

LANCASHIRE AND YORKSHIRE RAILWAY.

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

20th March 1884.

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 4th January, the result of my inquiry into the causes of the collision which occurred on the 2nd January at Rufford station, on the Liverpool and Preston branch of the Lancashire and Yorkshire Railway.

In this case, while the 12.5 a.m. up goods train from Sandhills to Hellifield was crossing from the down line (on which it had been shunted out of the way of an up express passenger train) to the up line, the rear of the train was run into by the engine of the 11 p.m. down goods train from Burnley to Sandhills, which train was due to pass (or, if necessary, to stop at) Rufford at 1.30 a.m.

The guard of the 12.5 a.m. up goods train was killed on the spot.

In the 12.5 a.m. up good trains (which consisted of engine, tender, 43 waggons, and a van) the second waggon (the first struck) from the van had its rear wheels knocked off the rails, and the last waggon and the van were turned over on their sides, all three vehicles being damaged.

In the 11 p.m. down goods train (which consisted of engine, tender, 20 waggons, and a break-van) the engine had its buffer-beam and right-hand sand-box broken; the right-hand side of the cab over the foot-plate was badly damaged; the framing and springs were damaged; the right side of the tender and the tender foot-plate were badly damaged; and the framing and springs were damaged.

Description.

The line in the neighbourhood of Rufford station, which is intermediate between Croston and Burscough junction, rises slightly towards Liverpool, and is straight. The levers working the points and signals are properly interlocked in a raised cabin in a central position. The down signals, which alone need be referred to, are, first, the down distant-signal, 890 yards from the down home-signal, and visible for a long distance; the down home-signal, about 420 yards from the point of collision, also visible for a long distance; the down starting-signal, about 360 yards from the down home-signal, about opposite the up end of the cross-over-road through which the 12.5 a.m. train was crossing. So far as the levers were concerned, all these three signals must have been at danger while the 12.5 a.m. train was passing through the cross-over-road. Block system is in force on this part of the line when any passenger train is concerned, but for goods trains only it is not employed.

The collision occurred at 1.28 a.m., at a point about 1,310 yards and 420 yards inside the down distant and down home signals respectively, while the last two waggons and van of the 12.5 a.m. train were on the cross-over-road still foul of the down line.

Evidence.

1. *Caleb Singleton*, three years in the service, signalman nearly all the time at Rufford station.—I came on duty at 6 p.m. on 1st January, to remain to 7.40 a.m. on the 2nd, the relief man coming from Croston by the first train. I stopped the 12.5 a.m. up train from Sandhills at 1.18 a.m., to shunt it on to the down road to allow the 12.55 a.m. Liverpool to Blackburn express passenger train to pass at 1.24 a.m. I crossed the train through No. 10 and 11 cross-over-road, and took on line the passenger train from Burscough at 1.20 a.m. It passed at 1.24 a.m. with clear signals. The down signals had been at danger since 11.36 p.m. As soon as the passenger train had passed I put to danger the up signals, opened No. 10 and 11 cross-over-road points, and called the goods train through. I got the "Be ready" from Croston at 1.20 a.m. for the 11 p.m. down goods train from Burnley, and I took it on line

at 1.23. My rules allowed of my taking this goods train on line although the other goods train was standing on the down line, but I could not have done this in the case of either train being a passenger train. I am quite sure, however, I never took off my signals. The first time I heard the driver of the 11 p.m. goods train whistle was as he was passing the cabin at about 1.27 a.m., and this was in consequence of the driver of the other goods train having first opened his whistle. The train passed the cabin at a good speed, steam having been shut off only about 50 yards before reaching the cabin. I did not notice what was being done at the breaks. The 11 p.m. train stopped shortly after striking the tail of the other train, which was close to the starting-signal, the time of the collision being 1.28 a.m. I had last looked at the back-light of the down distant-signal at 1.23 a.m. and it was showing a green light, and

the back-light of the home-signal the same. The night was pretty clear and fair at the time. It had been snowing at 10 o'clock, but the snow had not remained on the rails. I spoke to the driver about the down distant-signal directly after the collision. He said it was off; I said it was not. On my speaking to the guard he said the signal was on. There was no room to put away the up goods train into the sidings off the up line, as they were full. The longest of these sidings will hold about 20 waggons; there are four other shorter sidings. I never had to make any complaints about the down distant-signal. The light was not a very good one on the night in question, but it was burning. I distinctly state that I never took off the down signals after putting them up after the passing of the 10.57 p.m. passenger train, Blackburn to Liverpool. I noticed the down goods train approaching at a very high speed, and sparks flying from the wheels of the guard's van outside the home-signal, and before the driver had shut off steam or whistled.

