

The occurrence of this accident (as well as of many others in which tank-engines have been concerned) tends, I think, to show that, unless on a heavy permanent way in perfect order, tank-engines are not suitable for running trains at high rates of speed; if from any cause oscillation is set up in the engine, there is the absence of the steadying influence of the tender, to help to check this oscillation, the tendency to which is aggravated by a very heavy weight on a comparatively short wheel base.

The soft spots in the permanent way, owing to the wetness of parts of the Summit Tunnel, ought decidedly to receive more attention than from the evidence of the foreman platelayer appears to be the case. Ballast of a superior description should be used in these places, and the sleepers should be packed up certainly more than once a fortnight.

It was a great mercy that the train ran off to the left against the wall of the tunnel and not into the 6-ft. space, otherwise there would probably have been a fearful collision between it and a down train which entered the tunnel just after the other train had stopped.

The break with which the train was fitted, viz., the simple vacuum on the engine, and the automatic vacuum break on the two front vehicles must have been applied by the unconscious action of the driver, (as he saw the tap over without remembering that he had moved it) and no doubt did good service in contributing to the quick stop which the train made.

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

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

APPENDIX.

DAMAGE TO STOCK.

Third-class, 1,584 :—

1 new continuous foot-board.
3 „ axle-boxes (patent).
1 „ intermediate quarter complete.
1 „ door complete.
2 „ side lights.
1 „ door light.
6 „ bottom boards.
1 „ roof lamp glass.
Draw-bars, &c., require re-adjusting.

Cost, 40*l*.

M.B., 351 :—

1 new continuous foot-board.
1 „ short bottom board.
1 „ end panel and mouldings.
Draw-bars, &c., re-adjusting.

Cost, 10*l*.

Van, 269 :—

1 new headstock.
1 „ leg iron, and 3 straightening.
2 „ wood buffer casings.
4 buffer-rods straightening.
1 bottom foot-board.
2 new continuous foot-boards complete.
2 „ end panels.
1 „ bottom quarter panel.
1 „ end „ „
2 „ elevation lights.
2 „ lamp irons, and 1 new pinion wheel.
1 „ side projection complete.
2 „ axle-boxes (patent) and 1 brass step, and draw-bars re-adjusting.

Cost, 50*l*.

Printed copies of the above report were sent to the Company on the 24th December.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade, (Railway Department,
1, Whitehall, London, S.W.,
29th December 1884.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 1st instant, the result of my inquiry into the causes of the collision which occurred on the 27th ultimo, at Kirkgate station, Wakefield, on the Lancashire and Yorkshire Railway.

In this case, as the 3.35 a.m. goods train from Normanton to Halifax was drawing up at the up platform at Kirkgate station, the last vehicle but one and the break-van were struck by an engine and van which had been improperly permitted to proceed along the up through line (instead of along the down through line) on their way to Normanton.

A postman in charge of mail bags, who was travelling in the van at the rear of the goods train, was injured.

In the goods train the break-van and waggon in front of it were thrown off the rails and damaged.

The tender of the engine which had the van attached to it had a hole knocked in the back of the tank, and one of its axle-boxes was broken. The van was also damaged.

Description.

There are four lines of rails through Wakefield station, the two centre lines being used principally for goods trains. About the centre of the station there is a cross-over road between the up and the down goods lines, in connection with which there are disc-signals properly interlocked. There are three signal-cabins,—East, Central, and West,—communicating with each other by telephone. From the West cabin the facing-points at the junction of the down platform line and goods line are worked, as well as a cross-over road between the up and down main lines, and other connections and the necessary signals. From the Centre cabin, the cross-over road and discs between the up and down goods lines are worked, and the down signals at the West cabin controlled. The arrangements at the East cabin are not connected with this collision.

The collision took place close to the junction of the up goods line and up platform line, 110 yards east of the Centre cabin, at about 3.50 a.m.

Evidence.

