

METROPOLITAN & GREAT CENTRAL JOINT RAILWAY.

Board of Trade, Railway Department,
28, Abingdon Street,
Old Palace Yard, S.W. 1.
30th November, 1918.

SIR,

I have the honour to report, for the information of the Board of Trade, in compliance with the Order of the 6th November, the result of my inquiry into the cause of the collision between two goods trains, which occurred on the 30th October, about 5.11 a.m., near Harrow, on the Metropolitan & Great Central Joint Railway.

In this case, No. 11 Metropolitan down goods train ran into the rear of No. 2 goods train, which was standing by the down main line starting signal for Harrow North Junction. The guard (Andrew Davies) of No. 11 train suffered from concussion and other injuries, and the driver and fireman of the same train were knocked about and bruised.

No. 2 goods train comprised Metropolitan tank-engine No. 91 (0-6-2), and 25 loaded and 4 empty wagons or trucks, with a brake-van in rear (11 tons). No. 11 train comprised tank-engine No. 81 (0-4-4), with 22 empty coal trucks and van. Both engines were fitted with steam and hand brake, actuating single blocks on the coupled wheels. The wagons in both cases were unfitted.

Engine No. 81 had the buffer-beam and leading axle bent, plating and chimney damaged, and brake-pipe work, etc., broken. One brake-van and three wagons were smashed, whilst two trucks and three wagons were more or less badly damaged.

Description.

The scene of this collision is north of the junction of the Uxbridge Branch with the main line. Harrow Goods Yard is situated on the east (up) side of the railway, and access thereto is provided for by a through crossing with trailing points on the down road.

The Junction Yard is worked from Harrow North Junction signal-box, which is placed on the west (down) side of the railway. Measured from this box, the approximate distances to the undermentioned points, signals, etc., are:—

Down home signals	10 yards S.
Treadle contact on goods siding	120 „ N.
Trailing points to through crossing on down line	201 „ N.
Point of collision	245 „ N.
Down starting signal	401 „ N.
Treadle contact on down main line	559 „ N.

The railway in the vicinity is laid on an easy curve eastward, and the gradients fall in the down direction at inclinations of from 1-274 to 1-176.

There is electrical control over the down main home signal, whereby, when this signal has been once lowered and replaced to "Danger," it cannot be again lowered until released by the signalman plunging on an auxiliary instrument. The plunge cannot be made until the instrument is released by the passage of an electrical current. Two connections in the circuit have to be made before this current can pass. One is effected by the signalman operating the lever working either the down starting signal, or the ground signal for backing into the goods yard over the through crossing. The other connection is made by the engine or train passing over one of two mechanical rail contacts.

Conclusion.

The circumstances leading up to this collision were fully described in the statement made by signalman George Phillips. No. 2 goods train passed the Junction Signal-box at 4.41 a.m. and, having to back into the goods yard, came to a stand with the rear of the train clear of the crossover trailing points.

Under the Rules in the Joint Committee's Appendix to the Working Time Tables, dated 1st June, 1912, it was the duty of signalman Phillips to use the "lever collar" supplied to him as a reminder that the down line was blocked by No. 2 goods train. Phillips admits that he should, in accordance with this Rule, have placed the collar over lever No. 47 which works the down main home signal, and regrets that he failed to do so.

It was, further, the duty of the guard of No. 2 train, Percy Cann, in accordance with General Rule No. 55(b), after the train was brought to a standstill, to go to the signal-box, and remain there until he had personally assured himself that the signalman had protected

the train by using the collar appliance. Cann admitted he was well aware of this Rule, but did not carry it out, as he was momentarily expecting that his train would be backed into the goods yard, and he did not wish to delay the movement. Cann agreed that he had never been blamed for delaying a train in such circumstances, and I cannot accept his excuse.

Signalman Phillips, after No. 2 goods train had come to a standstill, found it necessary to test the working of No. 22 (crossover) and No. 23 (slip) points leading into the goods yard, in connection with the working of No. 20 backing signal into the yard, as he had experienced difficulty during the night in operating the signal. After reversing the two point-levers, he pulled No. 20 signal lever half over, and found it was working correctly. The latter movement resulted in the release of the lock on his auxiliary instrument, so that the indicator of the instrument dropped from the "locked" to the "free" position. This release should not have occurred until the second connection in the electrical release circuit had been completed by the movement of the train over the mechanical treadle in the goods siding. Phillips at once recognised that the treadle was out of order, and that the auxiliary instrument had been released irregularly. He did not, however, take any action to re-set the instrument, as he might have done, by plunging and working signal-lever No. 47. The false indication "free" therefore remained on the face of the instrument.

