

LANCASHIRE AND YORKSHIRE RAILWAY.

Whitehall,

14 September 1869.

SIR,

IN compliance with the instructions contained in your minute of the 27th July, I have the honour to report, for the information of the Board of Trade, the result of my inquiry into the circumstances attending a collision which occurred on the 24th July between a passenger train and an engine near Clifton junction on the Lancashire and Yorkshire Railway. Four passengers are returned as having been cut and bruised in consequence of the collision.

Clifton junction is the point at which the main lines from Manchester to Bolton and Bury diverge. There is a station close to the junction in the fork between the two lines, and there are extensive sidings on the Bolton side of the station, connected with both the Bolton main lines. The junction signalman's view of these sidings is impeded by an overbridge, 270 yards from his box, on the North or Bolton side of it. There are two parallel sidings, each about 300 yards long, on the east side of the line; these unite and join the up line at the overbridge and the down line by means of a through crossing (in which there is a slip road for connection with the up line) 400 yards north of the same bridge. There is also a cross-over road between the up and down lines, the centre of which is about 60 yards north of the bridge. On the west side of the line there is only one siding 350 yards long, joining the down line about 360 yards north of the bridge. For the protection of the junction and station there are the ordinary semaphore signals at the junction cabin, which are well seen by trains approaching from Manchester; a down distant junction signal 490 yards from the junction, also well placed for being seen; an up junction distant signal on the Bolton line only 270 yards from the cabin, but well visible by approaching trains; a treadle signal 815 yards from the cabin, which up trains put to danger on passing, and of which the junction signalman has control, and can use in case of need as an additional up distant signal. For the protection of shunting operations at the sidings, an up and a down distant signal are worked from handles placed at the north end of the sidings, the former 610 yards to the north of the handle, and well visible by approaching trains; the latter, 407 yards to the south of the handle (at the overbridge before referred to), visible for some distance in the neighbourhood of the junction distant signal by a train approaching from Manchester, then hidden by trees, and not again visible till approached within about 150 yards, after the junction cabin has been passed. This signal can also be seen by the junction signalman, and is an indication to him as to when shunting is going on at the sidings. For the protection of the cross-over road at the south end of the sidings, the up signal worked from the north end is connected with a handle placed near it; but there is no special down signal, which is a serious omission. The gradient is a rising one towards Bolton, but its amount, not known exactly, is about 1 in 200. The Clifton sidings are principally used during the summer months as standing places for empty carriages, and no pointsman is regularly stationed there.

On Saturday morning, 24th July, a light engine, with driver, fireman, and passenger guard, left Salford at 6.50 for Clifton sidings, to bring back a train of empty carriages for excursion traffic. On passing the junction, the guard informed the signalman by motion and word of mouth of what they were going to do, which the latter perfectly understood. On reaching the crossover road at the north end of the sidings a foreman platelayer, who was in the habit of attending at these sidings when shunting was going on, put the up and down signals to danger, and then held open the points to allow the engine to back into the sidings on the east of the up line. He asked the guard how

