

APPENDIX No. 26.

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ACCIDENTS.

Lancashire and
Yorkshire and
East Lancashire
Railways.

LANCASHIRE AND YORKSHIRE AND EAST LANCASHIRE RAILWAYS.

*Railway Department, Board of Trade,
Whitehall, August 31, 1852.*

SIR,

I HAVE been directed by the Lords of the Committee of Privy Council to transmit to you the enclosed copy of a report they have received from their inspecting officer, of his inquiry into the causes of the collision which occurred at the Bootle Lane station on the joint line of the Lancaster and Yorkshire and East Lancashire Railway Companies, on the 26th ultimo, and to request you to lay it before the Directors of the Lancashire and Yorkshire and East Lancashire Railway Companies.

The whole of the report appears to my Lords deserving of careful consideration; and I am particularly to request that the recommendations therein contained may receive the early and serious attention of the Directors; and that so soon as they shall have had an opportunity of deliberating upon them, my Lords may be informed what steps shall have been taken for remedying the defects pointed out by their inspecting officer.

I have, &c.

DOUGLAS GALTON,
Capt. Royal Engineers.

*The Secretary of the
East Lancashire Railway Company and
Lancashire and Yorkshire Railway Company.*

SIR,

Liverpool, August 28, 1852.

I HAVE the honour to report to you, for the information of the Lords of the Committee of Privy Council for Trade, the result of my inquiry into the circumstances attending a collision which occurred on the morning of the 26th ultimo at the Bootle Lane station of the joint line of the Lancashire and Yorkshire and East Lancashire Railway Companies near the town of Liverpool.

The Lancashire and Yorkshire Company's line from Wigan and the East Lancashire's from Ormskirk form a junction at Walton, from whence to the joint station at Liverpool, a distance of three and three quarter miles, the traffic of the two Companies passes over the same line.

From Walton the joint line rises for a distance of 550 yards at a gradient of one in 464, then enters a tunnel 1,140 yards in length, through which the gradient falls one in 620, and on emerging thence continues to descend at the increased inclination of one in 394. It is on this descending gradient, about 260 yards from the tunnel mouth, that the Bootle Lane station is placed. The position is peculiarly awkward, for it is at all times inexpedient to place a station so near to the mouth of a tunnel, and particularly so when the line from the tunnel to the station is on a descent. When circumstances render it necessary to adopt such a position, it is desirable that the detention of trains at the station should be as short as possible, and that a very perfect system of signalling should be established, to give timely warning to trains approaching through the tunnel.

In the present instance the Bootle Lane, being the last of the intermediate stations before reaching Liverpool, had been selected as the place for collecting the tickets of all the up trains of both companies,—a proceeding which always involves some minutes delay,—and the only protection afforded to trains thus detained at the platform was furnished by an auxiliary signal carried back about 200 yards towards the tunnel, from the mouth of which it was then distant about sixty yards.

The auxiliary signal could be seen for a considerable distance within the tunnel when that tunnel was clear of steam, but when, as must frequently have been the case, it became filled with steam from the numerous engines of both Companies which traversed it in each direction, it was scarcely possible for a driver to discern the signal till he was nearly abreast of it. Under such circumstances, if the train were not intended to stop at Bootle (and the goods trains did not stop there), and were moving at the ordinary speed, it would be impossible for the driver to come to a stand in the short distance which intervened between the signal and the platform.

Having given this general description of the locality, I now proceed to relate the circumstances which preceded the collision.

It appears that about 9.35 A.M. on the morning of the 26th ultimo a goods train of the East Lancashire Company proceeding towards Liverpool, came up to the Walton junction, and was stopped by the pointsman, in consequence of a passenger train of the Lancashire and Yorkshire Company, which should have reached Liverpool at 9.20, being then over due. The Lancashire and Yorkshire train ran past the junction without stopping at 9.40, and at 9.42 the pointsman allowed the East Lancashire train to move through the crossing and follow. During the short detention of seven minutes, the East Lancashire train had been joined by another train of the same Company, and the pointsman, following a most objectionable practice which appears to have been established for a considerable time allowed the two trains to pass through the junction together.

