

The engine-driver of the pilot engine had no business to leave his engine to go into the signal-cabin. It was, probably, his occupying the signalman's attention in conversing about matters, that at that time did not concern him, that led to the collision.

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

I have, &c.,
F. H. RICH,
Colonel B.E.

APPENDIX.

Damage to Passenger Train.

Engine No. 17.—Trailing buffers broken.

Engine No. 1,562.—Heading buffer plank smashed, heading buffers broken (Turton's); left-hand trailing buffer broken (Turton's); angle-iron leading end broken; frame ends damaged.

No. 293, Third class.—Two iron buffers sockets broken; two buffer back blocks broken.

No. 4. C.R. Third class.—Four buffers bent; iron stay broken.

Printed copies of the above report were sent to the Company on the 31st January.

LANCASHIRE AND YORKSHIRE RAILWAY.

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

26th June 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 5th inst., the result of my inquiry into the causes of a collision which occurred on the 3rd instant, at Blackburn station on the Lancashire and Yorkshire Railway.

In this case, the 10.5 a.m. passenger train from Gisburn to Manchester,—consisting of engine and tender, break-van, five passenger carriages coupled with Fay's break, and one loose carriage in rear,—when approaching Blackburn, came into collision at about 10.55 a.m., inside the tunnel at the north of Blackburn station, with the 8.30 a.m. up goods train from Hellifield to Miles Platting,—consisting of engine and tender, 31 loaded goods waggons, two loaded cattle waggons, and break-van,—which was standing with the engine at the stop-signal inside the south end of the tunnel, and the tail of the train about 116 yards inside the north end of the tunnel.

The break-van and two waggons in the goods train were thrown off the rails, and this train was divided into three portions, the engine running ahead with 26 waggons attached to it.

None of the vehicles in the passenger train left the rails.

Six passengers and the driver and guard of the passenger train were injured, but it is stated that none of the injuries were of a serious nature.

The damages to the rolling stock were trifling.

The leading end of the passenger engine was damaged, some of the bodies of the carriages were shifted slightly, and one window was broken.

In the goods train the break-van and three waggons were damaged.

Description.

At Daisy Field junction the line from Hellifield joins the line from Accrington and Skipton, and between this junction and Blackburn station there is a tunnel 433 yards in length.

The following distances from Daisy Field junction cabin should be noted:—

To north end of tunnel -	-	-	-	-	307 yards
To point of collision inside tunnel	-	-	-	-	423 "
To south end of tunnel -	-	-	-	-	740 "
To Blackburn east cabin	-	-	-	-	774 "

The home-signal at Blackburn east is four yards from the cabin, and the distant-signal is 520 yards from the cabin, and there is a stop-signal inside the tunnel.

The line falls from Daisy Field on gradients of 1 in 132, 1 in 120, and 1 in 102, to the south end of the tunnel, but is level through Blackburn station.

The line is worked upon the block system between Daisy Field and Blackburn east cabins, and there is also telephonic communication between the cabins.

The following is an extract from the regulations for working the block instruments:—

“Signal sent in Error.”

“28.—The ‘error signal’ is to be given when an erroneous signal has been sent, and when acknowledged it will cancel the previous signal sent. The correct signal must afterwards be sent in the usual way. The sender of an ‘error signal’ must not allow any train or engine to pass his signals for the section in advance until the corrected signal has been duly accepted.

“The ‘error signal’ must not be sent to cancel the ‘Be ready’ signal until ‘Line clear,’ or ‘Train passed out of section,’ signal has been received for the previous train.”

Evidence.

