

The  
**VIRTUAL MUSEUM**  
of the  
**LANCASHIRE & YORKSHIRE RAILWAY**

Accident Reports.

29 December 1857

BoT Report into Accident at  
Alderbottom.

(3 Pages).

passengers at Kingstown, the carriages are left standing at the platform in order to proceed as first train to Dublin the next morning; the engine is then taken to the shed which is near the Dublin terminus; the next morning it is despatched from thence about 5.30 to take up the first train from Kingstown, the time of departure of which is 6 a.m.; the distance to Kingstown is five miles and a half.

The driver on the occasion in question took the engine out of the shed at 5.35 A.M., and states that he proceeded at the usual speed; when a quarter of a mile from the station he put on the break, and the wheels immediately began skidding. This statement is corroborated by the parcel porter, who was standing at the club house at the time the engine passed, and which is about this distance from the Kingstown Station. On going through some points, which are about 170 yards from the station, the driver, finding that he was not reducing his speed sufficiently, re-

versed his engine, but notwithstanding the engine ran into the carriages which were standing at the platform. There were no passengers in the carriages, and the only person hurt was the fireman, who was rather severely bruised; the two first carriages in the train were much shattered, and the buffer plank and break work of the engine broken.

The morning was wet, and the rails very slippery.

The driver appears to have been on the alert, but to have miscalculated his speed; as this was the first stop he had to make, he might have been deceived as to the slippery condition of the rails. I do not think under the circumstances that much culpability attaches to him.

I have, &c.

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

GEO. WYNNE,  
*Lieut.-Colonel, R.E.*

#### EAST LANCASHIRE RAILWAY.

*Railway Department, Board of Trade,  
Whitehall, S.W. February 8, 1858.*

SIR, I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you the enclosed copy of the report which they have received from Captain Tyler, R.E., of his inquiry into the circumstances attending the collision which occurred on the 29th December at Alderbottom on the East Lancashire Railway.

My Lords trust that the following recommendations of the inspecting officer will be carefully considered by the directors of the East Lancashire Railway Company, viz. :-

- 1st. As to the use of powerful break vans in rear of goods and mineral trains, and the use of better breaks on the mineral waggons.
- 2nd. As to placing a break carriage or van, with a guard, at the rear of every passenger train.
- 3rd. As to invariably providing a second means of attachment between the vehicles of passenger trains.

I am, &c.

*The Secretary of the  
East Lancashire  
Railway Company.*

DOUGLAS GALTON,  
*Capt., R.E.*

*Railway Department, Board of Trade,  
Whitehall, January 16, 1858.*

SIR, IN compliance with the instructions contained in your letter of the 5th instant, I have the honour to report, for the information of the Lords of the Committee of Privy Council for Trade, the result of my inquiry into the circumstances which attended the accident, that occurred on the 29th ultimo, between the Ramsbottom and Helmshore stations of the East Lancashire Railway, which are, respectively, 14 and 16½ miles to the north of Manchester.

As the 5 p.m. passenger train from Manchester to Skipton, consisting of an engine and tender, six carriages, and a van, was travelling between these two stations on the evening in question, the driver suddenly saw the red light of a goods van in front of him. He at first supposed that it belonged to a train which had failed in surmounting the incline of 1 in 72 which he was ascending, and had come to a stand; but after watching it for a short time, he perceived that some vehicles were running back upon him; and he accordingly shut off his steam, whistled for the breaks, and stopped his train as fast as he could. He had hardly succeeded in doing so, when eight waggons, loaded with stone, and a break van, dashed against his engine, at a speed supposed to have been from 20 to 25 miles an hour.

The driver, fireman, and guard of the passenger train all jumped off just before the collision occurred. Some of the stone waggons were damaged; the van behind them was broken to pieces; the engine of

the passenger train was thrown off the line with all its six wheels; and the last two carriages were uncoupled by the shock from the remainder of the train, and were started by themselves towards Ramsbottom. These latter had a narrow escape of coming into collision with a train which was proceeding along the same line of rails towards the Bacup Branch; but the policeman at the Stubbins Junction, between this branch and the main line, saw the carriages approaching in one direction and the branch train in the other; and he had the presence of mind to beckon to the driver of the Bacup train to hurry on, and thus to get that train out of the way before the carriages passed him. The Bacup driver, seeing what had occurred, stopped his train, ran back to Ramsbottom, detached his carriages, pursued the two stray vehicles, and managed to bring them to a stand about half a mile to the north of Bury.

