

LONDON MIDLAND AND SCOTTISH RAILWAY.

Ministry of Transport,
7, Whitehall Gardens, London, S.W. 1.
18th March, 1924.

SIR,

I have the honour to report, for the information of the Minister of Transport, in accordance with the Order of the 26th February, the result of my inquiry into the circumstances of an accident which occurred at about 2.45 p.m., on February 9th at Eastwood, between Nonnanton and Todmorden on the London Midland and Scottish Railway.

As the 9.45 a.m. freight train from Woodstock to Crofton was passing Dover Bridge signal box, Eastwood, it was noticed by the signalman there to have become uncoupled. The rear portion came to a stand in the section with the brake van about 45 yards west, that is on the facing side, of Dover Bridge down starting signal. Arrangements were eventually made for the 12.35 p.m. Liverpool to Bradford passenger train to propel this rear portion to Hebden Bridge, the next block post in advance. This passenger train failed, however, to stop short of the standing wagons and came into collision with the brake van at the rear, with the result that the brake van and three wagons were derailed and seven altogether were damaged, two of them considerably. There was no case of personal injury, nor was there any damage done to the passenger engine or train.

The goods train consisted of 117 wagons, of which 38 were loaded and the remainder empty, and a 10-ton brake van, weighing in all about 810 tons. It was drawn by engine No. 1645, 0-8-0 type, with 8-wheeled tender. The passenger train consisted of six bogie passenger coaches, weighing in all 151 tons. It was drawn by engine No. 1524, 4-6-0 type with 6-wheeled tender, weighing approximately 111½ tons. The train and engine were fitted throughout with the vacuum brake, the percentage of brake power on the train being 68½.

The weather at the time was clear. There is some doubt as to whether it was dry or damp, but the visibility and state of the rail both appear to have been good.

Description.

The railway between Dover Bridge and Hebden Bridge consists of a double line running in a general direction from west to east, with the down line upon the north side. Dover Bridge signal box is situated to the east of Eastwood Station and on the north of the railway. The down outer and inner distant signals for this box are carried under Eastwood inner home and starting signals respectively, and are situated 1,222 and 801 yards from the box. There are in addition to these a home signal 62 yards west of the box and a starting signal 354 yards east of the box. Hebden Bridge has two signal boxes, the West box north of the railway and East box south of the railway, separated by a distance of 535 yards, the West box being 1 mile 554 yards from Dover Bridge. The railway between Dover Bridge and Hebden Bridge is on a curved alignment throughout. Between Dover Bridge signal box and the down starting signal the alignment is on a curve southward with gradually diminishing radius, the minimum being approximately 30 chains in the neighbourhood of the down starting signal, about 50 yards beyond which there is a short length of tangent preceding the following reverse curve to the north. The line at this point is on low embankment and there is a bridge under the railway approximately at the place where the collision took place, 44 yards west of Dover Bridge down starting signal. There is a trailing crossover between the up and down main lines immediately east of Dover Bridge down home signal. The gradients between Dover Bridge and Hebden Bridge West box are as follows:—

For 3½ chains	...	...	...	1 in 182 falling.
" 10 "	...	...	...	1 in 1,886 rising.
" 11 "	...	...	...	1 in 179 rising.
" 15 "	...	...	...	1 in 109 falling.
Thereafter	...	...	...	1 in 179 falling.

Report.

This collision was in itself of minor importance, but there are certain points which call for notice in regard to the manner in which the regulations covering cases of the kind were carried out.

So far as the original uncoupling is concerned, it is not necessary to go into any great detail. It occurred between a Midland and Great Central wagon (the 79th and 80th vehicles from the engine), and in both cases the couplings (standard Gedges) and drawgear were in good order. The Midland wagon hook was nibbed, but that of the Great Central wagon was not, and it is therefore probable, though there is no evidence on the point, that the link of the Midland wagon was on the Great Central wagon hook, from which it must have become uncoupled on the change of gradient near Dover Bridge. Under these conditions such a result is not uncommon, and it is to be prevented, as far as possible, uncoupling of the kind that the nibbing of hooks has been introduced.

