

NORTH EASTERN RAILWAY.

Railway Department, Board of Trade,
8, Richmond Terrace, Whitehall, London, S.W.

September 2nd, 1910.

SIR,

I HAVE the honour to report for the information of the Board of Trade, in compliance with the Order of the 6th August, the result of my inquiry into the circumstances under which a collision occurred on the 29th July between a passenger train and an engine which had been assisting it, at Lartington on the North Eastern Railway.

In this case the 12.40 p.m. down passenger train from Darlington to Tebay, consisting of an engine and six vehicles, was, on arrival at Lartington station, run into from the rear by a banking engine which had assisted it up the incline between Barnard Castle and Lartington, and which had become uncoupled from the train without the knowledge of its driver.

Six passengers and the guard of the train were slightly injured by the collision, but none of the injuries were of a serious nature.

The engine of the train was a four-wheels-coupled tender engine, with one leading pair of wheels ; it was fitted with the Westinghouse automatic brake working blocks on the four coupled wheels and on the six tender wheels, and with a hand brake working the blocks on the tender wheels.

The banking engine was a six-wheels-coupled tank engine, with one pair of trailing radial wheels ; it also was fitted with the Westinghouse automatic brake working blocks on the six coupled wheels, and with a hand brake working the same blocks. It was running bunker first, and it had been coupled to the rear vehicle of the train by means of a slip coupling.

The train consisted of the following vehicles attached to the engine in the order given :—

	Wheels.
One brake composite	8
One milk van	6
One brake composite	8
One third class	8
One composite	8
One brake third	8

These vehicles were all fitted with the Westinghouse automatic brake working blocks on all the wheels of the eight-wheeled vehicles, and on four wheels of the six-wheeled van. All the brakes are reported to have been in good order.

The only damage to rolling stock was that two windows were broken in the brake third at the rear of the train. None of the vehicles were derailed, and no damage at all was done to the permanent way.

Description.

Lartington station, where this accident occurred, is situated about two and a half miles from Barnard Castle, on the Barnard Castle—Tebay Branch of the North-Eastern Railway. The station is provided with up and down platforms, with one pair of lines running between them ; the direction of the lines is approximately east and west, the down line being on the south side. There are no connections at the station, and no signals, the station being in the block section between Tees Valley junction on the east and Lartington Quarry junction on the west.

For a train running from Barnard Castle to Lartington, the first mile is practically level, but for the remainder of the distance there is a long rising gradient, averaging 1 in 70 ; the line beyond Lartington for about 10 miles is also on a rising gradient, and it was on account of these gradients that an additional engine was attached to the train.

The Company's regulation is that when an additional engine has to be attached to a train, it must be attached at the rear of it, the reason for which is that there is a viaduct a short distance beyond Lartington over which it is not considered desirable that two engines shall run coupled together.

The following extract from the Company's Regulations refers to this point :—

“ When passenger, goods or mineral trains are run from Barnard Castle to the west with two engines, the engine assisting must be attached in the rear from Barnard Castle to The Summit.”

Evidence.

Thomas Cooper, stationmaster, Barnard Castle, states : I am stationmaster at Barnard Castle, and I have held that appointment for about 20 years. I remember the 12.40 p.m. down passenger train from Darlington to Tebay leaving Barnard Castle on the 29th July. I was present when the banking engine was coupled on to the rear of the train. It is customary whenever the weight of

the train necessitates it to couple a banking engine on to the rear of this train. It is only occasionally necessary to do so. The rule is that when the weight of the train exceeds 112 tons for the class of engine in use on this occasion, a banking engine is to be attached to the train. I myself saw the slip coupling hanging on the rear of the train, and I saw the other end of it coupled up to the banking engine. Everything appeared to me to be in proper order. I saw the train start away, and everything appeared to be all right. Whenever a banking engine is attached to a passenger train going to the Summit it is customary to use a slip coupling.

