

One or two passengers in the Great Western train, and six passengers in the London and North-Western trains, are reported to have been shaken. The guard of the train from Dudley Port was hurt in the side and back.

Dudley station has two platforms, with lines of rails at each side, so that four lines of rails are provided with platforms. The station is controlled by three signal cabins. The east signal cabin is about 100 yards from the station, on the line to Horsley Fields, at the east side of a bridge over the railway.

This bridge over the railway, and the curves of the line, prevent the signalman in the east cabin from seeing trains that may be standing at the south side of the south platform.

The middle signal cabin is at the east end of the south platform. The signals between this cabin and the east cabin are worked in connection with each other.

The west signal cabin is at the west end of the station.

On the day in question the Great Western train from Birmingham, which consisted of a tank engine, a break carriage, two third, a second, a first, and a composite carriage with a break compartment, and a guard, arrived at Dudley station south platform at 10.24 p.m., 17 minutes late. The signals were lowered for the train to enter the station, but it was stopped by signal at the south platform, instead of running through the station, and then being pushed back to the north platform as usual, because another train was being shunted across the railway at the west end of the station.

The home signal at the east cabin is slotted, so that the signalman in the east and middle cabins must both pull over their levers before it can be lowered for a train to pass, but either of these men can replace the signal at "danger." This signal is opposite to the east cabin, but it cannot be seen by the signalman in the middle cabin.

As soon as the Great Western train had passed the east cabin the signalman on duty there put back his distant as well as the home signal to "danger."

The London and North-Western train from Dudley Port, which consisted of a tank engine, a third-class with break compartment, three composite and two third-class carriages, the last of which had a break compartment and a guard, approached the east cabin immediately after the Great Western train. The signalman in the east cabin pulled the gong to announce its arrival to the man in the middle cabin, and he then lowered his signals for the train from Dudley Port to pass into the station.

This train ran into the Great Western train, which had been standing for about two minutes at the platform.

The London and North-Western train from Walsall, which consisted of a tank engine, a third-class with a break compartment, two composite, two third, a composite, and a third-class carriage with a break compartment, and a guard, arrived about 12 minutes after the train from Dudley Port. The signals at the east cabin were lowered in the same manner as they had been

lowered for the train from Dudley Port, and a second collision ensued, near the middle cabin. The drawbar of the front carriage of the Great Western train was broken, and six carriages of the London and North-western trains were damaged.

One carriage of the train from Dudley Port was knocked off the rails.

The speed of the Dudley Port and Walsall trains is reported to have been about four to six miles an hour at the time of the collision.

The signalman in the middle cabin stated that he did not pull over his lever so as to allow the home-signal, opposite to the east cabin, to be lowered for either the Dudley Port or the Walsall train, as firstly the Great Western, and subsequently the Great Western and the Dudley Port trains were standing on the same line of rails, close to his cabin. He further stated, that the slotting machinery was out of order, and that he had reported to the yard inspector on that morning that it did not act properly.

The yard inspector acknowledged having received such a report, and stated that he had written to the signal inspector at Birmingham on the subject, but neither of these men reported the matter to the station-master at Dudley, or took any means to provide for the safety of the station.

The signal arrangements were new, but the slotting machinery was found to work well after the accident. The wires when examined were found to cross each other; and when I visited the station, the saddle on which the crank that works the points is fixed, was quite loose, and rocked about when the points were moved.

This work was done by Messrs. Saxby and Farmer. It should not have been taken over in such a state. Under such circumstances it is difficult to say whether these collisions were caused by the defective state of the machinery, or by the signalman in the middle cabin forgetting to put back his lever, so as to allow the east cabin home-signal to return to "danger" after the Great Western, and again after the Dudley Port train had arrived near his cabin. This man was new to the work, and appears to have lost his head, or he certainly would have taken steps to prevent the second collision. He, as well as the yard inspector, are very much to blame for not having informed the station-master that the signals were out of order, if such was the case; so that the latter might have taken the measures necessary to protect the station.

I recommend that two signals, one for goods and the other for passenger trains, be placed at the east side of the middle cabin, and at the west side of the bridge over the railway, for the protections of trains that may be standing at the south platform at Dudley station. These signals might probably be worked on the same wires that work the slotting bars of the home-signals which are opposite the east cabin.

*The Secretary,
(Railway Department),
Board of Trade.*

I have, &c.,
F. H. RICE,
Lieut.-Col. R.E.

LONDON AND NORTH-WESTERN RAILWAY.

Sir, *Crewe, 5th October 1872.*

In compliance with the instructions contained in your minute of the 21st August, 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 16th of that month, at Victoria station, Manchester, of the London and North-Western Railway.

A passenger train from Leeds was turned by mistake into a siding where there was an empty passenger train.

The collision was very slight; and no persons are reported to have been hurt.

The London and North-Western part of Victoria station is one-sided, with two dock lines.

The main through line next to the platform is consequently used as a single line for trains entering the station from the east and from the west.

The second through line, which has no platform, has been kept clear for some time past, so that when the platform line is blocked with trains, goods trains that are running through the station, or through passenger trains may be sent along this second line; and, after passing through the station, the latter are backed to such part of the station where there may be room to receive them. This is a much more

dangerous system of working than where there are up and down line platforms. The London and North-Western Railway Company's portion of Victoria station is controlled by signalmen in No. 1 and No. 2 cabins. The first is about the centre of the station, where the Lancashire and Yorkshire Railway joins and crosses the London and North-Western lines; and No. 2 cabin is at the west end of the station. The points and signals in both these cabins are arranged on the locking principle; and the signals at both cabins are worked in connexion with each other. The signalman in No. 2 cabin controls the points that lead to the outside, middle, and wall sidings, and to No. 1 and No. 2 dock lines. The dock lines and the sidings are at the same side of the railway, and face each other.

