

Editorial Comment

More Difficult to Get A Call-On Signal

THE term call-on, as used on many railroads, applies to a restricting-speed interlocking signal, the control of which is directly by lever, without including automatic control by track circuits in the home signal limits. One purpose for such a signal is to provide a means for directing trains by signal indications, rather than by hand signals, when closing one train in on another, or when making switching moves, such as allowing a locomotive to return to its train after setting out cars, as well as for making moves when track circuits fail.

No Call-On on One Road

On the other hand, some railroads contend that the use of signals so controlled may lead to accidents, because, when a leverman cannot get a high signal to clear at once, he is prone to clear the call-on without investigating to be sure that no dangerous condition exists. A rear end collision occurred on the Chicago, Burlington & Quincy at Buda, Ill., on June 30, 1924. In this instance, a rule, prohibiting the use of a call-on signal for advancing a train on a main track, was violated. The leverman was so impressed with the importance of not stopping a fast mail train that he overstepped in giving this train a call-on signal to proceed into an occupied block. The engineman failed to comply with the speed restrictions, and short flagging entered into the picture. In order to eliminate one important factor from future accidents the Burlington eliminated call-on signals, and what is more, this road has no serious difficulties in getting trains through interlockings. Quite true, some extra signals are required in extensive interlocking layouts, but if the Burlington can do the trick, others may well give it some thought.

A great many of the railroads, however, insist that call-on signals are absolutely necessary in interlockings, and, therefore, they continue to install and use such signals, but various features are or can be applied to improve the safety surrounding the operation of these call-on signals.

Not a Cure-All

A first consideration, voiced by some signal engineers, is that a call-on signal should not be used as a cure-all for preventing train stops, but rather as a means for

moving trains in emergencies, and, therefore, safety should dictate that trains be required to stop before accepting a call-on signal. If such a rule is not obeyed, a short track circuit can be installed so that the signal will not clear unless the train has stopped or is going at a very low rate of speed. This idea, as used on the Southern Pacific, is explained on page 148 of *Railway Signaling* for March, 1943.

Many railroads now arrange the circuits so that a call-on signal will not clear unless a certain route is complete, that is, the switches are positioned for a route starting at that signal, and also the opposing signals are at Stop. At some interlockings the circuits are arranged so that, with the call-on displayed, when the train ahead clears the block the call-on restricting aspect will give way to the high-arm aspect automatically, without action by the leverman. This is helpful in reducing delays.

Another idea is to include a special button or release device which the leverman must operate in addition to the lever in order to clear a call-on. The purpose is to require the leverman to stop and think what he is doing, thus preventing off-hand hasty action.

Stick Control

An objectionable feature in the control of the call-on signals as used on many roads is that the circuits are non-stick. For example, at an interlocking recently, a call-on was cleared for one movement, and the leverman neglected to restore the control to normal. Along came a through freight train that accepted the call-on and did not stop until half way through a crossover leading to the opposite main track. Luckily no accident occurred, but the occasion emphasizes the need for stick control of call-on signals. One means for providing stick control would be to install a short track circuit which could be in approach to the signal, and thus serve also to enforce the rule to stop before accepting a call-on. Several circuits for use with interlockings using mechanical locking between levers were explained in the May and June issues of *Railway Signaling* for 1927. A certain form of a stick for a call-on signal as installed at an all-relay plant on the Canadian Pacific was explained on page 107 of *Railway Signaling* for April, 1933.

A conclusion is that where call-on signals are necessary, the benefits obtained should justify the best thought in surrounding their operation with the most effective safety practices that can be devised.