James Wilson, loco. foreman, Barnard Castle, states:—I am loco. foreman at Barnard Castle, and I have held that appointment about 15 years. I remember the 12.40 p.m. down train Darlington to Tebay leaving Barnard Castle on the 29th July. It had a banking engine coupled up to it. I myself saw the banking engine coupled to the train. I was standing by when the banking engine was coupled up. I told the fireman to be careful about seeing that the clutch was properly in. The fireman that day was not a regular fireman but a cleaner, and it was on that account that I gave him the caution. As far as I could see the clutch was properly in. I think that the slip coupling was properly connected up. I saw the train start away, but I did not specially notice the slip coupling when it started.

Alfred Blumer, engine driver, Barnard Castle, states: I have been about 35 years in the service of the Company, and I have been a driver for about 17 years. I came on duty on the 29th July at 12.15 p.m. to work till 10.15 p.m. I left duty on the previous night at 10.15. At Barnard Castle I coupled up my engine to the 12.40 p.m. passenger train from Darlington to Tebay. My engine was a four-wheels-coupled tender engine with one pair of leading wheels. My engine was fitted with the Westinghouse automatic brake working blocks on the four coupled wheels and on the six tender wheels, and with a hand brake working the blocks on the tender wheels. My brakes were in good order. I am in the habit of driving between Barnard Castle and Tebay, and am well acquainted with the line. I had a banking engine to assist me on the journey, and it was coupled up to the train at Barnard Castle. I did not see it coupled up myself. Before we started either the stationmaster or guard told me that I was to have a banking engine to assist me, and that it would be coupled up with a slip coupling. I subsequently received a hand signal from the guard intimating that the banking engine was coupled up, and I got a whistle from the rear engine intimating that they were ready to start. It is only occasionally that we have a banking engine on this train, and when we have a banking engine it is always coupled up with a slip coupling. As far as I am aware when we left Barnard Castle everything was correct with my train. Nothing unusual occurred that I am aware of between Barnard Castle and Lartington; everything appeared to work satisfactorily. The banking engine assisted us very well, in fact we made good time between Barnard Castle and Lartington. We left Barnard Castle at 1.27 p.m., and we arrived at Lartington between 1.30 and 1.31 p.m. I think if anything it was 1.31 p.m. On this date, on account of having a banking engine, we ran rather quicker than usual. On arrival at Lartington station I stopped my train as usual. I knew nothing of the collision at Lartington, but I noticed that we were detained

longer than usual, and I asked the fireman what was the matter. He said there was some bother down at the other end of the train and that the passengers were getting out. I started from Lartington without knowing anything about the accident having occurred. I felt no shock whatsoever from the collision. When stopping at Lartington station I made use of the Westinghouse brake. I made a good gradual stop at the station. I knew nothing whatever about the collision until I got to Tebay. I shut off steam at the cattle creep, about 100 yards before reaching Lartington station, I did not apply the automatic brake until just before we had reached the platform. I did not feel any jerk when I shut off steam. I cannot say when steam was turned off on the banking engine.

Percival Walton, loco. cleaner, Barnard Castle, states: I have been three years in the service of the Company during which I have been variously employed in the loco. sheds. I have often acted as fireman on trains between Barnard Castle and Tebay. I am not, however, a passed fireman. On the 29th July I was acting as fireman on the 12.40 p.m. Darlington to Tebay train with driver Blumer. At Barnard Castle the guard told me that a banking engine had been attached to the train. Nothing unusual occurred on our run from Barnard Castle to Lartington. On approaching Lartington station the driver turned off steam opposite the cattle creep and he applied the automatic brake just about when we reached the end of the platform. The train stopped very nicely and I never noticed any jerk of any sort. Before I left Lartington I had no idea that there had been a collision of any sort. I first heard of it at Tebay. The brakes on my engine appeared to me to be in good order. I do not know at what point steam was turned off on the banking engine.