1. *James Jackson*, four years in the service, two years signalman.—I was employed in the Centre cabin at Wakefield on the 27th ult., having come on duty on the 26th November at 6 p.m. to remain till 6 a.m., after an interval of 12 hours rest. Shortly before the collision I received a message from Ward, the signalman in the West cabin, that a goods train was coming along the down goods line. I had accepted the train, and had taken off the signals for it, when Ward telephoned me to send the goods train along the platform line, as he wanted to get an engine and break for Normanton in front of it. I accordingly changed my signals for the goods train, and it passed along the platform line. I saw the engine and break coming as I was booking the goods train, and at first I did not know whether they were on the up or the down goods line. At this time No. 10 crossing was not pulled, and consequently No. 19 disc could not be pulled and was at danger, and the goods driver should consequently have stopped at it. I had accepted the signal for the Normanton to Halifax mail goods train, and I had lowered my signals for it; and it had arrived, and was standing at the platform before I received the message about the engine and break, and the collision occurred about five minutes after this. Up to the time of the collision I had not known whether the engine and van were on the down or up line, but on seeing them pass I thought they must be on the down goods line. I had received eight rings from the West cabin, which I took as cancelling the signal for the goods train along the goods line; and I answered back with eight. Six would have been the rings for sending the engine and van along the up line. The down goods train passed at 3.57, and departed at 4.2 a.m. The Halifax mail goods train arrived at 3.56 a.m., and departed at 4.37 a.m. The book contains no record of the cancelled signal. I ought to have entered it.

2. *Thomas Ward*, 10 years in the service, five years signalman, a week in Wakefield West cabin when the collision happened.—I came on duty there at 10 p.m. on the 26th ultimo, to remain till 6 a.m. I had gone off duty at 6 a.m. on the 26th. I had intended to send the Oldham Road to Normanton goods train along the down goods line, and the signals had been taken off for this purpose, but on receiving information that an engine and van were coming from behind the wall to go to Normanton I decided to send the goods train along the down platform line, and to let the engine and van go along the down goods line, on to which it would be turned at the Centre cabin. It was important to get the engine and van away as

soon as possible, as it was to fetch a yeast train from Normanton. I accordingly informed Jackson on the telephone of the change, and he reversed his signals. I gave him also the obstruction signal for the engine and van, which meant that it would proceed along the up goods line. The Oldham Road goods train passed at 3.57, and the engine and van about 3.55, when I moved the points for it to proceed on to the up goods line. Jackson accepted the obstruction signal with six rings. I did not know of the collision till after it had occurred. I telephoned Jackson after the engine and van had passed, and, on seeing that the disc was not taken off, that they wanted to cross, and Jackson replied "All right."

Jackson denies having received this second telephone.

3. *George Lodge*, 15 years in the service, about 18 months driver.—I came on duty on the 27th November about 1.30 a.m., having left work on the 26th at 3.15 p.m. Shortly before four o'clock I came on to the main up line from the back of the wall at Wakefield with a van to proceed to Normanton for a yeast train to Bolton. I proceeded along the up main line as far as the cross-over road points, when I was called on by a white light, and so I thought I was proceeding along the down goods road. Had I been turned on to the wrong line, I ought to have had a green light and word of mouth from the signalman. I did not see the signal off for a down goods train. I then proceeded eastward, and did not find out I was on the wrong road till I had got passed the Centre cabin, when my speed was about 15 miles an hour. I then saw the Halifax train coming along the up platform line, the engine of which train I passed about opposite the Centre cabin. I shut off steam, reversed, (I was running tender first,) and said to my mate, "We are on the wrong road;" and he put on his break as soon as possible, and the collision occurred (just as he had got it on) with the waggon in front of the van of the Halifax train. We did not run more than three yards after the collision. No wheels left the rails with my engine or van. We upset the Halifax train's van. The van of the Halifax train was in motion when we struck it. I do not remember ever being sent along the up goods line before. I saw the down goods line signal off as I approached it. I did not look at the cross-over road disc signal, not thinking I required it. I was not hurt, nor was the fireman.

