

it; and, as much importance has been attached to the fact of the Governor's having so expressed himself, I have his Excellency's authority for reading to you the very words he made use of:—"If, however, it be decided to open the Crown Lands' Act of 1842 to amendment, various questions will present themselves—the first, and most important, of which is that of 'pre-emption.' My objections to the right of pre-emption are, that it will greatly increase the species of gambling for land, which is always more or less actively going on in the colony—especially for land in good locations, or positions which have the command of water; and that it will tend to bring the business of the survey department again into arrears; and indeed to throw all matters connected with the sale of land into confusion. I acknowledge, however, that pre-emption might be attended with some advantages, and I believe there is an impression in favour of it among persons in England, who take an interest in colonial affairs; I, therefore, cannot but feel that it probably will be conceded, and though I cannot take on myself the responsibility of recommending the measure, I am therefore prepared to acquiesce in it. To grant to a squatter the right of purchasing his homestead at a fixed price, after having been a certain number of years in possession of it, would doubtless be much more simple in its operation, than to expose him to the risk of an auction, even though the value of his improvements were secured to him, in the manner which I have recommended."

Certain commercial returns were moved for by Mr. Lamb; and on the motion of the Colonial Secretary, John Hubert Plunkett, Esq., was appointed to the seat in the contested elections court, vacant by the resignation of Roger Therry, Esq.

The Attorney General obtained leave to bring in a Bill for adopting an Act of the Imperial Parliament intitled, "An Act for consolidating and amending the laws against offences relating to coin;" also, a Bill for adopting an Act of the Imperial Parliament, intitled "An Act for more effectually preventing embezzlements by persons employed in the public service." Both Bills were read a first time.

On the motion of Mr. Windeyer the Select Committee appointed to consider the Country Court of Requests Act Amendment Bill, was re-appointed.

Mr. Cowper, in a speech of some length, moved "That Public Prayers to Almighty God, be offered up daily at the opening of this Council, as soon as the Speaker shall have taken the Chair; and that the Chaplain, who shall be of the Church of England, be appointed by the Speaker to perform this duty."

Mr. Suttor seconded the motion.

Mr. Robinson moved the previous question, —this motion not having been seconded,

Mr. Windeyer moved that the matter be referred to a Select Committee.

Mr. Allen seconded the motion, which was supported by Dr. Lang.

The Attorney General moved the previous question.

Mr. Robinson seconded the motion, which was supported by Mr. Murray, and Mr. Foster; and having been put, was negatived by a majority of 12 to 11.

The motions of Messrs. Cowper and Windeyer were consequently not put.

## WEDNESDAY.

Dr. Nicholson moved "That a Select Committee be appointed to enquire into and report upon the necessity of amending the law relating to scab and catarrh in sheep."

Mr. Cowper seconded the motion, which after a suggestion by Mr. Hamilton, that the Act for regulating the Slaughtering of Cattle, and the Hired Servants' Act, should be submitted to the same Committee, was put and carried,—the Committee to consist of Dr. Nicholson, Mr. Cowper, the Colonial Secretary, Mr. Hamilton, Mr. Icely, Mr. Suttor, and Mr. Wentworth.

In answer to a question from Mr. Panton, the Colonial Secretary stated that it was understood that Her Majesty would not sanction the Customs' Bill, passed on the 22nd December, 1843, but that it would be allowed to expire in December.

Mr. Lowe presented a petition from John Broughton complaining that he had not received a reward of £40 offered for the capture of two bushrangers in 1840.

The Colonial Secretary said his impression was that the petitioner had failed in making out a proper claim to the reward.

## THURSDAY.

Mr. Cowper moved for a return showing the amount of tolls levied on roads in the county of Cumberland since the passing of the Act of Council 6 William IV., No. 11, and also the amount of such tolls expended in repairing the roads on which the same were raised. He hoped that the public would be satisfied with the information that would be presented in return to this address. He understood that more money had actually been expended on the roads since the passing of the Act than had been received from the tolls on them; although the very bad state in which they had lately been would lead to the belief.

