

an increased business through the prisoners and others about to be employed on the roads ; a large herd of cattle; two extensive flocks of sheep going to a more convenient station, to be washed and shorn ; a string of horses, bought at a public sale at Richmond, **from** the celebrated stock of Francis Smith, Esq. ; and two ox-teams with flour from Pittwater, about twenty miles from us, and which is the nearest mill, although it will not long be so. I am glad to find that Cruttenden has contracted with a man at **Hobarton** for the erection of a mill at **Prosser's**, which in the **first** instance is to be worked by oxen or horses, but can be readily enlarged to move by steam when the consumption shall make it desirable. It costs now two shillings to take the wheat to the mill, and one shilling for back carriage ; and as there are times when an ox-team cannot travel, they are then obliged to resort to horses or donkies, which carry the wheat or other grain in sacks on their backs. We have never **had** so **lively a day** before since I have been here.

It is very strongly reported that the Road meeting at Richmond is a failure. If so, ours will still be the only one that has **succeeded**—no one directly from it.

4th **January**.—**The** Rev. Mr. Norman ought to have been here to-day, but he has **again** disappointed us. Our small congregation waited very patiently *more* than an hour, and then dispersed. A party came four or five miles with a child to be christened: they brought a fiddler with them, and notwithstanding their disappointment, had a dance on the green, and such other amusement as they had intended, and **departed in good order**.

Cruttenden **and** Dr. Blyth came to my quarters in the evening, when the Doctor told us **all** the particulars about the Road meeting at Richmond. It did not go off upon its merits, but was very properly opposed by some whose names had been irregularly struck off the Special Jury List, which disqualified them from acting as commissioners. This was supposed to have been done at the instigation of the "Director-general of Roads," a perfect dog in the manger, who does not know how to act himself, **and** does everything he *can* to thwart others. He is reported even to have said of some of the **landholders** of the district, that they were getting too rich and independent, and that they must be curbed and kept back. I think) this is rather too bad for a man who exists by the taxes paid by these very people. This meeting was principally got up and supported by Francis Smith, Esq., of **Campania**, who in comparative worth and usefulness is about a thousand to one before the "Director-general of Roads,"

The survey of the road has gone on in the same listless, **unbusiness-**

like mariner as usual in works of public advantage. Mr. Calder has come over to us for a day or two, and then under one pretext or another has left for Hobarton, leaving his men here at the public charge, and with his salary running on **from** the date of his appointment.

7th January.-All ready for a start, at ten o'clock I was on my horse, and bid a long and last adieu to Prosser's Plains. Whilst I **was** there, I feel that I held the scales of justice with a firm and even hand, equally protecting the masters and the men, which it sometimes appeared to me was more than the latter had always been used to-and by their generally orderly and proper **behaviour**, I have reason to believe that they duly appreciated my conduct towards them. I had fewer complaints during my time than had been usual, never had occasion to inflict a serious punishment, and the "lash" had quite a sinecure **of it** for months, never again, I hope, to be resorted to.

The morning was lowering-the sun thought me unworthy to shine on, which, as it was now Midsummer, I could have no possible objection to, and **after** a very pleasant ride and occasional walk up and down **the** hills, I arrived at Richmond, twenty-five miles, about five o'clock, where I intended to stop for the night.

8th January, Sunday.-Went to church **in** the morning, which I had not had an opportunity of doing for some months, and heard a good practical sermon from the Rev. Mr. Aislabie : a very good and attentive congregation, who appeared to be gathered together **from** some **dis-**  
**tance** round. I could not but admire the style in which an old gentleman, a German, came in : amongst other peculiarities, he had, I think, the most tremendous Meerschaum that I had ever seen, and which he evidently very reluctantly surrendered to his servant on entering the church porch. I intended after church to have rode to Hobarton, **fifteen** miles, to dinner ; but Major Schaw, the police magistrate at Richmond, from whom I had received great civilities on former occasions, pressed me so strongly to take an early family dinner with him, that I consented on condition that he would let me off at four o'clock, which **would** have allowed me daylight to Hobarton.

