

minated on this board, the power and operating circuits being properly protected with cartridge fuses. From these terminals Pullman special No. 14 flexible conductors, the braided covering of which is lacquered, extend upward in two main cables which branch laterally to each shelf and to each relay.

The wire groups are neatly taped and secured in place by enameled bridle rings. Of course, each wire is properly tagged at each terminal point so as to be easily identified. The terminal board also accommodates the 10-pen Esterline-Angus time-recorder, which has been provided to record continuously the operation of the interlocking, in accordance with the requirements of the state government. This instrument operates in synchronism with the 110-volt a-c. circuit. The battery shelves occupy space on the first floor of the tower, opposite the relays.

The old interlocking operated on 110-volt d-c. energy supplied from a 55-cell Exide lead storage battery of 60-a.h. capacity. This battery was retained in service to operate all of the Style-B semaphores, and a G.R.S. copper-oxide rectifier was installed to maintain the charge. In addition, a 10-volt storage battery and rectifier have been provided to feed the line circuits.

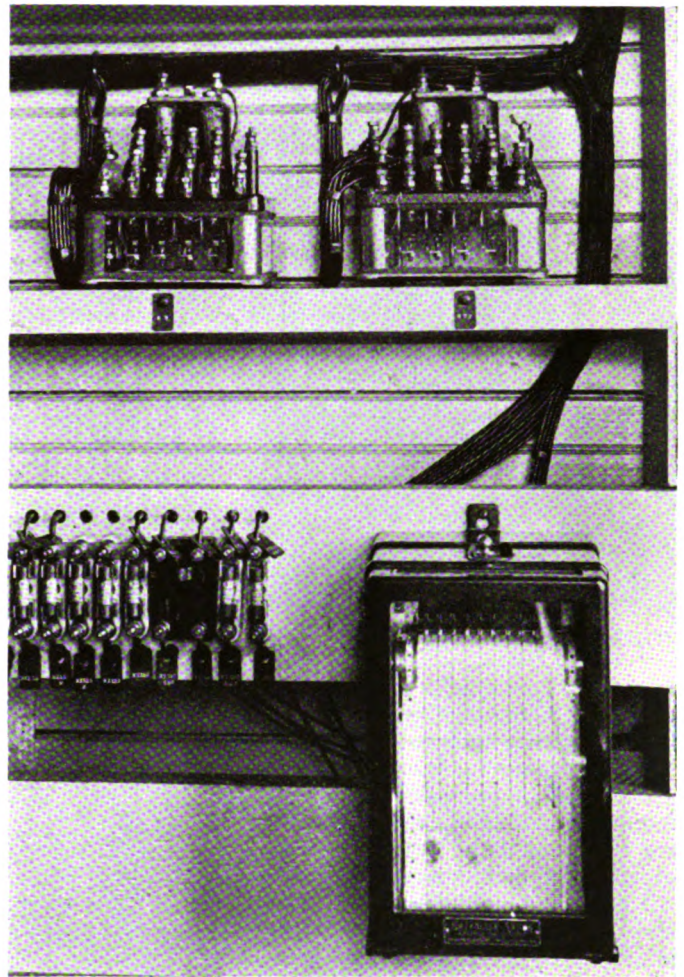
Control and Releasing Scheme

All of the control relays may be classed in five groups as follows, according to their individual function: Track relays and their repeaters in the tower; WP relays for repeating the normal position of the three main-line hand-operated switches; HP relays, repeating the normal position of the home signals; HR relays, for direct signal control; and ZH relays, which alternate the use of the plant between the opposing lines.

One ZH relay is provided for each of the five pairs of opposing home signals. The ZH circuits are normally de-energized, but each functions while a train passes to energize its ZH relay, which "sticks

The HR circuits pass through front contacts of the HP or normal repeater of the home signals of the opposing road. From this point the signal control-circuit combination includes the necessary track-repeater

Control relays and graphic time recorder are housed in the tower



up" and opens the control circuits for the signals on this road until the train has cleared the entire interlocking. Meanwhile, a train approaching on another road is able to secure a proceed signal as soon as the home track circuits are cleared by the departing train.

contacts, ZH, WP and HR contacts to energize the HR relays, which control the semaphores directly by 110-volt energy. Each HR circuit is checked through the HR circuit of the opposing home signal on the same road and is shunted by a front contact of each HR relay governing signals on an opposing road.

Provision has been made for the manual release of the plant in the event of switching movements not involving the use of the crossing within home signal limits. For example, if a Frisco train is using the cotton compress crossing, track circuit 10T in the approach to signal 13 being occupied, signal 13 would normally assume the proceed aspect. An approaching T. & P. train would, therefore, be obliged to stop short of its home signal and then proceed over the crossing under flag protection, were it not for the releasing equipment. For this purpose a push-button station has been installed at



Pot-head arrangement for terminating Okosheath conductor, with Raco fittings