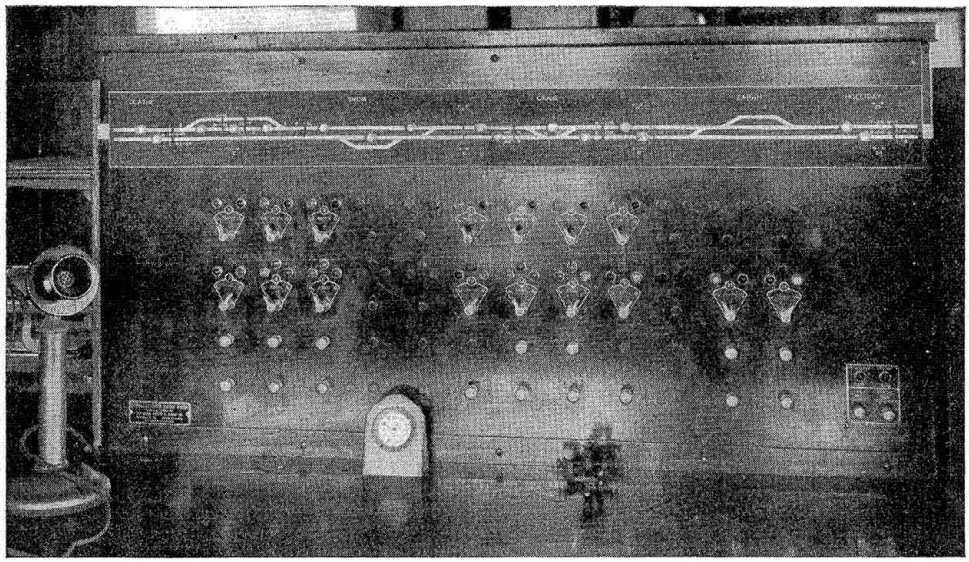

The control machine at Holliday

Centralized Traffic Control Saves Time on the Santa Fe

Trains operated in either direction on double-track grade—Tonnage trains save 9 minutes in 12 miles

By D. W. Fuller

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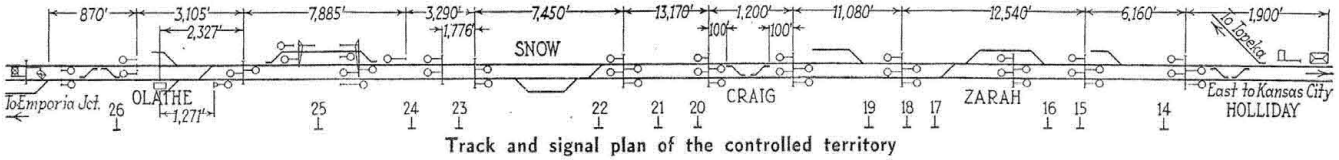
THE Atchison, Topeka & Santa Fe has installed centralized traffic control, including signals for directing train movements in either direction on both tracks of a 12.2-mile section of double track between Holliday, Kan. and Olathe. This territory is a section of the main line handling traffic to and from the west coast, the gulf and intermediate points. Starting at Holliday, 13 miles west of Kansas City, Mo., a single-track line runs via Topeka, Kan., to Emporia Junction, 113 miles, while the double track line runs directly to Emporia Junction. A number of important passenger trains, as well as most of the through freight trains, are operated over this double track cut-off, and the daily average traffic in 1929, at which time consideration was given to this installation, included 20 passenger trains and 14 freight trains.

The line ascends at an average grade of 0.6 per cent practically all the way from Holliday to Olathe. Under the previous method of operation, with automatic block signaling for left-hand running only, train delays were frequently encountered. For example, if a freight train did not have time to run to Olathe ahead of a train on a faster schedule, the freight was held at Holliday. The same circumstances were true to a certain extent for eastbound trains out of Olathe. In other words, this Holliday-Olathe section, involving a long grade which retarded the movement of westbound tonnage trains, was the "bottle neck" of the operating district. The solution of the problem was to increase the track capacity so that any train could be accepted and operated through the section without delay, even with other trains ahead or following. Previous to the development of centralized control, studies were made to determine the best possible method of increasing the track capacity between these two points, consideration being given to the construction of a third track. Based on an investigation made in 1929, it was decided to install centralized traffic control.

Centralized Control and Either-Direction Operation

By installing centralized traffic control, including either-direction operation on both tracks, the necessary increase in track capacity on the existing two tracks has been effected satisfactorily.

In order that trains might be diverted from one track to the other readily, two No. 20 crossovers were installed at Holliday, which is the east end of the section, and two were installed at Craig, which is located centrally, while two No. 14 crossovers were installed at Olathe, where slow-speed movements prevail. The passing siding at Olathe will hold a train of 156 cars and is, therefore, an important part of the track layout. The siding at Zarah



Track and signal plan of the controlled territory