The Major, Mrs. Schaw (who is a relative of the late Mrs. Admiral C. B. Ross, whom I had the pleasure of being known to), and Lady **Cockburn**, six daughters (a very interesting group), a son, and myself, made a very respectable family party. I find the Major, like myself, is tired of his berth, although should he be **confirmed** to Richmond, where he is only acting provisionally, and which I hope he will be, it may perhaps alter his **opinions**. With such a family as he has, a return to England is a very serious matter to consider of, and, indeed, almost prevents

the possibility of his moving. Just as I was about to start, it came on to rain heavily, which continued all the evening. I consequently gave up the intention of leaving, and spent the evening most agreeably with the Major and his amiable family.

9th Jan.4 started after breakfast : the rain had laid the dust, cooled the air, and made it delightful. Between Richmond *and* Ridsen, where we cross the Derwent in a punt, and where, **from** the depth of water, a suspension bridge will doubtless at some time or other (the sooner the better) be erected, is 2 very long, **tortuous**, and high hill, **from** the summit of which you see both Richmond and the Derwent. A most excellent road has been made over it, at a trotting **rise** both up and down, and at the top there is a continual **rill** of water, which is received into two large stone cisterns, that are always full, and which must be most useful to cattle and stock when travelling over it. At the bottom of the hill, as you approach Mr. Gregson's, there is a long flat, where the formation of the road has been discontinued, and which in wet weather, I should think, must be almost impassable ; but this is only another proof of the incompleteness of the surveys, and a want of a controlling power in the formation of the necessary roads and communications.

Crossed the ferry at **Ridsen**, and about noon arrived at Hobarton. Went to the Freemasons' Hotel, where I had arranged to meet **Crutten-**den ; it is kept by a mulatto, who is neither very cleanly nor civil. Having secured accommodation for myself and horse, I proceeded to the wharf to look for a ship, and went on board the "Derwent," which, as a regular trader, had been strongly recommended to me ; *saw the* master, learnt his terms for a passage, and promised to give him an answer in a day or two. I then went to the Colonial Secretary to announce my arrival, when I found that I had no occasion to be in a hurry about my resignation, as I was entitled to some holidays, if I chose to take them.

10th January.—**B.**, of the **51st** Regiment, called on me, Had a long talk with-him about his family, who came out in the same ship with me to Port **Phillip**. He had been over to Melbourne to see them. He told me his mother and sisters were going back to Dublin, having found everything so very different from what they had hoped **and** expected ; but that his father would probably stay there, as he was getting into good practice, and it was hoped that the terrible state of business had seen its worst.

Everything seemed to be very bad at Melbourne ; one of the banks had just failed, and the others were tottering. Over-speculation has

played the deuce with them there, as well as here and at Sydney. Saw the master of the *Derwent* ; agreed for my passage, and gave him a cheque for part of the amount as earnest; she will sail towards the end of the month ; all her oil, and a great part of her wool, is shipped, **The Derwent** has the reputation of being the best, and the master one of the best, in the trade **from Hobarton** to London ; and the time of the year being **favourable**, I anticipate a quick and pleasant voyage home.

**Grueber** came into town to-day ; we dined together at the **Macquarie**, where he is staying. Met there a Mr. **Bunster and his family**, who are just arrived out from England in the *Tasmania*; he complains very much of their treatment on board. He is an old settler, **and a really good fellow** ; we soon got acquainted. His lady, a second wife, pleasant and agreeable. The young ladies had been in England **some** years for their **education**,—**one** of them rather pretty.

11th Jan.—**Cruttenden** is come to town about the roads, and says **the prisoners are to be sent down directly: I hope they will get them**, We **dined together** at William Robertson's, who has an estate **near Prosser's**, where he intends **building a house** for the **occasional** residence of himself and **family**. He will be a great acquisition to that **neighbourhood** ; he has **acquired** a large property, and is a thorough man of business. **If a few more** of those who own property in that locality were to follow the **example**, it would **be moat useful to the country** ; and when the **roads** are commenced, it will perhaps stimulate them to do so.

In the evening we **went to the theatre** : a very decent house, and a tolerable company, **under the management of a Mr. Clarke**, who seems to be very efficient, and gives **general satisfaction**: The play was my old acquaintance "**Blue Beard**." Some dancing by Miss Young, not perhaps quite equal to Fanny **Elsler's**, and a farce, very well played, called "**Bachelors' Buttons**." No gallery, no half-price, and I did not see or smell **any smoking, which is much too common both with young and old**, and upon almost all occasions, here.