The passenger vehicles which thus broke away, were a first-class carriage and a third-class carriage, containing the former two gentlemen and a lady, and the latter two other passengers. The three first-class passengers all jumped out, one gentleman near Stubbins, the other near Ramsbottom, and the lady near Bury. The two third-class passengers kept their seats. The lady was unhurt, and one only of the two gentlemen who jumped out was injured; six or seven other persons were unfortunately more or less hurt by the collision, but none of them to a very serious extent.

Considering the nature of the accident, the injury to the passengers and the damage to the stock appear to have been both much less than might have been anticipated. But the passengers that were in the two carriages that became detached from the passenger train, had, as has already been stated, a very narrow escape of a collision with the Bacup train; and if that train had been but a minute later, the consequences would have been very serious. These carriages had been coupled to the rest of the train by the usual mode of a central screw coupling and two side chains; but the hooks of the side chains, instead of being each passed through a link of the chain opposite to it, were attached to each other only; and the consequence was, that when the buffers were doubled up by the force of the collision, the three couplings which connected the two carriages with the rest of the train, were all detached at the same time, without any fracture having occurred. The company propose to enforce a better use of their side chains, in the manner above indicated, in future.

A still more serious defect in the system of the company, by which these carriages were enabled to run by themselves for upwards of five miles, was the want of a break van behind them, or of breaks working upon them, by which they might have been

brought to a stand. I have frequently had occasion in former reports to refer to the excellent break, known as Newall's break, which is in use upon this railway, and which is applied by the guard of a train simultaneously to as many carriages as are fitted with it and connected together. In practice, it is found sufficient to connect the breaks of three or four carriages only, together, with trains of moderate dimensions; and, for convenience in working, the company have got into the habit of employing those breaks in front of the other carriages, and of leaving the hinder portions of their trains without any available means of retardation, in the event of their becoming separated from the carriages over which the guards have control.

Thus it happened, that when the two carriages were on this occasion uncoupled from the remainder of the train, they ran for a long distance by the force of gravity, and were only brought up at last by the driver of the Bacup train, who followed them on his engine.

It is desirable that there should be a guard and a break at the rear of every train, but it is particularly necessary on the East Lancashire Railway that such should be the case, in consequence of the nature of the gradients over which the trains are worked. The greater number of the carriages are provided, I believe, with breaks; but those breaks are useless without a guard to work them, or unless they are connected with a carriage or a van in which a guard is riding; and where it is not worth while to employ two guards, the carriages on which the breaks are connected should therefore be placed behind the remainder of the train.

I shall next proceed to explain the circumstances under which the waggons ran back upon the passenger train.

A special train, composed, in the following order, of an engine and tender, ten empty waggons, eight waggons loaded with stone, and a van, left Ramsbottom for Accrington at 5 o'clock on the evening in question, in charge of an Accrington porter, of the name of Howarth. It was stopped at Grane Road, a goods station, a mile to the north of Helmshore, by the porter in charge of that station, who wanted some of the empty waggons; and Howarth left the eight loaded waggons and the van, standing by themselves on the main line, whilst the remainder of the train went forward to the sidings. He turned on the break of the van, but he neglected to let down the breaks of any of the loaded waggons. He then went towards the engine, and uncoupled one of the empty waggons, which the station porter turned into the siding; he next uncoupled three or four others, which were not intended to be left behind, let down the break of one of them, and lowered them down towards the hinder portion of the train. As he was returning after this to the engine, and while the station porter was getting a second empty wagon into the siding, the latter shouted to him that his waggons were moving back, and they both ran to try and stop them.

The station porter succeeded in stopping the empty waggons after they had run about a quarter of a mile, in the first instance, and in about 100 yards more when they were a second time started by two other waggons which came down upon them. These latter waggons were liberated by the driver, and were allowed by him to run down towards the others, before he was aware that those others had started down the incline.

