

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

11 December 1860

BoT Report into Accident at

Bescar Lane.

(1 Page).

LANCASHIRE AND YORKSHIRE RAILWAY.

*Railway Department, Board of Trade,
Whitehall, December 22nd, 1860.*

SIR,

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you, for the consideration of the Directors of the Lancashire and Yorkshire Railway Company, the enclosed copy of the report made by Captain Tyler, R.E., of his inquiry into the circumstances attending the accident which occurred on the 11th instant to a passenger train near the Bescar Lane Station.

I am, &c.

J. E. TENNENT.

*The Secretary to the
Lancashire and Yorkshire
Railway Company.*

SIR,

Southport, 17th December, 1860.

In compliance with the instructions contained in your minute of the 13th instant, I have the honour to report, for the information of the Lords of the Committee of Privy Council for Trade, the result of my inquiry into the circumstances which attended the accident, that occurred on the 11th instant, near the Bescar Lane Station of the Lancashire and Yorkshire Railway.

This station is four miles to the east of Southport, and is approached on a long straight line, and a nearly level gradient. There is a distant signal about 400 yards to the west of it.

On the day in question, the 8'20 A.M. express passenger train, consisting of an engine and tender, four passenger carriages, and a guard's van, started from Southport in due course for Manchester. One of the carriages was placed immediately behind the tender, and the guard's van, which was next to it, was fitted up with Fay's patent break, so arranged as to work continuously along the four last vehicles in the train.

The rails were slippery, and the engine, whose wheels were not coupled, did not therefore get up its speed so soon as it would otherwise have done; but it is stated to have been travelling at from 30 to 35 miles an hour as it passed the distant signal from Bescar Lane. As he went by that signal, the driver felt his engine "sway over" to the right, and he perceived, immediately afterwards, a jerk, as if from the carriages behind him. He shut off his steam, and, on looking round, he saw that some of the carriages were off the line. He then found that his tender had left the rails, and it appeared to him that the carriages had "pulled it off." The leading carriage next broke loose from the tender, turned round, and fell on its side, on the left of the line, at 100 yards from the point at which the first disturbance was perceived; and the van and the other carriages came to a stand, buried up to their axles in the light sand on which that part of the line is formed; whilst the engine and tender ran forward, 290 yards further, to a level crossing at the west of the Bescar Lane Station.

The tender was on four wheels, and, when it came to a stand, the trailing wheels only were off the rails. The screw coupling which connected it with the leading carriage, had been tightly screwed up, in accordance with the usual custom on this line, before the train started from Southport; and it had slipped off the hook of the draw-bar without being fractured. The leading end of the draw-bar of the guard's van was broken. The driver might have stopped his engine within a shorter distance, but he allowed it to run on in the first instance, for fear the carriages should run forward upon it.

The guard was sitting down in his van when he first perceived that the carriage in front of him was off the rails. He had no time to apply his break, before he was thrown forward against a shelf, and found his van brought suddenly to a stand. He was slightly contused, but expects now to be able to return to his duty. Two of the passengers were injured, and two or three others were shaken, but none of the injuries appear, fortunately, to have been of a serious character.

On a subsequent examination of the permanent way, it was found, that there was, first, a rail on the right of the line, a short distance to the west of the signal-post to which I have referred, bulged outwards to the right; that 10 or 12 yards further on there was a second rail, on the opposite side, bulged outwards to the left; that in advance of this, a third rail, again on the right, had suffered in a similar manner; and that a fourth rail, still further forward on the left, had been pushed altogether out of its place, and thrown outwards on its side. The line was then more or less torn up or damaged, as far as the Bescar Lane Station, almost all the chairs of the right-hand rail having been broken, up to the level crossing at that station, by the trailing wheels of the tender running over them.

The line is laid with double-headed rails, weighing 75lbs. to the lineal yard, and 18 feet 6 inches in length. The chairs are rather narrow in the base, but are placed within 2 feet 6 inches of each other at the joints of the rails, and 2 feet 9 inches at the intermediate spaces. The sleepers are laid transversely, and the chairs are secured to them by means of wooden trenails only. The trenails were originally of an inferior description, and, during the six years that the line has been open for traffic, they have become seriously deteriorated. They had given way, both inside and outside of the rails which were found to be bulged out in the manner that I have described, and it is to their failure that the accident is to be attributed.

The engine and tender were not at all damaged, but have been running on the line without alteration ever since the occurrence of the accident; and there appears to have been nothing in the carriages in any way to account for it. They were, as well as the break-van, nearly new, and were of a very superior description. It is evident, that the failure of the trenails on the right of the line allowed the first rail to give way, and caused the engine to oscillate; that the subsequent oscillations of the engine fractured other trenails, and pushed the rails outwards, alternately on opposite sides of the line; and that the disturbances thus effected in the permanent way threw the carriages off the road.

This is only one out of a number of instances, in which the insufficiency of wooden trenails, as a means of securing the chairs to the sleepers, has been proved. There is danger, sometimes of their failing from decay, and suddenly giving way without previous warning, and without any indication on the surface of what is taking place below; and sometimes of their being sheared off, when the lower edges of the chairs are sharp, or of their being broken off when they are in a partially decayed condition.

In the present instance, as the line was straight, there was not so great a liability to shearing, or fracture, as if it had been curved; and the trenails appear to have given way under a strain of no greater severity than was incident to the usual traffic of the line, in consequence of their having been in a peculiarly weakened state. Many, which were picked up on the spot immediately after the accident, proved to have been completely rotten at the portion where strength was most required. Others, which I caused to be pulled up for examination, near the same spot, were more or less similarly affected; and it is desirable that no time should be lost in inserting wrought-iron spikes in the chairs for the security of the trains. I am happy to learn that the Company propose at once to adopt this course; and I would add, in conclusion, that it is exceedingly desirable that they should fish the joints of the rails—a measure which they would find advantageous, as well for economy of maintenance as for the greatly increased degree of safety which it would afford in the working of the traffic.

I have, &c.

*The Secretary to the
Board of Trade, Whitehall.*

H. W. TYLER,
Captain, R.E.