4. *Thomas W. Heaton*, two years in the service, cleaner all the time, acting occasionally as fireman.—

I was 18 years of age last October. I agree with the driver's evidence, except that I think the Halifax train was drawn up at the station. The tender has only a hand break, no steam break. I think the van of the Halifax train was at rest when we struck it.

5. *Frank Hoyle*, 10 years in the service, nine years guard.—I was in the van attached to the engine going to Normanton for yeast. We started at about 3.45 a.m. On starting towards Normanton I knew we were going as far as the Middle cabin on the up road, as the signalman gave us a red lamp to stop us short of the crossing, and I saw the down signals off; he gave us a white light to start. I was not aware we had not been turned on to the down line at the Centre cabin till just before the collision, when, feeling a shock, and going to the door to look out, I was thrown down by the blow. We stopped in a few yards. I was not hurt. I had not noticed the Halifax train before, or whether it was stopped when we struck it. The time of the collision was about 3.50 or 3.55 a.m.

6. *Thomas Pickup*, 21 years service, 13 or 14 years goods guard.—I left Normanton on the 27th ultimo, at 3.35 a.m., with a train consisting of engine, tender, two waggons, and a van, in which there was a travelling postman with the Halifax mail bags. We picked up about 22 waggons in the Wakefield goods yard, and came into the station at 3.58, and we were just coming to a stand when the collision occurred without any warning, except that I saw the engine coming on the wrong road for a moment before. I jumped off on to the platform just before the collision. The tender struck first the vehicle in front of my van, knocked it off the rails, and then struck the break-van, which was turned over on its left side. The postman was in the van when it was upset, and said at the time he was not hurt. The break-van was the only vehicle detached from the train.

Ward, recalled: I gave the driver of the yeast engine a white light, being all ready for him.

Conclusion.

This collision was the result of carelessness on the part, (1) of the signalman, (Jackson) on duty in the Central cabin, and (2) of the driver of the engine with the van attached. The signalman (Ward) in the West cabin was also not free from blame.

It appears that after the signals had been taken off by the West and Centre signalmen for a down goods train from Oldham Road to run through Wakefield station on the down goods or centre line, the West signalman (Ward) was informed that an engine and van had to proceed at once to Normanton to fetch a yeast train. To avoid detaining this engine and van (the yeast traffic being of an important character) till after the Oldham Road goods train had passed, he accordingly determined to admit the latter to the station on the down platform line, and to send the yeast engine and van (which had come out of sidings on the up side of the line at the west end of the station) along the up goods line as far as the Centre cabin, where they would pass through the cross-over road on to the down goods line, and so get in front of the Oldham Road goods train. He accordingly informed (by telephone) the signalman (Jackson) in the Centre cabin of his intention, and the latter appears so far to have understood him as to have reversed his signals for the Oldham goods train, so as to permit it to pass along the down platform line instead of along the down goods line. Jackson, however, says that he misunderstood the obstruction signal (six bells) sent by Ward, implying that the goods engine and van would proceed along the up goods line, for the signal (eight bells) cancelling the signal for the Oldham goods train proceeding along the down goods line, and that he was under the impression that the engine and van were coming along the down goods line. He ought, however, to have known, had he given the matter a moment's thought, that the engine and van could not come along the down goods line at the same time that the Oldham goods train was running into the station. Being, however, as he says, under the impression that the yeast engine and van were on the down goods line, he did not move the cross-over road to turn them from the up to the down goods line, and was unaware that they were on the up line till the collision had occurred. Jackson disagrees with other evidence as to the relative times of the arrival of the Halifax goods mail train, the Oldham Road goods train, and the time of the yeast engine passing his cabin; and I fear his evidence in this and other respects is but little worthy of credit.

