cross, although the signals may continue to operate. A better arrangement is to provide local control at the crossing so that the employee can cut-in or cut-out the operation of the signals while switching movements are being made. In towns where several crossings are protected by automatic signals, part-time manual control from a central point can be used during the hours of the day when switching movements predominate.

The application of any of these special control arrangements entails considerable expense for installation as well as maintenance. However, it seems advisable that action be taken at once at numerous locations, rather than have criticism grow to the extent that the signals, as such, are in disrepute as effective protection.

OPEN FORUM

This column is published to encourage interchange of ideas on railway signaling subjects. Letters published will be signed with the author's name, unless the author objects. However, in order to encourage open discussion of controversial matters, letters may be signed with pen names at the request of the author. In such instances, the correspondent must supply the editor with his name and address as evidence of good faith. This information will not be disclosed, even on inquiry, unless the correspondent consents.

A Maintenance Suggestion

To the Editor:

Through various experiences of maintaining in the few years I have had in signal work, I wish to offer the following as a suggestion for better maintenance, and in case of a failure, quicker restoration to normal conditions of any switch or other apparatus with dynamic indication, or apparatus depending upon self-generating energy for indicating. Use a volt-ammeter (or an ohm-meter) and take specific data, a continuity check, of all circuits, with levers and other operating devices placed in the indicating position, making sure that all contacts are clean, that the generating device is open at the generating point, and that the readings are taken from that point. For instance, take a General Railway Company all-electric 5a layout for a concrete example. Open the brushes, place the lever on the indicating point, making sure that circuit shifter, indicating relay, and all switch machine contacts are in proper position and clean, and note the resistance of the circuit. Next, open the circuit at the indicating contacts of the switch machine, tower side, and take readings. Then, open the circuit at the indicating relay and take readings. This gives you three specific readings, and three specific locations to check. This takes time, but if you are a maintainer that wants to keep his apparatus in proper condition, and to hold down failure interruptions, what does a few hours of labor mean? Now, when any particular circuit gets into trouble, take your ohm-meter readings with you on your way out to switch the machine location and many a time you will have located the trouble and have it repaired, while you would be thinking of what to look at by the old hit and miss way. This continuity checking scheme can be used on all other circuits that do not maintain a standing current at all times. In fact, I have a resistance reading of all traffic circuits, between cabins on my territory, and know from time to time of anything out of the ordinary, such as high resistance relay contacts or bad splices. Try this once and you will forever keep it up.

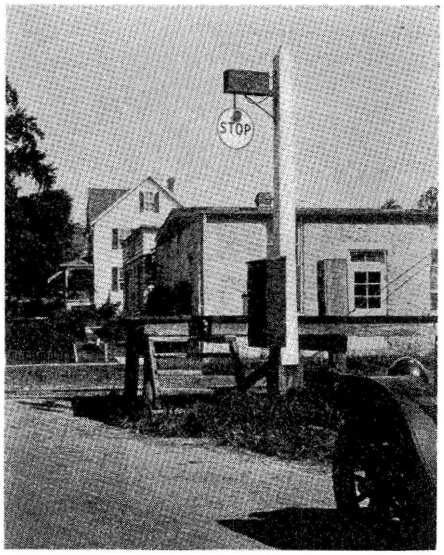
H. C. DUNN,
Huntington, W. Va.

The Rotating Stop-Sign

Baltimore, Md.

To the Editor:

Forty per cent of the highway crossing signals installed by the railroads during the past year were of the type comprising a two-position stop-sign, normally held by electrical energy with its edge to the highway. On the approach of a train, the stop-sign is rotated a quarter of a turn on a vertical axis by gravity, and presents its face to the highway. The stop-sign is displayed to vehicular traffic in a stationary position until after the passage of a train. Electrical energy then rotates the sign back to its normal position.



Adler rotating-disk signal installed on the Maryland & Pennsylvania at Glenarm, Md. on Feb. 25, 1921

Invented by the writer in August, 1920, and developed and built under the direction of D. W. Richards, signal engineer of the Norfolk & Western, this type of signal was first installed on the Norfolk & Western at Buena Vista, Va., in October, 1920. The signal was described and illustrated in the December 24, 1920, issue of the *Railway Age,* on page 1124 of Vol. 69, No. 26, and in *The Railway Signal Engineer* of December, 1920, on page 533, in the New Devices column.

Similar early installations were made on the Baltimore & Ohio at Bates Road, Terra Cotta, District of Columbia, on November 23, 1921; on the Maryland & Pennsylvania at Glenarm, Md., on February 25, 1921; and on the Norfolk & Western at Shepardstown, W. Va., on February 1, 1922.

These facts are set forth solely as a matter of interest, historically.

CHARLES ADLER, JR.