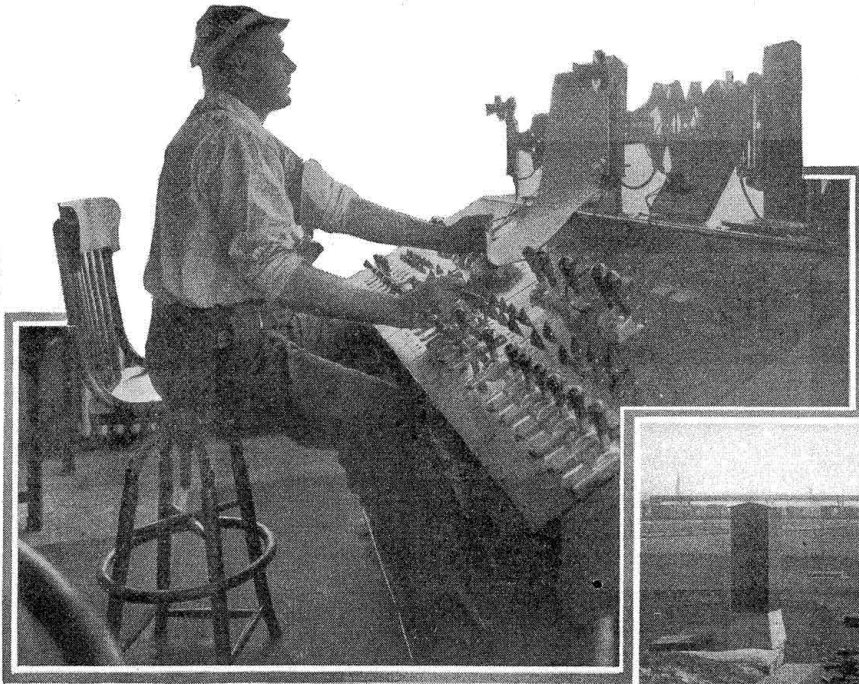


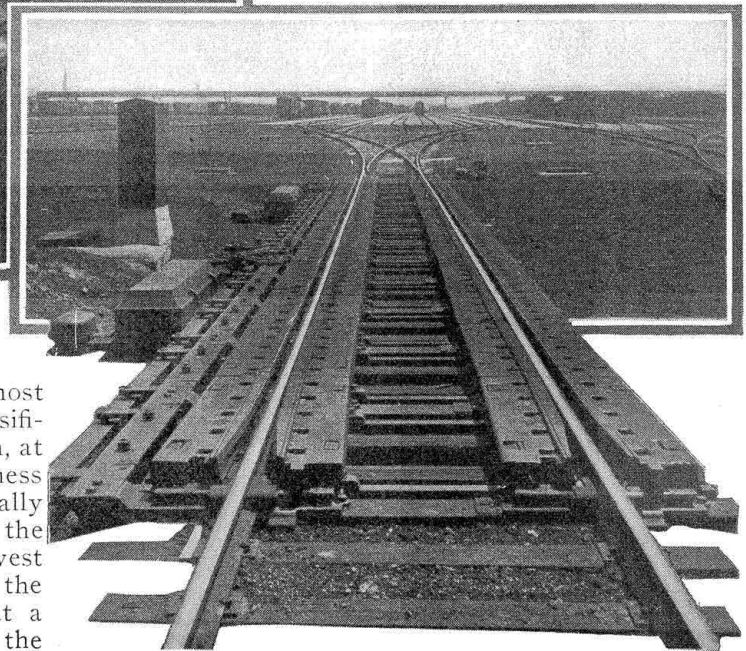
Railway Signaling

Car Retarders Installed by C. & N. W. at Proviso Yard, near Chicago



Top—Interior of tower showing control machine
Right—Retarder serving a group of seven tracks

Power supply, including battery floating on generator, ensures constant service regardless of power failures



THE car retarder system is one of the most important features of the new inbound classification yard of the Chicago & North Western, at Proviso, Ill., about 14 miles west of the business center of Chicago. Proviso is located strategically with reference to connecting lines, as well as to the four lines of the North Western radiating to the west and north of Chicago. The yard lies just north of the Galena division, or Chicago-Omaha mainline, at a point just west of the overhead crossing of the Indiana Harbor Belt line connecting with railroads to the East. Likewise, Proviso is the southern terminus of the so-called Des Plaines Valley line, which connects the Chicago-Omaha line with the Chicago-St. Paul line at Des Plaines and the Chicago-Milwaukee freight line. All inbound freight traffic, for connecting lines and for freight house and industries on North Western rails in the Chicago area is brought into Proviso.

The Eastbound Yards

The receiving yard, consisting of 31 tracks, each holding from 90 to 100 cars, extends in a general north and south direction parallel with the Des Plaines Valley line and about a mile north of the Galena division main line, with a wye connection to the latter line. Trains from any of the incoming routes are pulled directly into the receiving yard, which lies on a practically level grade. A double-track line, built on a level grade, ex-

tends from the south end of this yard about one mile to the hump of the classification yard. The present traffic consists of from 2,500 to 3,400 cars daily. The number of classifications desired and the capacity of the yard determined that 59 tracks were required, varying in capacity from 44 to 96 cars. At the east end of the classification yard there is a forwarding yard of 21 tracks, each of 100 cars capacity, and also a repair yard that will hold about 120 cars.

Yard Layout and Retarders

Having made an investigation of various yards, it was decided that car retarders were to be installed for the new classification yard, therefore a special study was made of the various factors involved. Tests of the wind for a year and a half showed that, at various seasons, the wind blew at equal velocity and frequency from all points of the compass; therefore, this factor