Mr. Robinson seconded the motion, which was put and carried.

Dr. Lang presented a petition from C. Sievwright, lately a protector of aborigines, complaining that the Government was indebted to him in a sum of £58, which he had applied for in vain.

A Message was received from his Excellency the Governor, presenting a Bill to authorize the establishment of a General Cemetery, in the neighbourhood of the city of Sydney, and the removal to the same of the dead formerly interred in a Burial Ground in Sydney, which has long been disused, and for other purposes.

Also a Message from his Excellency, presenting a Bill to alter and amend an Act intitled, "An Act to make provision for the safe custody of, and prevention of offences by persons dangerously insane, and for the care and maintenance of persons of unsound mind."

Also, a Message, presenting a Bill to repeal an Act, intitled "An Act to give a preferable lien on wool from season to season, and to make mortgages of sheep, cattle, and horses valid, without delivering to the mortgagee."

The Collector of Custom moved for leave to bring in a Bill for the better regulation of the customs in the colony of New South Wales.

Leave was granted, and the Bill was presented and read a first time.

The Colonial Secretary moved the re-appointment of the Library Committee, with the addition of the names of the Speaker, the Collector of Customs, and Mr. Cowper.

The motion was seconded by the Auditor General, and carried.

The Colonial Secretary moved the re-appointment of the Standing Orders Committee, for the purpose of reconsidering the rules 112, 125, and 139.

The motion having been seconded, was put and carried.

Mr. Wentworth said, it appeared by a Message which had been sent down to the House this evening, on the subject of the Lien on Wool Act, that the House was placed in this position; either they must repeal the Act this session or Lord Stanley would put an extinguisher upon it next year. Lord Stanley's despatch had been placed before them; but the letter of the Governor which had accompanied the Bill home, was not placed before them; and in the absence of that letter it was impossible to say how far the views of the noble Secretary of State had been guided by the advice which was sent to him from this colony. He did not wish to impute any sinister motive to the Governor; if His Excellency did give advice of which this despatch was the result, he had no doubt that His Excellency had given that advice under the idea that the disallowance or repeal of the Act, would be beneficial to the colony. But whatever the original opinions of His Excellency as to this measure, he had no doubt that His Excellency's experience of the measure, like that of every one else in the colony, had led him to form very different conclusions; and if His Excellency had given such advice he would now, no doubt, readily recall it. The measure had been of the utmost benefit to the colony. (Hear, hear.) There were not two opinions about it in the country. He held in his hand a return which shortly stated what had been the operation of this Act. The amount advanced upon mortgages of stock, from the 11th October, 1843—the day on which the Act came into force, to the 31st December, 1844, was £358,622 11s.; and the amount advanced upon liens on wool during the same period £148,972 0s. 8d.—in all £507,594 11s. 8d. During the present year from the 1st January to the 31st July, there was advanced upon mortgages of stock £98,960—upon liens upon wool £62,908, or £161,868 during the present year, and £669,462 11s. 8d. since the Act came into force. There could be no necessity for him to point out the immense benefit which must have arisen from the circulation of such an amount of money; from such advances being made to that particular class; the most important class who received these advances. It was not too much to say that but for this measure, scarcely one of those engaged in grazing and pastoral pursuits but must have gone to swell the large list of bankrupts that had unfortunately arisen from other classes of society. It was because he, in common with the greater part of the country, were aware of the benefits that the measure had conferred, that he said it ought to remain part of the permanent legislation of the country; it could not be repealed without the greatest injury to every interest in the colony. In moving for a Committee, his object was, to call before that Committee persons of all classes, bankers, merchants, all in fact who had seen the operation of the Act, and who were competent to

