

Mr. Storey, the locomotive foreman, who was on the engine, appears to have considered himself a passenger for the time, going to assist in getting the 6.50 passenger train on the rails.

He had never been an engine-driver, and was a fitter by trade. He had been worked hard owing to the disorganisation of the traffic caused by the snowstorm, and had no reason to think that the driver was not thoroughly competent and trustworthy. He did not interfere with him in any way.

The Assistant Secretary,
Railway Department, Board of Trade.

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

APPENDIX.

COLLISION NEAR IVYBRIDGE, MARCH 12.

Locomotive and Carriage Department,
Newton Abbot Station,

DEAR SIR, March 28, 1891.

As requested I now send you account of damage to rolling stock in the above four wheel coupled tank passenger engine No. 3543, running chimney in front:—Chimney top damaged; leading sand-boxes broken; leading buffers damaged; leading corner of front buffer plank damaged the right-hand side; vacuum-pipe broken; both lubricators broken; draw-bar hook front end broken; splashers damaged.

Two coaches were damaged:—

No. 488, six-wheel composite, was telescoped and broken to pieces and framing badly damaged.

No. 513, six wheel third-class.—One pair of wheels knocked from under it and the axle-guards of the same broken, and some of the other guards were bent and strained.

Colonel Rich,
Board of Trade,
8, Richmond Terrace,
Whitehall, London.

I remain, &c.
T. LUXMOORE.

Printed copies of the above report were sent to the Company on the 6th May.

LANCASHIRE AND YORKSHIRE RAILWAY.

Board of Trade, (Railway Department,)
Whitehall, London, S.W.,
19th February 1891.

SIR,

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the Order of the 13th ultimo, the result of my enquiry into the causes of the collision which occurred on the 11th ultimo at Bolton junction station, on the Lancashire and Yorkshire Railway.

In this case the Lancashire and Yorkshire Company's 11.5 p.m. passenger train from Preston for Manchester, due at Bolton at 11.50 p.m., while standing at the platform was run into by the Midland Company's passenger train from Blackburn for Manchester, which train was running in connection with the 8.37 p.m. train from Carlisle due to leave Blackburn at 11 p.m.

The collision occurred about 12.25 a.m.

Thirty-four passengers in the Lancashire and Yorkshire Company's train, and two in the Midland Company's train have complained of injury.

The Lancashire and Yorkshire Company's train consisted of an engine and tender, three third-class carriages, brake-van, two composite and two third-class carriages, eight vehicles in all, fitted throughout with the automatic vacuum-brake, and the damage sustained by it is given in an appendix.

The Midland Company's train consisted of an engine and tender, bogie composite brake carriage, composite carriage, bogie third-class brake-carriage and brake-van, four vehicles equal to five vehicles, fitted with a steam brake for the engine and tender, and with the automatic vacuum-brake for the four vehicles, and in it the brake-carriage next the engine was slightly damaged.

Description.

At Bolton junction station, where the lines to and from Wigan and Preston, and to and from Blackburn separate and unite, the up platform is a long one, the line from Wigan and Preston coming alongside it at about its centre, and it is not customary

for trains from Blackburn to stop at the down end of the platform, but to run as far towards the up end as circumstances permit.

The line from Blackburn approaches Bolton on falling gradients as far as a point 25 yards inside a short tunnel 85 yards long, which terminates close to the down end of the platform. From this point onwards up to the point of collision the gradients, &c. are as follows:—

Level	-	-	-	-	-	-	22 yards
Rising gradient	1	in	213	-	-	-	22 "
"	"	1	" 94	-	-	-	16 " (tunnel mouth)
"	"	1	" 168	-	-	-	28 "
"	"	1	" 71½	-	-	-	120 "
"	"	1	" 117	-	-	-	25 "
"	"	1	" 261	-	-	-	88 " (point of collision)

From the tunnel mouth the up line (looking towards Manchester) curves sharply to the left, and the tail of a train standing towards the up end of the platform is not well seen (owing to columns &c.) from the footplate of an engine approaching it; still with a good look out tail-lights are visible for about 100 yards from either one or other side of the footplate.

