

The
VIRTUAL MUSEUM
of the
LANCASHIRE & YORKSHIRE RAILWAY

Accident Reports.

7 September 1889

BoT Report into Accident at
York NER.

(4 Pages).

Now that express trains are being run between Leeds and Sunderland it is most desirable that the sharp curve on which this accident took place (as well as others at Haswell and Murton) should be improved.

The Assistant Secretary,
Railway Department, Board of Trade.

I have, &c.,
(Signed) C. S. HUTCHINSON,
Major General, R.E.

APPENDIX.

ACCIDENT at RYHOPE, August 19th, 1889.

PARTICULARS of DAMAGE to ENGINE and TENDER.

Bogie passenger engine, No. 663.—Front and intermediate buffer-beam, both cylinders, starting and intercepting valves, blast and steam pipes, clack-box and feed-pipe, reversing shaft and bracket, valve-gear, Westinghouse donkey-pump exhaust pipe, foot-plate, splashers, front and side of cab, handrail, reversing-rod, and whistle-stand broken; smoke-box door and front crushed in; two holes punched through smoke-box tube-plate; and connecting rod, coupling-rod, foot-steps, and crank-pins bent.

Tender, No. 663.—One spring and coupling and safety-chains broken; footplate, handrail, top-rail, brake-hanger, and brake-stays bent; and large hole made in right-hand side of tank.

PARTICULARS of DAMAGE to LONDON and NORTH-WESTERN COMPANY'S CARRIAGE STOCK.

Brake-van, No. 1,733.—Body, frame, and two pairs of wheels and axles destroyed.

Third-class, No. 1,253.—Body destroyed, frame twisted, and brake-gear damaged.

Third-class No. 1,003.—Side and end panels, and door handles broken, bottom frame twisted, and brake-gear damaged.

Lavatory composite, No. 306.—Side and end panels, two corner pillars, sheaves, window lights, seven door handles, three axle-boxes, two buffer-cylinders, one buffer-rod, three footboards, ironwork, brake-gear, and side moulding broken; one buffer-rod bent, and inside fittings damaged.

Lavatory composite, No. 986.—Side, end, and door panels, window lights, one corner pillar, one buffer cylinder, two buffer-rods, brake-gear and ironwork broken; one buffer-rod, four door handles, and four door hinges bent; and cornice and inside fittings damaged.

Third class, No. 1,278.—Side, end, and door panels, door and quarter lights, two corner pillars, end framing, two axle-boxes, footboards, ironwork, and brake-gear broken; two buffer-rods bent, and inside fittings damaged.

Brake-van, No. 1,757.—One end sheath, four end panels, end framing, centre bars, side-chains, footboards, and ironwork broken.

Printed copies of the above report were sent to the Company on the 7th November.

NORTH-EASTERN RAILWAY.

Board of Trade, (Railway Department),
1, Whitehall, London, S. W.,
28th September 1889.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the instructions contained in the Order of the 10th instant, the result of my inquiry into the causes of a collision which occurred on the 7th instant, at York station, on the North-Eastern Railway.

In this case, the 12.10 p.m. Lancashire and Yorkshire train from Manchester, due to arrive at York at 2.10 p.m., came into collision with the buffer-stops at the end of No. 6 Dock at about 2.26 p.m.

No vehicles left the rails, except the bogie of the engine, which mounted the platform, but the buffer-stops were broken down and the platform behind was damaged.

Thirteen passengers are stated to have complained of injuries, none of which were serious.

The damages to the rolling stock were as follows:—

Engine No. 893—

Cast-iron bogie centre broken.

Two sand-boxes damaged.

Right-hand trailing platform ripped up.

In the passenger carriages—

Two buffer rods bent, and the bodies of nine carriages shifted.

The train was made up as follows: Engine and tender, brake-van, one composite, two third-class, one third-class brake, two composites, one third-class brake, two third-class and one composite carriages and brake-van, all six-wheeled stock, and all fitted with the automatic vacuum brake, with which the engine and tender also were fitted.

Description.

There are four lines through York station with dock lines on each side.

No. 6 line, a dock line, upon which this collision occurred, is at the back of the proper down platform, on the west side of the platform.

The signals at the south end of the station are worked from the locomotive signal cabin, which is on the west side of the railway, and are placed on a signal bridge over the railway.

