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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL

EVERY

PUBLIC WORKS • TENDERS •
ADVANCE INFORMATION •
AND MUNICIPAL PROGRESS

WEDNESDAY

This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers
Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

VOL. 10.

OCTOBER 18, 1899

No. 38

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Advertising Rates on application.

Information solicited from any part of
the Dominion regarding contracts open to
tender.

TENDERS

Sealed tenders will be received by the undersigned
until 6 p.m. of OCTOBER 21ST, 1899, for

Heating by Steam St. James' (Episco-
pal) Church, Orillia, Ont.

Parties tendering must prepare their own plans and
specifications of Heating System, giving tenders on
heating firstly by coils, secondly by piping, under each
power, and thirdly by combination of both systems or
otherwise. The building plan of St. James' Church
may be seen at the Synod Office, 15 Wellington Street
West, Toronto, on and after the 18th inst. Tenderers
must be prepared to give satisfactory bond for the
immediate completion and guarantee of the work.

The lowest or any tender not necessarily accepted.

F. G. EVANS,
Churchwarden.

Orillia, October 18th, 1899.



Notice to Contractors

TENDER FOR DRAINAGE DITCH

Tenders will be received, by registered post only, ad-
dressed to the Chairman of the Board of Control, City
Hall, Toronto, up to noon on MONDAY, THE
23RD INSTANT, for the following work:

DRAINAGE DITCH,

extending from City limits (200 feet north of Queen
Street) to Ashbridge Bay.

Contents of envelopes containing tenders must be
plainly marked on the outside.

Conditions and specifications may be seen and forms
of tender obtained at the office of the City Engineer
on and after October 6th, 1899.

A deposit, in the form of a marked cheque, payable
to the order of the City Treasurer, for the sum of 5 per
cent. on the value of the work tendered for, must ac-
company each and every tender, otherwise they will
not be entertained.

Tenders must bear the bona fide signatures of the
contractor and his sureties, or they will be ruled out
as informal.

Lowest or any tender not necessarily accepted.

JOHN SHAW (Mayor),
Chairman Board of Control.

City Hall, Toronto, Oct. 18th, 1899.

TENDERS

Tenders will be received until 5 p.m. FRIDAY, THE
20TH INST., for the Mason and Brickwork, and until
WEDNESDAY, THE 25TH INST., for all other
trades required in the erection of a

Pair of Semi-Detached Residences

on Howland Avenue. The lowest or any tender not
necessarily accepted.

F. H. HERBERT, Architect,
9 Toronto Street, Toronto.

Notice to Contractors

SMITH'S FALLS, ONT.

SEWERAGE AND WATERWORKS

Sealed tenders will be received by the Town Clerk
until 6 p.m. on THURSDAY, OCTOBER 26TH, 1899,
for the construction of about 4,000 Lineal Feet of
SEWER, in rock trenches, also for laying 3,500 Lineal
Feet of WATER MAINS.

Plans and specifications may be seen at the Town
Clerk's office, Smith's Falls, or at the office of the Chief
Engineer, Toronto, on and after October 18th.
No tender necessarily accepted.

B. E. SPARHAM, Esq., Town Clerk,
Smith's Falls, Ont.

WILLIS CHIPMAN, C.E., Chief Engineer,
103 Bay Street, Toronto, Ont.

October 18th, 1899.

MARKET CONDITIONS.

In the prices of building materials, there
have been several advances within the
past week. Cut nails have undergone
another advance of ten cents per keg,
making the gain 35 cents within a
fortnight. In galvanized roofing nails
there has been an advance of five per
cent., while wire nails are five cents per
keg dearer. The galvanized iron market
continues to strengthen. Importers have
been advised of an advance of ten cents
per 100 lbs. on galvanized iron of Ameri-
can make, while British manufacturers
refuse to accept orders for delivery after
the first of the year, on account of an ex-
pected advance in prices. Lead pipe has
been advanced by two and one-half per
cent., and iron pipe is selling at higher
prices, although no general change in quo-
tations is reported.

At Toronto and Montreal the cement
market is active for this season of the year.
So with glass, paints and oils. Stocks of
window glass are getting low, and im-
porters complain of difficulty in getting
their orders filled. White lead has
undergone an advance of 37½ cents per
100 lbs.

CONTRACTS OPEN.

UNBRIDGE, ONT.—Beal Bros. purpose
extending their tannery.

PARIS, ONT.—A new central school will
be built here next year.

CHESLEY, ONT.—An addition will be
built to the chair factory.

MAPLE CREEK, N.W.T.—The water-
works system is to be improved.

NELSON, B. C.—Another brick block
will be built by Malone & Tregillus.

TILBURY, ONT.—A three-storey addi-
tion will be built to the hotel of J. D.
Marchand.

ORILLIA, ONT.—Tenders are invited in
this issue for a steam heating plant for St.
James' church.

GREENFIELD, N.S.—The dam built by
T. G. McMullen, M.P.P., was swept away
by a recent flood.

BRINSTON'S CORNERS, Ont.—Matilda
council will raise \$800 by debentures to
erec a new school.

