

THE TWENTY-FOUR INCH GAUGE.

In strong contrast to the magnificent broad gauge railway, advocated by Brunel, is the two-foot gauge—the latest novelty in permanent way—that English engineers have just completed among the hills of Merionethshire, in Wales. This is not only something of a wonder from an engineering point of view, but very much so financially considered, for in the carriage of slate, coal, stone, and other freight, it pays a profit of thirty per cent. upon its cost. It is twelve miles and a half long, and seven thousand feet higher at one terminus than at the other. It has an average gradient of one in ninety-two, but at the steepest part of the grade it is one in sixty. It is so crooked that on some parts of the line a train of ordinary length is on three curves at once. There is one place where, in turning a curve, the engine comes abreast of the last car in the train. Two of the curves are so sharp as to have a radius of only one hundred and sixteen feet. From this it will be seen that the Festiniog Railway is a most unique undertaking, and its success is strongly suggestive of a more extended adoption of the extremely narrow gauge, not only abroad, but in this country, where the question of reducing the proportion of dead weight to paying loads is one of very great importance. That in this one instance, at least, the problem just referred to is satisfactorily solved, is shown by the heavy dividend derived from the original investment. That the same results can be obtained in an equal or approximate degree, in American practice, wherein, in most cases, the engineering difficulties would be less than in the Welsh mountains, can scarcely be doubted.

The contrast between the rolling stock of the Festiniog Railway and that of the other English lines is as great as between their respective permanent ways. Instead of cars—er, as they are termed across the water, carriages—having five hundred pounds of dead weight for each passenger carried, there are employed those in which the ratio of dead weight to paying load is one-half. A truck of seventeen hundred weight is made to carry four times its own weight, whereas, in ordinary practice, fifty per cent. of this is as much as is carried, while, in most cases, the weight of the load is not greater than that of the truck. The engines were designed by Fairlie, and their efficiency may be estimated from the performance of one of them, named the "Little Wonder." This is worked at a boiler pressure of from one hundred and sixty to two hundred pounds per square inch, and easily draws one hundred and fifty empty slate trucks—an aggregate weight (including its own) of from one hundred to one hundred and fifty tons—up an incline of one in ninety-two, sometimes rising to one in eighty. It is to be expected the results have given equal satisfaction, thirty-five miles an hour having been attained without undue jerk or oscillation of the train—a rate, with the thirty-inch wheels employed, equal, in the number of revolutions, to ninety miles an hour with the seven-foot wheels of an ordinary locomotive.

After making all due allowance for the station attendant upon the completion of a successful enterprise, and even an undue discount upon statements made during such station, there appears to be positive proof that the Festiniog line is the first of a new type of railway designed to come extensively into practice, and capable of yielding better returns than are commonly received from similar sources of investment. The use of wooden rails is now being advocated in some quarters, as cheaper, under some conditions than iron; and it is not impossible that, for local and comparatively out-of-the-way lines, their adoption, in connection with the narrow gauge now exciting attention, would enable railways to be built, in their way, would be marvellous of economy and profit, however much they might clash with preconceived opinions founded on established usage.

THE DEAD OF THE YEAR.—The New York Tribune thus sums up the distinguished dead of 1869:

In the necrological list of the year 1869 it seems as if the losses of our country have been unusually heavy. Two at least of the present active generation of American statesmen—Benton and Stanton—died while gratified for their past services was still fresh and the hope of their future usefulness was unimpaired. Fremont had passed away, leaving a vacancy in the Senate which will long be felt. Of political leaders less eminent, in official position, we have lost Henry J. Raymond; and among politicians of a past day, whose influence had measurably or wholly passed away, time has been unusually busy. Ex-President Pierce, ex-Attorney General Bates, ex-Secretaries Bell, Guthrie, Walker and Tennyson; ex-Governors Fitzpatrick, of Georgia, Pickens, of South Carolina, and most curious relic of a by-gone political era, Joseph Ritner, sometime Governor of Pennsylvania—these are among the best known of the host who have been gathered to their fathers during the past twelve months. The loss of European statesmen has been much smaller. In England Lord Derby and Lord Stanley of Alderly, in Spain General Dulce, in Russia Prince Menschikoff, in France Marshals Niel and Trochu, in Turkey Fuad Pasha, are the most distinguished of the dead, and few of these exercised a vital influence upon the Government under which they lived. From the roll of the army and navy we shall miss the names of Old Consider and General Wool; abroad the British General Lord Gough, Admiral Sir James Gordon—who brought a British fleet up the Potomac in 1814; the French Marshals Niel and Regault St. Jean d'Angely, the famous Russian soldier Menschikoff, and the veteran Jomini. Art deplors the loss of Grief, Berlioz and Overbeck; science mourns for Houghton, Reichenbach, Jukes and many lesser lights; and the charities of two hemispheres will feel the taking away of George Peabody. In literature, although the list is long, very few names of real eminence are found. When we have mentioned William Carleton, Professor Compton, Frederick S. Coxson, Peter Cunningham, Alexander Dyer, Lamartine and Elia, however, we have called over all the most illustrious.

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