Henry Robert Willey, relief porter, states: I have been in the service of the Company 13 or 14 years and I have been a relief porter for 9 years. I have been passed as a guard and have often been employed as such. I came on duty on the 29th July at 7.20 a.m. to work till about 7.20 p.m. I came off duty on the previous day at 9.5 p.m. I was guard on the 12.40 p.m. passenger train Darlington to Tebay and I joined that train at Darlington. My train consisted of six vehicles, five of which were bogie carriages with eight wheels and one was a milk van with six wheels. The vehicles were all fitted with the Westinghouse automatic brake working blocks on all wheels of the eight-wheeled vehicles and on four wheels of the six-wheeled vehicles. My brakes were in good order. At Barnard Castle the banking engine was attached to the rear of my train. I have occasionally before acted as guard on this train. I have never before had a banking engine attached to this train but I have on other trains from Tebay. I myself saw the banking engine attached to the train and it was attached with a slip coupling. I am acquainted with the slip couplings though I have never actually handled them myself. I think it was the fireman of the banking engine who connected up the slip coupling on this occasion. I myself looked to see whether the coupling was properly coupled up at Barnard Castle, and it was properly coupled up. I think I should have detected it if it had not been properly coupled up. I had no communication with the driver or fireman of the banking engine before we left Barnard Castle. Nothing unusual occurred between Barnard Castle and Lartington until I received the bump at Lartington station. As far as I could tell whilst running from Barnard Castle to Lartington the

banking engine appeared to be pushing the train. The banking engine appeared to be pushing the train steadily and I did not notice any jerks. I did not notice the automatic brakes applied until we were close to Lartington station. We came to a stand at Lartington station and immediately after doing so my van was run into. When we stopped at the station it was a gradual stop of the usual description. I was in the act of opening the door of my van when the collision occurred and I was slightly injured thereby. I got out to see what had happened and found that the banking engine had run into us. None of the wheels of my train were off the road. At Bowes I asked the driver of the banking engine how it had happened and he said the slip coupling had got disconnected. It was at Barnard Castle that I learnt a banking engine would have to be attached to my train on account of an additional vehicle being added to it there. I felt no jerk whatever on the train when we were approaching Lartington. As soon as I could pull myself together after the collision I looked at the slip coupling and I then found that the driver was engaged in connecting it up again.

John Glendenning, engine-driver, Barnard Castle, states: I have been about 24 years in the service of the Company, and I was appointed permanent driver on the 29th July last. Previous to that I had been a fireman about 18 years and I have been a passed driver for 10 years. I have often been in charge of passenger and goods trains and I have often been in charge of banking engines between Barnard Castle and Summit. During the last seven years I have off and on had charge of banking engines working between Barnard Castle and Summit and for five months I did so regularly. I have only once been driver of a banking engine which was attached by means of a slip coupling, but I was also once fireman on a train which was so fitted. I came on duty on the 29th July at 10.35 a.m. to work until about 9.5 p.m. I came off duty the previous night about 10.15 p.m. My engine was a six-wheels-coupled tank engine with one pair of trailing radial wheels. It was fitted with the Westinghouse automatic brake working blocks on the six coupled wheels and with a hand brake working the same blocks. My brakes were in good order. My engine was attached as a banking engine at the rear of the 12.40 p.m. passenger train from Darlington to Tebay. My fireman coupled the engine up to the rear of that train. I got off the engine and saw the fireman finish coupling up. I looked at the coupling from the platform and saw that it was right and it appeared to me to be perfect. I think that if it had not been properly connected up I should have detected it. When we started from Barnard Castle I was under the impression that everything was all right. Nothing unusual occurred after leaving Barnard Castle until we were approaching Lartington station. I think that my engine was propelling the train properly all the time. I turned off steam just below the cattle creep before reaching Lartington station; I noticed that steam was turned off on the leading engine just as they came round the curve and I turned off steam immediately afterwards. I did this instantly after seeing that the leading engine had turned off steam. I do not know when the automatic brake was applied by the leading engine. Immediately after I had shut off steam I noticed that my engine was uncoupled. I found this out by going to the side of my engine to get a better view of the train, and I at once saw that we had parted. I cannot say when the coupling became uncoupled. I did not notice any jerk on my engine when I turned off steam. As soon as I

found we were uncoupled I applied the automatic brake at once, but previous to that I did not apply it. The automatic brake acted well, but the collision occurred immediately afterwards. I think at the time of the collision our speed was about walking speed. After the collision I got down to see what had happened. The coupling was hanging by its link to the front of the engine and the coupling which had been attached to the rear of the train was open as if the cord had been pulled. The cord had never been pulled on the engine, it had never been touched at all. I do not think anything occurred on the engine to pull the cord. I cannot account in any way for the coupling becoming open. I myself connected it up again before leaving Lartington, and it acted all right up to the Summit. At the Summit my engine was uncoupled by pulling the cord and it acted quite correctly. We were running bunker first on the train. We stood for about three minutes at Barnard Castle after we had coupled up before we started. I am quite sure the cord was never tightened up before reaching the Summit. The cord was on the cab of the engine when the coupling took place.