There are also leading signals upon a four-armed bracket post controlled from the station central cabin. The left-hand arm is for No. 6 Dock, the next for No. 5, or the proper down line, the next for the through down line, and the last for crossing to the up platform line, to which many of the down trains run.

There are similar signals upon the signal bridge, and distant signals near Holgate cabin, the next block cabin southwards.

The line curves to the left running northwards, and is on a falling gradient of 1 in 1,320.

The following distances from the buffer-stops should be noted:—

To south end of platform	-	-	138 yards.
„ points leading to No. 6 Dock	-	-	204 „
„ leading signals -	-	-	223 „
„ locomotive cabin -	-	-	319 „
„ signal-bridge carrying home-signals	-	-	406 „
„ Holgate cabin -	-	-	629 „

The line is worked upon the block system.

Evidence.

George Atkins states: I have been about 18 years in the service of the North-Eastern Railway Company, and about 17 years a signalman, about 12 years at York. On the 7th September I came on duty at 1 p.m. for eight hours in the locomotive cabin, in which there are 94 levers. The Lancashire and Yorkshire express, due to arrive at 2.10, was given "On line" to me from Holgate Bridge cabin at about 2.23, and I took off No. 88 signal for it to run to No. 6 platform. This is the platform it always runs to during the summer season. The train passed at 2.25, running no faster than usual, about 10 or 12 miles an hour I should think. I did not notice whether steam was on or off, or whether the brakes were applied. I had no idea there would be any collision, and did not hear of it until 20 minutes afterwards. I work block outwards but not inwards, but I have telephone communication with the station cabin, the signalman in which directs me to which platforms to send the trains.

William Stafford states: I have been 17 years in the service of the North-Eastern Railway Company, and 12 years assistant station-master at York. On the 7th September I was on duty on the west or proper down platform when the collision occurred. I was nearly opposite to the buffer-stop on No. 6 Dock. I saw the train as it passed the home-signals, and at that time there was nothing to call my attention to it particularly. Steam was then off, as far as I could tell. It was not until the train was within a yard of the stops that I looked at it again, as I was attending to the Midland train upon No. 5 line. There was no shouting or anything, but I just turned round. The driver then had his brakes on. The engine struck the stops at considerable speed—a great deal faster than I could walk. I would estimate the speed at 12 miles an hour. The buffer-stop was knocked away, and the bogie wheels of the engine mounted the platform. The luggage table behind the buffers was knocked away. None of the carriages left the rails and none were telescoped. There was no rebound. There were a good many passengers. As far as I could ascertain about 13 or 14 passengers were injured, but none seriously that I could see. It was a clear day, but there had been a local shower just before the train arrived. I spoke to the driver

immediately afterwards. I asked him how it was that he had not stopped, and he said that the brake would not hold. I did not try the brake myself. The couplings were slightly slack as the train stood after the collision.

William Taylor states: I have been nearly 17 years in the service of the Lancashire and Yorkshire Railway Company, and about seven years a driver. On the 6th September I went off duty at 9.25 p.m., after 15½ hours duty. On the 7th September I came on duty at about 10.55 at Newton Heath. My engine, No. 983, is a bogie engine, with leading bogie and driving and trailing wheels coupled, and a six-wheeled tender. It is fitted with the automatic vacuum brake which works blocks on the four coupled wheels of the engine and the six tender wheels. The brake was in good order. I was attached to the 12.10 train from Manchester, due at York at 2.10. There were six vehicles on the train when we left Manchester, and 12 when we left Rochdale. It was about the same weight as usual. We stopped at Sowerby Bridge, Brighouse, Wakefield, and Castleford, in the ordinary course. I used my continuous brake at all these places, and it acted properly. I also found it act properly at one or two places when checked by signals. Approaching York the signals at North Lane cabin were on when I sighted them, and I checked my train with the continuous brake until the signals were dropped for me; the south point signals were also on when I sighted them, and I again checked the train slightly until the signals were dropped. The Holgate home-signal was dropped as I passed the distant-signal, and the locomotive cabin home-signal was off when I sighted it. I was running at about 10 miles an hour when I passed this home-signal. I had shut off steam when sighting the North Lane signals, and did not put it on again. When I passed the locomotive cabin home-signal I was just working the brake, and I had my train properly under command. I was running with 22 inches of vacuum. Both gauges were showing a good vacuum. I thought I was running too slow when passing the locomotive cabin, and I put the blower on and released the brake. When my engine was at the end of the platform I applied the brake again, destroying about 10 inches. I think my speed

