

CALEDONIAN RAILWAY.

Board of Trade, Railway Department,
8, Richmond Terrace,
Whitehall, London, S.W.,
16th February, 1906.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in compliance with Order of the 2nd January, the result of my inquiry into the circumstances under which a collision occurred at 8.29 a.m. on the 27th December, 1905, at Milnwood Junction on the Caledonian Railway.

In this case as the 7.55 a.m. passenger train *ex* Lanark to Glasgow was approaching Milnwood Junction, the signals being lowered for it, it ran into a light engine which was standing on the main line at the home signal. Fourteen passengers and three servants of the Company (*viz.*, the two drivers and the guard of the passenger train), were injured by the collision. None of the injuries were serious, except that sustained by the driver of the light engine, who was scalded by steam owing to the breaking of the gauge glass of his engine. This man is still away from duty, and was unable to give evidence at my inquiry.

The light engine (No. 522) was a six-wheels-coupled goods engine, with a six-wheeled tender, and was travelling with the tender in front. The total weight of the engine is 75 tons 5 cwt. Fortunately the brakes were not on, and the driver had given his engine steam immediately before the collision occurred, otherwise the effects would have been much more serious.

The train consisted of engine No. 83, a four-wheels-coupled bogie passenger engine running chimney first, a six-wheeled tender, five bogie carriages, and two six-wheeled carriages, the total weight of engine and train being 214 tons 2 cwt. It was fitted throughout with the Westinghouse continuous brake, and its speed at the time of the collision was about 20 miles an hour.

The engines met chimney to chimney, and were both seriously damaged. The stationary engine had both frames and cylinder covers broken, and the smoke-box door and front of smoke box staved in. The passenger engine had its bogie destroyed, one axle broken and frame bent, besides other minor damages. The leading carriage of the train was very badly broken, and the two next carriages were also damaged, but not to the same extent. For full particulars of damage to engines, rolling stock, and permanent way, *see* Appendix.

Description.

The direction of the railway between Braidhurst and Milnwood Junction is approximately North and South. On leaving Braidhurst the railway is level, and has an easy curve to the left for a length of 520 yards, after which it is straight for some distance beyond Milnwood Junction, the gradient being a rising one, with inclinations varying from 1 in 200 to 1 in 220.

The distance from Braidhurst signal-box to Jerviston Junction box is 934 yards, and from Jerviston Junction box to Milnwood Junction box 735 yards. Between Braidhurst and Jerviston Junction there are two lines of rails, and between Jerviston Junction and Milnwood Junction four lines. At Milnwood there are several junctions, but the only ones to which reference need here be made is that to the right, leading to Bellside, and that to the left, leading to Bellshill, while the straight lines go to Mossend.

The light engine was on its way to Bellside, and the passenger train to Bellshill. The light engine was standing on the down west line, at the down home signals which govern the junctions of the three routes just referred to.

The signal boxes at Braidhurst, Jerviston Junction, and Milnwood Junction are provided with the usual block instruments for each line of rails, and also with route indicator bells, by means of which the signalmen are informed what the destination is of any train or engine which is approaching.

The following rules have a bearing on the case :—

General Rules and Regulations.

55 (a.) In case of detention at a home, starting, or advanced starting signal, the engine-driver must immediately sound his whistle, and, if still detained, the guard, shunter, or fireman must

(except where instructions are given to the contrary, or where the lock and block system of train signalling is in operation) go into the signal-box and remind the signalman of the position of the train, and remain there until the signalman can give permission for it to go forward.

55 (c.) The duty of going to the signalman must be performed as under :—

In the case of a light engine, by the fireman ;

149 (b.) When a goods train is assisted by an engine in the rear, the guard must remove his tail lamp, and when the assisting engine leaves the train the tail lamp must, when practicable, be replaced within view of the signalman, to remind him that an assisting engine is following and in order to prevent the train being signalled to the box in advance as having passed without a tail lamp.

Caledonian Company's Block Rule No. 6.

6. Bank Engine in rear of Train.—(a) After the "Train entering section" signal has been given to the signal-box in advance, and the semaphore Arm of the block instrument has been raised to the "Danger" position for a train that is assisted by an engine in the rear, the "Bank Engine in rear of Train" signal must be given to the signal-box in advance, to indicate that an engine is assisting the train in the rear. The "Bank Engine in rear of Train" signal must be acknowledged by being repeated, and a note of the signal must at once be made in the train register book at the signal-box in advance, and the "Train out of section" signal must not be given until the assisting engine has arrived.

(b) If from any cause the bank engine, after being signalled, does not proceed in the rear of the train, the "Cancel Bank Engine in rear of Train" signal must be sent to the block telegraph station in advance.

(c) If it is necessary for the train to be cancelled as well as the bank engine, the authorised "Train not coming" signal must be given, and this will cancel both the train and the bank engine.

NOTE.—*This regulation only applies at places where the use of bank engines is specially authorised. The train must be brought to a stand, and the bank engine properly coupled on, and the driver of the latter engine must not whistle to the driver of the train engine as an indication that he is ready to proceed until this has been done.*

Evidence.

Henry Wood, Senior, signalman, Braidhurst, says: I have been in this Company's service 23 years, a signalman for about same time. I have been about five years at Braidhurst. On the 27th December I came on duty at 7 a.m. to work for eight hours. At 8.14 a.m. a mineral train from Braidhurst Colliery left for Mossend Bank drawn by engine 623. Before the train started I exchanged the usual block signals with Jerviston Junction. The mineral train was standing in the Braidhurst sidings and an engine, No. 522, was standing in the sheds road. I instructed the driver of engine No. 522 to assist the mineral train through the section. The mineral train was then drawn forward on to the main line clear of the points between the Branch and back of sheds sidings. Engine No. 522 then drew forward to the rear of train. I cannot say whether the rear engine was coupled on to the train. I did not tell the driver to couple on to the train, but I told him to assist the train. Generally engines couple on to the rear of the trains in front. Engine No. 522 was going from the sheds to Bellside. It was a goods engine. I told the driver of No. 522 engine to assist the mineral train chiefly for the purpose of saving time. I had already given the "Is line clear" signal to Jerviston Junction and got it accepted. When the train was ready to start, I lowered the starting signal and gave "Train entering section" signal to Jerviston Junction. I then gave the route signal, viz. six bells, as the mineral train was for Mossend Bank. I then gave "Bank engine in rear of train" signal to Jerviston Junction, and then the route for the bank engine, viz. three bells, as it was going to Bellside. The block signals are given on block bell and the route signals are given on route bell. The signals were correctly acknowledged by Jerviston Junction. I told the brakesman to take his tail lamp off which he did. The bank engine was running tender first, and it had a red light at the chimney

end which was the rear end of the train. I do not think the mineral train was brought to a stand for the light engine to be attached to it. There was nothing unusual in the way of working.

Frank Forsyth, signalman, Jerviston Junction, says: I have been about nine years in the service and a signalman for six and a-half, and 13 months at Jerviston Junction. On the 27th December I came on duty at 6 a.m. The mineral train was signalled to me from Braidhurst at 8.11 a.m. I received "Train entering section" at 8.14 and it passed my box at 8.16. In addition to the "Train entering section" signal I got the signal for Pilot engine in rear. I got route signals also for the train and for the Pilot, and I acknowledged all these signals. My signals were off for the train, which did not stop at my box. I saw the Pilot on the rear of the train as it passed me. It was then close up to the train. When I received "Train entering section" from Braidhurst I gave "Is line clear" to Milnwood Junction. When that was acknowledged I gave the route signal for the train. At 8.16 I gave "Train entering section" signal to Milnwood Junction. Immediately after that I gave "Pilot engine in rear of train" signal and followed that up with the route signal for the Pilot. All those signals were correctly acknowledged by Milnwood Junction, and I got the "Train out of section" signal at 8.20. I was at the window when the Pilot was entering the West line, and after seeing that it was entering the West line I signalled it forward to Milnwood Junction. Milnwood Junction acknowledged receipt of "Bank engine in rear of train" signal by repeating that signal, viz. 2-2. At 8.34 I received the "obstruction danger" signal from Milnwood Junction, and a few minutes after that a passenger came back and told me that a collision had occurred and blocked the line. Before I

received the "obstruction danger" signal, signalman Taggart at Milnwood Junction asked me on the telephone when the engine entered the West line or something to that effect, and I told him that I had signalled it on in rear of the mineral train. He made no reply to that. It is a daily occurrence to have an engine in rear of mineral trains. As the train was approaching my box, I went to the window and saw it entering the West line, and it was after seeing this that I gave the "Train entering section" signal to Milnwood Junction, following that up by the "Pilot engine in rear of train" signal.

John Taggart, signalman, Milnwood Junction, says: I have been in this Company's service 25 years, 21 years signalman, and at Milnwood Junction four years. On the 27th December I came on duty at 7 a.m. to work 8 hours. I received the "Is line clear?" signal for the mineral train from Jerviston Junction at 8.12 a.m., and I accepted it same time. I then received route signal for the train, viz., six bells. I then got the "train entering section" signal at 8.14. I have a bookmarker in the cabin. He enters the times in the train register book. He was out of the cabin at the time when the "train entering section" signal was received, and did not return until a minute or so afterwards. The entry 8.14 for the "train entering section" signal may therefore not be quite correct. The boy was out of the box altogether about two minutes. When I got the "train entering section" signal from Jerviston Junction I raised the block and got it acknowledged by one beat. There were no other signals given to me and I got no signal for the engine in rear of the train, and I did not know it was in the section. I had a pilot engine working in the up line sidings, and it had put 15 waggons on to up main line. I had to keep this pilot inside to allow the 8.18 train *ex* Holytown to pass. Grangemouth No. 11 mineral had also to pass from the up main line to the up west line, and to make sure that the 15 waggons referred to were clear of the crossing I sent the boy from the cabin to the brakesman to see if they were clear. When the boy came back, he said to me "Is there a pilot on rear of the down mineral?" I said "No, there is no pilot in rear belled." He replied that he thought he saw some steam in rear of the mineral. I immediately looked towards the rear of the train, and I saw the van of the train immediately inside of the home signal, which would be about 300 yards from the signal-box. I could see nothing beyond it because there was dense smoke about. Immediately after the train passed the signal-box I caught sight of the tail lamp. There was a pilot engine shunting on the up main line, and the Grangemouth mineral train was passing. These engines helped to obscure the view between the down home signal and the signal-box. The mineral train did not stop at my box. My attention was not drawn by anyone on the train that a pilot engine was left at the home signal. The train is recorded in my book as arriving at 8.16 and departing at 8.18. These times were entered by the boy, and the first time is not correct as the train did not stop. The time the train passed my box was 8.18. When I saw the tail lamp of the mineral train I gave "Train out of section" signal to Jerviston Junction. At 8.24 I received the "Is line clear" signal for the passenger train from Jerviston Junction. I accepted it at the same time, not knowing that the pilot engine was standing at my home signal. I did not hear any whistle from the pilot engine. Owing to the noise at the iron works and the engine shunting in the up

