

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Covers damaged/
Couverture endommagée

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Cover title missing/
Le titre de couverture manque

Coloured maps/
Cartes géographiques en couleur

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Bound with other material/
Relié avec d'autres documents

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Coloured pages/
Pages de couleur

Pages damaged/
Pages endommagées

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Pages detached/
Pages détachées

Showthrough/
Transparence

Quality of print varies/
Qualité inégale de l'impression

Continuous pagination/
Pagination continue

Includes index(es)/
Comprend un (des) index

Title on header taken from: /
Le titre de l'en-tête provient:

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Générique (périodiques) de la livraison

Additional comments: /
Commentaires supplémentaires:

SOME PAGES ARE CUT OFF.

This item is filmed at the reduction ratio checked below /
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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. 10.

SEPTEMBER 27, 1899

No. 35.

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY WEDNESDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER PUBLISHING COMPANY
of Toronto, Limited,
Publishers,

CONFEDERATION LIFE BUILDING, TORONTO.

Telephone 2362.

Branch Office:

New York Life Insurance Building, Montreal.
Bell Telephone 2199.

Advertising Rates on application.

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



SEALED TENDERS, addressed to the undersigned and enclosed "Tender for Public Building, Woodstock, Ont.," will be received at this office until TUESDAY, 1ST OCTOBER, 1899, for the Erection of a PUBLIC BUILDING at Woodstock, Ont., according to a plan and specification to be seen at the Department of Public Works, Ottawa, and at the office of A. S. Ball, Esq., Barrister, Woodstock, Ont.

Tenders will not be considered unless made on the printed forms supplied, and signed with the actual signatures of the tenderers.

An accepted bank cheque, payable to the order of the Minister of Public Works, equal to ten per cent (10%) of the amount of the tender, must accompany each tender. The cheque will be forfeited if the party decline the contract or fail to complete the work contracted for, and will be returned in case of non-acceptance of tender.

The Department does not bind itself to accept the lowest or any tender.

By Order,

E. F. E. ROY,

Secretary.

Department of Public Works,
Ottawa, Sept. 15th, 1899.

Newspapers inserting this advertisement without authority from the Department will not be paid for it.

TENDERS FOR BROKEN STONE

Sealed tenders will be received by the undersigned up to noon on the

FIRST DAY OF NOVEMBER, 1899,

for the delivery of about Twelve Thousand Tons (2,000 pounds to the ton) of BROKEN STONE for construction of Macadam Pavements, of which said quantity one-third to be broken to pass through a three-inch ring and be rejected by a two-inch ring, one-third to pass through a two-inch ring and be rejected by a one-inch ring, and one-third to pass through a one-inch ring and be rejected by a half-inch ring. Tenders to state a price for the above quantity to be delivered from May 1st to November 1st, 1900, and also for the same quantity each year for one, two or more years thereafter, giving the City the privilege to require the delivery of more or less of the above stated quantity in respect to either of the aforesaid if deemed necessary. Delivery to be made free on board cars or dock in this city. Tenders to be accompanied by a sample of the Stone proposed to be delivered, and to be addressed "Chairman of Public Works," and also marked on envelope "Tender for Broken Stone." Forms of tender may be obtained from the undersigned, and all tenders must be made upon said form. The City will not be bound to accept any tender. It is the intention of the City to expend \$200,000 in ten years in constructing Macadam Pavements.

STEPHEN LUSTED, City Clerk.

Windsor, Ont., Sept. 15th, 1899.

TO CONTRACTORS

Tenders will be received by the undersigned up to 4 p.m. of OCTOBER 2ND, for the Electric Wiring and Combination Fixtures, Seating (Pewing) and Chancel Furniture required at St. George Cathedral, Kingston. Lowest or any tender not necessarily accepted. Plans and specifications may be seen at our office.

POWER & SON, Architects,
Merchants' Bank Building, Kingston.

TENDERS

FOR

SEWERS

Sealed tenders, addressed to the Reeve, Village of Chesley, Ont., will be received up to 6 p.m. FRIDAY, OCTOBER 6TH, for the Construction of PIPE SEWERS on King, Mary and Main Streets in said Village. Total length, 2,950 feet; average depth, 7 1/2 feet. Also some 2,000 feet of 6-inch connections from sewer to street line.

Schedule tender as follows

- Total price for King and Mary Street Sewer.
- Total price for Main Street Sewer
- Price per foot for 6-in. Connections, 6-in., 9-in., 12-in., 1-in Pipes.
- Price per Manhole.

A certified bank cheque, payable to the order of the Treasurer, Village of Chesley, for the sum of 5% of the contract, must accompany each tender, the same to be forfeited if the parties decline the contract or fail in the performance thereof, and will be returned in case of non-acceptance of tender.

Plans and specifications can be seen at the office of the Village Clerk.

Right is retained to reject any or all tenders.

DR. STEWART, Reeve.

R. McDOWALL, Engineer.



NOTICE TO CONTRACTORS

TENDERS FOR SEWER

Tenders will be received, by registered post only, addressed to the Chairman of the Board of Control, City Hall, Toronto, up to noon on WEDNESDAY, OCTOBER 4TH, 1899, for the following work:

12-inch Tile Pipe Sewer, Golden Avenue, from Dundas Street to a point 440 feet north.

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 and after September 25th, 1899.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2 1/2 per cent. on the value of the work tendered for, must accompany 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, Sept. 27, 1899.

CONTRACTS OPEN.

ORO STATION, ONT.—A. W. Bell is preparing to build a residence.

PRESTON, ONT.—Council has purchased site for new market building.

RAESIDE, ONT.—A. B. Gordon, lumberman, is erecting a residence here.

WINCHESTER, ONT.—The council will raise \$5,000 by the issue of debentures.

ROSSBURN, MAN.—The Presbyterian congregation are about to build a manse.

MORDEN, MAN.—McMillan & Lane intend erecting an elevator at Snowflake.

PENBROKE, ONT.—G. Archer wants tenders immediately for erection of brick residence.

FORT COULONGE, QUE.—The erection of new Methodist church is under consideration.

NORMAN, ONT.—Dr. Beatty intends erecting an addition to the old Separate school building.

MITCHELL, ONT.—A movement is on foot to form a company to build a skating and curling rink.

GRANBY, QUE.—G. A. Brousseau intends erecting a brick building, 22 x 55 feet, three storeys.

CHEMAINUS, B. C.—It has been decided to proceed at once with the building of a general hospital.

ERIN, ONT.—The council has arranged with Mr. Diegle, of Cataract, to light the streets of the village.

WELLAND, ONT.—The extension of the Hellem's avenue sewer, cost \$760, is to be undertaken at once.

PELEE ISLAND, ONT.—Dr. McCormack will make alterations and additions to his residence, cost \$2,500.

ST. AGATHE, QUE.—The new C.P.R. hotel, for which a site has been purchased, will contain 200 rooms.

WALKERVILLE, ONT.—P. Dugal has purchased property on which to build a two-storey frame house.

PORT ARTHUR, ONT.—The old town hall, owned by the Masonic lodges, is to be enlarged and improved.

VICTORIA, ONT.—Mr. Sipes, who purchased the Teeple property, purposes building a new residence thereon.

COLUMBIA, B. C.—A. J. McArthur, of Winnipeg, will build a warehouse and cold storage building near the depot.

ANDOVER, N. B.—F. H. Hale has completed his dam at Plaster Rock, and is preparing to erect a sawmill at once.

ARNPRIOR, ONT.—R. Anderson, of Ottawa, has purchased a site for proposed power house for supplying electricity.

PARRY SOUND, ONT.—The Parry Sound Lumber Co.'s mill is being overhauled. New tramways will be built.

STRATFORD, ONT.—The Stratford Clothing Co. have purchased an adjoining building, and are having it remodelled.