PETROLIA, ONT.—The Carman Natur-
al Gas Co. want a franchise for laying gas
pipes in the streets.

ST. JOACHIM, ONT.—Rochester town-
ship council are negotiating for the sale
of \$5,022 of debentures.

ROSSLAND, B. C.—Judge Spinks has
purchased property on which he intends
erec a large warehouse.

BUCKINGHAM, QUE.—The government
has offered the town \$5,000 towards the
erec a post-office here.

AMHERSTBURG, ONT.—Tenders are
about to be taken by the council for con-
struction of sewer on Park street.

ST. STEPHEN, N.B.—Tenders are
asked for erec a bridge at Oak Bay.
Plans at store of H. E. Hill & Co.

LEAMINGTON, ONT.—Mr. Edgar Mc-
Clutchie has purchased property on which
to build a brick house next spring.

WAKEFIELD, QUE.—The Exchange
Hotel, recently acquired by Thos. Mit-
chell, will be thoroughly remodelled.

BEDFORD, P.E.I.—C. W. Leach, of
Marlboro, Mass., intends to immediately
commence the erec a large hotel.

ST. BONIFACE, MAN.—The old cath-
edral here is to be pulled down and a
modern building constructed on the site.

BELLEVILLE, ONT.—At next council
meeting a motion will be introduced to in-
vite tenders for electric fire alarm system.

CHARLOTTETOWN, P.E.I.—The Central
Christian congregation are about to build
a new church, 65 x 35 feet, with 75-foot
spire.

BELOEH, QUE.—A company has been
formed here to build a large hotel. They
have purchased Fabien Brodeau's prop-
erty.

ARNPRIOR, ONT.—R. Anderson, of
Ottawa, has completed arrangements with
Geo. Malloch to locate the proposed elec-
tric plant in his saw mill.—The Ottawa,

Arnprior & Parry Sound Railway Company will probably build a new station here.

STRATHROY, ONT.—The Strathroy Electric Co. have refused to supply electric lighting at the price offered by the council.

BERLIN, ONT.—C. K. Hagedorn has purchased property on King street and intends erecting a large suspender factory next spring.

WELLAND, ONT.—The canal staff are at the air line junction preparing plans for the new bridge to be built across the canal at that point.

DIGBY, N.S.—The town clerk has been instructed to obtain from Mr. Fairn, architect, the cost for plans and estimates of a fire-hall.

WOLFFVILLE, N.S.—The parishioners of St. John's Church of England will build a rectory, for which tenders will be asked at once.

PARRY SOUND, ONT.—The Parry Sound Lumber Company purpose rebuilding their saw mill and putting in steam feed apparatus.

WILLIAMSTOWN, ONT.—The High School Board has not yet reached a decision regarding the heating system and seating of school.

ST. LAMBERT, QUE.—The old school building and site on Victoria street has been purchased by the council for a town hall and fire station.

BRANTFORD, ONT.—An architect was in town last week securing information previous to preparing plans for proposed pork packing factory.

ST. JOHN, N. B.—Geo. R. Vincent, county secretary, invites bids up to 23rd inst., for the purchase of \$13,000 of 3½ per cent. debentures.

WOODSTOCK, N.B.—On Monday last the ratepayers voted on a by-law to grant a bonus of \$50,000 to establish a pulp mill; result not learned.

CHATHAM, ONT.—Powell & Carswell, architects, are taking tenders this week on the erection of a stone and brick brewery and frame ice-house.

LONDON, ONT.—John Hayman has secured a building permit for a double brick dwelling, corner Queens avenue and English street, to cost \$5,500.

SHERBROOKE, QUE.—The new market building will be proceeded with at once.—Voting on the by-law to raise \$100,000 for improvements takes place this week.

HARRISTON, ONT.—On November 7th the ratepayers will vote on a by-law to guarantee the bonds of the Harriston Pork Packing Co. to the extent of \$20,000.

WROXETER, ONT.—The council has reached an agreement with Ingram & Donaldson, and the electric light plant will be installed by the latter forthwith.

HULL, QUE.—The by-law to bonus the Ottawa & Gatineau and Pontiac & Pacific railways to the extent of \$30,000 will be voted on by the ratepayers on October 23rd.

MIDWAY, B.C.—Tenders have been invited for erection of hall, 30x70 feet, and a two storey cottage on Hartland avenue.—Geo. Smith intends erecting a dwelling.

NEWCASTLE, N. B.—The council intends purchasing 1,000 feet of fire hose.—Mr. Duncan, engineer, is preparing plans for the proposed electric light system.

GANANOQUE, ONT.—Willis Chipman, C.E., of Toronto, has been engaged to prepare plans for and superintend the construction of waterworks and sewerage systems for this town.

ALMONTI, ONT.—W. P. McEwen, secretary North Lanark Agricultural Association, desires tenders by October 21st

for building a cedar breakwater along the bank of the Mississippi.

WOODSTOCK, ONT.—Messrs. Ickes & Armstrong have accepted the franchise for electric street railway as offered by the town, and the work of building will be commenced at an early date.

TAVISTOCK, ONT.—The South East-hope township council decided at a recent meeting to build an iron bridge with concrete abutments on the side line between lots 40 and 41, concession 6. V. Stock, clerk.

