

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

6 November 1873

BoT Report into Accident at
Ingham's Siding Horbury.

(3 Pages).

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade,
(Railway Department),

Whitehall, 13th December 1873.

SIR,

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 10th ultimo, the result of my inquiry into the circumstances which attended the collision that occurred on the 6th ultimo, between a passenger and a goods train at Ingham's siding, situated between Dewsbury east junction and Horbury station on the Lancashire and Yorkshire Railway, which places are about 2½ miles apart. Fourteen passengers and the driver and guard of the passenger train were more or less hurt on this occasion.

This part of the Company's line is worked on the absolute block system, with the assistance of the electric telegraph, and there is an intermediate block telegraph signal-box between Dewsbury east junction and Horbury at Ingham's siding, 500 yards to the east of the Dewsbury east junction signal-box, which intermediate telegraph signal-box is closed at night; but according to the Company's regulations, should be opened by the signalman at 6 a.m. and remain open until 6h. 30m. p.m.

The signal lights for Ingham's siding are not lit during the night.

The signalman on duty at Dewsbury east junction signal-box informed me that on the morning in question he received the telegraphic signal "train on line," according to the Company's code of regulations, which are forwarded herewith, at 6.41 a.m. from Dewsbury west junction for a goods and coal train, which passed his box on the way to Horbury at 6.42; but before it passed he had given the "warning signal" to Horbury, which had been acknowledged, and the signal "train on line" to Horbury, and that was also acknowledged in the proper manner, and by the electric semaphore switch in his box being placed at danger by the Horbury signalman; that he received the "warning signal" for a passenger train from the Dewsbury west junction signal-box about 6.57, and repeated this "warning signal" to Horbury by "two beats twice given," but this last signal was not acknowledged by the Horbury signalman; that he repeated the "warning signal" again to Horbury in about half a minute to a minute, as he never left the instrument, and this second "warning signal" was acknowledged by the electric semaphore switch being dropped, and he also received "one beat" on the bell as well.

He then allowed the passenger train to proceed, and it passed at 6.59 a.m., and in about half a minute he heard the noise of the collision.

The Company's regulations, in this respect, are perfectly clear and distinct with respect to the block system of working.

The "all clear" signal is to be given back by the signalman at the station in advance (in this instance Horbury), by taking off the electric semaphore switch, and by giving three beats of the bell.

The "electric semaphore switch" was taken off, under circumstances which I shall shortly describe, but the signalman at Dewsbury east junction box, says that he only received one beat of the bell. He states further, that he has always worked in this manner, and has taken the dropping of the electric semaphore switch in his box as a sufficient indication from the advanced box, that the "line is clear" up to that box; he says he has been accustomed to work the block system since the latter end of the year 1872, and he had been three weeks employed in this signal-box.

The signalman at Horbury states, that a goods train was signalled on to him from Dewsbury east junction signal-box as "train on line," at 6.43 a.m., and he put on the electric semaphore switch in the east junction signal-box, and blocked the line for the goods train: so far the two signalmen agree. He says that about 10 minutes after he received the signal "train on line," the signalman at the Dewsbury east junction signal-box began to ring, and kept on ringing continuously; that no goods train had arrived; and as he could see more than half-way, he thought the continuous ringing meant "error signal" (which is given by seven beats), and "is to be given when an erroneous signal has been sent, and it will cancel the previous signal," and in consequence he then pulled off the electric semaphore switch. He says the east junction signalman immediately gave "passenger train on line," by two beats, at 6.59 a.m. This signalman distinctly states that he did not give one beat in addition to taking off the electric semaphore switch, and although he should not have taken off the "electric semaphore switch," exhibited in the Dewsbury east junction signal-box without further explanation, he does not appear to have given back "line clear," or to have authorised the signalman in that box to send the passenger train forward.

The goods and coal train which passed Dewsbury east junction signal-box at 6.42 a.m. consisted of an engine and tender, 37 waggons, and a break-van, among which were nine empty waggons intended to be left at Ingham's siding.