Harold Walker, cleaner, Barnard Castle, states: I have been about three and a-half years in the service of the company and I have been employed as a loco. cleaner the whole time. During that period I have often been employed as a fireman, but I am not a passed fireman. On the 29th July I was acting as fireman to driver Glendenning. I worked the same hours as he did, and I was on the engine which banked the 1.24 p.m. train from Barnard Castle to Tebay. My engine was attached to the rear of the train by means of a slip coupling. Previous to being coupled up to the train my engine was standing at the water column, and while we were standing there the slip coupling was brought up and hung on to the front of the engine in the way we were running. I undid the coil of the release cord and put it into the cab of the engine, but I did not secure it to anything in particular. When we joined the train I myself coupled up the slip coupling. When I went to couple up, the catch of the covering was made fast, and all I had to do was to put the coupling over the hook of the rear vehicle. I tried the catch to see that it was made properly fast, and it was. The stationmaster and Mr. Wilson were both looking on at the time. Mr. Wilson remarked that the coupling was all right, but it would be better if I moved the release cord from the fireman's side to the driver's side. I did so, and I made the release cord fast to the water gauge for the tank. When running from Barnard Castle nothing unusual occurred to my knowledge. It appeared to me that the engine was shoving the train. The engine appeared to be shoving the train steadily and I noticed no jerks at all. On coming near the cattle creep driver Glendenning observed that steam was turned off on the leading engine and he then turned off steam himself at once. I noticed him turn off steam. Something like half a minute after he had turned off steam Glendenning remarked to me that the train had become divided, and he then at once applied the automatic brake. The brake seemed to work well, but the collision occurred. I cannot say what our speed was at the time of the collision. Previous to noticing that the train was divided I did not notice any jerk at all on our engine. After the collision I did not myself examine the coupling at Lartington. The driver got down and did so and the driver coupled up again. On reaching the Summit the engine was uncoupled by means of the release cord. It

acted well and released the engine. I can give no explanation as to how the coupling became uncoupled. It is only the second time that I have had anything to do with them. I had only once before connected up an engine to its train by means of a slip coupling. So far as I understand the coupling I think that it was correctly connected up before leaving Barnard Castle. We stood a short time at Barnard Castle after I had shifted the release cord from one side of the engine to the other. I think now that when I undid the coil of the release cord and first put it into the cab of the engine was after my engine had been coupled up to the train. There was slack on the cord when the cord was first put on to the engine, and there was still slack on it when it was shifted from the fireman's to the driver's side.

Driver *Glendenning*, re-called, states: My engine was standing at the water column in the

yard when the slip coupling was first put on to it, and it was whilst standing at the water column that the release cord was brought on to the cab of the engine. It was brought on to the fireman's side when it was first put on. It was subsequently altered from the fireman's side and put on the driver's side. My engine was standing at the platform at the time when this alteration was made. I believe that we had been coupled up to the train when this alteration was made. I myself saw the alteration made and I do not think that any strain was put on the cord which could have released the coupling, and while we were travelling to Lartington the release cord was quite loose. The release cord was not fastened to anything in the cab. The release cord was not made fast to the tank water gauge. I cannot say for certain whether my engine began to move from Barnard Castle before the train engine began to move. I do not remember my engine being pulled forward by the train when starting from Barnard Castle.

Conclusion.

