

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

23 August 1871

BoT Report into Accident at
Sandhills.

(2 Pages).

joint between two rails was found at the off side of the line, about 100 yards back from where the front engine lay on its back.

The two cheeks of the joint chair were found broken, two of the bolts that keep the cheeks together were broken, one bolt appeared not to have been put on, and the fourth bolt remained unbroken. The end of one of the rails at this joint was much laminated. The nuts of a fished joint on the outside of the near side rail a little further forward were cut off. About 18 yards north of the bad joint of the off rail a slight mark was found on the ballast between the rails. This mark is believed to have been made by the right leading wheel of the front engine. From thence forward the marks increased, until the near side rail was completely pushed out of its place. About five rails were bent. Four joint and two middle chairs were broken, and eighteen iron tie rods were bent or broken.

The place where the accident happened is about one mile to the north of the place where the accident happened in April last, and the railway is of a similar character.

The driver of the second engine estimated the speed of the train at the time that the accident happened to have been about 19 miles an hour. The guard of the train estimated it at least at 25 miles an hour; but calculating the speed by the time that expired between leaving Omagh station and the time when the accident happened, I find that the train must have been running at least 32 to 33 miles an hour, and considering that

this train is timed to travel about 26 miles an hour between Mountjoy and Newtown Stewart stations, and that it was late, and that the gradient was very favourable to get up speed, I have no doubt that the train was running 32 miles an hour when the accident happened.

I am of opinion that the accident was the result of the train being timed to run at much too high a speed, considering the very indifferent road over which it was travelling. I do not think it would be possible for any engineer to keep the iron road fit for trains to run safely over it, that are timed to run at a greater speed than 12 miles an hour. The passing of trains on this single line is regulated with the telegraph, which I consider a very dangerous method. Some of the stations on the line are not properly signalled. It is never desirable to put two engines to draw a train if it can be avoided, and it is the more objectionable when the train, as in the present case, was so light as to be easily drawn by one moderately good engine. I would suggest to the Irish North-Western Railway Company the desirability of taking up the iron road and replacing it with a fished rail, laid on wooden sleepers, of providing some good engines to work their traffic, and that they should adopt the train staff system.

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

I have, &c.,
F. H. RICH,
Lt.-Col., R.E.

LANCASHIRE AND YORKSHIRE RAILWAY.

Sir, *Liverpool, 8th September 1871.*

IN compliance with the instructions contained in your minute of the 28th ult., I have the honour to report, for the information of the Board of Trade, the result of my inquiry into the circumstances which attended the collision, that occurred on the 23rd ultimo, at the Sandhills goods-yard, on the Lancashire and Yorkshire Railway.

In this case the 8.15 p.m. passenger train from Preston for Liverpool, came into collision at Sandhills with a goods train, which, in drawing out of a siding, came in its way on the main line.

The Sandhills goods-yard is the great dépôt and sorting station for the Liverpool goods traffic of the Lancashire and Yorkshire Railway, and is about $1\frac{1}{2}$ miles north of the Exchange station at Liverpool. There are numerous sidings on both sides of the main lines of railway, and there is a signal-cabin on each side of the main lines, near a bridge carrying the Stanley road over the railway. The sidings on the east of the passenger line, to which only I need now refer, are connected with the up main line by a pair of points about 43 yards to the south of the signal-cabin; and these and other points near them are worked by a pointsman stationed opposite to them on the ground, with a small hut for shelter. This pointsman communicates with the signalman in the cabin 43 yards to the north of him, by hand-signals only; and it is the practice, during the hours of darkness, for the signalman, when he lowers his main line signals, to exhibit a red light from his hand-lamp, which he places on a small shelf on his cabin, to communicate to the pointsman that it is not right for him to let a train out of the siding in the direction of the main line. When the pointsman sees no red light from the cabin hand-lamp, he considers himself at liberty to proceed with his shunting, and, if necessary, to foul the main lines for that purpose.

The 8.15 p.m. passenger train from Preston to Liverpool, left Preston at 8.37 p.m., 22 minutes late, on the evening in question,—consisting of an engine and tender, two carriages, a break-van, and a loaded fish-wagon. After stopping at all the stations as far as Walton junction, it left that junction station soon

after 9.30 p.m., rather more than a quarter of an hour late; and, passing Bootle Lane without stopping, it approached the Sandhills junction cabin at a speed of between 14 and 15 miles an hour. The engine-driver found the signals at "all right,"—both the distant-signal (which is a fourth of a mile north of the Sandhills junction) and the home-signal, which is above the junction cabin. When within 20 yards of the Sandhills cabin, the engine-driver saw, whilst travelling at a speed of, say, 13 miles an hour, a goods engine on the west main line, with some wagons attached to it, which stood across the east line, on which he was travelling. He had just time to reverse his engine, and to place himself in a convenient position to receive the shock of the collision, by the time his engine struck the wagons which were second and third from the goods engine. The engine of the passenger train was thrown off the rails with all its wheels into the six-foot space, to the right of the line on which it was travelling, and in the direction in which the goods engine and wagons were drawing ahead; but the tender and carriages of the passenger train remained on the rails. The guard, who was looking out of his van, saw the home-signal at the junction cabin suddenly raised to danger, and immediately applied his break, which was a patent spring-break, at the moment that the engine-driver, catching sight of the wagons in front of him, whistled for the breaks to be applied. The speed of the train is stated to have been thus reduced from 18 to 12 miles an hour before the collision occurred.

The smoke-box in front of the passenger engine was stove in, the steam pipes were fractured, and one of the side rods was bent; but the carriages were not damaged, except as regards the footsteps and the adjustment of the break. Out of 30 passengers who were riding in the train, five have complained of injury.