RAT PORTAGE, ONT.—The building of a bridge across the bay at Norman is being agitated, and the government may be asked to contribute towards the cost.—The council will build a wing to the town hall.

QUEBEC, QUE.—David Ouellet is preparing plans for an aqueduct to be built for the Hospice St. Joseph de la Délivrance at Levis; 5 and 6 inch cast iron pipe, length 5,500 feet; brass valves, hot air engine to raise water, etc.

BEAR RIVER, N.S.—Clark Bros. have acquired the McMaster property at Kingston, including timber lands, upon which they will erect a portable saw mill.—An agitation is on foot to construct an electric railway from this place to Digby.

ST. CATHARINES, ONT.—The Niagara Central Railway will this week commence the conversion of the road between this city and Niagara Falls into an electric line. The extension to Port Dalhousie will also be undertaken at an early date.

TRENTON, ONT.—Dominion government engineers have been instructed to prepare plans for the southern section of the Trent Valley canal from Trenton to Frankford. From this it would appear that tenders will be invited at an early date.

FREDERICTON, N.B.—The Provincial Department of Public Works invite tenders up to Monday, 23rd inst., for building high water wharf at Belyear's Cove, Greenwich, Kings county. Plans at above department and at office of Hon. Wm. Pugsley, St. John, N.B.

BRYSAN, QUE.—It is reported that J. B. S. Trelawney, of the Anglo-Canadian syndicate, operating the Ostrom nickel mine, has secured control of a water-power here with the object of developing it for electrical purposes and for the operation of a large pulp mill.

GODERICH, ONT.—On November 15th a vote of the ratepayers will be taken on a by-law to grant a bonus of \$55,000 to Francis Lennox, of Chataineau, Belgium, to assist him in establishing a glass factory in this town, the money to be raised by the issue of debentures.

VANCOUVER, B. C.—The council has decided to engage H. D. Wyllie, of the Septic Tank Syndicate, to prepare preliminary plans for three tanks, after which tenders will be invited for the necessary works on more detailed plans prepared by the city engineer.

PEMBROKE, ONT.—The question of the construction of a bridge at Mary street is still under consideration by the council, the engineer having recommended a Howe truss bridge.—Some of the councillors are in favor of purchasing the electric light plant from the Pembroke Electric Light Company.

WINDSOR, ONT.—The tenders received for parochial residence for St. Alphonsus church were found to be in excess of the appropriation, and the plans will be modified and new tenders invited.—E. W. S. Bauer, chairman Water Commissioners, wants tenders by to-day (Wednesday) for excavating and pipe-laying.

KINGSTON, ONT.—The council will construct a sewer on Gore street.—Up to date \$20,000 has been subscribed towards the building of a summer hotel by a joint

stock company.—A steamer to connect the Lakes.—It is rumored that three hotels are to be built in the M. district.

PERTH, ONT.—Tenders will be received this week for erection of skating rink. Particulars from J. M. Hall.—Moore, county clerk, desires tenders on November 1st for supply of 25 cwt. limestone.—It is rumored that the R. intend erecting a large addition to their car shops here.

NIAGARA FALLS, ONT.—Plans are under preparation for an extension of the Niagara Falls Metal Works. C. Pew is authority for the statement that an American syndicate has leased the site of the old Clifton House, and the work of rebuilding the hotel will be commenced next spring.

STRATFORD, ONT.—It is probable the G.T.R. will enlarge their shops in the near future.—The question of constructing a bridge over the river at John street is engaging the attention of the council.—R. B. Barber invites tenders on behalf of the corporation up to 11th for the supply of a modern lance.

EDMONTON, N.W.T.—A brick building 30x75 feet, will be built by W. J. next spring.—The council is considering the construction of a waterworks and may engage an engineer to report thereon.—Bids are invited by F. J. son, town clerk, up to November 1st for the purchase of \$2,725 twenty-year cent. and \$686 ten-year 5 per cent. debentures.

SYDNEY, C. B.—It is stated that the Cape Breton Railway Extension Co. incorporated at the last session of the Scotia Legislature, are perfecting plans for the construction of a railway from Louisburg to Hawkesburg, on the shore of Canso, a distance of 80 miles. The company has a capital of \$1,000,000 and includes among its promoters Cassius M. Field, of Philadelphia, John C. Brown, of New York, and Joseph Shute, of Albany, N. Y.

WINNIPEG, MAN.—Plans are being prepared for a large business block to be erected on Portage ave. early next spring.—The Bell Telephone Co. have decided to construct a long distance line between Winnipeg, Portage la Prairie and Pawa.—Mr. T. G. Shaughnessy, president of the C.P.R., is in the city, and brought with him the plans of the proposed hotel to be erected at the corner of Main and Higgins street. These are a six-story structure 208x320 feet, about \$1,000,000.—The Bell Telephone Co. are inviting bids for the supply of 4,000 cedar poles, 25 feet in length and 7 inch tops.