speak of the measure. If the testimony which he should be able to bring forward was of that conclusive, irresistible character that he hoped it would be, he trusted that Lord Stanley would be induced to withdraw the edict he had pronounced, and that, His Excellency the Governor would feel bound to recommend that such a course should be adopted. The ultimate effect of the appointment of this Committee might be, that the Bill, which he had brought into the House during the last Session, would be again submitted to the House for its adoption, together with certain resolutions—such as to induce the Governor to transmit the Bill a second time to Her Majesty's Government, for Her Majesty's sanction. With these observations he would move "that a Select Committee be appointed to enquire into the working of the Act 'to give a preferable lien on wool from season to season, and to make mortgages of sheep, cattle, and horses, valid, without delivery to the mortgagee; and to report whether it is expedient that this Act be repealed, or be continued part of the permanent legislation of this colony."

Mr. Robinson seconded the motion.

The Colonial Secretary said, he scarcely thought that justice had been done to the Governor, in supposing that it was in consequence of suggestions made by him that the Secretary of State had determined upon the course he had. Had the Governor been so strongly opposed to the measure, he might have arrested it *in limine*, he might have refused to sanction the Bill, and it could never have come into operation. No doubt it was the duty of the Governor, in bringing such a Bill under the consideration of the Secretary of State, to point out such portions as might appear objectionable, but the objections on which the Secretary of State dwelt, appeared to have arisen in England, and if it were permitted him, he would suggest to the Committee, which he had no doubt would be granted, that they should particularly direct their attention to those portions of the Bill dwelt upon by Lord Stanley in his despatch. He should give his support to the motion for a Committee.

After a few words from Mr. Lamb, the Attorney General, and Mr. Lowe, the question was put on the motion for a Committee, carried; to consist of the following members:—Mr. Wentworth, Mr. Robinson, Mr. Lowe, the Attorney General, Mr. Cowper, Mr. Hamilton, and Captain Dumaresq.

#### Sydney District Council.

MONDAY.

The order of the day being for the consideration of the Report from the Committee to enquire into the alteration of the Charter.

Mr. Thurlow moved for the reception of the Report.

Mr. Kettle seconded the motion.

Mr. Fisher moved, as an amendment, that the Report be sent back to the Committee for reconsideration; objecting to the reception of the Report in its present state, on the ground of the gross personalities which it contained against the heads of the District Council and of the Colonial Government.

Mr. Carr seconded the amendment.

Mr. Macdermott stated, that he should be willing to support the amendment if any other member of the Committee besides Mr. Fisher

had come forward to disclaim any concurrence in the violent language of the Report; but that Committee was composed of seven members, and there was little reason to expect that its general character would be changed if it was sent back. He should rather, therefore, that the Report be received and disposed of at once.

After some further observations, the amendment was put and negatived, and the Report was received.

Mr. Thurlow now moved the adoption of the Report, expressing his hope that, although ample reasons existed for retaining what was termed the objectionable language, the Council would rather expunge this language and adopt the Report thus altered, than allow the subject to pass without coming to a definitive determination upon it.

Mr. Kettle seconded the adoption of the Report.

Mr. Macdermott moved the following amendment, "A Select Committee of this Council having reported that certain alterations having been made in the original Charter, incorporating the district of Sydney, by which, in the opinion of the said Committee, the Charter has become void, and the Council defunct. Resolved, that without adopting such Report, it is expedient for the security of the members of this Council, and for the interests of the district, that the correctness of this opinion should be ascertained, and with this view, that the advice of counsel learned in the law be taken in the matter, and in the event of the Charter being pronounced void or defective by such learned counsel, that proper measures be adopted to remedy the defects, or to procure a new Charter, if necessary, agreeably to the provisions of the Act of Parliament, 5th and 6th Victoria, cap. 76, sec. 45, and that a Committee consisting of the Warden, Councillors Carr, Cape, Hyndes, and Macdermott, be appointed to carry into effect the objects of this resolution." In moving this amendment, Mr. Macdermott remarked that it would have all the effect which the Committee, in all probability intended, while it would get rid of all those censures which the Report contained against public officers, and which had much better be dispensed with.

