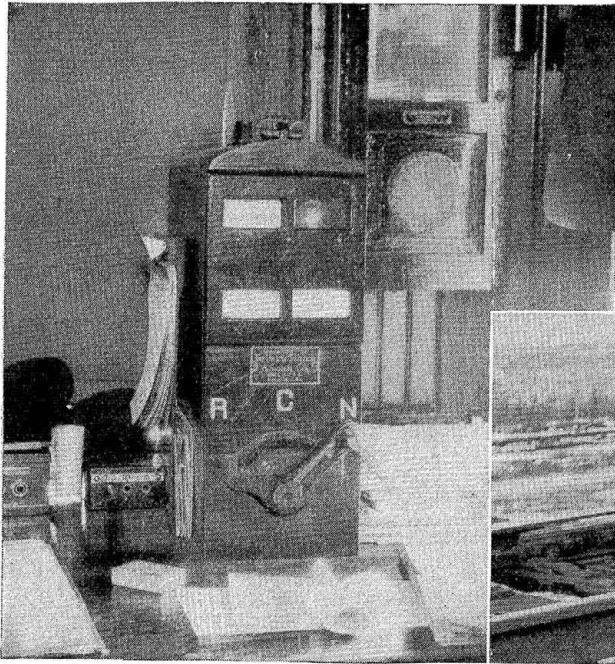
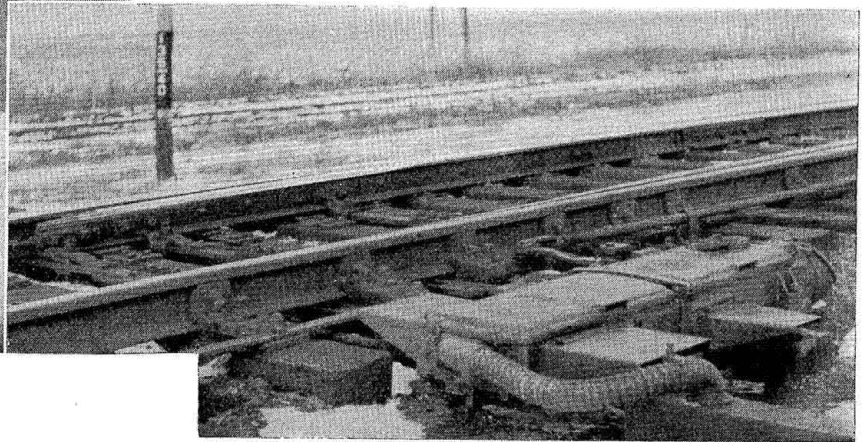


# Big Four

# Improves Operation



Desk-lever machine at Gays



Typical power switch machine

*Principal passing tracks on equipped so as to stops at*

By J. H. Westbay

Special Engineer to General Superintendent, Cleveland, Cincinnati, Chicago & St. Louis, Indianapolis, Ind.

ON the 96 miles of single track extending between Terre Haute, Ind., and Pana, Ill., on the St. Louis division of the Cleveland, Cincinnati, Chicago & St. Louis, nearly all of the passing track switches are now operated either from interlocking plants or by remotely-controlled power-operated switch machines, so that the stopping of trains to handle switches is practically eliminated. Besides the distinct advantage of time-saving, the use of these switches also results in a reduction in wear and tear on equipment, and a saving of fuel.

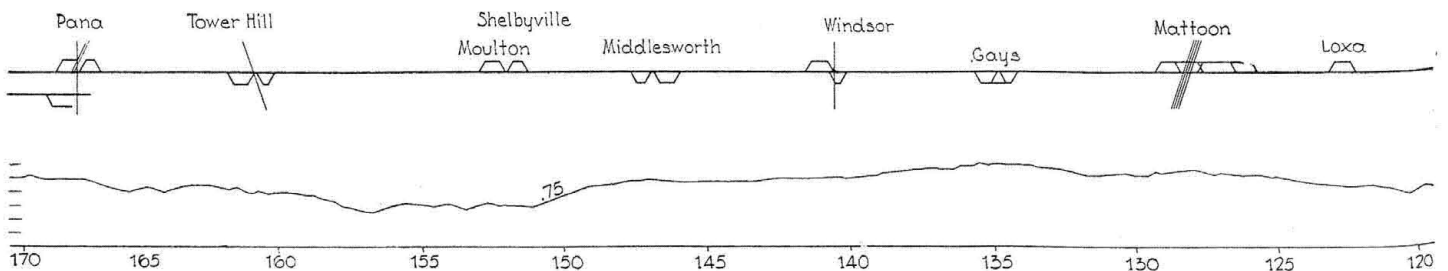
The main line of the St. Louis division of the Big Four extends from Indianapolis, Ind., to East St. Louis, Ill., a distance of 248.7 miles. The line is double tracked from Indianapolis to Terre Haute, Ind., 71.6 miles, and from Pana, Ill., to E. St. Louis, 81.6 miles. The intervening section between Terre Haute and Pana, 95.5 miles, is single track except for 1.5 miles of double track through Mattoon, Ill. This 95.5 miles of single track is, therefore, the "neck of the bottle" for this division. Division headquarters are at Mattoon, 128 miles west of Indianapolis; Mattoon being the terminal for

all crews in freight service and for engine crews in passenger service.

Between Terre Haute and Pana the line traverses a rolling prairie country. The ruling grade in the westward direction on the single track is encountered in the ascent from the Wabash River valley, a short distance west of Terre Haute, where a one per cent grade extends for a distance of about two miles, followed by a 0.77 per cent grade of approximately the same distance. Near the top of the one per cent grade is a reverse curve, each section of which is approximately three degrees. The remainder of the grade is on tangent track. The ruling grade in the eastward direction is 0.75 per cent, extending for about two miles east from Shelbyville, Ill., and on this grade are two curves, each of two degrees. The remainder of the single-track district is broken by short grades that offer no serious obstacle to train movements.

### Traffic Handled on Fast Schedules

The operation of this section of single track is complicated by the preponderance in the number of passengers as compared with freight trains, both of



Track plan showing the location of the stations and the passing