PETERBORO', ONT.—Representatives of the town and county councils at Dominion government held a conference last week regarding the site for the proposed bridge across Chemung Lake at Bridgenorth, towards which the government has voted \$10,000. It was decided to instruct J. D. Belcher, county engineer, to make a report on the different sites. S. R. Armstrong, town clerk, will receive tenders up to November 10th for the purchase of the following debentures: \$12.14 thirty-year, \$4,410.92 twenty-year, \$13,383.69 thirty-year, \$9,050.93 twenty-year, all three per cent., and \$5,200.00 twenty-year four per cent.

HAMILTON, ONT.—It is understood that the Sawyer-Massey Co. intend building a large two-storey brick addition to their factory.—The foundations of Hoepfner Refining Co.'s buildings at the Edgerton Storage Battery works are nearly finished, and the buildings were rushed up at once.—It is stated that the Cataract Power Co. syndicate will

ate commence work on the roads to Galt, Guelph and other A double track will be built to Galt and a single track to Guelph, Berlin and Waterloo. Grading will commence this fall.—The city engineer favors the division of the two for waterworks purposes, a to be built on Barton street high level reservoir to be en-T. Beasley, city clerk, wants tennoon of 23rd inst. for construction sewer on Oak ave.—The Cataract Co. syndicate are having plans for three large brick buildings, will require over 1,000,000 bricks. One will be 100 x 135 feet, another 40 x 50 and another 54 feet square.

wa, ONT.—Residents of the have petitioned for a system of e.—Mr. J. R. Booth has offered one-third of the cost of the proposed bank street subway under the Atlantic tracks.—The city engineer just invited tenders for the of 100 flat steel bars, 30 1-inch nuts, and 330 cast iron washers. Ottawa Car Co. have purchased corner Kent and Slater streets, extension of its building. Ex-is now in progress for a brick 36 feet square and 18 feet high. Jones, secretary Department of and Canals, desires tenders by day, November 1st, for rebuilding age Rideau.—M. M. Pyke, of 99 street, has purchased McDonald's laundry on Queen street. The s will be enlarged and a complete nt installed.

REAL, QUE.—At a meeting of the Board held last week to the proposed wharf to be built or, it was decided to build two timber and the shore wharf of —The Laing Biscuit Manufac-a. have purchased ten lots at St. ad will erect thereon a four storey to be equipped with the most d machinery.—At a meeting of ad Trunk Railway shareholders London, Eng., last week, the ot for the extension of the Inter-railway from: Chaudiere Junction real was approved of.—The muni-of De Lorimier is about to let the for laying of drains.—Negotia-nder way for securing a build-Point St. Charles for a general —The Market Committee have Harbor Board to construct an pavement on Commissioners

TO, ONT.—The Consumers Gas d to be favorable to the establish-a gas plant on the Island.— permits have been granted as Lancashire Insurance Company, as 27 East Wellington street, 000; G. H. King, five dwellings Harbor and Bathurst streets, cost A. E. Walton, store corner nd Broadview, cost \$5,000; Ben. o dwellings on Broadview aven- \$2,000; P. P. Griffin, factory ase on St. Helen's avenue, cost Kane Bros., pair of dwellings e Cawthra square, cost \$4,000.— and Trunk Railway Co. are hav- reys made for improving the ad double tracking the line from n to Niagara Falls. It is ex- at the contracts for widening the d, track laying, etc., will be let he winter, and work commenced rly spring.—The Property Com- of the city council is considering hase of new boilers for the jail. ad city engineer has closed the Glen s edge in Rosedale, contending that airs are made it is unsafe.—The Health Officer last week in- various sites offered for the pro- tive consumptive sanatorium, but tion has as yet been made.—The

Havana Traction Co., composed of Canadian and American capitalists, is said to have secured control of the Havana electric railway system. Sir Wm. Van Horne has been elected president, and Mr. Frederick Nichols, of this city, treasurer of the company.—The contract for the plumbing of Manning's large office building, corner Queen and Terauley streets, is still open.—In the annual report of the city engineer, just issued, he again urges improvements to the waterworks system, stating that a new conduit between the Island shore crib and the pumping station is imperative, also the installation of another 10,000,000 gallon pumping engine and the construction of a 36-inch main from corner Bathurst and College streets to the reservoir.

FIRES.

The Good Shepherd Orphanage at New Westminster, B.C., conducted by Our Lady of Charity Sisters; loss \$13,000. Rebuilding will be commenced at once.—Dwelling of A. Chalk at Magog, Que., totally destroyed.—Smith's mill at Gardner's Creek, St. John county, N.B.; loss \$1,000.—Owl's Head Hotel on Lake Memphremagog, about eight miles from Georgeville, Que., totally destroyed. The building was owned by C. D. Watkins, of New York City, and was valued at \$25,000; no insurance.—Residence at Colborne, Ont., owned by J. S. Yeomans.

CONTRACTS AWARDED.