At 5.6 a.m. Phillips was offered No. 11 down goods train. He entirely overlooked the position of No. 2 goods, and, without observing the road, accepted No. 11 after duly obtaining acceptance for the train from Pinner, the box in advance. The weather was clear and there was no difficulty in observing tail or signal lights. The irregular "free" position of his auxiliary instrument imposed no check to his memory or action, and he lowered all the main line signals for No. 11 goods train to come forward. Shortly after doing so, he happened to look along the line and saw the tail-and side-lights of No. 2 goods train standing on the down line. He at once threw the main line signals to "danger" by reversing the levers.

Driver Jesse Allen of No. 11 train, however, appears to have passed the signal-box before the signals were reversed, but he saw the starting signal go to "danger" at the same time as he observed the tail-lights of No. 2 train. His own train was travelling at considerable speed (40 miles an hour), and, though he took immediate action to reduce speed, he was unable to avoid the collision. The slight curvature of the railway, and steam from an engine in the goods yard, may have limited the view obtainable by driver Allen of the red tail-lights. I am not disposed, therefore, to hold him in any way responsible for failure to avoid the collision.

Guard Cann saw the headlight of the approaching train, and was fortunately able to get out of his van before the collision took place. He endeavoured to draw the attention of the enginemen of the approaching train by displaying a red light. The fact that he had the hand-brake in his van applied when the collision took place increased the injurious effect of the blow.

Driver East of No. 2 train sounded his whistle to remind the signalman of his position on the line after ten or fifteen minutes had elapsed, but not again before the collision took place.

Signalman Phillips stated that the mechanical treadle on the goods siding had been out of order for some weeks, and that he had called the attention of the lineman to the fact. Lineman Hoare did not admit that he had received any recent complaint from the signalmen. He, however, was aware on the 10th October, as the result of periodical examination, that the treadle was out of order, owing to the breakage of two screws. But he had not with him at the time the necessary tools for the repair work. He was prevented on the 11th October by other more urgent work from executing the necessary repair to the treadle, and was off duty, owing to illness, from the 12th to the 23rd October inclusive. After he returned to duty, he made no further inspection prior to the accident, and had forgotten that the treadle needed repair. Relief-lineman William Webb was in charge of Hoare's section during the latter's absence on the sick-list. He knew the Instruction that treadles had to be inspected once a week, but during Hoare's absence he was busily employed elsewhere, and received no report of the defect from the signalmen.

II. My conclusions on the whole case are :—

(a) The responsibility for this collision rests, in the first place, upon signalman Phillips for failure to make use of the collar appliance in accordance with the Committee's Rules, to re-set the electrical locking control of the auxiliary instrument over the home

signal, and to observe the line before he accepted the second goods train. The daily turn of duty is 8 hours, and Phillips had been at work about 7 hours when the collision happened.

(b) Responsibility, in the second place, rests upon goods-guard Cann for failure to carry out General Rule 55(b), as emphasised by the Rule on page 8 in the Joint Committee's Appendix to the Working Time Tables. In Cann's case, the booked turn of duty is 9 hours, and he had been at work about 2½ hours.

(c) Responsibility for the defective treadle rests mainly upon lineman Hoare.

The evidence as a whole makes it clear that both signalmen and linemen regard the operation of these treadles, or, at all events, the treadle on the goods siding at Harrow North Junction, as of small importance. Whether—as linemen Webb and Hoare both declare—it is the fact that they have not the time to make the periodical inspections of these treadles in accordance with their Instructions, will be for the Company to ascertain, and to rearrange their duties, if found necessary.

It is possible by the addition of a second relay to the auxiliary instrument to arrange that a release is only obtainable when the contacts are made in the right order. But, having regard to the working conditions at Harrow North Junction, and to the difficulties in the way of maintaining in good order a mechanical treadle of this description on a goods siding, I think the better plan would be to control the main line signal by means of a track circuit in the vicinity of the down starting signal. I hope the Company, after considering the matter, will come to the same conclusion, and arrange for the provision, which will enable them to dispense with two mechanical treadles.

I have, etc.,

J. W. PRINGLE.

The Assistant Secretary,
Railway Department,
Board of Trade.
