



Spring Switches Used Extensively on Chicago & North Western

Seventeen installations on eight different kinds of layout with special signal protection, latest type buffers and rods used

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THE use of spring switches on the Chicago & North Western is not new, such a device having been in service on a switch near Ironwood, Mich., for at least 27 years. However, the general adoption of spring switches did not receive much encouragement until the Atchison, Topeka & Santa Fe developed the oil buffer to prevent pounding and excessive wear of the switch points with the passing of each set of trucks when trailing through the switch. Starting in 1924, the C. & N. W. installed its first spring switch with an oil buffer at the west end of the yards at West Chicago, Ill., which eliminated the necessity for 24-hour switch tender service and resulted in a saving of \$5,000 per year. The track layout and signaling is shown as Sketch B in Fig. 1. The successful operation of this installation brought to attention numerous other layouts where spring switches could be used to eliminate train stops or the requirement for operators or switchmen at junction points, ends of double track, etc., such that a total of 17 spring switches are now in service on eight different kinds of track layouts.

Signaling To Be Used with Spring Switches

When applying spring switches it soon became evident that the unusual features of the operation of trains over spring switches would require special provision for the signaling. To serve as a guide sketches of a series of layouts were prepared and approved for use on the C. & N. W., which with slight variations will probably cover all conditions. The idea back of this chart, which is shown as Fig. 1, is that of keeping trains in motion as far as practicable and yet not spend any more money than is absolutely necessary for safety.

Sketch-A shows a trailing switch installed in automatic signalled double track territory. The siding in this case is but a train length long and, therefore, in order to allow a train on the main track to pass, the train on the siding must of necessity be stopped. Therefore, there is no need of giving information by which the train can keep in motion through the spring switch. The trainmen can go to the switch indicator

and observe its position and then give necessary information to the engineman to proceed. A dwarf signal is provided on the main track to protect reverse movements, for which purpose a color-light signal is generally used although a semaphore signal can be used if desired. This signal is normally in the stop position and is operated to "proceed" through an

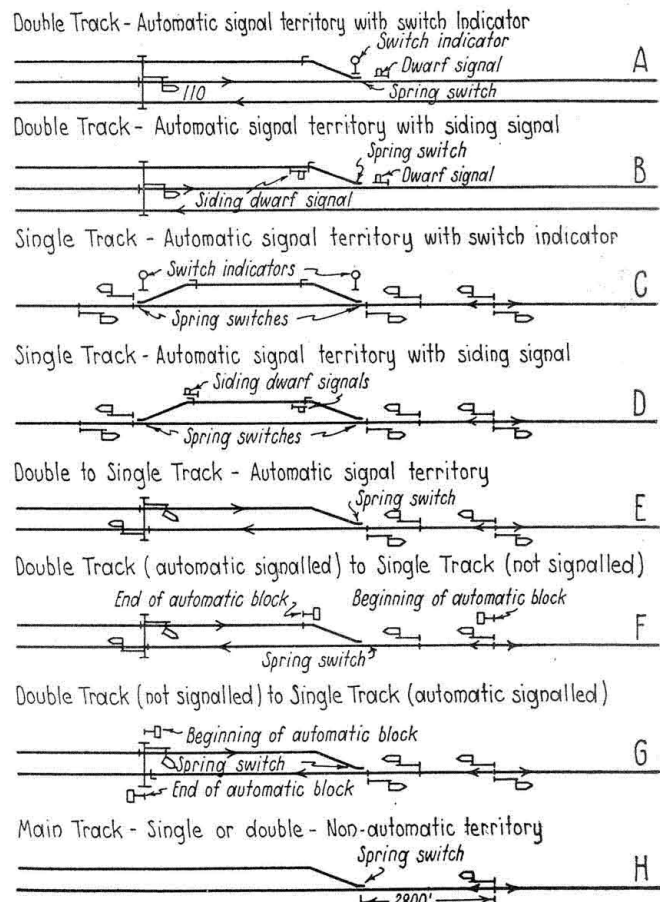


Fig. 1—Chart of signaling for different track layouts where spring switches are used

