

CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF PUBLIC WORKS, TENDERS, ADVANCE INFORMATION AND MUNICIPAL PROGRESS

EVERY

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. 13.

FEBRUARY 5, 1902

No. 1

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY WEDNESDAY

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WANTED - A FIRST-CLASS ARCHITECTURAL Draughtsman; one with experience required. Apply, stating terms, etc., G. M. BAYLY, Architect, Ottawa.



TO CONTRACTORS, ETC.

Tenders for Exhibition Buildings.

Separate tenders addressed to the undersigned will be received through registered post only up to noon on

WEDNESDAY, FEBRUARY 19TH, 1902,

for each of the various works required in the erection and completion of the following buildings on the Toronto Exhibition Grounds

1. New Manufacturers' or Main Building.
2. New Art Gallery

Plans and specifications can be seen and all information obtained, for No. 1, at the office of Gosnlock & Baker, Architects, Temple Building, Bay Street, for No. 2, at the office of Beaumont Jarvis, Architect, McKinnon Building, Melinda Street, on and after Thursday, February 6th, 1902.

Tenders must be accompanied by a marked cheque, payable to the order of the City of Toronto, or a cash deposit equal to five per cent. on tenders up to \$5,000, and two and one-half per cent. on tenders over that amount.

Should any party whose tender is accepted fail to execute the necessary contracts and bonds, and give satisfactory security for the due fulfilment of the contracts, the deposit accompanying the tender will be forfeited to the City.

The lowest or any tender not necessarily accepted. The deposits of unsuccessful tenderers will be returned.

O. A. HOWLAND (Mayor),
Chairman Board of Control.

City Hall, Toronto, January 29th, 1902.

TO CONTRACTORS

Separate or bulk tenders, addressed to the undersigned, will be received up till 6 p. m.

THURSDAY, FEBRUARY 20TH.

for the several trades required in the erection of a Four Storey Brick and Stone Dry Goods Store 62x200 feet, for Joseph Mickleborough, in St. Thomas, Ont.

Plans and specifications may be seen and all information obtained at the office of N. R. Darrach, 51 Thomas. The lowest and any tender necessarily accepted.

NEIL R. DARRACH,
Architect.

MUNICIPAL DEBENTURES FOR SALE

Tenders will be received by the undersigned up to 4 p. m. MONDAY, FEBRUARY 10TH, 1902, for the purchase of \$5,000 Local Improvement Debentures of the Town of Walkerton.

Debentures drawing 4 per cent and to be Walkerston delivery.

No tender necessarily accepted.
W. S. GOULD,
Town Clerk
Walkerton January 22nd, 1902

CONTRACTS OPEN.

MOOSE JAW, N.W.T. - A new town hall will be erected here.

ST. MARTINS, N.B. - A movement is under way to build a breakwater here.

QUEENSBORO, ONT. - Walter Gray purposes building a new residence.

MITCHELL, ONT. - Arthur Mutton purposes building a brick residence this spring.

PERTH, ONT. - A by-law has been passed in council to issue about \$17,000 debentures.

HINTONBURG, ONT. - James Lunny & Co. may build a new sawmill next summer.

FORT VERMILLION, N.W.T. - The Hudson Bay Company will erect a flour mill here.

ARNPRIOR, ONT. - The English speaking Baptists purpose building a new church this year.

NILE, ONT. - R. McIlwain is asking for tenders up to 24th inst. for erection of brick school house.

PORT CARLING, ONT. - H. Martin will receive tenders up to March 15th for addition to public school.

HOLSTEIN, ONT. - Colin McKinnon wants tenders for stone work, brick work and plastering of a residence.

CARTHAGE, ONT. - Tenders close 15th inst. for erection of brick school; W. E. Binning, Listowel, architect.

SHAWVILLE, QUE. - James D. McCann, of Perth, purposes erecting a butter and cheese factory in this vicinity.

WINCHESTER, ONT. - Tenders are asked by N. W. Beach up to February 15th for completion of the town hall.

RIVERVIEW, ONT. - Thomas Donkin, of this place, is asking for tenders up to 20th inst. for building brick school house.

BRADFORD, ONT. - The Methodist congregation will make extensive alterations to the interior of their church.

BERLIN, ONT. - M. C. Cressman, secretary building committee, invites tenders up to 15th inst. for erection of church.

BAYFIELD, ONT. - Tenders are asked by James Donaldson up to 15th inst. for erection of brick Presbyterian church, from plans prepared by J. A. Fowler, architect, of Godench.

SAULT STE. MARIE SEWAGE WORKS

SECTION "C"

Sealed tenders, addressed to W. J. Thompson, Esq., Mayor, and endorsed "Tender for Outlets," will be received until 6 p. m. on

Monday, February 17th, 1902,

for Laying Six Cast-Iron Submerged Sewer Outlets, total length, 2,570 feet.

Plans, profiles, specifications, etc. may be seen at the Engineer's office, 103 Bay Street, Toronto, or at the Town Hall, Sault Ste. Marie, Ontario.

No tender necessarily accepted.
W. J. THOMPSON
Mayor.
WILLIS CHIPMAN,
Chief Engineer.

City of Winnipeg

Tenders for the Supply of 1200 Tons of Asphalt.

Sealed tenders, addressed to the Chairman of the Committee on Works, for the supply of 1,200 tons of asphalt for street paving for the City of Winnipeg, will be received at the office of the undersigned up to 3.30 p. m. on Thursday, Feb. 7, 1902.

Specifications and forms of tenders may be obtained upon application at the office of Col. H. N. Ruttan, City Engineer, Winnipeg.

