

Appendix No. 63.

Lancashire and
Yorkshire Railway.

SIR,

Office of Commissioners of Railways, Whitehall,
November 16, 1849.

I HAVE been directed by the Commissioners of Railways to forward to you the enclosed copy of a report made to them by Captain Laffan, on a collision which occurred on the line of the Lancashire and Yorkshire Railway on the 3rd instant, close to the Heaton junction, and which appears to be to a certain extent attributable to the imperfect siding accommodation at the Heaton station, which is under the control of the London and North-Western Railway Company.

I am to request you to call the attention of the Directors of the Company to the whole of this report, which appears to claim their careful consideration, and to inform them that the Commissioners have directed a communication to be addressed to the Lancashire and Yorkshire Railway Company, calling their attention to the observations of Captain Laffan on the deficiencies at the Heaton Lodge and Mirfield stations, and to the Midland Railway Company, with reference to his remarks upon the arrangement of the trains at Normanton, and they hope that, by the co-operation of the London and North Western with those Companies, such arrangements as may ensure the safety and the convenience of the public will be promptly effected.

I have, &c.,

The Secretary of the
London and North Western Railway Company.H. D. HARNESS,
Capt. Royal Engineers.Office of Commissioners of Railways, Whitehall,
November 16, 1849.

SIR,

I HAVE been directed by the Commissioners of Railways to forward to you the enclosed extracts from a report made to them by Captain Laffan, on a collision which occurred on the Lancashire and Yorkshire Railway, on the 3rd instant, near the Heaton Junction, and to request you to call the attention of the Directors of the Company to the inconvenience and dangers which may be occasioned, as shown by the extracts, by an injudicious arrangement in a train of the carriages to be detached during its progress, and to express the hopes of the Commissioners that the instructions enforced at Normanton on this subject will receive renewed consideration.

I have, &c.,

The Secretary of the
Midland Railway Company.H. D. HARNESS,
Capt. Royal Engineers.

SIR,

Derby, November 29, 1849.

REFERRING to your communication of the 16th instant, enclosing extracts from Captain Laffan's report on a collision on the Lancashire and Yorkshire Railway, I am instructed to state, in reply, that to marshal the trains at Normanton in the way suggested would be fraught with far more delay and danger than can possibly arise at the Heaton junction.

At Normanton there are about 150 trains in the 24 hours, whilst at Mirfield there are about 25.

The trains arrive from Hull and York in trains of from 40 to 60, or 70 waggons, placed indiscriminately as to station, and to re-arrange them at Normanton, as suggested, would block up the main line for a long time, occasionally for an hour and a half or two hours.

I consider that the want of sidings at Heaton junction, as alluded to by Captain Laffan, to be the evil more particularly requiring to be remedied.

I have conferred with the station-master at Normanton, who is most desirous to do all in his power to facilitate the traffic and ensure safety.

I have, &c.,

Capt. Harness, R.E.,
&c. &c.JOSEPH SANDERS,
General Manager.

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Lancashire and
Yorkshire and East
Lancashire Railway.

APPENDIX No. 64.

LANCASHIRE AND YORKSHIRE AND EAST LANCASHIRE RAILWAY.

SIR,

Office of Commissioners of Railways,
December 11, 1849.

I HAVE the honour to lay before you, for the information of the Commissioners, the result of my inquiries into the circumstances attending a twofold collision which occurred on the morning of the 26th ult., upon the joint line of the Lancashire and Yorkshire and East Lancashire Railway Companies, leading from the joint terminus of those Companies at Liverpool.

The joint line extends from the Liverpool terminus to the Walton junction, distant 3 miles; there the lines separate; the East Lancashire going off to the left, towards Ormskirk, and the Lancashire and Yorkshire proceeding onwards towards Wigan. The joint portion is under the superintendence of an officer representing both Companies; the only station upon it is situated in Bootle-lane, 1½ miles from Liverpool, and there the staff consists of a station-

master and signal-man, appointed by the joint Companies, and of a ticket-collector or porter appointed separately by each Company; in all, four servants.

Proceeding from Liverpool, the line on leaving the Bootle station rises for a distance of 285 yards on a gradient of 1 in 400, thence for 1,370 yards further, the ascent is 1 in 471·6, and the last 1,240 yards of this distance passes through the Walton tunnel. From the summit which coincides with the northern mouth of the tunnel, the line descends again at a gradient of 1 in 400 to the junction, distant from the tunnel mouth 325 yards.