SMITH'S FALLS, ONT.—Four houses for Lester Allyn; John McEwen, contractor. GODERICH, ONT.—Residence for Dr. A. C. Hunter: Buchanans & Rhynas, contractors. CHESLEY, ONT.—Construction of pipe sewer: E. A. Cawsey, Stratford, successful tenderer, \$1,566. WALLACEBURG, ONT.—Presbyterian church: John M. Gibb, successful tenderer; price about \$5,000. EDMONTON, N.W.T.—Sunday School building for All Saints' church: J. Ball, contractor; estimated cost, \$1,400. NEW WESTMINSTER, B.C.—H. Bloomfield & Son are supplying stained glass windows for Holy Trinity Cathedral. WOODSTOCK, ONT.—Post office building: J. A. Des Rivieres, of Ottawa, successful tenderer; price about \$31,000. WILKESPORT, ONT.—Babcock drain: Daniel Fraser, successful tenderer, \$314.—Lapish drain, W. S. McLean, contractor, \$4 50. OTTAWA, ONT.—The contract for 165 tons of telegraph wire has been awarded by the government to J. A. Seybold, of

this city.—Plumbing and heating of Dalhousie ward school: May & McWhinnie, successful tenderers.

SYDNEY, C. B.—The contract for the erection of 100 houses at Ashpy has been given to Schurman, Lefurgey & Clark, Ltd., of Summerside.

NAPANEE, ONT.—Alterations to Dominion Bank: Geo. A. Cliff, contractor; plate glass windows, New Brunswick sandstone capps and sills.

MARYSVILLE, N. B.—Steel bridge across the Nashwaak: J. M. Roddock, of the Miramichi Foundry & Machine Works, successful tenderer; price about \$25,000.

SEBRINGVILLE, ONT.—For repairing Maitland drain tenders were received by Ellice council as follows: Peter Nicholson and John Reid, \$1,740; Armstrong & Smith, \$1,510; Pascal Pigeon, \$1,475 (accepted).

WESTON, ONT.—At council meeting on Saturday last the contract for electrical apparatus for lighting plant was awarded to the Canadian General Electric Company, Toronto, and that for engine and boiler to the Goldie & McCulloch Co., Galt.

PEMBROKE, ONT.—For \$12,000 sewerage debentures and \$5,000 High school debentures, tenders were received by the council as follows: G. W. Wood & Son, Toronto, \$17,513; Geo. A. Stimson & Co., Toronto, \$17,253; Geo. Macbeth, Toronto, \$17,362.50; Amelius Jarvis & Co., Toronto, \$17,133; A. T. Drummond, Kingston, for High school debentures only, \$5010. The tender of G. W. Wood & Son has been accepted.

LACHINE, QUE.—Following is the list of tenders received for construction of drainage system: Albert Dini, \$209,129.74; Rheault & Dansereau, \$144,816.90; Leopold Leger, \$163,230; Charter & Rebin, \$174,095; Martineau, Son & Lemoine, \$185,000; Bastien, Valiquette & Parker, \$152,523.15; O. L. Hainault & Co., \$149,552; Amyot, Lemay & Gauthier, \$141,518.88. The contract, as already reported, was awarded to Bastien, Valiquette & Parker.

MONTREAL, QUE.—The contract for supplying all the drain pipe, connections, etc., and Portland cement required for the sewer work at Lachine, Que., has been awarded to W. McNally & Co., of this city. This work is quite extensive, consisting of over nine miles of sewers, and it is expected that it will take over two years to complete same.—The contract for planks, boards, timber, etc., for the harbor works of 1900 was last week awarded by the commissioners to the Shearer & Brown Co., at the tender of \$92,726.32.—The Richelieu & Ontario

Pumping Machinery
Electric Light Engines
Boilers

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Machine Co.
Limited
199 Barton Street East, HAMILTON, ONT.
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HENRY F. DUCK, MANAGER FOR CANADA.

BRIDGE SUB-STRUCTURES, WATER POWER DAMS, CANAL WORK and CAISSON FOUNDATION a Specialty

Navigation Co. has let the contract for hotel building at Murray Bay to W. W. Scott, of this city. The hotel will contain over 200 rooms and is to be completed by June 15th.—W. McNally & Co. are supplying over 10,000 barrels of high grade German Portland cement to the Engineering Contract Co., of Toronto, for their work at Chaudiere Falls, Que.

TORONTO, ONT.—The Board of Control last week awarded contracts as follows: Dominion Construction & Paving Company—Cedar block pavements—Bay street, Esplanade to Front street, \$1,475; Carlyle street, St. Patrick northward, \$561; Florence street, Dufferin to Brock avenue, \$1,675. Brick pavements—Markham street, from Queen to Arthur, \$11,613; Robinson street, Bathurst to Palmerston avenue, \$3,459. A. Gardner & Co.—Concrete pavements—Russell street, north side, between St. George and Huron, 67c.; and Queen street, south side, west of Simpson's, \$1.75. City Engineer, pavement on lane south of Front street, between Yonge and Scott, \$1,540; John McGuire, pipe sewer on Golden avenue, \$516.

BUSINESS NOTES.

Gauthier & Caron, contractors, Montreal, have dissolved partnership.

Dandeneau & Turcotte have registered partnership as plumbers in Montreal.

Peter Mittleholtz, brick and tile manufacturer, West McGillivray, Ont., has been succeeded by John W. Hardy.

Lefavre & Taschereau have been appointed curators of the estate of A. Beudet, brick manufacturer, St. Jean des Challeons, Que.