sidings, it is possible that the driver whistled, and that I did not hear it. The down home signal is 300 yards from the signal-box. After the collision I spoke to Jerviston Junction signalman on the telephone, and asked him how the pilot came to be there. He replied that it was in rear of the mineral. I said that he did not bell the pilot and he replied that he did. When the boy spoke to me asking if there was a pilot in rear of the mineral train, I was certain I did not get a signal for it. If it had been otherwise I might have asked Jerviston Junction about it. It is a common occurrence for an engine to accompany a train in rear. I did not know that anything was wrong until I saw the pilot engine pass my box after the collision had occurred, the rear end of it being damaged. The rule is that the brakesman should call the signalman's attention to the fact that the pilot engine has been detached from the rear of the train, in accordance with Rule 149 b. On this occasion I received no indication at all from the brakesman of the mineral train. I was watching the van after it passed my home signal. When the van got near to the box I lost sight of it owing to the window frames. I then caught sight of it again as it was passing the centre of the box, and just before it passed under the bridge, which is about 50 yards from the centre of the signal-box, I saw the tail lamp. I was then standing in the middle of the box near the block instruments. I moved to the window after that. If I had gone to the window the window frames would not have interfered with my view. I did not see the brakesman of the mineral train at all, and therefore did not get any sign from him. I am quite certain the bank engine was not signalled to me.

Archibald Gillespie, bookmarker, Milnwood Junction, says: I have been with the Company 10 months. I have been 10 weeks at Milnwood Junction. I am nearly 15 years of age. On the 27th December I took duty at 7 a.m. I received "Is line clear" signal for the mineral train at 8.12 from Jerviston Junction. After making that entry I was sent out of the box by signalman Taggart to see if the waggons were clear of the crossing between the main line and the west line. I was out of the box about one and a-half minutes. When I was returning to the box I saw the mineral train coming down and thought I saw a pilot in rear of it. I asked Taggart if "Train entering section" signal had been received for the mineral train and if nothing had been belled in rear of it. Taggart replied that there was no pilot in the rear. The mineral train was slowed down at the home signal but I cannot say whether it stopped or not. I entered its arrival at 8.16 and passing forward about 8.18. It took so long that I thought it was stopped. We received "Train out of section" signal from Mossend No. 3 for the mineral train at 8.20. I saw a tail lamp on the brake van as it passed the box. When the mineral train was signalled to us from Jerviston Junction I heard the route bells given for the train. I left the box immediately after that. I did not hear any bells for the pilot. I did not hear any whistle from the pilot. I did not see the engine in rear of the mineral train, but I thought I saw smoke at the rear of the van. After Taggart told me that no pilot engine had been belled, I thought no more about it.

John Currie, brakesman, Motherwell, says: I have been in the Company's service 16 years, 14 years as brakesman. On the 27th December I came on duty at 6.55 a.m. at Motherwell. My train was Motherwell, No. 48, and consisted of

engine, No. 623, 21 ordinary waggons of coal and dross and a brake van, and we were going from Braidhurst to Mossend Bank. At Braidhurst engine No. 522 was put in rear. We were not stopped and the engine was not coupled on to us. I took off the tail lamp when the engine came on to the rear, and put it down in the van. We were not stopped at Milnwood Junction. We had been slowed down by the Milnwood Junction signals, but got Mossend No. 3 signals clear. When passing Milnwood Junction signal-box I cried to the signalman that the pilot was left, but got no answer. I neither saw the signalman nor the boy. I put on my tail lamp while I was passing the box. The windows of the box were obscured with frost and there was a lot of smoke about. I have a copy of the general Rule Book, and I carried out Rule No. 149B to the best of my ability. The only other thing I could have done would have been not to replace the tail lamp on my train, in which case it is probable that I would have been stopped at Mossend No. 3 as a train travelling without a tail lamp. I feel sure that I did not put my tail lamp on before reaching the signal-box at Milnwood Junction. I have often worked this mineral train before. It does not often occur that an engine is put on behind that train. It was not a heavy train on this occasion. I had 21 waggons on, but the load is 35 for the class of engine working the train. The assistant engine was not coupled on. I have not known it happen previously for a bank engine in rear of a train leaving Braidhurst not to be coupled on. It was the duty of the fireman with the pilot engine to have coupled it on to the train. I could not say what light the engine was carrying in rear. It was running tender first.