13th Jan.—**Grueber** and **Lieut. Steele** dined with me yesterday, and Grueber left this morning early : he is a thorough good fellow—I owe him many civilities, which I am **afraid I** shall never have an opportunity of repaying, as we have most probably met and parted for the last time. On my arrival in London, I have promised to go down to Tottenham, where his father is living, and give him a faithful account of my friend's present position and future prospects, which are **unquestionably** good; and I most assuredly shall perform my promise.

Dined at Steele's, where I met a Mr. Lempriere, of the **Commisariat**, a relation of whose, Dr. Lempriere, I knew many years ago at Newport in the Isle of Wight. He told me that Captain Booth, the commandant of Port Arthur, where he **is** stationed, is a son of Richard Booth, Esq. R.N., an old **friend** of my father's.

The establishment at Port Arthur for twice or thrice convicted prisoners, under the superintendence of Captain Booth, is said to be perfect in its arrangements ; perhaps as a place of punishment it may be so, but, as a means of reformation, it is very questionable. Every one seems to be unacquainted with its details, or at least pretends to be so. If we may judge from its occasional effects, such as the commission of murder, and other crimes that are inevitably punished with death, the prisoners must be in a very deplorable state of despair. I **do** not believe, from all I could learn, that the horrors of Port Arthur tend much to the prevention of further crime ; and men are certainly occasionally sent there for very slight additional offences. Perhaps it is not wrong to hold out something in **terrorem**, to deter, if possible, **from further** crimes ; but all experience shows that it acts very faintly as a preventive.

There is an establishment there for the employment of boys and lads, who are taught various trades. Boys should not be allowed to congregate together, -no good does or can come of it ; whatever of evil they did not know when they were sent there, they are sure very speedily to acquire ; and the " Port Arthur boys," as they are called, **are** always the most troublesome to those to whom they may be assigned, or who may subsequently employ them.

14th **Jan.**—**After** breakfast, paid my bill at the Freemasons', where I was all alone, and moved my quarters to the **Macquarrie**, where there is a good table-d'hbte, which is much more to my taste ; indeed, for the last seven months I have had quite enough of my own company at Prosser's Plains. Mr. **Leasley**, whom I knew before, and who has been some months waiting for a godsend in the shape of an **official** appointment—Mr. **Milligan**, the new director of convict **discipline**—Mr. **Bunster**, and others, are there.

[To be continued,]

## ON THE AGRICULTURE OF HINDOSTAN.

BY GEORGE W. JOHNSON, ESQ. BARRISTER-AT-LAW,

FELLOW OF THE **AGRI-HORTICULTURAL SOCIETY OF INDIA**, CORRESPONDING  
MEMBER OF THE **MARYLAND HORTICULTURAL SOCIETY**.

**WHEN** we remember that Hindostan was inhabited by a comparatively **civilised** people at a period as far remote from the present as that of its Macedonian invader, it is but natural to anticipate that, after a lapse of two thousand years, they would be found to be improved at least in those arts **from** whence are derived the common necessities of life.

This is a justified expectation, because such is the usual onward progress of nations.

Even when unaided by either science or printing--the director in acquiring, and the great agent in **diffusing**, improved knowledge--yet the slowly-accumulated results of experience have **always** enabled the historian of other nations to **point** out, that in later ages they were more expert and more knowing than in those which preceded.

Confining our attention on this point exclusively to agriculture, an apt illustration is offered by comparing the state of this art among the Romans, as related to us in the works of the elder Cato and **Varro**. The latter lived a century and a quarter after the first-named writer, and his details show that in that period the Roman agriculture had practically improved, though still shackled by superstition.

This is only one example out of many which might be quoted. But when we turn to India, we find it standing alone, as an instance of a nation remaining without any advance in the scale of improvement through the series of centuries to which we have alluded.

The causes of an existence so protractedly stagnant must be powerfully fettering ; for it is no ordinary restraint that can keep back the desire for **improvement**, and the emulation to excel, which are inherent in the human mind.

The aptitude to learn, the readiness to imitate, which **characterise** the natives of that country, render **them** capable of rapid improvement.

