

new union station should be built at the intersection of Cannon St. and Ferguson Ave. This would be a more convenient situation than would be one at James St., but would necessitate the putting of Barton St. in a subway. On this basis the city would not be called upon to contribute any of the cost, as the proposed route would give the new railways a better entrance at a lower cost than they can get on their one proposed route. The engineers recommend, however, that the present grade of the G.T.R. between Birch Ave. and Kenilworth Ave. be raised a maximum of 6 ft. at Gage Ave. to permit of future subways being easily drained. The city would probably be called upon to contribute part of this cost, as the principal advantage to be gained by such a change would accrue to it.

Proposal B.—All tracks, yards and spurs as they now exist to be removed from Ferguson Ave. The G.T.R. to build new lines from some point near Rymal station, on its Port Dover line, to a connection with the main line at Stoney Creek. A union station to be located at the intersection of Cannon St. and Ferguson Ave., to be built with a circular loop, so that trains may pass directly through without having to back in. A freight station to be built at Cannon St., having a connection with the main line, the tracks for both passenger and freight traffic to be depressed and Barton St. carried over them. Three plans are discussed, but the loop station is recommended as being the best, although it is estimated to cost \$175,000 more than either of the others. The street railway and local radial railways should be brought to circulate around this traffic centre.

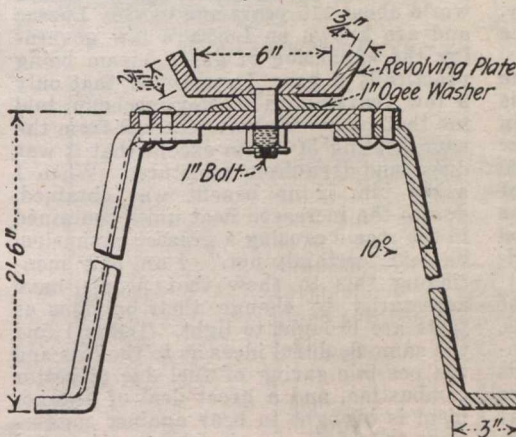
Proposal C.—The Toronto, Hamilton & Buffalo Ry. main line, yards and spurs from Red Hill Creek, between Stoney Creek and Bartonville, and the Y at Dundurn St., west of the Hunter St. tunnel, together with the greater part of the Gage Ave. cross town line, should be eliminated and replaced by a line from near Red Hill Creek to the G.T.R., near Parkdale Ave., and to the Burlington Beach line near the south end of the beach, and that company should join with the other companies in the formation of a terminal company to operate all main lines, yards and spurs between Stoney Creek yard on the east and Burlington Jct. yard on the west, including the Burlington Beach cut-off. The T.H. & B.R. should also build a tunnel under the park and cemetery to provide a connection between its Brantford line and the terminal tracks. All T.H. & B.R. through freight traffic to be sent round by Burlington Beach. A new union station to serve all lines entering or to enter Hamilton, to be built near King William St., with a circular loop, so that trains might pass directly into it; all tracks to be depressed and streets carried over them. This would be the most expensive station plan, costing about \$1,250,000 more than the cheapest (a through station on James St.), but the cost might be shared by all the railways and the city. In the event of proposal C being adopted in its entirety, the engineers recommend further that no industries requiring spur track accommodation should be permitted south of Barton St.; the erection of a sea wall along the harbor front, with the reclamation of the intervening low lying land for industrial purposes, and the laying out of switching tracks on the reclaimed area, connecting with the main line at the westerly end and with the Burlington Beach line at the

easterly end.

In conclusion, the engineers strongly recommend proposal C as the ideal to which the city should work, and appends numerous reasons why it would be advantageous, not only to the city, but to the railway companies. The engineers, in a statement made July 13, asked for a very careful consideration of the report, suggesting there was plenty of time to do so, as, owing to present financial conditions, any work of considerable magnitude was not likely to be taken in hand for a time. The statement concludes: The first of the works outlined in the report to be carried out should undoubtedly be the construction of the Stoney Creek yard and the improvement of the Burlington Beach line. . . . When the new roads are prepared to come in, Hamilton should insist that they follow the route outlined and should vigorously press for the carrying out of the various other works outlined.