William Thompson, signalman at Daisy Field junction, states: I have been 11 years in the service, and nine years employed as signalman at Daisy Field junction. On June 3rd I came on duty at 6 a.m. for an eight hours’ turn. At 10.41 a.m. I received and accepted the “Be ready” signal for a goods train from Accrington direction, and it arrived at my cabin at 10.43 a.m. Whilst it was standing waiting for the block I received the “Be ready” for a goods train from Hellifield direction, and this train arrived at my signals at 10.49 a.m. I had previously offered the “Be ready” to Blackburn east cabin for the Accrington goods train. I spoke to the signalman at Blackburn east through the telephone, saying that I had both these goods trains at my signals, and informed him that I was sending the Hellifield goods train first, as the passenger train was close behind it. The Hellifield goods train was then put “On line” at 10.50 a.m., and it was duly accepted by Blackburn east. I received “Train out of section” for it at 10.54 a.m. Before I received “Train out of section” signal I sent “error” signal at 10.53 a.m. This, I admit, is contrary to Rule 28. This “error” signal was sent to cancel the “Be ready” signal, which I sent for the goods train given at 10.41 a.m. After he had acknowledged the “error” signal I gave him the “Be ready” for passenger train at 10.54, which he accepted. I was listening to the telephone, and heard pointsman Bailey at Blackburn east cabin distinctly tell pointsman Greenhall at Blackburn Old junction, that “The Hellifield to Miles Platting goods was coming first, and that he must shift the Liverpool goods to make room for the passenger train.” Soon after the passenger train had passed I received information on the telephone that a collision had occurred in the tunnel. I have not regularly carried out the instructions laid down in Rule 28 for sending “error” signals, but I have sent such signals in cases like the present before I have received “Train out of section” for the previous train. I take from my book the following record of the signals for each of the above trains:—For the Accrington goods train.—From level-crossing box, “Be ready” received at 10.39, accepted at 10.41; “On line” received at 10.41. For the Hellifield goods train.—From Daisy Field station, “Be ready” received at 10.37, accepted at 10.48; “On line” received at 10.48. For the 10.5 passenger train.—From Cemetery cabin, “Be ready” received at 10.50, accepted at 10.54; “On line” received at 10.54. I gave the “Be ready” to Blackburn for a goods train at 10.40, and this was accepted at 10.50; and I gave the Hellifield goods train “On line” at 10.50. I gave a second “Be ready” for a goods train to Blackburn east at 10.50, and this was not accepted. After I had sent this second “Be ready” for a goods train, I received at 10.50, from Cemetery cabin, the “Be ready” for the passenger train, and wishing to cancel the second “Be ready” for a goods train I sent the “error” signal at 10.53. I got “Line clear” from Blackburn east at 10.54, and gave the passenger train “On line” at the same time. I thought, from hearing the con-

versation in the telephone, that the signalman in Blackburn east cabin knew exactly the state of affairs, and that he would understand that the “error” signal referred to the second “Be ready.” That has been our way of working together.

John Bailey, signalman at Blackburn east cabin, stated: I have been in the Company’s service 14 years, and 13 years signalman, 11 years at Blackburn east cabin. On June 3rd, at 10.37 a.m. I received “Be ready” for goods train from Daisy Field junction, but I have no recollection of this train being put “On line” to me. At 10.52 I received “error signal” to cancel the signal last sent, and immediately after I received “Be ready” signal for passenger train, which I duly accepted, not being aware that the goods train was in the tunnel. I will not speak positively that the train was not given “On line” to me, but I have no record of it in my train book. I am perfectly aware that Rule 28 says that “error signal” must not be sent until “Line clear” or “Train out of section” is received for the previous train, but we have been in the habit of working contrary to this rule at my cabin. Signalman Thompson, of Daisy Field junction, informed me on the telephone that he was sending the Hellifield goods train next. I told him in reply that the yard would not hold it, and immediately afterwards I received the “error” signal, and this I communicated to the main line inspector. We were completely blocked up with goods trains at this time. I cannot, after thinking it over, recollect receiving the “On line” for a goods train, but I will not be positive that I did not receive it. I am certain that I never received the second “Be ready” for a goods train. I was very busy at the time, as the yard was blocked up with goods trains, and I was telling the inspector how things were standing. I have 40 levers in my cabin, and work alone. I have no booking boy. If I had received the “On line” for the goods train I would have known when I got the error signal that Daisy Field junction was wrong in sending that signal, and I would have asked him on the telephone what he meant.

