

There appears to be no blame attaching to the servants of the Tilbury Company's train, nor to the signalmen.

It is to be regretted that the Great Eastern Company can not see their way to adopt strict junction block working at Salmon's Lane junction. It would certainly be an additional safeguard against the recurrence of such mistakes as led to the present collision, the consequences of which were nearly being of a most serious character.

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

I have, &c.,
C. S. HUTCHINSON,
Major-General, R.E.

Printed copies of the above report were sent to the Great Eastern and the London, Tilbury, and Southend Railway Companies on the 5th April.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade, (Railway Department,)
1, Whitehall, London, S.W.,
20th January 1883.

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 15th inst., the result of my inquiry into the causes of an accident which occurred on the 11th inst., near Bradford station, on the Lancashire and Yorkshire Railway.

In this case, as the 6.20 p.m. passenger train from Manchester to Bradford,—consisting of engine and tender, two third-class, one first-class, and one second-class carriages, and rear break-van,—was running between Low Moor and Bradford, the coupling between the engine and the leading carriage parted, and after running for about 1,200 yards the carriages overtook the engine, and struck it with considerable force.

The leading carriage was thrown off the rails, and four passengers and the driver and fireman of the train were injured.

The only part of the rolling stock damaged was the leading carriage, in which one axle-guard and two axle-boxes were broken and one buffer was drawn out.

Description.

The scene of this collision is 670 yards outside Bradford station, between the Coal Shoots Junction cabin and Mill Lane Junction cabin, which are 295 yards apart.

The line at this point, and for about $\frac{3}{4}$ of a mile towards Low Moor, is on a gradient of 1 in 51, falling towards Bradford.

Bowling Junction is 1 mile 15 chains and Bowling tunnel is 1 mile 26 chains from Bradford, and the tunnel is nearly a mile in length.

The coupling which parted is of the ordinary pattern and dimensions, the shackle-pin which broke being $1\frac{3}{4}$ in. in diameter.

The train was fitted throughout with Fay's break under the control of the guard.

Evidence.

John Sterling, signalman at Coal Shoots Junction cabin, states: I have been in the service for two years, and signalman five months. I was on duty on the night of the 11th inst. I got "Be ready" signal from Bowling Junction cabin for the 6.20 p.m. passenger train from Manchester to Bradford at 8.43 p.m., "On line" at 8.45 p.m., and it passed my cabin at 8.47 p.m. As it was passing me it sounded as if a light-engine was passing, and I opened the window and looked out. I saw it was a light-engine, and directly afterwards I saw the carriages passing my cabin without engine. They would be then about three or four yards apart. I called the attention of the signalman at Mill Lane Junction cabin on the telephone to say that the train was divided, but before he had time to receive it I heard the collision, which sounded a severe one. I concluded that the carriages had overtaken the engine, as they were running much quicker than the engine

on passing my cabin. It was very dark. There was no fog. The carriages were running twice as fast as the engine. I came on duty at 6 p.m. for 12 hours.

George Soothill, signalman at Mill Lane Junction cabin, states: I was on duty on the night of the 11th inst. I remember having "Be ready" signal given from Coal Shoots Junction cabin at 8.44 p.m. for the 6.20 p.m. passenger train from Manchester. I accepted it at the same time. It was given "On line" at 8.47 p.m., and stopped between Coal Shoots Junction cabin and my cabin at 8.48 p.m., but the engine went forward to cabin "A" distant-signal, and came to a stand there. When I found out what had happened I telephoned to the signalman at cabin "A" what had occurred, when he replied, "All right, I will acquaint the station staff;" and soon after inspector Ellis and staff came up to the place and

arranged single-line working, and the down line was cleared at 2.45 a.m. next day. When the train was approaching all my signals were off. There was a clear road into the station.