John Forrest, fireman, says: I have been in the Company's service four and a-half years, three years as fireman. On the 27th December I took duty at 6.30 a.m. at Motherwell to work 12 hours. My driver was Robert Muir, and my engine No. 522, a six-wheels-coupled tender engine. We were going from Braidhurst to Bellside. The signalman at Braidhurst made a sign to the driver to get to the rear of the mineral train (Motherwell No. 48). There were two brakemen on the engine with us. We drew out of the shops sidings on to the rear of the train as the latter was passing out on to the main line. The train was not stopped but was going very slowly. I did not couple the engine on to the rear of the mineral train. I could not do so as the train did not stop, and we were running tender first. We have done the very same thing before, *i.e.*, followed a train from Braidhurst to Milnwood Junction without being coupled on. We kept close to the train. We stopped at the home signal at Milnwood Junction, where the train left us. The train was running about 10 miles an hour, but was not stopped. After the train left us, my driver whistled for the Holytown Branch. We stood at the home signal about eight minutes when we saw the main line signal drop, and my driver immediately whistled. After this the driver drew my attention to the passenger train which was approaching. He gave the engine steam, and was on the move when the passenger train overtook our engine and the collision

occurred. I jumped off the engine before the collision. My driver whistled altogether three times, firstly when he stopped at the home signal, secondly two minutes after that, and thirdly when he saw the main line signal fall. He did not send me to the signal-box and I did not leave the engine. I did not think it necessary to do so, as it is quite a common thing to stand at the same signal and there was also a clear view to the signal-box.

David Lightbody, brakeman, Motherwell, says: I have been in the Company's service 14 years, brakeman all the time. On the 27th December I came on duty at 7 a.m. at Motherwell, and was going to Bellside with engine No. 522. The signalman at Braidhurst gave the driver instructions to shove up that train, *viz.*, Motherwell No. 48. The train was not stopped and I do not think we were coupled on to it. We were stopped at the home signal at Milnwood Junction, and the train went on at a speed of about 10 to 15 miles an hour. We stood at Milnwood Junction home signal 9 or 10 minutes. The driver whistled soon after we came to a stand, a second time after the main line signal was cleared, and a third time when we saw that the signalman did not alter that signal. It is quite a common thing for a light engine to stand at this signal for that length of time. I jumped off when I saw the passenger train coming.

Thomas McGrath, brakeman, Motherwell, says: I have been in the service two years and two months, brakeman all the time. On the 27th December I took duty at 7 a.m. as second brakeman of engine No. 522. We were going to work with that engine at Bellside. I do not think the pilot was coupled to the rear of the train in front. The signalman at Braidhurst told us verbally to give the train a push. On arrival at Milnwood Junction we stood 8 or 9 minutes at the home signal. The driver whistled when we came to a stand, and he afterwards whistled twice when the signal was lowered for the main line. On seeing the other train coming I jumped off. The driver gave the engine steam and it moved forward, but it was overtaken by the passenger train.

Robert Martin, engine-driver, says: I have been in the service 35 years, 19 years as driver. On the 27th December I came on duty at 6.45 a.m. at Carstairs to work for about 11 hours. I was in charge of the 7.55 a.m. passenger train, Lanark to Glasgow. My engine was a four-wheels-coupled bogie engine. I had clear signals from Motherwell. At Milnwood Junction the signals were all clear. On approaching Milnwood Junction I observed a light engine standing on the down main line. It was about 30 yards away when I saw it. I shut off steam and applied the brakes. There was smoke coming from the Iron Works. We were running at a speed of between 20 and 30 miles an hour when we saw the engine. That speed was a good deal reduced before the collision occurred. We ran about 95 yards after striking. We had 7=9½ coaches on the train. The train was fitted with the Westinghouse continuous brake. The view of the engine was obscured by smoke.

Conclusion.

