



*The machine is of the centralized control type*

## Big Four Installs

# Simplified Interlocking

## With No Mechanical Locking

*Illuminated diagram includes signal levers and movable track sections repeating position of switches—All locking accomplished electrically*

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**S**IMPLICITY and facility of operation are the features of a large electric interlocking plant recently installed by the Cleveland, Cincinnati, Chicago & St. Louis at Linndale, Ohio, six miles west of Cleveland. This new interlocking is located at the west end of the new electrified zone of the Cleveland Union Terminal. The locomotives for about one hundred New York Central Lines passenger trains are changed daily from steam to electric, or vice versa, at the Linndale plant. The track layout was, therefore, designed to facilitate changing locomotives as well as to expedite the movement of numerous freight trains which are handled by steam locomotives through this territory, but do not go through the Cleveland passenger terminal.

On account of the numerous train movements at this point, considerable study was given to the choice of a plant that would provide, with safety, the greatest flexibility and rapidity of manipulation and operation. Other features desired were simplicity of design, economy in first cost and maintenance, and adaptability to future track changes and additions.

### Reason for Using New Type Control

To accomplish these results in the best way, it was

determined to use a machine of the centralized-control type, providing the simplest possible controlling devices for switches and signals and, at all times, giving the operator complete information as to all conditions affecting the operation of the plant.

The safety features of mechanical locking have been so surrounded by electrical protection, in the modern interlocking plant, that a machine of that type, with its resultant increase in size and other complications, only tends to retard the manipulation of the plant and affords no safety features not already covered by adequate electrical protection. That complete reliance can be placed on the electric circuits alone, has been demonstrated by the successful operation, over a period of years, of remotely-controlled switches and centralized traffic control systems. These principles were, therefore, considered to be equally applicable to short distance control.

### Small Levers for Switches, Buttons for Signals

The machine is quite small, only 67 in. long, and the operator seated at the desk has all of the controlling switches within easy reach. The diagram before him reproduces the track layout. A lever directly below a switch or crossover on the diagram,