The uncoupling was observed by signalman Ingham at Dover Bridge. As the train passed his box at 2.19 p.m. he thought that the rear portion was beginning to run slowly, and on going to the window to watch the train more closely, he saw the rear portion come to rest near his starting signal. He then sent the "train divided" bell signal to Hebden Bridge West box, where the receipt of this signal is booked at 2.24 p.m., and the front portion of the train was eventually brought to a stand with the engine about 80 yards beyond Hebden Bridge East box, after the signalman there had been told that the rear portion was stationary. Arrangements were then made for the up line to be examined, and for this purpose the engine was detached at Hebden Bridge West from the 1.20 p.m. Bradford to Manchester passenger train, which had just left the station and was stopped for the purpose at the West box up home signal. This engine was sent forward to examine the up line under the provisions of Block Telegraph Regulation 14 A., the "entering section" signal for this engine being booked at 2.35 p.m. Signalman Mawson, on duty at Hebden Bridge West, said that he previously told signalman Ingham at Dover Bridge of his intention, and the time when he expected this engine would leave. It may be noted here that the presence of this passenger train on the up road prevented the use of the goods train engine for carrying out this work. Station foreman Ingle, Hebden Bridge, travelled on the footplate of the passenger train engine in order to examine the road in accordance with the terms of the Block Telegraph Regulation concerned. There also appears to have been on the footplate of this engine, without authority, but with the knowledge of station foreman Ingle, Shackleton, a goods shunter at Hebden Bridge, who "joined the engine thinking he might be of use if assistance was required at the Dover Bridge end." Ingle found the up line unobstructed and the rear portion of the divided goods train at a standstill in the position already described, and on his arrival at the Dover Bridge signal box gave this information to the signalman.

Meantime signalman Ingham had arranged for the 12.35 p.m. Liverpool (1.25 p.m. Manchester) to Bradford passenger train, which was then at Eastwood Station on the down line, to propel the rear half of the goods train to Hebden Bridge, and at 2.33 p.m. accepted this train accordingly from Eastwood under the warning arrangement, as authorised in these circumstances, up to his home signal, where the train came to a stand. Ingham stated in his evidence that as soon as he was satisfied that the rear half of the divided train had come to a stand he telephoned to the Control at Manchester, having previously informed them of the circumstances, to ask whether he could use the Liverpool-Bradford passenger train to propel this portion through the section, to which procedure Ingham said the controller at once agreed. He added that the controller did not ask whether there was any alternative method of getting the rear portion through the section. There is considerable discrepancy between Ingham's version of this conversation with the Manchester Control and that of Turner, the controller who dealt with the matter. The latter said that the telephone conversation with Dover Bridge was initiated by him and not by Ingham, whom he told that the engine of the up passenger train was coming along the up road to examine it, and that he could use this engine to propel the rear portion of the divided train to Hebden Bridge. Turner said that the signalman then said "we have made arrangements for the passenger train to do this." Turner then asked which passenger train was intended and was told it was the 1.25 p.m. from Manchester. He was not then aware that this passenger train was at Dover Bridge and said to

Ingham "that the light engine would have been better to do that job than the passenger train." On the signalman replying "the passenger train is just going" Turner acquiesced, saying that in the circumstances it was no use making fresh arrangements.

Which of these two versions is correct it is impossible to say, but Ingham admitted that he had no very clear recollection of individual telephone messages, of which there were a good many at the time. I am inclined to accept controller Turner's version of the conversation and to conclude, therefore, that Ingham brought up the passenger train to his home signal before the Manchester controller was aware of what he had done, and that the agreement of the latter to the use of the passenger train was more in the nature of acquiescing in a *fait accompli* than in agreeing to an initial proposal to this effect.