Patience and unwearied application, two of the best ministers to

success, are also amongst their prominent characteristics,-accompanying them in the pursuit of all their arts, and particularly in their practice of agriculture.

The sedulousness with which they address themselves, in every district, to overcome the difficulties often incident to irrigation-the **unweariedness** with which they urge again and again their ploughs over the same spot, to **up-scarify** a tilth, are instances of these characteristics.

In the Himalaya **mountains**, whose sides seem carved by nature to an angle forbidding the exertion of the farmer's art, patient perseverance has triumphed over the difficulty, and the natives raise crops upon the acclivities which enable them to subsist high up among the **precipitous** formations.

“ The inhabitants,” says **Mr. Fraser**, “ must indeed be a patient, industrious race : a spot of ground, of any considerable extent, seldom occurs where even the rude plough which they employ can be used without the previous assistance of art ; the sides of the mountains must be cut and **levelled** to produce fields for **tillage** ; water must be conducted for the purposes of irrigation, frequently **from** a great distance ; and, when the insufficient means together with the rude tools they possess to effect this are observed, it will perhaps excite wonder that corn **tillage** should have been attempted at all, in a land that appears only calculated, at best, for grazing ; and it must surely appear astonishing that the inhabitants, thinly scattered as they are, can raise as much grain as is requisite for their own support, and can spare a portion to those of other districts and countries which are not so well supplied, Their **method** of cultivation is so ingenious and neat, that it merits a particular description.

As level ground is seldom to be met with, the least rocky faces of **the hills** are cut into a succession of terraces, rising above each other; which operation produces a number of strips of level ground, more or less narrow according to the steepness of the hills, and more or less regular according to its ruggedness. Great **labour** and care are bestowed on this operation. It is generally necessary to build a retaining wall, to support the edge of the small strip of ground, of a height corresponding with that of the bank ; and **much** attention is paid to **leveling** its surface, so that water may neither rest upon it, nor, in running **off**, carry away any portion of its scanty soil. But this exact level is **also** necessary to fit it for receiving the benefit of irrigation, and every rivulet (with which indeed the hills abound) is diverted **from** its course

at a height sufficient for their purpose (consequently often **from** a great distance), and led by small drains, constructed with much neatness and skill, first to the higher cultivated spots, **from** which it flows to the rest, or is again collected into a stream, after saturating them, and directed to another and lower range of fields.

Sometimes these streams are carried across a deep dell by means of long hollow trees, supported by high piles of stones, for the purpose of irrigating the opposite side of the valley, where water **could** less easily have been conveyed from above.

The irrigating system is chiefly necessary for the rice crop, which, though not put into the ground till the rains have **set** in, frequently requires the assistance of artificial flooding. The spring and summer crop, however, of wheat and barley scarcely less require this aid, as showers are often scanty from the time of sowing until the corn is **full**.

The breadth and extent of the ledges or strips of land obtained by their cutting the hill-face vary according to the nature of the ground: where they are carried up one of their usual slopes without the advantage of a retroceding vale or bottom, they are generally not more than half so much, and the depth of the supporting wall frequently equals the breadth.

On such narrow strips it *would* be impossible to make use of cattle and a plough, and therefore manual **labour** is there employed in preparing the soil; but wherever there is room for a plough, it is preferred. The instrument here made use of is perfectly similar to that employed in the plains of Hindostan, being equally simple and inefficient: a piece of crooked wood, one end of which is fastened to a rude yoke, which crosses the necks of two bullocks, and the other end inclined downwards, is sharpened to **turn** the ground; while near the acute angle formed by the bending, a handle is inserted to guide and press the point into the earth.

Patience, however, (the characteristic of the Hindoo of the plains,) serves also the mountaineer, instead of ampler means, to attain his end; and repeated ploughings produce an effect equal to that which a superior instrument would compass in one or two operations, and the soil of the hills in general **favours** these weak means, being free and easily worked, consisting chiefly of sand, the decomposition of sandy, **mica-ceous**, and **slaty** stones, mixed with a considerable proportion of decayed vegetables,

The instruments used in manual **labour** are equally simple and inefficient. A stick crossed at right angles, one end of which is shod with iron resembling a miserable and broken sort of **pickaxe**, seems to be the

principal one. **But** whatever their implements may be, or whether the fields are worked by the plough or by the hand, they do assuredly bring them to a high degree of **tilth.**”\*

Thus **characterised** by ingenuity, patience, and endurance, what were the obstacles to improvement that have restrained their escape **from** that rude practice of the art which they yet pursue ?