The goods train which thus came in the way of the passenger train, was being made up in the Sandhills sidings, under the orders of the goods inspector, who was present, and was standing between the pointsman's hut and the signalman's cabin. The train had been nearly prepared for starting, and had only one

shunt to make;—in order to take 10 wagons out of a siding, and to place them in front of 16 other wagons, which had already been placed in front of the break-van, and were marshalled in No. 4 siding.

The engine-driver, standing 40 yards on the south of the siding points, whistled to the pointsman, to ask permission to go out on the main line with his 10 wagons, in order to shunt these wagons back to the 16 wagons in No. 4 siding; but he received no reply to his whistle, and he whistled again. After the second whistle, the pointsman showed him a white light from his hand-lamp, as a signal to proceed forward to the main line; and he accordingly started forward towards the main line, whilst the pointsman held the points which allowed him to leave the siding. He had already reached the main line before he received any warning of the approach of the passenger train. He then heard some one call out to him, and, looking northward, he saw the train about 50 yards from him. He opened his regulator wider, with the view, if possible, of getting his wagons across to the west line out of the way of the passenger train; but before he could do so the passenger engine struck the second and third wagons from the goods engine as already described. One of these, an empty cattle-wagon, was completely destroyed; and the other, a low-sided goods-wagon, was much damaged.

The pointsman who was on duty at the siding points does not remember having heard the driver of the goods engine whistle more than once. On hearing the whistle from that engine, he looked towards the signal-cabin, to see whether any red light was displayed by the signalman at that cabin from his hand-lamp in the usual manner; and seeing no such signal, he showed a white light from his own hand-lamp to the engine-driver, and opened the points to turn him on to the main line. This pointsman appears to have done his duty in the ordinary way, according to the means which he had at his disposal, and the practice under which he ordinarily worked.

The signalman in the junction cabin received from Bootle Lane notice, by means of a gong, of the approach of the passenger train at 9.35 p.m.; and on receiving that notice he looked towards the goods siding. Seeing all clear, apparently, towards the sidings, he lowered his signals for the passenger train to approach; but he forgot, before doing so, to place his hand-lamp on the little shelf outside his cabin, to indicate to the pointsman that the road was blocked from the siding to the main line. He had been using his hand-lamp to make signals in an opposite direction immediately before he received notice of the approach of the passenger train; and he put it down on a small post in his cabin, on which it usually stands, in order to lower the signals for the passenger train, instead

of placing it, as he ought to have done, on the little shelf outside his cabin, with a red light showing towards the siding pointsman. He did not see the engine with the goods-wagons going out of the siding until they were already foul of the down main line; but he then turned his main line signals to danger as quickly as he could; and the guard, as already stated, saw the home signal in time to enable him to apply his break, and thus materially to lessen the shock of the collision.

This accident was caused by an act of forgetfulness on the part of the signalman in the Sandhills Junction cabin. The signalman had been stationed in that cabin, or in the one opposite to it, for four years, and is reported to be a man of excellent character. He could not have made the mistake which led to the accident if he had been provided with those appliances which are absolutely necessary to safety in the working of important junctions and stations, and in the neighbourhood of goods yards, and their communications with passenger lines. The safety points and the points connecting the siding with the main line should obviously be worked from the cabin by the junction signalman himself; and the lever for working them should be so interlocked with the main-line signals that it would be impossible for the signalman to open them for the main line when the signals are lowered for the passage of passenger trains, or, on the other hand, to lower the signals for passenger trains when the siding points are open.

I am happy, however, to be able to state that the directors of the Lancashire and Yorkshire Railway Company have at length authorized a considerable expenditure of money, which is so necessary for the reasonable security of their traffic, at this as well as in other important places; and brick buildings have already made considerable progress on both sides of the line at Sandhills, which are intended to be improved signal cabins, and from which a series of point-levers and signal-handles, interlocked with each other, will, when the system has been completed, be worked. This necessary work will, I am informed, be completed within a couple of months from the present time. And it is also, I believe, intended to add to the siding accommodation, with a view to the shunting being performed in the sidings, independently of the main lines, in place of its being done across the main lines, as on the present occasion, to the delay as well as to the risk of the passenger traffic.

I have, &c.

H. W. TYLER.

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

LANCASHIRE AND YORKSHIRE RAILWAY.

SIR, *Bolton, September 8th 1871.*

IN compliance with the instructions contained in your minute of the 1st inst., I have the honour to report, for the information of the Board of Trade, the result of my inquiry into the circumstances which attended the accident, that occurred on the 29th ultimo at the Bolton station on the Lancashire and Yorkshire Railway.

In this case the 12.20 p.m. passenger train from Manchester to Liverpool, came into collision, whilst shunting from the front to the back of the Manchester platform at Bolton, with an engine proceeding from the turn-table over the passenger line at the back of platform, in returning to Manchester.

At the Bolton station the two lines from Liverpool and Preston, and from Blackburn, meet for Manchester. The platform appropriated to the trains from Blackburn is constructed on the segment of a circle, curving from the eastward to the northward.

The main-line platform is also circular, but curving to the westward. There are four lines of rails between the two platforms at the east end of the station. In the middle of the station, the lines from Blackburn on the north, and Liverpool, Preston, and Southport on the west, join each other, and run into these four lines. The southern main line platform east of the junction, is used for trains going either northward towards Blackburn, or westward towards Liverpool and Southport. At the west end of the south main line platform there is a junction between the main line and three sidings, one of which is the turn-table siding, and all of which are on the south of the platform. One of these sidings adjoins the south of the main line platform, and is frequently used as a starting line for trains in the direction of Liverpool and Southport; and in order that such trains may start from that siding, they are, on their arrival at the station from the east, run forward, past the north side,