

derails or high speed signals of the cross road. This arrangement makes it possible to advance a train on one road with the slow speed signal when the crossing is occupied on the other road. Trains may be entering the pockets simultaneously, i. e. one on a high speed signal or a low speed signal and the other on a slow speed signal.

This arrangement of signaling will eliminate all train delays caused by short pockets and is a step toward the general elimination of all main track derails.

Chicago.

J. H. MOLLOY,

Office Engineer, Signal Department, Chicago, Rock Island & Pacific.

Training of New Levermen

"Who is responsible for the training of new levermen on your road?"

THE New York Central on the installation of its controlled manual signal system on its main line between New York and Buffalo, N. Y., in 1892, when something over 20 signal stations were placed in service on the 440 miles, employed for each of the main line divisions a chief signalman who was in responsible charge of the men employed to work the signal levers in the signal stations whose title, in accord with our rules, was that of signalman and not leverman. In some of our signal stations a train director is employed but these as well as the other men employed in the signal station are given the name of signalmen.

Since 1892 we have found it advisable to employ a chief signalman on each division on which there are about 15 or more interlocking plants, the chief signalmen having also charge of telegraph operators at stations not provided with signals, but does not have charge of agents at stations except as to their duties as telegraph operators.

We have found the chief signalmen to be a necessary part of our signal supervisory force for they not only have charge of and examine the signalmen on the rules but also instruct the men in the operation of the signals and see that everything is done to expedite the safe movement of trains. In addition, the chief signalmen examine all engine and train men on signal rules, on the signals in use on the division, and are responsible for the men in the train service being fully qualified on signals. The chief signalman reports to the superintendent as an operating official and is not a part of or subject to the authority of the signal department.

Albany, N. Y.

W. H. ELLIOTT,

Signal Engineer, New York Central (Buffalo and East).

Second Answer

A SIGNAL cabin inspector has recently been assigned on our road to devote his entire time to the investigation of operating methods at interlocking plants. Although only engaged in his new duties but a short time he has already rendered assistance in getting trains through interlocked territories as fast as possible and has been instrumental in inaugurating a system of qualifying operators for positions as levermen. Following is an outline of his duties:

1. Qualify new operators.
2. Check old operators.
3. Inspect cabins and interlocking plants.
4. Check unauthorized persons in cabins.
5. Check traffic locking operation.
6. Note infractions of rules applying to operators.
7. Note infractions of rules applying to trainmen.
8. Prepare written report to division superintendent and

superintendent of signals on operators qualified.

9. Prepare written report to division superintendent and superintendent of signals on infractions of rules.
10. Check fire protection.
11. Check movement of trains or operation of train through interlocking plant in order to save train delays.
12. Prepare a list of qualified towermen on each division for use of dispatcher.
13. Make such special investigation of interlocking plants as may be required.
14. Check all rules relative to cabin operation and operation of trains at interlocking plants.
15. Check electric wiring in cabins.

Richmond, Va.

BURT T. ANDERSON,

Superintendent of Signals, Chesapeake & Ohio.

C. M. & St. P. Preliminary Report

E. H. DEGROOT, JR., director of the Bureau of Signals and Train Control Devices, of the Interstate Commerce Commission, has directed a letter to B. B. Greer, formerly chief operating officer of the Chicago, Milwaukee & St. Paul, regarding the preliminary inspection of the installation of the Union Switch & Signal Company's continuous inductive two element automatic train stop system on the 24 miles of double track between Bridge Switch, Minn., and Winona, Minn., on the C. M. & St. P. As a result of this inspection, the following criticisms and comments are offered:

1. It is suggested that the cut-in feature at the beginning of train control territory in this installation be carefully considered with a view to possibly securing increased protection in case the locomotive device should become defective while in non-equipped territory, and that this protection might be of such character as to result in a penalty brake application should the device for any reason fail to cut-in automatically.

It is further suggested that some means be provided for checking the integrity of the locomotive circuits when the locomotive is operating in non-equipped territory.

2. No interference from foreign current influence was reported and none observed during the inspection, nor was there any evidence of foreign current having been existent at any time. However, the trouble which might result from the presence of stray current could be so serious that it is deemed proper to say here that, should it later develop, effective means will have to be provided for promptly overcoming the trouble.

3. Great care should be exercised in the assembling and installation of the automatic train stop device. It was noted that the service exhaust choke had been omitted from the engineman's brake valve on locomotive No. 5623, causing a more rapid reduction of brake pipe pressure during various tests than was had with locomotives having orifice of the proper size.

4. All equipped locomotives should be properly tuned and in good working order before leaving the terminals at La-Crosse and Minneapolis. It was noted during the inspection that there was room for improvement in this respect.

5. It was noted that the apparatus of the modified equipment has been so constructed as to prevent release of the brakes after an automatic application, until the train has been brought to a stop, and it is understood that this modified equipment is to replace that of the older type on all locomotives.

6. Careful investigation should be made to ascertain, beyond doubt, the cause of undesirable operations such as that of locomotive 6320 on September 11 and 14, 1925, and to remove this cause.

7. In the modified equipment the placing of the automatic train stop valve group in the engine cab where it will not be affected by cold should increase the reliability of the device. It is understood that this modified equipment will replace that of the older type.

8. The failure of the automatic train stop device on locomotive 5623 to initiate a brake application with main reservoir pressure below 65 lb., on September 10, 1925, emphasizes the necessity for preventing undue frictional resistance in the valve affected.