

Interlocking at St. Louis Union Station Expanded 30 Per Cent

*Ten new station tracks necessitated addition
of a 59-lever machine — Color-light
dwarf signals used to advantage
—Unique train-starting sig-
nal system developed*

ALTHOUGH the trainshed serving the Union Station at St. Louis is one of the two largest in the country, the facilities in this station had become so crowded by 1928, owing to the fact that most of the roads entering this station are operating longer trains than formerly, that the Terminal Railroad Association found it necessary to increase the capacity of the station tracks and platforms by approximately 60 per cent. Eight of the new tracks will accommodate trains of 20 cars, as compared with a maximum of 12 cars on the old tracks. The new facilities including rearrangement and enlargement of the Union Station interlocking were placed in service in November, 1929, after an expenditure of \$4,000,000.

This station handles 136 inbound and 136 outbound scheduled trains daily. All empty trains from and to the station tracks are pulled to and from the various coach yards by switch engines. Likewise, there are numerous switching movements in the station transferring cars from one train to another and to and from the mail and express buildings. It is estimated that approximately 2,000 movements are made over the station plant daily in addition to the freight trains moving over the outer tracks.

New Interlocking Machine Separate from Old One

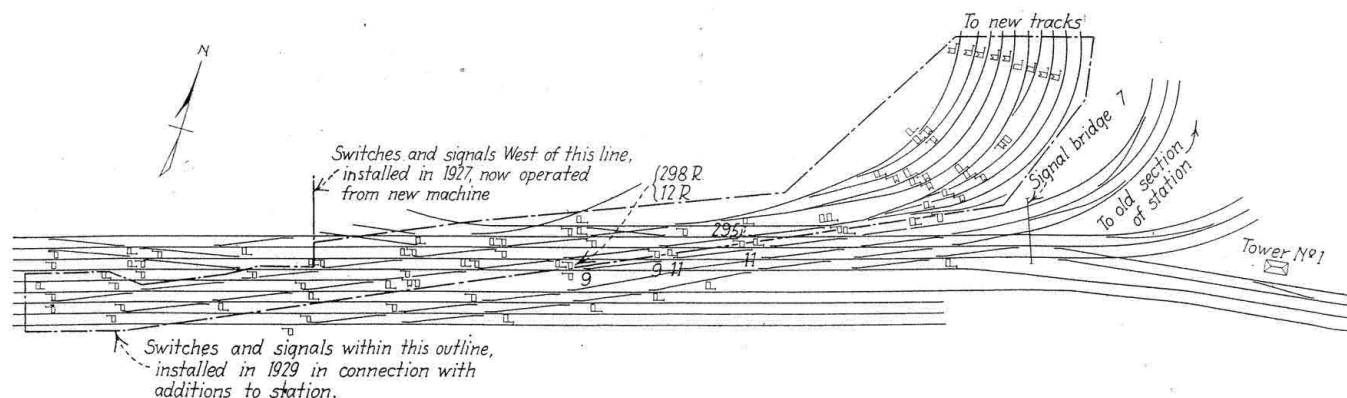
The Union Switch & Signal Company's electro-pneumatic interlocking installed at the station in 1902 included a 215-lever machine for the control and operation of 222 signals, 71 single switches, 47 double slips, 3 single slips, and 29 movable point frogs. The addition of the 10 new station tracks together with the necessary switches, etc., require 59 more levers for 59 signals, 18 single switches and 13 complete double slip switches. It is interesting to note that no movable point frogs were used in the new track layout, as rigid frogs are now considered satisfactory where the angle does not exceed 8 deg. 10 min.



A. P. Hix, Signal Engineer, inspecting a signal

The addition of 59 levers to the old machine was not practicable, and furthermore in view of the fact that the old machine, in spite of its 28 years of service was still giving good service and apparently good for years to come, it was not deemed advisable to discard it and install an entirely new machine for the entire layout. Even if a new machine had been desirable, the cut-over would, of necessity, have had to be made without interrupting the operation of the terminal, which would have introduced complications because there was no space in the tower to set up a second machine. Therefore, the only solution was to install a new machine to control the additional functions. The problem of accomplishing this result was somewhat simplified on account of the fact that the switches and signals involved in the new track facilities are grouped at the west end of the layout, as indicated by the track plan.

The new machine is the latest Union Model-14 and although it stands end to end with the old one in the tower, there are no mechanical locking connections; but electric locking is provided between levers in the



Track and signal plan showing only the layout controlled from the new machine