Jonas Dobson, guard, states: I was guard in charge of the 6.20 p.m. Manchester to Bradford on the 11th inst. We left Low Moor at 8.41 p.m. for Bradford, with the engine, and a five-coupled train; two third-class carriages were next to the engine, then a first-class carriage, a second-class carriage, and the van in the rear. On approaching Bowling Junction I observed that the signals were all off. On passing Bowling Junction cabin I saw the distant-signal for Coal Shoots cabin at danger, but the home-signal and the distant and home signals for Mill Lane Junction were off. The distant-signal for Coal Shoots Junction cabin was not taken off. I did not notice anything after this until I was knocked into the bottom of my van, soon after passing Coal Shoots Junction cabin, when I afterwards found, on getting out of the van, that the third-class carriage next the engine was off the road. I then went to see about the passengers, and found that two ladies had got out of the carriage and were assisting another one out along with the ground pointsman. I then called to the pointsman at Mill Lane Junction cabin to ask if he had blocked the lines, but I got no reply. The ground pointsman stated that he had given obstruction-signal to Coal Shoots Junction cabin, and acquainted them at the station. I then got the names and addresses of the parties who were injured. I did not observe that the engine had uncoupled from the train, and was not aware that anything was wrong until I was knocked to the bottom of the van. I did not hear the driver whistle for the guard's break. I think we should be running from 10 to 15 miles an hour at the time of the accident. Afterwards I went to Coal Shoots Junction cabin to see if the signalman there had blocked back, when I found that he had, and on walking to the cabin I found on the line the buffer of a carriage and part of a coupling pin, some 50 yards beyond my train. When passing over the bell in Bowling tunnel we should be going some 30 miles an hour. I then applied the breaks, and put the blocks easily to the wheels, to be ready to apply it properly if the signals were on. I kept it so until we were descending the bank, when I kept tightening it as we were going down, and I had the break in my hand at the time of the collision. My blocks were never off the wheels after passing the distant-signal in Bowling tunnel. I felt no jerk whatever until we came into collision. It was a dark night. I did not feel the steam shut off in the tunnel. I never saw any steam from the engine after emerging from the tunnel. I have been 24 years in the service, and 12 years a guard. We were running at right time, and at our usual speed.

James Marchbank states: I was driver of the Bradford portion of the 6.20 p.m. from Manchester on the 11th inst. I attached to the train at Low Moor. My engine was tender first. I told my fireman to

hook on to the train, and he went to do so, when he found that a porter from the station had already done so. There was nothing said about any defect. We started all right, and nothing was found wrong with the train. I went through Bowling tunnel all right. The signals were all off down the bank; the distant-signal for the station was on. I looked back at my train just before I approached Ripley bridge, and it appeared to be all right. I had felt no jerk whatever nor heard any rattling of couplings, &c., and knew of nothing being wrong until the train ran into my engine. My engine did not leave the rails. I was thrown against the face-plate, and my face was cut. I felt no sudden application of the guard's break between Low Moor and Bradford. I shut off my steam in Bowling tunnel, and did not put it on again. I do not remember my engine slipping in the tunnel. My fireman put on his break on emerging from Bowling tunnel, and I am not aware that he took it off until after the collision. I felt the speed of the train checked on the top of the bank, but it was only slightly. I examined the shackle attached to the carriage after the accident, and found it was screwed on as far as possible, and I felt no jerk in starting from Low Moor, as I should have done if the train had been slack-coupled. On passing over the bell in Bowling tunnel I should be running at a speed of about 15 miles an hour. My speed at the time of the collision would be about 10 miles an hour. I told my fireman to release the break a little after the collision. I have been 10 years in the service, and eight years a booked fireman. I have been acting as extra driver for about a year. My engine (No. 266) is a six-wheel coupled engine, with hand-break on the tender. I had not checked speed at all before the train came into me. I hadn't passed the junction, so there was no occasion to check for the station distant-signal.

James Jagger, cleaner, acting as fireman to Marchbank, states: I did not couple up to the train at Low Moor, this having been done by a porter. I did not see whether the shackle was screwed up properly or not. The train started as usual, and we came through the tunnel in the ordinary way. On coming out of the tunnel the driver told me to put on my break gradually, which I did. I did not take it off again until after the accident. My break was not hard on until immediately before the collision. I had no idea the train had left us until after the accident. I felt no jerk between Low Moor and Bradford. The steam was shut off in the tunnel, and was not put on again. I was knocked over and a little bruised.