Each tender must be accompanied by an accepted cheque or cash deposit for the sum called for in the form of tender supplied, which will be subject to forfeiture in case of failure on the part of the contractor to enter into a written contract if called upon to do so. If an accepted cheque is submitted it must be payable at par in Winnipeg, or be for an amount sufficient to cover a change over the sum called for in the form of tender supplied.

The City reserves the right to reject any or all tenders or to accept any bid which appears advantageous to the City of Winnipeg.

C. J. BROWN,
City Clerk.
City Clerk's Office,
Winnipeg, Jan. 25, 1902.

GRANTON, ONT.—Mr. Barber, architect, of Stratford, is preparing plans for new Presbyterian church to be built here.

RAT PORTAGE, ONT.—It is understood that the C.P.R. is again considering the building of a large summer hotel here.

WOLFVILLE, N.S.—A new telephone company has been formed here, of which R. E. Harris is president and Mr. DeWitt, secretary.

FORT WILLIAM, ONT.—E. J. Rochon will build an addition to the Avenue Hotel, and a brick block will be built by A. Berthaume.

SYDNEY, N.S.—The members of the C. M. B. A. have decided to consider the proposals of the Catholic Club for erection of joint club building.

SHAWINIGAN FALLS, QUE.—The Pittsburg Reduction Co. will largely increase its plant here and will go into the manufacture of wires and cables.

SANDWICH, ONT.—Mayor Gardot states that he has already received the assurance of \$400,000 towards the proposed beet sugar factory in this town.

CORNWALL, ONT.—The county council has decided to engage an expert to prepare plans for the electric street lighting of the town preparatory to calling for tenders.

FREDERICTON, N. B.—The Provincial Public Works Department is asking for tenders up to the 17th inst. for construction of wharf at Falmer's Landing, Kings county.

REDICKVILLE, ONT.—Tenders are asked by John S. Allen, commissioner for Dufferin County, up to February 25th, for the erection of a bridge over the Grand river in Proton.

SAULT STE. MARIE, ONT.—The Sault Ste. Marie Bridge Co. has been incorporated, with the object of building an international bridge across the St. Mary's river at this place.—A movement is on foot to form a company to build a new theatre.

COLLINGWOOD, ONT.—J. J. Long recently interviewed the Minister of Public Works concerning the amount that the Government would contribute towards the establishment of a dry dock here.—The site for the proposed library has been finally approved of.

SMITHS FALLS, ONT.—Messrs. C. B. and F. T. Frost have donated the sum of \$10,000 towards the maintenance of a public library. This will enable the council to take advantage of the offer of Mr. Carnegie to give \$10,000 for the erection of a building.

WHITBY, ONT.—The Board of Trade has taken steps towards establishing a beet sugar factory here. It is proposed to form a company with a capital of \$500,000. Particulars may be obtained from Secretary Annes, of the Board of Trade.

OWEN SOUND, ONT.—The House of Refuge Committee of the county council has been instructed to report details of the proposed building at the June session.—J. C. Forster is asking for tenders up to 7th inst. for erection of frame hotel at Balmy Beach.

QUEBEC, QUE.—Captain Wolvin, of Duluth, is in this city in connection with the building of proposed grain elevator. It is said that the expenditure will be about \$1,300,000. Ten steel barges, of a capacity of 2,000 tons each, will be built.

STRATFORD, ONT.—Frank Rustin, jr., has purchased a lot on Ontario street on which he will build a two storey red brick residence, to cost \$2,500. William McCully has purchased property on Ontario street on which he will build a residence.

PICTON, ONT.—The Central Ontario Railway have had plans prepared for new station, freight sheds, cement walks, etc., at this place. The station will be one and one-half storeys, of pressed brick, with stone trimmings.

LINDSAY, ONT.—The Roads and Bridges Committee of the county council will look after the building of a bridge over the Grass river, on the Victoria road, and of a bridge south of the village of Norland.

HAMILTON, ONT.—The special Good Roads Committee of the county council has recommended that \$100,000 be spent in improving the roads.—Mr. Mills, architect, has prepared plans for rebuilding E. Brompton's departmental store in Brantford.

PETERBOROUGH, ONT.—An application is about to be made to the Ontario Legislature for the incorporation of the Peterborough Radial Railway Company, to build an electric railway from Peterborough to Ashburnham, Lakefield, and through the township of Utonabee to Rice Lake.

ORILLIA, ONT.—The Orillia Export Lumber Company have decided to build a box factory.—The Canada Wood Specialty Co. will install a new 125 h.p. boiler.—The vestry of St. James church have decided to proceed with the building of a new Sunday School and the installation of a new organ; cost, \$6,000.

PORT ARTHUR, ONT.—Isaac Erikela states that he will build a large addition to the Windsor Hotel.—It is the intention of H. Reid to build this spring on VanNorman street.—The Separate School trustees have decided to erect a brick and stone school building this year, eight rooms, cost \$10,000.—G. P. Nicholas Clavet states that he will build a two storey brick block this spring, to be fitted up for stores and offices.

BROCKVILLE, ONT.—At the session of the Leeds and Grenville counties council last week, the question of constructing roads was given much consideration, although no definite scheme was decided upon. The council proposes raising \$75,000 by debentures for this work, which, with the Government grant amounting to \$36,000, will provide a total sum of \$111,000.—W. H. Wood has purchased 20 acres of land on which to start a brick yard. He will put in an up-to-date plant.

WINNIPEG, MAN.—On behalf of the corporation, C. J. Brown, city clerk, is asking for tenders up to 6th inst. for supply of 4,500 feet of sewer pipe and a quantity of bends and junctions.—Tenders will be invited by the city for the following works: A-pavement on Princess street, from Notre Dame avenue to Bannatyne avenue, cost \$8,081; macadam pavement on Spadina avenue, from Osborne street to Wellington Crescent, cost \$3,877, and on Lorne street, from Austin street to Beaconsfield street, cost \$1,782.