This train is appointed to leave Wakefield at 6.25 a.m. and is due at Holmefrith at 8.45 a.m., but it actually left Wakefield at 1.45 p.m., and did not reach Holmefrith until 8 p.m., eleven and a quarter hours after its appointed time. The driver came on duty at 5.55 a.m. on the 5th ultimo, but he had to wait until the afternoon for the guard, who was unable to attend sooner in consequence of having had long hours on the previous day. This train left Holmefrith on its return journey at 1.30 a.m. on the 6th ultimo, but was detained by goods trains and shunting at Huddersfield and Mirfield, so that the train only reached Ingham's siding, which is 16 or 17 miles from Holmefrith at 6.45 a.m. (instead of at ½ past 2 p.m. on the previous day, its proper time), the driver having had all right signals exhibited for him to proceed from Dewsbury east junction signal cabin.

The guard in charge of this train states that the train was stopped by his orders at Ingham's siding, as he had nine waggons to put off, and he found the signals there were all off, but the lamps were not lit, and there was no signalman there. He says that his van stopped 50 or 60 yards on the Dewsbury side of Ingham's siding signal-box; he found that the door of the signal-box was open, and he tried to put the Ingham's siding signals on, but could not do so, and he found that he could not open the points to pass from the down line, on which his train was standing, across the up line into the sidings. He had unhooked the nine waggons from the rear part of the train, and had caused the driver to take them ahead, clear of the trailing points of the through road to the siding, in expectation that he would be enabled to open the points and shunt them across to the sidings; and when he found that he could not put on the signals and open the points, he then directed the driver to whistle to the signalman at Dewsbury east junction signal-box, for permission to back his train from Ingham's siding on the wrong road, and on to the branch line to Dewsbury, so that it might be out of the way of the passenger train which was then due.

As the driver was unable to attract the attention of the Dewsbury east junction signalman by repeated

whistling, the guard then told him that they would go on to Horbury, and the engine and the nine empty waggons were backed to, and coupled on to the rest of the train, which then started; and, according to the driver, he had travelled about a mile and was proceeding at the rate of about eight or nine miles an hour, when his train was overtaken and run into by the passenger train; and to show how little these men appreciate the distance they have run, I may state that the collision actually took place 434 yards beyond Ingham's siding signal-box, or 934 yards beyond Dewsbury east junction signal-box.

The morning is described as being very thick and foggy by the Dewsbury east junction signalman, who says that if he had been looking out of the window he could not have seen the tail lights on the goods and coal train at a greater distance than 200 yards. The guard of this train, on the other hand, says that he saw the light in the Dewsbury east junction signal-box when he was standing by his break-van close to Ingham's siding signal-box.

The passenger train which ran into the goods and coal train was the 5.0 a.m. from Manchester to Normanton. It consisted of an engine and tender, four carriages, and one break-van, and it left Thornhill station, which is about $\frac{1}{2}$ a mile from Dewsbury east junction at 6.55 a.m., or five minutes late. The carriages and the break-van were provided with continuous breaks on all these vehicles.

The driver states, that he found that on approaching the Dewsbury west and east junctions, the signals were at "all right" for him to proceed, and that he was travelling about 30 miles an hour when he passed the east junction box; and he had passed the east junction and Ingham's siding signal-boxes, when he fancied he saw a red light ahead, and he moved across the foot-plate of the engine, and then he saw a second light at the right side of the break-van at the tail of the coal train, at a distance of about 150 yards ahead, and he shut off the steam, shouted out to the fireman to "hold hard," and whistled for the guard's breaks, applied the steam the reverse way, but the reversing lever was not properly in the notch, and when the steam was re-applied the reversing lever flew over. He does not think the speed had been very much reduced when the collision took place. He also states that the tail lights on the goods and coal train were burning dimly, and that on passing the east junction the gauge glass broke, and this gave them plenty of steam and water on the foot-plate, and prevented them from seeing well, until the taps could be shut, which was accomplished by the fireman, by the time they got to Ingham's siding signal-box.

The fireman confirms the driver's statement.

The guard riding in the van at the tail of the train, says that the first intimation which he received was having his head thrown against the van by the collision itself, when the train was travelling at about 35 miles an hour; that there was no whistle from the engine; and that after he got out of the van, and was walking towards the east junction, he could see for a distance of 500 yards, and the signal-box itself at a distance of about 300 yards.

The passenger train engine and three carriages were thrown off the rails, and the break-van was smashed, and two third-class carriages and eight good's waggons were more or less damaged.

As the result of my inquiry into this case, I should state that there are some very ugly and unsatisfactory features connected with it which must be remarked upon, and I have not often had to comment on the neglect of so many men as I am compelled to do in this instance.