2. *Edward Boydell*, 23 years in the service, 16 years driver.—I was driver of the 12.55 p.m. express passenger train, Liverpool to Blackburn, on the 2nd January. I got clear signals all the way through, and found the signals off for me at Rufford. As I passed Rufford I saw an up goods train standing on the down line. I then passed a down goods train 500 or 600 yards the Preston side of Rufford down distant-signal. I saw the driver was coming at a very rapid speed, and in consequence of having noticed the up goods train standing on the down line I thought it better to give him a signal, and I held out a green lamp into the 6-ft. space before and after he had passed, and on looking back I saw that he had still steam on. The van had passed before I took in the green light. I did not happen to notice the down distant-signal on looking back. I think the speed of the goods train must have been 35 miles an hour, as fast as I was running. It did not occur to me to whistle as well as to show the hand-light. It was dark on the foot-plate of the other engine, so that I could not see either driver or fireman. I have never had occasion to find fault with the Rufford down distant-signal. As I returned from Blackburn at about 6.25 a.m. the down distant-signal was full at danger, but the light was dim.

3. *Erin Monk*, 30 years in the service, 23 years driver.—I started from Sandhills on the 2nd January at 12.10 a.m., five minutes late, with a train consisting (from Aintree) of engine, tender, 43 waggons, and a van. We stopped at Aintree and Ormskirk for water, and then at 1.18 we were stopped at Rufford and shunted on to the down road for the up express to pass. Lostock Hall is the regular place to shunt out of the way of the express. I saw the up express train pass after I had been standing on the down line six or seven minutes. While I was thus standing I have no reason to suppose that the down signals were ever taken off. I was close to the down starting-signal, and could hardly have failed to notice if it had been taken off. As soon as the passenger train had passed the cross-over-road was again opened, and the signalman gave me a hand-signal to re-cross. I began to do so, and I had got on to the up line and past the level crossing with the engine when I first noticed the other goods train, not yet up to the home-signal. I at once thought it was coming too fast to stop. I accordingly put on full steam and opened the sand boxes, and the fireman opened the alarm whistle. I could not say where the engines passed each other, nor what the speed of the other train was at the time. I think the first vehicle struck was the leading end of the van. The van was turned over on its side, but not badly smashed. I had no conversation with the other driver about the cause of the collision. The time was about 1.28 a.m., the night was pretty clear, snow had fallen. I have never had reason to complain of the Rufford down distant-signal. I saw it as

I went away to Croston with the waggons; it was a fair light, but not brilliant; it was not at all mixed.

4. *Peter Ormrod*, seven years in the service, three years fireman.—I was fireman with Monk on the 2nd January, and agree with his evidence.

5. *George Watts*, 10 years in the service, 64 years goods guard.—I started from Burnley on the 1st January at 10.55 p.m. with the 11 p.m. goods train for Sandhills. We stopped at Accrington, Church, and Lostock Hall. There was no difficulty in pulling up at these places. We stopped about five minutes at Accrington for water; at Church, 10 to 15 minutes; at Lostock Hall, about 40 minutes. We were shunting nearly all the time at Lostock, where the driver never left his engine. We left Lostock at about 1 p.m.—five minutes before time,—with 11 loaded waggons, six empty waggons, and a break-van, in which I was alone. Our next stop was to be Burscough, as there was nothing to leave either at Croston or at Rufford. At Croston we got clear signals, and on approaching Rufford I found the distant-signal at danger. I saw it about 100 or 200 yards off. The night was not foggy, but the signal-light was burning dimly. On finding this signal at danger I applied my break, and had it skidding by the time I reached the distant-signal. The speed on my first seeing the distant-signal was much as usual. I noticed the passenger train shortly before seeing the distant-signal; I was looking out of the left-hand window at the time, and did not consequently see the driver give any signal. On passing the distant-signal I looked out and saw the home and starting signals on, and wondered why the driver did not shut off steam; and I do not think he did so before he passed the home-signal, and then the speed began to slightly reduce, and was not more than a walking speed when we struck the van of the other goods train, after which we ran about the train's length. Nothing left the rails in my train. I was not hurt. I did not jump out. I found the guard dead in his van, which was turned over on its side. My driver then said the distant-signal was off. I said, "No," but he repeated it. Then, in presence of the signalman, the driver again repeated that the distant-signal had been off, which I contradicted. I afterwards went back with the station-master to look at the light, and found it at danger but burning dimly. I did not go back more than 50 yards from it. I have always known this signal to work well previously.