BROCKVILLE, ONT.—Heman Sheppard

has invited tenders for alterations to terrace on Victoria avenue, cost \$1,400.

WESTON, ONT.—The property owners on Saturday last voted in favor of installing an electric light plant, at cost of \$7,000.

THESSALON, ONT.—Tenders close September 29th for building Presbyterian church. Particulars from Wm. Thomson, this place.

ST. JOHNS, QUE.—The Alaska Feather & Down Co., of Montreal, have offered to remove their factory to this city in return for a small bonus.

RED DEER, N.W.T.—Thos. Brindle is about to take over the Alberta hotel, and will make improvements, including an additional storey.

ST. LOUIS, QUE.—The Catholic School Commissioners intend building a new school on St. Urbain street and a presbytery on Atlantic ave.

CHATHAM, ONT.—Major Rothwell, of Windsor, has purchased the Grand Opera House in this city, and intends to thoroughly renovate it.

WATFORD, ONT.—The council has appointed a committee to report as to the cost of constructing a waterworks system and granolithic sidewalks.

TILBURY, ONT.—The English church committee have accepted plans submitted by J. L. Wilson & Son, architects, of Chatham, for proposed church.

RENFREW, ONT.—The council has decided to undertake the construction of granolithic sidewalks by day labor. Considerable material will be required.

HUNTINGDON, QUE.—At a meeting of the county council to be held in December the question of the proposed bridge across Trout river at Starks will be considered.

ST. HYACINTHE, QUE.—The St. Hyacinthe Electric Railway Co. is seeking incorporation, to build an electric railway, telephone and telegraph lines and bridges.

BERTON, ONT.—At a recent public meeting a resolution was passed in favor of raising \$3,000 to be applied to electric light debt and \$2,000 for street improvements.

BIRCHTON, ONT.—A. F. Swan, secretary-treasurer School Board, invites tenders up to 30th inst. for building school house in district No. 17, township of Eaton.

LINDSAY, ONT.—W. T. Ashbridge, town engineer, has reported that a granolithic walk on the north side of Kent street, from William to Cambridge, would cost \$2,270.

TORONTO JUNCTION, ONT.—It is the intention of Walt & Watson to increase their boiler capacity, put in a steam engine, and erect a brick building in the near future.

CHARLOTTETOWN, P. E. I.—Tenders close this week for grading and other work on the portion of the Prince Edward Island Railway between Colville and Loyalist.

ST. CATHARINES, ONT.—A project for an electric railway from this city to Wellandport, via Fonthill and Pelham, is under consideration. Buffalo capitalists are interested.

GRAND FORKS, B. C.—The Columbia Telephone & Telegraph Co. is about to construct 50 miles of private telephone line connecting the head offices here with the various mines.

ALMONTE, ONT.—Voting took place yesterday on a by-law to raise \$30,000 to buy out the present electric light company. Result not learned.—Street improvements are urgently required.

ST. HENRI, QUE.—The council has given permission to the Merchants Cotton Co. to erect a new factory in the municipality. The building will be 300 feet long and our storeys high.

HALIFAX, N. S.—The Nova Scotia Steel Co. is making preparations to build another smelting furnace. The large steel building will be extended some 80 feet to cover the new furnace.

PERTH, ONT.—Architects have been invited to submit plans for proposed skating and curling rink, to cost about \$4,000. Building will be of wood, on stone foundation. Particulars from J. M. Meighan.

WALLACEBURG, ONT.—The plans for new Presbyterian church, for which tenders close on 28th inst., were prepared by Powell & Carswell, architects, Chatham. The building will be brick and stone, heated by hot air.

SYDNEY, C. B.—It is rumored that the Massey-Harris Co., of Toronto, have bonded a large tract of land at the west side of the harbor. It is not known whether it is to be used for residential or industrial purposes.

PORTAGE LA PRAIRIE, MAN.—Some of the citizens are talking of building a large hockey and skating rink.—It is announced that the Northern Pacific Railway Co. will build more than the twenty lines of road this fall.

STANLEY, N. B.—Plans have been completed by Mr. Ruel for the York and Carleton County Railway. From an interview with Hon. A. G. Blair it is understood that the contract for building the road will be let an early date.

MARYSVILLE, N. B.—The Department of Public Works at Ottawa is asking for tenders up to October 3rd for the erection of a public building in this town. Plans at above department and at office of McFarlane, Anderson & Thompson, this place.

NEW WESTMINSTER, B. C.—The municipality of Burnaby desires tenders by 30th inst. for building a bridge on the North Arm road.—It is understood that tenders will be invited immediately for the new post office building to be built in this city.

NIAGARA FALLS, ONT.—The Canadian Niagara Power Co. have let a contract for boring a number of holes along the line of the proposed canal on the Canadian side, and it is said that tenders will be asked at an early date for construction of the tunnel.

ST. JOHN, N. B.—Mr. Peters, city engineer, has completed plans for alterations in the wharf and additional warehouse accommodation at Sand Point. The plans provide for filling in the Connolly slip and a 70 foot extension to No. 2 warehouse; estimated cost, \$12,000.

KINGSTON, ONT.—It is said that a summer hotel, to cost \$8,000, will be built on Amherst Island.—An addition will be built to Zion Presbyterian church on Pine street.—At a mass meeting of citizens held on Monday, last the sum of \$12,500 was subscribed towards building a summer hotel.

HULL, QUE.—On October 10th the ratepayers will vote on local improvement by-laws to provide funds as follows: \$5,000 for 12 and 18 inch pipe sewer on Albert street; \$1,500 for to and 12 inch pipe sewer on Laurier avenue; \$1,500 for wooden sidewalks on several streets. R. W. Farley is city engineer.

INGERSOLL, ONT.—The ratepayers carried a by-law last week granting a bonus of \$20,000 for the extension of the Lake Erie, Tilsonburg and Port Burwell Railway from Tilsonburg to this place.—The St. Charles Condensing Co., of Chicago, have closed negotiations with the town for the erection of a large factory here.

NEWCASTLE, N. B.—The purchase of 1,000 feet of fire hose has been recommended by the Fire Committee.—The construction of waterworks and electric light systems is under consideration. Some of the councillors are in favor of

engaging an expert to report on the cost of installing a municipal plant.

BRIDGETOWN, N. S.—The Nova Scotia Electric Light Co. have engaged an engineer to report on the various water powers suitable for their purposes. The company's options include the head waters of the Gaspereaux river and the Currell brook at Bridgetown. J. W. Beckwith, of Bridgetown, is interested.

NELSON, B. C.—The British Columbia Gold Fields, Limited, will erect an office building, brick, two storeys. A. E. Hodgins is architect.—The C.P.R. has made an appropriation of \$30,000 to complete the work of straightening and improving the Columbia and Kootenay branch between this place and Robson.

BRANTFORD, ONT.—The tenders submitted for the new isolation hospital for addition to John H. Stratford hospital are considerably above the proposed expenditure, and the matter will again be submitted to the council. There is a possibility that the construction of both buildings will be postponed for the present.

RAT PORTAGE, ONT.—Mr. Tranter has purchased property on which to build greenhouses.—Capt. J. J. Durage, of Duluth, has surveyed the water power of the Seine river from Sturgeon Falls to McManus Falls, a distance of eight miles. Permission will be asked from the government to develop the power, which is estimated at 39,000 horse power.

ROSSLAND, B. C.—A. A. Mackenzie is about to erect a two-storey frame building, 40 x 60 feet, containing stores and offices.—It is probable that the septic tank system of sewerage will be adopted.—Archie B. Mackenzie, representing a syndicate, is negotiating to secure control of the Hotel Allan. If purchased the building will be remodelled and extended.

VANCOUVER, B. C.—N. S. Hoffer, architect, has prepared plans for new stables to be erected by P. Burns & Co.,—F. M. Rattenbury, architect, has prepared plans for cold storage works for P. Burns. Tenders will be invited shortly.—The James Robertson Co., of Montreal, purpose establishing paint works in this city.