Two signal-cabins are concerned with this collision—Johnson Street and Blackburn junction. Johnson Street cabin is situated near the south end of the tunnel mouth, and works the points of a junction of a loop line forming a direct connection between the Blackburn and Wigan lines. The signals worked from it, and which have reference to the collision are, first, a main up home-signal (No. 3) 15 yards south of the tunnel mouth; second, an outer up home-signal (No. 2) 155 yards from No. 3, and acting as the up advance signal of Bradshaw Gate cabin (closed at night); third, an up distant-signal (No. 1) 294 yards from No. 2 signal, and below Bradshaw Gate up starting-signal.

Blackburn junction cabin is a short distance from Johnson Street cabin, and nearer to the centre of the station. From it is worked the junction between the Blackburn and Wigan lines, and the points at the Wigan end of the loop line. The signals worked from it and referring to the collision are:—

1. An up home-signal (No. 53) 165 yards from Johnson Street up home-signal No. 3.
2. A calling-on arm (No. 47) below No. 53.
3. Two up distant-signals, Nos. 54 and 55, respectively below Johnson Street up home-signals, Nos. 3 and 2.

The distance from No. 53 signal to the point of collision is 113 yards.

At Johnson Street cabin No. 3 main home-signal precedes No. 2 outer home-signal; at Blackburn junction the calling-on arm No. 47 precedes No. 53, the up home-signal.

Block working is in force between Johnson Street and Blackburn junction cabins, but between the cabins at Blackburn junction and Salford line (the next towards Manchester) station yard working is resorted to, as connections have to be formed at the platform between trains arriving from Wigan and Blackburn.

Evidence.

1. *William Holder*, guard; 12 years in the service of the Lancashire and Yorkshire Company, four years guard.—I came on duty at 6.45 p.m. on the 10th January to sign off at 12.10 a.m. on 11th. I was guard in charge of the train due to leave Preston at 11.5 p.m. for Manchester. The train consisted of engine, tender, and eight vehicles; and it had not been altered after leaving Preston. The vehicles consisted of three thirds, brake-van, two composites, and two thirds. I do not know why a van was not at the tail end of the train. The vacuum-brake was fitted throughout the train. We left Preston at 11.42 p.m., having been detained waiting for the mail train from the North. We had a good run to Bolton, and arrived there at 12.24 a.m. We stopped with the tail end of the train about opposite the clock on the down platform, and the train had not been standing at the platform more than a minute before the collision took place. I was in the van when it occurred. I was knocked down among the luggage and hurt in the back, and was off

duty for one day. My van was driven forward about a carriage length by the force of the collision. The train was divided, I believe, into two parts. I heard no whistle before the collision occurred, nor any shouting. The vacuum-brake was, I believe, on when the collision happened. The night was beautifully clear. No snow was on the ground. It was very cold. The side and tail lights were burning brightly after the collision. The side lamp next to the platform was on the tail end, and the one on the other side was on the front side of the rear vehicle. The tail-lamp was in the usual place just above the buffer-beam, and all the lamps were burning after the collision. The brake had been used for running into the station, and I am not sure whether it had been taken off or not.

2. *John Pinches*, driver; 15 years in the Midland Company's service, driver three months, and fireman for about nine years.—I commenced work on the 10th January at 6.45 p.m., and I should have

signed off duty about 3 a.m. if there had been no collision. I was driving engine No. 1571. It is an eight-wheeled engine, with a four-wheeled leading bogie and a tender. The engine and tender were fitted with a steam-brake, which applied to the four coupled wheels of the engine and the six tender wheels. I commenced working with the engine at Blackburn. I started from Blackburn at 11.58 p.m. The train consisted of four vehicles, equal to five. The automatic vacuum-brake worked from the engine applied to these vehicles. I started from Blackburn with this train after arrival of the train from Scotland due at Blackburn at 10.51 p.m., the carriages of which train went on to Liverpool. My instructions were not to stop for traffic purposes between Blackburn and Manchester. I had on the engine with me my fireman, Edward Rees. He had only been my fireman for this one evening. I have no regular fireman, being at present a spare man. I am well acquainted with the road between Blackburn and Manchester. I have worked an engine on it eight times as driver, and about 52 times as fireman during the last few years. I felt I had a thorough knowledge of the signals. After leaving Blackburn the first signals I found against me were the Spring Vale distant-signals, but the home-signal was lowered when I sighted it. Entwistle was the next distant-signal against me, and there the home-signal was taken off before I sighted it. The next signal against me was the Astley Bridge junction distant-signal, and there again the home-signal was off when I first sighted it. The next signals I sighted were at Craddock Lane; there I found the distant-signal at danger, but the home-signal was off before I sighted them. The distant-signals for Bradshaw Gate below the home and starting signals at Craddock's Lane were both lighted and both off, but the home-signal at Bradshaw Gate was not alight, and I did not see the arm. I was aware that Bradshaw Gate box was closed at night, and that removed the necessity for my not seeing the home-signal. The distant-signal for Johnson Street below the Bradshaw Gate home-signal was alight and at danger, but the home-signal for Johnson Street at the Blackburn end of the tunnel was off when I sighted it. This I had seen 300 or 400 yards before coming to the Bradshaw Gate home-signal. I entered the tunnel at a speed of from 10 to 12 miles an hour, and emerged at the Bolton end of it at from six to eight miles an hour, so as to be better able to stop and see the signals after coming out of the tunnel. On emerging from the tunnel, I found that the Johnson Street inner home-signal was off; the Blackburn junction home-signal, and the "calling-on" arm below it were also both off when I first sighted them. These signals I saw shortly before passing Johnson Street box, I, having gone over for the purpose to the left or fireman's side of the engine. I had nearly come to a stand when I sighted these signals, but finding them off, and the road clear, as far as I could see, I crossed over to my own side of the engine, released the brake, and put on steam. At this time the distant-signal for Salford line cabin, which is between the home-signal and calling-on arm, was at danger. I had got into a speed of about six miles an hour, when the fireman called my attention to a train being in front. Previous to him speaking I had already shut off steam, and I then at once applied the brake. There was only a carriage length's distance or rather more between my engine and the other train when the fireman spoke. I think I struck the train at a speed of from five to six miles per hour. My engine did not move after striking the tail of the other train; but after the collision there was about a yard's space between the buffers of my engine and the last vehicle of the train in front. No wheels of my train left the rails. There was very trifling damage done to my train. The Lancashire and Yorkshire train was separated behind the first carriage next to the engine, there being a short space between the two portions of about a yard and a half. I think the collision occurred about

12.25 or 12.26 a.m. The weather at the time was rather hazy. It was very cold, and a little snow was on the ground. I do not think I reached a speed of more than eight miles an hour between emerging from the tunnel and striking the train. This speed would be between the Blackburn junction signals and the bridge. If I had found the home-signal at danger, and the draw-ahead signal off, I should have expected to find something at the platform, and drawn forward cautiously in consequence. I am quite certain I found the top signal showing a white light. The lights of the Lancashire and Yorkshire train after the collision were burning well. The tail-lights on the train were obscured from my view, the left hand one and the centre light by the boiler and smoke-box of the engine, and the right-hand one by its position at the front end of the rear vehicle. Had the right-hand light been at the tail of the vehicle instead of the front, I should, no doubt, have seen it. My guard told me on leaving Blackburn that my next stop was to be Manchester. There are no instructions in the Midland time book appendix where we should whistle for Bolton. On catching sight of the Blackburn junction home-signals I gave one long continuous whistle to intimate to the signalman at Salford line cabin that I had nothing to stop me at Bolton. A man in uniform came to me on the engine after the collision and asked me what signals were off, and I replied that I would reserve what I had to say until the enquiry. This conversation occurred perhaps half an hour after the collision. About 15 or 20 minutes after the collision, a Midland Company's servant employed at Ancoats got on to the foot-plate of the engine. I expected to go through the platform road at Bolton. I did not whistle at Craddock Lane. My brake was in good order. I had just time to get it on before the collision occurred.