6. *Joshua Ronce*, 14 years in the service, five years driver.—I have been on the line between Burnley and Liverpool as a fireman, but not often as a driver. I started from Burnley on the 1st January, at 10.55 p.m., with engine No. 723,—a six-coupled goods engine,—and tender. The engine and tender weigh 45 to 50 tons; they are able to take a load of 47 mixed waggons. The only break is that on the tender. We stopped at Accrington, Church, and Lostock, and left Lostock about right time, with 20 waggons and the break-van; the next proper stop being Burscough. We got clear signals at Croston, and on approaching Rufford, at a speed of 20 to 25 miles an hour, I saw from the left-hand side of the engine, when about 200 yards off, the distant-signal showing a clear white light but dull. I remember passing the up express about 300 yards from the down distant-signal, but I did not notice any signal given by the driver of that train. I was attending to the fire after passing the distant-signal, and did not notice the home-signal till I got within about 300 yards of it, and I saw it at danger. I then whistled for the guard's break. I told my mate to put on the break. I shut off steam and reversed the engine, and got steam against it, as I was passing the home-signal. This was all I could do up to the time of the collision, when the speed was reduced to from 5 to 10 miles an hour. My engine struck the second waggon from the van, and cleared the last waggon and van out of the road, turned the van over, and then ran half the length of the train before we stopped. No wheels left the rails in my train.

Neither I nor my fireman jumped off, nor were we hurt. I do not think the guard saw the signals at all. I first saw the engine of the up goods train when near the home-signal, but I had begun to take means to stop before this. I have been tested for sight, and have been found all right. I have never had occasion to complain of the Rufford down distant-signal. My steam pressure was about 120 lbs.

7. *John Holman*, two years in the service, cleaner and occasionally employed as fireman.—I had not worked with Rowe before the night of the 1st January, when I had to take another fireman's place. I understand signals. I was firing when approaching Rufford, and did not see the distant-signal; I did not see any signals at all. It was the first time I had been on the road. My driver saying "Wo" was the first I knew of anything being wrong. I at once put on the break, saw that the engine was reversed, but I do not know whether there was steam against it, and I was putting down sand at the time of the collision. I do not think we had passed the engine of the other goods train when the driver said "Wo." The driver had said before we got to the distant-signal, "They are favouring us to-night; the distant-signal is off; put on some fire." The driver had no drink while I was with him. He was perfectly sober and was in bed when I went to call him.

8. *John Gooder*, 29 years in the service, 20 years driver.—On the afternoon of the 2nd January I was driving the 3.5 p.m. passenger train from Preston

to Liverpool, and on approaching the Rufford distant-signal I found it hanging down, but not quite so low as caution. It would have shown a red light although it was intended to be off. I reported it verbally to the station-master. At other times it has been a proper signal.

9. *John Fielding*, 16 years in the service, 12 years driver.—On 1st January about 1.15 a.m., I was driver of the goods train from Burnley to Sandhills, and on approaching Rufford down distant-signal I found it showing a white light when I was about 300 yards from it, but as I got nearer to it it appeared to gradually change from white to red; it should have been off, as the home and starting signals were off. I did not report this. This is the only instance I have known of this signal not acting properly.

10. *John Checkley*, signal-fitter.—I was at Rufford when Gooder complained about the down distant-signal. I at once had it worked, and it appeared to work properly.

11. *John Bradshaw*, station-master at Rufford 11 years.—I went to look at the distant-signal about half an hour after the collision. I found the light burning dimly, but I did not test how far off it could be seen. There were no complaints as to the signal before the collision, except as to dimness. The complaint by Gooder on the 2nd inst. was not justified by what was found to be the condition of the signal.

Conclusion.