The circumstances attending this collision are briefly as follows. At 8.14 a.m. a mineral train for Mossend Bank started from Braidhurst, at which time a light engine (No. 522) was standing in the engine sheds road, waiting to proceed to Bellside. The engine sheds road is connected with the colliery branch, and as the mineral train drew out

of the branch, on which it had been standing, on to the main line, the signalman at Braidhurst (Henry Wood) instructed the driver of the light engine (Robert Muir) to follow the train, and to assist it as far as Milnwood Junction, where the lines to Mossend and Bellside respectively diverge. Wood gave no information to the driver or brakeman of the train in regard to the light engine, nor was the train stopped in order to enable the engine to be coupled on to it, but when the brakeman saw the light engine come on to the rear of his train, he took off the tail lamp from his van, in accordance with the Rule to that effect. Engine No. 522 was running with its tender in front.

The train was a light one, consisting only of 21 waggons, and the train engine required no assistance. There was therefore no reason for putting the engine behind the train, and in acting as he did, Signalman Wood committed an irregularity, inasmuch as he had no authority to allow the light engine to assist the train, the section between Braidhurst and Milnwood Junction not being one of those on which the use of bank engines is authorised in the Appendix to the Working Time Table. But having decided that the engine was to help the train, it was Wood's duty to see that the latter was brought to a stand, and that the engine was properly coupled on to it. In failing to do this, Wood must be held to have broken Block Telegraph Rule No. 6, which has already been quoted.

Signalman Wood forwarded the proper block and route signals to Jerviston Junction for both the train and the engine in rear of it, and these were correctly acknowledged.

Signalman Forsyth, at Jerviston Junction, on receiving the block and route signals from Braidhurst passed these on to Milnwood Junction. He then set the points for the west down line, and lowered his signals. At 8.16 the train with the engine in rear passed his signal-box on the west line without stopping. The bank engine was then close up to the train, and Signalman Forsyth had no means of knowing whether it was coupled on to the train or not.

On reaching Milnwood Junction, the signals were off for the train, which proceeded to Mossend without stopping, but as the bank engine required to go to Bellside, it was brought to a stand by driver Muir at the Milnwood Junction home signals. After the train passed the Milnwood Junction signal-box, Signalman Taggart, who was on duty, put the home signal to danger, and the engine remained stationary at the junction signals for about ten minutes. These signals are 300 yards from the Milnwood Junction signal-box, and Taggart states that he was quite unaware of the presence of the engine. He says that he received no block signals from Jerviston Junction in connection with the bank engine, and there is in this respect a direct conflict of evidence between him and Forsyth.

Taggart has the assistance in his signal-box of a boy for entering trains in the train register book, but he had sent the boy out of the box for a few minutes with a message to the brakeman of a train which was doing some work in the sidings, and it was while the boy was out of the box that the block signals were received from Jerviston Junction in connection with the train and engine. When the boy returned to the box he told Taggart that he thought he had seen a bank engine in rear of the train, and inquired whether such an engine had been signalled on the block instruments from Jerviston. Taggart replied that no signals for a bank engine had been received, and both Taggart and the boy say that when the train passed their signal-box the tail lamp was on the rear van. Rule 149 (b) of the General Rule Book (which is quoted in an earlier part of this report) says that "when the assisting engine leaves the train the tail lamp (of the train) must, when practicable, be replaced within view of the signalman to remind him that an assisting engine is following." Brakeman John Currie says that he replaced the tail lamp as he was passing Milnwood Junction signal-box, and, further, that he called out to the signalman that the bank engine was left on the line. But Taggart admits that he was not near the window of the signal-box, and he neither saw nor heard the brakeman. It is remarkable that when the boy inquired whether any block signals for the bank engine had been received from Jerviston or not, and said that he thought he had seen the steam of an engine in rear of the train, Taggart took no steps whatever to assure himself on the subject. He says that he could not see the engine owing to the smoke and steam from the adjacent iron works and from shunting engines working in the sidings. But as the engine was standing at the signal for the space of 10 or 11 minutes, it is impossible to believe that if Taggart had taken pains to look for the engine he would have been unable to see it at some time or other during that interval. It was also open to him to have spoken with Jerviston Junction on the telephone, and to have enquired whether there was an engine in rear of the train, or not; or he could have communicated with the brakeman in the van of the train as it passed him and inquired whether the boy was