BELLEVILLE, ONT.—Alford & Lewis, who recently purchased the street railway, have applied to the county council for a franchise for an electric road connecting Shannonville, Belleville and Trenton.—Mr. Thos. Hanley, architect, has prepared plans for new Roman Catholic churches to be built of local stone at Merrickville, Lanark and Warkworth. He has also prepared plans for remodeling the Presbyterian church at Campbellford.

VANCOUVER, B. C.—The Provincial Government is taking tenders for cleaning site for proposed reformatory, and it is expected that money will be provided for the erection of the building at the forthcoming session of the legislature.—During the coming summer the Canadian Pacific Railway will spend

upwards of \$250,000 on betterments to its lines in West Kootenay and South Yale, including the construction of a steel bridge over the Kootenay river and numerous small bridges and sidings in the Slokan and Boundary districts.—Ship yards for hauling out vessels for repairs will be built at Nelson.

LONDON, ONT.—Moore & Henry, architects, are calling for tenders for two residences for Joseph and Thomas Molan.—Herbert Mathews, architect, is taking tenders on a residence for L. Jeffrey.—A committee of the county council has been appointed to award the contract for the Muncey bridge.—Debentures to the amount of \$24,000 will be issued by the county council.—Geo. Craddock, architect, is calling for tenders for a storey and a half residence to be erected on York street for Thomas Mungall.

TORONTO JUNCTION, ONT.—A site will be selected immediately for new post office to be built here. Last year's estimates contained an appropriation of \$5,000 for a site, and it is likely that a vote to cover the cost of erection will be made at the coming session of parliament.—The chairman of the Board of Works has recommended the laying of granolithic walks on several streets.—It is the purpose of the Comfort Soap Company to build a three storey addition to factory, to be 140 x 70 feet.

MONTREAL, QUE.—David Brown, architect, has prepared plans for a large departmental store to be built in North Sydney, N. S., by Vooght Bros., to be four storeys, brick and stone.—The contract for steel bridge to be built over the Becancour river for the South Shore Railway will be let this week. It will be a steel structure of four spans of 130 feet in length. The engineers of the company are preparing plans for other bridges on the road between Sorel and Levis.—The Harbor Commissioners are asking for tenders up to 14th inst. for annual supply of castings, iron pipes, bolts, oils, paints, rope and cotton waste.

ST. JOHN, N. B.—The waterworks superintendent has submitted a report to council on necessary improvements. It is proposed to raise the dam of the Little River reservoir, to enlarge the pond at the pumping station, and to take water from Donaldson lake. The total cost is placed at \$33,500.—Murray & Cegory have applied to the city council for a lease of the islands above the falls.—They state that it is their intention to develop the power for electrical purposes. The city council are considering the question of building a bridge across the harbor. The cost would be about \$500,000, and would be borne by the C. P. R., the St. John Street Railway Co., and the city.—The city will likely invite tenders immediately for the construction of a new wharf on the McLeod lot. Separate tenders may be taken for the supply of 2,500 tons of timber for the work.

OTTAWA, ONT.—Should the Canada Atlantic Railway be acquired by the New York Central Railroad, it is understood that the purchasers will build a passenger station at the canal basin in this city and grain elevators at Sorel, Que., and Depot Harbor, Ont., as well as retracting and rebridging the track throughout.—Fred. Gelinus, secretary Department of Public Works, invites tenders up to Tuesday, February 25th, for the construction of armouries at Revelstoke, Kaslo, Kamloops and Nelson. Plans for Revelstoke and Kaslo on application to the postmasters at those places; for Nelson, at the office of J. A. MacDonald, architect, Nelson; and for Kamloops at the office of A. Thompson, clerk of works, Kamloops.—At a meeting

of the waterworks committee last week the city engineer submitted a report on the improvements needed this year. He recommends that repairs be made to the old pump house, cost \$6,620, that water mains be laid on O'Connor, Waverly, Patterson, Archibald, Norman and other streets, and that meters be placed on all services where there is a large consumption of water. For main extensions \$10,000 is asked, for rebuilding of cribs \$1,000, for meters \$4,000. — The Board of Management of Bill street Methodist church have decided to erect a new parsonage, at a cost of \$3,000. — The city engineer will be asked to furnish an estimate of the cost of widening the overhead bridge at Somerset street. — The ratepayers of Rochesterville will present a petition to the Minister of Railways and Canals asking that a bridge be constructed across the canal at Concession street. — The Dominion Government has been asked to furnish additions to the equipment of the Ottawa Fire Department, in view of the protection furnished the government buildings. A fire engine, water tower, combination chemical engine and hose wagon and hose tower are specified. — The finance committee of the city council has endorsed the proposal for the establishment in Ottawa of an annual show of live stock, involving the erection of a building to cost \$20,000. — It is proposed to erect a two storey building adjoining the police station for the accommodation of juvenile offenders; estimated cost, \$4,850. — There is a proposition before the council to remove the scoria blocks on the approaches to Defferin and Sappers bridges and to replace them with sandstone. The cost would be about \$2,500.

