from defective plumbing arrangements. On the other hand there is a certainty that if sewers were led into these houses, and any plumbing fixtures, especially water closets, introduced, there would be bad joints, stoppages, breakages in pipes, and resultant outbreaks of zymotic diseases. He therefore advised the Municipal Council to give frequent connections to the sewers by means of gullies, placed so as not to intercept surface water, for carrying away household water, to flush the sewers, and to continue the use and daily collection of night soil though the "pail" system.

The Board of Health, a body similar to the Provincial Board of Ontario or Quebec, is endowed with extraordinary power, which it does not hesitate to use. With such a mentor over it, the Municipal Council has small chance to relax its rules and regulations regarding the proper preservation of the public health.

The city has plumbing by-laws, based on the practice of large American and Canadian cities, which are perhaps too exacting for its present requirements. It will not be practicable to put fixtures into small houses renting under $40 per annum, when the plumbing by-law calls for self-flushing cisterns and water-saving appliances, and expensive cast iron soil pipes extending through the roof of the house. One certain result of these cold houses will be frozen pipes, traps, and other fixtures. To put in deep hoppers with the trap below the frost line, and flush them with the ordinary rim flush, will not answer, as the writer knows by experience. He favours and has suggested making a trial of a trough closet in a proper building under Municipal control, in which a self-acting flushing tank would discharge at short intervals—these closets to be common to a range of two or three houses, having compartments for males and females, and close by them he would place yard slop hoppers for the use of every two houses. By careful attention to these under the special exigencies of the city, he believes a successful solution of the problem will be arrived at.

## APPENDIX No. 1.

AVERAGE RAINFALL FOR EIGHT YEARS.

| | 1873 | 1875 | 1876 | 1879 | 1880 | 1884 | 1887 | 1888 |
|---|---|---|---|---|---|---|---|---|
| | ins. | ins. | ins. | ins. | ins. | ins. | ins. | ins. |
| January | 4.51 | .... | 3.46 | 4.74 | 3.58 | 5.03 | 4.35 | 7.72 |
| February | 4.60 | .... | 2.34 | 2.42 | 6.14 | 5.23 | 1.90 | 5.01 |
| March | 2.86 | .... | 4.29 | 3.84 | 4.40 | 5.84 | 6.77 | 3.78 |
| April | 2.57 | .... | 1.67 | 6.87 | 3.20 | 4.77 | 4.96 | 3.41 |
| May | 3.06 | 4.67 | 4.13 | 4.33 | 1.98 | 7.71 | 4.05 | 3.70 |
| June | 2.05 | 2.56 | 1.19 | 3.44 | 6.65 | 1.40 | 1.01 | 3.90 |
| July | 3.79 | 3.05 | 4.09 | 3.96 | 2.88 | 6.87 | 2.10 | 2.13 |
| August | 2.16 | 3.08 | 7.47 | 3.21 | 1.97 | 2.64 | 3.75 | 4.43 |
| September | 2.51 | 3.56 | 8.75 | 2.70 | 2.84 | 2.19 | 5.78 | 1.63 |
| October | 2.92 | 6.14 | 4.19 | 4.17 | .... | 5.03 | 4.42 | 10.00 |
| November | 8.14 | 3.48 | 3.68 | 4.22 | 3.23 | 5.44 | 5.19 | 4.19 |
| December | 8.75 | 1.70 | 2.99 | 2.17 | 5.20 | 4.65 | 4.81 | 2.73 |
| | 47.92 | 28.24 | 48.25 | 46.07 | 42 07 | 56.80 | 49.09 | 52.63 |

GREATEST DAILY RAINFALL.

| | 1872 | | 1875 | | 1884 | | 1885 | | 1887 | | 1888 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ins. | Hrs. | Ins. | Hrs. | Ins. | Hrs. | Ins. | Hrs. | Ins. | Hrs. | Ins. | Hrs. |
| January | .... | .... | .... | .... | 1.17 | 13 | 0.82 | 7 | 6.66 | 9 | .... | .... |
| February | .... | .... | .... | .... | 0.61 | 4 | .... | .... | 2.40 | 24 | .... | .... |
| March | .... | .... | .... | .... | 0.86 | 10 | 1.37 | 9 | 1.04 | 6 | .... | .... |
| April | 1.48 | 12 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| May | 3.47 | 22 | 1.63 | 7 | 1.64 | 17 | 1.76 | 12 | .... | .... | .... | .... |
| June | 1.63 | 13 | 1.80 | 10 | 0.63 | 6 | 1.93 | 22 | .... | .... | .... | .... |
| July | 1.77 | 10 | 1.30 | 2 | 2.26<br>0.88 | 21<br>5 | 1.49 | 24 | 0.76 | 3 | 0.57 | 1.30 |
| August | 1.22 | .... | .... | .... | 0.88 | 4 | 0.91 | .... | .... | .... | .... | .... |
| September | 2.16 | 14 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| October | 3.71 | 8 | .... | .... | 1.14 | 12 | 1.48 | 12 | .... | .... | 1.20 | 3 |
| November | 1.27 | .... | .... | .... | 1.56<br>3.52 | 9<br>26 | 1.27 | 15 | .... | .... | 2.78 | 12 |
| December | 2.07 | 15 | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |