

LANCASHIRE AND YORKSHIRE RAILWAY.

*Board of Trade,
(Railway Department),
Whitehall, 16th January, 1873.*

506. I have the honour to report, for the information of the Board of Trade, in compliance with the instructions contained in your minute of the 21st ult., the result of my inquiry into the circumstances connected with the collision between a passenger train and a coal train which occurred on the 17th ult. near Pendleton station, on the Lancashire and Yorkshire Railway.

At least 20 passengers are stated to have been injured in this collision, as well as the guard of the passenger train.

The traffic between Clifton junction and Manchester has been worked upon the block-telegraph system since the 20th October last; and, in connection with the present collision, there are three telegraph cabins concerned, viz., those at Pendleton, Bedlam Bridge and Windsor Bridge.

The distance between Pendleton and Bedlam Bridge is - - 485 yds.

" " Bedlam Bridge and Windsor Bridge is 260 "

These cabins are all provided with home and distant signals; and as regards the up traffic from Bolton to Manchester, the Pendleton up home signal can be seen from an engine at a distance of 550 yards; the Bedlam up distant signal (which is a lower arm on the Pendleton home signal post) at the same distance of 550 yards, though not so distinctly, not having so good a back ground.

The Bedlam Bridge up home signal and Windsor Bridge up distant signal come into a driver's sight at the same time, when 100 yards past the Pendleton cabin, or at a distance of 385 yards from the Bedlam Bridge up home signal. Approaching Pendleton from Bolton the line falls at 1 in 544 towards Manchester, the gradient changing to a still falling one of 1 in 1034 at a point near Pendleton, and continuing at this rate to Windsor Bridge.

It will be perceived from the above description, that from the obstructed view, close proximity of the cabins, and falling gradient, a driver requires to exercise great caution in running over this portion of the up line. If a train is standing on the up line in the block section between Bedlam Bridge and Windsor Bridge, and the signals are properly worked, the driver of the following up train will get a warning of 1,035 yards that he has to stop at Bedlam Bridge home signal; which distance, with the continuous breaks in use on all Lancashire and Yorkshire company's trains, ought to be sufficient for the purpose. To stop at the Windsor Bridge up home signal, if the block in advance is occupied, a driver gets a warning of only 645 yards from the Windsor Bridge up distant signal,—not sufficient, unless great caution is being used.

On the morning of the 17th ult. an up coal train, consisting of engine, tender, 7 loaded waggons, and 2 vans, was stopped at 9.20 a.m. at the Windsor Bridge up home signal in consequence of a goods train occupying the block in advance. The coal train had been standing for about 4 minutes, when the guard, hearing a passenger train approaching at a rapid speed, jumped out of his van, and told his driver to go ahead. The latter just got his train into motion, when it was run into by the passenger train at a point 180 yards on the Manchester side of the Bedlam Bridge up home signals, i.e. 1,215 yards from the point at which the Bedlam Bridge up distant signal is visible. The blow appears to have been a severe one. The end of the rear van of the coal train was broken up, the van in front of it damaged. The engine ran away with 3 waggons, before the driver had time to shut off steam, both he and his fireman having been knocked off the foot-plate by the collision, but fortunately not hurt. The engine

afterwards came into collision with the goods train standing in the next block.

The passenger train was the 8.15 a.m. express from Southport to Manchester, timed to stop only at Wigan, Bolton, and Salford. It consisted of engine, tender, 9 carriages, and a break van at the tail of the train; which van, and the four carriages in front of it, were coupled together with continuous breaks.

The driver, a man of 24 years service, states that he left Bolton four minutes late (being allowed 16 minutes for running the 10½ miles between Bolton and Salford, requiring a speed of about 40 miles an hour); that on approaching Pendleton he found the Pendleton up distant and up home signals and the Bedlam Bridge up distant signals all off for him; that he shut off steam 300 or 400 yards on the Bolton side of Pendleton, the usual place for doing so preparatory to stopping at Salford, 1½ miles distant, it being down hill all the way; that his speed on passing Pendleton was about 30 miles an hour; that on catching sight of the Bedlam Bridge up home and Windsor Bridge up distant signals, which were both at danger, he at once had his break applied, whistled for the guards' breaks, reversed his engine and applied contrary steam, but notwithstanding failed in reducing his speed to less than 12 or 14 miles an hour on coming into collision with the coal train; that he jumped off into the 6-ft. space just before the collision, tumbled over, but was not hurt.

The fireman's evidence is to much the same effect as that of the driver. He gives the same account of the state of the signals, but underrates the driver's estimate of the speed both on passing Pendleton and on collision. He jumped off before the driver, also rolled over, but was not injured.

The guard of the train states that on approaching Pendleton the Pendleton up signals and Bedlam Bridge up distant signal were all off, but that when half way between the Pendleton up distant and home signals he saw the Bedlam Bridge up distant signal put to danger; that he slightly applied his break according to practice so as to have his train under control on approaching Windsor Bridge; that soon after passing Pendleton he heard the break whistle, and applied his break as hard as possible, and kept it on up to the collision, which knocked him down on his back and injured him.

The leading wheels of the engine left the rails, but the rolling stock sustained no damage of importance.

The driver of a down passenger train, which was stopping at Pendleton as the express passed, looked at the up signals, and noticed that up home signal was off, but cannot speak as to the position of the Bedlam Bridge up distant signal arm.