On the day in question, a train which consisted of an engine and tender, 12 coaches, a break-van with a guard, and a horse-box at the tail of the train, arrived at Victoria station at 5.18 p.m. from Liverpool. The train was 18 minutes late, owing to detentions on the road. After depositing the passengers it was shunted back to the west end of the station.

The horse-box was pushed into what is called the centre siding, and the rest of the train was placed in what is called the outside siding, which is next to the main lines between Liverpool and Victoria station at Manchester.

The 3 p.m. train from Leeds, and the 4.15 p.m. train from Liverpool are due at Victoria station, Manchester, at the same time, viz., 5.15 p.m. The train from Leeds generally arrives first, and is run through the station, and backed into No. 1 dock line at the west end of the station. The train from Leeds arrived at 5.24 p.m. on the day of the accident. The signals at No. 1 cabin were at all right for it to run up to the platform; and as it did so, the signalman at No. 2 cabin called the engine-driver forward with hand-signals, as he wanted the train to run through the station and back into No. 1 dock line.

The points that lead to the outside siding are opposite, and the points that lead to No. 1 dock line are to the west side of No. 2 cabin.

The Leeds train ran up to No. 2 cabin at a speed of about five miles an hour, and turned through the points that lead to the outside siding, instead of continuing, as it was intended to do, along the main line, to the points through which it was to be backed into No. 1 dock.

The signalman in No. 2 cabin had forgotten to alter the points, after the 3 p.m. train from Liverpool had been sent through them to No. 1 siding, or else he had subsequently changed them twice. He stated that he had done the latter, in a flurry; but a great part of his statement was incorrect; and I believe that he had never put the points right for the main line after the Liverpool train had been shunted through them. He could not have made this mistake if he had tried to lower the main line signal for the Leeds train to pass his cabin, instead of calling it on

with a hand-signal, as the main line signal could not have been lowered until the points had been properly set; and the engine-driver of the Leeds train would have been stopped by the main line signal being at danger.

The engine-driver of the Leeds train did not observe his danger until he had passed the points towards the outside siding. He then reversed, put steam on, the fireman applied the tender break, the guard applied the break in the van, and the speed of the train was reduced to about two miles an hour, when the engine struck the engine of the Liverpool train that was standing in the siding.

The engine-driver of the Liverpool train reversed his engine and put steam on, so as to get his train back and avoid the collision, but his engine had not started, when the engine of the Leeds train struck the engine of the Liverpool train. The buffer beams of the two engines were slightly damaged, but nothing left the rails, and the rolling stock was not injured.

The accident was caused by the forgetfulness of the signalman in No. 2 cabin, who did not put his points right before he called on the Leeds train, and who, very improperly, used hand-signals to do what stationary signals had been specially provided for. This man, instead of honestly confessing his mistake, tried to put the blame on the yard foreman, by stating, that the latter was giving the driver of the Liverpool train, orders to run across the main lines to the sidings, at the north side, which are called "The Slums," at the moment that the Leeds train was running through the station, and that the fear of a collision, hurried him so much, that he made the mistake with his points. This and other statements of the signalman in No. 2 cabin, as to the place where the Liverpool engine stood, which, he said, prevented him from moving the points, were shown to be false by the evidence of all the other witnesses; and the man has very properly been dismissed from the Company's service.

A one-sided station, which necessarily converts a double line into a single line, at a place where trains meet from various directions, must always be dangerous.

It is to be hoped that the London and North-Western and the Lancashire and Yorkshire Railway Companies will take the first opportunity to improve Victoria station, Manchester. The station, as now divided and apportioned between the two companies, is bad and dangerous.

If re-arranged and worked as a joint station, it could be very much improved.

There is very good access to the station from both sides at present.

I have, &c.,
The Secretary,
(Railway Department),
Board of Trade.

F. H. RICH,
Licut.-Col. R.E.

LONDON AND NORTH-WESTERN RAILWAY.

Board of Trade,
(Railway Department),

SIR,

Whitehall, 18th September 1872.

I HAVE the honour to report, for the information of the Board of Trade, in compliance with the instructions contained in your minute of the 21st ult., the result of my investigation into the circumstances attending the collision which occurred on the 17th ult., at Kendal station on the London and North-Western Railway, between an excursion train and a passenger train standing at the platform.

One person in the passenger train was slightly injured.

Kendal station is one-sided, and both up and down trains use a platform on the down side of the line. Between Oxenholme junction and Windermere the line is one of heavy gradients; and between the

junction and Kendal, a distance of rather more than two miles, that part now immediately in question, there is a long descending gradient of 1 in 80, commencing a short distance out of Oxenholme, which changes into a gradient of 1 in 148 (still falling) at a point about 160 yards south of the south end of Kendal platform. Of this gradient there are 70 yards, next 90 yards of 1 in 480, and then comes the platform with 40 yards of level, and 60 yards of 1 in 273; after which the line again falls sharply towards Windermere on a gradient of 1 in 90.

The Kendal down distant-signal is situated about $\frac{1}{2}$ of a mile from the south end of the platform, and is well seen from an approaching engine.

On the 17th ult., an excursion train to convey a number of workpeople from St. Helen's to Windermere and back was arranged to leave St. Helen's at 6 a.m.