The Lancashire and Yorkshire train reached the Bootle Lane station about 9.46 A.M., and the guards, assisted by the staff of the station, commenced collecting the tickets. They had been thus employed, according to the best evidence, between three and four minutes

when the alarm was given that another train was approaching at speed. On hearing this a number of the passengers escaped from the carriages, and the driver put the steam on, and attempted to move away; the train had just begun to move when the East Lancashire Company's engine ran into it. The shock, though much alleviated by the incipient movement of the Lancashire and Yorkshire train, was still very severe; several of the last carriages were crushed and damaged, and two of the passengers were severely and several slightly injured. The Lancashire and Yorkshire Company, following a practice which I am very sorry to see gaining ground upon several railways, had no breakvan behind their passenger carriages.

The goods train of the East Lancashire Company consisted of an engine and tender, thirty-two waggons, some laden, some empty, and a breakvan behind; to this breakvan again was attached another engine, followed by seven empty carriages, which had come up while the goods train was detained at Walton, and which had been coupled on to it so as to appear one train, in order to get through the junction more quickly by evading the rule which forbids trains to pass the points at shorter intervals than five minutes. The combined trains began to move at 9.42, and as the second engine helped to start the heavy load in its front, it is possible that a considerable speed was attained much sooner than the pointsman had expected, or probably he would not have allowed the goods engine to follow so closely upon a passenger train. Allowing for the time lost in getting into motion and passing the points of the junction, there appears to have been barely five minutes between the passenger and the goods train.

On entering the tunnel, the drivers found it full of steam; several engines had lately passed through it, and the weather being cold and showery had caused the vapour to hang somewhat longer than usual. Both engines appear to have run down the descending gradient with steam shut off, but, not seeing any indication of danger, neither driver appears to have thought any further precaution advisable. It might indeed have been imprudent for either driver to have offered any obstruction to the onward movement without knowing what the other intended to do.

On reaching the further end of the tunnel, the driver of the leading engine endeavoured to make out the signal, but could not do so immediately, as his train was driving the steam before it and it was raining heavily outside. It was not till he had almost reached the signal post that he perceived the danger signal on. The alarm whistle was immediately sounded, and both engines reversed, and every break at once applied, but it was too late; the second engine, with its light load of seven empty carriages, was able to come to a stand; but the heavier goods train broke its couplings, and leaving the last four waggons and the van with the retarding engine, pushed on its own engine till it was brought to a stand by coming into collision with the passenger train.

From the preceding narrative it will be at once apparent that the collision, as is generally the case, was brought about by a variety of circumstances,—some showing faults in the arrangements and management of the line,—some a laxity of supervision, allowing objectionable practices to arise,—and some evincing errors of judgment and miscalculation, amounting in one instance to misconduct, in individuals. I shall class these various causes of the collision as follows:—

1. The insufficiency of the signals at the Bootle Lane station.
2. The imprudent detention of passenger trains at such a spot for the purpose of collecting the tickets.

These I regard as faults in the general arrangement and management of the line.

3. The objectionable practice of coupling two trains together, to evade the rule which prescribes that there shall be a certain interval between trains passing the junction points.

This practice shows in my opinion a want of due supervision on the part of the proper officers. I found that the practice of coupling goods trains together, in order to evade the rule, had been frequently adopted by the servants of both companies; that several accidents had nearly been caused by it, and yet that the higher officials were not aware of it, and even doubted its existence, which nevertheless was clearly proved.

4. The imprudence of the drivers of the East Lancashire trains in not having concerted together to move slowly through the tunnel, so as to have their long train completely under command on approaching the Bootle Lane station. These men knew how closely they were following the Lancashire and Yorkshire train, and they knew that that train would be detained to collect the passenger tickets, and yet they moved through the tunnel at so high a speed that the leading engine was unable to come to a stand in time. There does not appear to have been any communication whatever between the drivers at starting; each acted upon his own judgment, and they followed a most objectionable practice which had been long permitted, and of the danger of which they were not perhaps fully aware.

