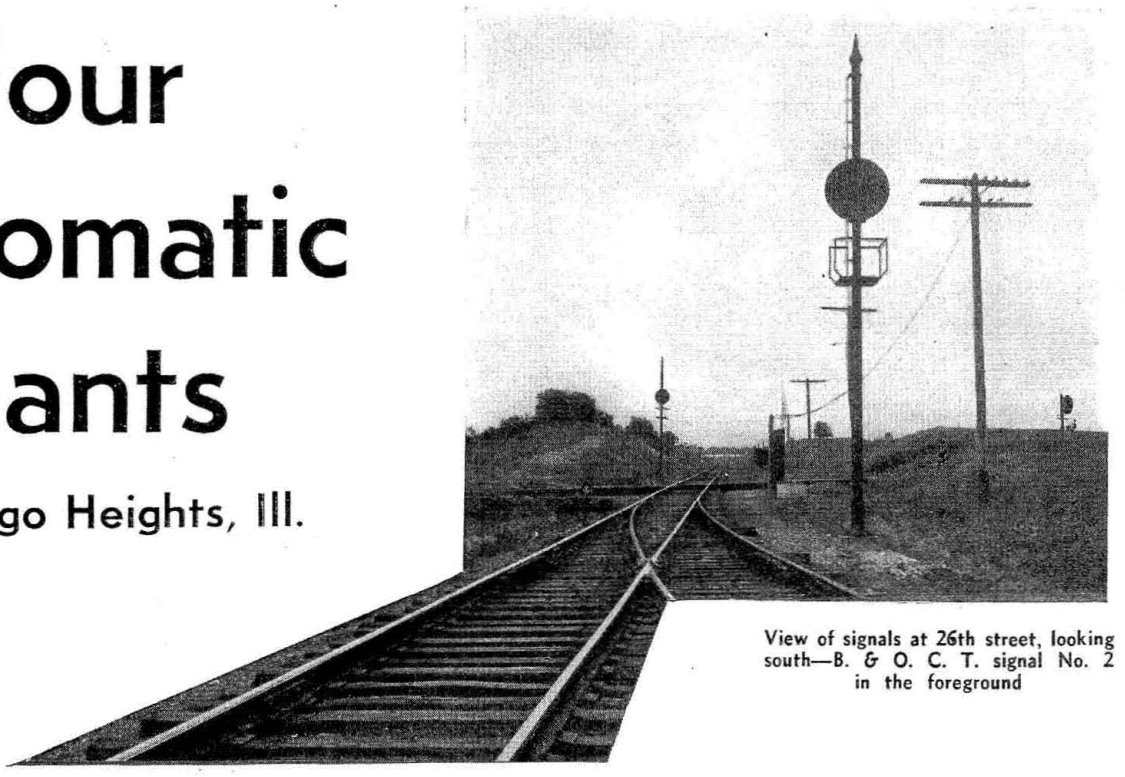
B. & O. C. T. Stops Theft of Coal with

Four Automatic Plants

at Chicago Heights, Ill.



View of signals at 26th street, looking south—B. & O. C. T. signal No. 2 in the foreground

Resulting annual saving, together with reduction of losses due to train stops, will pay for interlockings in less than two years

FOUR automatic interlocking plants of an extremely simplified type, completed in January 1932 by the Baltimore & Ohio Chicago Terminal Railroad on a freight line in Chicago Heights, Ill., have most effectively achieved their twofold purpose. One of the objectives was to eliminate the cost of stopping all trains at each of four railroad grade crossings. The other objective was to stop the wholesale stealing of coal from the many trains which were required to stop at these crossings. Formerly, the only crossing protection was that provided by "Stop" boards and red lights.

Coal Thieves

The line in question is a freight connection between the B. & O. C. T. and the Chicago, Milwaukee, St. Paul & Pacific's line extending from Chicago Heights to the coal fields near Terre Haute, Ind. In normal times the Milwaukee operates about five coal trains each 24 hours over this line through Chicago Heights, as well as a few merchandise freight trains. The B. & O. C. T. uses this line only for switching service.