Thomas Bridson, main line inspector at Blackburn, states: On the morning of June 3rd the down passenger line was occupied at 10.46 by a London and North-Western Belle Vue special. We had to hold back in the goods line the Hellifield to Liverpool goods, which arrived at 10.32, until the special passenger train had gone. This goods train occupied the whole of the goods line, except room for about 15 waggons. At this time the signalman at the east cabin informed me he had the Salford to Lostock Hall goods train waiting with 12 or 15 waggons on. I then instructed the signalman to let this train come, as the goods line would hold it. In about two or three minutes the signalman called out to me that the signalman at Daisy Field junction would not allow it to come, but was going to send the Hellifield to Miles Platting goods first, which had over 30 waggons on. I then instructed the signalman to telephone to Blackburn

Old junction to let the Liverpool goods go away in front of the Belle Vue special, so as to admit the Hellifield to Miles Platting goods, and make a clear road for the passenger train. I was immediately informed by the signalman at the east cabin that the Daisy Field signalman had cancelled the "Be ready" for the Hellifield to Miles Platting goods, and that the passenger train was coming first. About two minutes after I heard the collision. I saw the goods train come out of the tunnel divided, and I signalled the driver to go forward to avoid a collision with the second portion. The second portion came out without the break-van. I went and told Mr. Howard, the station-master, that a collision had happened in the tunnel, and I made preparation for establishing single-line working. Both signalmen are good, steady men.

Jeremiah Yates, driver of the 10.5 a.m. Gisburn to Manchester passenger train, June 3rd, states: I have been 36 years in the service, and 31 years a driver. I left Daisy Field junction about right time. The Daisy Field junction signals were lowered. The distant-signal for east cabin, Blackburn, was at danger. I also saw a green flag exhibited from Daisy Field junction cabin on passing. I was running at about eight or nine miles an hour when I entered the tunnel. The tunnel was full of smoke. I had got a short distance within the tunnel when I saw the windows of the break-van immediately in front of me. I reversed and popped for the breaks, but was unable to stop before coming into collision. I was knocked down on the footpath and stunned. I have been off work since. My engine, No. 334, is a six-wheeled engine with driving and trailing wheels coupled, and with a six-wheeled tender. The only break under my control was the hand-break on the tender. Five of the vehicles in the train were fitted with Fay's break under the control of the guard. I was running with steam off, as the distant-signal was on, and I was prepared to stop at the home-signal at the west end of the tunnel. My fireman was not injured.

William Bell, goods guard, states: I have been 15 years in the service as guard. I was acting as passenger guard in charge of the 10.5 a.m. passenger train, Gisburn to Manchester. I left Daisy Field station two minutes late, and on passing Daisy Field junction, where the signals were all off, I noticed that the distant-signal for Blackburn east cabin was at danger. I was running at about eight miles per hour.

I had got about 100 yards inside the tunnel, when my train came into collision with a train in front. I was applying my break when the driver whistled, and immediately the collision occurred. I was thrown down to the bottom of my van. When I recovered myself I found the passengers were alighting from the train. I requested them to keep their seats, and sent a platelayer to Daisy Field to inform the signalman that he might prevent any train from following. Mr. Howard came to me, and instructed me to back the train out of the tunnel into the daylight. The train was made up as follows:—engine and tender, break-van, five passenger carriages coupled to the van with Fay's break, and one loose carriage behind. I was in the front van. We were running at about eight miles an hour when the collision occurred. I was stunned for a little.

Thomas Barnes, driver of the 8 a.m. Hellifield to Miles Platting goods train, states: I have been about 16 years in the service, and about seven years a driver. The train consisted of 31 waggons of goods, two waggons of cattle, and a break-van, 34 in all. On arriving at Daisy Field junction I was detained about four minutes; the signals were then lowered, and I went forward. The distant-signal from Blackburn east was at danger. I drew up to the disc-signal within the tunnel. After the train had been standing there two or three minutes the signal was taken off. I eased off my break, and was preparing to start when the collision took place. The force of the collision sent my train forward. When I came out of the tunnel I found that my train was divided into three portions. The inspector gave me a signal to run forward out of the way, and I did so.

Adam Hutchinson, guard of the 8.3 a.m. Hellifield to Miles Platting goods train, states: I have been about 13 years in the service, and 10 years a goods guard. We were running about an hour late, having had to wait for the Midland train at Hellifield. I had on a waggon of cattle for Edge Hill, and when we came to a stand inside the tunnel I walked forward to speak to the driver as to dealing with this waggon of cattle. Whilst walking forward I heard the train coming, and I ran back with the idea of stopping it, but I could not do so. My van was knocked off the road and damaged; two waggons were also thrown off the road. My train was divided into three portions. The engine ran forward with about 26 waggons.

Conclusion.

This slight collision was due to a failure in the block working between Daisy Field junction and Blackburn east cabin.

