

APPENDIX.

DAMAGES TO ROLLING STOCK.

Waggon Stock.

1. H. R. waggon, not damaged.
2. H. R. waggon, No. 202.—1 side beam, 1 transome beam, 1 transome for break, 4 bottom boards, 1 end upright, 1 break shaft, 1 break guide, 1 draw bar, 4 axle boxes, 1 guard plate and 4 tie rods broken; 1 side beam damaged, and 3 guard plates bent.
3. H. R. waggon, No. 180.—A total wreck.
4. C. R. waggon, No. 38,443.—1 axle, 2 axle boxes, 1 side beam, 1 buffer beam, 1 draw bar coupling, 3 side planks, 1 break guide, 1 diagonal, 1 guard plate, and all bottom planks broken; 2 draw bars, 1 iron corner plate, 4 side iron knees, 1 break lever, 1 guard plate, and 2 side cope irons bent.
5. N. B. R. waggon, No. 30,173.—1 side beam, 2 side planks, 5 end boards, 2 end uprights, 4 iron door-rests, 1 iron corner plate, 1 end cope iron, 1 axle-box lid and 2 door rests broken; 2 side cope irons, 1 end cope iron, 4 door hinges, and break guide bent.
6. N. B. R. waggon, No. 14,605.—4 end boards, 1 buffer beam, 2 end uprights, 1 side board, and 1 iron bracket broken; 1 iron door keeper, 1 break guide, 2 side cope irons, and 2 end iron straps bent.
7. G. N. of S. R. waggon, No. 770.—3 side planks, 3 end planks, 1 side beam, 20 bottom boards, 1 buffer beam, 3 axle boxes, and 1 iron corner plate broken, 1 break lever and 1 break guide bent.
8. H. R. waggon, No. 922.—2 side planks, 2 side chains, and 2 buffers broken; 1 guard plate bent.
9. H. R. waggon, No. 493.—6 end panels, 1 corner plate, 1 buffer, 2 end cope irons, 1 axle box, 1 axle box lid, and 6 bottom boards broken; 1 corner plate bent.
10. H. R. waggon, No. 2,085.—2 buffer beams, 8 end planks, 4 side planks, 4 end uprights, 2 transome beams, 2 longitudinals, 3 diagonals, 1 end case rail, 1 side case rail, 2 side cope irons, 2 end cope irons, 2 longitudinal bolts, 3 iron corner plates, and 2 axle boxes broken; 1 break guide, and 4 side iron knees bent.
11. H. R. waggon, No. 2,212.—3 bottom boards, 1 axle box, 1 break guide, and 2 buffer bolts broken; 3 side planks and 1 door plank damaged; 2 buffer spindles bent; 1 side chain wanting.

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

Carriage Stock.

12. H. R. Post-office van, No. 8.—10 side panels, 2 long wooden steps, 4 end panels, 2 door pillars, 1 corner pillar, 3 end pillars, and 1 buffer spindle, 13 end lining boards, 10 side lining boards, 1 letter-box, 1 door, 1 pane of glass, 1 door window frame, 1 sorting table, 1 roof-glass, 1 end case rail, 1 end roof moulding, 1 side accommodation handle, 1 end accommodation handle, and 2 long binding bolts; and 1 draw-bar bent.
13. H. R. break-van, No. 41.—2 long wood side steps, 2 short wood side steps, 3 side panels, 4 end panels, 3 mouldings, 1 end case rail, 2 end pillars, 2 end roof mouldings, 4 panes of glass, 3 inside lining boards, and 1 end accommodation handle broken, 4 door hinges bent, and 1 buffer spindle torn out.
14. H. R. third-class carriage, No. 83.—11 panes of glass, 5 end pillars, 1 corner pillar, 1 door pillar, 2 door panels, 2 side panels, 10 end lining boards, 1 side case rail, 1 end case rail, 2 long side steps, 2 short side steps, 8 centre division lining boards, 4 seats, 2 roof lining boards, 3 iron step hangers, and 1 continuous shaft bracket broken; 4 iron step hangers and 1 door handle bent, 4 net rod brackets, and 1 buffer socket torn off; 2 buffer spindles torn out, and 1 screw coupling wanting.
15. H. R. covered goods van, No. 1,760.—5 end planks, and 1 bearing spring broken; 1 end pillar damaged; 1 buffer spindle, and 1 break guide bent; 1 buffer socket torn off; and 1 side chain wanting.
16. H. R. first-class carriage, No. 27.—1 step iron hanger bent.
17. H. R. composite carriage, No. 102.—Not damaged.
18. H. R. break van, No. 29.—Not damaged.

The above vehicles are in the order in which they were running.

DAMAGES TO PERMANENT WAY.

The following materials were destroyed or rendered unfit for use:—50 sleepers, 53 chairs, 12 fish-plate bolts, and 135 spikes.