When the passenger train had come to a stand at Dover Bridge home signal, the fireman at once went to the box to carry out General Regulation 55. Meantime, as soon as the rear portion of the goods train came to a stand, the guard, Hobson, having put the chain on the wheel of his brake, which as a matter of fact he had fully applied after leaving Summit Tunnel and which remained applied until the train came to a stand, collected his detonators, wrong line orders, etc., and went back along the down line to Dover Bridge box, opposite to which he placed three detonators on the rail. It is uncertain from the evidence whether he or the fireman of the following passenger train reached the box first, but in any case there can only have been a very short interval between their visits. Shortly after their arrival at the box, it appears that the light engine with station foreman Ingle arrived on the up road, and, according to his evidence, when he went to the box the signalman asked him whether he was going to use this light engine for propelling the rear portion through the section. Ingle said that arrangements for this purpose were nothing to do with him. He said that he then left the cabin and stood just outside. Subsequently he heard the signalman tell two or three people outside the cabin, evidently guard Hobson and the fireman of the passenger train, that arrangements had been made for the rear portion of the goods train to be propelled by the passenger train which was at the time standing at Dover Bridge home signal. Ingle, guard Hobson, and signalman Ingham were of course all three aware exactly where the tail of the rear half of the train was standing and guard Hobson was also informed by station foreman Ingle where the front portion of the train was:

There is considerable uncertainty from the evidence as to exactly what information was given to the driver of the passenger train and by whom such information as was given was conveyed. In accordance with the regulations, intimation of the exact position of the tail of the rear half of the divided train should have been given personally by guard Hobson to the driver, John Priestley. Hobson said that he told the driver that they were going to propel the rear portion to the front portion at Hebden Bridge, and said "it is down there," pointing in the direction. He was at the time half on and half off the left side of the footplate and could see the rear portion from where he was. The driver, however, was sitting at the time on his seat on the left-hand side of the engine, from which position he would not be able to see the tail of the train. Hobson added that when he gave the instructions to the driver and pointed down the line, he said the tail was "about 100 yards down there," and that as far as he knew both the driver and the fireman understood the situation as well as he did, and that instructions had already been given to them by foreman Ingle. It may here be noted that, on the fireman's suggestion, guard Hobson had already removed the three detonators which he had placed opposite the box, the fireman thinking there was no object in exploding them unnecessarily. Station foreman Ingle said that he told driver Priestley that his train was to propel the rear portion of the goods train to the front portion which was standing at Hebden Bridge, and that the rear portion was standing just ahead and pointed towards it. He was standing on the footplate against the firebox when he gave this information, and about the same time or very soon afterwards the guard of the goods train also got on to the footplate, but he did not know whether there was any conversation or not between the two. It was, as Ingle was aware, guard Hobson's duty and not his to instruct the driver and to travel on the footplate of the engine. He said that he did so on this occasion as he considered that his presence would be an additional precaution, and also he wanted to get back to Hebden Bridge.

Driver Priestley's version of the information which he received does not accord with that of the foregoing two witnesses. Priestley said that he did not know

definitely, although he guessed as much, that his train was going to be used to push the rear portion of the divided train until station foreman Ingle got on to the engine. He said that Ingle told him that the last wagon was against Hebden Bridge box and that he understood this to mean the last wagon of the rear portion. He said that he did not get any information from the guard as to the condition of the section and did not in fact ask him for any, imagining from what station foreman Ingle told him that the rear portion was at the far end of the section, and that this impression was strengthened by the subsequent message given to him by the signalman to the effect that he was entering the section under Block Telegraph Regulation 14 and that he was authorised to pass the down starting signal at danger. It will be remembered in this connection, that the rear end of the standing wagons was inside the starting signal in question. Priestley added that just as the train started away the guard asked him his name, and the type of his train, and that it was just after this conversation concluded that he first saw the standing vehicles about an engine length away. Guard Hobson also gave evidence in regard to this conversation.