Mr. Cape seconded the amendment, and expressed his belief that some such course as this was essentially necessary to set at rest the important question at issue, while all the objectionable matter of the report would be avoided.

Mr. Carr moved, as a further amendment, "that this Report be not adopted;" contending that if, according to the language of the Report itself, the Charter had been void *ab initio* for the want of a corporate name, or from any other cause, there was, in point of fact, no Charter at all, and, consequently nothing for the Governor to invalidate. The duty of the Committee would, therefore, have been properly fulfilled by reporting that the Charter was invalid from the commencement, if they believed such to be the fact, without going on to investigate and censure the conduct of the Governor.

Mr. Hyndes seconded the amendment.

Mr. Macdermott expressed his intention of supporting this amendment, as being free from the objection which applied to his own on the score of expense.

THURSDAY.

The debate on the Report as to the alteration of the Charter was resumed.

Mr. Fisher moved, as a further amendment, that the Council should resolve itself into committee, for the purpose of considering this report.

Mr. Jenkins seconded the amendment.

Mr. Thurlow said, that nothing had been advanced which touched the Report materially, except by his friend Mr. Fisher, one of the committee. The amendment which had been proposed by Mr. Macdermott was based in error, for it assumed the essence of the Report to be that the Charter was rendered invalid by the alterations which had been made in it by the Governor; whereas the real principle of the Report was, that the Charter was invalid at its very outset. He would maintain that the assertions in this report, as to the invalidity of the Charter, were unquestionable law, and by the amendment of Mr. Macdermott they could only arrive at the same end which they had already attained; while they would be involved in additional expense. The committee had done no more than communicate to the Council the whole circumstances of the transaction which they had been appointed to enquire into, drawing their inferences from these facts as they went along; and although some members might deprecate the terms which had been used, it was by the public that their conduct and the real worth of the transaction had to be determined; and the rejection of this report would be tantamount to an approval on the part of the Council of all that had been done by the Warden, the Colonial Secretary, and the head of the Executive. It was quite probable that the City of Sydney might have been included in the district merely by mistake at the first issue of the Charter; but in such a case as this, the proper course of the Governor to have adopted would have been to procure an act of indemnity from the Legislative Council, in the same manner as had been done with reference to the defects in magistrates' commissions. Instead of this a public record had been tampered with, and a notice had been published in the *Government Gazette* for the purpose of misleading the public, by inducing a belief that the alteration had been a mere matter of omission, and thus disguising the real facts of the case. The rejection of this report would, in after years, be construed into a precedent for admitting the authority of the Governor to alter any of the public records; and although members had expressed a kind of pious horror at the language of the report, they had a duty to perform to their constituents; he would ask, therefore, whether they could continue to act under an instrument which they believed to be invalid, without taking the necessary steps to enquire into its validity? However the matter might be determined, he should rest satisfied with having performed his duty, in protesting against the unauthorised interference with a public record.

Mr. Fisher's amendment was now put and negatived by the casting vote of the Warden.

The next amendment was that of Mr. Carr, "That the Report be not adopted;" and on a division the votes were found to be even, the Warden therefore was called upon for his casting vote, which he gave against the amendment, remarking that having been

somewhat roughly handled in the report, he could not vote for its rejection in this manner, lest it should be thought that he was influenced by personal feelings in so doing.

The next question was the amendment of Mr. Macdermott, in which the division was also equal, and the casting vote of the Warden being given in favour, the amendment was carried.

*Creoles.*—The word Creole is often, in England, understood to imply a Mulatto; but the term means a native of a West Indian colony, whether white, black, or of the coloured population.

### LITERARY REGISTER.

## THE CREEK OF THE FOUR GRAVES.

A TALE OF THE BUSH.