TORONTO, ONT.—Tenders are invited by the city up to Wednesday, 10th inst., for erection of new Main Building and new Art Gallery on the Toronto Exhibition Grounds. Plans of the Main Building at office of Gouinlock and Baker, architects, Temple Building, and those of Art Gallery at office of Beaumont Jarvis, architect, McKinnon Building.—The Women's Canadian Historical Society has started a movement to erect a memorial hall to Queen Victoria.—The management of the Public School Board have recommended that Huron street school be enlarged by three rooms, Kew Beach school by two rooms, and that a sum be placed in the estimates to finish an additional room in Withrow avenue and Essex street schools.—The City Commissioner has submitted to the property committee a plan for alterations to the Berkeley street fire hall, to cost \$2,500.—A committee was appointed to select a site on the island for the summer home for poor children which a Toronto gentleman has consented to erect, at a cost of \$20,000.—In his annual report, Judge McDougall, chairman of the Public Library Board, states that the accommodation at the Central Library is inadequate, and suggests that the city council should take steps at once to erect a suitable building.—Chief Thompson, of the Fire Brigade, has recommended the erection of two new fire halls, one on Cowan avenue, and the other in the vicinity of York and Wellington streets.—Building permits have been granted as follows: Gough Bros., alterations to stores, 6 to 8 Queen street west, cost \$1,500; Joseph Wilby, pair two storey semi-detached, brick and roughcast dwellings, 65 and 67, Woodbine avenue, cost \$2,000; Hugh Munro, two-storey

and attic brick dwelling, south side South Drive, near Sherbourne street, cost \$4,500 (E. J. Lennox, architect; A. McCord, builder); M. Causland Stained Glass Company, alterations to factory, 86 Wellington street west, cost \$1,500; S. McAllister, alterations to dwelling, 213 Huron street, cost \$1,400 (H. Simpson, architect, James Donovan, builder).—The City Engineer, in his report to the Board of Works last week, submitted a plan for an overhead bridge at the foot of Yonge street, which he estimates would cost \$195,000. He also recommended the construction of the following works. Reconstruction of asphalt pavement on Bay street, from King to Front, cost \$7,430. Asphalt pavements—Maynard avenue, from King to Leopold street, \$3,525; Sackville street, Carlton to Winchester, \$4,060. Macadam roadway—Wellesley avenue, from Wellesley street to point 249 north, \$535; Logan avenue, Queen to G. T. R. tracks, \$8,685; O'Hara avenue, 150 feet north, from a point 653 feet north of Marion street, \$530. Tar macadam—Albany avenue, Wells street to Dupont street, \$5,270. Sewers—Sheridan avenue, Moutray street to point 106 feet south, \$390; Sheridan avenue, College street to Monray street, \$380. Water mains—Bedford road, Davenport to point 318 feet north, \$318. Concrete sidewalks—E. in street, south

side, Yonge to Terauley, \$657; O'Hara avenue, east side, Queen to Maple Grove avenue, \$578; Harbord street, north side, Broadview avenue to Howland road, \$1,145; Sussex avenue, south side, Spadina avenue to Robert street, \$337; Wellesley avenue, from Wellesley Avenue to point 249 feet north; Victor avenue, north side, Broadview avenue to Logan, \$1,570.—The estimates of the City Engineer for the current year were submitted to the Works Committee last week. The sum of \$1,367,838 is asked for, including the following items: New 15,000-gallon pumping engine for main station, \$150,000; new boilers, \$50,000; engine for high level station, \$40,000; concreting Rosedale reservoir, \$30,000; 6 feet steel water pipe from shore crib to island basin, \$87,500; 6 feet steel pipe from island basin to tunnel shaft, \$96,250; 36-inch main on Bathurst street, Dupont and Yonge streets, from College street to Rosedale reservoir, \$162,053; waste prevention, \$10,000; extension of Jarvis street sewer, \$5,000; Berkeley street sewer, \$6,000; Manchester avenue sewer, \$6,500; track allowance reconstruction, \$10,000; new bridge, Crawford street, \$25,000; new bridge at Keating's Channel, \$15,000; paving Esplanade street, granite sets, \$96,000; paving Esplanade street, asphalt, \$43,000; draining walls and renewing sidewalks,

Good Roads Machinery Co. (Limited.)

JOHN CHALLEN, Manager, HAMILTON, ONT.

"CHAMPION" Rock Crushers, Road Rollers, Road Graders, Road Plows, Macadam Spreading Wagons, Street Mud Cleaners, Wheel & Drag Scrapers.

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Portland Cements

Highest Grade

American, German, English and Belgian

DRAIN PIPES and Connections of all kinds.
PAVING BRICKS, ENAMELLED BRICKS,
FIRE BRICKS, FIRE CLAY, Etc., Etc. * *

F. HYDE & CO.,

31 Wellington Street

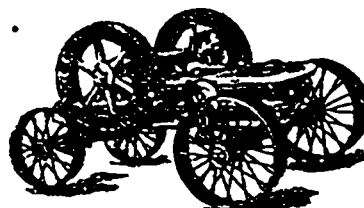
MONTREAL

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TORONTO, ONT.

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Trolley Pole Brackets; Electric Light Arms; Prison and Jail Cells; Fire Escapes
Automatic Fire Shutters and Doors; Iron Sidewalk Doors, Etc.

We stock Bar Iron, Bar Steel, Steel Angles, Channels, Etc.



STONE CRUSHERS, Stone Spreading Wagons, Wheelers and Drag Scrapers, Plows, Steam and Horse Rollers, Road Graders, & C. CATALOGUE ON APPLICATION

SAWYER & MASSEY COMPANY, Limited - Hamilton, Canada

MUNICIPAL DEBENTURES BOUGHT

EMILIUS JARVIS & CO. (Toronto Stock Exchange) 19-21 King St. West, TORONTO, Ont.