at the end of the platform was about four or five miles an hour. I did not release the brakes after that. About two carriage lengths inside the end of the platform I put the brake on full power, and did not release it again. When about 30 yards from the buffer-stop I found that the train was not pulling up. I reversed the engine and applied steam. My fireman sanded the rails. I struck the buffer-stop at a speed of about three miles an hour. I and my fireman both stopped on the engine. Neither of us were hurt. After the collision I did not look to see if the brake-blocks were on the wheels. This is only the second time I have run into York station, but my fireman knew the road well. There was a shower of rain as we were running from Holgate Bridge into the station, and I cannot attribute the accident to any other cause. The rails inside the station were also greasy. I was not making up any time.

George Dixon Gill states: I have been about seven years in the service of the Lancashire and Yorkshire Railway Company, and about 2½ years as fireman. I was fireman to William Taylor on the 7th September. I have heard my driver's evidence read over, and I agree with it. I had applied the tender brake at Holgate Bridge, and kept it on all the way. I have been running to York about eight months, and I know the road perfectly well. I was not knocked about when the engine struck the buffer.

Charles Biglow states: I have been 16 years in the service, and 14 years a guard. On the 7th September I came on duty at 6.30 a.m. I was guard of the Liverpool portion of the train (due at York at 2.10), which joined the Manchester portion at Rochdale. On leaving Rochdale the train was made up as follows: Engine and tender, large brake-van, one composite, two third-class, one third-class brake, two composites, one third-class brake, two third-class, one composite, and large brake-van. It was all six-wheeled stock, and was fitted throughout with the automatic brake, in good order. We left Rochdale a little late, about two minutes, but lost time on the road at stations. There was nothing unusual in the speed when approaching York. I think we passed the ticket platform at a speed of between 8 or 10 miles an hour. The vacuum-brake gauge in my van shows the pressure on the pipe only. The pressure averaged 18 to 20 ins. throughout the journey. When passing the ticket platform there was very little pressure, and I could feel that the train was being checked by the brake. Soon after this the driver blew off the brake.

I felt the brake go on again just as my van (the front van) was entering the station. There were 3 ins. or 4 ins. of pressure left on the pipe. Finding that the train was not pulling up properly, I exhausted the vacuum when we were coming under the station roof, and also put the hand-brake hard on. We struck the buffers at a speed of about five miles an hour. I was not knocked over, as I held on to the brake wheel. It was a fairly loaded train. Only three passengers complained to me of injury. I did not speak to the driver after the accident. I have been working regularly into York about four or five years ago.

Robert Brockbark states: I have been about 20 years in the service, and have been travelling inspector for six years. I was in the front van with guard Biglow. His evidence is correct. I have been in the habit of coming into York with these trains. I did not observe that the speed was any greater than usual. I think the speed on striking the stops was from five to seven miles an hour. There was a heavy shower just outside the station. I think the wheels were picked up owing to the rain, and skidded into the station. It is the habit to use the continuous brake as well as the hand-brake when entering York. There was no rebound. I looked at the front portion of the train after the collision, and the blocks were on the wheels. I have no doubt whatever that the brake was in good order.

Basil Hope states: I am assistant district locomotive superintendent in the service of the North-Eastern Railway Company. I was a passenger in a train from Darlington which ran through York station to put back into a bay line on the east side of the station, just as the Lancashire and Yorkshire train was running in. My train was nearly at a stand between the locomotive cabin and the station as the Lancashire and Yorkshire train passed. It was running then at a speed of at least 10 miles an hour, but it did not strike me that there would be any danger of an accident. When we had backed into the station I saw the Lancashire and Yorkshire engine on the platform, and I went down to look at it. I found there were 18 inches of vacuum in the vacuum chamber, and the vacuum in the pipe was all exhausted. I looked along the top of the rails to see if there were any marks of skidding, and the top of the rail was abraded for about 30 yards. Sand had been applied. The speed of the train was not higher than that usually adopted by the Lancashire and Yorkshire trains.

Conclusion.