John Burns & Co., plumbers and manufacturers of steel ranges, Montreal, have made a voluntary assignment, with liabilities stated to be \$7,749. Mrs. John Burns has been registered proprietress.

MUNICIPAL DEPARTMENT

AN OUTLINE OF THE SYSTEM OF GARBAGE COLLECTION AND DISPOSITION IN THE CITY OF TORONTO.

By JOHN JONES, Street Commissioner

The total area of the city, including the bay and island, is 13,976 acres, of which 10,500 acres are occupied. The mileage of the streets is 258 3/4, and of the lanes or alleys about 75 miles, nearly all unpaved. Our population is about 230,000; the buildings number 41,500, of which 36,416 are dwellings, and the balance (5,082) business places.

For the operation of the scavenging service we have divided the city into two districts, eastern and western, each being in charge of an inspector, who also has charge of the street cleaning and street watering branches in his district. Those districts are again laid out in sub-divisions, the number of which throughout the city is 29. Each of these sub-divisions is again divided into "beats" or routes, one cart or team wagon being allotted to each "beat," from eight to twelve carts on an average being required for each sub-division. In order to ensure the proper performance of the work, and at the same

* Abstract of a paper read before the Municipal Improvement Association, Toronto, October, 1899.

time be able to locate any driver who may neglect his duty, or in other ways give cause for complaint, we have appointed one driver in each sub-division as head, or senior, over the others, who is held responsible for the work being properly performed in his particular sub-division, and whose duty it is to investigate and report on all complaints that may affect his staff of drivers, to the inspector of the district, by whom the facts are transmitted to the office. Moreover, each cart bears a number, whereby any dereliction of duty can be more readily traced to the right party. The central portion of the city, which is the most thickly populated, and contains most of the business houses, is covered by the carts twice weekly; the remaining section, comprising the residential portion and outskirts, have a weekly collection only.

Employed in this work we have 120 horses, with carts and wagons of varying capacities, all the property of the city, built and kept in repair at our own shops. We have three stables for our horses, one in the western, one in the eastern and one in the northern section of the city.

Coming now to the statistics for last year, we removed altogether 115,679 loads, of which 35,085 were garbage, and the remainder, namely, 80,594 loads, ashes. It may be well to explain here that the term garbage covers all substances that are combustible. Of pure garbage—that is, kitchen refuse—comprising animal and vegetable matter, the proportion of the aforesaid quantity removed last year was only about one-twelfth, or 8.33 per cent, the remainder consisting of brushwood and debris from lawns and gardens, clippings and waste ends of cloth, leather, etc., from factories and warehouses, waste paper, and odds and ends generally that will burn, all of which was disposed of at the crematories. It may be a matter of

(Continued on page 6.)

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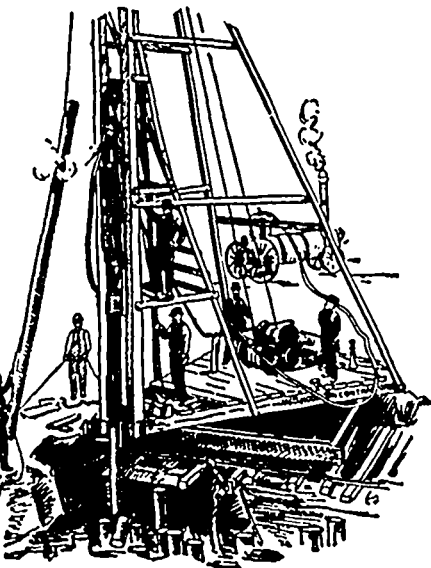
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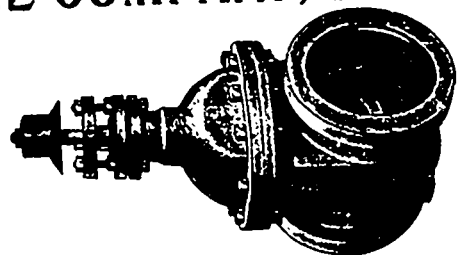
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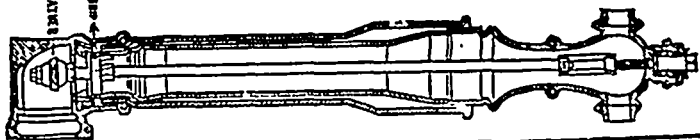
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urprise to some of the gentlemen present that the percentage of pure garbage is so small. One reason is, practically all the refuse from our large hotels and boarding houses is sold to persons maintaining piggeries outside the limits of the municipality, who also have men employed to collect the refuse when put out by householders for the scavengers to take away. Another reason is, many families make a practice regularly of burning their garbage in the kitchen stoves. Dead horses are removed by a private firm outside the city, at their own expense.

I am aware that the disposal of garbage, whether by reduction or incineration, is occupying a good deal of attention at present in large cities both in the United States and in England, some of which have adopted the former process, and I recollect we had an interesting discussion on the subject when the convention met in Washington last year. I am not prepared to pass a definite opinion on the question as to whether it is profitable for municipalities in general to adopt the reducing process for disposing of garbage, in preference to other methods, as local conditions vary in each case, and the process is not yet beyond the stage of experiment, but I have no hesitation in saying that it would not pay this city to adopt that system in preference to our present system of incineration, inasmuch that the amount of pure garbage we collect is so small.