The following were slightly damaged:—278 sleepers marked, and 21 chairs chipped.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade, (Railway Department),
1, Whitehall, London, S.W.,
31st October 1885.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 28th ultimo, the result of my inquiry into the causes of the collision which occurred on the 19th ultimo at Bolton station, on the Lancashire and Yorkshire Railway.

In this case, while the carriages of a relief passenger train from Bolton to Stoneclough were standing on the main up line at Bolton station, they were run into by the 6.13 p.m. passenger train from Hellifield for Manchester, due at Bolton at 8.10 p.m.

In the relief train, which consisted of five vehicles, all coupled with Fay's break, which was on at the time of the collision, five passengers are returned as having been injured. In the Hellifield train, which consisted of a six-wheel coupled goods engine and tender fitted only with a tender hand-break, and eight vehicles, five at the rear of the train being coupled with Fay's break, no passengers were injured.

In the relief train the rear carriage had its headstock slightly damaged.

No damage was sustained by the Hellifield train.

No wheels were knocked off the rails.

Description.

The up platform at Bolton is a long curved one with an up rear signal at the down end of it, about 200 yards from the point of collision. About 100 yards east of this rear signal are the up junction signals for the lines from Wigan and Blackburn, the junction (called Blackburn junction) cabin being close to these signals in the fork of the junction, and about 100 yards west of the point of collision. Block working is in force as regards through trains, but as regards trains having to stop at Bolton the following rule, dated August 20, 1880, applies:—

“When the line has not been given ‘clear’ from the cabin in advance, and it is necessary to allow a second train to enter the section, the second train must be stopped at the home signal, when the usual caution must be exhibited to the driver of the approaching train, the home and starting signals lowered, and the caution signal continued until the train has passed your cabin.”

Evidence.

1. *Joseph Grimshaw*, platform inspector, 20 years in the service, 9 weeks platform inspector at Bolton.—I was on duty on the evening of September 19, in charge of Bolton station. A relief train from Stoneclough to Bolton had arrived, empty, on the down goods line at about 8.11, and was then crossed on to the up main platform line to form a relief train, in front of the train from Hellifield, to Stoneclough (about 4½ miles distant) in the Manchester direction. The engine had not yet got to the front of its train. The carriages had come to rest at the platform at about 8.16, and were at once filled by intending passengers, the train consisting of five vehicles, all coupled with Fay’s break, which was on at the time of the collision. At about 8.18 p.m. the collision occurred, while I was at the up end of the train waiting to see the engine attached. The train was not moved at my end. The shunter was just going to put the lamps on the rear of the train when the collision occurred. It was a fine clear night. The driver of the Hellifield train said that there were no tail lights on the standing train, and that he got a green light as he passed the cabin. The signalman had no right to have lowered the junction home-signal without first bringing the train to a stand at it. There would have been no difficulty in the Hellifield train having been stopped to do its work on the branch platform, short of the junction home-signals.

2. *Edward Barnard*, signalman, 17 years in the service, 16 years signalman.—I was on duty on Bolton up platform when the collision occurred. I was near the rear of the Stoneclough train assisting to get the passengers in when I saw the Hellifield train approaching four or five carriage lengths off, with steam on. I shouted “steady,” and thinking the driver did not hear me I ran towards him, and the engine passed me about the Manchester end of the bridge. I put my arms up and down and shouted again, when I think he heard me, as he reversed the engine at once, and gave it steam. I do not think the speed was more than three miles an hour when he passed me; and in about 15 yards came the collision. The tail lamps at this time were not on the rear of the Stoneclough train, but the shunter was standing in the 6-ft. beside the tail of the train ready to put them on, and they would have been on in less than another minute. Under the circumstances I should not have lowered the junction home-signal for the Hellifield train, without having first brought it to a stand.

3. *James Isherwood*, driver, 17 years in the service, 10 years driver.—I joined the 6.13 p.m. train from Hellifield at Blackburn.—My engine was No. 384, a six-wheeled coupled goods engine and tender, running engine first, the only break power on the engine and tender being the tender hand-break. My fireman had been with me three weeks before the accident. The train consisted of eight vehicles, three loose and five coupled with Fay’s break at the rear. We left Blackburn at

