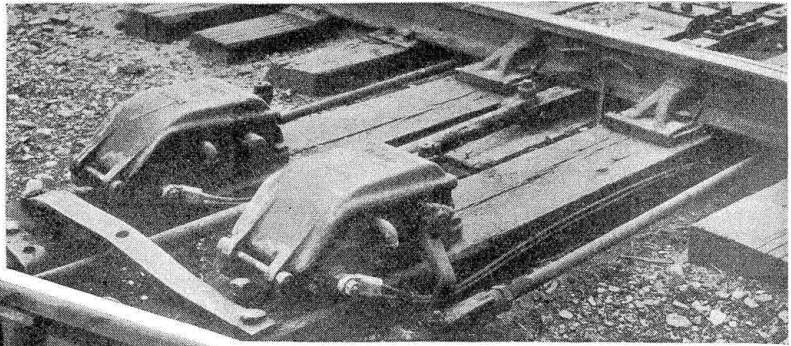
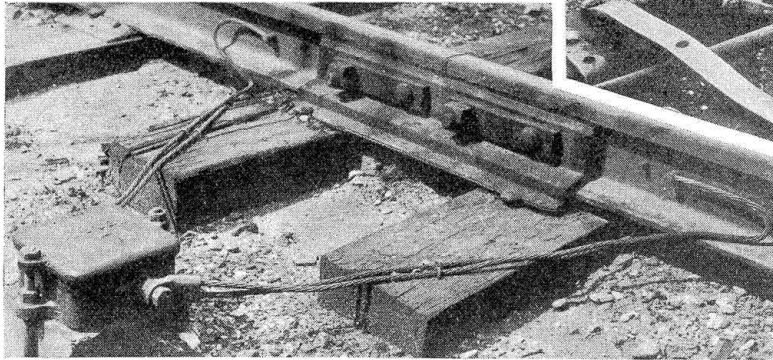


Illinois Central Installs

Color-light Signals on 80 Miles of Single Track

*New type of rail connections
is feature*



By H. G. Morgan
Signal Engineer,
Illinois Central,
Chicago

The Butridge connector as used for rail and shunt connections

THE 80-mile installation of automatic block signaling between Ruslor, Miss., and Haleyville, Ala., completed signal protection for Illinois Central trains from Chicago to Birmingham. This section of signal track is used by the Illinois Central and the Mobile & Ohio. North of this section the Illinois Central trains use the M. & O. tracks; south of this section the I. C. uses the tracks of the Northern Alabama. This installation includes the junctions with the other two railroads, both of which have recently installed color-light signals, and our new installation closes the gap between them.

The necessity for automatic block signaling on this Ruslor-Haleyville section was brought about by the character rather than the density of traffic. The Illinois Central operates four passenger and six to eight freight trains daily during the entire year. The M. & O. operates two mixed trains and two freight trains daily. During the winter season, additional high-class passenger trains between Chicago and Florida are operated by the Illinois Central.

The signaling is of the APB type, using three-indication color-light signals. Owing to the fact that traffic is not dense, the blocks are fairly long, there being a total of 34 absolute and 77 permissive signals.

Illinois Central forces installed all foundations, track bonding, insulated joints and line wires. The Union Switch & Signal Company furnished and installed all other materials under contract. The signal cases were wired in the factory. Work started October 1 and the installation was completed in December, well in advance of the first trip for the season of the Illinois Central de luxe train, the Floridan, on January 1. Three maintainers without helpers are assigned to this section.

Power Supply

The signals are the Union Switch & Signal Company's Type-R, using 10-volt, 18-watt double-filament rebased lamps. The voltage is adjustable from 7.5 to 8.0 volts at the lamp.

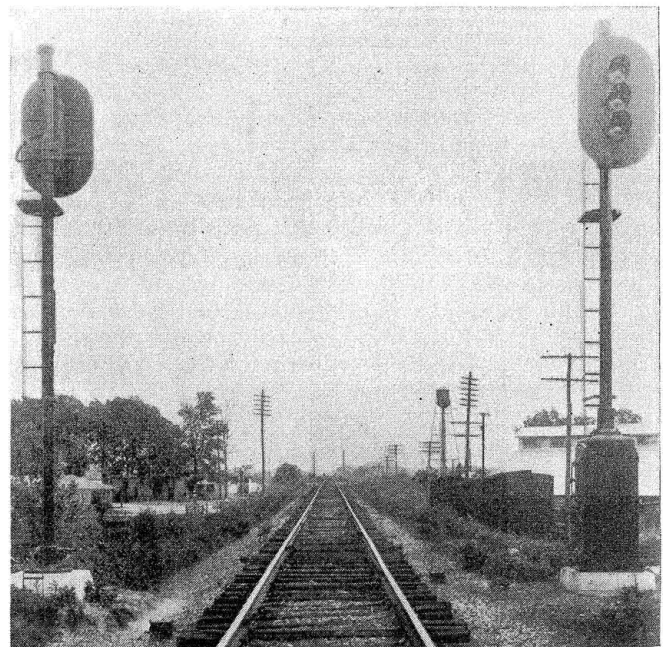
The floating charge system is used, lighting signal lamps directly from the alternating-current supply line, using the storage battery for line circuits and as

a reserve for signal operation. Track circuits are operated from storage batteries on floating charge.

The transmission line consists of two No. 6 AWG hard-drawn copper triple-braid weatherproof wires strung on the two end pins on the track side of the signal crossarm on the telegraph pole line.

Commercial power is secured at six locations, and transmission voltages of 440 volts and 220 volts are used, depending on the length of the line. The line transformers are of two types. The 220-110 volt transformers are G.E. Type-M, 100-v.a. capacity. The 440-110 volt transformers are G.E. Type-Y, 100-v.a. capacity. All transformers have 5 and 10 per cent taps inside the primary winding.

For the lighting of signals U. S. & S. Co. Type-NL transformers are used, having 110-volt primary winding and secondary winding with taps giving a selec-



The use of parkway cable eliminates trunking

