

All-Relay Interlocking Installed by Rock Island

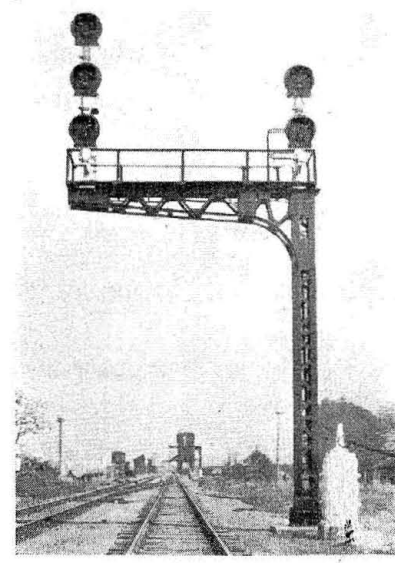
Three crossovers, two single switches and twenty-seven signals controlled by twelve levers in C. T. C. machine

AT POLO, Mo., the eastern end of the new Milwaukee—Rock Island joint track, the Rock Island has recently constructed an interlocking to handle the junction and crossover switches and signals, the control machine being of the C. T. C. type without mechanical locking between levers, the locking being accomplished electrically on the all-relay principle.

The layout includes the junction of two single-track lines from the east with passing tracks on each road in the approach to the junction. A joint double-track line extends westward from the junction toward Kansas City, and, because trains are operated in either direction on both tracks of this double-track section, high signals are provided for all possible through routes.

The interlocking includes three crossovers and two single switches. A point of special interest is that three main-line switches within home signal limits are not interlocked but are manually operated with switch stands. However, the position of each of these switches is indicated on the control machine. Furthermore it is interesting to note that a buffer-type spring switch is used at the east end of the passing track on the Rock Island, although this switch is outside of the interlocking limits and is not shown on the diagram.

The traffic on the Rock Island through this plant includes five passenger and about five freight trains each way daily, while the Milwaukee traffic includes two pas-

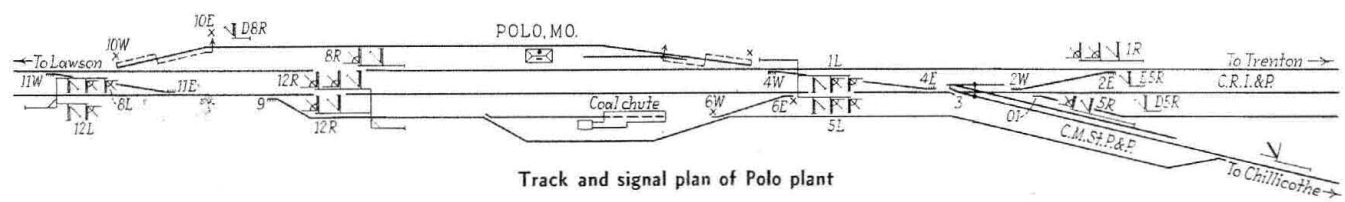


Eastward home signals

enger is provided for one of the house-track switches No. 10, and for the hand-thrown crossover, No. 6. Two additional levers in the machine are for the control of traffic-direction locking on each of the two tracks extending westward from this plant, to Lawson Jct., a distance of 12 miles.

Two small indication lamps are mounted above each switch lever, a green lamp above the normal position of the lever and a red above the reverse, the respective light being illuminated to correspond with the position of the switch controlled by the lever. The indications of the signals are repeated by lamps representing the signals on the track diagram above the levers. Likewise, this diagram includes one or two lamps in each track section, which are illuminated when the corresponding track circuit is occupied by a train. The lamp indicators located above the traffic levers are controlled in such a way that a green indication is given when the signals are set for the normal direction and red when set for a reverse-direction movement.

The push buttons marked A, B, and C, with white indication lamps above, are for starting the operation



Track and signal plan of Polo plant

senger and from six to eight freight trains each way daily. In other words, the total number of train movements is about 36 every 24 hours.

The interlocked signals include five high home signals with two three-indication and one two-indication units each, four high home signals with one three-indication and one two-indication units each, and three two-indication dwarf signals. The eight switches are controlled by only five levers and 27 signals are controlled by five other levers. A lever space with indication lamps

of the time-element relays used as time releases, each release being used for a separate section of the plant. The indication lamps are illuminated when the release relay is in operation, so that the operator will know when the light goes out, that the time interval has elapsed and he is then free to change the line-up. The releases "A" and "C" are operated whenever the red light at a signal on the track diagram remains out after a train has passed or the signal lever is restored to the normal position. This is due to the stick route locking still being in effect