But, prior to doing so, I must say that I believe the officers of the Lancashire and Yorkshire Railway Company have not only to contend against an insufficient amount of accommodation for working their exceedingly heavy traffic, but that they experience great difficulties from the state of the labour market in the North of England. Generally, it is no punish-

ment to discharge men for misconduct, as they can go elsewhere, and usually obtain equal or even higher remuneration for their labour.

With respect to the collision, I must observe:

1st. That the driver in charge of the goods and coal train was a spare driver who took the duty in consequence of the regular driver having been working *very long hours*, and at the time when the collision occurred this spare driver himself had been 25 hours on duty!

2nd. The signalman who should have taken charge of Ingham's siding telegraph signal-box at 6 a.m. was not present even when the collision took place at 7 a.m., and no explanation was given as to the cause of his absence. If he had been attending to his duty at the proper hour, or considerably after that time, the collision would not in all probability have occurred.

3rd. The guard of the goods and coal train was very much to blame, for not having at once proceeded on to Horbury, when he found on arriving at Ingham's siding that the signalman was not present; that the signal lights were not lit, and that telegraphic communication for working the block system had not been re-established with Horbury on one side, and Dewsbury east junction on the other, and especially for having attempted under such circumstances to shunt the train from the main line on which it was running, across the other main line, into the sidings beyond. Fortunately the interlocking of the points and signals in Ingham's siding telegraph signal-box prevented him from accomplishing his purpose. The signal-box should be locked up at night when closed, in accordance with the instructions, otherwise it might be practicable, for an evil disposed person, to cause a fearful accident by setting the points wrong.

4th. The immediate cause of the collision taking place was the direct disobedience of the Company's instructions for the working of the block system by the signalman at Dewsbury east junction. As already stated, those instructions are quite explicit, that "line clear" is to be given by taking off the electric semaphore switch and by giving three beats of the bell. The electric semaphore switch in his box was taken off by mistake, but three beats of the bell were not heard, according to his own statement.

5th. This is the worst case of the kind which has come before me, in which it is tolerably apparent, that in consequence of that portion of the line being worked on the absolute block system, the driver and fireman of the passenger train were not keeping a proper look-out ahead. If they had been, the tail lights on the goods and coal train might have been seen at a distance of 200 or 300 yards, perhaps more, according to the evidence; and with continuous breaks on the five vehicles, in addition to the break on the tender, if the driver had at once whistled for the breaks, the collision might have been avoided altogether. It is true that the driver says he whistled for the guard's breaks, but the guard denies that any whistle was sounded, and states that the first intimation he had that anything was wrong, was the collision itself.

6th. In working the absolute block system, it appears to me, that many of the railway companies are attempting to do too much, taking into consideration the class of men who are mostly employed to work the instruments. Thus, on some lines, the number of beats on the bell run up as high as 14, and there is great risk of an error in counting the number.

Now, the instructions for working the system cannot be made too simple and too clear, and it should be distinctly aimed at, that the same number of beats on the bell should not have two different meanings. Thus, in the Lancashire and Yorkshire Company's instructions, the "warning signal," two beats twice repeated, is easily mistaken for four beats of the bell intended to denote the "departure" of a "goods, coal, or ballast train," if the signalman does not make a

proper pause between the first and second two beats; and when making this inquiry I noticed in one of the signal-boxes that the "two beats twice repeated" might easily have been mistaken for four beats, from the defective manner in which they were given.

Again, the mistake of the signalman at Horbury was probably due to the Dewsbury east junction signalman having too quickly repeated the "warning signal," two beats twice repeated, which made the Horbury man suppose that it was intended for the "error" signal of "seven" beats by a miscout on his part, and thus caused him to take off the "electric semaphore switch," which he had put on in the

Dewsbury east junction telegraph signal-box, when he received "train on line" for the goods and coal train at 6.43 a.m.

There are great varieties in the mode of working the absolute block system, but now that greater progress is apparently taking place in its introduction, it is very essential that a good uniform system for all railways should be adopted.

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

I have, &c.,
W. YOLLAND,
Colonel.

Printed copies of the above report were sent to the Company on the 31st December.

LANCASHIRE AND YORKSHIRE RAILWAY.

Sir,
Manchester, 27th January 1874.
IN compliance with the instructions contained in your minute of the 12th ultimo, 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 6th ultimo, at the east end of the Victoria station, Manchester, on the Lancashire and Yorkshire Railway.