GREENWOOD, B. C.—F. M. Rattenbury, architect, of Victoria, has prepared plans for a frame hotel for Graham & Parry, 50 x 80 feet, three storeys, for which tenders will be invited shortly.—A. H. Sperry & Co., Limited, contemplate erecting a building 25 x 110 feet, two storeys.—Thos. Walsh, of the Clarendon Hotel, will build a frame structure 48 x 80 feet, and Louis Boshart, of the International Hotel, is talking of a brick structure.

SARNIA, ONT.—Notice has been given in council of a by-law to raise \$10,000 by debentures for granolithic sidewalks.—The Doherty Manufacturing Co. are said to be considering the removal of their factory to another city.—David Mackenzie, representing the Sarnia Electric Railway Co., has informed the council of the willingness of the company to proceed at once with the construction of an electric railway.

HAMILTON, ONT.—R. Clohacy, architect, desires tenders by 28th inst. for tubular steam boiler, mason work, etc., required for heating St. Patrick's church, King street east.—John Hummell has been granted a permit for alterations to building, corner Bay and Market streets, for Henry Kuntz, cost \$2,000.—The Ontario Box Co.'s factory is to be rebuilt, from plans by Stewart McPhie, architect; cost \$7,000.

LONDON, ONT.—Workman & Ward are building an addition to their machine shop on York street.—Moore & Henry, architects, have prepared plans for brick addition, 74 x 148 feet, to Carling Brewing & Malting Co's building. Same archi-

fects are inviting tenders for a two-story brick addition, 32 x 26 feet, to Bishop's palace adjoining St. Peter's cathedral.—A. O. Graydon, city engineer, wants tenders by 5 p. m. of 28th inst for erection of brick valve house.

WINDSOR, ONT.—The negotiations regarding the site for a House of Refuge have not yet ended, and the county council will take further steps in that direction at once. Plans submitted by Fred Henry, architect, of London, have been accepted for new parochial residence for St. Alphonsus church. Building will be brick, cost \$8,000. Tenders for erection are invited up to October 9th. Plans at office of Rev. Dean Flannery.—Government authorities were in the city last week inspecting the different sites for proposed drill shed.

WINNIPEG, MAN.—J. A. Macdonnell, chief engineer of the Public Works Department, was in the Gimli district last week laying out some road work to be done there.—Manager Whyte, of the C. P.R., states that the foundation of the new hotel and station will be laid this fall. Plans of the building are expected to arrive in the city immediately.—The Hudson's Bay Co. are about to establish telephone connection from Fort Smith to Smith's Landing, a distance of 160 miles on the Great Slave river.—Extensive improvements to the C.P.R. shops in this city are proposed.—The Northern Pacific Railway Co. will build three new stations on the Portage extension this fall.

VICTORIA, B.C.—Thos. Hooper, architect, has prepared plans for a three-storey and basement building to be erected on the north-west corner of Government and Broughton streets. Mr. Hooper is acting under instructions from E. M. Johnson, agent for C. A. Vernon, the owner. Tenders will be invited immediately. Building will contain stores, offices and a large hall.—The British Columbia Land & Investment Co. purpose adding another storey to their building at southwest corner of Government and Broughton streets.—A portion of Yates street will be paved with wooden blocks.—A motion will be introduced in council to submit a by-law offering an annual subsidy of \$17,000 for 20 years to a company to build and operate between Victoria and Port Angeles a steel passenger and express steamer, together with a steam-car ferry.

GUELPH, ONT.—The Guelph & Ontario Investment & Savings Society invites separate tenders up to Saturday, 30th inst., for alterations and additions, including plumbing, cabinet work, etc., to buildings at corner Wyndham and Court streets. Plans by Stewart McPhee, architect, Hamilton.—Cement sidewalks will be constructed on portions of Bridge, Birmingham, Cambridge, Derry and Perth sts.—A city engineer is wanted to do engineering work for the city, and to be allowed to accept outside commissions; salary \$500 per annum. Applications received by Ald. G. J. Thorp up to October 2nd.—Tenders are wanted by October 2nd for storm sash for two residences. Particulars from John McAteer, Victoria Hotel.

MONTREAL, QUE.—Changes are to be made in the eastern front of Bonaventure station. The wooden sidewalk will be replaced by asphalt, a fountain erected, and the canopy extended 15 feet.—It is announced that the Montfort Railway will be lengthened by the addition of 30 miles of track, to be built under the supervision of H. L. Auclair, of this city.—At a meeting of the Harbor Commissioners held last week, John Kennedy, chief engineer, submitted a report as to the parts of the harbor work that could best be undertaken next year. He recommended the construction of the pier nearest the Lachine canal, of the shore wharf between that pier and the canal,

the construction of part of the city flood protection wall, and the widening of Commissioners street. The engineer was instructed to prepare an estimate of the cost of the shore wharf in concrete, wood and stone. The plans for improvements at Windmill Point basin were approved of, and the engineer instructed to prepare an estimate showing the difference in cost between the high and low level systems. Specifications were also submitted of the high level flood protection wall to be built along Common street.

OTTAWA, ONT.—The Pontiac Mining Co. has secured control of the Chat's Falls water power at Quyon, 35 miles from this city, said to be capable of developing 680,000 horse power. A portion of this power will likely be developed at once.—The Geo. Matthews Co. has purchased the property consisting of Nos. 129, 131 and 131½ Bank street. The present building will be taken down and replaced by a four-storey brick block.—There will be erected on the grounds at Rideau Hall a modern greenhouse, 80 x 20 feet, fitted with all improvements.—The Grand Trunk Railway Co. will lay a double track from Coteau to Montreal.—The residents of Ottawa East are desirous of having a steel bridge erected over the canal between Argyle avenue and the canal road in place of the wooden structure.—Geo. R. Blythe & Sons, merchants, have purchased No. 194 and 195 Sparks street. It is the intention to remodel the stores and build an extension through to Queen street.—The construction of a tar macadam pavement on Rideau street, at cost of \$30,000, is under consideration.—An agitation is on foot to extend the Kingston and Pembroke railway to Bryston, Que. This extension would tap one of the best water powers in Canada.—Building permits have been granted as follows: G. B. Caldwell, brick veneered house, Patterson avenue, cost \$2,300; Jos. Barry, frame dwelling, Hickey street, cost \$700; E. E. Perney, frame house, Rideau terrace, cost \$1,200; J. M. Lavoie, terrace of three dwellings, Daly avenue, cost \$3,900.

TORONTO, ONT.—C. P. Thomas, architect, Temple Building, has prepared plans for a five-storey apartment house to be built this fall on the south-west corner of George and Harbord streets. The building will be of brick and stone, and will cost about \$100,000. The undertaking is in the hands of A. W. McDougald, of the Provincial Trust Co., as trustee for the promoters.—It is understood that a loan company have had plans prepared for a tenement building to be erected on the upper part of Jarvis street.—Mr. John Hall, secretary of the