Thomas Grayson, porter, Low Moor, states: On the night of the 11th inst. I was on duty, and coupled the engine to the Bradford portion of the 6.20 p.m. train from Manchester, due to leave at 8.37 p.m. I screwed the coupling tight up in the usual way; the buffers of the engine and the carriages were close together. I did not notice any defect in the coupling, but it appeared to be all right.

Conclusion.

This collision was brought about by the fracture of the pin attaching the shackle of the coupling to the engine. This fracture shows no old flaw, although the metal is of inferior quality, and the pin, which is $\frac{3}{4}$ in. in diameter, looks as if it had given way under a sudden jerk. This was probably the case, although no such jerk was noticed either in starting the train at Low Moor or at the time when the parting of the train took place, for when the engine was coupled on at Low Moor it was a porter who performed the operation, and not the proper person, viz. the fireman, and I have very little doubt but that the coupling was not tightly screwed up.

In spite of the darkness of the night the engine ought not to have run for 1,200 yards detached from its train without the driver being aware of what had occurred; but this can be better understood when it is observed that the engine was running

tender in front, and that it was in charge of an acting driver of small experience, who had for his fireman a cleaner of very short service.

I do not think that the driving of passenger trains should be entrusted to only an acting driver if it can be avoided, and when this does occur the second man on the engine ought certainly to have some experience.

This collision is one of a class which would not occur if automatic continuous breaks were generally adopted.

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

I have, &c.,
F. A. MARINDIN,
Major.

Printed copies of the above report were sent to the Company on the 8th February.

LONDON AND NORTH-WESTERN RAILWAY.

(Railway Department,) Board of Trade,

13th February 1883.

SIR,

IN compliance with the instructions contained in your Minute of the 3rd instant, 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 double collision that occurred on the 1st instant at Hillhouse, near Huddersfield, on the London and North-Western Railway.

Hillhouse No. 1 cabin is situated at the south-west end of Huddersfield goods yard, and is about half a mile from Huddersfield station.

On the day in question the London and North-Western train to Kirkburton was drawn up at Hillhouse cabin, the Lancashire and Yorkshire train from Meltham to Bradford was drawn up close behind it, and while these trains were stopped, in consequence of the section in advance being occupied, the Lancashire and Yorkshire train was run into by a London and North-Western train, which was proceeding from Huddersfield to Leeds, and the force of this collision drove the Lancashire and Yorkshire train against the London and North-Western train, which was in front of it.

Four passengers in the Kirkburton train, six in the Lancashire and Yorkshire train, and one in the North-Western train to Leeds are returned as having been hurt, but their injuries are believed to be slight. The guard of the Lancashire and Yorkshire train was also slightly hurt in the back.

The Kirkburton train consisted of a tank-engine and six vehicles, the first and last being third-class coaches with break compartments. The guard rode in the break compartment of the last coach. The vehicles were coupled together with the patent chain break, which was controlled to the extent of half of the train by the driver, and the other half of the train by the guard. The Lancashire and Yorkshire train consisted of a tank-engine, four coaches, and a break-van; the guard in charge was riding in this break-van, which was coupled to the coaches with Fay's patent break, which was worked by the guard. The Stockport train consisted of an engine and tender and six vehicles, which were coupled together with the patent chain break. This break was controlled from the engine and from the guard's van at the tail of the train.

The buffer-sockets and the tie-rod of the last coach on the Kirkburton train were broken. The break-van and three coaches of the Lancashire and Yorkshire train were damaged. One of the engine buffer-castings in the train to Leeds was broken. No vehicles in any of the trains left the rails, and no injury was done to the permanent way.

The London and North-Western Railway between Huddersfield station and Hillhouse is at present undergoing some alterations, in consequence of three additional lines of rails being constructed between these places. The new signals in connection with No. 3 cabin, which is at the north end of Huddersfield station, and No. 1 cabin, at Hillhouse, were also undergoing alterations, and were not complete at the time. The line between these cabins is perfectly straight, the gradient falls 1 in 105 for 341 yards from Huddersfield, and after that it falls 1 in 90 for the remainder of the distance.

This section of railway is worked on the permissive block system, and has, up to the present time, been treated as part of Huddersfield station yard. When the alterations are completed the Company propose to work the passenger lines on the