King street subway, \$3,500; northern stables, \$5,000; storm overflow at Queen and Roncesvalles to lake, \$4,100; 24-inch main, Front street east, from Church to George street, \$9,234.—The establishment of cement and plaster works on Armour street, near the King street subway, is proposed by the Wood Fibre Plaster Company. The fire by-law calls for solid brick buildings in this vicinity, but the council has been asked to allow the use of cement in the construction of the works, which will cost about \$40,000.

FIRES.

The Guardian Fire & Life Assurance Co.'s building on St. James street, Montreal, totally destroyed on January 29th; loss \$50,000.—Residence of G. H. McDonnell at Carman, Man.—Hotel at St. Philippe, near Lachute, Que., owned by Mr. Leclair; loss \$10,000.—Premises of J. L. Hamilton & Sons, wholesale milliners, 8 Wellington street west, Toronto, gutted by fire last week. Building is owned by the Christopher Robinson Estate.—Residence of J. Boyd McNeil, Registrar of Deeds, Weymouth, N.S.; no insurance.—Bedstead and spring factory of George Gale & Sons, Waterville, Que., completely destroyed; loss \$60,000, largely covered by insurance.—Residence of Mrs. William Barnhill at Fairville, N.B.; loss \$3,000.—Skating rink at Keewatin, Ont.; insurance \$1,500.

CONTRACTS AWARDED.

VICTORIA, B.C.—The tender of A. Sheret has been accepted for heating the new high school; price \$4,355.

AMHERSTBURG, ONT.—The Pedlar Metal Roofing Co., of Oshawa, are furnishing the metal ceiling and wainscoting for the new town hall here.

SARNIA, ONT.—Purser & Boulger have secured the contract for remodelling the Clark residence, corner George and Euphemia streets. Robert Ross will do the plumbing and heating.

TORONTO, ONT.—Furdy, Mansell & Co. have secured the contracts for plumbing and hot water heating of a residence on Glen road and two residences on Madison avenue for C. A.

Dinnick; also for the automatic fire equipment for the Massey Harris Co.

BEAMSVILLE, ONT.—The Beamsville Brick & Terra Cotta Co. have been awarded the contract for supplying the facing brick for the Metropolitan Life Insurance Co.'s new office building in Quebec city.

MOUNT FOREST, ONT.—George Scott, jr., has secured contract for brick residence for George L. Ryan. Sub-contracts have been let as follows: Masonry, Patton & Son; painting, S. E. Drummond.

PARIS, ONT.—The tender of G. A. Stimson & Co., of Toronto, has been accepted for purchase of debentures, at the price of \$6,921.25. Other tenderers: Amelius Jarvis & Co., Toronto, \$6,750;

W. H. Brouse, Toronto, \$6,920; William C. Brent, Toronto, \$6,934; Dominion Securities Co., Toronto, \$6,921.25; Canada Life Insurance Co., \$6,925; Joseph Parker, Boston, \$6,860.

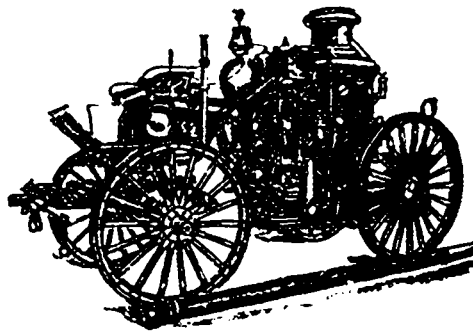
MONTREAL, QUE.—The Montreal Bridge Co. is announced to have awarded to the Atlas Construction Company, of New York, the contract for the construction of the proposed bridge across the St. Lawrence river from Montreal to Longueuil. The estimated cost of the bridge is \$10,000,000. The length is to be 8,800 feet. The main span, a cantilever, will be 1,360 feet long. It is estimated that the weight of steel in the structure will be 74,000,000 pounds, and there will be 90,000 cubic yards of masonry.

JOSSON CEMENT ..Manufactured at NIEL ON RUPELL

Is the Highest Grade Artificial Portland Cement and the Best for High Class Work. Has been used largely for Government and Municipal Works.

TO BE HAD FROM ALL CANADIAN DEALERS

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FIRE ENGINES in five sizes, with a full line of fire-fighting goods.

We Rebuild other makes of Fire Engines with our patent Boiler.

BRANTFORD PITTS DOUBLE ENGINE STEAM ROAD ROLLER

IN THREE SIZES—10, 12 and 15 ton.

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WATEROUS, Brantford, Canada.

Hugh Cameron & Co., Selling Agents, 13 East Queen Street, Toronto

The Canadian Bridge Co., Limited

WALKERVILLE, ONT.

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BEST ENGLISH MAKE—VERY LITTLE USED.

206 tons 56 lbs. Steel Relaying rails } Including Plates
2300 " 60 " " " " } and New Bolts.

SUBJECT TO INSPECTION. DELIVERY F.O.B. MONTREAL.

ASK FOR SAMPLE SECTION OF RAILS.

L. H. GAUDRY, 101 St. John St., Quebec

CANADIAN SOCIETY OF CIVIL ENGINEERS.

The sixteenth annual meeting of the Canadian Society of Civil Engineers opened in the rooms of the Society in Montreal on January 17th, Mr. E. H. Keating, Toronto, presiding. Among those present at the meeting were:

Jas. C. Kennedy, Owen Sound, O. Arcand, Three Rivers; W. McLea Walbank, Andre Loignon, Jas. Ewing, R. Bickerdike, jr., Ernest Marceau, R. E. Hunter, L. G. Papineau, Geo. Holland, Henry R. Lordly, J. M. Nelson, J. W. Heckman, J. L. Michaud, P. E. Amiot, J. E. Hardy, D. Macpherson, Prof. Bovey, Dean of the Applied Science Faculty, McGill University, and Jno. Kennedy, Chief Harbour Engineer, Montreal; Willis Clipman, Frederic L. Gagnon, Toronto; C. B. Smith, Niagara Falls, Ont.; W. G. Matheson, New Glasgow, N.S.; C. H. Pinkey, R. Sterkel, Ottawa; Jno. Irvine, Harriston; C. E. W. Dodwell, Halifax; W. C. Traffer, St. Johns, Que.; O. C. Macpherson, Cape Town, South Africa; Alex. S. Grant, Coteau Landing.