Separate School Board, is having plans prepared for an addition to the teachers' residence on McDonald square. Regarding the removal of the Penetanguishene reformatory, it is stated that a site will be selected this fall, but that nothing further will be done until next year.—The Consumers' Gas Co. last week inspected sites at the Island for the establishment of a gas plant.—The manager of the Toronto Street Railway Co. has notified the city engineer of the willingness of the company to construct a permanent pavement between tracks on Dufferin street north of King.—In his fortnightly report presented to the Board of Works last week, the city engineer recommends the construction of the following works: Asphalt—Spadina avenue, Bloor to Bernard avenue, cost \$16,790; College street, Bathurst to Clinton, cost \$20,630; Manning avenue, Arthur to College, cost \$12,655; Manning avenue, College to Bloor, cost \$25,610; Simcoe street, King to Front, cost \$14,410. Cedar block—College street, Clinton to Lansdowne avenue, cost \$16,350. Concrete walks—Huntley street, west side, Isabella to Bloor, cost \$754; Carlton street, north side, Ontario to Bleeker, cost \$375.—Building permits have been granted as follows: Toronto General Trusts Company, alterations to offices, corner Yonge and Colborne streets, cost \$11,000; C. H. Westwood, two-storey and attic brick and stone residence, south-west corner Wilcox and Huron streets, cost \$5,000; Thomas McIlwain, pair two-storey s.d. stone and brick residences, west side King street, near Spencer avenue, cost \$4,500; G. P. Reid, general manager Standard Bank, residence on east side Jarvis street, north of Isabella, cost \$8,000; S. Wright, two-storey brick and stone residence, east side Brunswick avenue, near Ulster, cost \$4,300; John F. Urquhart, four detached two storey and attic dwellings, 31 Spencer ave., cost \$14,000.—The city council has given authority to the city engineer to invite tenders for the supply of a road roller. The council has also decided in favor of the construction of 24 inch water main on Front street, between Church and George, cost \$12,000.—Mr. A. R. Denison, architect, has prepared plans and taken tenders for a five-storey warehouse to be erected on Westmarket street for Ald. Hallam.

FIRES.

Refinery at Vancouver, B. C., owned by Fraser River Oil & Guano Syndicate, totally destroyed; loss \$50,000, covered by insurance.—Gendron & Thoret's grocery store at Valleyfield, Que., completely gutted; loss partially covered by

**Pumping Machinery
Electric Light Engines
Boilers**

Built Specially for Municipalities

**The Smart-Eby
Machine Co.
Limited**

199 Barton Street East, HAMILTON, ONT.

CORRESPONDENCE SOLICITED

CEMENT

We make only one Brand of Portland Cement and it is the Highest Grade. It is used by the Government in Public Works and by the Leading Contractors in the Provinces. Write us for prices of our **SAMSON BRAND.**

The OWEN SOUND PORTLAND CEMENT CO., Limited

OWEN SOUND, ONT.

Engineering Contract Company

Main Office:

EMPIRE BUILDING, 71 BROADWAY, NEW YORK

Canadian Office:

TEMPLE BUILDING, TORONTO, ONT.

HENRY F. DUCK, MANAGER FOR CANADA.

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

insurance.—Shingle mill of Alexander Johnson, near Cloverdale, B.C., reported to have been destroyed by fire.—Residence of J. Pelly, near Chilliwack, B.C.—Power house of Canada Electric Light Co., at Amherst, N.S.; building is a complete wreck; insurance, \$8,000. N. A. Rhodes and D. W. Robb are directors.—Lumber camp of Hon. Mr. Snowball at Chatham, N.B., which contained peevies and a large quantity of lumbermen's supplies.—Residence of David Gallagher at Picton, Ont.—Residence of James Clarkson at Norman, Ont.—Dry kiln and planing mill of W. C. Edwards & Co., New Edinburgh, damaged to the extent of \$7,000.—Saw and planing mill of the Digby Manufacturing Co., at Digby, N.S., totally destroyed; loss \$7,000, insurance \$3,500. The owner, Sydney Woods, will likely rebuild.

CONTRACTS AWARDED.

HUNTSVILLE, ONT.—Public school: Wm. White, successful tenderer.
HULL, QUE.—\$4,000 of debentures: Merchants Bank of Canada, purchasers.
WESTON, ONT.—Brick veneered house for Wm. Jackson: J. Barker, contractor.
TORONTO, ONT.—Pavement on Grove ave.: Dominion Pavement & Construction Co., \$3,820.
PORT COLBORNE, ONT.—Addition to residence of J. Uhrig: Augustine & Sons, contractors.
PENETANGUISHENE, ONT.—N. Payette has received contract for building several cottages at Tomahawk Point.
EDMONTON, N. W. T.—Contract for raising piers of bridge has been let to Dominion Bridge Co., Montreal.
SARNIA, ONT.—Roundhouse for Lake Erie & Detroit River Railway: George Morgan, of Blenheim, contractor.
NIAGARA FALLS, ONT.—Addition to Dominion Suspender Co.'s factory: Carpenter work, Waugh & Robertson; masonry, Geo. Fuller.

MOUNT FOREST, ONT.—Brick residence for County Councillor Hampton: Brick, stone and plastering, W. Patton; carpenter work, Till & Ferrier; frames and fitting, A. J. Leslie; painting, W. H. Drummond.

WINDSOR, ONT.—Tenders for granolithic walks were received by the council as follows: Geo. Sewell, 12½ cents; Schillinger Bros., 12½ cents; Cadwell Stone Co., 13 cents. The latter tender has been accepted.

CHATHAM, ONT.—Addition to Ursuline convent: Blonde Bros., masonry and carpenter work; Geo. Stephens & Co., iron work; Watt & Sons, plumbing. The addition will cost about \$20,000. Powell & Carswell are architects.

HAMILTON, ONT.—Seven tenders were received by the county council for purchase of \$20,000 debentures, as follows: G. H. Gillespie, \$20,950 (accepted); H. O'Hara & Co., Toronto, \$20,805.50; Bank of Hamilton, \$20,661; Emilius Jarvis & Co., Toronto, \$20,660; W. H. Browse, Toronto, \$20,601; G. W. Wood & Son, Toronto, \$20,552; G. A. Stimson, Toronto, \$20,551.

GUELPH, ONT.—Office building for Dominion Permanent & Loan Co. (Powell & Wideman, architects): Mason work, T. Matthews; lathing and plastering, J. J. Mahoney; plumbing, Mahoney Bros.; galvanized iron work, A. Rumford; painting, glazing and decorating, Wm. Scriven; heating, A. Rumford; trimming and fittings, Office and School Furniture Co., Preston.

OTTAWA, ONT.—E. A. Wallberg, of Montreal, has closed a contract with J. R. Booth to equip the Canada Atlantic Railway repair shops with the fan system of heating and ventilation.—W. C. Edwards & Co. have been awarded the contract for show cases for the Dominion exhibits at the Paris Exposition.—School on Lyons street for Separate School Board: J. J. Lyon, successful tenderer, \$4,750.

LONDON, ONT.—Contract for section A

of the sewerage system has been let to Harding & Leathorn, of this city, at \$4,485. A. J. Brown, Toronto, tendered at \$4,631.—Improvements to St. Andrew's church (H. C. McBride, architect): Woodwork, John Shopland; seating, Valley City Seating Co., Dundas; decorating, M. Evans, Toronto; painting and stained glass, R. Lewis; electric wiring, Rogers Electric Co.

VICTORIA, B.C.—For addition to electric light station tenders were received as follows: Joseph E. Phillips, \$1,997.7; George Snider, \$1,905; Elford & Smith, \$1,900 (accepted); Thomas Catterall, \$2,640; George Glover, \$2,636; R. Dinsdale, \$2,198.—Residence on Rocklands avenue for E. V. Bodwell: W. Gregson, contractor; price about \$4,000. Building will be rockfaced stone, shingled walls, hall panelled in cedar. F. M. Rattenbury, architect.

BIDS.

VANCOUVER, B. C.—At last council meeting tenders for construction of sewers were opened from Dixon & Cook, Ironsides, Rennie & Campbell, and Boyd, Burns & Co. For the supply of drain pipe tenders were submitted by Evans, Coldman & Evans and the British Columbia Pottery Co. The engineer was instructed to report thereon.

DATE OF PUBLICATION.

Architects, Engineers, Municipal Authorities and others are reminded that the CONTRACT RECORD is printed every Tuesday afternoon, and that advertisements should reach the office of publication not later than 2 o'clock p.m. on that day to ensure insertion in the issue of the current week. Advertisements are frequently received too late for insertion, to avoid which special attention is directed to this announcement.