The evidence given above proves that the speed of the train, although no higher than usual, was as much as 10 miles an hour when between the locomotive cabin and the station, when within 250 yards of the buffer-stops, and that in spite of the application of the continuous brake when about 130 yards from the stops the train was still running at over five miles an hour when the engine struck the stops.

The driver seems to have had his train under control before reaching the locomotive cabin, for he released the continuous brakes with which he had been checking the speed, but he appears to have been too late in applying it again, although possibly if the wheels had not skidded he might have stopped short of the stops.

There had just been a very sharp shower, and this probably caused the wheels to skid.

The collision may be attributed to a miscalculation of the speed by the driver, but I think that, as usual, he was depending too much upon his continuous brake for stopping when upon the dock line, and that if, when between the locomotive cabin and the station, he had been running at the speed enjoined by the regulations, viz., at such a speed that the train might be stopped by the use of the hand-brakes only, the collision would not have occurred.

These buffer-stop collisions are a great deal too common, and I do not believe that they will cease to take place until drivers are forbidden to use their continuous brakes

to stop with at terminal stations except in cases of emergency, when they find that the hand-brakes are not sufficient.

At the time of the collision the driver had been on duty for about $3\frac{1}{2}$ hours only, but the evidence discloses the fact that upon the previous day he had been on duty for $15\frac{1}{2}$ hours.

In the last accident upon the Lancashire and Yorkshire Railway which I investigated, I had to call attention to the excessive hours of duty of a driver, who had been on for over 15 hours; and as such long hours are neither fair to the men nor safe for the travelling public, it is high time that they were put a stop to.

The Assistant Secretary,
Railway Department, Board of Trade.

I have, &c.,

F. A. MARINDIN,
Major, R.E.

Printed copies of the above report were sent to the Lancashire and Yorkshire and North-Eastern Railway Companies on the 10th October.

SOUTH-EASTERN RAILWAY.

Board of Trade, (Railway Department),
1, Whitehall, London, S.W.,

17th October 1889.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 12th ultimo, the result of my enquiry into the circumstances connected with the accident which occurred on the 30th of August between Battle and Robertsbridge stations on the Tunbridge and Hastings branch of the South-Eastern Railway.

In this case, as the 4.40 p.m. up slow passenger train from Hastings for London was running between Battle and Robertsbridge stations, five vehicles at the rear of the train—which consisted of engine, tender, and seven vehicles—left the rails near an over-bridge about $2\frac{1}{2}$ miles on the London side of Battle station, the first of these five vehicles coming into collision with one of the piers of the bridge.

One passenger has complained of being injured.

In the train—which consisted of engine and tender, two third-class carriages, a composite, a first-class carriage, a second-class carriage (these carriages all having six wheels), a four-wheeled brake-van, and a four-wheeled horse-box, the whole of the train being fitted with the automatic vacuum brake, the horse-box having only brake pipes and couplings but no wheel blocks—the front end of the front compartment of the third vehicle was damaged by coming in contact with the pier of the over-bridge, and the left foot-board was broken off in front. The couplings between the second and third vehicles were broken, and there was an interval of about 110 yards between these two vehicles, the engine, tender, and the first two vehicles having run ahead some distance after the severance took place and before they stopped. The third, fourth, fifth, and sixth vehicles remained coupled together with their right wheels in the 4-ft. space, and their left wheels outside the left rail of the up line; but the seventh vehicle (the horse-box) was separated from the sixth vehicle by an interval of about three yards, and was completely outside the rails, its right wheels being outside the left end of the sleepers, and its left wheels on the other side of a drain along the side of the line.

Four uprights in the horse-box were cracked, and a coupling was broken.

In the permanent-way six rails were bent, 125 chairs were broken, 20 sleepers were cracked or damaged, and several fish-plates were broken.

Description.

This accident commenced by a wheel leaving the rails about 16 yards beyond the north end of a curve to the left (looking towards London) of one mile radius and about 800 yards long, the line thence being straight for about 600 yards; the gradient of the up line at and near the place is a rising one of 1 in 415. The first wheel mark was on the head of a spike on the inside of a chair supporting the right rail, the chair itself being broken; the second mark was about 6 feet further on, on the ballast, and about 8 inches outside the left rail, the chair under the right rail opposite this mark being broken; there were then marks on the sleepers both in the 4-ft. space and outside