The first business was the submission of the report of the Council by the secretary, Prof. McLeod. It showed that there had been elected to membership ten members, fifteen associate members, three associates, and eighteen students, a total of forty-six. Resignations had been received from two members, one associate member, and one associate. There had been struck off the roll for non-payment of dues seven members, eleven associate members, one associated and twenty-five students, in all forty-four. Four students had been removed from the roll. During the year the society suffered the loss of seven members by death; E. J. Duckesney, H. C. Symmes, A. B. Tower, John Hyslop, A. L. Husband, J. Isbester and B. B. Osler. The membership of the Society was at present 892, as compared with 900 a year ago. Fifteen ordinary meetings had been held during the year, at which papers on interesting engineering subjects were read. The addition to the building fund during the twelve months amounted to \$379.

It was stated that the resolution proposed at the last annual meeting asking for special railway privileges for members was

not favorably entertained by the railway officials.

The report of the treasurer showed the general receipts for the year to have been \$5,788, while the expenditure was \$4,846.52, leaving a total balance on hand of \$941.48.

The reports of the secretary and treasurer were adopted.

Mr. J. G. Kerry called attention to the lack of interest manifested in the Society by engineering students. Mr. Duggan suggested that the word "civil" be dropped from the Society's name, so as to put an end to confusion in students' minds which kept the mining, electrical and mechanical students out of the Society. Mr. Irwin pointed out that if the organization was simply called the Canadian Society of Engineers, it would be confused with locomotives and machinists. After further discussion the general subject of interesting students in the Society was referred to the council, with power to act; and, on the motion of Mr. Kerry, it was decided that committees should be appointed to prepare and submit to the meeting reports on matters of interest in connection with engineering.

From 4.30 to 6 o'clock luncheon was partaken of in the rooms of the Society, to which a large number of friends were invited.

The evening session, at which the room was filled, was occupied with the delivery of an interesting lecture by Mr. Wallace C. Johnson, on the Shawinigan water and power development. Mr. Johnson explained that the falls were located about midway between Montreal and Quebec, and about seventeen miles north of the St. Lawrence, and said that the natural beauty of the falls had not been interfered with by the work that had been done in developing the water power. The drop of the falls was about 150 feet, and the water was that of the St. Maurice River, the third in size of the tributaries of the St. Lawrence. The volume of water was 20,000 cubic feet a second, capable of yielding an effective power equal to 200,000 horse power. When the lecturer first visited Shawinigan Falls, with a view to outlining a plan of development in the summer of 1898, there were no waggons

roads and no railroads, and no actual work was done until May, 1899, so that all the improvements that had taken place were the result of about two and a half years' work. A number of views were exhibited, showing improvements at various stages of their construction, and some interesting

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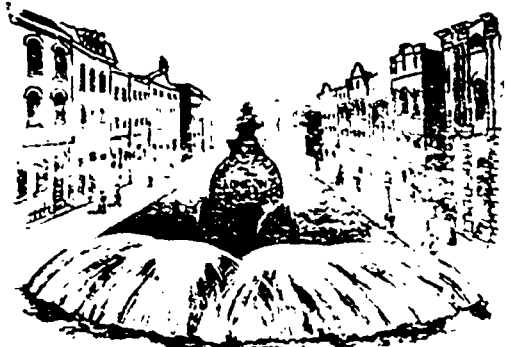
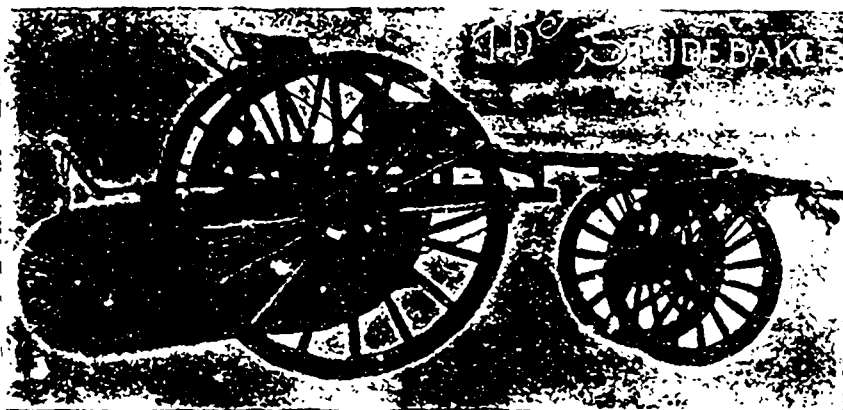
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Details were given in connection with the same.

The first item on the programme of the second day was a visit to Shawinigan Falls. Over two hundred members took a special train provided by the Canadian Pacific Railway to St. Jerome, where they were transferred to the Great Northern and taken to Shawinigan. They were received by Mr. Wallace Johnson and the manager and secretary of the Shawinigan Water & Power Company. After being entertained at luncheon they were shown over the magnificent works for the development of the water power, arriving in Montreal on the return trip at 8 p.m.