The signalman of the former cabin had two goods trains approaching his cabin at the same time, one from Accrington, and one from Hellifield, and both came to a stand at the home-signals on their respective lines. He gave the "Be ready" to Blackburn east cabin for one goods train at 10.40, and this train was accepted at 10.50, and he lowered his signals for the Hellifield goods train, which was, he states, given "On line" to Blackburn east cabin at 10.50, and, passing his cabin at 10.50, was brought to a stand at the signals at Blackburn east cabin. He states further that he gave the "Be ready" for a second goods train at "10.50," but that this signal was not accepted. After giving the second "Be ready," he received warning of a passenger train approaching on the Hellifield line, and, wishing to send this train forward in place of the Accrington goods train, he sent the "error" signal to Blackburn east cabin, in order to cancel the second "Be ready" for a goods train.

As he had not received the "Train out of section" signal for the Hellifield goods train, this sending of the error signal was in contravention of Rule 28 in the block regulations.

The signalman at Blackburn east cabin admits the receipt of the first "Be ready" for the goods train, and his acceptance of the signal, but has no recollection of this train having been given "On line" to him, but he is not positive that he did not receive this "On line" signal.

He is, however, quite sure that he never received the second "Be ready" for the Scrimington goods train, and when he received the "error" signal he thought it was to cancel the first "Be ready" for a goods train, and therefore accepted the passenger train, not knowing that the Hellifield goods train was standing at his home-signal.

If he did receive the "On line" signal for the Hellifield goods train, he ought to have known that the "error" signal was sent contrary to the regulations, as he had not given the "Train out of section" signal for this train, while if the second "Be ready" for a goods train was sent, he was still more to blame for accepting the passenger train.

It is impossible to say which signalman is correct in his statement, but it is quite clear from the admission of both of the men that they had been in the habit of paying no attention to Rule 28, and both are therefore to blame for a direct breach of the Regulations, leading to this accident, fortunately of an unimportant character.

The electrical interlocking of the block instruments with the out-of-door signals would have prevented this, among many other accidents of a similar character; and as the value of this system of interlocking is becoming every day more apparent, it is to be hoped that it will be more 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.

LANCASHIRE AND YORKSHIRE RAILWAY.

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

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 23rd September, the result of my inquiry into the causes of the accident which occurred on the 20th September in the Summit Tunnel, near Rochdale, on the main line of the Lancashire and Yorkshire Railway.

In this case, as the 1.25 p.m. passenger train from Leeds to Liverpool was running at a high speed through the Summit Tunnel, between Todmorden and Rochdale, it ran off the rails at a spot about a quarter of a mile from the Rochdale end of the tunnel, and stopped in a distance of about 204 yards, with all the wheels off the rails.

Ten passengers are reported to have been shaken.

In the train (which consisted of a tank-engine with a trailing bogie, running chimney in front, guard's break-van, composite first and second class carriage, and third-class carriage, three vehicles in all, the engine being fitted with the simple vacuum break, and the first two vehicles with the automatic vacuum break, both breaks being applied by the same tap on the engine,) the bogie pin of the engine was bent backward and slightly to the left, one plate was broken (old fracture) in the right leading spring, two (both new fractures) in the right driving spring, and two (both new fractures) in the left driving spring; there were marks on the inside edge of the left leading tyre, and a grinding mark along the inside of this tyre; there were also marks on the outside of the tyre of the left leading bogie wheel, and a deep indent on the inside edge of this tyre, as well as one smaller indent. The vehicles were all damaged, the particulars being given in the Appendix.

The repairs to the permanent way involved the putting in of new rails, chairs, and sleepers for a distance of 204 yards, the damaged permanent way having been slewed to one side and left for my inspection.

Description.

This accident occurred at about 3 $\frac{1}{4}$ miles from Todmorden, about 2 miles 31 chains from Walsden station, about 1 mile 55 chains from the cabin at the east end of the tunnel, and 37 chains from the cabin at the west end of the tunnel. The tunnel is 1 mile 53 chains long, is on a gradient of 1 in 332, falling towards Rochdale, there being an ascending gradient of 1 in 177 from Todmorden, and then a short piece of level to near the eastern entrance to the tunnel. The lines through the tunnel are straight. As before stated, the accident commenced about a quarter of a mile from the west end of the tunnel, close to a wet spot from drippings from the roof, and the