ARTIFICIAL STONE PAVEMENTS

SIDEWALKS A SPECIALTY

CORPORATIONS Will do well to consider our work and prices before letting contracts

The Silica Baritic Stone Company of Ontario, Limited.

WALTER MILLS, General Manager. Head office: INGERSOLL, ONT.

ORE AND STONE
 CRUSHERS
 HOISTING MACHINERY
 RAILWAY SUPPLIES
 BOILERS AND ENGINES
 Prices furnished on application

MARSH & HENTHORN,
 BELLEVILLE, ONT.

Please mention the CONTRACT RECORD when corresponding with advertisers.

THE PHENIX BRIDGE & IRON WORKS

MANUFACTURERS OF STAY BOLTS AND ALL KINDS OF RIVETS

STEEL AND IRON STRUCTURAL AND ARCHITECTURAL WORK

Beams, Channels, Angles and Tees always in stock. 29 to 49 McGill Street,

P.O. Box 893. MONTREAL
 Prices on Application.

THE CADWELL SILEX STONE CO'Y

SILEX STONE WALKS CURBINGS } A SPECIALTY

TO CORPORATIONS.—We can give you the benefit of our ten (10) years' experience in building our Silix Stone Walks.

G. W. Cadwell, Manager, Windsor, Ont.

Portland Cements...

HIGH GRADE GERMAN BRANDS FOR GRANOLITHIC AND ARTIFICIAL STONE SIDEWALKS.

Sewer Pipes, Best English Cements. Best Belgian Cements.
 Culvert Pipes, &c. W. McNally & Co., Montreal.

JOSSON CEMENT ..Manufactured at. NIEL ON RUPELL

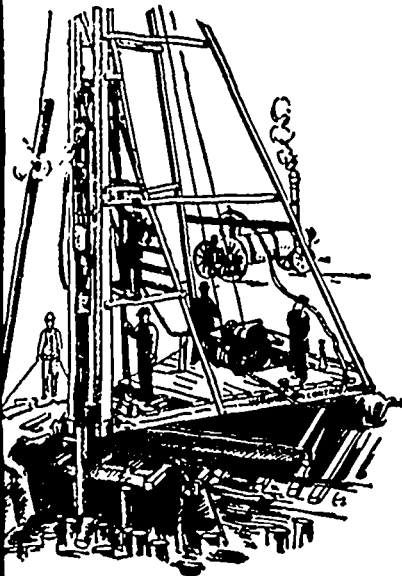
Is the Highest Grade Artificial Portland Cement and the Best for High Class Work. Has been used largely for Government and Municipal Works.

TO BE HAD FROM ALL CANADIAN DEALERS

C. I. de Sola, Manager in Canada :: 180 St. James Street, MONTREAL

MUNICIPAL DEBENTURES BOUGHT
 EMILIUS JARVIS & CO. (Toronto Stock Exchange) 52 King St. West, TORONTO

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS



PILE DRIVING

on land or water by Steam Pile Drivers or Drop Hammers.

Portable Boilers
Hoisting Engines
Pumping Machinery
TO LET

Bridge Building, Trestle Work, Wharves,
Dams, Diving Submarine Work and
General Contracting.

WM. HOOD & SON
10 Richmond Sq. - MONTREAL

DEBENTURES BOUGHT

Municipalities saved all possible trouble
by applying to

G. A. STIMSON & CO.
Investment Dealers
24 and 26 King St. W. - TORONTO

Paving Granite

Granite Sets for Street Paving. - CURBING cut
to any shape ordered. - Fine Rich Colors for
Building and Monumental Purposes.

Quarries, St. Philippe d'Argenteuil, P. Q.

Address all communications to
JOS. BRUNET - COTE DES REINES, MONTREAL

Please mention the CONTRACT RECORD
when corresponding with advertisers.



THIS Preparation is used for the following purposes:
Prevention of Dry Rot, Fungus, Decay and the at-
tack of White Ant and Termites in Timber; Preservation
of Floors, Sills, Flooring, Wainscoting, Shingles, Wood
Curling, Sidewalks, Slat-walks, and Block Pavements.
Preparation for salt- or Timber treated at Factory,
Corner Shaw Street and C. P. R. Track.
Circulars sent of Application. Tel. 978.

OFFICE: Molson's Bank Building, Vancouver, B.C.

Tel. 64. P. O. Box 426

PORTLAND CEMENT

High Grade PORTLAND CEMENT, for Concrete Work of all descriptions, Heavy Masonry, Sidewalks, Etc.
EXCLUSIVELY used by the CANADIAN PACIFIC RAILWAY CO. on all their works in British Columbia
also by the DOMINION GOVERNMENT, the MUNICIPAL AUTHORITIES of VANCOUVER
and VICTORIA, and by all the leading Contractors in BRITISH COLUMBIA

Manufactured by

THE BRITISH COLUMBIA PORTLAND CEMENT CO.

Prices and Circulars on application.

VANCOUVER, B. C.

W. & F. P. CURRIE & CO.

MONTREAL

Importers of

SEWER PIPES,

CHIMNEY TOPS,

VENT LININGS,

FLUE COVERS,

FIRE BRICKS,

FIRE CLAY,

WHITING.



PORTLAND CEMENTS,

HIGH GRADE ENGLISH

B. S. & Co. "ANCHOR,"

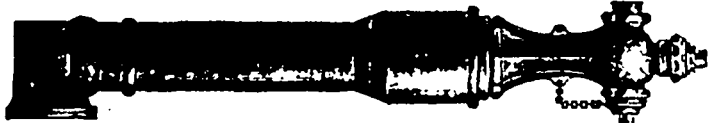
ALSO OTHER BRANDS,

PLASTER OF PARIS,

BORAX,

CHINA CLAY.

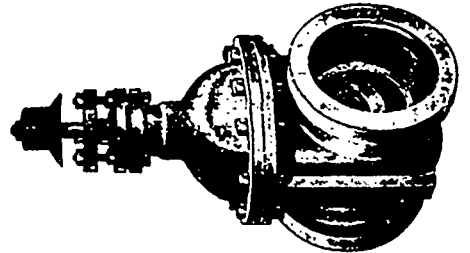
The KERR ENGINE COMPANY, Limited



Corporations and
Contractors ...

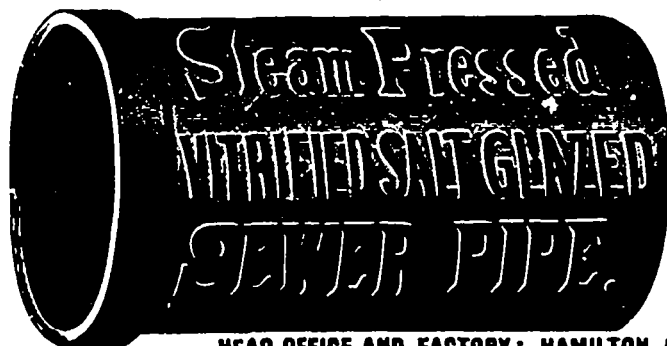
should not fail to obtain our
prices on

PUMPING MACHINERY,
HYDRANTS and VALVES



WALKERVILLE, - ONTARIO

THE HAMILTON AND TORONTO SEWER PIPE CO.
(LIMITED.)

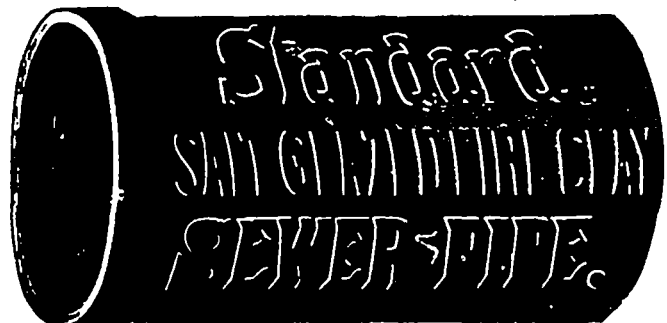


- FOR -
SEWERS,
CULVERTS
AND
WATER PIPES.
INVERTS
For Brick Sewers

Write for Discount!

