

I was also satisfied with the Engines supplied by the English Contractors, most of which I examined; but exception having been taken to 42 of them, manufactured in England, it is necessary to speak of those features in them which have been considered objectionable.

In common with all the other Engines, they have wrought-iron Fire-boxes. Their Tube Plates are wrought-iron; those supplied by the Canadian Contractors and by some of the American Houses being Copper. Twenty-nine of them have Iron Tubes; the Engines built in America having either Brass or Copper Tubes. They were built without the "truck" or "bogie" in front.

I greatly prefer Fire-boxes and Tube Plates of copper, and Tubes of brass; but it is right to state that iron Fire-boxes, Tube Plates, and Tubes, are frequently used in England, and well thought of by some Engineers of great experience; so that I do not feel that my decided preference for copper and brass would justify a rejection of iron, especially as no specific requirements in regard to such details were to be found in the Contracts. The Iron Tubes gave much trouble during the winter; a circumstance which I ascribe mainly to the absence of "trucks," which, experience shows, save the Engines from the effect of the blows given by the Permanent Way, when set by frost.

These Engines were built without "trucks" under the sanction of the Engineer-in-Chief, and in reference to such sanction I may state, that while I soon recognised the value of "trucks" under the Carriages, I felt for sometime objections to the use of them under the Engines, which were only overruled by the statements of the experience acquired by your Officers.

The Engines made in England are in several respects superior to those made in America. Their workmanship, although plain, is more solid. Wrought-iron is used in many parts where the others have Cast Iron. Their Boiler Plates and Tube Plates average $\frac{7}{16}$ inch and $\frac{3}{4}$ inch in thickness, while those of the American Engines average $\frac{5}{16}$ inch and $\frac{1}{2}$ inch. I believe that when furnished with "trucks" they will be found to last longer than the American Engines; and the comparison of their Working Expenses shows no inferiority.

Of the generally good character of all the Engines, the following facts may be taken as some confirmation.

During the severities of a North American winter, when it is not an uncommon thing for the whole traffic of a Railway to be stopped, much delay and irregularity will of necessity occur. From an examination of a Return of the delays of trains on your Line, between December 23rd, 1856, and February 28th, 1857, I find the delays ascribed to Locomotive causes amount to only $1\frac{1}{4}$ per cent. of the advertised running time. During the first four months of this year your Engines performed the average daily mileage, of 47 miles; 45 miles being considered a high average daily mileage, including summer and winter, in England; 33 miles being the average daily mileage on seven Continental Railways, and 50 miles the average daily mileage on the Railways in the Northern States, tabulated in Appendix X.

To the well-known intelligence and zeal of your Locomotive Superintendent, much is no doubt due. The Returns in the Appendix show a decrease in the cost of Locomotive power; and when, added to all difficulties of climate, it is remembered that the present wages of mechanics in your Workshops average 37 per cent. more than those in England, and the cost of Engine Stores nearly 50 per cent. more, you have reason to be well pleased that the Locomotive expenses during the last half-year of 1856, were only 22.70 cents. per mile, and for the whole year 26.33 cents per mile.