

Letters to the Editor

Crossing Signal Shunting Circuit

Arkansas City, Kan.

To the Editor:

The shunting circuit for highway crossing signal controls, as shown on page 366 of *Railway Signaling* for July, has been used for some time on the Atchison, Topeka & Santa Fe on branch lines, where no automatic signaling is in service. Our experience has revealed one fault with this circuit, which can be corrected. The polarity of the adjoining track circuits must be the same on both sides of insulated joint. The reason for this is, if both sides of the interlocking relay should become de-energized at the same time by being jarred, the relay cannot pick up again, because the current then passes from positive battery through the back contact of the relay to the negative rail, thence to the opposite track battery, back to the relay on the positive rail, through the back contact of the relay to the negative rail to battery. This makes it impossible for the relay to pick up. This fault was overcome by arranging the connections so that the rails are of the same polarity on each side of the insulated joints. In addition, we use silver to silver back contacts because under certain conditions, there is not enough shunting effect with silver to carbon back contacts to prevent the relay from picking up while an engine or cars are on the crossing.

C. A. COTTON,
Signal Supervisor,
Atchison, Topeka & Santa Fe.

More on Distant Signals

North Cape, July 10.

To the Editor:

Now is a good time to study your distant signals to see whether all needed provision has been made for the longer trains and higher speeds, that have been gradually changing the conditions during the last few years. This I read in the main editorial in your June issue. Every signal engineer must agree with this, and, no doubt all enterprising members of the profession have in their mind well-defined ideas on the subject, already, if not in their prospective budgets—in their lists of what they would like to do. But even with the present liberal provisions of government money, desirable projects will have to remain on the waiting list for some time yet, and I want to direct attention just now to the last four lines of your editorial; the duty of the superintendent.

The signal engineers of America are entitled to much commendation for the alert readiness with which they always furnish for the general manager—and even for the division superintendent—everything that he asks for; but sometimes they seem to do too much. The operating officer asks too much. Those last four lines contain one of the most important suggestions of your article. *Make full use of the facilities that you have.* Lacking complete equipment of cautionary signals, grasp the bull by the horns, and train the enginemen to make full use of all other landmarks. The young runner, who habitually waits until he comes to a signal before he awakes to the fact that he is approaching the crossing of the X. Y. & Z., should take lessons from some veteran in

the service who has run thousands of miles with nothing but a red barn or a cedar tree to tell him where he is.

Of course, this thought should not be stressed to the point of scrimping the number of signals; but it should be remembered that in many situations the roadside signal is of value chiefly as a reminder for the engineman who has been allowing his mind to wander for a few seconds. Every means should be employed, no matter how complete the signaling, to keep one's mind (when in the engine cab) alert every second of the time. 'Practice makes perfect.'

Your advice gives the superintendent two very definite points: (1) The runner should be *instructed* by a competent road foreman who has the habit of never giving up until every dull spot in the engineman's mind has been rubbed bright; and (2) the engineman who has by this education been made master of the aspects of the signals, should be *required*—not merely advised, requested or exhorted—to take for himself, every trip, the full benefit of every advantage that the signals give him.

B. R. B.

Collision at Kylesburg

(Continued from page 394)

Supervisor Harding tested the signal apparatus involved, and it was found to be in proper working order.

This accident was caused by the failure of Operator Miller at Heath to display the train order signal and to deliver a form 31 hold order to the crew of Extra 6706; and by his further error in lining up the route and displaying signal indications admitting this train to a block which he had pledged to and which was occupied by an opposing eastbound train.

The B. & O. train was being operated against the current of traffic; under these conditions the automatic block signal system does not function to provide adequate protection, and the rules and practices provide for a manual block system to protect such movements. A safety device, known as a keeper or reminder, was provided and required by the rules to be used on the lever of the interlocking machine to preclude possibility of a conflicting movement being authorized after the block had been pledged. In this instance, however, Operator Miller removed the reminder from lever 3 in order to arrange for another train movement at Heath, and then he said he forgot to replace it; overlooking the fact that he had pledged the block to the eastbound train, he then lined the route for the westbound train and permitted it to enter the occupied block without having delivered copy of the hold order to the crew of that train or having displayed the train order signal for the westbound train.

Cab-Signal Protection

This portion of the line and Pennsylvania engines operated over it are also equipped with an automatic cab-signal system of the continuous type; while a number of engines on this line have been equipped with cab-signal apparatus for reverse movements the Pennsylvania engine involved in this accident was equipped with cab-signals which are operative only when an engine is being run forward in the normal direction of traffic. In this case the Pennsylvania engine was being operated backward in the direction of traffic; had the engine been operated forward, or had the engine been equipped with cab signal apparatus for reverse running, the engineman would have received a cab signal indication, that the block was occupied, in sufficient time to have enabled him to prevent the accident.