In addition to the other men on the footplate, shunter Shackleton was also on the engine. He seems, however, to have taken no part in the conversation or proceedings generally and to have stood with his back to the tender on the right-hand side of the footplate. There were therefore five men on the engine, of whom two, station foreman Ingle and shunter Shackleton, should not have been there. The train then left after being cautioned by the signalman as mentioned above, and with the driver and fireman both, in accordance with the expressed opinion of station foreman Ingle and guard Hobson, well aware of all the circumstances and of the position of the standing wagons; but, according to the evidence of driver Priestley, under a misapprehension as far as he was concerned of the position of the standing wagons, and according to the evidence of fireman Ingham, with no idea on his part where the tail of the divided train was. Driver Priestley remained seated on the left-hand side of the footplate, from which position there was admittedly no view of the standing wagons as the train left. Station foreman Ingle was on the right, that is the six-foot side of the footplate looking out along the road. He said that as the engine was starting away there was a good deal of steam coming from the front end and blowing across, and as soon as this steam had cleared away, he saw the tail of the standing train about 10 or 20 yards away, at which time steam was still applied to the engine. He at once shouted out to the driver to stop, with the result that he closed his regulator and applied the vacuum brake, too late, however, to avoid the collision. Guard Hobson was standing on the footplate immediately behind the driver, and from this position did not see the tail of the standing train owing to the curvature until he was within about 30 yards of it, when he called out a similar caution to the driver. The speed at the moment of the collision appears to have been quite low, and both Ingle and Hobson said that the impact was no more severe than they have seen in the course of ordinary shunting operations. The weight of the passenger train no doubt accounted for the damage which resulted. Immediately after the collision, guard Hobson said that the driver remarked to him "I misunderstood what you said, guard" and also made the same remark to the fireman. Priestley's version of this conversation was that he told the guard that he had misunderstood what the station foreman had said.

Conclusion.

The two chief features in this case which call for remark are, firstly, the use of the passenger train for propelling the rear portion of the divided goods train instead of employing for this duty the light engine which had been used for examining the up line; and secondly, the apparent ignorance, whatever the reason may have been, on the driver's part of the whereabouts of the standing wagons, which resulted in the collision.

In regard to the former point, though the evidence is confusing and the exact times are uncertain, it is fairly clear that signalman Ingham had accepted the passenger train from Eastwood with the intention of using this to propel the rear half of the goods train before he had any conversation with the Manchester Control on the subject, and certainly before the light engine arrived. When it did so he presumably asked station foreman Ingle the question already referred to in the latter's evidence in case he might have received definite orders before leaving Hebden Bridge that the light engine was to propel the goods vehicles back again. Signalman Ingham

was not contravening instructions in using his own discretion without prior reference to the Control as to the method he adopted in clearing the obstruction, but he committed, in my opinion, a distinct error of judgment in using the passenger train instead of the light engine for the purpose. Even if he had not been told of the approach of the latter before he accepted the passenger train from Eastwood—and, as a matter of fact, he had received the telephonic intimation from Hebden Bridge of the engine's despatch before he did so—he could still have altered his previous decision by holding the passenger train at his home signal and setting the light engine across to the down line over the crossover road between this signal and his box.

In regard to the cause of the subsequent collision, it is clear, from the manner in which Priestley handled the train and the position from which he was driving, that he was unaware of the position of the standing wagons. There is no doubt that station foreman Ingle gave the information to driver Priestley, though the latter claims that it was put in such a way as to convey the impression that both portions of the train were in the neighbourhood of Hebden Bridge. If, however, Ingle's version of his message is to be accepted, it is difficult to see how any misunderstanding could have arisen. There is also the evidence of guard Hobson, from whom Priestley denies that he received any information at all, that he definitely told the driver that the tail of the train was about 100 yards away, a considerably shorter distance than proved, in fact, to be the case.

My opinion is that station foreman Ingle gave the message substantially in accordance with his evidence, and that had driver Priestley given full attention to what Ingle said, he should have realised the circumstances. In any case, it was Priestley's duty, under the Regulations, to obtain full information from the guard, and if, as he said, the latter gave him no instructions, he should have asked for them himself. In regard to Priestley's claim that he was further misled by the authorisation from the signalman to pass the starting signal at danger, the latter was, in fact, acting strictly in accordance with instructions in doing so, and the authorisation did not imply, and should not have been taken as implying, any conflict with information otherwise given as to the position of the standing train. The main responsibility for the collision, in my opinion, falls upon driver Priestley. He is a man with 31 years' service, for ten of which he has been a driver, and his record is good.