long they would be, and, on receiving for answer "two or three minutes," stated that he took off the down signal as soon as the engine had cleared the down line. There is a discrepancy in the evidence as to the course of proceedings adopted in making up the train, but it would appear to have been as follows: the driver first backed into No. 1 siding (the one next the main up line), and brought out of it three coaches, which he took through the crossing, and then backed them on to the up line; he left them there, returned through the crossing, and backed into No. 2 siding (the one farthest from the up line), and brought out of it six coaches, which, by going through a similar process, he attached to the three already standing on the up line. The train was now formed, with the engine at the wrong end, for returning to Manchester. No. 1 siding was perfectly empty, but there were two trucks left standing in No. 2. The guard now wanted the driver to push the train before him into Manchester, and the platelayer expected he was to do so; but in consequence of the driver having been recently cautioned as to the necessity of obedience to the company's rule forbidding this proceeding, he refused to do this. Some conversation then ensued as to how the engine was to get round its train, and it was decided that, as there were two or three minutes before the seven o'clock train from Manchester was due, it should run along the down (or wrong road) through the crossing near the overbridge, and so return on the up road to the other end of the train, the operation being protected by the down signal being again put to danger. [There is contradictory evidence as to the time of *taking off* and *putting on again* of this signal, but I am inclined to think (from the weight of the evidence) that it must have been *taken off* as soon as the carriages had all been arranged on the up line, when the platelayer thought that the engine would push them into Manchester, as up to this time the down road had been continually fouled by the engine in shunting; then, on finding that the engine was going to run round its train by using the down road, he put it on again to danger.] The driver accordingly started, and was approaching the overbridge when he caught sight of the engine of the passenger train coming through it. He pulled up as quickly as he could, and had just come to a stand about 100 yards north of the bridge, when the tender of the light engine and the engine of the passenger train came into collision. The light engine was carried forward about 100 yards, and the tender wheels knocked from under it, the wheels of the engine keeping the road. The driver and fireman jumped off before the collision, and escaped without injury. The tender was seriously damaged, but the engine was unhurt.

The passenger train had left Manchester for Bolton and Liverpool at three minutes past seven, consisting of engine and tender, a set of five carriages with Fay's breaks, three loose carriages, and another set of four carriages with Fay's breaks. The train had stopped at Salford, Oldfield Road, and Pendleton, and its next stopping place was Moses's Gate beyond Clifton. The morning was fine. The driver had whistled for the Clifton junction signals, which were immediately lowered. (The signalman stated that the signal from the siding had been taken off about two minutes before the driver whistled, and must have been again put to danger while he had gone into an inner part of the cabin to book the train.) The driver stated that he did not remember noticing whether the distant signal from the siding was off or on where it is first possible to get a view of it (near the junction distant signal), but that on passing Clifton platform (150 yards from the signal) he caught sight of it at danger; that he then gave a long whistle, but finding the signal still kept on whistled for the guard's breaks, shut off steam, reversed his engine, and had his tender breaks applied; that the speed was thus

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reduced from 35 miles an hour to 10 or 12 miles an hour at the collision, which occurred, as before stated, 100 yards north of the signal, or about 250 yards from the point at which the driver acknowledged that he first observed it at danger. The front guard had not time to get his break applied, as he was sorting parcels when the driver whistled; but the rear guard, who was in his breakloft, applied his on seeing the signal at danger, and on passing under the bridge his set of breaks and the last of the three loose carriages broke away from the remainder of the train, and no passengers were injured in this rear part. The driver and fireman both stuck to their engine, and were neither of them seriously hurt. The front wheels of the engine left the road; its smoke-box and buffer-beam were broken, and it sustained other injuries, but it was able to go to the shops under steam. Many causes contributed to the occurrence of this accident, which may perhaps be placed as follows in the order of relative importance:—

1. The faulty position of the down distant signal from the sidings. This signal, which has to protect shunting operations, often extending (as on the present occasion) to the crossover road close by it, although visible near the junction down distant signal, is then lost sight of for a considerable distance, not being again visible until the junction has been passed, and the distance from it reduced to about 150 yards; it is thus next to impossible that a train, running at a speed which enables it to keep its time as laid down in the tables, can, if necessary, stop at this signal, which may be put to danger (as it probably was on this occasion) during the time it is lost sight of. Its position would be improved by extending its wire to the junction cabin, and making it and the down junction signal to

Bolton the same signal. This improvement the company, I believe, intends at once to carry out.

2. The conduct of the guard of the empty train in acquiescing in the driver's moving along the down or wrong road just at the time when he knew a down passenger train was due, and this more particularly when there was nothing to have prevented his getting round his train by using No. 1 siding instead of the main down line. The guard is also to blame for having made up his train on the main up line, when it could have been just as well done in No. 1 siding, in which case the driver would have been almost certain to have used the up or proper road for getting round his train.