3. *Edward Rees*, fireman; 18 months in the service of the Midland Company, passed as fireman since the 1st September last.—I was engine cleaner on the Manchester, Sheffield, and Lincolnshire Railway before I came to the Midland Company. I have been in railway service about three years, and was 23 years of age last September. I am not Pinches' regular fireman, but I was told off to fire for him on the 10th January. I came on duty at 6 p.m. to remain as long as necessary. I did not know the road between Manchester and Blackburn. I had been over it only twice before the collision. In October last I made one journey from Manchester to Carlisle and back with a goods train, and on Christmas eve I went from Manchester to Hellifield and back with a goods train. These are the only two occasions on which I had passed through Bolton, that is, twice on the down and twice on the up journey. I do not know what time we got to Blackburn. On arriving there we shunted our train and did some other work. I do not remember having any kind of an accident at Blackburn. We turned the engine and in due time started away for Manchester with a train of four vehicles, equal to five. My place on the engine is on the left-hand side. There was no one on the engine besides myself and Pinches. I do not know the signals between Blackburn and Manchester so as to be able to speak of their designation. I did not see any signals at all on the way from Blackburn. If I was not firing I suppose I was doing something else. I remember going through the tunnel at Bolton, and on getting to the Bolton end of it we were almost at a standstill, and when about opposite Johnson Street signal-box I saw two signals off; the top and bottom one. The footbridge prevented my seeing the middle one. On finding these signals off, Pinches gave his engine steam. I had got about 20 yards off Trinity Street bridge, when I saw two red lights and did not at first know what they meant except that they meant danger. On first seeing them I did not say anything to the driver about them, because I took them at first to be on the middle road. I then lost sight of them, but after passing to the other side of the bridge I saw they were on the road we were

travelling. I then told the driver to stop as there was a train in front. When I said this we were about an engine and tender length from the train. The speed then would be a little faster than I could walk. The driver at once put the brake on. I cannot judge whether the speed was reduced before we struck the train. Neither the driver nor I left the engine before the collision occurred. We were neither of us hurt. It was seeing the driver looking through the window on my side that led me to look at the signals, and I then saw both of them off. There was no complaint made at Blackburn of any violent shunting at that station.

4. *Arthur William Winnell*, guard; nine years in the service of the Midland Company, and passenger guard for seven years.—I commenced work at 3.30 p.m. on the 10th January, and ought to have finished at 12.0 p.m. midnight. I joined the duplicate train from Blackburn for Manchester at Blackburn, and left at 11.58 p.m. We were waiting for the arrival of the second portion of the Scotch train. The train consisted of four vehicles, namely, bogie composite brake next to the engine, composite, bogie third-brake, brake-van, equal to five vehicles, the bogie composites counting one and a half each. I was in the brake-van at the time of the collision. The automatic vacuum-brake was fitted to the vehicles, and I could apply it from the van. There were only two passengers in the train. Both of them were going to Manchester. The Lancashire and Yorkshire foreman on duty at Blackburn arranged that the train should run through to Manchester without stopping for traffic. The tickets were collected before we left Blackburn. I had not much luggage in the van. I was not looking out for signals all the way between Blackburn and Bolton. The first home-signal I saw on approaching Bolton was either at Craddock Lane or Bradshaw Gate, I am not certain which. The signal I saw was off showing a white light. I did not see the distant-signal below these signals. I saw no other signals until the train had passed through the tunnel, as I was not looking out. I did not see the signals close to the tunnel mouth. The next signals I saw were the Blackburn junction signals. The left-hand top arm was showing a white light. This I saw when the van was about opposite the Johnson street cabin. On coming through the tunnel we had nearly come to a stand, and then gone on again. I think we were proceeding at a rate of about eight miles an hour when we struck the train. I did not feel the brake go on before the collision occurred. The vacuum in my gauge showed about 20 inches, and I did not notice whether it fell when the collision occurred. By the force of the collision I was struck on the cheek and fell to the floor, but I was not hurt so as to have to leave my duty. I do not know exactly what time the collision occurred. The collision took me quite unawares. I saw nothing of the train in front. I heard the driver give a whistle (not an alarm whistle) just before the collision. I had accompanied the train from Manchester to Blackburn and I came back with it, but I was not in the train when it was being shunted at Blackburn. The weather was fair, but a little hazy. The night was very cold, and there was snow on the ground. The same engine and carriages were able to proceed to Victoria at 2.20 a.m. from Bolton: there being no particular damage done. I expected to go through the passenger line at Bolton; I have never gone through the goods line. I was particularly on the look out for the top arm at Blackburn junction, Bolton, because I have been sometimes preceded by the Preston train, and had to stop behind it. The couplings were broken in the bogie-brake next to the tender. I was on the platform side of the van when I saw the Blackburn junction home-signal off.