For years a very costly and annoying condition existed at Chicago Heights. Coal was stolen in enormous quantities from the stopped and slow-moving trains. As many as 200 thieves would board the trains, in daylight as well as at night, and throw off as much as 50 tons of coal while the crossing stops were being made. It was necessary to send armed police through Chicago Heights with each shipment, but even this policy did not effectively solve the problem. A logical remedy was to install an automatic interlocking at each of the crossings, in order to permit the trains to run through without stopping. As stated in the opening paragraph, this has been done, and the results have been eminently satisfactory. It is still necessary to send an armed policeman through Chicago Heights with certain shipments of coal, but the theft of this commodity has been almost entirely eliminated. Added to the saving thus effected is the appreciable but not so tangible saving resulting to the railroad from the elimination of thousands of train-stops annually, and the benefits derived by the municipality from the reduction of highway congestion at the street crossings in this territory, since trains now clear these street crossings in much less time than was formerly required.

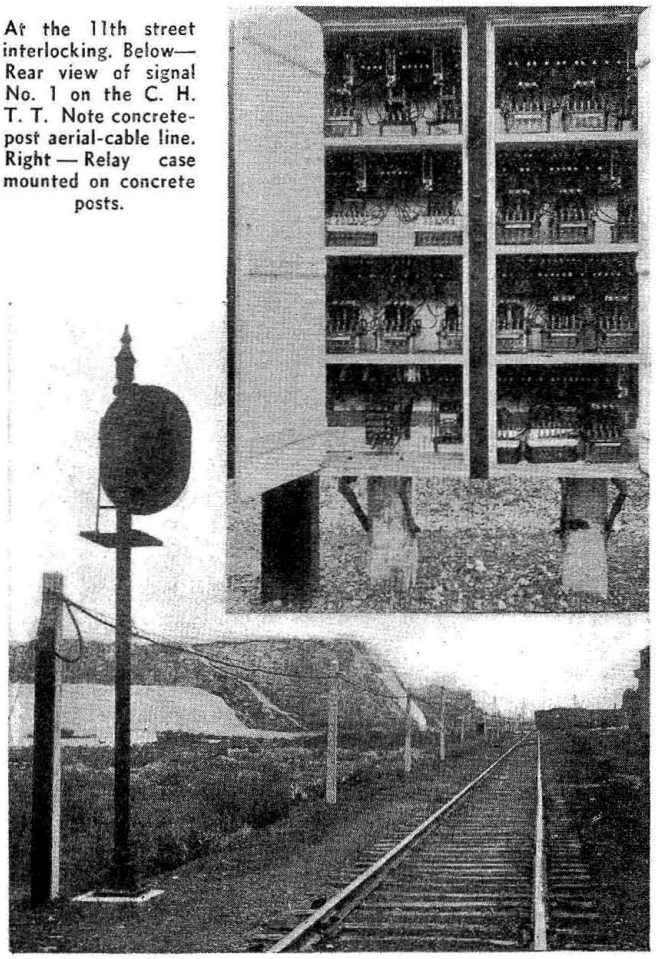
Location and General Features

The automatic plants are located at 26th, 22nd, 17th and 11th streets, all of them being within a distance of

two miles. In each case the B. & O. C. T. crosses the Chicago Heights Terminal Transfer Railroad, now part of the Chicago & Eastern Illinois. The plant at 26th street is a crossing of two single tracks, slightly complicated by the presence of two side-track switches. At 22nd street the track layout is somewhat more complicated, consisting, in effect, of the double-track B. & O. C. T. line crossed by a crossover extending between two lines of the C. H. T. T. which are parallel to and on either side of the B. & O. C. T., as shown in the track-and-signal diagram. The plant at 17th street is essentially a single-track crossing, with side-track switches, and with a secondary track extending over the crossing, train movements on the latter being protected by a mechanical gate arrangement. The 11th Street plant is a simple single-track crossing without any complications whatever.

