C. & N. W. Employs

Centralized Control

To Speed Up Trains

Dispatcher at Green Bay controls junction switch, yard lead and a crossover remotely

North bound home signal at the junction switch at Duck Creek

A NOTICEABLE improvement in train operation has resulted from a dispatcher-control installation on the Chicago & North Western between Green Bay, Wis., and Duck Creek, approximately four miles. At the latter location, where the Lake Shore and the Peninsula divisions diverge, there was formerly a four-lever mechanical interlocking plant, employing one combination leverman and operator on each trick. These men have been released and in addition the train dispatcher estimates that there has been a saving in running time of at least 15 min. per freight train between Duck Creek and Green Bay, by reason of the elimination of stops in entering and leaving the North Green Bay freight yard. In addition, there has been a large but undetermined saving in train time, because of the elimination, within these limits, of the superiority of trains according to class and direction, and the movement of all trains entirely by signal indication.

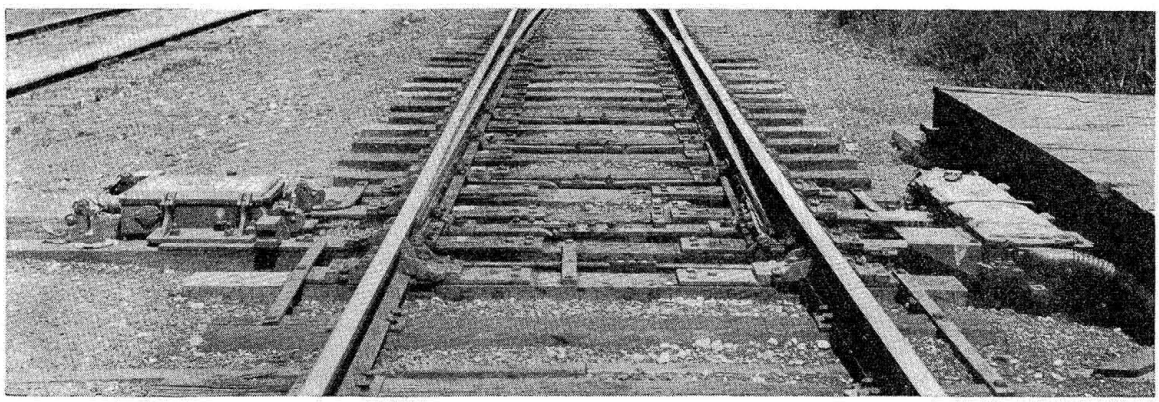
The traffic approximates 32 trains daily, including 9 passenger trains and 6 freight trains scheduled regularly in each direction, in addition to one or two extra freight trains daily. It is evident, therefore, that this short section of single-track railroad is a particularly busy line. All of the switch machines, signals, control relays and the control machine on this installation were furnished by the General Railway Signal Company.

Power Switches

The four switches are operated by power switch machines equipped with dual-control selectors. No derails are required in this layout. The motors are wound for 20-volt operation, and will effect a complete movement of the switch from normal to reverse or vice versa in 15 sec. A feature of the switch construction is the use of Morden adjustable rail braces, there being five of these braces on each rail, one on the inside and four on the outside of the rail. The dual-control mechanism permits the train crew to throw the switch manually in case of a failure of the switch machine or when switching, provided permission is obtained from the dispatcher. If the dispatcher should mistake the identity of a train, line up the wrong route for it, and display clear signals; the electric locking can be released so that the route can be changed by instructing a trainman to operate the dual-selector lever to the vertical or mid position, and return it to its normal position.

Each switch machine is operated from a 10-cell Exide storage battery Type-KXCS-9, which is charged by a Fansteel electrolytic rectifier through a G-R-S step-down transformer. The storage battery and rectifier are housed in a concrete battery well, adjoining the relay case at the switch location.

The signals are Model-2A semaphore type, the southbound signals at Duck Creek operating from 0 to 90 deg. in the upper quadrant. The northbound home



The junction switch at Duck Creek is power operated by means of a Model-5A machine equipped with dual-control selector