5. *Edwin Dodgin*, signalman, Johnson Street cabin: I have been in the Lancashire and Yorkshire

Company's service eight years; signalman six months. I am 22 years of age. I have been employed two or three months in Johnson Street cabin, Bolton, where I came on duty at 5.40 p.m. on the 10th January, to remain until 6 a.m. on the 11th. Twelve hours is the proper spell of duty, but my mate asked me to come 20 minutes earlier than usual. This was done without the authority or knowledge of any superior officer. The next block cabin on the Blackburn side is Bradshaw Gate, but this was closed, as it is always so at night, and the next block cabin with which I was in communication was Craddock Lane, and between Craddock Lane and my cabin the block system is strictly worked. On the Bolton side Blackburn junction is the cabin with which I work. Strict block is worked between my cabin and Blackburn junction. The first I knew of there being a duplicate portion of the 11 p.m. from Blackburn was by seeing two tail-lamps on the first portion of the train which passed my cabin at 11.32 p.m., and stopped at Bolton. I got the "Be ready" signal for the second portion from Craddock Lane at 12.18 a.m., and accepted it, the line being clear between me and Blackburn junction when I did so. At 12.24 a.m. the train was given "On line" from Craddock Lane. I did not at this time lower my signals for the train because I did not get it accepted straight away from Blackburn junction. At 12.24 a.m. I got it accepted at Blackburn junction. I still kept my signals at danger until I thought the train had come to a stand at Bradshaw Gate advance-signal, which is my rear home-signal, and then I took off the rear home and home signals. The signalman at Blackburn junction cabin accepted the train under clause 15, namely, "Section clear, but station and junction blocked." I judged by time that the train was stopped, as I could not see it because the tunnel was between the train and my cabin. It is the custom when a train is standing at the Manchester end of Bolton station to accept a train under the conditions of clause 15, and to keep the home-signal at danger until the train is judged to have come to a stand. The train shortly afterwards appeared through the tunnel and passed my box at a speed not exceeding five or six miles an hour. This was at 12.25 a.m. As the train was passing my box I noticed that the Blackburn junction signals were all on, both the calling-on arm and the home-signal above it, but when the train was a few yards on the Blackburn side of the footbridge, I saw the calling-on arm lowered, but not the top arm, and the distant-signal between the two arms remained at danger. On the arm dropping, the driver of the Midland train quickened his speed, and soon after that I heard the collision occur. The Midland driver could have stopped at the Blackburn junction signals if they had both remained at danger. I allowed the train to pass the home-signal at the Blackburn end of the tunnel, because it was as I thought nearly brought to a stand. I did not give the driver a hand-signal on emerging from the mouth of the tunnel, because I thought he was proceeding at so slow a rate as to not require it. I was alone in the box at the time of the collision. When the calling-on arm was lowered the driver gave his engine steam. The calling-on arm was lowered after the train had passed my box. I heard the driver whistle when he was passing the Blackburn junction home-signal. He gave one long whistle. I could see one side-lamp and the tail-lamp of the Preston train standing at the platform.

6. *Thomas Potts*, signalman at Blackburn junction cabin, Bolton: I have been over 20 years in the Lancashire and Yorkshire Company's service, signalman for 19 years. I have been employed about 16 years in Blackburn junction cabin, and in the new cabin since it was erected, and I came on duty there on the 10th January at 10.0 p.m., to remain until 6.0 a.m. on the 11th. I was alone at the time of the collision. I have a train booker with me generally, but he is allowed to go away soon after 11.0 p.m. I was first informed by telephone from Lostock junction