BY CHARLES HARPUR.

I tell a settlers tale of the old times,  
As told me by our friend, old Egremont,  
Who then, with four of his most trusty men,  
Went forth into the wilderness—on foot,  
For horses then were cattle of too great price  
For the rough usage of its trackless depths—  
Went forth to seek new pastures for his fast  
Increasing flocks and herds.

The sun that rose  
Behind them as they journeyed out, was now  
Setting beyond a mountain range, before  
He'er visited, and his last glances gleaned  
Down on the windings of a nameless creek,  
That, fringed with oaks and the wild willow, ran  
Noiselessly near, between our travellers  
And those new eminences.

Wearied, there  
The fire they kindled for their first night's camp;  
And soon in pots of tin the tea was made,  
Fragrant and strong; the fresh sliced rasher broiled  
On the live embers, and as soon dispatched  
By the keen edge of healthful appetite:  
And as they supped, birds of new shape and plume,  
And wild strange voice, nestward repairing by,  
Oft took their wonder; or between the boles  
Of the upstanding forest trees, they saw,  
Perched on the bare abutments of those mountains,  
The Wallaroo look forth.

Their supper done,  
The echoes of the solitary place  
Came, as in wonder, round about, to meet  
Strange voices in a stranger speech, while then  
Lifted in glee—but to be hushed forthwith,  
As some vague sense of danger lurking round,  
Came o'er the adventurers. Discourses then,  
Of their peculiar business, following, brought  
A graver mood that reached into the night.

And now their couches were prepared of grass,  
And the green tresses of the willows there;  
And four, as pre arranged, laid them to rest,  
Under the dark boughs of the forest, high  
Ordering, and traced out against the clear  
Wide gaze of Heaven; and trustful of the watch  
Kept o'er them by their thoughtful master, soon  
Slept heavily: while all things round them there  
Showed slumbrous too;—the circling forest trees,  
Their foremost boles carved from a crowded mass  
Less visible, by the watch fire's bladed gleam;  
And even the shaded and enormous mountains,  
Their bluff brows glooming through the still air,  
Seemed in their quiet solemnly asleep;  
Yea, the whole universe had thence appeared  
Coiled in vast rest, only that one long cloud  
Crept, as with scrawling legs, across the sky;  
And also, that the multitudinous stars,  
In their bright companies, high over all,  
Looked thoughtfully awake.

And now the Moon,  
Up from behind an eastern hill, was seen  
Ascending slow, till level with its ridge,  
Whereof the solid bulk seemed then to grow  
Half saturate with her radiance; while the shrubs  
That fringed the outline of its summit, all  
In delicate delineation, looked as well  
Out of her very face in hazy relief,  
As sculptured from a her substance.

(To be continued.)

### BIOGRAPHY. BRINDLEY.

JAMES BRINDLEY, the originator of that system of canal navigation which contributed so much to the national wealth, was born in the parish of Wormhill, in Derbyshire, in 1716. He was the son of a small freeholder, who squandered his property in rustic dissipation, and could scarcely afford to give him even the rudiments of education. His boyhood, therefore, was spent in rural labour: but at the age of seventeen he left his home, to be apprenticed to a millwright at Macclesfield. He soon exhibited an uncommon share of mechanical ingenuity, which enabled him to excel his master in planning and executing orders for machinery more complicated than usual, and caused his services to be eagerly sought and highly prized by those who had once occasion to employ him.

At a later period he went into business on his own account, and, by many useful inventions and contrivances, established his reputation throughout the neighbourhood as a skilful mechanic. He gradually obtained a wider range for the exercise of his powers.

