

RAILWAY JOTTINGS.

THE opening and naming of "the Royal Border Bridge," at Berwick, by her Majesty and Prince Albert on their progress to the ancient palace of their ancestral family at Edinburgh, may be regarded as the main event in railway progress during the week, and as "the last act of the Union" of England with Scotland and its kingly race, as courtly contractors have *areally* yet decorously styled it in the flowery language of hyperbole. The construction of the narrow old bridge of James the First's time was a job of twenty-four years' standing, carried out, it is alleged, with the mere interest on the instalments prepaid by the Treasury to the contractors. The present imposing structure was thrown across the Tweed in not much more than as many months, although it contains three times the amount of material and workmanship. The Queen, after viewing the viaduct, was pleased to testify her sense of the eminent scientific skill of the engineer, Mr. Stephenson, by offering him, through Sir George Grey, the honour of knighthood. Mr. Stephenson, no doubt, fully appreciated the honour so gracefully tendered by royalty to science, but gratefully and respectfully declined it.

The length of the viaduct is 2,160 feet, and its greatest height 126 feet 6 inches to top of parapet. It consists of 26 arches, each of 61 feet 6 inches span. The remainder consists of a massive embankment of 700,000 yards of earthwork, describing a curve towards Tweedmouth, and being at some places from sixty to eighty feet high. The material of the viaduct is stone, with brick in cement in the inner part of the arches. In the whole structure there are 1,250,000 cubic feet of masonry, and 2,500,000 bricks. At high water the Tweed is here twenty-three feet deep. The foundations were of a very expensive and difficult character. In the execution of the *coffer-dams*, Nasmyth's patent steam pile-engine was used, with an engine of fifty-horse power for pumping water out of the dams. Piles have been extensively used, the ground principally being loose sand and gravel. No less than two years were spent in driving the piles and laying the under masonry. The contractor at one time employed 2,000 men in the various departments of his contract. The entire cost of the viaduct, amounting to about 200,000*l.*, has been borne by the York, Newcastle, and Berwick Railway Company.—Mr. John Dobson, the architect of the central station at Newcastle, also opened by the Queen, forwarded to her Majesty, at Castle Howard, a book of five drawings, illustrative of that building.—The site of the new railway bridge over the Wye, says the *Hereford Times*, will be a short distance below the old one, and the staple material will be iron, the piers of iron tube filled up with concrete. The first objects that attract the notice at present are the great and novel works constructed for sinking in the river the cast-iron piers, the foundation of which is upon the solid rock at the bottom of the Wye. The piers on the land side are 6 feet in diameter, and those in the water 8 feet. They are bolted together in sections and will be filled with concrete. On the top of these iron-cased piers will be placed the roadway for carrying the trains of the South Wales Railway over the river to Gloucester; but whether it will be by a tube, or by a partly suspended medium, the spectator has no means of ascertaining. The greatest difficulty in this new construction at Chepstow appears to be from the water pouring so fast into the iron piers that it requires a large steam-engine to pump it up.—A prospectus of the Briton Ferry (Neath) Docks scheme has been issued by the promoters, from which it appears that the total sum required to make the docks and wharfs, according to Mr. Brunel's estimate is 25,000*l.* of which 10,000*l.* are to be furnished by the Vale of Neath Railway Company, leaving 35,000*l.* to be raised by the parties locally interested in the speculation. The Vale of Neath Railway works are, it is said to be now prosecuted with renewed vigour. In a short time ten miles will be ready for the laying of the permanent way. Mr. G. Hennett, of Bristol, has taken the contract for making the bridges over the Neath canal and Neath river; also for the erection of the viaduct near Cadocston. It is in contemplation by the proposer of the Monmouth

and Forest of Dean tramroad to convert their line into a locomotive one.—Papers, it is said, have been lodged to file an injunction to prevent the Dover Company from opening the Ashford and Hastings line, on the ground that the line as constructed does not agree with the parliamentary section. On the other hand, an injunction has been obtained, prohibiting the company from paying any more dividend until said line shall have been opened. The company are therefore in a true American "fix."—Government is reported to have made the long-expected grant of 100,000*l.* to the Waterford and Limerick for constructing the line to Waterford.—An iron bridge on the Erie Railway broke down on the 31st July last, under the weight of a train with 113 oxen and some sheep and pigs. Several men were killed, and many of the cattle were horribly gored and mangled. Had the train been one of passengers a scene of dreadful slaughter must have ensued. There is something wonderful in the narrow escapes made by human beings in the still frequent falls of railway works. It is not many days since an equally narrow escape of hundreds occurred at the Bricklayers' Arms station. Iron-work seems to be all going to sticks. Pity it would not, in many instances, fall back into stones and bricks.—A committee of dukes, lords, M.P.s., professional men, and others have taken in hand the realization of a national monument to the late George Stephenson.—Mr. George Carr Glyn, M.P., treasurer, and the secretary to the Institution of Mechanical Engineers at Birmingham, honorary secretary. The committee base their unquestionable hopes of success on Mr. Stephenson's exertions "in connection with the introduction of the safety lamp," as well as on (and, indeed, in precedence to) his "elaboration of the locomotive." But, considering the all-sufficiency of his renown as the elaborator, or, as we long since equivalently designated him, the maturer of the locomotive, it is perhaps a pity that many who have conscientious doubts of his priority of claim to the invention of the safety-lamp should have their desire to honour the locomotive maturer interfered with by a moot question on a point of certainly, in this case, secondary, though in itself still great and decided merit and importance. The success as well as the grandeur and simplicity of the idea of a monument to the creative genius of the iron horse may thus be marred.