If guard Hobson's evidence is to be accepted, he had good reason to believe that the driver was aware of the position of the standing wagons from the information which he himself gave. There is, however, driver Priestley's denial that any information on this point was given him by guard Hobson, and neither station foreman Ingle nor Priestley's fireman, Ingham, were in a position to corroborate either Priestley's or Hobson's evidence on this point. According to Ingle's evidence, he was on the footplate before the guard, though the latter says they both got on about the same time. This discrepancy is possibly accounted for by the fact that they mounted on opposite sides of the engine and that Hobson, according to his own account, gave his message before he actually came inside the engine cab. In any case all four men, including the fireman, must have joined the engine within a few seconds of each other, as the train, though it was moving very slowly, never actually came to a stand after starting away from the home signal. I am loath to believe that Hobson's evidence of the message which he gave to the driver is entirely false, and think it more probable some such message was given, but that it left little impression on Priestley, who, thinking that he had sufficient information from station foreman Ingle, paid less attention to the guard's message than he would otherwise have done.

I think it also possible that the removal of the detonators by guard Hobson had some bearing on the sequel. In accordance with General Regulation 219, they should have been left where they were and renewed by the signalman after having been exploded. If this had been done driver Priestley would, or should, have then realised that the standing wagons could not have been at any rate at the far end of a section which is over one mile and a quarter long. Hobson removed these detonators at the suggestion of the fireman, who, as he believed, knew where the standing wagons were. Fireman Ingham, on the other hand, though he agrees that the detonators were removed at his suggestion, said that he had no idea where the tail of the train was; at any rate, whether he had or not, he gave no information to his driver on the subject.

So far as giving warning to the driver is concerned, I do not think that signalman Ingham was called upon by regulation to do more than he did, and his assumption that full details of the position of the train would be given by the guard to the driver was reasonable.

All the circumstances of this case point to the conclusion that the accident was largely due to a multiplicity of messages only partially attended to or understood, and to a series of assumptions that somehow or other the correct information would reach the man primarily concerned, that is, the driver. There were only two men between whom the necessary information should have been passed, that is guard Hobson and driver Priestley, and so far as Hobson is concerned, no reliance should have been placed upon any information which he gave to the fireman or which he understood station foreman Ingle gave to the driver. In view of the proximity of the standing wagons Hobson should certainly not have engaged the driver in irrelevant conversation as the train left, and in all the circumstances I am unable to free him from some share of responsibility for the accident. Neither station foreman Ingle nor shunter Shackleton should have been on the footplate, though I do not think that their presence contributed, at any rate directly, to the accident.

The chief feature in this case to which I wish to draw attention is the use of the passenger train in question for propelling the rear half of the goods train through the section. It appears, from the evidence of all the signalmen concerned, two of whom have over 40 years' experience as signalmen, that it is by no means an uncommon occurrence; though Easton, the signalman at Hebden Bridge East box, added that they do not as a rule use passenger trains if there are any other means available. The controller at Manchester went further than this, and not only appears in this case to have acquiesced in the arrangements with considerable reluctance, but said that he has never authorised the use of a passenger train for this purpose unless it is absolutely necessary, and certainly not when there is a light engine available.

The opinion of controller Turner appears to me to be entirely correct. The use of a passenger train for this purpose is open to many and obvious objections, among which, apart from the risk of initial collision, may be included the possible consequences to a passenger train of a derailment of one of the wagons, which is liable to occur when a considerable number of light vehicles of the kind is being propelled.

Even if no other light engine is available, it would generally appear possible to detach the engine from a following passenger train in order to clear the line—as was done in this case for the purpose of examining the up road—and the occasions when it is actually necessary to use the whole passenger train for the purpose should be rare. In any case it should be clearly understood by the men concerned that this should not be done if there is any possible alternative. In this case there was not only a possible but an obvious alternative in the light engine, and the fact that it was not used suggests that the signalman had been so familiarised with the use of a passenger train in circumstances of the kind that he considered the finding of a possible alternative a matter of comparatively little moment.

As to the circumstances of the subsequent collision, the regulations give precise instructions in regard to the procedure to be followed, and action at variance with these regulations, for example, the presence of unauthorised persons on the footplate and the conveyance of information except directly between the men concerned, is an obvious source of potential trouble. I have only one comment in regard to these regulations, which is that, when the signalman is aware that the obstruction is inside his signal area, it would be of advantage that he himself should include this information in the message which authorises the driver to pass his starting signal at danger under the provisions of Block Telegraph Regulation 14.

I have the honour to be, Sir,

Your obedient Servant,

G. L. HALL,

Major.

The Secretary,
Ministry of Transport.