The acting guard Howarth, having pinned down some of the breaks of the empty waggons (after they had started), ran on to the loaded ones. He managed to pin down three of the breaks of these, and he then got into his van, in which he rode until he arrived at the points at Helmshore. He there dropped off to try and catch the points, in order to turn some of the waggons through them, and thus throw the others off the road; but he failed in the attempt, on account of a fall which he received as he jumped from the

van; and the waggons and van, therefore, proceeded by themselves towards Ramsbottom.

They met the passenger train, as has been already stated, between that place and Helmshore; the exact site of the collision having been a mile and fifty-eight chains from Ramsbottom, a mile and eight chains from Helmshore, and two miles and eight chains from Grane Road, the place from which they first started. The gradient over which they travelled was 1 in 72 for the whole distance; and the gradients over which the carriages ran, were 1 in 72 as far as Stubbins, which is a little to the north of Ramsbottom, and 1 in 120 between Stubbins and the place where the engine stopped them, half a mile to the north of Bury, which is four miles to the south of Ramsbottom. The carriages thus ran altogether, as was before stated, upwards of five miles.

Howarth, though only a porter, had acted six times previously as guard with special goods trains on this district, and frequently as guard on other districts of the East Lancashire Railway.

He has been in the company's service for four years and a half, during which time he has been selected, as a useful man, for various extra duties, and he appears to be altogether a man of superior intelligence. He fully admits his fault, and has been fined for it by the magistrate before whom he was taken, his fine having been made the less heavy, apparently, in consequence of his having pleaded guilty.

This accident has been entirely caused by his neglect in not fastening down the breaks of some of the waggons, in addition to turning on the break of the van, while the shunting operations were going on in the foremost part of the train.

Four printed orders have been issued from the office of the general manager, calling special attention to the necessity for certain precautions upon the inclines between Accrington and Ramsbottom, within the last two years and a half; two of them referring to cases such as the present, where detached waggons have run down by themselves for want of the employment of sufficient break power to restrain them; and two others to the cases of goods trains, which have overpowered their engine in the descent for a similar reason. The remedy prescribed for these contingencies is the application of *spraggs*, or pieces of timber which are applied to the wheels, and which, resting against the bodies of the waggons, prevent the wheels from revolving. A stock of *spraggs* is directed to be kept at Accrington, and four *spraggs* are to be kept in every guard's van; and they are to be used in addition to the ordinary breaks when necessary.

Howarth did not remember having seen these special regulations, and not having been a guard, he had not been personally supplied with them, though it appears that he might have seen some of the copies which were posted up in the stations and offices. He admits, however, that he was aware of their having been issued, and had a general idea of their contents.

These *spraggs* are a sort of make-shift contrivance, in universal use on mineral lines, and in too general use on passenger lines. They are much inferior to the regular break, as they are apt to drop out, and to strain the stock to which they are applied; and it is desirable, therefore, that their employment should be rendered unnecessary on inclines such as these, as much as possible, by substituting for them more powerful break vans and better breaks on the waggons.

This accident, then, has been caused by the neglect of one man, who left a number of waggons standing upon a gradient of 1 in 72 without sufficient break power to keep them stationary on it. But it is not the first accident of the same sort, and looking to the risk of conducting shunting operations upon so steep an incline, and to the ordinary habits of the people to whom such shunting operations are necessarily intrusted, it is unlikely to be the last, even

though orders more stringent than those which have already been published be now issued.

But not only will the goods guards be liable to let portions of their trains slip away from them occasionally in shunting on these inclines. There is another source of danger to be provided against. These stone waggons and their van might have run back upon the passenger train on this occasion without such carelessness on the part of the acting guard, by the fracture of a coupling; and some means appears to be wanting to meet both of these contingencies.

The means that suggest themselves for this purpose are, the extended use of the electric telegraph, and the construction, in suitable spots, of what are called *blind sidings*, or sidings not interfering with trains proceeding up the incline on their proper line, but so connected by a pair of switches with the main line as to catch all vehicles coming down on the wrong line of rails, and to turn them off into a field or some other convenient receptacle.

If the line were divided into lengths, if the trains were worked from length to length by means of the electric telegraph, and if sidings such as these were judiciously inserted, so as continually to protect the passenger trains, on whatever length they might happen to be running, by opposing, at the tail of the next length in front, an obstruction to all run-away waggons, then the risk of accident from such contingencies as those referred to would be materially decreased.