HEAD OFFICE AND FACTORY: HAMILTON, CANADA

THE STANDARD DRAIN PIPE CO.
OF ST. JOHNS, P. Q., (LIMITED)



Manufacturers
Salt-Glazed
Vitrified
SEWER
PIPES

Double Strength
Railway Cul-
vert Pipes,
Inverts, Vents,

AND ALL KINDS OF FIRE CLAY GOODS

MUNICIPAL DEPARTMENT

HIGHWAY CULVERTS AND BRIDGES*

By A. W. CAMIBELL, Ontario Road Commissioner.

(Concluded.)

DESIGN OF IRON BRIDGES.

The design of iron or steel bridges commonly erected may be classified under: The plain beam or girder, the beam truss, the suspension truss, and the bowstring or arch truss. The first of these is well understood; the second comprises those trusses in which both bottom and top chords are essential; the third includes those in which the upper chord only is necessary, in which the horizontal tie takes the place of fixed abutments. The style chosen should be governed by circumstances and economy, but apart from this any design is good as long as it can be accurately analyzed as to the character and amount of strain in all its parts. On the other hand, any design which cannot be so analyzed should not for a moment receive consideration.

The course pursued by some, indeed most municipalities, in erecting iron bridges is likely, however, to result disastrously and throw iron and steel into disrepute. A council advertises for tenders. The companies responding supply their own plans and specifications. Thus far the procedure is entirely satisfactory. The difficulty arises when the councils accept the lowest tender without obtaining the advice of an experienced builder of iron bridges as to the plans and specifications submitted. Cases have occurred in which a difference of five dollars has influenced a council to accept a tender for a bridge which manifestly, to a man of experience, was worth less than the other by several hundred dollars, and which was indeed unsafe, offering every likelihood of failure, with attendant loss of life and great expense for reconstruction. It is difficult to understand the action of councillors, shrewd in other matters, in the construction of bridges and other public works, proceeding with such apparent disregard for the true interests of those whom they represent. A small sum spent in securing reliable advice is as much a matter of economy in public as in private affairs.

PAINTING IRON BRIDGES.

The prevention of rust is a matter of first importance in the care of iron and steel bridge work. The first principle in so doing is the exclusion of air and moisture. Galvanizing and painting are the two most commonly adopted means for accomplishing this end. If the coating could in all cases be made continuous the result would be reached, but it is impossible to prevent slight breaks, no larger than pin-points, perhaps, but which admit air and moisture. With these as a point of commencement, corrosion goes on beneath the coating, and is all the more dangerous because concealed. The durability of painted iron work depends largely upon the surface of the metal being properly cleaned and prepared to receive the paint or zinc coating. An

* Paper read before the Association of Ontario Land Surveyors.

ideal paint should have a toughness that does not depend upon a perishable ingredient; its elasticity should not be diminished by cold; it should not soften, but rather harden, by heat; and it should contain nothing which would act as a carrier of oxygen to the metal. Most engineers have a pet compound, that recommended by the chief engineer of the Bay of Quinte Railway being composed of one pound of lamp black, eight pounds of red lead, and one gallon of raw linseed oil, the color being a rich chocolate brown.

PAINTING WOODEN BRIDGES.

The painting of timber in bridges is a matter of some importance. The effect of paint on wet timber is to retain moisture and cause the so-called "dry-rot". If the timber is dry and well seasoned, the better practice is to apply a coating of paint at once. It is, however, a mistake to paint unseasoned timber in a bridge until it has stood a year; and the work should be done at the end of the summer when the wood is thoroughly dry.

Because the tendency of paint to retain moisture, there has been some dispute as to the advisability of painting very large timbers in a bridge, the tendency of the paint being to increase the "dry-rot". Nevertheless, the timber reaches a certain stage, after sufficient seasoning, when to exclude the atmosphere by painting tends to its preservation.

It is not considered good practice, however, in wooden bridge construction, to use any timber more than 6 inches in thickness. Where greater strength is required, in caps, beams, cords, braces, etc., a sufficient number of pieces of this or less thickness should be built together by keys, packing pieces and bolts, thus allowing a free circulation of air. Over members thus composed should be placed a covering of galvanized iron, extending a half or three quarters of an inch down on the timber, and secured by galvanized tacks, preventing the rain from entering the spaces or resting in or around the packed joints.

The bridge thus built should be given one thorough coat of paint the summer following its construction, and a second

one should be applied the third year. The ends of all timbers, all seats, joints and bearings, should be well coated with white lead at the time of construction.

THE ECONOMY OF IRON AND STEEL.

The economy of iron and steel bridges for replacing wooden structures is a matter in which definite statistics are not available. The steel superstructure should last half a century, while the masonry piers and abutments, with first class material and workmanship and careful attention to repairs, should be good for at least twice that period. The life of a wooden bridge may be placed at fifteen years, and during that period expensive repairs will be required. If the cost of the iron and masonry bridge is twice that of the wooden structure, there is still a wide margin for profit. The price of concrete, masonry and steel is constantly decreasing; that of timber is becoming greater, while the quantity available is degenerating; and it is not difficult to foretell that, in future, culverts and bridges will necessarily be built of permanent and durable materials.

A municipal street railway is operated in Port Arthur, Ont., under the direction of a commission, which is also in charge of the public lighting plant. Mr. Geo. T. Marks, mayor of the city, states that Port Arthur was being left behind the times for the reason that the Canadian Pacific Railway deserted it for Port William, leaving it to either go backward or to work out its own salvation. So the road was built to Port William with the understanding that the latter city could buy a half interest within a certain time, but if she does not do so within this period, she must wait twenty years. The road and equipment cost \$130,000, which was raised on 5 per cent. bonds. This was seven years ago. At first the line hardly paid expenses, but is now yielding about 2½ per cent., leaving the city an equal annual loss on account of the interest on bonds. The haul is 7.6 miles, and the business is almost wholly of a suburban nature. School children can buy 10 tickets for 25 cents, and there are special workmen's tickets, available only between certain hours, which are sold at the rate of eight for 25 cents.



"BEAVER" PORTLAND CEMENT

A HIGH GRADE PORTLAND CEMENT

Manufactured by

THE BEAVER PORTLAND CEMENT CO., LIMITED - WORKS: MARLBANK, ONT.

SOLE SALES AGENT:

COMMERCIAL WOOD & CEMENT COMPANY

Canada Life Building, Montreal.

Largest Works in Canada.

Write for Prices.

BELLHOUSE, DILLON & CO., 30 St. Francois Xavier St., Montreal

Sole Agents for the Compagnie Generale des Asphaltes de France (Rock Asphalt).

PORTLAND CEMENT NORTH'S CONDOR

Paving and Fire Brick a Specialty

"DYCKERHOFF" and "WHITE CROSS" Brands

NORTH'S "CONDOR" BRAND AWARDED FIRST PRIZE AND GOLD MEDAL AT THE ANTWERP EXHIBITION



"GERMANIA" BRAND

HIGHEST CLASS PORTLAND CEMENT

McGILL UNIVERSITY TESTS, 1898:

Fineness:—residue on 100 sieve, 4.45%.

Tensile strength: neat: 7 days, 629 lb.

" " " 28 " 773 lb.

—OF ALL FIRST CLASS DEALERS.—



"BURHAM" BRAND

THE BEST LONDON PORTLAND CEMENT

As used for the following work: Keewatin Power Co.'s dam at Lake of the Woods; Canada Paper Co.'s dam at Windsor Mills; Government Breakwater, Buffalo; Dry Docks, Brooklyn and League Island; Hudson River Tunnel; and a vast amount of railway work, and mileage of Street Paving throughout Canada and the States.