7.31 p.m., three minutes late, and stopped at all stations, losing, I think, a little time. On approaching Bolton I found the distant-signal against me and also the rear signal, at which latter I came to a dead stand, and was stopped from one to two minutes. The rear signal was then lowered, and the junction home-signal also as soon as I got into motion, and I concluded therefore that nothing was standing on the main up platform line, and that I was at liberty to draw up to the Manchester end of it. As I was running along the platform line, I looked towards the cabin, and saw, as I supposed, the signalman standing at the window nearest me, but I saw no light in his hand and I did not hear him say anything, or see him show any light as I passed the cabin. Had I received a green light, I should have gone on with great caution, believing something might have been ahead near the end of the platform. On coming under the bridge, the platform light shining on the back of the standing train showed me there was something standing on the line. I shut off steam, reversed, re-applied steam, and then ran into the last vehicle of the standing train at a speed of two or three miles an hour, the speed never having exceeded four miles an hour after starting from the rear signal. Just as I had reversed, I saw a man running towards me and shouting. I believe my mate saw the shunter in the 6-ft. space. Had there been tail lights on the train I think I should have stopped in time. I have been in the constant habit of working passenger trains into Bolton. On previous occasions, with anything standing on the up platform line, I have been stopped at the junction home-signal, and then allowed to draw forward on its being lowered, and receiving a green light or flag. I was not hurt.

4. *Thomas Adamson*, fireman, 3½ years in the service, 12 months extra fireman.—I had been about three weeks with Isherwood at the time of the collision. I agree with what Isherwood says. I was on the 6-ft. side of the engine. I got my break on before the collision after seeing the train ahead. After the collision I saw a man in the 6-ft. space with some lamps in his hand coming along by the last carriage of the standing train.

5. *Joseph Woodward*, guard, 3½ years in the Lancashire and Yorkshire Company’s service, and three months guard.—I was in charge of the 6.13 p.m. train from Hellifield to Manchester on the 19th September. It consisted of three third-class carriages, two third, one first, one second-class carriage, and a van, to which latter the four vehicles in front of it were coupled with Fay’s break. We left Hellifield at right time, Blackburn three minutes late, and arrived at the Bolton rear signal at 8.17 p.m., seven minutes late. There we were stopped two minutes, and then drew into the station, both the rear signal and the junction home-signal being lowered at the same time. I was looking towards the cabin, with my break slightly applied; but I saw no light shown

from the cabin, nor do I remember seeing the signalman. I was not aware that there had been a collision till I was afterwards told of it. There was no rebound in my train, and no passenger complained of injury. The collision occurred at 8.19 p.m. The train was able to proceed as it was to Manchester at 8.28. Twice previously during the week we had been stopped at the junction signal, and then allowed to draw ahead with the lowering of the junction signal and a green light.

6. *Thomas Potts*, signalman, 17 years in the service, 15 years signalman.—I came on duty at Blackburn junction at 2 p.m. on the 19th September, for eight hours. I have been employed in the same cabin for 11 years. The empty train from Stoneclough had arrived on the down goods line at 8.11, and ran forward on the Wigan line, from which line the empty carriages were knocked back on to the main up platform line, where they came to rest at about 8.15 p.m. I received the "Be ready" signal for the Hellifield train from Cradock Lane (about a mile distant) at 8.13 p.m., and "On line" at 8.16 p.m. I kept my signals against it in consequence of the empty train being on the up main line, and stopped it at the rear signal at 8.18 p.m. After having satisfied myself that the train had come to a stand I lowered the rear signal and then the home-signal as the engine was approaching it, and nearly brought to a stand. I also exhibited a green hand-light from the open side window of the cabin when the engine was about half-way between the two signals, and I also shouted and said to the driver, "Keep a good look out, there are empty carriages in front." The driver saw the green light, I believe, because he turned his head and nodded to me. This was the man farthest from me. He did this just as he was approaching the junction signal and after I had shouted; I had seen two red lights near the rear of the empty train, but I could not be sure whether they were fixed on the train or not. They appeared to be stationary as the Hellifield train passed me. I had no fear but what it would stop.

I know the rules dated August 20, 1880, and one of these rules is that the signals shall not be lowered if the section ahead is not clear until the train has been brought to a stand. I maintain that I was working according to this rule in allowing the train to draw forward after having stopped it at the rear signal, and showing a green light. I acted as I did, considering the train was approaching on a heavy gradient, to avoid stopping it a second time. I should have stopped the Hellifield train at the junction signal had I not thought the tail lights were fixed on the tail of the standing train. Many trains are brought to a stand on the branch platform, but they afterwards draw up to the main platform.

7. *Felix Crumlow*, train booker, 2½ years in the service, all the time train booker in Blackburn junction cabin.—I came on duty at 6 p.m. on September 19th, to remain till 10.30 p.m. I remember the empty train from Stoneclough being crossed from the down goods to the up main line at 8.15 p.m. It stopped at the platform at about 8.16 p.m. The Hellifield train arrived at the rear signal at 8.18 p.m. and was kept a minute, when the rear signal was lowered, and the junction signal was lowered as the train was approaching the cabin; the signalman also gave the driver a green light and shouted, as the engine was passing the cabin at a walking speed, "Look out, mate, there are carriages in front." I could not say whether the driver heard or saw what was done by the signalman.