The train to which the accident occurred had started from Darlington, and it was after its arrival at Barnard Castle that the banking engine had been coupled up to the rear of it; previous to being coupled up to the train, this engine had been standing at the water column, and whilst it was standing there the slip coupling, by which it was to be attached to the train, was brought up and hung on to the bunker end of it. Cleaner Walker, who was acting as fireman of the engine, undid the coil of the release cord and brought the latter into the cab of the engine on the fireman's side. The engine then joined the train, and Walker coupled it up to it by means of the slip coupling. He states that after doing so he tried the clutch to see that it was made properly secure, and he satisfied himself that it was so. Whilst the engine was standing at the platform, the release cord was changed from the fireman's side to the driver's side, but it does not appear to have been fastened to anything in the cab. Mr. Cooper, the stationmaster at Barnard Castle, was present at the time that the banking engine was coupled up and he states that he saw the slip coupling connected and everything appeared to him to be in proper order. Locomotive Foreman Wilson was also standing by at the time, and he also saw the banking engine coupled up. Knowing that the fireman that day was not a regular fireman, but a cleaner, Wilson told him specially to be careful about seeing that the clutch was properly in, and Wilson states that, as far as he could see, that was the case.

Porter Willey, who was acting as guard of the train, states that he also looked to see whether the coupling was properly carried out at Barnard Castle; he thinks that it was properly coupled up, and that he should have detected it if it had not been so.

The train accordingly started from Barnard Castle, and nothing unusual occurred until it was approaching Lartington Station. The driver of the leading engine of the train states that the banking engine assisted very well during the run, and as a result good time was made between Barnard Castle and Lartington. The guard of the train states that the banking engine appeared to him to be pushing the train steadily, and he did not notice any jerks.

On approaching Lartington Station, driver Glendenning, who was in charge of the banking engine, noticed that steam was turned off the leading engine, and he at once turned steam off on his engine. Immediately after doing so he noticed that his engine was uncoupled from the train, and on seeing that that was the case he at once applied the automatic brake; the brake acted well and the speed of the engine was reduced to about walking speed, but before it could be brought to rest it ran into the rear of the train. Glendenning at once got down from his engine to see what had happened, and he found that the coupling was hanging by its link to the end of his engine, and that the clutch by which it was attached to the rear of the train was open, as it would have been if the cord had been pulled. The coupling, it should be noted, was found to be uninjured in any way. The engine was again connected up to the train by the same coupling, and at the Summit, where the engine was finally uncoupled, the uncoupling was carried out by pulling the cord, and it acted quite correctly. There was clearly therefore no defect in the coupling.

From the above evidence it is clear that this collision was entirely due to the fact that the banking engine had become uncoupled from the rear of the train without the knowledge of its driver. It is undoubtedly possible that some strain may have been

inadvertently put on the release cord, and thus caused the coupling to become undone, but there is no evidence of this having occurred, and I am inclined to think that the cause must be looked for elsewhere. Cleaner Walker, who coupled up the engine to the train, had only once before coupled up an engine by means of a slip coupling, and all he can state with regard to the coupling on this occasion is that as far as he understood the coupling he thought it was correctly coupled up. Several officials who were standing near at the time looked at the coupling and thought that it was correctly secured, but none of these appears to have made a sufficiently close examination of it to make sure on that point. The most probable cause of this uncoupling, which fortunately did not have more serious results, appears therefore to be that the clutch of the slip coupling was not properly secured when the engine was coupled up at Barnard Castle, and that it consequently became unfastened during the run to Lartington.

The primary causes, however, to which this accident should be attributed are the employment of a banking engine at the rear of a passenger train, and the attachment of that engine to the train by means of a slip coupling. In October, 1899, an accident occurred on this same branch of the North-Eastern Railway which, though somewhat different in detail, was due to precisely the same causes. In reporting to the Board of Trade on that accident, the Inspecting Officer recommended that the Company should consider whether they could prohibit the use of slip couplings on passenger trains, and make it a rule that on such trains assisting engines should invariably be attached in front. It is to be regretted that the Company have not yet seen their way to carry out this recommendation, but, in the light of this accident, the recommendation should once more be brought to their notice.

I have, &c.,
P. G. VON DONOP,
Lieut.-Col. R.E.

The Assistant Secretary,
Railway Department, Board of Trade.

Printed copies of the above Report were sent to the Company on the 16th September.
