and, if excessive, through the other compartments as well; in which process all sediment is removed and drained into the 18-inch sewer, while the storm water flow, as an overflow from the tanks, proceeds via the Keele Street sewer to the lake. In this manner the standby tank disposes of all storm-swelled sewage entering it by the Bloor Street west and upper Keele Street sewers.

The former, *i.e.*, the Bloor Street branch, enters the tank at the northwest corner with a 6-ft. 9-in. x 5-ft. section, decreasing as it proceeds westward. Near the junction of the Bloor Street and Clendennan Avenue sewers the work necessitated the construction of an unusually large fill. For a length of about 600 ft. the sewer is here supported upon piles which are in some cases 50 ft. in length with framed lumber bents 30 ft. in height above them.

The Keele Street sewer enters the tanks at the northeast corner as a 9-ft. 3-in. circular section with square concrete bottom with brick lining and brick arch. This diameter is maintained as far as Conduit Street, or to its first branching point. The Woodville Avenue section is 8 ft. in diameter. On this portion a ravine is crossed by a timber trestle support, the ravine being subsequently filled in. The 8-ft. circular sewer extends north to St. Clair where it branches, as stated. The eastern branch is 4 ft. 3 in. and the western branch 6 ft. 3 in. in diameter. The Utley Park branch is a 6′ 3″ x 5′ culvert sewer changing at Hillsview Avenue to a 6′ 6″ x 4′ 4″ egg-shaped sewer with square bottom. Along Humberside Avenue it becomes a 5-ft. circular, changing again on

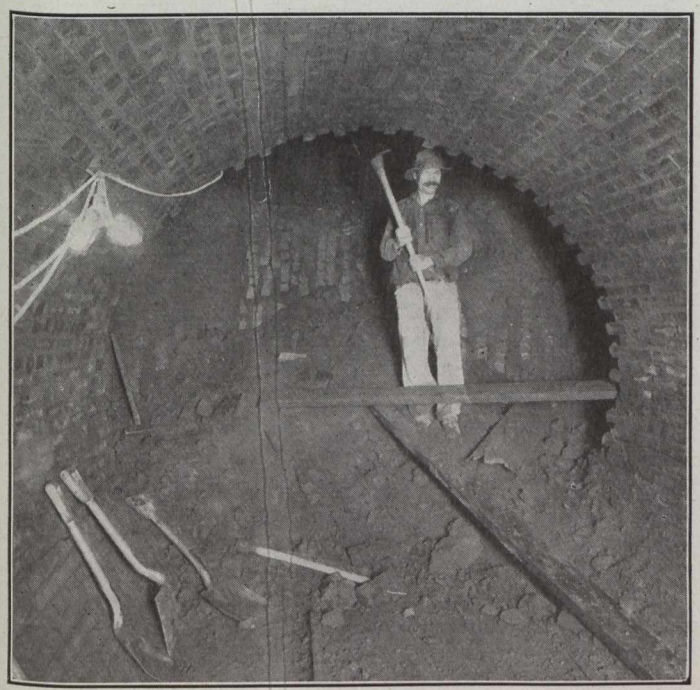

Fig. 5.—In the Keele Street Section, South of Bloor Street, Showing the Nature of Excavation Encountered in This Particular Section.

Quebec Avenue to a 4′ 9″ x 3′ 2″ egg-shaped and later to a 3′ 4″ x 5′ along Annette Street, the size diminishing as it proceeds westward.

The sizes of the sewer on Conduit are as follows: 7′ 5½″ x 5′; 9′ 4″ x 6′; 9′ 1″ x 6′; 8′ 10″ x 6′, etc.

The stockyards branch is a 5′ x 3′ 4″ egg-shaped sewer at Hirons Avenue, decreasing in section to 4′ 9″ x 3′ 2″. The Junction Road branch is smaller still, being a 2′ 6″ x 3′ 4″.

The 450-ft. section of storm outlet was constructed by Jennings and Ross, Limited, contractors. The section north as far as the tanks at Bloor Street, with the exception of a 32-ft. length which is an experimental section constructed of tile segment block with concrete base, and 800 ft. of concrete section with brick lining, is a 4-ring

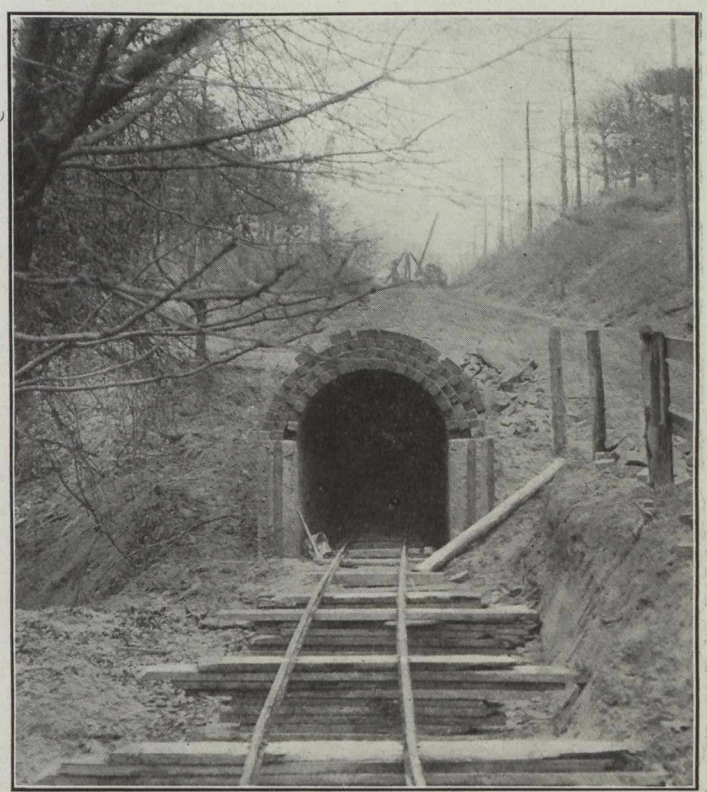

Fig. 6.—End of Bloor Street Tunnel Just Before the Section on Piles Shown in Fig. 1.

brick circular section. This was constructed by Messrs. Fussell, McReynolds Co., Limited. The tanks were built by the McKnight Construction Co. The Keele Street sewer from the tanks north as far as Woodville was constructed by the Orpen Co., Limited. The section up Woodville Avenue to St. Clair was built by Donnelly & Graham, and the St. Clair Avenue branches, both east and west, were built by Fussell, McReynolds Co. The stockyards branch and the Keele Street subway branch were constructed by Jennings & Ross, Limited. The whole Utley Park branch was built by the Godson Contracting Co. and the Bloor Street section by the Orpen Co., Limited, and the Conduit, Wallace Avenue, etc., branch sections by Fussell & McReynolds, McKnight Construction Co., John Maguire & Son, and Connelly & Agnew.

The work was done under the supervision of the Commissioner of Works, Mr. R. C. Harris, Mr. George G. Powell, deputy city engineer, and Mr. W. R. Worthington, assistant engineer, sewer section, while Mr. W. G. Cameron was division engineer on the work.

A few weeks ago the Delaware, Lackawanna and Western Railway completed the Tunkhannock viaduct, a structure worthy of note. It is the largest of its kind in the world, being 2,375 feet long, 240 feet high, and consisting of 10 reinforced concrete arch spans. It is on the Nicholson cut-off in northeastern Pennsylvania, which is a $12,000,000 change of alignment shortening the road 3.6 miles, eliminating 2,440 deg. of curvature and effecting a considerable reduction in the ruling grades.