RE-ASSESSMENT OF ST. LUKE'S, CHELSEA.

It is perfectly true, as stated in your paper of last week, that the resolution of the board of guardians for valuing the parish by a paid non-resident surveyor, was carried by a majority of one only (being, I understand, nine to eight); it is also true that the vestry, called and convened as it was by "discontents," passed a resolution against such appointment by a large majority (117 to 27); but what weight or consideration is to be attached to either the large minority in the one case or to the large majority in the other? I think none.

It should be known that the opponents to the measure both at the board of guardians and at the vestry, are men having considerable property under compound assessment (and, as it is believed to be) below its proper value. These, with others, having property which they dare not, evidently, subject to the impartial hand of a professional man, to be dealt with as the law directs and as the case demands, naturally feel deep interest in opposing such an arrangement, well knowing that he would show no favour to any one, but do full justice to all. Nothing of the sort, it is very easy to imagine, can be done, if the guardians, or as is proposed a committee of the vestry, are to have the re-assessing; and this too, not by existing and inspecting the property, which is the only right course to be pursued, but by sitting in a room two or three times a week, and then going over the rate-books under the pretence of ascertaining what house is and what house is not correctly assessed: can justice under such circumstances be done? Echo, I think, will answer "impossible." Justice, I am convinced, can only be done by employing, as the guardians purpose doing, a parochial and properly paid surveyor. Remonstrances against this, it appears, have been forwarded to the Poor Law Board from the minority of the guardians and from the majority of the vestry; but representations from such quarters will not, I trust, have any influence with the Poor Law Commissioners; they, and they alone, have now to decide the matter, and acting with right judgment, soon I hope to hear that the mandate has been issued forth to the guardians to "re-assess the

parish," which no unprejudiced man, I am sure, will deny will be for the parish benefit.

It is absurd what expedients men sometimes have recourse to to obtain their own ends. In the present case the doctrine laid down by the compounders and their friends is, that none but persons such as themselves are competent to revise the assessment; that two or three years will be required to do it; that the cost of it will be 3,000*l.* or 4,000*l.*; and next, that the appeals will be endless, and consequently the expense to the parish endless. It is unnecessary to tell you, but it may perhaps not be unnecessary to inform the ratepayers of Chelsea, and the ratepayers of other parishes, who may wish to have their parishes re-assessed, that all this is a wanton imposition on the credulity of those to whom it is addressed. Just the reverse is the case. Competent men can be found who will do the work in eight months or less for the sum of 525*l.*, and the parish guaranteed from all expenses attending any appeals. I enclose my name.

A RATEPAYER OF CHELSEA.

ST. JAMES'S CHURCH, HOLLOWAY.

SOME works are going on here which would drive a stanch ecclasiologist mad, and certainly can be anything but satisfactory even to those who attach less importance to forms and symbolism, but seek simply for propriety, fitness, and beauty. On looking into the building the other day we at first thought we had got into a huge warehouse, but ultimately determined it was in progress for a concert-room. Two tiers of enormous galleries, beating any of those we know of the worst days of church-building, are being put up; the organ is above the altar, and there is to be a gallery above the organ. We should have expected better things, from the large and intelligent population of Holloway. To reproduce in stone, too, such mouldings as those which adorn the classic entrance front is a sad waste of money. The contemplated outlay is about 3,000*l.*

Books.

Ploughing by Steam. By Lord WILLOUGHBY DE ERSSBY. Ridgway, Piccadilly.

We do believe that an era of agricultural development, as vast and wonderful as that which the present age has already witnessed in manufacture, is not only within the bounds of possibility, but on the eve of advent,—that a time is at hand when our present primitive agricultural implements will be put away as curiosities beside the distaff and the spinning-wheel,—and that the alleged discovery by Daguerre of a mode of rearing three-year plants in three months,—the reported power of some of our market-gardeners to rear a salad (like a mushroom) in a single night,—the alleged power of the Japanese to dwarf the lofty pine into a miniature tree, a few inches only in height,—the traditional story of the monks of Glastonbury Abbey, who could make the hawthorn bloom at Christmas,—or even the trick of the Indian jugglers, who appear to cause a mango seed to spring up out of the soil in course of a few hours, and before the eyes of hundreds, unfolding leaves and flowers and fruit,—are all but, at the worst, visionary imaginings, or rudimental typifying ideas, of actual powers of nature, scarcely less wonderful, and yet to be developed; just as was the old traditional idea of the magnetic telegraph of apparatus friends, with its needles and alphabets, but without any record of its invisible connecting wire,—alone wanting to reduce it all to credibility.

Believing, at all events, as we decidedly do, that a great era of agricultural development is at hand, when even the steam-plough, as it at present exists, may be a rude implement, it is interesting, in such belief, to witness just such beginnings of this anticipated era, as were the first steam-engines, or the first spinning and weaving machines, in manufacture—or the locomotive with legs, like a horse, in the railway system. The steam-plough may, even yet, be just such an implement, with relation to agriculture; but certainly, whatever be the upshot, or whatever be the merits of this particular invention, agriculturists are deeply indebted to Lord Willoughby d'Erssby, for his continued endeavours to elevate their position, and improve the means of their peculiar manufactures.

The steam-plough described and illustrated