

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

10 May 1861

BoT Report into Accident at
Manchester Victoria.

(2 Pages).

still showed tolerably well, for the most part, on the surface, were of little or no use in contributing to the security of the line.

The right rail in front of that which was opposite to the first displaced rail on the left, was forced outwards, and the chairs were knocked off the sleepers in a similar manner. The ninth sleeper from the first displaced joint was the first that had been renewed south of that joint, but two sleepers had been renewed north of it, which, though they contained sound timber, were not by any means in a creditable condition. On the morning after the accident, a slight bend was observed in a rail on the right, immediately to the north of the first displaced rail, and over one of these sleepers; but the keys, and the fastenings of the chairs to the sleepers, are stated to have been all secure. I observed that three of the four trenails by which the chairs under this rail were attached to the sleepers, had been cut through in order to disengage them, and that the fourth was not in a state to have given any support.

The permanent way was much torn up, and the rails bent, in front of the displaced rails to which I have referred; but these were merely the results of the accident. The cause of it was clearly the failure of the trenails under the rail first thrown out on the left. Their condition left no cause for surprise at their failure, but fully accounted for it; and, in fact, there was little beyond the friction of the chairs on the sleepers to retain them in their places.

The first lurch to the left felt by those who were on the engine, was no doubt occasioned by the failure of these trenails, and a dangerous oscillating motion was thus imparted to the engine. It might not, however, even then have finally left the rails, if the fastenings of the chairs in front had been strong enough to resist the oscillations which were thus produced in it, though they would have been severely tried. The driver, as I have stated, thought that his engine would recover itself after the second lurch to the right; but as it happened, they gave way, and the result was as I have described.

This is an accident of a most important character, and one which deserves serious attention from the directors and officers of all Railway Companies, on whose lines the chairs are fastened to the sleepers by means of wooden trenails only. As in the case of the recent accident on the Southport Branch of the Lancashire and Yorkshire Railway, of which the circumstances were detailed in my report of the 17th December last, and in other cases, so also in this instance, the trenails had become so much deteriorated by age and wear, that they were unable to resist the strains brought to bear upon them by a passenger engine travelling at speed, even upon a straight line.

The platelayers and those whose duty it is to examine the line, trust to these trenails from year to year, and do not pay the same attention to them as to the keys securing the rails in the chairs, which are, or ought to be, examined, and driven in when necessary, every morning and evening. The trenails are in many cases covered by the ballast; in others, where they are uncovered, they look sound to the eye after they have become useless at the part, between the chairs and the sleepers, where strength is most required; and they are only partially renewed at intervals, when other repairs to the line happen to be necessary or in progress. They sometimes decay

and become soft; in other cases they are worn by the action of the chair upon them; they are liable to be sheared off by the sharp edges of the chairs when they are employed upon curves, and when they are old and of good quality they become brittle and hard, and give way in this condition near the surface of the sleeper without being injured by the chair, and often without showing any sign of decay above the chair. In this last state the upper portion of them frequently squeezes out of the chair, as dirt or sand gets in below them from the ballast, and that portion may often be pulled out, in passing along the line, without any difficulty, between the thumb and forefinger, when the trenails are to all appearance sound and in their places.

The great danger of employing trenails as a sole means of fastening in the permanent way of railways, arises from the treacherous manner in which they thus fail, giving little or no warning to superficial observation of their gradual deterioration, until a heavy engine, or a lighter engine at high speed, suddenly bursts the permanent way that is dependent on them for security. In examining other portions of the Glasgow and South-Western Railway near the site of the present accident, I found it in a most unsatisfactory condition from this cause, and no one could have been more surprised, I believe, than the officers of the company themselves, at the defective state in which the trenails proved upon careful inspection and trial to be. In many instances the upper portion of them had disappeared altogether, in a large proportion of cases they were either loose or of comparatively little value, and in a smaller proportion they had been renewed or replaced by iron spikes. After the experience of this accident, I have no doubt that no undue confidence in trenails will be placed in future upon any part of the Glasgow and South-Western Railway; but I am aware that many eminent engineers and managers in the country are still in favour of them, and I fear that they will be the occasion of other serious accidents in different parts of the country before they are either superseded altogether or intermingled, as they ought to be whenever they are employed, with a proper proportion of wrought iron spikes, one to each chair or two to each sleeper.

It is not a little singular, that the engine-driver who has suffered from the effects of this accident, should have spoken to the local superintendent of the permanent way on the same morning in strong terms, while he stopped at the Annan Station on his way to Glasgow, in regard to the condition of the portion of the up-line, between Dornoch and Gretna, where it occurred. He did so, he says, without any real apprehension of an accident of that nature, but, according to a custom not uncommon with him, in order to induce the superintendent to pay that attention to the line which he thought it required.

Besides better fastenings between the chairs and sleepers, it is desirable that an extra sleeper should be placed under each rail, and that the joints should be fished. The present sleepers, also, will require to be carefully gone through, with a view to their partial renewal, unless the line is relayed within a short period.

I have, &c.

*The Secretary,
Railway Department,
Board of Trade.*

H. W. TYLER,
Capt. R.E.

LANCASHIRE AND YORKSHIRE RAILWAY.

*Railway Department, Board of Trade,
Sir, Whitehall, 5th June 1861.*

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you, to be laid before the Directors of the Lancashire and Yorkshire Railway Company the enclosed copy of the report made by Captain Tyler, R.E., the Officer appointed by my Lords to inquire into the circum-

stances which attended the accident that happened to a passenger train at the Victoria Station, Manchester, on the 10th ultimo.

I have, &c.

