

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

18 November 1871

BoT Report into Accident at

Bacup.

(2 Pages).

one not being in working order, and the blocks of three of the other carriages, being, according to the guard, worn away too much to work properly. On this, as on a previous journey the same morning from Blackburn to Chatburn, all had gone right as regards stopping at the five intermediate stations. On approaching Blackburn the driver shut off steam at the east end of a tunnel 200 yards long, about 550 yards from the tail of the Wigan train, and on emerging from the tunnel saw this train standing in its ordinary position; the fireman applied the tender breaks as usual at the east end of the station. When within two or three carriage lengths of the van of the Wigan train the driver, finding the train was not stopping as it ought, gave the break whistle, reversed and had just time to apply contrary steam when his engine struck the van at a very low speed, not two miles an hour. Neither train sustained any damage whatever.

The guard states that he had his breaks on as usual when the train was entering the station at a walking pace, but that when about 20 yards from the van of the other train he became apprehensive that there would

be a collision, and screwed his break on as tight as he could at the same time that the driver reversed. It was only after the collision that he found out the defects in his breaks and reported them.

The carriage inspector at Blackburn, after the collision, marked off the last carriage but one as wanting new blocks, but did not agree with the guard as to the blocks of three other carriages being worn out.

The occurrence of this collision must be attributed to an error of judgment on the part of the driver and guard of the Chatburn train in overestimating their power of stopping on entering Blackburn station. This may have been partly due to a defective state of the continuous breaks, but had the state of these been as bad as the guard would make out, it would have surely made itself felt at some of the many previous stops the same morning.

I have, &c.

The Secretary
Railway Department,
Board of Trade.

C. S. HUTCHINSON,
Lieut.-Col., R.E.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade,
(Railway Department),
Whitchall, 14th December 1871.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in obedience to your minute of the 22nd ultimo, the result of my inquiry into the circumstances which attended an accident that occurred to a passenger train, at the entrance to the Bacup station on the East Lancashire section of the Lancashire and Yorkshire Railway, on the 18th ultimo.

It is stated in the return from the company that one person was hurt.

The line between Rawtenstall and Bacup is rather more than four miles in length, and it is single throughout, with three intermediate stations and numerous sidings.

It was opened for traffic in the year 1848.

The station yard commences at the north-east end of a short tunnel under a turnpike road, where there is a pair of facing points with an indicator attached; the left road being the main line into the station, and the right road to a siding. The facing points are weighted to stand open for the main line, and they are fastened in this position by a hasp and a padlock, which is ordered to be kept locked. The line continues to rise on a steep incline of 1 in 74½ for about 12 chains, and thence to the end of the station, for about 15 chains further, the gradient is 1 in 200.

On the day in question, the 10h. 35m. a.m. train from Manchester to Bacup, consisted of an engine and tender, goods waggon, break van, 1st class, 2nd class, and 3rd class carriages, arranged in the order here written; and the driver states that the distant signal through the tunnel was off for him to enter the station yard, and the indicator at the facing points stood all right for him to go on the main line. He says he was travelling very slow, or about 10 miles an hour, and as he passed over the facing points he felt a bit of a jerk; he shut off the steam and whistled for the guards break, but the engine immediately dropped off the rails, and tumbled about so much, that he could not put on the tender break, and they ran about 43 yards from the facing points before the engine stopped, and then he went back to see what was amiss at the points.

The driver found the facing points unlocked, the clip or hasp was turned back, and the padlock was off altogether, and there was no key in it; and the points were very dry, white with frost, and did not look as if they had been oiled for a long time. He stated, that there was a fresh mark on the tongue of the right point rail, and this mark could be traced on the top of the right rail of the siding line, till it crossed to the outside of the main line right rail, where there still remained, when I visited Bacup, a deep indenta-

tion close to the heel of the right switch, and after that the engine ran on the ballast, between the two lines, but off the rails.