The first collision occurred in consequence of the 8 a.m. East Lancashire passenger-train from Liverpool—which should have stopped at the Bootle station at 5 minutes past 8—not reaching that station till 10 minutes past, and to its being further delayed in the long tunnel which intervenes between the Bootle station and the Walton junction, by the driver seeing the reflection of a strong red light a-head, which he mistook for a danger-signal. Before he could recover his usual speed after this last stoppage, his train was run into by a Lancashire and Yorkshire goods-train which had left Liverpool 5 minutes after him, and which had passed the Bootle station without stopping or even checking its speed only 3½ minutes after he had started from it.

As the passenger-train would lose 2 minutes in getting up its speed on rails that were very slippery, it appears that it only had 1½ minute's start of the goods-train on entering the tunnel, and that short interval appears to have been lost by the momentary check caused by the supposed danger-signal.

The second collision was a consequence of the first. The shock in the tunnel had detached the three last carriages of the passenger-train, and the driver went on with his engine and tender, followed by a break-van and two carriages. On reaching the Walton junction, he turned off on to the East Lancashire line; but the guard, seeing that part of the train had been left behind, called to him to stop, and the driver stopped before the buffers of the last of the carriages that had followed him were quite clear of the path of the line he had just left. In this position those buffers were struck by the three detached carriages, which had been carried over the summit by the velocity at which they were running when detached, aided by the shock of the collision, and had then run down the descending gradient towards the junction at a speed gradually diminishing, but which, when they struck the last of the preceding carriages, was still so great as to throw that carriage off the line.

Before entering into any further detail of the circumstances attending these collisions, there are two points in the evidence which I would wish to point out to the attention of the Commissioners.

The first is, that I was unable to get the evidence of the driver and fireman of the East Lancashire passenger-train, in consequence of these men forming part of a large body of the East Lancashire drivers and firemen who have lately left that Company's service, in consequence of some dispute with the managers. To this circumstance, however, I do not attach much importance, as the only value of their testimony would have been to explain how their train was so late at the Bootle station that morning; and to state how the mistake arose as to the supposed danger-signal in the tunnel. The first of these is, in my opinion, sufficiently accounted for by the fact that the morning was a very foggy one, and that the rails were slippery; and the second I was fortunately able to trace out, though with considerable difficulty, from other evidence.

The second point in the evidence is that which refers to the working of the signals at the Bootle station, and on this the witnesses made such conflicting statements, that it was only after repeated cross-examination that I was able to satisfy myself as to the real facts of the case. I shall quote the evidence on this point at some length, that the Commissioners may be able to judge whether I am right in my conclusion.

The passenger-train left Liverpool at 8, and the morning being very foggy, and the rails slippery, it only got to Bootle at 10 minutes past. The evidence was, that it reached that station at 20 minutes past, but it subsequently appeared that the latter time was taken from the clock at Bootle station, and that the clock is an uncertain one; or that, to use the words of one of the witnesses, "it goes wildly;" and that, on the morning in question it was 10 minutes fast. The train stopped for one minute at the station, and left it again at 11 minutes past 8.

At this time the station-master was absent from his station, getting his breakfast, and the signal-man had not yet come to his duty, and the only servants at the station were the ticket-collectors or porters of the two Companies. The duties of these latter appear to be undefined; each collects the tickets of his own trains, and beyond that their instructions are merely to make themselves generally useful. They do not hold themselves accountable for the management of signals, unless ordered to look to them by the station-master, and on this occasion the station-master was away. I shall quote the evidence as to the signals; but the conclusion to which I have come is, *that no signal whatever was shown from the Bootle station after the passenger train had left.*

On leaving Bootle, the passenger-train got up speed slowly, owing to the slippery state of the rails. Shortly after entering the tunnel, the driver saw the reflection of a strong red light a-head, and nearly in the same place, the two front white lights of an engine approaching on the opposite line of rails. He checked his speed, but soon the other engine passing him, explained the red appearance, and he went on. He had got within 200 yards of the north mouth of the tunnel when he felt a slight concussion, but still went on, got clear of the tunnel, and reached the points of the Walton junction, where he passed on to the East Lancashire line. Here he was stopped as before described, by the guard, who saw that part of the train had been left behind.