3. The conduct of the driver in unnecessarily using the down or wrong road for getting round his train, when he could have done so by means of No. 1 siding.

In addition to the alteration of the position of the signal alluded to above, the following improvements at these sidings are very desirable, viz., the sidings should end in blind sidings, and be provided with siding signals, those at the south end and the crossover road being controlled from the junction cabin, and interlocked with the junction signals, and those at the north end being interlocked with the distant signal. There should also be a gong communication between the north end of the sidings and the junction cabin. Locking apparatus is about being provided at the junction, and the present would, therefore, be a favourable opportunity for effecting the improvements now suggested.

I have, &c.,
C. S. HUTCHINSON,
The Secretary, Railway Department, Board of Trade. *Lieut.-Col., R.E.*

A copy of the above report was sent to the company on the 30th September 1869.

LANCASHIRE AND YORKSHIRE RAILWAY.

SIR, *Sowerby Bridge, 20th October 1869.*

IN compliance with the instructions contained in your minute of the 25th September, I have the honour to report, for the information of the Board of Trade, the result of my inquiry into the circumstances which attended the collision that occurred on the 23rd September at the Sowerby Bridge station of the Lancashire and Yorkshire Railway.

The passenger platforms at this station are not opposite to one another, the down-line or north platform being on the east of the up-line or south platform. The south platform is 120 yards long, and 120 yards to the west of it there is a tunnel. At 60 yards east of the tunnel, and the same distance west of the south platform, there are a pair of points leading from the up to the down line. The gradient at the station falls to the eastward.

On the day in question a return excursion train, on its way from Scarborough to Manchester, reached Sowerby Bridge at 5.33 p.m., consisting of an engine and tender, 12 carriages, and two vans, of which two carriages and one van were for Halifax. This train stopped, in the first instance, opposite the south platform; but it was shortly afterwards taken forward into the tunnel, in order that the Halifax portion might be shunted back from the up to the down main line, through the points above referred to. The van attached to the two Halifax carriages was fitted, as well as the carriages, with Newall's continuous break, so that when the break was applied in the van, the breaks of the carriages ought to have been put in action at the same time. But this van had been employed as a luggage-van only between Scarborough and Sowerby Bridge; no guard having ridden in it from Scarborough, and the two guards in charge of the return excursion train having ridden in two other vans from Scarborough to Thornhill, where the

Dewsbury and Bradford portion of the train had been detached.

When the train reached Sowerby Bridge the van for Halifax was at the tail of it, and a porter at Sowerby Bridge was ordered by the inspector at that station to join it, and to take the Halifax portion of the train across from the up to the down line. This porter had been lighting the lamps at the entrance to the tunnel, and was returning from that duty when he met the train moving forward from the down platform towards the tunnel. He uncoupled the Halifax portion from the remainder, under the orders of the inspector, and mounted the break-van as the engine driver backed the train, intending to apply the break and to stop the van and the two carriages as they approached the down platform on the down line.

A return special train from Blackpool stood at that time on the down line, with its hind van 30 yards east of the west end of the down platform, and the inspector intended that the Halifax portion of the train from Scarborough should be joined to the train from Blackpool, with a view of their returning together to Halifax.

The Halifax portion of the Scarborough train was pushed back accordingly at a speed of about six miles an hour towards the Blackpool train, and as it approached the latter train the porter in the van attempted to apply the break. He found, however, at the critical moment, that the break was out of order and would not work. He was thus unable to check the speed of the van and carriages, and they came into collision at the above speed, or perhaps rather greater speed, with the tail of the train from Blackpool. Neither the van nor the carriages for Halifax were damaged, nor were they thrown off the rails, any more than the vehicles in the train from Blackpool. The porter in the van from Scarborough was not hurt, but three of the pas-