The foreman of platelayers was the first person who got to the spot after the accident occurred. He confirmed the driver's statement, and added that he found the points closed and right for the main line, and the carriages were still on the main line, on the Bacup side of the heel of the points; that the second connecting rod of the facing points was bent at the left side, and the right point rail was bent near the heel, and the heel chair under it was broken; that there was a slight mark at the back of the tongue of the right point rail, and a sharp mark on the outside of the right switch rail near the heel, caused by the grinding of the flange of the right wheel; after that the engine and tender got off the rails altogether, as well as the goods waggon, and the leading wheels of the break van were also drawn off the rails, while the trailing wheels were on the main line rails. A little farther on a piece of a rail, 4 feet 6 inches in length, had been broken out of the left rail of the siding line where the engine had crossed it.

The foreman of platelayers told me that he tried the points and found that they would stand open if allowed to close gently, but that they would not close of themselves, and that they were not kept in proper order. He thinks the engine only took the wrong line, and dragged the waggon and van after it. The accident occurred just before 12 o'clock.

Very little damage was done to the rolling stock. A buffer and the footboard of one of the carriages and an axle box of the waggon were broken.

It further appeared that about 10.5 a.m. the yardsman, who had to look after eight pairs of points in the yard, had to attend to a goods train, which had been backed into the siding, and the engine was unhooked and ran down the main line, and the yardsman then unlocked the padlock, held the points open for the engine to go into the siding at the lower end adjacent to the tunnel; that the engine then went into the siding and was hooked on to its train, and the yardsman held the slip points to enable the goods train to get away at about ¼ to 11 o'clock. The yardsman told me that it was then his duty to put on the hasp and lock the facing points right for a train to enter Bacup terminal station, and he believes he did lock them and took the key away.

The accident was clearly occasioned by the facing points not having been kept in proper order, so that they were not closed to either rails when the engine ran over and mounted them. If they had been kept in proper order, the absence of the padlock would not have signified; but the yardsman had evidently forgotten to replace the hasp and to put on the padlock and lock it.

The indicator also was out of order, so that it did not show when the points failed to be close to the stock rails.

I do not think the station master is free from blame, as he had previously had occasion to find fault with the yardman for the manner in which he had attended to the points in the yard; and he should, in consequence, have made it his duty to look more closely after him, and to the manner in which he kept the points.

Bacup station requires to be re-arranged, and the points concentrated and worked from a signal box, with the proper interlocking of the points and signals.

The facing points at the mouth of the tunnel should also be bolt-locked by the distant signal. But the greater part of the station is situated on a falling gradient, on which carriages will not remain at rest unless there are breaks to hold them. For this reason there should be a signal box at the tunnel mouth, with proper arrangements for preventing vehicles that may break away from running down the incline towards Rawtenstall.

I have, &c.

The Secretary,
Railway Department,
Board of Trade.

W. YOLLAND,
Colonel.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade

(Railway Department),

Whitehall, 2nd December 1871.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in obedience to your minute of the 22nd ultimo, the result of my inquiry into the circumstances which attended a collision that occurred in the Walton tunnel, near Liverpool, on the Lancashire and Yorkshire Railway, between a passenger train and a goods engine on the 18th ultimo.

Two persons are stated to have been slightly hurt.

The Walton tunnel is about 1,140 yards in length; it is situated between Bootle Lane station, $2\frac{1}{2}$ miles from Liverpool, and Walton junction, $3\frac{1}{4}$ miles from Liverpool. It is worked on the absolute block system with the assistance of the electric telegraph; the telegraph signal stations being at Bootle Lane station and Walton junction.

There are extensive sidings at Bootle Lane station, and the telegraph signal box is situated about 370 yards on the Liverpool side of the mouth of the tunnel. The entrance to the sidings is from the up line, and the points are close to the signal box. Bootle Lane passenger station platforms are just to the north of the signal box.