In 1752 he erected a remarkable engine to drain some coal mines at Clifton, in Lancashire, of which the moving power was a wheel fixed thirty feet below the surface of the earth, and driven by water drawn from the river Irwell, by a tunnel cut for near 600 yards through the rock. In 1755 he was employed to construct portions of the works for a silk mill at Congleton, under the superintendence of an engineer, who proved incompetent to the task which he had in hand. Brindley does not appear ever to have executed machinery of the sort required, and he had not even been permitted to see the general model of the mill: but on the incompetency of his superior being discovered, he came forward and told the proprietors, that if they would let him know what was the effect they wished to have produced, and would permit him to perform the business in his own way, he would finish the mill to their satisfaction. The knowledge which they had of his ability and integrity induced them to repose confidence in this assurance; and he accomplished the very curious and complex machinery required, in a manner far superior to the expectations of his employers, and with the addition of several new and useful contrivances. He also invented engines for making tooth and pinion wheels, which theretofore had been cut by hand, and with great labour.

Many other improvements Brindley introduced into the mechanical arts. But about this time his thoughts were drawn towards a larger sphere of action by the resolution of Francis Duke of Bridgewater to cut a canal from his coal mines at Worsley to the town of Manchester, distant about seven miles. This scheme is said to have been before conceived by one of that nobleman's predecessors: but that circumstance does not detract from the honour due to the great perseverance and resolution displayed in the execution of his plan. Divesting himself of the splendour which usually belongs to his rank, he devoted his large revenue almost entirely to his favourite undertaking: resisting the temptation to borrow money, lest he should involve himself and his successors in irreparable difficulties, in case of the failure of an undertaking which, from its novelty, no man living could assert to be certain of success. At the

same time having selected Brindley as his engineer, on good experience of his skill and talent, he placed a noble confidence in him: and, without fear or distrust, devoted his energy and fortune to work out the magnificent design which the genius of his coadjutor had planned. As the difficulties to be overcome were very great, so there was little experience to guide the projectors. Navigable rivers indeed had been improved, and those which were not navigable by nature had been made so by piling up their waters with locks and dams: but of canals, properly so called, this was the first constructed in England. That it might be perfect in its kind, it was resolved to preserve a level, and avoid locks altogether: but to effect this obstacles were to be overcome such as never had been surmounted in England—obstacles which had always been considered insurmountable. Navigable tunnels were to be cut, long and large mounds to be carried across valleys, and in the line which finally was adopted, an aqueduct bridge of three arches, nearly fifty feet in height, and, including the embankments on each side, five hundred yards in length, was to be carried over the river Irwell. This part of the scheme being generally considered wild and extravagant, Brindley, to justify himself to his employer, desired that the opinion of another engineer might be taken. This was accordingly done: but the second, on being conducted to the spot where it was intended that the aqueduct should be made, exclaimed, "I have often heard of castles in the air, but never before was shown the place where any of them were to be erected." But the Duke of Bridgewater's confidence in Brindley was not to be shaken, and the bridge was undertaken and finished within less than a year.

It is needless now to give the details of works which, though they excited the wonder of contemporaries, have been far surpassed in magnitude by more recent undertakings. One feature in the Duke of Bridgewater's canal however is too remarkable to be passed over: it is continued on the same level more than three quarters of a mile into the heart of the hill in which the collieries are situated, so that after a short transit in low waggons along the galleries of the mine, the coal is deposited at once in the barges which convey it to Manchester. In 1762, the Duke of Bridgewater obtained an Act of Parliament, enabling him to continue his canal from Worsley in opposite direction to Runcorn, in the tideway of the Mersey, so as to establish a perfect water-way between Liverpool and Manchester, unembarrassed by the constant current, and inequalities of flood and drought, which impeded the navigation of the Irwell. In this part of the line several deep valleys, especially those of the rivers Mersey and Bollin, were to be crossed, and this was done without the assistance of a single lock. Brindley's method of constructing the long embankments, which occurred in some places, was remarkable: he built caissons along the line of its intended course, into which boats laden with excavated soil were conducted by the canal itself, and discharged their contents upon the very spot where the ground was to be raised. Thus the canal, as it were, pushed itself forward; and the labour and expense of transporting these immense masses of earth was greatly diminished. To guard against the total loss of water, and ruin to the surrounding