5. And lastly, among the causes of the collision, I beg to point out the misconduct of the pointsman at the junction, in allowing the goods train to start so shortly after the passenger train had gone by. I believe this man thought that, as the Lancashire and Yorkshire train had run past at speed, whereas the goods train would require some minutes to get into motion, there would practically be an interval of 7 or 8 minutes between the two; but a pointsman should not be permitted to enter into such calculations; he should adhere to the letter of his instructions, and there could not be a clearer demonstration of the necessity of such strict compliance with regulations than the circumstances of the present case. The pointsman thought that the Lancashire and Yorkshire train at the speed at which it was travelling would reach Bootle Lane very quickly, and that the heavy goods

train, having to get into motion, and to pass through the points of a junction, would be many minutes behind, and in each case he was mistaken, for the Lancashire and Yorkshire train having, in consequence of the wetness of the rails, overshot some of the preceding stations, ran through the tunnel at a slower speed than usual, in order to be able to stop exactly at the Bootle Lane platform; whereas the goods train, assisted by the second engine, moved through the points, and up the ascent, and entered the tunnel much quicker than could have been the case with a single goods train unassisted.

It is possible that the pointsman at this junction, being a servant of the East Lancashire Company, may have been actuated by a desire to accelerate the movement of his own Company's train. It appears to me that the pointsman at this junction should not be a servant of either Company individually, but that he should form one of the staff for the management of the joint line, and as such be under the immediate orders of the joint superintendent at Liverpool.

I have not classed the circumstance of their being no breakvan behind the carriages of the passenger train as one of the *causes* of the collision; but undoubtedly that circumstance rendered the consequences more disastrous to the passengers, for the intervention of a breakvan would greatly have lessened the shock. This, however, is by no means the chief consideration which makes me think the practice of dispensing with the breakvan behind passenger carriages objectionable, and I avail myself of this opportunity of pointing out its dangers.

It is well known to all who are conversant with the practical working of railways, that it sometimes happens that when a train is in motion several carriages may become detached from the rest. I have known several instances where an engine and tender have become detached from the train, and others where the first three or four carriages have gone on with the engine, leaving the rest of the train behind. In such a case the guard upon the last van, if there be one, has it in his power to apply his break, and carry back a signal to protect the carriages from any following train, and the driver, as soon as he has become aware of the accident, can come back to his carriages, and repair the mishap. But if there be no break behind the detached carriages will continue to run on. If the line be level, they will soon come to a stand, and then, if there be no guard with them, they will be left without protection. If the mishap takes place on a descending gradient of 1 in 150 or 1 in 200, they will continue to run on at a high speed, and it will be a very nice operation for the driver, if he discover his loss, so to manage his speed as to allow them to rejoin him without a serious collision; and if it be on an ascending gradient of the same inclination, the detached carriages will come to a stand, and *begin to move backwards*, and soon acquire a speed that will produce a catastrophe if they meet any following train.

Nor are these the only dangers. Let us suppose that a train is moving at the not unusual rate of 45 miles an hour down a gradient of 1 in 150, and that while moving at that rate six carriages without guard or breakvan become detached; they will continue to follow the engine at a very high speed for a considerable distance. Let us suppose then that the engine driver sees ahead of him a train disabled, with the guard sent back to signal him to stop. What is he to do? If he stop he will be run into by the detached carriages, which have no break to check their movement; if he go on he will himself run into the disabled train; in either case a serious collision may be the result. These are not mere theoretical objections; some of the cases I adduce here I have actually known to happen, and it is therefore with great regret that I observe the practice prevail upon some lines of dispensing with the breakvan and guard behind the carriages of passenger trains.

I would recommend,—

1. That a better system of signalling be adopted to protect the Bootle Lane Station. Perhaps the best plan would be to employ the electric telegraph to signal from one end of the tunnel to the other, or between the Bootle Lane station and the Walton junction, and allow no two trains to be running upon the intervening lines at the same time. This would guard not only the station but the tunnel also, where such a protection is much needed.

2. That the practice of collecting the tickets at the Bootle Lane station be discontinued, and that each Company collect its tickets before entering upon the joint line. The Lancashire and Yorkshire Company have their own Walton station within 150 yards of the junction, and the East Lancashire Company have theirs within a quarter of a mile, and at those stations the tickets should be collected, and not upon the more crowded joint line.