about 12.15 a.m. of the running of the Preston train; at this time it would be leaving Linstead Lane, and about the same time I received the "Be ready" signal from Bullfield, which is the next block station towards Preston. I accepted the "Be ready" signal, and got train on line at 12.22 a.m., and after signalling the train forward to Salford line and getting it accepted, I took the out-door signals off for the Preston train, namely, the home, advance and distant signals, and at 12.23 a.m. the train passed the cabin into the station. I do not remember when the Blackburn train was telephoned as leaving Blackburn, but the first information I got on the block bell was at 12.16 a.m., when I received the "Be ready" from Johnson Street. I did not accept the "Be ready" from Johnson Street, having already accepted the Preston train, and I did not accept the Blackburn train until the Preston train had got into the station at 12.23 a.m., and then I accepted it under clause 15, that is, section clear but station blocked. The train was given on line from Johnson Street at 12.24 a.m. I kept my signals against the train, and just as the train got to the footbridge I lowered the calling-on arm for it to proceed. I was justified in doing this to allow the train to draw into the station behind the Preston train. The lever I pulled to lower the calling-on arm was number 47; I am quite certain I lowered no other signal than 47—not 53. I did not know that the Blackburn train did not want to stop at Bolton. Had I received instructions that the train was to pass through Bolton without stopping I should have let it run through the through road so as to go before the Preston train. I have never allowed the train through the through road previously. The Blackburn train had nearly come to a stand when I lowered the calling-on arm, and after this signal was lowered the driver began to come on faster. I then looked out and saw the driver keep the steam on until the collision occurred. I could see the lights of the Preston train very well from my cabin. I did not hear the brakes applied before the collision. The driver commenced to whistle on the calling-on arm being lowered, and continued to do so until he hit the Preston train. I took the whistle to mean to warn passengers on the platform or in the train not to get out or in. The whistle does not mean a whistle for any particular signals. The Midland driver was whistling in the same way as Lancashire and Yorkshire drivers whistle when passing through Bolton station without stopping. I did not carry out the provisions of clause 48 because it is impossible for me to do so. The distance from my cabin is too great; and the calling-on arm is provided in lieu of doing this. There is no stated place for trains to come to a stand at Bolton; they generally draw well up the platform to carry out their station duties. Directly after the collision a driver, Joseph Rothwell, on the down platform line, said, "Tom, your signal's off," and I said, "Which signal?" and he replied, "The calling-on arm." I then said to him, "I will now put it on as I wanted some one to see how the signal stood." The manner in which the driver started off after getting the calling-on arm lowered made me feel very uncomfortable. I did not like the way in which he was running.

Joseph Rothwell, driver; 23 years in the service of the Lancashire and Yorkshire Company, three years as driver.—About 12.18 a.m. on the morning of the 11th January I arrived at Bolton from Rochdale with a passenger train, and drew up at the down platform. I had just begun to move away, when the collision occurred. The calling-on arm was off from the line from Blackburn. I bent down to look on hearing the collision and saw the calling-on arm off, as I could see its back light showing white. I saw the top arm on, which it was light enough for me to do. Its back light was not showing any light. I spoke to the signalman and told him the calling-on arm was off; he asked me which signal, and I told him the calling-on arm. He said he left it off so that some one might

see it. I did not look at the top arm until after the collision.

George McGhee, inspector of police; 13 years in the service of the Lancashire and Yorkshire Company.—I have been in my present position about six years. Mr. Maddock instructed me on the 14th January to ascertain why a man named Sharples was on the Midland engine on the night of the collision, and how far he had travelled. The impression was that he had travelled from Blackburn. I found Sharples at 29, Bennett Street, Hyde Road, Manchester. I said to him, I do not know whether you are the person I am looking for, but I want to see a man who is in the Midland Company's employ, and was at Bolton when the collision took place there last Saturday. I will tell you why I want to see you. A borough police constable who was on duty at Bolton said a Midland Company's servant was there, and went into the waiting-room amongst the injured and then on to the engine. Sharples said, "Oh yes, that was me." In the course of conversation with him I asked him if he knew how the accident occurred, and who was to blame. He said, "Our driver tells me that the danger-signal was against him, but he was called on with a green light." I saw him last night and he told me so. I said to him, "How did the driver come to run into the Lancashire and Yorkshire train; could not he see the lights at the end of the carriages?" He said he knew he had to run through, and the fact is that he saw the Lancashire and Yorkshire train at the bend of the platform, but could not stop, it was so slippery. It was the second portion of our train and was light. Had it been the proper train it would have smashed the Lancashire and Yorkshire train. Had the Lancashire and Yorkshire train been ours no one would have been injured but the Lancashire and Yorkshire carriages are so bad; they have no springs, and they are like blocks of wood. They are the worst carriages in existence. He told me that he got into the last carriage but two in the Lancashire and Yorkshire train before the collision took place, and he was injured in the head as well as back, and the doctors told him he must not go to work.