country, which might occur from a breach of these embankments, Brindley contrived stops, which were gates so hung as to lie horizontally near the bottom when the water was at rest, but to rise and close when any current should be produced by the banks giving way, and thus prevent the escape of any water, except that portion near the breach which should be comprised between them. It is hardly necessary to add that the result of this, the greatest undertaking perhaps ever performed by any private person out of his own fortune, has been the realization of an enormous income to the peer who undertook it, and to his heirs.

This success encouraged others to proceed in the same course; and in 1765, a subscription was raised, and an Act of Parliament procured, for uniting the rivers Mersey and Trent, and consequently the ports of Liverpool and Hull, by what is commonly called the Grand Trunk Canal. Brindley bestowed this name upon it, in the expectation that, traversing a large and important portion of our manufacturing district, it would be the main trunk, from which a number of minor branches would spring. The scheme had been projected so early as 1755, and the ground surveyed, which for the most part offered little difficulty. But there was one line of high ground, called Harecastle Hill, which could neither be turned nor surmounted by any expedient that former engineers could devise. Brindley overcame the obstacle by driving a tunnel through it, upwards of a mile and five furlongs in length, and in some parts seventy yards below the surface of the ground. This canal, which is ninety-three miles long, was begun in 1766, and finished in May, 1777, less than eleven years after its commencement. In connexion with it, Brindley planned and executed a branch which joined the Severn, and thus gave Bristol an inland navigation to Hull, Liverpool, and Manchester.

Some notion may be formed of the impulse which Brindley's energy and skill gave to the system of internal navigation, when it is stated that during the few years which elapsed between the completion of the Bridgewater Canal, and his death in 1772, he was engaged in at least eighteen different projects for cutting canals, or for improving rivers, without including those we have already mentioned. Nor shall we now be expected to dwell on the unprecedented increase of trade and manufacture during the last century, and to point out how closely this is connected with our great facilities of internal communication. One thing, however, is too remarkable to be passed over: it was as nearly as possible at the same time that Watt, Arkwright, and Brindley, were effecting, each in his own department, those wonderful improvements in mechanical science, which conjointly have given such vast extent and importance to all branches of our manufactures, and which singly would have been, as it were, each of them crippled and imperfect.

Of Brindley's private history, scarcely any particulars are preserved. The following account of his character is stated by Dr. Kippis to proceed from the pen of Mr. Bentley, a partner in the celebrated house of Wedgwood, who knew him well:

"When any extraordinary difficulty occurred to Mr. Brindley in the execution of

his works, having little or no assistance from books, or the labours of other men, his resources lay within himself. In order therefore to be quiet and uninterrupted, whilst he was in search of the necessary expedients, he generally retired to his bed; and he has been known to lie there one, two, or three days, till he had attained the object in view. He would then get up, and execute his design without any drawing or model. Indeed, it never was his custom to make either, unless he was obliged to do it to satisfy his employers. His memory was so remarkable, that he has often declared, that he could remember and execute all the parts of the most complex machine, provided he had time, in his survey of it, to settle in his mind the several departments, and their relation to each other. His method of calculating the powers of any machine invented by him was peculiar to himself. He worked the question for some time in his head, and then put down the result in figures; after this, taking it up again in that stage, he worked it further in his mind for a certain time, and set down the results as before. In the same way, he still proceeded, making use of figures only at stated periods of the question. Yet the ultimate result was generally true, though the road he travelled in search of it was unknown to all but himself; and, perhaps, it would not have been in his power to have shewn it to another.