A dinner was held at the Place Viger Hotel in the evening. Mr. E. H. Keating presided. Among the guests were Mr. Sitwell, president of the Boston Society of Civil Engineers, Mr. Blackmore, representing the Mining Institute of Canada; Mr. Venne, president of the Quebec Association of Architects; and Mr. Gastonguay, of the Bridge and Land Surveyors of the Province of Quebec. The above named gentleman and Dr. Martin Murphy, president-elect of the society, were the principal speakers. There were present a large number of representative engineers, and the function proved a pleasing one.

The officers elected for the ensuing year are as follows: President, Martin Murphy; vice-presidents, G. H. Duggan, W. P. Anderson and E. Marceau; treasurer, H. Irwin; secretary, Prof. C. H. McLeod, librarian, E. E. R. Roberts; members of council, H. H. Ruttan, W. B. McKenzie, K. W. Blockhouse, John Kennedy, J. M. McCarthy, W. G. Matheson, R. B. Rogers, W. R. Butler, E. O. Johnston, E. A. Hoare, W. Chipman, and C. P. Baillairge.

Mr. Keating read the report of the Legislation Committee, which has been trying to obtain for the society close incorporation in Ontario, as in Quebec. The bill submitted to the Legislature provides that no one may practise engineering in the province except members of the Society of Civil Engineers or various other bodies. It is hoped that this will pass this season.

The president was empowered to appoint a committee to consider the effect on legislation of dropping the word "civil" from the title of the society, or otherwise changing the name. It is desired to make the name include all mechanical, electrical, and mining engineers, as the constitution does.

BUSINESS NOTES.

The dissolution is announced of C. D. Allusi & Cie, plaster ornaments, Montreal.

The Sleeper Engine Company, Montreal, capital \$250,000, is seeking incorporation.

Joseph Bourque, contractor for section 3 of the Ottawa main drain, has submitted a claim for nearly \$70,000 for extras for rock cutting and other work not provided for in the contract.

The Strathy Wire Fence Company, Owen Sound, Ont., last week elected the following officers: President, E. H. Horsey, M. P.; vice-president, R. T. Butchart; secretary-treasurer, R. L. F. Strathy.

The Peterborough Peat Company, capital \$150,000, has been incorporated, with head office in Toronto. The Lake Superior Lumber Company, capital \$50,000, head office Windsor, Ont., has also been incorporated.

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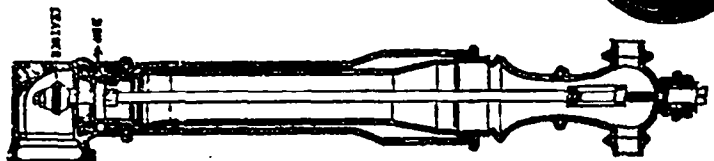
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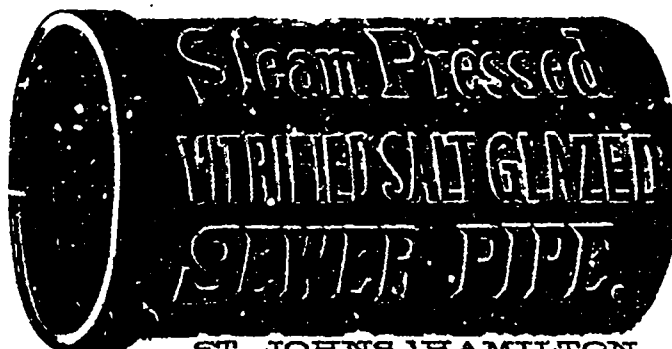
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ENGLISH PRACTICE IN THE MANUFACTURE OF CAST-IRON PIPES.*

By STEPHEN H. TERRY, M.I.C.E.

The patterns are drawn out vertically by cranes. Special care is taken in selecting good binding sand, which is all worked up with edge runners, and is of an orange-red colour. For some purposes a certain proportion of clay is ground up with the sand, and for loam moulds a further mixture of horse dung and a larger proportion of clay is added. The loam cores are built upon rigid hollow iron core bars, which in the larger sizes are of the collapsible type to admit of their removal after metal has set and is cooling, and by shrinkage, compressing the core. The use of organic material, such as horse dung, for cores is for the purpose of providing a somewhat compressible medium whilst cooling and shrinkage are taking place, the vegetable fibre in the dung, too, being largely consumed by the heat of the core ovens, which are heated by producer gas, and by the subsequent heat of the molten metal. Large volumes of gas are then given off, and escape through the vents provided in the mould, leaving in place of the fibre a porous ash of carbon and silicon. The pipe moulds are all grouped concentrically in pits round suitable radial cranes, and in Messrs. Cochrane and Co.'s works some 12 cupolas are in constant use, and melt from 150 to 200 tons of iron per day. Pipes of all sizes are cast with a considerable head of metal, which is afterwards cut off, it serving the double purpose of providing a space in which any impurities in the molten iron may accumulate, and of exerting a suitable pressure, thus causing the iron to fully feed and fill the mould during preliminary cooling.