Abel Sharples, pay clerk at Ancoats: I have been in the service of the Midland Company 19 years. I am 30 years of age. I was a passenger in the Lancashire and Yorkshire train which was run into at Bolton on the morning of the 11th January. I went on to the Midland engine about a minute after the collision. The fireman had just got off and the driver was putting the fire together. Knowing it was a Midland engine and one of those of which I pay the servants, I went and saw Pinches the driver, whom I am in the habit of paying. He made no remark upon my asking him how he came to run into the train. No communication was made by Pinches to me as to the cause of the accident just after it occurred. I saw the driver on the evening of the 14th when he came for his money. I simply saw him, but had no chance of speaking to him. No one has been to my house since the accident to see me, nor have I had any talk with anyone about it.

George McGhee, inspector, recalled and confronted with Sharples, said: "This is the man I saw at 29, Bennett Street, Hyde Road, Manchester." Sharples replied, "I have never seen this gentleman in my life before." McGhee then said to Sharples, "Did you not say to me that if the Lancashire and Yorkshire train had been a Midland no one would have been injured. That the Lancashire and Yorkshire carriages were bad; they were like blocks of wood; they had no springs, and were the worst carriages in existence." Sharples then admitted that McGhee came to his house when he was in bed, and his sister called him down. He also admitted having some conversation with McGhee about the accident, but denied that he had said that the driver had made a statement to him.

Conclusion.

The evidence with regard to this collision is very conflicting. If, as contended by the Midland Company's driver, Pinches, both the home and calling-on signals worked by the Blackburn junction signalman were off when he came in sight of them shortly after emerging from the short tunnel at the Blackburn end of Bolton station, it makes his conduct far less blameworthy than it would otherwise have been for not keeping a better look out in running into and through an important station like Bolton. Even supposing, however, these signals were both off, still with a good look out ahead the tail-lights and one side-light of the Lancashire and Yorkshire train might have been seen far enough off to have enabled Pinches, with the ample brake power at his command and the comparatively slow speed at which he was running, to have stopped his train in time to have averted the collision, which occurred at a speed stated to have been of from five to eight miles an hour, the lights of the train in front having been seen from the engine for only about a carriage length.

Pinches had been on duty about 5 $\frac{2}{3}$ hours when the collision occurred. He had been a driver only about three months, during which time he had made eight journeys from Blackburn to Manchester, having previously made 52 journeys as fireman, and he felt that he had a perfect knowledge of the signals.

I cannot place much reliance on the fireman's evidence, as he had made only two previous trips from Blackburn to Manchester, and acknowledged that he was but ill-acquainted with the signals and saw none on the way to Bolton till on emerging from the tunnel, he curiously enough saw the two signals (spoken of by his driver) *off* at Blackburn junction.

The guard of the train, who was well acquainted with the road, acknowledges that he was not looking out for signals till near to Bolton, when he saw a signal off (he is not certain which) before reaching the tunnel, and then shortly after emerging from it he states that he also saw the up home-signal worked from Blackburn junction, *off*.

Dodgiu, the signalman on duty at Johnson Street cabin near the tunnel mouth, declares that in consequence of the Midland train having been accepted at Blackburn junction under clause 15 of the block telegraph rules, viz., section clear, but station and junction blocked, he kept the home-signal on the Blackburn side of the tunnel at danger till, judging by the time that had elapsed since the train had been signalled to him from Craddock Lane, he thought that it must have stopped, or nearly stopped, at the home-signal. He excuses himself for not carrying out the further provisions of clause 15, viz., stopping the driver by hand-signal at his cabin, informing him of the state of things ahead and then allowing him to proceed by hand-signal on account of the slow speed he was running when he emerged from the tunnel not rendering it necessary to do so.

Dodgin must therefore be held primarily responsible for this collision, for though, owing to the position of the rear home-signal at the Blackburn side of the tunnel he was unable to know when the train had absolutely stopped at it, there was nothing to have prevented his stopping the driver by hand-signal opposite his cabin, and there informed him of the state of things ahead. Had the driver been so warned, he would have been far less likely to have been misled by fancying he had a clear road through the station, supposing that is that the Blackburn junction home-signal was not lowered.

Dodgin has been a signalman for six months, and employed for two months in Johnson Street cabin, where he had come on duty for 12 hours 20 minutes at 5.40 p.m., nearly seven hours before the collision. His proper hours of duty were 12, but he and the man he relieved had improperly made a private arrangement for Dodgin to come on duty 20 minutes before his regular time.