"The attention which was paid by Mr. Brindley to objects of peculiar magnitude did not permit him to indulge himself in the common diversions of life. Indeed, he had not the least relish for the amusements to which mankind in general are so much devoted. He never seemed in his element, if he was not either planning or projecting some great work, or conversing with his friends upon subjects of importance. He was once prevailed upon, while in London, to see a play. Having never been at an entertainment of this kind before, it had a powerful effect upon him, and he complained for several days afterwards, that it had disturbed his ideas, and rendered him unfit for business. He declared, therefore, that he would not go to another play upon any account. It might, however, have contributed to the longer duration of Mr. Brindley's life, and consequently to the further benefit of the public, if he could have occasionally relaxed the tone of his mind. His not being able to do so, might not solely arise from the vigour of his genius, always bent upon capital designs; but be, in part, the result of that total want of education, which, while it might add strength to his powers in the particular way in which they were exerted, precluded him, at the same time, from those agreeable reliefs that are administered by miscellaneous reading, and a taste in the polite and elegant arts. The only fault he was observed to fall into, was his suffering himself to be prevailed upon to engage in more concerns than could be completely attended to by any single man, how eminent soever might be his abilities and diligence. It is apprehended that, by this means, Mr. Brindley shortened his days, and in a certain degree abridged his usefulness. There is, at least, the utmost reason to believe, that his intense application in general to the important undertakings he had in hand brought on a hectic fever, which continued upon him, with little or no inter-

mission, for some years, and at length terminated his life. He died at Turnhurst, in Staffordshire, on the 27th of September, 1772, in the fifty-sixth year of his age, and was buried at New Chapel in the same county. The vast works Mr. Brindley was engaged in at the time of his death, he left to be carried on and completed by his brother-in-law Mr. Henshall, for whom he had a peculiar regard, and of whose integrity and abilities in conducting these works he had the highest opinion.

"The public could only recognise the merit of this extraordinary man in the stupendous undertakings which he carried to perfection, and exhibited to general view. But those who had the advantage of conversing with him familiarly, and of knowing him well in his private character, respected him still more for the uniform and unshaken integrity of his conduct; for his steady attachment to the interests of the community; for the vast compass of his understanding, which seemed to have a natural affinity with all grand objects; and likewise for so many noble and beneficent designs, constantly generating in his mind, and which the multiplicity of his engagements, and the shortness of his life, prevented him from bringing to maturity."

#### AUSTRALIAN GEOLOGY.

FROM THE PROCEEDINGS OF THE GEOLOGICAL SOCIETY IN LONDON.

*On a Fossil Pine forest at Kurrur-kurrán, in the inlet of Awaaba, on the Eastern Coast of Australia.* By the Rev. W. B. CLARKE, A. M., F. G. S.—Abstract of a paper read the 22nd February, 1843.

AWAABA is one of those inlets which occur at frequent intervals along the eastern coast of New South Wales, and which, from their sea-entrance being usually narrow and blocked up with drifted sands, are by the colonists termed "Lakes." Awaaba is called Lake Macquarie, and is the largest of the inlets of that description between Port Stephens and Broken Bay. Its sea-entrance lies fourteen miles to the south of the mouth of the Hunter River, nearly in 33° south latitude.

This inlet occupies a portion of conglomerate and sandstone, with subordinate beds of lignite and coal, which extends from the Hunter River southwards towards Brisbane Water. The lignite constitutes a considerable part of the Australian coal. This formation, owing to its beds along the shores of the inlet being placed horizontally, and being divided by nearly vertical joints, gives rise to regular lines of coast, both in a longitudinal and transverse direction. It forms along the coast a low range, which, except at the entrance, divides the lake from the sea. Within the lake a series of extensive bays, bounded on the water's edge by steep cliffs, run out like fingers, far up into the country. The water of the inlet is for the most part very deep.

On the western side of the lake, and nearly opposite its sea-entrance, a promontory, bounded on either side by a bay, is formed by the Tibareenba mountain, which stretches from the S.E. to the N.W., and in the latter direction ends abruptly in a lofty but not very precipitous escarpment; this sudden termination is occasioned by a