

MUNICIPAL DEPARTMENT

COST OF SIDEWALKS.

The following is a table showing the proximate cost in Toronto of different class sidewalks, of concrete, brick and plank, varying in width from 4 to 12 feet:

| Class of Walk | Width in feet | Frontage per foot | No. annual payments | Frontage cost per foot per annum |
|-----------------|---------------|-------------------|---------------------|----------------------------------|
| Concrete, heavy | 12 | \$ 2.40 | 10 | 29.5c. |
| " | 10 | 2.00 | 10 | 24.6c. |
| " light | 8 | 1.36 | 10 | 16.7c. |
| " | 6 | 1.00 | 10 | 12.3c. |
| " | 5 | .85 | 10 | 10.4c. |
| " | 4 | .67 | 10 | 8.2c. |
| Brick | 12 | 1.50 | 10 | 22.1c. |
| " | 10 | 1.50 | 10 | 18.4c. |
| " | 8 | 1.20 | 10 | 14.7c. |
| " | 6 | .90 | 10 | 11.0c. |
| " | 5 | .75 | 10 | 9.2c. |
| " | 4 | .60 | 10 | 7.3c. |
| Plank | 12 | .78 | 3 | 28.1c. |
| " | 10 | .65 | 3 | 23.4c. |
| " | 8 | .52 | 3 | 18.7c. |
| " | 6 | .39 | 3 | 14.0c. |
| " | 5-3 | .35 | 3 | 12.3c. |
| " | 4 | .26 | 3 | 9.3c. |

WATER WASTE IN CLEVELAND.

The study of water waste is now receiving special attention in Cleveland, where less than 8 per cent. of the service pipes are metered. A report on the subject was recently made by Mr. E. W. Bemis, superintendent. From his calculations it appears that the largest amount of water used on January 29-30 was between 8 and 9 a. m., 4,322,000 gallons, while the smallest amount in the same 24 hours was between 2 and 3 a. m., when it was 3,101,000 gallons. Thus three-fourths as much was used or wasted between 2 and 3 in the morning as at any other hour in the day. Of course, this was nearly all waste. The average cost of setting $\frac{1}{2}$ -inch meters is shown to be \$2.96.

One table gives a comparison of meter and assessment rates on 36 business services, where meters were placed last fall. In 26 of these places, or 72 per cent. an increase is shown ranging from \$2.40 to \$138.80. In eight of them, or 22 per cent., a decrease is shown. The total shows a net gain over 100 per cent., from which the inference is drawn that this district has been using or wasting about twice the water it has been paying for. A table giving a comparison of meter and assessment rates on 73 dwelling houses makes a different showing. Of these but five, or less than 7 per cent., show an increase of meter rate over assessment. The remaining 68, or 93 per cent. show a decrease ranging from \$1.50 to \$22, in the latter case the meter being reduced just one-half. The totals show a reduction of over 37 per cent. in meter as compared with assessment rates.

The inference from these figures is that domestic consumers are paying very much

in excess of their proper quota of water rates, thereby making up for waste and inequalities due to faulty assessment of other consumers.

A NOVEL KIND OF WATER PIPE.

An interesting method of manufacturing wooden water pipe has been developed by the Spokane Galvanized Wire Pipe Company, of Spokane, Washington Territory. The pipe is manufactured of kiln-dried Oregon fir. The staves are dressed to true mathematical segments, which, when assembled, form a perfect circle. The pipe is made in standard 8 ft. lengths, around which galvanized wire is wound spirally. In winding the wire is paid out under tension adapted to the size of the pipe and wire. The spacing of the wire, as well as its size, is adapted to the pressure under which the pipe is to serve. Thus, the higher the pressure the larger the wire used and the more closely it is wound. The staves are well dressed, making the inside of the pipe smooth. The wire is double galvanized to ensure its longevity. The wood is thoroughly kiln dried, to evaporate the sap, and the pipe is thoroughly boiled in asphalt, the more completely to protect it from destructive agencies. Each joint of the pipe is made with a socket and spigot end, enabling joints to be made easily. It is stated that the only tools necessary in joining the pipe are wooden mauls to drive the joints together. The manufacturers claim that the life of this pipe is from fifteen to twenty

years. It is further claimed that if the water passing through the pipe should freeze the pipe will not burst, as the wire imbeds itself in the wood, the expansion being taken up by the wooden staves.

BACTERIAL TREATMENT OF SEWAGE.

At a meeting of the Society of Public Health and Sanitary Engineering, held in Paris, France, Dr. Calmette, director of the Pasteur Institute at Lille, in discussing the question of the bacterial treatment of sewage, pointed out its advantages over broad irrigation. He referred to the successful work already accomplished in this direction in England, but laid great stress on the necessity of removing all insoluble matters by sedimentation, and all greasy matters, cellulose, etc., contributed from trade wastes, by chemical treatment where necessary, so that soluble matters alone are delivered to the bacteria beds for treatment. Mons. Heurot, late Mayor of Rheims, and Mons. Beckmann, chief engineer to the city of Paris, on the other hand, expressed surprise that the system of disposal by broad irrigation should be so adversely criticised, both maintaining the opinion that this system is superior to the bacterial.

Mr. A. O. Graydon, city engineer of London, Ont., has been seriously ill for some time.

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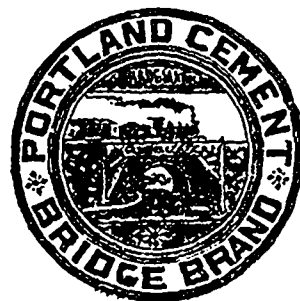
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