On the day in question, a passenger train, which consisted of an engine and tender, a break-van with a guard, a second-class, first-class, and two third-class carriages, arrived at Victoria station from Yorkshire about 11.38 p.m. As soon as the passengers and luggage had been taken out of the train it was backed out of the station, and, while doing so, it was run into by a passenger train from Rochdale that was entering the station.

Five passengers in the Rochdale train, as well as the guard of the train, are reported to have been slightly shaken.

Victoria station, Manchester, is approached from the east on a falling incline of 1 in 59, which extends to the east end of the station. The line into the station is on a falling gradient of 1 in 150. There is a signal cabin at the east end of the station, from which the arrival and departure of all trains is controlled. It is distinguished as No. 1 junction cabin. The lever-handles, by which the points and signals are worked from this cabin, are interlocked, and the railway from No. 1 cabin eastwards is worked on the absolute block system. There are separate arrival and departure signals for the several lines.

As soon as the passengers had disembarked from the Yorkshire train at No. 4 platform, Victoria station, the semaphore signal, for this train to shunt back, was lowered by the signalman at No. 1 junction cabin. This was about 11.40 a.m. Immediately afterwards the signalman received notice on the telegraph instrument that the train from Rochdale was approaching. This train consisted of an engine and tender, a break-van with a guard, a second, two first, and three third-class carriages. When the signalman in No. 1 cabin got notice of the approach of this train he looked out to see whether the Yorkshire train was ready to leave No. 4 dock line, but thinking that it was not ready, he put up the semaphore signal against the Yorkshire train, to prevent it from moving from the place where it was standing, and after waiting for a couple of minutes, to see that it had not moved, he lowered his semaphore signal for the Rochdale train to go to No. 2 platform at Victoria station. The line to No. 2 crosses the line to No. 4 at the east end of the platform. The train from Rochdale had been stopped outside No. 1 junction cabin, as it is customary to detach the engine from the train before it enters the station, and to allow the train to run into the dock line under the control of the guard who travels in the break-van next to the

engine. The guard of the train from Rochdale allowed the train to descend the incline into the station as soon as the signal for it to proceed was taken off, and the train was moving forward at a speed of about four or five miles an hour when it ran into the last vehicle of the train from Yorkshire, which had commenced to move back out of the station, about the same moment as the Rochdale train had started to move into the station. One carriage of the Rochdale train was thrown off the rails, and four or five carriages were damaged, and all the carriages of the Yorkshire train were slightly damaged, but no part of this train left the rails.

The shunter who was on duty at Victoria station, when he saw that the signal was at "all right" for the Yorkshire train to move back, had given the engine-driver of the train the signal to put back, and the shunter then jumped into the break-van, to act as guard during the shunting operation. On examining the signals after the accident it was found that the signal for the Yorkshire train to shunt back was standing at "all right," at the same time that the signal for the Rochdale train to enter the station and cross the line of rails on which the Yorkshire train was moving was also at "all right;" but on going into No. 1 cabin, the levers by which these signals are worked, were found to be so placed, that the signal for the Yorkshire train should have been at "danger" if it had acted properly, and on further examination of the wire by which No. 4 platform signal is worked, it was ascertained that the wire had stuck somewhere. This signal, together with all the apparatus in No. 1 cabin, had been put up in March 1873, and had never been known to fail before. It failed again about a week after the present accident, but fortunately the second failure was detected, and did not cause an accident.

The wire by which No. 4 signal is worked passes under the platform as well as under the lines of rails leading to 2, 3, and 4 docks. There are trapdoors by which the cranks and pulleys can be cleaned and examined, and I would recommend that the wires should be conveyed through pipes, for six or eight feet from the places where they enter the troughs, through which they pass under the railway, so as to prevent them from getting jammed by stones or rubbish that may be kicked about the line.

The Lancashire and Yorkshire Railway Company have put an additional weight on the lever by which No. 4 signal is actuated, so as to prevent, as far as possible, any recurrence of this signal not being raised to "danger" when the wire by which it is pulled to "all right" is slackened for the signal to return to the position denoting "danger."

The accident which forms the subject of this report seems to have been caused by the wire or one of the cranks by which No. 4 signal is actuated, not having worked properly, owing to the counterpoise