As I have before mentioned, all combustible matter is sent to the crematories, and dry substances form valuable fuel for incinerating the moist products. Ashes are used for filling-in purposes.

The collections are made from the various sections of the city on the same days of each week, printed cards containing information when the carts make their rounds, the regulations governing the service, etc., being served on every household. One of the most important of these regulations prohibits the storing of ashes and garbage in the same receptacle. Under a process of incineration such as we have, it is obvious that the combustible and non-combustible substances must not be mixed, nor do we find it difficult to enforce this rule. I must confess, however, that we have more trouble in getting citizens to observe rather very important regulation, namely, that which prohibits ashes and other substances from being thrown broadcast on streets or alleys. We have, however, special men appointed to patrol the lanes for the purpose of compelling a proper observance of the rules and regulations governing the service, and we rarely find it necessary to do more than issue a warning to offenders. I may mention so that we have the co-operation of the police towards this end.

The expenditure on the service last year was \$62,482.96, representing a cost per head of population of 27.17 cents, and per load removed of 54.01 cents. The expense of the work is largely increased by the long haul to the dumps where ashes are deposited, none of which are centrally located.

It might be supposed that the proportions of ashes and garbage so called would vary considerably in the winter and summer seasons, but we do not find a very great difference. For the information of the convention I have selected the returns from a district which is largely residential, for one week in the months of January and July of the current year:

Average number of carts collecting, 13; month of January—213 loads of ashes and 80 loads of garbage removed; month of July—102 loads of ashes and 117 loads of garbage removed.

There is, however, much difference in the quality of the materials collected. In winter the ashes are pure and un-mixed, but in summer there is a great proportion of sweepings of yards and

outhouses and such like, all of which is useful for filling low lying lands.

The substances classed under the head of garbage vary but little one month with another.

I purpose also to give the convention some information regarding the construction, method of operating and expenditure involved in running the crematories, where the garbage is consumed, which has been kindly furnished me by our esteemed City Commissioner, Mr. Coatsworth, under whose supervision they are conducted.

JOHN JONES, Street Commissioner:

DEAR SIR,—In compliance with your request, I beg to submit the following statement:

About 1884 the garbage dumps in our city became a nuisance, and for five or six years the subject of erecting a crematory was under consideration by the city corporation. Plans of several kinds of crematories were obtained from England and the United States, all of which were found to be more expensive in their construction than the need of our city warranted, and from information obtained it was discovered that many of them were offensive in their operation. Deputations from our city council visited several cities of the United States and Canada for the purpose of gathering information on the subject.

In the early part of 1891 the city commissioner was ordered, by resolution of council, to construct a crematory by day labor according to plans prepared by himself, a copy of which is herewith appended, having two furnaces each 22 feet long, 10 feet wide and 4 feet high to crown of arch, with iron smoke-stack 3 feet in diameter and 100 feet high, capable of cremating 100 cubic yards per day of refuse and garbage. It was erected in the eastern part of the city.

The operation of the eastern crematory having proved satisfactory, the commissioner was instructed, in the early part of 1893, to construct one of a similar kind in the western part of the city, which was completed and put into operation about the 1st of October of the same year,

the size of the furnace being 28 ft. long by 10 ft. 4" wide, and 4 ft. 3" high to crown of arch, with a brick smoke-stack 120 ft. high, having a cremating capacity of 120 cubic yards of refuse and garbage per day.

The following figures will show the cost of operation, and material consumed in the years named at the two crematories. We give these years in order to show the average.

In 1894, refuse and garbage cremated was 40,000 cubic yards, at a cost of 27½ cents per yard.

In 1897, refuse and garbage cremated, 54,000 cubic yards, at a cost of 22½ cents per yard.

In 1898, garbage and refuse cremated, 10 September 23rd, 33,000 cubic yards, at a cost of 22 cents per yard.

The eastern crematory cost for construction, in labor and material, for the furnaces and smoke stack, \$4,400; the wooden building, 48 x 98 feet, 22 feet high, and a bridge for approach from street and fencing lot, \$3,000, making a total of \$7,400.

The western crematory cost for construction, being a little larger than the other, with a brick smoke stack, in labor and material, furnaces and chimney, \$4,914; building and planking roadway, etc., \$2,600, or a total of \$7,514.

All kinds of garbage, refuse, dead animals, rotten meat, fruit, fish, vegetables, etc., are cremated. Cheap soft coal screenings are used as fuel, an average of about two ton per day at both institutions.

There are no offensive odors at any time emanating from the crematories; they might be placed in the heart of the city and would be no nuisance.

So far as my knowledge goes, from information I have been able to gather for the past ten years on the disposal of garbage, I believe that cremation is the best and most sanitary method of treating it. So far as our city is concerned, it is the only system suitable, as we get so much more refuse than garbage.

Yours respectfully,
E. COATSWORTH,
City Commissioner.