OF ALL FIRST CLASS DEALERS.

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

WILLIS CHIPMAN

H. n. Grad. McGill University.
M. Can. Soc. C.E. M. Am. Soc. C.E.
Mem. Am. W.W. Ass'n.
WATERWORKS, SEWERAGE WORKS, GAS
WORKS, ELECTRIC LIGHT AND
POWER PLANTS
Reports, Surveys, Construction, Valuations
103 BAY STREET - TORONTO

RODERICK J. PARKE
Consulting Electrical Engineer

MUNICIPAL ELECTRIC LIGHTING
COMMERCIAL POWER INSTALLATIONS
Isolated Electric Lighting and Power Plants for
Manufactories. Estimates, Specifications, Advice
on Ten-ters, Valuating.
310 Temple Building - TORONTO, CANADA

W. T. ASHBRIDGE, C.E.

A. M. CAN. Soc. C.E.
609 Temple Building, - TORONTO
Special Attention given to
MUNICIPAL IMPROVEMENTS
Sewerage Works, Water Supply,
Pavements, Concrete Construction, Etc.

J. EMILE VANIER
CIVIL AND HYDRAULIC ENGINEER

(Graduate of the Polytechnic School.)
IMPERIAL BUILDING, MONTREAL.
SPECIALTIES:
Waterworks, Sewers, both Steam and Hydraulic
Power Plants, Foundations, Paving, etc.
Valuations made of Waterworks Systems, Arbit-
rations, etc.
Plans and Estimates for Public Buildings.

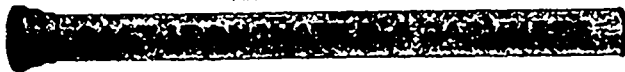
Please mention the CONTRACT RECORD
when corresponding with advertisers.

ST. LAWRENCE FOUNDRY CO.
OF TORONTO, LIMITED.
ESTD 1852
ARCHITECTURAL IRON & STEEL WORK
FORGINGS & CASTINGS
CAST-IRON GAS, WATER & SEWER PIPES.
SPIKES & BOLTS.
PATTERNS & MODELS.
OF EVERY DESCRIPTION FOR
BUILDERS, MACHINISTS
& RAILWAYS.
READY CASTINGS A SPECIALTY.
262 TO 268 FRONT ST. EAST. TORONTO.

WATER CRANES
INDICATOR VALVE POST
FOOT AND CHECK VALVES
2-3 & 4 WAY HYDRANTS

Montreal Pipe Foundry Co. Ltd.

SUCCESSORS TO
DRUMMOND, McCALL PIPE FOUNDRY CO. LTD
MANUFACTURERS OF



SPECIAL CASTINGS
FLANGE PIPE
BRANCHES
HYDRANTS
VALVES
VALVE BOXES

OFFICES
CANADA LIFE BUILDING

MONTREAL

LONDONDERRY PIPE FOUNDRY

Cast Iron Water and Gas Pipes, etc.

Londonderry, Nova Scotia

Notice to Contractors

WE can save you money on.....
Granolithic or Crushed Stone
of any size, as we have the most complete plant in
Canada. You will consult your own interests by getting
our prices. We also make a speciality of Slate, Tile,
Granite and all kinds of Stone. Crusher at Jarvis
street wharf
THE POWELL GRANITE & MARBLE CO'Y,
Phone 3440. Office, 482-484 Yonge St., Toronto

PORTLAND GEMENT

For Sidewalks, Pavements, Heavy Masonry and Concrete.
MANUFACTURED BY . . .

Write for Circular
and Prices.

The Rathbun Company
DESERONTO, ONT.

ALEX. GARTSHORE, President. J. G. ALLAN, Secretary and Treasurer. JAS. THOMSON, Vice-President and General Manager.

THE GARTSHORE-THOMSON PIPE & FOUNDRY CO.
LIMITED.

Manufacturers of:::

Flexible and Flange Pipe,
Special Castings and all kinds of
Waterworks Supplies.

CAST IRON PIPE

3 inches to 60 inches diameter.

For Water, Gas, Culvert and Sewer

HAMILTON, ONT.

WATER WORKS PUMPING MACHINERY

We are prepared to equip Municipal or other Water-Works Plants with Pumping Machinery of the latest and most approved designs. We are the largest manufacturers of Steam and Power Pumps in Canada; they are built in all sizes and capacities, and can be implicitly relied upon wherever used. Several excellent second hand pumps in first class condition for water works service on hand at close prices.

SEND FOR CATALOGUE.

NORTHEY MFG. CO. LIMITED

1015 King Street, Subway, TORONTO, CAN.

INDEX TO ADVERTISEMENTS

In the "Canadian Architect and Builder."

Architects. Ontario Directory.....111 Quebec Directory.....viii	Drying Apparatus Cummer & Son Co. 189	Lime. Ontario Lime Association..... xii	Roofers Campbell & Gilday..... Duthie & Sons, Guelph..... Forbes Roofing Co..... Nicholson & Co., D..... Ormsby & Co., A. B..... Rennie & Son, Robt..... Stewart & Co., W. T..... Williams & Co., H.....
Architectural Sculptors and Carvers. Holbrook & Mollington..... 1	Drain Pipes Bremner, Alex..... i Hamilton and Toronto Sewer Pipe Co. ... ix	Luxfer Prisms. Luxfer Prism Co..... x	Sanitary Appliances Ideal Mfg. Co..... The James Morrison Brass Mfg Co ...
Architectural Iron Work. Dominion Bridge Co. I	Elevators Fensom, John..... I Leitch & Turnbull... vi Miller Bros & Tom... vi Morse, Williams & Co. xi	Legal. Denton, Dunn & Boulthce..... 111 Quinn & Morrison.. 111	Stained and Decorative Glass Bloomfield & Son, Henry..... Horwood & Sons, H. Lyon, N. T..... Leonard, B..... Mackey Stained Glass Co..... McKenzie's Stained Glass Works..... The Robert McCausland Stained Glass Co..... Wood & Co.....
Art Woodwork Southampton Mfg. Co. II	Embossed Moulding Boynton & Co.....	Mantles, Grates, and Tiles. Chas. Rogers & Sons Co..... vi Holbrook & Mollington I Rice Lewis & Son.....IV	Shingles and Siding Metallic Roofing Co. 17 Ormsby & Co., A. B.....
Artists' Materials. Heam & Harrison... xi The Art Metropole.. 111	Engravers. Can. Photo-Eng Bureau..... viii	Mail Chutes. The Cutler Mfg. Co. viii	Soil Pipe. Toronto Foundry Co. 111
Builders' Supplies. Bremner, Alex..... i Montreal Directory... xii O'Neil, Wm..... viii Ontario Lime Association..... xii Rice Lewis & Son... IV Toronto Directory... xii	Folding Partitions. Seaman, Kent & Co. i 9 Springer, O. T..... xi	Mortar Colors and Shingle Stains. Cabot, Samuel..... IV Muirhead, Andrew.... i	School and Church Furniture. Can. Office & School Furniture Co. vi Glebe Furniture Co. 1
Building Stone Dealers. Amherst Red Stone Quarry Co..... x Brodie, James..... x Credit Forks Mining & Mfg. Co..... x Fassey, W. H..... x Hood & Son..... vii The Longford Quarry Co..... x	Fireproofing. Montreal Terra Cotta Lumber Co..... xii Rathbun Co. vii	Ornamental Iron Work. Dennis Wire & Iron Co vi Toronto Fence & Ornamental Iron Works. vi	Typewriters. Archibald, Chas E..... i
BRICKS. Beamsvi le Brick & Terra Cotta Co..... vii Toronto Pressed Brick & Terra Cotta Co..... v	Flagstaffs and Windmills. Gould, Shapley & Muir..... 11	Painters. Montreal Directory... xii Toronto Directory... xii	Ventilators Boston Blower Co. 111 Wood & Co.....
Contractors' Plant and Machinery Rice Lewis & Son... IV	Grilles and Railings. Dennis Wire & Iron Co. vi Toronto Fence & Ornamental Iron Works. vi Southampton Mfg. Co II	Plasterers Hynes, W. J..... 189	Wall Plaster Albert Mfg. Co..... 11 Alahastine C..... 11 Bremner, Alex..... 11
Cements. Bremner, Alex..... i Commercial Wood & Cement Co..... IV Owen Sound Portland Cement Co..... I The Rathbun Co..... vii	Granite Quarries Co..... x	Paints & Varnishes Muirhead, Andrew ... i	Wall Paper. Scantlebury, C. B..... 11
Crossed Stains Cabot, Samuel... IV	Heating. Boston Blower Co... 111 Clare Bros & Co..... iv Dominion Radiator Mfg. Co..... i, iii Darling Bros..... 189 General Engin. Co ... 11 Gurney, Tilden Co. ... i Jam & Smart Mfg. Co., v Leonard & Sons, E. IV McClary Mfg. Co..... v Ormsby & Co., A. B. I Robb Engineering Co. vii	Parquet Floors Elliott & Son Company vi	Wire Lathing The B. Greening Wire Company..... 11