Potts, the signalman on duty in Blackburn junction cabin, is positive that he never lowered the home-signal for the Blackburn train, but states that he lowered the calling-on signal, which is underneath the home-signal, when the train had got close to it and when it had nearly stopped. Dodgin makes the same statement as to the position of the train when the calling-on signal was lowered the statement of both signalmen being in direct opposition to that of the driver, fireman, and guard of the Midland Company's train, who declare that not only the calling-on signal, but also the home-signal above it were both off, when they came in sight shortly after the train emerged from the tunnel or at a distance of about 140 yards from these signals, the line rising towards them on a gradient of 1 in 71 $\frac{1}{2}$ for nearly the whole of this distance.

The "calling-on arm" which was lowered on this occasion is a substitute for a hand-signal, and there is no doubt that Potts ought not to have lowered this signal

until the Midland train had been actually stopped, which Potts acknowledges that it had not done.

Potts is a signalman of 19 years' service as such. He had come on duty in Blackburn junction cabin (in which he had been employed since it was opened nearly three years ago) at 10 p.m. for eight hours, and had been on duty about two and a half hours when the collision occurred.

Some further evidence was adduced as to a conversation which had passed between a Lancashire and Yorkshire Company's inspector of police and a Midland Company's pay clerk who had been a passenger in the former Company's train when run into at Bolton. The inspector of police stated that the pay clerk (Sharples) had told him that Pinches, the Midland Company's driver, informed Sharples (who was in the habit of paying Pinches his wages) that the danger-signal was against him, but that he was called on by a green light. Sharples at first denied having had any conversation with the inspector of police, but on being confronted with him admitted that he had had an interview with him, although he denied that the driver had made any statement to him about the cause of the collision, and which statement he had communicated to the inspector of police.

Leaving out of consideration the dispute as to whether the Blackburn junction home-signal was or was not lowered for the Midland train, the responsibility for this collision rests, in my opinion, primarily with Dodgin, the signalman in Johnson Street cabin, for failing to comply with his rules in not stopping the Midland driver by hand-signal and informing him of the state of things ahead before allowing him to proceed; secondarily with Potts, the signalman in Bolton junction cabin, for lowering the calling-on signal before the train had been stopped at or near it; thirdly, with Pinches, the driver of the Midland train, for not having kept a better look-out as he was approaching the Lancashire and Yorkshire train standing at up end of the Bolton platform, the tail-light and one of the side-lights of which train were visible quite far enough off (about 100 yards) to have enabled the Midland driver to stop his train with the continuous brake had he seen them even at half the distance at which they were visible.

If, however, the Blackburn junction home-signal was at danger (and my own opinion leads me to that idea), then the culpability of Pinches, the Midland driver, exceeds that of the signalmen, inasmuch as he ought then to have known he was most likely to be stopped behind a train already standing at the platform, and to be proceeding with the necessary caution in consequence.

At present the home and rear home up signals for Johnson Street cabin are so interlocked that the former has to precede the latter; this was done with the object of preventing a passenger train being stopped in the short tunnel between these home-signals. As, however, this arrangement obliges a train to be stopped out of the signalman's sight, it will be better to remove the interlocking from these two signals, so that a train may be stopped at the inner home-signal before being allowed to proceed into the station under clause 15 of the block-signal regulations.

The Assistant Secretary,
Railway Department, Board of Trade.

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

APPENDIX.

PARTICULARS OF DAMAGE TO LANCASHIRE AND YORKSHIRE COMPANY'S TRAIN.

Third No. 4.—Headstocks, middle-bearers, buffer-castings, diagonals, sole-bar, buffers, &c., damaged. Estimated cost of repairs, 50*l*.

Third No. 1841.—Headstocks, buffers, end panels, foot-boards, &c., damaged. Estimated cost of repairs, 30*l*.

Third No. 1030.—Axle-guards damaged and body moved. Estimated cost of repairs, 4*l*.

Van No. 73.—Headstocks, body moved, &c. Estimated cost of repairs, 5*l*.

Composite No. 566.—No damage.

Third No. 1426.—Middle-bearers, body moved, &c. Estimated cost of repairs, 6*l*.

Composite No. 138.—Middle-bearers, body moved, &c. Estimated cost of repairs, 7*l*.

Third No. 1805.—Headstocks, body, moved, &c. Estimated cost of repairs, 6*l*.

Printed copies of the above report were sent to the Lancashire and Yorkshire and Midland Railway Companies on the 21st March.