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

JAMES BOOTH.

SIR, *Hampton Court, 1st June 1861.*

IN compliance with the instructions contained in your minute of the 11th ultimo, 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 collision, that occurred on the 10th ultimo, at the Victoria Station at Manchester, on the Lancashire and Yorkshire Railway.

The east end of the Victoria Station is approached on a steep incline, a mile and a quarter long, containing gradients of 1 in 49, and 1 in 59, over which a very heavy traffic is conveyed, and which succeed other falling gradients of a less severe description. At the top of this incline, at the Miles Platting Station, several special weighted vans are kept in readiness for the use of goods trains, excursion trains, or other heavy special trains requiring them, that they may assist, by means of the breaks attached to them, in checking the speed of such trains, as they descend upon the station below; but these break-vans are not employed with the ordinary passenger trains, which are supposed to be sent off from the stations at which they are made up with a sufficient proportion of break-power to meet this contingency, and to descend the incline in question with safety under all circumstances in which due care and circumspection are employed on the part of the servants of the company who are placed in charge of them.

On the day referred to, the 5.55 a.m. passenger train from Normanton to Manchester started from Normanton at its proper time, and, after stopping at various intermediate stations, left Miles Platting in due course at 8.55. It was composed, in the following order,—of an engine and tender, 3 waggons loaded with fish, 8 passenger carriages, and 1 break-van. It ought, by the regulations of the company, or rather in obedience to an order which was issued many years ago, and which appears to have been well understood, and is well remembered, to have been provided with at least two break-vans, because it contained more than 11 vehicles. The guard of the train had, in consequence of its size, applied at Bradford, (which was the proper station for such an application,) for a second break-van, but had not been able to obtain one. The station master was away from the station at the time, and the porter in charge of it informed him that there was not one for him.

He therefore proceeded forward with only one break-van to Rochdale, which is 10½ miles from Manchester. If he had been able to obtain a second van at Bradford, it would have been his duty (according to the practice which has obtained in such cases) to ask for a porter at Rochdale to take charge of it; but without a second van it was of no use for him to ask for the porter, and he proceeded as he was towards Manchester.

The engine-driver was not aware, according to his own statement, until he had gone half-way down the incline above referred to, and was within little more than half a mile of the station-yard at Manchester, that the proportion of break-power on his train was so small. He supposed up to that time, either that it was supplied with the continuous breaks attached to three or more vehicles, and worked simultaneously by one guard, which have been so successfully employed for some years by this Company, or else that he had at least two guards and two break-vans behind him. Finding, however, that the speed of the train did not slacken as much as he expected, he then whistled for the guards' breaks, and observed for the first time, that there was only one guard, and that he was riding on a van not fitted up for the use of continuous breaks.

He reversed his engine, but was unable to prevent it from running forward against the stationary buffers at the end of the siding into which his train was turned, at a speed stated to be somewhat less than five miles an hour. Four of the passengers appear to have been more or less injured by the collision which was thus occasioned, and the more so because they were getting out, or preparing to get out, of the carriages when it occurred.

The regulation to which I have above referred, requiring that when the number of vehicles in a train exceeds eleven, there should be at least two breaks attached to it, appears to have become partly obsolete. I was unable to obtain a copy of it, and it is stated by the guard of the train to have been disobeyed on previous occasions, as well as on the present occasion, in consequence of there being no break-van available at Bradford. Two breaks to twelve vehicles, besides the tender-break, is of itself a smaller proportion of break power than is desirable on such a line and for such an incline, and the proportion that was here employed was utterly inadequate to provide in a reasonable degree for the safety of the passengers in the train.

The Lancashire and Yorkshire Company have now employed successfully for many years continuous breaks, by means of which an ample supply of break-power may be economically and advantageously obtained; and it is to be hoped that they will not delay longer in taking such steps as shall ensure the use of these breaks in all their passenger trains. That they should not provide at Bradford enough of break-vans in the mean time, to enable their own regulation to be carried out, is a piece of neglect for which no valid excuse can be offered.

I have, &c.

*The Secretary,
Railway Department,
Board of Trade.*

H. W. TYLER,
Capt. R.E.

Railway Department, Board of Trade.

SIR, *Whitehall, 15th June 1861.*

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you, to be laid before the Directors of the Lancashire and Yorkshire Railway Company, the enclosed copy of the report made by Colonel Yolland, R.E., the Officer appointed by my Lords to inquire and report upon the circumstances which attended the collision that occurred at the Mill Hill Station on the 25th ultimo.

I have, &c.

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

JAMES BOOTH.

Railway Department, Board of Trade,

SIR, *Whitehall, 12th June 1861.*

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 cir-

cumstances which attended a collision, that occurred on the 25th ultimo, at Mill Hill Goods Station, situated about one mile to the west of the Blackburn Station, on the line between Blackburn and Preston on the Lancashire and Yorkshire Railway (East Lancashire Section), between a goods train and a return excursion train, between Salford and Houghton, by which about 23 passengers received slight hurts, or have demanded compensation, in addition to one of the guards who was also slightly hurt.

The Preston and Burnley goods train, appointed to leave Preston for Burnley at 6h. 0m. p.m., left about 10 or 15 minutes late on the day in question, and it stopped by appointment at Bamber Bridge, and finally reached Mill Hill Goods Station, according to the driver of the train, at 7h. or 5 minutes past 7 o'clock. As it travelled to Mill Hill Station it passed the Salford and Houghton excursion train in a siding at Houghton Station, and the goods train, when it reached Mill Hill Station, consisted of five loaded waggons and a break-van, which were left standing