

*Extracts from the "London Railway News," for 16th and 30th November, 1872, and 22nd February 1873.*

This paper compared four English and four American railways, putting the Grand Trunk Railway of Canada in among the American, to which we decidedly object.

The *Railway News* says, "Comparison shows that the American engines perform an amount of work altogether unequalled by those on any line in this country; for example, the New York Central, where the traffic is heavier even than on our London and North Western Railway, there are not half the number of engines mile for mile to work it. It must be remembered, in instituting a comparison based on the earnings, that the rates of transportation are lower in America than in England; and therefore to earn as much per mile as an English train the American must carry much heavier loads. With respect to passenger trains, the American mean average is 6s. 5d. per mile, against 4s. 7d. in England, the difference being nearly 40 per cent. The rate of fare is probably about 30 per cent. lower than with us, and this, added to the 40 per cent. of extra earnings, shows that an average train in America must convey about 70 per cent. more passengers than an average English train. The American average, it will be noticed, is considerably reduced by the low average of the Grand Trunk Railway, and we are therefore probably within the mark in putting the difference in favour of the American train at 70 per cent. The New York Central average of 7s. 1d. per passenger train mile is probably the best of any large line, and affords a striking contrast with the Midland Company's average of 3s. 11d. only. After deducting working expenses, what a difference there must be in the net profit per mile run by passenger trains on these two lines. Comparing the earnings taken in connection with the cost of the plant, the earnings of the four English companies is £4,662 per engine. In America, on the other hand, the engines earn, on an average, no less than £7,963 each, and on the Lake Shore line each engine actually earns £8,765 a year, or more than three times its present value. Altogether, it would appear that an American locomotive earns somewhere about 70 per cent. more in a year than an average English one. The very same result, singularly enough, appears when the earnings are taken in relation to the original value of the rolling-stock on the lines. The rolling-stock on an English railway may be said to earn its own cost in a year; but in America it earns its own cost and 65 per cent. additional."

The *Railway News* shows that the earnings of the London and North-Western Railway, in 1871, was £4,856 per mile, that they operated 1,614 miles of railway, and had 1,791 locomotives: that the New York Central Railway had earnings of £5,417 per mile, operated 845 miles of railway, and had 423 locomotives. This data reduced shows that the New York Central earned, per mile of road, £561 more than the London and North-Western, and that it did its work with fifty-hundredths of a locomotive per mile of road, while the London and North-Western Railway occupied the services of one and eleven hundredths of a locomotive per mile of road, to say nothing of the New York Central having more severe gradients, curves, and climate to work in, and doing its work on what are considered to be in England "poor, miserable, light, loose tracks."

