

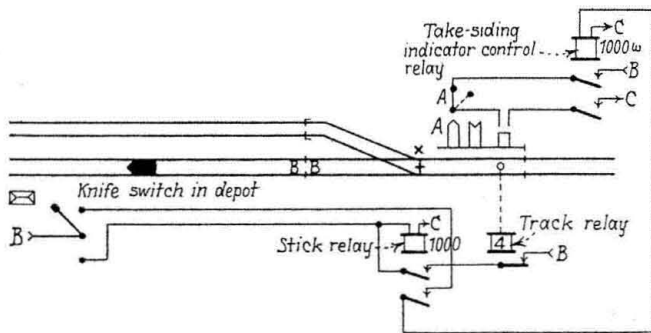
# What Kind of Control for Take-Siding Signals?

"Where take-siding signals are added to existing automatic signals to direct trains to enter passing tracks equipped with hand-throw switches, how are the take-siding signals controlled and is an indication of the signal repeated or checked in any way at the point of control?"

## Simple Circuit Without Any Indicating Features

By A. W. FEHRENBACH  
Signal Department, Pennsylvania, Chicago

IN the circuit shown in the accompanying plan, the first train must be on the main track and the automatic signals must be at stop, before it is possible to give a take-siding indication. The control is so arranged that the take-siding indicator circuit breaks through the circuit breaker on the automatic signal, when the latter is in the stop position. When the control switch at



Simple control circuit for take-siding indicator

the station or tower is thrown in one position, the stick relay at the signal is picked up and this permits the signal to clear. When the control switch is thrown in the reverse direction, the take-siding indicator is energized. I cannot see any necessity for repeating the indication of the take-siding signal at the point of control. Inasmuch as the automatic signals must be at stop, assurance is obtained that the train approaching the siding is operating at reduced speed.

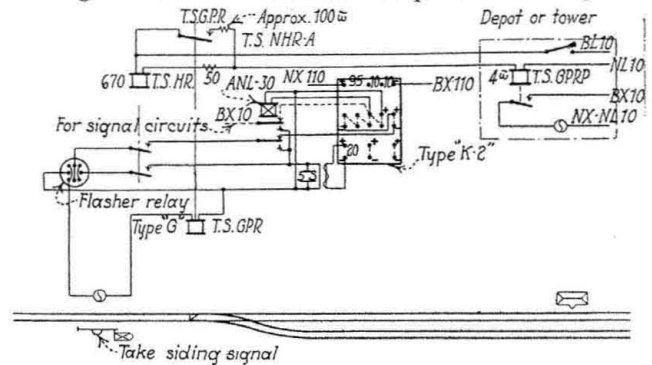
## Michigan Central Uses Flashing Light as Take-Siding Signal

By L. RUPERT  
Signal Inspector, Michigan Central, Detroit, Mich.

A FLASHING light controlled locally by a station operator is shown in the accompanying circuit plan. This is the installation which has been made near Jackson, Mich., and is the first one of this type. An ordinary flasher relay is employed to control the local lamp circuit at the signal. The knife switch is located in the station or tower and when this is closed a line relay is picked up at the signal. This operation causes a flasher relay to function, and the intermittent current in the flasher-light circuit is repeated through the medium of a Type-G series relay at the signal. It should be noted that the signal is repeated at the station or tower, by means of a circuit, which is in shunt with the 670-ohm take-siding relay-TSHR. A resistance unit of approximately 100 ohms is in this circuit in order to provide minimum working current only at the repeater

relay-TSGPRP, which is located in the tower or station. In other words, this latter relay operates intermittently in unison with the flashing-light take-siding signal.

On the Detroit-Toledo division of the Michigan Central, the take-siding signals are operated by the dispatcher. This control is accomplished by connecting selectors across the dispatcher's telephone



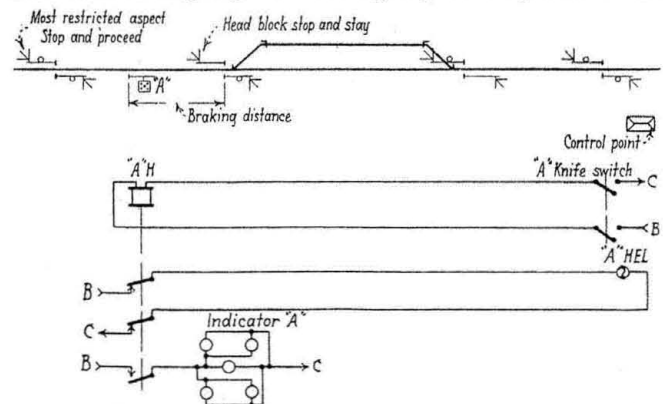
Circuit for flashing-light take-siding signal with repeating feature

circuit. The automatic signal marker light is flashed to provide the take-siding indication. An ordinary flasher relay is used to control the local lamp circuit, the flasher relay being controlled by the selector. An "O. S." feature is provided to inform the dispatcher when the train has passed. Motor-driven code wheels are arranged to repeat certain Morse code characters indicating the location of the signal and the position of the controlling apparatus, for both the take-siding and "O. S." signals. As a final check on the take-siding signal, the lamp is connected to the line through a coupling transformer, the intermittent operation of the lamp then becomes audible to the dispatcher.

## C. & O. Employs Position-Light Indicator

By C. A. TAYLOR  
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THE type of signal used for a take-siding signal on the Chesapeake & Ohio is a position-light signal consisting of five light units so located on a square background that they form the letter "X." The take-siding signal is straight-power operated and



Track and circuit diagram showing control of take-siding indicator on C. & O.

controlled over a circuit controller on an interlocking machine lever where such is available, or over a knife switch on the operator's desk. The indication of the signal is not repeated or checked in any way at the point of control.