For trains *descending* the inclines, cautious speed and ample break power, combined with proper notice by telegraph of their approach, and care that no obstructions are permitted to be in their way, are of course the only measures that can be adopted.

The only objection, probably, that can be made to

the use of blind sidings, as a security from accident in consequence of trucks breaking away from ascending or shunting goods trains, is that passenger carriages might also be turned into them in the event of the couplings breaking in a heavy passenger train; but this is a contingency which can hardly be expected to occur. I do not learn that it has ever happened, previously to the present occasion, that passenger carriages have run by themselves down these inclines; and if couplings should in future give way in the passenger trains, the excellent break which is attached on this line to the passenger carriages offers ample security, when applied to the rear, as it ought to be, and not to the front of the trains, against their falling into the *catch* or *blind* sidings, which it appears so desirable to establish for intercepting run-away goods waggons.

The first cause of this accident was, then, the neglect of the acting guard of the goods train, in not properly securing his waggons on a steep incline; and it appears clearly to demonstrate the necessity for the following precautions, which the directors would do well to cause to be adopted, with a view to the prevention in future of accidents of a similar nature.

1. The construction of catch sidings in convenient positions.
2. The extended use of the electric telegraph.
3. The adoption of a better mode of coupling with the side chains of passenger carriages.
4. Placing the break power now employed on the van and carriages, in the rear, instead of in the front, of the passenger trains.

I have, &c.

H. W. TYLER,  
Captain, R.E.

The Secretary,  
Railway Department,  
Board of Trade.

#### GREAT NORTHERN RAILWAY.

Railway Department, Board of Trade,  
Whitehall, January 8, 1858.

SIR,

I AM directed by the Lords of the Committee of Privy Council for Trade to transmit to you the enclosed copy of the Report which they have received from Lieut.-Colonel Yolland, R.E., of his inquiry into the circumstances connected with the collision which occurred on the 8th ultimo at the St. Neots Station of the Great Northern Railway.

My Lords trust that this Report will receive the careful consideration of the Directors of the Great Northern Railway Company, especially with respect to the following points; viz.—

- 1st. The desirableness of providing in all express trains, and trains timed to travel at high rates of speed, a large proportion of break power, under the control of the driver, in order that the time lost in putting on breaks may be reduced to a *minimum*.
- 2d. The desirableness of defining in the time tables the times at which the trains should pass intermediate stations.
- 3d. The question whether it might not be advisable to prohibit trains following each other at different rates of speed from passing each other at other stations than those named in the time table, without a direct order from some person appointed to control the movements of the trains over specified portions of line by means of the electric telegraph.

I am, &c.

The Secretary  
to the Great Northern  
Railway Company.

DOUGLAS GALTON,  
Captain, R.E.

Railway Department, Board of Trade,  
Whitehall, December 31, 1857.

SIR,

In compliance with the instructions contained in your letter of the 15th instant, I have the honour

to report, for the information of the Lords of the Committee of Privy Council for Trade, the result of my inquiry into the circumstances connected with the collision which occurred on the 8th instant between a passenger train and a train of empty coal waggons at St. Neots Station on the Great Northern Railway.

It appears that a down goods train of 30 waggons was ready to start from St. Neots Station for the North at 9h. 18m. p.m. The break van at the rear of this train stood three or four yards south of an angle crossing, 281 yards south of the station signal, and when the train started this van got off the rails at the angle crossing, was separated from the rest of the train by the breaking of its draw bar, which remained suspended by the coupling chains to the preceding waggon, and thus the down line a few yards north of the angle crossing became completely blocked. No sufficient cause was discovered at the time for this van leaving the rails. The road is said to have been in perfect order, and the rails to have been all completely keyed. Nothing was found wrong with the van; but it was surmised that, as it stood with the break on, to prevent the train from moving, which break was not taken off before the train was put in motion ahead, this break was in some way or other connected with the van getting off.

As soon as the under guard of this goods train discovered that the van was off the rails, he ran forward, and by passing the word to the porters the train was stopped; but the head guard and driver were prevented by an exceedingly dense fog from seeing the after part of their train. The under guard then heard the noise of another down train approaching the station, and he accordingly ran immediately back along the line, with his hand lamp and fog signals, and placed some of these fog signals on the rails, of which one was exploded by the train after it had passed inside the distant signal. The under