The driver of the yeast engine declares he was unconscious that he was running through the station on the wrong or up goods line, but thought that he had been turned from the up to the down line through the cross-over road at the west end of the station; and he urges that as he was to proceed along the wrong road he should have received a green hand light, and not a white one, at the West cabin. With regard to this, I think he is quite right; but at the same time he must have been keeping no look out at all, or he could hardly have failed to perceive, in the first place, the signal off for the Oldham road goods train, which rendered it impossible for him to cross; and, in the second place, the difference of position of the up and down goods lines through the station is very marked. As it was, the driver says that he did not discover his mistake till he had passed the Centre cabin, running at a speed of some 15 miles an hour, when he saw the train for Halifax running in on the up platform line. Every effort was then made to stop, but the tender of the engine (it was running tender first) caught the last vehicle

but one of the Halifax train, and knocked it and the break van off the rails, just as the train was coming to a stand. The guard of the yeast van was quite aware, when they started at the west end of the station, that they were proceeding along the wrong road, but thought that they had been turned through the cross-over road at the Centre cabin till just before the collision.

Signalman Ward is certainly to blame for having used a white light for giving permission to the yeast driver to proceed along the wrong line. He should have called him up to the cabin, and informed him by word of mouth where he was going.

No blame attaches to the servants of the Company with the Halifax goods mail train, the guard of which had a most narrow escape, as well as the travelling postman.

It would help to avoid the occurrence of a similar collision if interlocked safety points were provided at the east end of the up goods line.

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 24th January.

LANCASHIRE AND YORKSHIRE RAILWAY.

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

10th January 1885.

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 22nd ultimo, the result of my inquiry into the causes of the collision which occurred on the 18th ultimo, at Radcliffe North junction on the Lancashire and Yorkshire Railway.

In this case as the 6.25 p.m. passenger train from Salford to Colne was passing Radcliffe North junction, it came into collision with some waggons and a van (forming part of the 2 p.m. mineral train from Clifton Hall to Hollingwood) which had been left standing on the down line of the Bolton branch, but had moved forward and fouled the junction just as the passenger train came up.

Two passengers are returned as having been shaken and injured. The guard of the passenger train was also shaken.

In the passenger train (which consisted of a four-wheeled coupled eight-wheeled bogie engine, and six-wheeled tender, three third-class carriages, two composite carriages, and a van, the coupled wheels of the engine and all the tender wheels being fitted with the automatic vacuum-break, and the five rear vehicles with Fay's improved continuous break, applicable by the guard,) the engine had its left-hand buffer broken and foot-plate damaged; the left leading axle-box of the tender was broken; and two third-class carriages had their panels broken and received other minor damage.

In the portion of the mineral train (which consisted of 18 waggons and a break-van) three waggons were more or less damaged, and one of them was thrown over on its side.

The collision occurred at about 6.51 p.m.

Description.

At Radcliffe North junction the lines from Manchester and Bolton unite, and thence proceed to Bury. The Bolton branch joins the main line on a gradient of 1 in 88, falling towards the junction; this branch is at present (owing to subsidence from coal workings) closed for passenger traffic. The down home-signals for the main line and branch are each about 110 yards from the signal-cabin (which is provided with all modern appliances), and about 40 yards from the point of collision.

Evidence.

1. *Patrick Cuddy*, signalman.—I have been 7½ years in the service, seven years signalman, and 16 months at Radcliffe North junction, where I came on duty on December 18th at 2 p.m. to remain till 10 p.m. The 2 p.m. coal train Clifton Hall to Hollingwood arrived at 6.25 p.m., having work to do at North Radcliffe, and I had it set back on to the down line of the Bolton branch, where no passenger trains are at present running. I then allowed the engine to come across with three waggons and the front break-van into the sidings adjoining the Manchester line: this was about three minutes after the train arrived. At 6.40 I got "Be ready" for the 6.25 p.m. passenger (Salford to Colne)