

The amount of lead used was 120 lbs. per joint, which cost approximately \$10.

The trench was dug in loam, clay and hardpan, and as there was a sewer two feet from the trench this necessitated shoring, the method employed in doing this being shown in Fig. 2. The stringers were placed 3 ft. 6 in. apart, and were of 3-inch by 10-inch lumber. The sheeting used was 2-inch by 10-inch. These planks were strengthened by cross pieces every 6 ft. of 3-inch by 10-inch material.

The amount of lumber used per hundred feet of shoring was 1,925 lin. ft. 3-inch plank and 1,250 lin. ft.

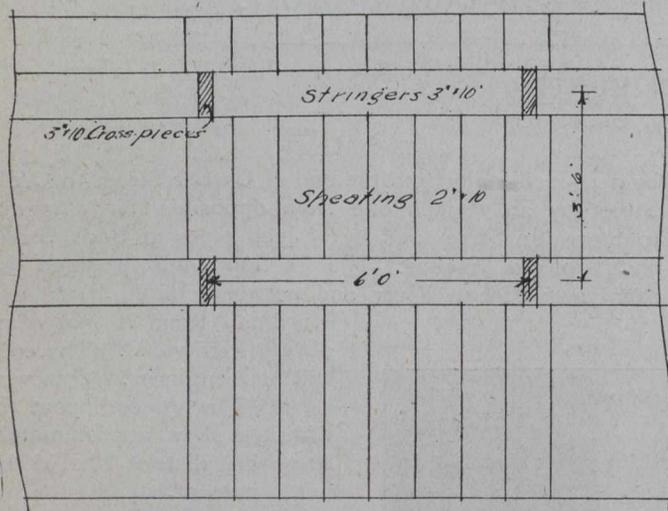


Fig. 2.—Longitudinal Section Showing Method of Shoring Trench.

2-inch plank. The greatest length of trench open at one time was 1,500 feet.

The 36-inch pipes were lowered as shown in photograph (Fig. 4). A traveller was erected running on two 4-inch trails, the pipe being lowered from the traveller by chain blocks supplied by the Herbert Morris Crane and Hoist Co., Toronto.

The joints were caulked as shown in Fig. 3. Hemp rope, "teased out," was packed as shown, and then lead was run into the joint. This was caulked with pneumatic hammers, run off a gasoline driver air-compressor (shown in Fig. 5). The average pressure at compressor

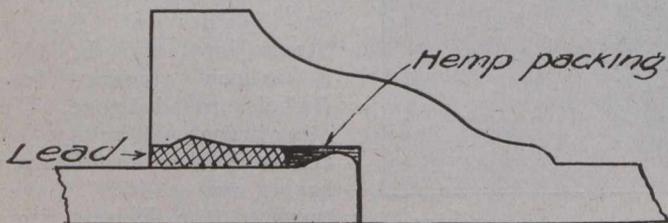


Fig. 3.—Detail of Pipe Joint.

was about 70 lbs. per square inch. Two to four hammers were run off this. Four men were kept constantly busy caulking on this main. Two men received \$2.75 and two \$3 per day. The engineer on the compressor was paid \$3.30 per day.

The pipe-laying gang was made up of twelve men and a foreman, and the two excavating gangs had 40 men each, also a cart and from six to twelve teams.

The rates of pay for these gangs were: Foreman, \$3.85; team, \$5.30; cart, \$2.70; watchman, \$1.68; laborers, \$2.52 for a nine-hour day.

The Gloucester Street main has been under construction for seventy-three days; 4,271 lin. ft. of pipe has been

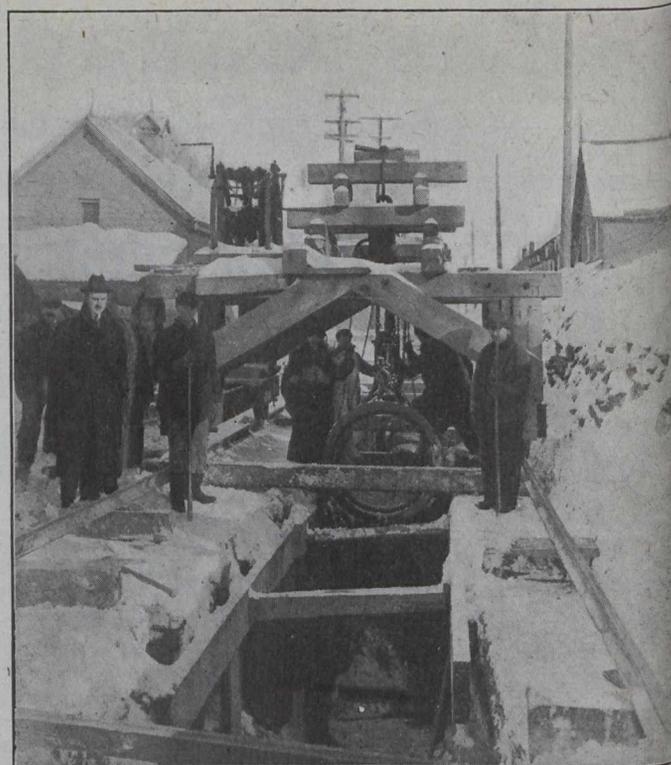


Fig. 4.—Showing 36-in. Water Main, Gloucester Street.

laid at a labor cost of \$16,092.74; this includes excavating, filling, pipe-laying, shoring and pumping.

The cost per lin. ft. for labor only before frost set in was as follows:—

Excavating	.....	\$1.23
Shoring	.....	.11
Pipe-laying	.....	.57
Backfilling	.....	.58
Removing earth	.....	.38
Sundries	.....	.20
		<hr/>
		\$3.07

After frost set in this cost increased to \$3.76 per lin. ft. The pipes were supplied by the National Iron Works, Toronto.

The project has been carried out under the constant supervision of Andrew F. Macallum, commissioner of works, and W. E. MacDonald, resident engineer on the work.

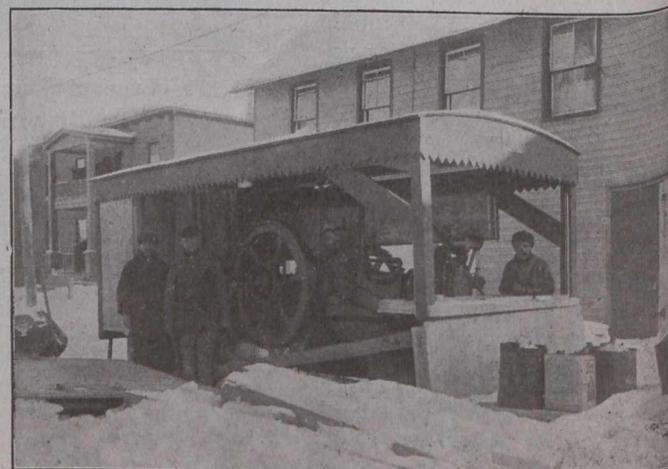


Fig. 5.—Gasoline-Driven Air-Compressor.