Though unable to obtain the evidence of the driver and fireman of this train, I still have not the slightest doubt that the following is a correct solution of the cause of the red light which

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they mistook for a danger-signal. The engine they saw approaching on the opposite line of rails belonged to a goods-train of the Yorkshire and Lancashire Company, and the gauge-lamp used by the Lancashire and Yorkshire Company to enable the driver to read the gauge showing the quantity of water in the boiler, is made to show a light on all four sides—a white light a-head, where it falls upon the gauge, a green light behind, and a red light on either side. This is done to render the lamp, on being detached, generally useful; but when fixed on the engine the red light on either side is not shaded in any way, and I am opinion that it was the reflection of this red light from the sides of the tunnel that deceived these men into the belief that a danger-signal was shown.

The goods-train which followed the East Lancashire passenger-train from Liverpool belonged to the Lancashire and Yorkshire Company. It left Liverpool 5 minutes after that passenger-train, and was delayed 4 minutes more at the goods depôt, which is situated half-way between Liverpool and Bootle. Being a very light train, however, consisting of only an engine and tender, two empty coke-waggon and a van, it reached the Bootle station only 3½ minutes after the passenger-train had left it. The goods-train had no occasion to stop at Bootle; and I have already stated my opinion that no signal whatever was shown from that station to stop the driver or warn him that the passenger-train was such a short distance a-head. He, therefore, passed on at his usual speed, and whistled loudly on entering the tunnel. As the passenger-engine a-head of him, however, and the goods-engine on the other line were sounding the whistles at the same time, this signal, in the confusion of sounds does not appear to have been of any use.

Thinking that all was clear before him, the driver went on, till within a couple of hundred yards from the northern extremity of the tunnel, he suddenly saw the reflection of the light of his own fire cast back from a carriage some 20 yards a-head. He tried to stop, but there was no time, and he ran into the passenger-train. The difference of speed at the moment of collision could not have been great, for the shock was scarcely felt by the men on the engines, and the guard of the goods-train was not even aware that a collision had occurred, the parties who suffered were the passengers in the carriages, three of whom, who were sitting in a coupé, were thrown with such force against the plate-glass that their heads went through, and their faces and necks were much cut.

The first question that naturally suggests itself at this point is, how was it that the driver did not see the red tail-lamps of the passenger-train? The answer appears to me an extraordinary one. The East Lancashire trains, though they pass through this long tunnel, were not, up to the time of this collision, provided with tail-lamps by day. Now, I understand they are always used. It is scarcely necessary to remark, that they should never have been omitted.

On first seeing the carriage a-head, the driver of the goods-train had proceeded to stop his train, and the shock of the collision to him appears to have been so slight, owing to the great weight of the engine, that he was not aware that any damage had been done to the preceding train. After a momentary panic, seeing that the carriages in front of him had gone on, and knowing that a pilot-engine was following him which would again be followed by the 8·20 Lancashire and Yorkshire passenger-train from Liverpool, the driver proceeded slowly to the junction where he arrived shortly after the detached carriages had run against the buffers of the first part of the passenger-train.

At first sight it appears unfortunate that the first part of the passenger-train was stopped so as to be run into by the detached carriages, yet it is very questionable whether if these carriages had not been thus stopped a more serious calamity might not have happened; for an East Lancashire goods-train happened to be passing from its own line on to the up-line of the joint portion just at that moment, and the driver of it had been compelled to pull up, by the circumstance, that a passenger in one of the two carriages that had followed the passenger-engine, frightened by the collision in the tunnel, and dreading something more, had thrown himself out of the carriage while the train was still in motion, and lay senseless and stunned on the opposite line. Had that goods-train not stopped at once, the engine must have passed over this passenger, and had not the detached carriages been stopped by the buffers of the preceding part of their own train, they would have come in contact with the goods-train at a very oblique angle, and might have been thrown off the line and probably upset.