The signalman in the Pendleton cabin states that the up goods train passed at 9.17, the up coal train at 9.20, and the Southport express at 9.25; that he was not able at once to get "line clear" for the express from Bedlam Bridge, and consequently kept on his signals till the express was about 100 yards from his cabin, when, on receiving "line clear," he lowered his up home signal; that the driver had had his steam shut off, but on the signal being lowered put it on again, and ran past the cabin at a speed of 30 miles an hour. This signalman speaks positively as to the Bedlam up distant signal being at danger as the train approached and passed his post.

A man who was in the Pendleton cabin as a learner corroborates the signalman's evidence; and a porter who was standing on the Pendleton platform as the express passed says that he looked up at the signals, and saw the up home signal off, but the Bedlam up distant signal at danger; thinking the speed was too fast, and steam being on, he tried to attract the driver's attention.

The signalman at Bedlam Bridge cabin states that the goods train passed his cabin at 9.20, the coal

train at 9.21, and the express at 9.25; that the Pendleton signalman rang forward the latter twice before he took it into block, and that he kept on both his up home and up distant signals, as the coal train was on the line between him and Windsor Bridge; that he saw the express driver shut off steam on his showing him a red flag when he was some 50 or 60 yards from his cabin; and that the speed as he passed was from 15 to 20 miles an hour. He further states that the breaks were being put on as the train passed.

The signalman at Windsor Bridge cabin estimates the speed on collision at from 15 to 20 miles an hour. He told me that this was the first instance that he had witnessed of a block-signal at danger having been passed.

A careful consideration of the foregoing evidence leaves, I think, but little doubt that this collision is attributable to a very great want of caution on the part of the driver of the Southport express in approaching a portion of the line where peculiar care was necessary.

Even assuming him to be correct in his statement that the Pendleton up distant signal was off when he approached and passed it, his speed was nevertheless such that although the Windsor Bridge distant signal was against him, he would have never stopped (but for the collision) till he had run a long way past the Windsor Bridge up home signal into the block section beyond. I do not, however, believe either his or his fireman's statement with regard to the Bedlam Bridge distant signal; but believe, both from the weight of the evidence, and the circumstances of the case, that it was against the driver of the express, and that he consequently, in spite of caution received 1,215 yards from the point of collision, struck the coal train at a speed

(allowed by himself, and therefore possibly much greater,) of 12 to 14 miles an hour. No possible mode of working traffic can avert the consequences of such carelessness on the part of drivers.

An improvement is, no doubt, desirable in the arrangement of the signals at these telegraph stations; and that the collision occurred in the block section on the Manchester side of Windsor Bridge, where a driver gets a warning only 645 yards from the point at which he is to stop, much less blame would have attached to him than as it is.

Considering the short distance between Pendleton, Bedlam Bridge, and Windsor Bridge, and the obstructed view, it would be, I think, only prudent to make the up home signals at the two former posts the up distant signals for the two latter, treating the down signals similarly. It would be a further improvement if the Bedlam Bridge block section could be altogether dispensed with; its short distance of only 260 yards from Windsor Bridge is hardly compatible with the essential principle of block-telegraph working, viz., that of maintaining a reasonable space interval between following trains, especially at a part of the line where there is fast running.

Considering the crowded traffic on the line between Bolton and Manchester, it is, I think, worthy of consideration whether it would not be well to allow rather more time for express trains to run the distance, so that to keep time they should not be required to maintain an average speed of 40 miles an hour.

I have, &c.,

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

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

LLANELLY RAILWAY.

SIR,

Llanelly, 30th January 1873.

IN compliance with the instructions contained in your minute of the 30th November last, 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 22nd of that month at Llandilo station on the railway of the Llanelly Railway and Dock Company.

Two passengers are reported to have been slightly hurt.

On the day in question a train belonging to the London and North-western Railway Company, which consisted of an engine and tender, one third, two composite carriages, and a break-van with a guard, arrived from Craven Arms at the north end of Llandilo station yard about its proper time, 5.57 p.m.

The signals which are worked from a raised signal cabin at the north end of the station, were at "all right" for the train to approach and run up to the platform. The railway is a single line until it reaches the north end of the station yard, from thence it is a double line up to the station platform, and there are sidings at each side of the railway, but it is only worked as a double line from a cross-over road about the centre of the yard. The part of the second line to the north of this cross-over road is used as a siding.

It has been customary to place some empty coaches, for attaching to a Carmarthen train, on this part of the second line of rails. These empty coaches have usually been taken away before the London and North-western train arrived. On the day in question three carriages and a van were taken by the yard shunter with his horse to the north end of the station, to wait till the engine of the Carmarthen train should take them away.

The shunter should have placed these coaches at

the north side, clear of the cross-over road, but he left them where the van was foul of the cross-over road, and the engine of the London and North-western train as it arrived at Llandilo ran into the van and empty carriage next to it at a speed variously estimated at four to eight miles an hour, and damaged them. The engine and tender of the London and North-western train were thrown off the rails.

The signalman on duty at Llandilo station was forbidden to take off the signals before he got the station-master's leave to do so. The latter was in the habit of always walking through the station yard, to see that it was clear, before allowing the signalman to take off the signals. On the present occasion the signalman forgot to put up the signals after a train belonging to the Llanelly Railway and Dock Company had arrived, about 5.38 p.m., or else he lowered them without ascertaining first of all that the line was clear. The station-master thought that he made the mistake first mentioned. The signalman himself stated that he had committed the last-mentioned mistake.

Accidents of this kind will occur through the forgetfulness and carelessness of servants, but good arrangement and interlocking of the points and signals will contribute very much towards preventing accidents of the kind.

The yard shunter was to blame for leaving the carriages where he did, and the signalman for having his signals at "all right" for the London and North-western train to run into the station before the line was clear.

I have, &c.,

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

F. H. RICH,
Lieut.-Col. R.E.