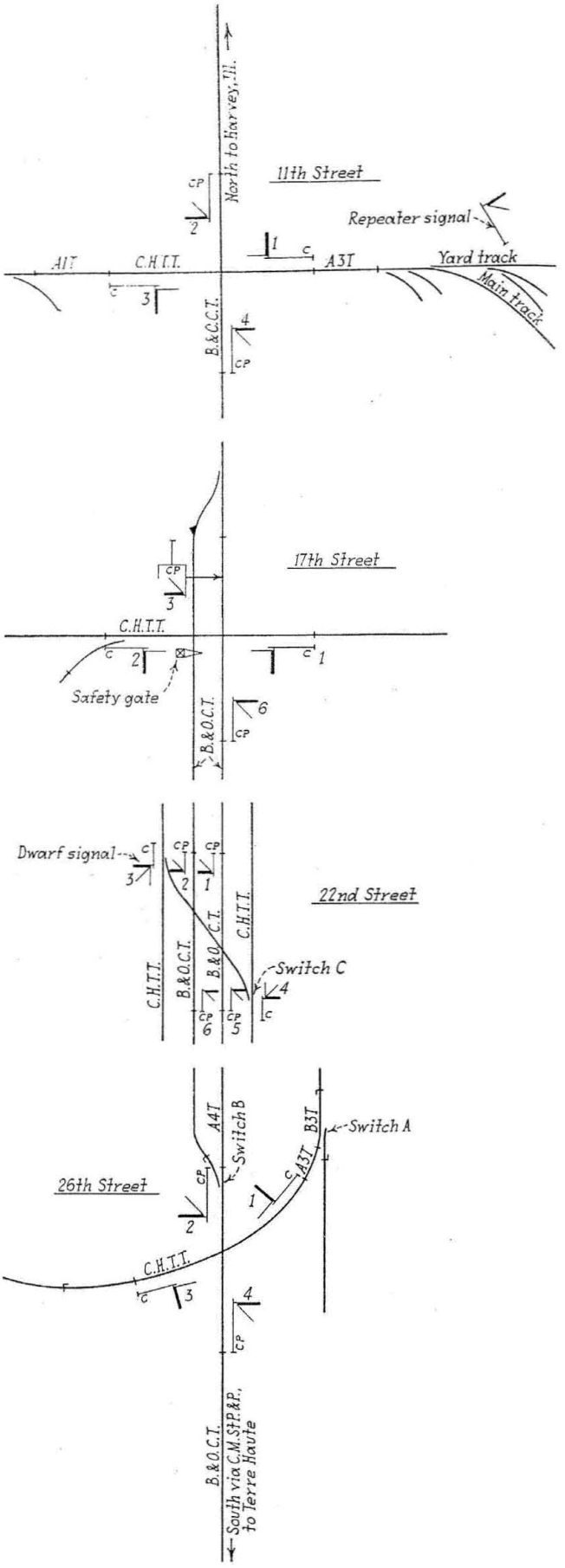
Important Characteristics

At each crossing the signals are located within 100 ft. of the intersecting tracks. Approach or distant signals are not used, partly because train movements through this territory are restricted by time-card order to 15 m.p.h. The approach track circuits on the B. & O. C. T.



At the 11th street interlocking. Below—Rear view of signal No. 1 on the C. H. T. T. Note concrete-post aerial-cable line. Right — Relay case mounted on concrete posts.

are approximately 2,000 ft. long; on the C. H. T. T. they vary from approximately 250 to 350 ft. in length. Color-position-light signals are used on the B. & O. C. T. and color-light signals on the C. H. T. T. Most of the signals are of the two-position type and, with the exception of the four dwarf signals on the B. & O. C. T. at 22nd street, all the signals are of the high type. Time releases are the media for emergency operation of the plant by trainmen. Where conditions permitted, the signals are approach-lighted. The signals on the C. H. T. T.



The problem presented by the presence of local complications was successfully solved