In consequence of a deficiency in the length of the sidings for the shunting and marshalling of goods trains at Bootle Lane station, it had been found necessary to establish a draw-ahead or stop semaphore signal, placed within a few yards of the mouth of the tunnel, and worked from the signal box, to enable any train to pass the station signals, and to draw close up to the mouth of the tunnel, and to stop there until the signalman had received "line clear" from Walton junction by telegraph, if the train was going through the tunnel, and had taken off the stop signal; or to back again into the sidings if it was merely engaged in shunting or marshalling the waggons prior to leaving.

This stop signal was not placed in its proper position at the left of the up line, but at the other side, to enable it to be seen from the signal box, the view being obstructed by the arch of an overbridge, about 115 yards north of the signal box; but a double disc down distant signal is placed in the position which the stop signal should have properly occupied; this down distant signal being also worked from the signal box and intended to protect Bootle Lane station and the down line.

It appears that on the day in question the 10h. 30m. a.m. up passenger train from Liverpool to Preston, which consisted of an engine and tender, two vans, and five carriages, reached Bootle Lane station about 10h. 40m., stopped at the up platform to put down and take up passengers, and left at 10h. 41m. At this time the engine of a special goods train from Bolton to Liverpool had returned from Liverpool, and was standing in the Bootle Lane sidings, having attached a guard's break van while in the sidings, and was waiting for permission to proceed on its way back to Bolton; and when the 10h. 30m. passenger train had left the station the signalman took off the signal for this goods engine to come out of the sidings, and put on the stop signal at the mouth

of the tunnel, intending to keep the goods engine standing there until the 10h. 30m. a.m. passenger train had been telegraphed back as having arrived at Walton junction, and he wanted to bring out another goods train to do some shunting. But the driver of the goods engine, it appears, was not well acquainted with the line, as he told me that he did not get to Liverpool oftener than once in six or nine months, and on coming out of the sidings he failed to observe the stop signal at the right side of the mouth of the tunnel, and proceeded through the tunnel, in ignorance that he was intended to wait at the south end of it until he got special permission from the signalman to proceed by the latter taking off the stop signal.

The driver of this goods engine says he travelled very gently along the tunnel, hardly as much as at the rate of 10 miles an hour; but, at all events, he overtook and ran into the passenger train just before the latter got to the north end of the tunnel, but rather more than half way through the tunnel, according to the driver of the passenger train, who says he was travelling at 15 or 16 miles an hour. The lights at the tail of the passenger train were not visible to the driver of the goods engine on account of the steam. The driver of the passenger train felt something had happened, but he did not know what, and the guard experienced a great shock.

When the engine of the passenger train emerged from the tunnel it was found that the train had broken into two parts, four vehicles remaining attached to the engine, and the three last travelling apart from the front part of the train. A shackle of the coupling chain and the side chains between the fourth and fifth vehicles had snapped, and the shackle of a coupling between the last van and the carriage in front of it had also broken, but the side chains kept up the connexion in this case.

No damage was done to the goods engine and break van; but the buffers of the guard's van at the tail of the passenger train were broken, and two carriages were slightly damaged.

The collision was caused by the mistake of the engine driver of the goods engine in having failed to see the "stop" signal at the mouth of the tunnel.

The Railway Company are about to lengthen the siding accommodation at Bootle Lane station, and when this is done there will be no necessity for resorting to this exceptional mode of working the block system; but while it is retained the stop signal should be placed in its proper position at the left of the up line, and whether it stands at "danger" or at "all right" can be shown in the signal box, by an electric or mechanical repeater. The down distant signal should also be shifted to the other side of the lines.

Again, it is desirable that the same kind of signals should be used throughout the Company's lines, and not a double disc signal at one side of the line and a semaphore signal immediately opposite to it.

I have, &c.

The Secretary,
(Railway Department)
Board of Trade.

W. YOLLAND,
Colonel.