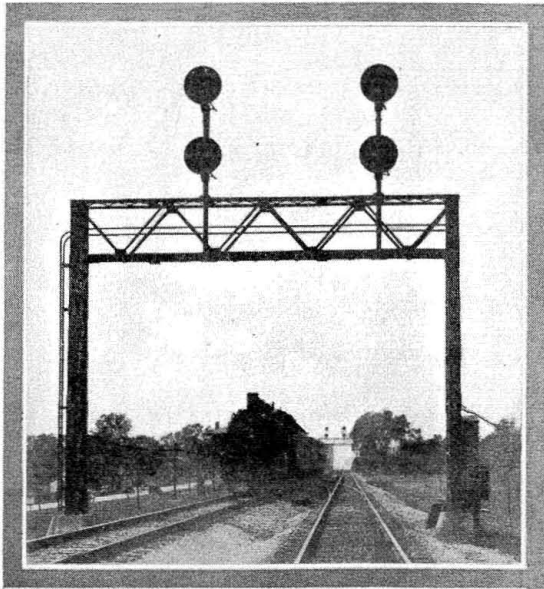
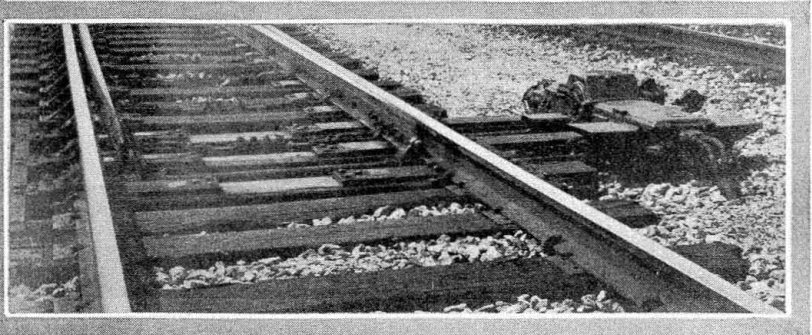


Interlockers Replaced by Centralized Traffic Control on the Illinois Central



Northbound train on remotely-controlled plant at Chebanse



The switch machines are of the dual-control type

Change of control for two plants accomplishes saving of \$11,000 representing 31 per cent on investment—Approach and signal-clear indications on machine—Unique superimposed a-c. circuits used

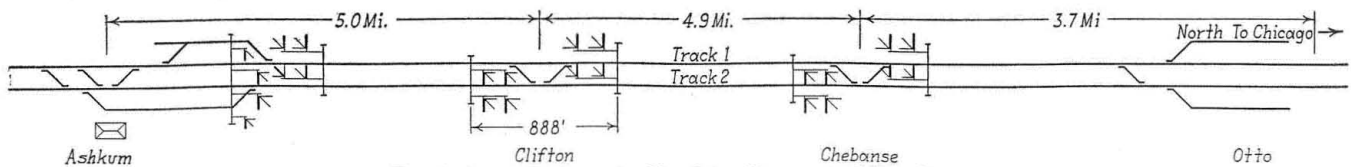
THE 20 miles of main line of the Illinois Central from Otto, Ill., to Gilman is the busiest piece of double track on the road. In 1922, a daily traffic of 54 to 60 trains forced the management to study means of increasing the capacity of this section of line. Consideration of the construction of a third track was abandoned when an investigation revealed that the desired increase in capacity could be accomplished, at a great saving compared with the cost of a third track, by utilizing both tracks for the operation of trains in either direction. In order to facilitate run-around movements two crossovers, one facing in either direction, were provided at Chebanse, Clifton and Ashkum, these towns being located approximately five miles apart. Number 18 crossovers were used to permit train speeds of 45 m. p. h. An electro-mechanical interlocking plant was installed at each of the points mentioned; the ones at Chebanse and Clifton handled only the crossovers and signals, while at Ashkum the passing-

in addition to their function as automatic block signals, served as traffic-direction signals. In order to let a train in any section the operator at the entrance end was compelled to secure an unlock from the operator at the leaving end, permitting him to clear the entrance signal and making it impossible for the operator at the other end to clear his entrance signal for a train in the opposite direction.

Switches between interlocking plants are electrically locked, and in case one of the switches is to be used, it must be unlocked by the nearest interlocking tower operator. Therefore, an absolute check is provided for all train movements between towers.

An Opportunity to Reduce Operation Expenses

The above system, described on page 139, *Railway Signaling*, April, 1925, proved to be sufficiently flexible, and gave the desired results from an operating standpoint. However, with the recent development of cen-



Track layout of centralized traffic control territory

track switches at the south end were operated mechanically, and the switches at the north end were operated by electric switch machines controlled remotely from Ashkum.

Train movements were made on the authority of signal indication without written train orders. Each track was equipped with automatic block signaling for train movements in either direction on either track, in other words, the same as two single-track roads side by side.

The sections of track between interlocking plants were provided with entrance signals at each end, which

tralized traffic control systems, it became apparent that very appreciable savings could be effected by placing the control of several interlocking plants in the hands of a single operator and operating the switches electrically, with option of hand control, as in centralized-control systems.

In view of the fact that there were only the four crossover switches at each of the plants at Chebanse and Clifton, the expenditure for the power switch machines and the control equipment necessary, could easily be justified by the saving in wages accomplished by the release of the three operators at each plant. However,