8. *Briston Harrison*, shunter, 16 months in the service, shunter at Bolton about three months.—I was on the up platform on the 19th September, waiting for the Stoneclough relief train to come across, and then to change the side and tail lamps. Directly the train came to a stand I took off the three lamps and took them along the 6-ft. to the other end of the train, and I had just got there when the collision occurred. I had no time to give the driver a signal. I am sure I lost no time in transferring the lamps. It was my duty to transfer the lamps.

Conclusion.

The responsibility for causing this slight collision rests between the driver of the train from Hellifield and the junction signalman on duty in the Blackburn junction cabin, Bolton. The driver appears to have been properly stopped at the signal at the Hellifield end of Bolton platform in consequence of the relief train standing at the Manchester end of it. This signal and the junction signal (100 yards beyond the rear signal) were then lowered to allow the train to draw forward, the signalman declaring that he showed a caution signal and also warned the driver by word of mouth that there were empty carriages ahead, in which statements he is corroborated by a train booker in the cabin.

The driver, fireman, and guard of the Hellifield train all deny having seen any caution signal exhibited from the cabin; and the driver, in the absence of this and from the fact that the junction home-signal was lowered without his having been stopped at it, says, that he concluded that there was no train at the Manchester end of the platform, and only became aware, when about 40 yards off, that there was one, by the platform lights shining on to the back of it, when, although he used every means to stop, he could not avoid a slight collision. The driver is of opinion that had there been tail lights on the standing train, he might have seen them in time to have stopped.

There is no doubt but that the lowering of the junction signal, with a train standing 100 yards inside it, when the Hellifield train was in motion towards it, was very misleading to the driver, and I think, therefore, that he can hardly be considered blame-worthy on the assumption that he received no caution signal from the cabin, with regard to which the evidence is conflicting.

Supposing the caution signal to have been exhibited as declared by the signalman, the latter might perhaps be held to have acted in accordance with the *letter* of the rule before quoted, as this rule permits of the home and starting signals being lowered after a train has been stopped at the home-signal; that is on the assumption that what

are called the home and starting signals are in this case represented by the up rear and up junction signals. The *practice*, however, at Bolton appears to be in like cases to stop the train at the up junction signal, and then to allow it to go forward with a caution signal; and this practice is in conformity with No. 55 of the general block working rules. If this practice had been followed in the present instance, the collision would probably not have occurred; and the signalman is certainly to blame for not acting in accordance with it.

The rule of the 20th August 1880, however, is not as clear as it might be with regard to what is meant by *home* and *starting* signals, and I think it should be remodelled.

There was, moreover, no necessity for the Hellifield train to proceed along the platform line beyond the junction signals, until the relief train had started, as it could have done its work at what is called the branch platform, and the signalman showed want of judgment in allowing it to go forward under the circumstances.

As the relief train came to rest on the up platform line at 8.15 or 16 p.m. and the collision did not occur till 8.19 p.m., there would appear to have been want of smartness on the part of shunter Harrison in the transference of the tail lights from one end of the train to the other. Had they been fixed on the tail of the relief train when the Hellifield train was approaching it, it is very possible the collision might have been avoided.

With a continuous break under his control, the driver of the Hellifield train would no doubt have been able to stop in time to have prevented the collision.

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 1st December.

LANCASHIRE AND YORKSHIRE RAILWAY.

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

25th January 1886.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 17th ultimo, the result of my enquiry into the causes of the collision which occurred on the 14th ultimo at Middleton Junction station, on the Lancashire and Yorkshire Railway.

In this case, while the 8.10 a.m. passenger train from Middleton Junction to Rochdale, viâ Oldham, was just starting from the Oldham branch down platform, it was run into at the rear by the engine and carriages which were to form the 8.13 a.m. passenger train from Middleton Junction to Middleton.

Three passengers are returned as having been shaken. The guard of the empty train was injured.

In the 8.10 a.m. train—which consisted of a tank engine and five vehicles, the last a break-van, all the vehicles being fitted with Fay's continuous break—some buffer spindles and panels were damaged. The engine broke away from the train when the collision occurred.

In the other train—which consisted of an eight-wheeled tank engine (fitted with the automatic vacuum break applying to six out of the eight wheels) and six vehicles, the first a break-van coupled to the four in rear of it with Fay's continuous break—no damage was sustained.

No wheels left the rails in either train.

Description.

At Middleton Junction the main line between Manchester and Rochdale is joined by the Oldham Branch, the signal-cabin, in which the levers working all the points and signals are properly interlocked, being in the space between the main and branch lines. The station is on the down side of the junction, the main line and branch each having its own up and down platforms. There are two parallel sidings on the up side of the up main line, to which access is afforded by facing-points on the up branch line, and by trailing points on the down branch line, these points being nearly