

Amherstburg.—Tenders for the construction of section "C" of the sewerage works were received as follows: Harding & Leathorn, London, \$10,900; C. Barfitt, London, \$14,863; Simpson & Murray, London, \$14,335; Wm. F. Grant & Co., Toronto, \$9,112.22; J. W. Cawse, London, \$9,973; A. J. Brown, Toronto, \$10,915; Clark & Connolly, Toronto, \$10,180; George D. Cameron & Co., London, \$11,367.89; J. S. Fallows, \$16,272; Geo. F. Webb, Hamilton, \$17,389. The tender of W. F. Grant & Co., Toronto has been accepted. This is over \$1,800 less than was estimated by the City Engineer. The estimate of Mr. Willis Chipman was \$10,980, and of Mr. O. A. Graydon, \$11,000.

MONTREAL, QUE.—J. Rawson Gardiner, architect, has let the contract for alterations to fittings for the Royal Insurance Co. to W. Scott & Son. Same architect has awarded the contract for a mission church at Maussoneuve to A. Strang for all trades.—A. G. Fowler & J. R. Gardiner, architects, have let contracts as follows for fittings to store for the Laing Packing & Provision Co., corner Ontario & Champlain streets: Carpenter and joiner's work, R. Guertin; plumbing, heating and tinsmithing, M. Ballantyne; marble work, Robert Reid.—W. McLea Walbank, architect, has let contracts as follows for reparations and modifications of a house, corner Craig & Victoria streets, for J. D. Davis: Excavating, drainage, masonry and brick-laying, White & Morrison; carpenter and joiner's work, Thos. Ford; plasterer, Knott & Gardiner. Offices of the Lachine Rapid Hydraulic Co., Ltd.—Thos. Ford, contractor; iron work, Canadian Bridge Co.—Building permits have been granted as follows: Three houses to be erected on Berri street for Jos. A. Leguerrier—Jos. Forget & Despatie, architects; masonry contractor, Boucher & Huberdeau. Reparations of a house on Redpath street for C. L. Shorey—architect, A. F. Dunlop; masonry contractor, Wm. Oman; carpenter and joiner's work, Simpson & Peel; brickwork, A. Cowen.

MUNICIPAL DEPARTMENT

SEWAGE DISPOSAL WORKS, HAMILTON, ONT.

The city of Hamilton, which is situated on Burlington Bay, at the head of Lake Ontario, is built on a plateau of slightly elevated ground, winding round the foot of a hilly range which extends from Niagara Falls.

Founded in 1813 by the late Geo. Hamilton, it has had a growth of prosperity rarely equalled in Canada, till now it is a leading manufacturing centre and boasts a population of over 49,000 people. The city, owing to a gentle uniform slope towards the bay, is well adapted for the simple and efficient sewerage system, designed and carried out by the late city engineer William Haskins, M. Inst. C. E. By this system the city is now divided into five independent districts, each district collecting its sewage and storm water into one main outlet, and discharging it into Burlington Bay.

For a number of years the bay, which is about six miles long by two miles wide, was fully capable of disposing of the sewage thus discharged, till recently owing to the increase in the size of the city the waters were gradually getting polluted, especially along the shore line. In the year 1895 matters were brought to a climax by an order from the High Court restraining the city from discharging crude sewage at the east end outlet, on the ground of its being a nuisance; the sewer in this district emptying into an inlet from the bay and not into the bay directly. Whilst the best means for carrying out this order were under consideration the question of the disposal of the entire city sewage naturally suggested itself, and Mr. E. Kuichling, C. E., the eminent sewerage expert of Rochester, N. Y., was engaged by the Council to

report on this subject. After getting the necessary data he presented a very full and elaborate report, the purport of which was the recommendation to collect the dry weather flow of all the city sewage to one station, and then pump it a mile or more out into the deepest part of the bay, considering that the bay was amply capable of receiving the sewage from the present population without rendering the waters offensive.

This solution of the sewage question did not meet with the approval of the city council, the citizens, or the city engineer, there being a repugnance to this mere emptying the sewage into the bay without any treatment at all. The expense of collecting the sewage at one station was also against such a scheme, the estimated cost being nearly \$200,000.

The late city engineer, Mr. Haskins, recommended the purification of the sewage by chemical precipitation, and advised the construction of such works at the outlets of two of the trunk sewers at Ferguson ave. and the east end. A by-law being submitted to the ratepayers, was carried for the construction of this work, the amount voted being \$50,000 for Ferguson ave. outlet and \$35,000 for the east end outlet. It will thus be seen that the character and location of the works are both in accordance with the recommendation of the late city engineer.

The question of applying the sewage to land was gone into, but no site of a suitable nature or at a reasonable cost could be obtained. There was a determined opposition made to the establishment of sewage farms by the surrounding townships.

After careful measurements, the daily dry weather flow of sewage at the east end outlet, where the works are being established, was found to be 500,000 gallons per 24 hours. The sewage is comparatively free from obnoxious components, being largely collected from the rural parts of the city. The works now being constructed consist of a pump house, press house three large precipitation tanks with channel leading

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