correct in saying that there was a bank engine. There seems to have been some confusion in Taggart's signal-box that morning, as shown by the entries in the train register book. The "train entering section" signal is therein booked as having been received at 8.14 a.m., whereas this signal was not sent from Jerviston Junction till 8.16. Then, again, the train is recorded as having arrived at Milnwood Junction at 8.16, and having left at 8.18, whereas the train did not stop at all, but passed the box at 8.18, and yet the "train out of section" signal was not received at Jerviston Junction till 8.20. Taggart admits the inaccuracy of these entries, and explains them as being due to the boy's absence from the box. But this seems an insufficient excuse, as he says the boy was away for only two minutes (the boy himself says 1½ minutes), whereas the wrong entries extended over a longer period than this. The boy is provided for the purpose of booking the trains, and it is doubtful whether Taggart was right in sending him out of the box with a message, but as he did so, it was Taggart's duty during the boy's absence to make the entries in the train book himself, and under any circumstances Taggart must be held responsible for the correctness of the entries in the train book.

As regards the dispute between signalman Forsyth at Jerviston Junction and signalman Taggart at Milnwood Junction, in relation to the exchange of block signals for the light engine, I prefer the statement of Forsyth that he sent those signals and received the correct acknowledgment from Taggart, and I believe that the latter omitted to record, and forgot those signals.

At 8.24, Taggart received the "Is line clear" signal from Jerviston Junction for the 7.55 passenger train from Lanark to Glasgow, and at once accepted it. He then lowered the signals for it, and shortly afterwards the train arrived and ran into the bank engine, which was still at the junction home signals.

It is now necessary to consider what had been happening on the bank engine. When this left Braidhurst, there were four men on it, viz., driver Muir, fireman Forrest, and brakemen Lightbody and McGrath. Driver Muir was so much injured that he was unable to give evidence at my inquiry, but the other three men were present, and explained what occurred. In accordance with signalman Wood's instructions, the engine followed up the mineral train as the latter was leaving Braidhurst. It was not coupled to the train, as it should have been, because the train did not stop. It was the fireman's duty to couple it on to the train, but he had no chance of doing so. The engine was running tender first, and it was not permissible, even if it were possible, for the fireman to have climbed to the back of the tender and coupled the latter on to the train while they were in motion. The engine followed the train as far as Milnwood Junction home signals, and was there stopped by Driver Muir, as his route was to Bellside, while the train was proceeding to Mossend. Driver Muir whistled as soon as he stopped for the road to be set for Bellside, and as this was not done, the engine remained stationary. After an interval of nine or ten minutes the home signal for the main line was lowered. As this was not the signal for Bellside, Muir did not move his engine, but whistled again. But no notice was taken by the signalman, and the signal for the main line remained off. Shortly after this the men on the engine heard the passenger train approaching, and they then seemed to have realised for the first time that their engine had been overlooked. The fireman and two brakemen at once jumped off the engine on to the ballast, and escaped uninjured. The driver remained at his post, and gave his engine steam in the endeavour to avoid the collision, or at least to lessen the shock, but before his engine got into motion it was struck by the train, which was travelling at not less than 20 miles an hour. The shock was a violent one, and the light engine was driven forward for a distance of about 930 yards before driver Muir was able to bring it to rest. This was due to the fact that the regulator was open, and that owing to the coal from the tender being thrown upon him, Muir was pinned against the front of the fire-box, and was unable to shut off steam until a minute or two had elapsed. The gauge glass of the engine was broken, and Muir was badly scalded by steam and water.

The collision is said to have occurred at 8.29, and the light engine reached the junction at 8.18, or perhaps a minute earlier. It had therefore been standing at the home signals for at least 11 minutes, and yet no steps were taken by driver Muir to send his fireman or one of the brakemen to the signal-box, in accordance with Rule 55, in order to remind the signalman of the position of the engine, nor does he seem to have whistled sufficiently often to attract the signalman's attention. It is stated that he whistled three times, but signalman Taggart declares that he never heard any whistling. At any rate, one would have thought that when Muir saw the main line junction signal lowered, he would have understood that it was not for him, and it might have been expected that he would then have taken measures, by repeated whistling or else by sending a man to the

signal-box, to let the signalman know of his presence. The apathy displayed by Muir and the other men on his engine can only be regarded as surprising.

Driver Martin, of the train engine, says he was approaching Milnwood Junction at a speed of about 25 miles an hour, all signals being off for him, when he suddenly saw the light engine about 30 yards ahead of him. He immediately shut off steam and applied the brake, and did all he could to stop. He states that the speed was a good deal reduced before the collision occurred, but it is impossible to believe that much could be done in the way of reducing the speed in such a short distance as 30 yards. It may therefore be taken that the speed of the train at the moment of the collision was 20 miles an hour at least, and very likely it was more. The train travelled a distance of 95 yards after striking the light engine before it came to rest.

From the above facts it will be seen that the collision was due to neglect of duty or breach of Rules on the part of several servants of the Company. Signalman Henry Wood, at Braidhurst, caused the engine to follow the train without any authority to do so, and broke the Rules in not causing them to be coupled together. Signalman Taggart performed his duty in a very negligent fashion; he forgot altogether that he had received and acknowledged the proper block signals from Jerviston relating to the bank engine; the entries in his train register book are admittedly unreliable; and, although warned by the boy Gillespie that a bank engine appeared to be assisting the train, he took no steps whatever to ascertain whether this was the case or not. Driver Muir, of the bank engine, broke the Rules in following the train without being coupled on to it, and in not sending his fireman to Milnwood Junction signal-box when he found himself detained at the Junction home signal. Fireman Forrest is also to blame for not proceeding to the signal-box. I do not attempt to apportion the blame between these men, but, had any one of them performed his duty in the proper manner, the collision would not have occurred. The two signalmen had been on duty for an hour-and-a-half, and the driver and fireman of the light engine for two hours-and-a-half, at the time of the accident.

Signalman Wood, in his evidence, makes the remark that there was nothing unusual in the way of working. If this means that it is the custom to send engines forward from Braidhurst behind mineral trains without their being coupled to the latter, it indicates an habitual disregard of Block Rules and a lack of discipline, which can hardly have escaped the notice of Wood's immediate superiors. To allow an engine to follow a train without being coupled to it, is, in my opinion, tantamount to permitting two trains to be in a section at the same time. The attention of the Company might be specially drawn to this feature of the case.

I have, &c.,
H. A. YORKE.

The Assistant Secretary,
Railway Department, Board of Trade.

APPENDIX.

DAMAGE TO ROLLING-STOCK.

Engine, No. 522.—Both frames broken off at cylinder; cylinder covers broken; smoke box door and front of smoke box staved in; leading sand boxes and footplates damaged.

Engine, No. 83. — Bogie destroyed and one axle broken; framing bent; footplates broken off at cylinders; waybar shaft brackets and reversing rod, also cylinder cocks broken; back end of tender and vacuum pipes damaged.

Third Class, 1012.—End broken, headstock,

buffer spindles, buffer springs, couplings, gas and Westinghouse pipes, bogie chains, steps, three windows and hand rails broken; tram corner irons bent.

First Class, No. 155.—End and sides damaged; bogie chains, headstock, three windows, one footstep, two seats and luggage racks broken.

Brake Third, No. 1270.—End damaged; buffer spindle, Westinghouse pipes, gas pipes and coupling broken.

PERMANENT WAY MATERIALS DAMAGED.

50 lineal feet of 9 ft. by 1½ ft. timber damaged; two 32 foot 90 lb. steel rails broken; eight 32 foot 90 lb. steel rails bent; 19 crossing chairs

broken; 74 common chairs broken; 53 sleepers destroyed.