· We **shall find** that these have been neither few nor trivial, and that they form together a mass of impediments which would have thwarted the exertions of even a nation of philosophers.

Prominently effective among these obstacles is their religion.

This, by **excluding from** a vast portion of inhabitants the use of animal food, proportionately prevents the formation of manure, without a supply of which the farmer’s industry is expended in vain.

No soil possesses so great a power of self-renovation as *to* enable it to bear constant cropping. Manure must be applied to it in some form, and the readiest source from which this can be obtained is from the excrements of our agricultural animals. In India these sources are very restricted, or entirely cut off. Pigs are held in abomination, and rarely seen, being eaten only by the lowest class of Hindoos, the outcasts of society, Sheep are few, the meat being bad and little used, whilst the **wool** is too **coarse for** export, and **woollens** are but in small request for home **consumption.**† The ox is held too sacred by the large majority of natives to be fattened by them for market; and its dung is almost entirely consumed for fuel.

· The exclusion of animal food induces another injury to the productiveness of the soil, by promoting the more general employment by the natives of vegetable oils to enrich their food. To supply this, as well as that which they require to anoint their bodies and to feed their lamps, the sesame, linseed, **palma Christi**, and other plants are cultivated, and occupy a very large extent of surface. These not only proportionally restrict the space applicable to the more necessary articles of food, but exhaust more than any other plants the soil on which they are **allowed** to ripen : the impoverishing effect of the oleaginous crops is so

• J. Baillie Fraser’s “Himayala Mountains.”

† The wool is mostly brown, a perfectly white-wooled sheep being rarely met with. In flocks of some hundreds it might be possible to select one so distinguished.

‡ Except where Mahomedans prevail; whilst elsewhere, in concession to the prejudices of Hindoos, its slaughter has been actually prohibited by the **authorities** (as in **Kishnaghur**).

well known and admitted by farmers in England, that leases, very generally, contain a covenant prohibitory of their growth. They are usually a profitable crop, and, therefore, an outgoing tenant, if inimical to his lessor, usually **endeavours** to remunerate himself, and, as he says, “ gets the land ready for the landlord,” by growing mustard, rape, and **turnip** seed.

The injury caused by the religious system of the natives is not confined to this one point ; another arises from the numerous holidays it enjoins.

In this respect, the Mahomedans are about as much in error as the Hindoos, and the amount thus deducted from the annual **labour** performed by the latter does not fall much short of one-third ; there are upwards of ninety holidays noted in the Hindoo Almanac, and many of them last for several days. When we combine this with their natural indolence, and the tardiness with which they work even when they really address themselves to any task, it must be very apparent that the productive resources of the country are greatly diminished ; and no branch **suffers** more from such causes than agriculture, which, perhaps more than any other art, admits of every hour being profitably employed, “ There are always weeds to be extirpated, and dung to be collected from the high-road,” was the reproof of one cotter farmer to another, who was less industrious than himself’.

A third obstacle thrown by the Hindoo religion across the path of improvement, is the division of the people into castes. Not that I am ignorant of the error into which most European writers have fallen, in considering the demarcation of caste impassably strict, and as still sustained in its original integrity ; but the obstacles to which I allude are such as those which give to one caste an advantage over another in the very terms on which its members hire their land. A **Ryot\*** of the **Brahminical** caste obtains a lease on more **favourable** terms than any other, and all others are more kindly treated than the **Chamars**, or **low-caste** natives. What also is of consequence in all trades, a **Brahmin** has greater facility than a lower caste man in recovering his debts ; for he has **only** to threaten to mutilate or to destroy himself, when the **terrified** debtor will strain every resource to repay the money, fearing the misfortunes in this world, and the torments in the next, which he believes would be brought upon him by such a **proceeding**.†

\* Ryot is the **Hindustanee** name of the class who alone cultivate the soil in **India**, and resemble the cotter farmers of this country.

† Until lately, the threat to sit Dhurna **was** equally effectual in the **Anglo-**