NOTE.—As the Grand Trunk Railway of Canada, has been introduced in these comparisons, I beg to pay my compliments to it in this connection of comparative merits of American and English engines. Indians are said to be not satisfied with one "scalp," they must have a dozen or more. As I do not intend to be ever again induced to "enter the lists" in favour of or against anything appertaining to railway rolling-stock, I may as well have my say out and knock down all opponents so they cannot get up again, or at least make a bold attempt in that direction. The Grand Trunk Railway was built by English engineers with English capital. The engineers boasted on more than one occasion that they were going to show the "Yankees" how to build a railway. It was stocked originally with English engines and cars, and has always been managed by Englishmen. When this great line of over 1,400 miles had been brought to the very verge of bankruptcy by excessive expenditure in construction, and by the use of English rolling-stock, they were forced to open their eyes to the merits of American engines and cars, and adopt them, paying at that time 12½ per cent. duty on the American engines going into Canada. In 1859 this railway company had 203 locomotives—50 built in England and altered in Canada to American patterns, 110 built in the United States, and 43 built in their own shops after American patterns. This company also adopted the long American car on two bogies, oil-tight boxes, the cast-iron chilled wheels, and centre buffers, all belonging to the American system. In November, 1874, the Grand Trunk Railway had in use 434 locomotives—328 built in the States, 49 built in Canada, and 57 built in England by Neilson and Company, and "Canada Works," Birkenhead. This change to American rolling-stock was a necessity. Without it this railway would soon have become hopelessly bankrupt, and over one hundred million of dollars of British capital sunk out of sight. The directors and engineers in Canada saw that it was impossible to contend with the "Yankee" trunk lines, for the great and ever-increasing business of the "West," without making great and radical changes in their rolling-stock. They bowed gracefully to the governing circumstances, and ordered the changes to be made. The company in London were not prepared to swallow unresistingly this bitter and expensive remedy. On receiving a report from their mechanical engineer in Canada showing that he was altering the engines sent from England to Yankee ideas of fitness, they ordered him home and sent out another, who said he would soon stop this Yankeeification of the engines. But very soon after his arrival in Canada he became a convert to the necessity of a change. The proximity to Yankee land had its impressive features, so the new locomotive superintendent "pitched in" to complete with all despatch the changes commenced by his predecessor. About this time Mr. Alexander M. Ross, the Engineer-in-Chief of the Grand Trunk Railway, in writing to Mr. George E. Gray, an old assistant of mine (and then Engineer-in-Chief of the New York Central), said, "On the breaking up of the frost in the Spring, we never could keep the English engine on the track, except at a slow speed, which defeated our object."—W.W.E.

*Extracts from the "Engineer."*

1st October, 1858.—"As opposed to Mr. Tait's opinion of American locomotives, Mr. Robert Stephenson stated, while in America, that the engines of that country were *better* than those of English build; while the same gentleman, to the knowledge of the writer, has reiterated the same opinion within the last ten days: "that American locomotives are at least of a fair quality of workmanship may be presumed from the fact that they are worked to a load averaging 20 per cent. more than that of English engines."

29th October, 1858.—"The peculiarities of the American locomotives, which were last season very fully explained to us by Mr Neilson (locomotive builder of Glasgow), are attracting attention in this country, from the good adaptation of these engines to steep gradients and sharp curves."

*Data from a Letter of Mr. Howard Fry, Locomotive Superintendent of Philadelphia and Erie Railway, to Mr. J. F. Robinson, in reference to the Performance of a Baldwin Consolidation Engine—No. 41—on that Railway, 27th October, 1877.* [This Mr. Fry is an English mechanical engineer of experience and ability, and is held in high esteem by all the railway engineers of the United States.]

"The engine No. 41 had cylinders of 20 in. x 24 in.; four pair driving wheels coupled, 48 in. diameter; weight in working order, 102,000 lbs.; weight on four pair coupled, 88,000 lbs.; total wheel base, 22 ft. 10 in.; rigid wheel base, 9 feet. Train consisted of 100 American 8-wheel cars, 87 loaded with oil, and 13 with grain; weight of, including engine, 2,201 tons of 2,240 lbs. each; length of train, excluding engine and tender, 3,127 feet; distance run, from Sunbury to Dauphin, 45·5 miles; time, 4 hours 21 minutes, or 10½ miles an hour; line, practically level; minimum radius of curvature, 860 feet. This engine made 26 double trips in this month of October, running 2,340 miles, or at the rate of 28,080 miles for the year. One day it hauled 106 cars, and averaged 90·3 cars per trip for each day in the month. This engine has made a car-mileage of 192,009, with a consumption of fuel of 1·8 lbs. per car-mile."

NOTE.—If any one in Europe can match this performance of No. 41 with any engine they have there, I will be much pleased to see them trot it out and give us the figures. Our engines may be "miserable affairs" made of "poor materials," with "execrable workmanship," "loose-jointed," "flexible like a basket," &c.; but they do their work in a most miraculous manner, earn piles of money for the shareholders, seldom ever complain, enjoy good health, win friends, and live to a good old age.—W.W.E.