3. That the practice of allowing goods trains to couple together for the purpose of evading the rules drawn up for the safety of the traffic be at once discontinued. This will best be done by making the pointsmen at the Walton Junction form part of the staff of the joint line, and holding them and the joint superintendent at Liverpool responsible for the immediate discontinuance of this practice. At present I believe the joint superintendent is aware of the existence of this practice, but has no power to prevent it.

4. That a breakvan and guard be attached to the last carriage of every passenger train.

In closing this report I beg to refer to some instances of a want of proper care and supervision in the management of the goods traffic which came to my notice, and which, though unconnected with the circumstances of the present collision, I wish to point out to the attention of the Directors, in order that the laxity of management they evince may be corrected. It appears that in many instances goods trains are started with large packages so insecurely placed upon the waggons, without sheet or rope to secure them, that they have been frequently observed to rock about from side to side as the trains moved, and in several instances large packages and bales of wool or cotton have been left behind, and been found

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lying upon the line. It is needless to dwell upon the dangers to which such lax supervision exposes the public, or to point out the fatal consequences which would most probably ensue were such bulky packages left upon the line in a tunnel.

Capt. Galton, R.E.,
&c. &c.

I have, &c.

R. M. LAFFAN,
Capt. Royal Engineers.

SIR,

Bury, Lancashire, September 2, 1852.

I BEG to acknowledge the receipt of your communication of the 31st ult., having reference to the recent collision at Bootle Lane station, which shall be submitted to the Directors of this Company at their next meeting.

Capt. Simmons, R.E.,
&c. &c.

I have, &c.

JAMES SMITHELLS,
Secretary.

SIR,

Manchester, September 2, 1852.

I BEG to acknowledge the receipt of Captain Galton's communication of the 31st ult., enclosing copy report from Captain Laffan of his investigation into the circumstances of the late accident at the Bootle Lane station.

I will submit the same to the Directors of this Company at their next meeting.

Capt. Simmons, R.E.,
&c. &c.

I have, &c.

JNO. DUNSTAN jun.
Secretary.

SIR,

*Railway Department, Board of Trade,
Whitehall, November 5, 1852.*

WITH reference to your report of a collision at the Bootle joint station on the 26th July between a luggage and a passenger train, I am directed by the Lords of the Committee of Privy Council for Trade to request that you will state the precise number of passengers who were injured by the accident in question.

This information is requested, in order to the completion of the usual returns prepared in this department for presentation to Parliament.

*The Superintendent of the
Liverpool and Bootle Joint Railway Station.*

I have, &c.

J. L. A. SIMMONS,
Capt. Royal Engineers.

SIR,

Liverpool, November 16, 1852.

REFERRING to my communication of the 8th instant, I beg to state, as the result of my inquiries, that twenty-five persons have been returned by the medical officer of the Lancashire and Yorkshire and East Lancashire Railway Companies as having been more or less injured by the collision at the Bootle station on the 26th July last. None of the Companies servants were injured, as far as I am aware.

Capt. Simmons, R.E.,
&c. &c.

I have, &c.

THOMAS JONES,
Joint Superintendent.

Appendix No. 27.

Lancashire and
Yorkshire Railway.

APPENDIX No. 27.

LANCASHIRE AND YORKSHIRE RAILWAY.

SIR,

*Railway Department, Board of Trade,
Whitehall, November 13, 1852.*

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you, for the information of the Directors of the Lancashire and Yorkshire Railway Company, a copy of the report their Lordships have received from the officer appointed by them to inquire into the circumstances which attended the collision that occurred near the Bolton station upon the Lancashire and Yorkshire Railway on the evening of the 23d August last.

My Lords direct me to request that you will call the especial attention of the Directors to the observations in the report upon the following points:—

1st. The insufficient accommodation for the traffic at the Bolton station.

2d. The improper encouragement of excursion traffic without due provision for its conduct.

3d. The great want of punctuality in the trains, caused in a great measure by the absence of proper arrangement for the excursion traffic, and particularly at the Liverpool station.

4th. The flagrant breach of the regulations framed by the Company for the guidance of their servants and for the safe conduct of the traffic, trains being permitted to pass the