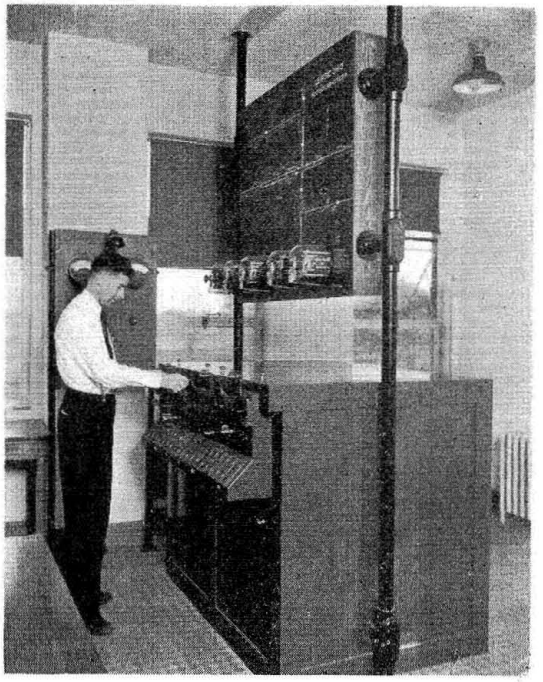
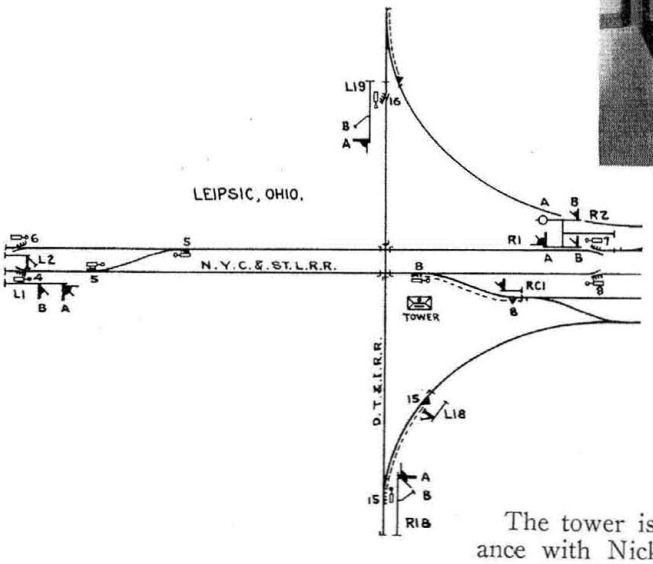
Electric Interlocking

Constructed by the

Nickel Plate

Rectangular-type relay shelf developed to fit space in tower—Sheet metal square conduit used

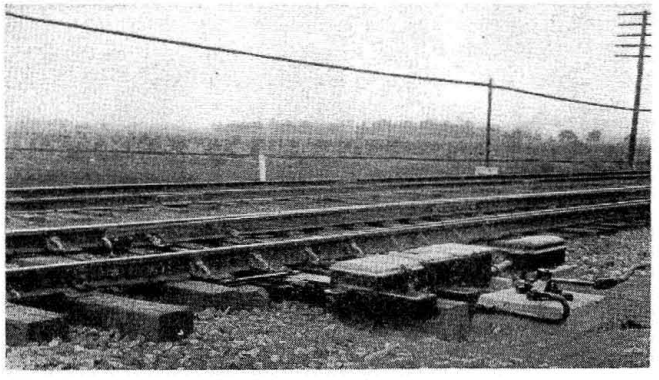




By

J. H. Oppelt

Signal Engineer,
New York, Chicago & St. Louis



A NEW electric interlocking was installed recently at the crossing of the New York, Chicago & St. Louis and the Detroit, Toledo & Ironton near Leipsic, Ohio. This new plant replaces an old 20-lever mechanical interlocking, built in 1898 by the National Signal Company, which included pipe-connected switch and lock movements, the signals, both home and distant, being operated by wire connections. Additional track facilities were to be included in the plant and, as the old interlocking was obsolete, it was decided to abandon it in favor of an entirely new installation. An electro-mechanical plant would have handled the present layout as well as proposed additions quite satisfactorily, however, it was evident that an all-electric interlocking would fit in better with possible future developments at this point.

The tower is constructed of paving brick, in accordance with Nickel Plate standards, and, while rougher than face brick, it presents a very substantial appearance. On account of a lack of adequate drainage, it was not feasible to provide a basement, therefore, the ground floor is divided into two rooms by a full partition, the heating plant, coal bin and toilet being in one room, and the relays, battery and charging apparatus in the second room.

As a result of this arrangement the apparatus room is somewhat smaller than ordinarily encountered at such a plant. Therefore, there was no space available for a long relay rack of the usual type. After considerable study, a new type of relay rack was designed. This rack was constructed in a rectangular arrangement with instruments on three sides, and one side toward the wall of the room is open for a doorway. At each corner there is a five-inch angle-iron upright to which the asbestos, boards, known as transite, are bolted. The edges of adjacent sections of the asbestos board are kept flush by short pieces of strap iron with a bolt through each board.

As shown in the illustrations, each relay is mounted on an individual shelf with wall brackets bolted through the asbestos board. Each relay is supported on its shelf by a coil spring at each corner. With this arrangement, the relays are spring-supported but are held in proper position without drooping out of alinement, as is the case oftentimes with spring-supported wall-type relays.

The wires from the relay terminal posts are run through holes in the asbestos board to the rear, where square Bull-dog duct is used for cross runs as well as vertical runs. This duct is constructed of light sheet metal, enameled to resist corrosion. It is made in sections