding any sort of conveyance. Oxen hired by the day in general, as in Gondwara, are allowed  $\frac{1}{2}$  ana for every *man* they can carry, but in other places, as Kaliyachak, the hire is double. Scarcely anything except fish, vegetables, milk or such trifles, is carried to or from markets by porters, and such people cannot in most parts be procured. In the division of Kharwa, however, porters are the principal conveyance, and there are a good many (Bhariya) who carry on a pole passing over their shoulders, and often go to other places for service. Some of them who engaged with me were contented with 4 rs. a month. They carried about 60 lbs. weight, proceeding by very easy marches and long halts. In most other parts of the district the porters (Motiya), that can be procured, will carry only on the head. They are therefore chiefly employed in removing goods from the warehouse to boats, or from boats to the warehouse, or from one warehouse to another at a short distance. The Motiya, or man who carries on the head, it must be observed, can take a package 60 lbs. weight, and the Bhariya, who carries on a pole, must have this load divided into two equal portions; but then any number of Bhariyas may be employed on one package by suspending it to a pole, so many men going to one end and so many to another, while the Motiyas will not act in concert. A man of either class loses caste if he attempts to innovate in his manner of carrying.

No regulation respecting ferries seems to be observed. The Darogahs of the Thanahs in some places, indeed, compel the ferry-men to enter into agreements for the due execution of their office; but as I find, that on frontier rivers the prerogative is disputed with eagerness, I presume, that this anxiety after trouble chiefly arises from a desire to share in the fees of office; and I am pretty confident, that it does not extend to any superintendency of the stipulations in the agreement being executed.

When troops march, the native officers of police call on the Zemindars to furnish proper boats; but on common oc-





casions every thing is left to the Majhi's discretion, and the boats are very unsafe, and generally much overloaded. On the Ganges and Kosi the only proper boats are large fishing Dinggis, which as I have said are very safe, if not overloaded. On smaller rivers single canoes are most commonly in use; but on the Mahanonda and Nagar small boats of 40 or 50 *mans* are employed. Only one of these is, however, allowed for each ferry, so that they cannot be united to make a float for conveying horses or carts. No Dinggi of less than 200 *mans* burthen should be permitted on such rivers as the Ganges or Kosi. Such can take carts with great safety. A regulation of ferries by government seems to be much required. In this district no land seems to have been attached to them, or at least, whatever may have been formerly attached, has now been seized by the Zemindars. The owners of land or other rich men appoint Majhis Ghaliyals or ferrymen, who usually furnish the boats, and pay a share of the profit to the person, who pretends to give him a licence. I understood, for instance, that the ferries in Gondwara paid in all 365 rs. a year; one of them, Saptami, paid 105 rs. In Sibgunj again the ferrymen found boats and servants, and were contented with one-third of the fare, accounting to the landlord for the remainder.

In this district there is some accommodation for the traveller, besides the casual hospitality or charity of rich men. Those who retail provisions (*Modis*), as I have mentioned, may be said to keep inns, and they are much more numerous than towards the east. There are in the southern part of the district some of the kind of inns called *Bhathiyarkhanahs*, where strangers are accommodated with lodging and food.