This collision must be attributed to reckless driving by Rowe, the driver of the 11 p.m. down goods train from Burnley to Sandhills (Liverpool). This train, comparatively a light one, consisting only of 20 waggons (of which six were empty) and a van, was allowed by its driver to approach Rufford station, where no doubt both distant, home, and starting signals were at danger against it, at so high a rate of speed that at a point 1,310 yards inside the down distant-signal, and 420 yards inside the down home-signal, the engine had sufficient remaining velocity to upset and clear out of its way the last waggon and van of the 12.5 a.m. up goods train (which latter were in motion on the cross-over road leading from the down to the up line), and then to run another 100 yards or more. Rowe excuses himself by declaring that the down distant-signal (which was burning dimly) was off when he first saw it about 200 yards off, and that, as he was afterwards attending to his fire, he did not notice the down home-signal till he saw it at danger when about 300 yards off, and that he then did his best to stop. His fireman, who was a stranger on the line, saw no signals at all. The guard of the train contradicts Rowe as to the down distant-signal, which he says was at danger though burning dimly, and that, seeing the down home and starting signals also at danger, he was surprised at Rowe's not shutting off steam, which he does not think was done until the engine had passed the home-signal. The signalman's evidence as to the non-observance of the signals by driver Rowe is to much the same effect as the guard's, and he thinks it was the alarm-whistle from the engine of the other goods train, as the engine of the 11 p.m. train was passing his cabin (about 210 yards from the point of collision), which first seemed to have made Rowe aware that he was rushing into danger.

The only fault about the signals appears to have been that the light of the down distant-signal was burning dimly, and would consequently not be visible for so long a distance as usual; this, however, should only have made a careful driver more cautious in approaching the station; in addition to this, no fault at all was attributed to the lamp of the down home-signal, which could have been seen for a long distance, probably for at least a mile.

The complaints made by two drivers as to this down distant-signal were to the effect that it had been on two occasions nearly at danger when it was intended to have been off, a fault at any rate on the safe side.

Had there been a refuge siding on the up side of the line at Rufford into which the 12.5 a.m. up goods train might have been shunted out of the way of the up express train, instead of its having had to be crossed on to the down line, this collision would

not have occurred; and it is very desirable that increased siding accommodation should be obtained at Rufford.

The collision would also have been prevented had the block system been in force as regards goods trains. If the goods traffic on the line is too thick to allow of the block system being carried out as regards goods trains, it would at any rate seem desirable and practicable that the driver of a goods train should be informed at the previous station whether or not the line is clear.

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 Company on the 23rd April.

LONDON AND NORTH-WESTERN RAILWAY.

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

11th January 1884.

SIR,

IN compliance with the instructions contained in the Order of the 7th 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 accident, that occurred on the 6th instant, at Coppull Moor bridge, on the London and North-Western Railway.

This bridge is situated about three-quarters of a mile to the south of Coppull station. It carries a public cross road over the railway. This cross road connects the main road from Wigan to Preston with the main road from Wigan to Chorley. There is very little traffic on the cross road. Coppull bridge was built about the year 1837, when the railway belonged to the North Union Railway Company.

The arch, which was of the elliptic form, had a span of 29 ft. 7 ins. The abutments were 28 feet wide at the ground level, and were battened up to the soffit of the arch. The roadway over the arch was 20 ft. 5 ins. wide between the parapets, which were a brick and a half thick. The whole was built of brick with lime mortar. The top of the arch was about 16 ft. 9 ins. above the level of the rails.

The crown of the arch had settled, so that three or four feet at the centre were flat. The district engineer, who had been 24 years in charge of this part of the London and North-Western Railway, and who had constantly examined the bridge, had observed no change in it until last November, when he noticed a slight crack in the pointing of the arch. He then resolved to remove the arch, and commenced to take the necessary steps to substitute iron girders. As soon as the necessary arrangements were completed, the assistant engineer made a sketch of a temporary wooden bridge which was to be put across the opening during the construction of the permanent work; this was given to Hammonds, who was a clerk of works, and who held the appointment of Company's bridge inspector in the Manchester district.

Hammonds had been foreman to a contractor who had done a good deal of work for the London and North-Western Railway Company, and as he had shown great efficiency and steadiness, he was taken into the Company's service in 1880; since that time he has been constantly employed, in superintending the repairs and renewals of bridges and in repairing tunnels.

The work of taking up the Coppull roadway, of removing the filling above the arch, and of placing three large baulks of timber across the opening, was done on the 4th and 5th instants; and all that had been left of the parapet walls, was removed by 8 a.m. on the 6th, after Ditchfield, the permanent way inspector, reached the place with his gang.

Hammonds, who had been superintending the work at the bridge on the 4th and 5th, arrived there about 8.30 a.m. on the 6th. He brought with him from Manchester 14 men and a train that consisted of an engine, five waggons, a crane, and a break-van. The train was loaded with timber, iron cranks, and such materials and tools as were required for the work that was to be done at the bridge. These materials were unloaded at the bridge, and then the train was sent to a siding at the south side of the bridge, to remain there until it was required to take away the rubbish from the bridge.

A second train—which consisted of an engine, five waggons, and a break-van,—was kept at Coppull station until it would be required for the same purpose, after the bridge