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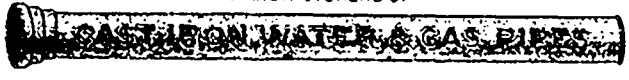
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For ornamental work, cu. ft. 40
Granite paving blocks, 8 in. x 12 in. x 6 in., per M. 50 10
Granite curbing stone, 6 in. x 20 in., per lineal foot... 70

CREDIT VALLEY STONE.

F.O.B. Quarries.
Rubble, per car of 16 tons... 7 00
Brown Coursing, up to 10 in., per sup. yard... 1 50 1 75
Brown Dimension, per cub. ft. 60
Grey Coursing, per sup. yard 1 00
Grey Dimension per cub. ft. 45

LONGFORD STONE.

Rubble, per 30 M. car... 5 0
Ashlar, per cub. yd... 2 0
Dimension, per cub. ft... 18

SLATE.

Toronto Montreal.
Roofing (1/2 square), red... 17 50 20 00
" purple... 8 5 10 00
" unslating green 8 5 7 00 8 00
" black... 7 50 6 50
Terra Cotta Tile, per sq... 20 00 25 00
Ornamental Black Slate Roofing 8 80 6 80

EMMENT, LIME, etc.

Portland Cement: German, per 100 lbs... 2 90 3 10 2 55 2 65
London... 2 90 3 00 2 35 2 45
Newcastle... 2 70 3 00 1 95 2 10
" Jossens Bra Portland 3 00 3 25 2 70 2 80
" Dyckerhoff... 3 05 3 25 2 75 2 90
North's "Condor"... 2 95 3 10 2 65 2 80
English, artificial, per bbl... 2 85 3 00 2 35 2 45
Belgian, natural, per bbl... 2 50 2 75 2 00 2 20
Canadian, artificial, " 2 85 3 00 2 60 2 70
Roman " " 2 10 2 25
Parian " " 5 25 5 25 5 75 5 75
Superfine " " 1 25 1 40 8 25 9 00
" Karlstadt" (German)... 3 05 3 25 2 75 2 90
" Germania" (German)... 3 05 3 25 2 75 2 90
" Rooster" (Belgian)... 2 15 2 20
" Keystone" (Belgian)... 2 15 2 20
" Anvil" (Belgian)... 1 95 2 05
" Burham" (English)... 2 95 3 00 2 25 2 45
Hydraulic Cements: Thorold, per bbl... 1 50 1 65
Queenston, " 1 50 1 50 1 60
Napanea, " 1 50 1 50
Hull, " 1 50 1 50
Ontario, " 1 25

Toronto Montreal.
Keene's Coarse "Whites"... 5 50 6 00 5 00 5 50
Fire Bricks, Newcastle, per M 30 00 35 00 16 00 21 00
" Scotch 30 00 35 00 19 00 21 00
Lime, 100 lbs., Grey... 25
" White... 30 30
Plaster, Calcined, N. H... 2 00 1 50
" N. S... 2 00 1 50
Hair, Plasterers', per bag... 80 1 00 06 0

HARDWARE.

The following are the quotations to builders for nails at Toronto and Montreal:
Cut nails, 5d & 6d, per keg 2 50 1 85
Steel " " " " 2 60 1 95

CUT NAILS, FENCE AND CUT SPIKES.

40d, hot cut, per 100 lbs... 2 60 1 85
10 to 12d, hot cut... 2 35 1 95
8d, gd, " " 2 40 2 00
6d, 7d, " " 2 55 2 15
4d to 5d, " " 2 65 2 25
3d, " " 2 90 2 25
2d, " " 3 25 2 85
Cut spikes, 10 cents per keg advance.
Steel Nails, 10c. per keg extra.
Wire Nails, 3/40 base, 10c.

Iron Pipe:

Iron pipe, 1/2 inch, per foot... 6c 6c
" " 3/4 " " " 7 7
" " 1/2 " " " 8 1/2 8 1/2
" " 1 " " " 12 12
" " 1 1/2 " " " 17 17
" " 2 " " " 24 24
" " 2 1/2 " " " 30 30
" " 3 " " " 43 43
Toronto, 65 per cent. discount.
Montreal, 70 per cent. discount.

Lead Pipe:

Lead pipe, per lb... 7c } 25 per
Waste pipe, per lb... 7 1/2 } cent. dis

Galvanized Iron:

Adam's-Mar's Best and Queen's Head and Opello:
16 to 24 gauge, per lb... 4 1/2 4 1/2 4 1/2
26 gauge, " " 4 1/2 5 4 1/2
28 " " 5 5 1/2 4 1/2
Gordon Crown—
16 to 24 gauge, per lb... 4 1/2 4 1/2 4 1/2
26 gauge, " " 4 1/2 4 1/2 4 1/2
28 " " 4 1/2 5 4 1/2
Note.—Cheaper grades about 1/2 c. per lb. less.

Structural Iron:

Steel Beams, per 100 lbs... 2 75 2 30
" channels, " " 2 85 2 30
" angles, " " 2 50 2 00
" tees, " " 2 80 2 30
" plates, " " 2 55 2 05
Sheared steel bridge plate... 2 30