Prices of Building Materials.

PRESSED BRICK, Per M.

TORONTO PRESSED BRICK AND TERRA COTTA WORKS.			
	F.O.B.	F.O.B.	
	Milton, Ont.	Montreal.	
Red No. 1.....	\$12 50	\$18 00	
" 2.....	11 00	16 00	
" 3.....	8 00	3 10	
B ff No. 1.....	14 50	20 00	
" 2.....	13 00	8 50	
Brown.....	20 00	25 50	
Roman Red.....	21 00	30 50	
" Buff.....	18 00	33 50	
" Brown.....	35 00	40 50	
Hard Building.....	6 00	11 50	
" Sewers.....	6 00	11 50	
Roofing Tiles, \$20 00 per 1,000, \$2 00 Montreal.			

DON VALLEY PRESSED BRICK WORKS.

	F.O.B.	F.O.B.	
	Don Valley.	Montreal.	
Red A.....	18 00	24 00	
Red B.....	16 00	20 00	
Red C.....	13 00	17 00	
Trojan and Co Indian.....	21 00	28 00	
Pompeian.....	22 00	29 00	
Athenian and Egyptian.....	25 00	31 00	
Tyrian.....	35 00	41 00	
Sicilian.....	40 00	45 00	
Roman.....	35 00	40 00	
Carthagian.....	40 45	45 00	
Ornamental.....	30 00 100 00	30 00 100 00	
Common insides.....	6 00		
Hard sewers.....	7 50		
Vitrified, 18 in., 18 in.....	6 00	22 00	
" " 18 in., 18 in.....	1 00	15 00	

COMMON BRICK, Per M.

	F.O.B.	F.O.B.	
	Toronto.	Montreal.	
Common Walling.....	7 00 8 00	7 50 8 00	
Good Facing.....	8 00 9 00	8 50	
Sewer.....	8 00 9 00	8 50 0 00	

STONE.

Common Rubble, per ton, delivered.....	10 0	11 0
Large flat Rubble, per ton, delivered.....	14 00	18 00
Foundation Blocks, per c. ft. Granite (Stanstead) Ashlar, 6 in. to 12 in., rise 0 in., per ft. Amherst Red Sandstone. Amherst, N.S., per cu. ft. Kent Free stone Quarries, Moncton, N.B., per cu. ft. River John, N. S., brown Freestone, per cu. ft. Port Philip, N. S. Brown Sandstone.....	1 00 1 00 95 90	75 95 95 90

"Scoria" Paving Blocks, 8" x 3 1/2" x 5".....	55	
"Scoria" Paving Blocks, 8" x 3 1/2" x 4".....	45 00	
Massilon.....	30 00	
Quebec and Vermont rough granite for building purposes, per c. ft. f.o.b. quarry	40	1 00
For ornamental work, cu. ft.	40	
Granite paving blocks, 8 in. x 12 in. x 6 in. x 1/2 in. per M.		50 00
Granite curbing stone, 6 in. x 20 in. per lineal foot.....		70

CREDIT VALLEY STONE.

	F.O.B. Quarries.	
Rubble, per car or 15 tons.....	7 00	
Brown Coursing, up to 10 in., per sup. yard.....	1 50 to 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 00
Ashlar, per cub. yd.....	2 00
Dimension, per cub. ft.....	18

SLATE.

	Toronto.	Montreal.
Roofing (8 square).		
" red.....	17 50	20 00
" purple.....	8 50	10 00
" unfasting green.....	8 50	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

CEMENT, LIME, etc.

Portland Cement -			
German per bl.....	2 90 3 10	2 55 2 65	
London.....	2 95 3 00	2 25 2 45	
Newcastle.....	2 70 3 00	1 95 2 10	
" Joseph Bra Portland.....	3 05 3 25	2 70 2 80	
" Dyckerhuth.....	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 15 2 45	
Belgian, natural, per bbl.....	2 50 2 75	2 10 2 20	
Canadian, artificial, ".....	2 85 3 00	2 60 2 70	
Roman.....		2 0 2 25	
Parian.....	5 25 5 25	5 75 5 75	
Superfine.....	2 25 2 50	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 25 2 20	
"Anvil" (Belgian).....		1 95 2 05	
"Burham" (English).....	2 95 3 00	2 25 2 45	
Hydraulic Cement -			
Thorold, per bbl.....	1 50	1 65	
Queenston, ".....	1 50	1 60	
Napanee, ".....	1 50	1 50	
Hull, ".....	1 50	1 50	
Ontario, ".....	1 25		

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

HARDWARE.

The following are the quotations to builders for nails at Toronto and Montreal:

Cut nails, 50d & 60d, per keg	2 25
Steel " " "	2 25

CUT NAILS, FENCE AND CUT SPIKES.

40d, hot cut, per 100 lbs.....	2 15
10 to 12d, hot cut.....	2 25
8d, 9d, " ".....	2 30
6d, 7d, " ".....	2 45
4d to 5d, " ".....	2 55
3d, " ".....	2 80
2d, " ".....	3 15

Cut spikes, 10 cents per keg advance.
Steel Nails, 10c. per keg extra.
Wire nails, 2-75 base price.

Iron Pipe:

Iron pipe, 1/2 inch, per foot.....	6c.
" " 3/4 " " ".....	7 1/2
" " 1 " " ".....	8 1/2
" " 1 1/4 " " ".....	12
" " 1 1/2 " " ".....	17
" " 1 3/4 " " ".....	24
" " 2 " " ".....	30
" " 2 1/2 " " ".....	43

Toronto, 65 per cent. discount.
Montreal, 70 per cent. discount.

Lead Pipe:

Lead pipe, per lb.....	7c.
Waste pipe, per lb.....	7 1/2

Galvanized Iron:

Adam's—Mar's Best and Queen's Head and Opal:	
16 to 24 gauge, per lb.....	4 1/2c. 4 1/2c.
26 gauge, ".....	4 1/2 5
28 ".....	5 5 1/2
Gordon Crown—	
16 to 24 gauge, per lb.....	4 1/2 4 1/2
26 gauge, ".....	4 1/2 4 1/2
28 ".....	4 1/2 5

Note.—Cheaper grades about 1/2c. per lb. less.

Structural Iron:

Steel Beams, per 100 lbs.....	2 75
" channels, ".....	2 85
" angles, ".....	2 50
" tees, ".....	2 80
" plates, ".....	2 55
Sheared steel bridge plate.....	1 75