On inquiring how it came to pass that the three last carriages of the East Lancashire train became detached by a shock that does not appear to have been very severe, and questioning the servants of that Company as to whether there was not something peculiar in the couplings of the carriage that was cast loose, I learn that the East Lancashire Company's store-room at Liverpool has not always been provided with proper screw couplings, and that when one breaks and there are none in store, the practice is to use a chain such as goods-trucks are coupled with, and to endeavour by running the carriages together, to get this on so tight that it may answer the purpose. I have every reason to believe that the carriage that broke loose was coupled in this way, and I need scarcely remark, that it was a very imperfect coupling.

On reviewing all the circumstances attending these collisions, I am of opinion that the second was in a great measure due to the imperfect coupling of the East Lancashire train, and that the first may be ascribed to the following causes:—

1st. To the laxity with which the duties at the Bootle station appear to have been conducted, and the consequent neglect to give proper signals on the arrival and after the starting of the passenger-train. The station-master was absent from his duty; the signal-man had not yet come; the Lancashire and Yorkshire ticket-collector was doing the station-master's duty in the ticket-office; and the East Lancashire ticket-collector appears to think it no part of his duty to attend to signals, and attends to them or not as he feels inclined.

2nd. To the want of tail-lamps to the East Lancashire passenger-train. This appears to me to have been a most improper omission.

3rd. Though in a far minor degree to the unfortunate circumstance of the reflection of the red light from the Lancashire and Yorkshire gauge-lamp being mistaken for a danger-signal,—

I would recommend that the attention of the joint manager be directed to the laxity of discipline and want of definite instruction to the several servants at the Bootle station, with a view to its being amended. I would further recommend that proper care be taken to keep the Liverpool store-room better supplied than it has been of late; that the East Lancashire trains be never again allowed to pass through a tunnel without tail-lamps; and finally, that the Lancashire and Yorkshire Company be requested to provide some means of shading the red lights of the gauge-lamps upon their engines, to prevent the recurrence of a mistake so natural as that made by the driver of this passenger-train.

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Yorkshire and East
Lancashire Railway.

I have, &c.,

R. M. LAFFAN,
Capt. Royal Engineers.Capt. Harness, R.E.,
&c. &c.Office of Commissioners of Railways, Whitehall,
December 13, 1849.

SIR,

I HAVE been directed by the Commissioners of Railways to forward to you the enclosed copy of a report made to them by Captain Laffan, on the collision which occurred on the 26th ultimo, upon that portion of railway by which the lines of the Lancashire and Yorkshire and the East Lancashire Railway Companies are connected with their joint terminus at Liverpool, and to express the hope of the Commissioners that the arrangements of the Bootle station will receive the immediate attention of the two Companies interested, and that by their mutual co-operation, the laxity which Captain Laffan considers to have been one of the principal causes of the accident, may be effectually prevented for the future.

I am also to request you to call the particular attention of the Directors of the Company to those parts of the report which apply to the arrangements of the East Lancashire Railway Company.

I have, &c.,

H. D. HARNES,
Capt. Royal Engineers.To the Secretary of the
East Lancashire Railway Company.

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Appendix No. 65.

London and North
Western Railway.

LONDON AND NORTH WESTERN RAILWAY COMPANY.

Office of Commissioners of Railways, Whitehall,
August 13, 1849.

SIR,

I HAVE been directed by the Commissioners of Railways to acknowledge the receipt of your letters of the 10th instant, on the subject of the recent collision near Warrington, and to request you to forward a copy of the regulations by which the number of breaksmen allotted to goods trains, and the speed of such trains, are determined, that they may be referred to the officer who has been appointed to inquire into the circumstances attending the accident above referred to.

I have, &c.,

H. D. HARNES,
Capt. Royal Engineers.The Secretary of the
London and North Western Railway Company.General Manager's Office, Euston Station,
August 16, 1849.

SIR,

I AM instructed to answer your letter of the 13th, and to state that there are no specific regulations in regard to the number of breaksmen with a train, which depends not upon the number of waggons that are in a train, but upon the number of road-side waggons to be detached on the journey.

With reference to the speed of the goods trains, I have the honour to enclose a time-bill, which will give you every information.

I may add that, since writing, the Directors have met, and taken a mass of evidence upon the subject; the result of the investigation has satisfied them that the accident was one which did not arise from carelessness on the part of any one, but was the result of a combination of unfortunate contingencies.

I have, &c.,

MARK HUISE.

Capt. Harness, R.E.,
&c. &c.