The report, which was accompanied by plans, is being considered by the city's board of control.

The report was considered by the city's board of works and sent on to the city council with a recommendation that it be forwarded to the Board of Railway Commissioners as representing the city's views on the railway situation.



Small Turntable for Car Repair Yard.

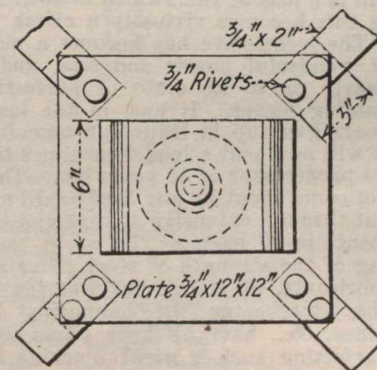
New Union Station at St. Paul.

The plans for a new union terminal station in St. Paul, Minn., have been prepared, and the work of laying out the yards and erecting the station and other buildings will be started at an early date. The terminal project is being carried out by the St. Paul Union Depot Co., which represents the nine railways for which facilities will be provided. The site lies along the banks of the Mississippi River, upon the same frontage as formerly, the proposal to change the river channel having been abandoned, owing to the restrictions imposed by the U. S. War Department. The yard accommodation is to be widened by the purchase of all property out to Third St., while the passenger station will occupy a block along Third St., between Sibley and Wacanta Sts., being connected with the tracks by a tunnel and a bridge. The tracks will be elevated through the terminals on a solid fill between concrete retaining walls, except where space is provided beneath the tracks for baggage, mail and express facilities. Jackson and Sibley Sts. will be carried under the tracks clear through to the waterfront, where there is a public levee for steamboat accommodation.

The track layout at the station provides for 22 passenger tracks and 2 freight

tracks, while in addition there will be 2 outside freight tracks of the Chicago, Milwaukee & St. Paul Ry. Of the 22 passenger tracks, 8 will be for the use of trains for which St. Paul is the terminus, while the remaining 14 will be for through trains. There will be about 5 miles of trackage in the yards, making the total length of tracks in the terminal 12½ miles. There will be a large interlocking switch and signal tower at each end of the station. A 4 stall house for the switching locomotive will be provided. The several companies using the station will maintain their car cleaning, storage yards and locomotive facilities upon their own independent properties.

The station building will be 150 x 300 ft., facing towards Fourth St., but set back nearly half way to Third St. The ticket office and other main public facilities will be on the level of the Fourth St. entrance, while the upper floor will contain offices, kitchen and rest room for women. Two lower, or basement floors, will provide for station facilities, immigrants' quarters, branch post office, etc. As the main floor, entered from Fourth St., will be 26 ft. higher than Third St., this will permit the latter to be spanned by a bridge carrying the smoking room and a connection with the main waiting room. This room, with the concourse,



will form a separate structure, 80 x 400 ft., extending across the tracks, with an elevator and stairway at each platform.

The estimated cost of the work is \$11,000,000. The plans for the new terminal were laid out by W. C. Armstrong, Chief Engineer, and the Architect for the station building is by C. S. Frost.

Small Turntable Cuts Cost of Handling Relay Rails.

The turntable shown in the accompanying sketch is proving a big labor and time saver in handling rails for the Pennsylvania Rd.'s new car repair yard, now under construction at Greenville, N.J. The 85 lb. rails used are second hand, and the ball of each is badly worn on one side. Since it is therefore necessary to place the unworn side on the inside of the track being laid, it happens that many of the rails have to be turned end for end before placing them. Previous to building the turntable it required considerable manoeuvring by a gang of at least six men to turn one rail. With the turntable, however, which is set up about 18 ft. from the track being laid, two men can turn a rail with ease. The device was made complete for \$8.—J. S. Sawkins, in Engineering News Record.