

divisions. This was the first voluntary installation approved.

The additional installation was made voluntarily, the report says, after the train-stop system had been in use on the Detroit and Middle divisions "a sufficient length of time to demonstrate its practicability from an operating standpoint." The carrier reported that it was felt that to get the benefit of all the protection the system might afford for main line traffic between Detroit and Chicago the West division should likewise be equipped, and this was accordingly done. Kensington is within the city limits of Chicago and is the point at which Michigan Central trains enter the tracks of the Illinois Central electrified line to run to Central Station. The majority of the locomotives operating between Detroit and Chicago were equipped with the device to operate over the Detroit and Middle divisions. Forty-eight additional locomotives were equipped and on April 1, 1927, the system was placed in service in connection with the ten interlockers located on the West division.

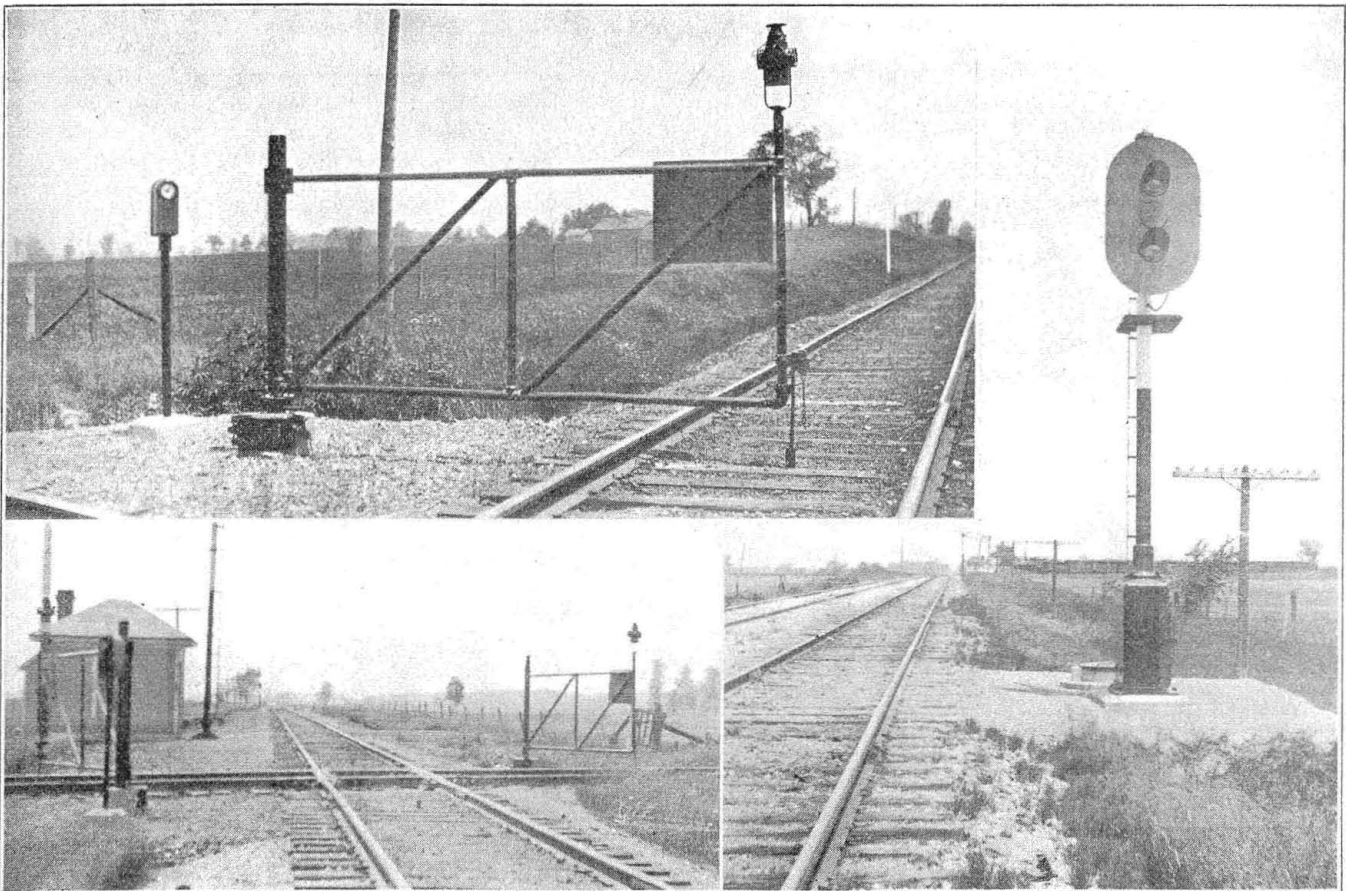
Half-Interlocker on D. T. & I.

AT the intersection of the main line of the Detroit, Toledo & Ironton with the Fayette branch of the New York Central at Bimo, Mich., the first half-interlocker has been completed on the former road. The heavy volume of traffic on the D. T. & I., combined with a stiff grade made it necessary to provide protection at this rail intersection, because under the regulations many unnecessary train stops and delays to trains occurred. Prior to the new installation it was necessary to stop all trains and flag them over the crossing in accordance with state regulations.

Two-position color-light home signals located 700 ft. in advance of the crossing, displaying red for "stop" and green for "proceed" and semaphore type distant signals 2,000 ft. in advance of the home signals, displaying a fixed caution indication comprise the signaling facilities. The home signals are approach-lighted, being operated from 10 cells of Edison 500 a.h. primary battery and controlled by the manual operation of the crossing gates at the intersection. The track circuits are fed by 3 Edison cells in multiple. Normally the gates are lined up across the New York Central tracks thus allowing D. T. & I. trains to operate under proceed signals over the crossing without stopping.

To provide information as to approaching trains on the D. T. & I. for the benefit of New York Central trainmen a semaphore indicator has been installed and serves the same function as at a main line switch. That is, the New York Central trains stop at the crossing under normal operating conditions and the train men note from the semaphore indicator whether or not a D. T. & I. train is approaching. If not, the gates are reversed, thus causing the D. T. & I. home signals to display a stop indication. Upon completion of the movement of the N. Y. C. train over the crossing, the gates must be restored to their normal position over the N. Y. C. tracks after the train has been flagged over the crossing, thus changing the D. T. & I. home signals to the green or proceed indication normally displayed.

As at fully automatic signaling interlocking plants the Bimo installation is without derails. Passenger trains on the D. T. & I. are permitted to operate over the crossing at a speed of 30 mi. an hour while freight trains are permitted to cross at a maximum speed of 20 mi. an hour.



Views of crossing and, at right, home signal on D. T. & I.