At the Woodside Works all pipes are carefully tested by hydraulic pressure, various tests being specified and employed, ranging from 300 lb. per inch upwards, according to the pressure for which the pipes are required. There are a number of pipe-testing machines on the premises, so situated that the pipes pass them on their way to the barge wharf, before reaching which they are (if proved satisfactory) heated and dipped in Dr. Angus Smith's composition, which consists of a mixture of gas tar and pitch. The largest testing machine will take 48 in. pipes of standard length, and by the use of ingenious hydraulically moved caps the operation of centering a pipe weighing six tons, filling it with water, putting on the pressure, emptying and passing it into the roller path, does not take more than 10 minutes per pipe. The whole of the hydraulic plant (except pumps and accumulators) in use at Woodside was designed by Mr. Brooks, the works foreman, and constructed in the works. An intensifier situated near the large pipe-testing

machine will give any pressure up to 1,200 lb. per inch. On the occasion of the author's visit, large numbers of 42 in. pipes were being cast for the Birmingham Waterworks; these are $1\frac{1}{4}$ in. thick, and have steel hoops shrunk on at the socket end. The iron used for pipe-founding is subjected to the following tests: Several bars are cast from each run of pig, and then machined and emery ground to the following dimensions—viz., 3 ft. 6 in. long by 2 in. deep and 1 in. thick, each bar weighing about 21 lb. These are tested in a "Kennedy" bar tester with knife-edged supports 3 ft. apart, upon which the bar is placed with the depth vertical. The load is applied gradually by means of a weight drawn by cords along a scale beam, when a load of from 28 cwt. to 30 cwt. is frequently attained before fracture occurs, the deflection reaching $\frac{3}{75}$ in. shortly before fracture. The test for tensile strength is by means of a bar 1 ft. long, cast with shoulders formed so as to drop into clamps; the bar for a length of about 6 in. is turned down to $1\frac{1}{4}$ in. diameter, and the pressure is gradually applied until a load of seven, and sometimes eight, tons is reached, and must remain on for 24 hours without causing fracture. In a test carried out in the presence of the author, fracture actually occurred with a load of $11\frac{1}{4}$ tons.

A table of the standard sizes, thicknesses, and weights of cast-iron waterpipes adopted by Messrs. Cochrane & Co. is appended.

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Diameter. Inches.	Thickness. Inches.	Length. Feet.	Weight. Cwt. qr. lb.
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$2\frac{1}{2}$	$\frac{1}{4}$	6	0 2 14
3	$\frac{1}{4}$	9	1 0 14
4	$\frac{1}{4}$	9	1 2 0
5	$\frac{1}{4}$	9	2 0 0
6	$\frac{1}{4}$	9	2 2 0
8	$\frac{1}{4}$	9	3 3 0
9	$\frac{1}{4}$	9	4 3 0
10	$\frac{1}{4}$	9	5 3 14
12	$\frac{1}{4}$	12	9 0 0
14	$\frac{1}{4}$	12	10 1 0
15	$\frac{1}{4}$	12	12 3 0
16	$\frac{1}{4}$	12	13 3 0
20	$\frac{1}{4}$	12	21 0 0
24	$\frac{1}{4}$	12	25 0 0
30	$\frac{1}{4}$	12	35 0 0
36	$\frac{1}{4}$	12	43 0 0
42	$\frac{1}{4}$	12	50 2 0

Messrs. Cochrane and Co. do not recommend a less thickness than from $1\frac{1}{4}$ in. to $1\frac{1}{2}$ in. for pipes of 42 in. and upwards in diameter.

The Farmers' Electric Water & Telephone Company has been incorporated at Cardston, N. W. T.

Mr. G. H. Richardson has received the appointment of assistant city engineer of Ottawa, to succeed the late Mr. Cranston.

Mr. G. H. Duggan, chief engineer of Dominion Bridge Company, Montreal, has been appointed consulting engineer for the Dominion Iron & Steel Company, of Sydney, N. S.

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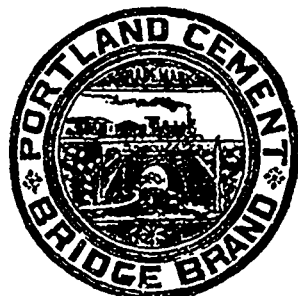
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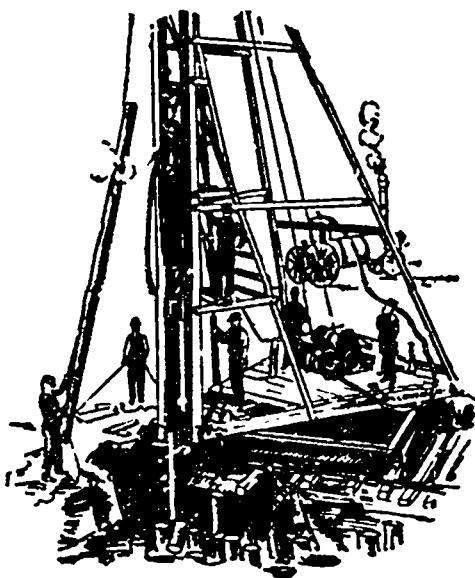
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Table listing various brick types (No. 1, 2, 3, Buff No., Roman Red, Brown, Hard Building, Sewers, Backing) and their prices.

TORONTO PREPRESSED BRICK AND TERRA COTTA WORKS

Table listing brick and terra cotta products (Red No., Buff No., Roman Red, Brown, Hard Building, Sewers, Backing, Terra Cotta) and their prices.

BEANSVILLE BRICK AND TERRA COTTA CO.

Table listing brick products (Red Pearlstone Facing, Buff No., Roman Red, Brown Pearlstone Facing) and their prices.

Large index table listing various construction categories: Architects, Contractors' Plant and Machinery, Cement, Cordage, Masonry, Roofing Materials, Sash Cord, Stained and Decorative Glass, Builders' Supplies, Bridges, Folding Partitions, Grilles and Railings, Heating, Interior Decoration, Landscaping Architecture, Lime, Legal, Mantles, Grates, and Tiles, Mail Chutes, Mouldings, Mortar Colors and Shingle Stains, Ornamental Iron Work, Paints and Varnishes, Plate Glass, Plumbers, Roofers, Slate, Cement, Lime, and Co., Stone, and Architectural Varnishes.