

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.
- Additional comments:/
Commentaires supplémentaires:

- 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

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 THURSDAY

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. 7.

MARCH 12, 1896

No. 6.

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY THURSDAY

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, Publisher,

CONFEDERATION LIFE BUILDING, TORONTO.
Telephone 2362.

New York Life Insurance Building, Montreal.
Bell Telephone 2299.

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

Advertising Rates on application.

Subscribers who may change their address should give prompt notice of same. In doing so, give both old and new address. Notify the publisher of any irregularity in delivery of paper.

Notice to Contractors

CANADIAN CONTRACTORS HAND-BOOK

A new and thoroughly revised edition of the *Canadian Contractor's Hand-Book*, consisting of 150 pages of the most carefully selected material, is now ready, and will be sent post paid to any address in Canada on receipt of price. This book should be in the hands of every architect, builder and contractor who desires to have readily accessible and properly authenticated information on a wide variety of subjects adapted to his daily requirements.

Price, \$1.50; to subscribers of the CANADIAN ARCHITECT AND BUILDER, \$1.00. Address

C. H. MORTIMER, Publisher,
Confederation Life Building, TORONTO

TENDERS

Will be received at the office of the City Clerk, Chatham, Ont., up to NOON OF MONDAY, THE 30TH DAY OF MARCH, INST., for the following supplies and works for corporation purposes, for one year from 1st April, 1896:

So much per foot for vitrified sewer pipe, to be delivered in such quantities and at such times and places in the City of Chatham as may, from time to time, be required.

So much per lineal foot for stone curbing, to be delivered free on board cars at Chatham.

So much per square foot for putting down such stone walks or crossings as may be required.

Also so much per square foot for imitation stone walks, all excavations made and material found by the contractor. All measurements of areas or openings in walks when they occur to be deducted; all tenders for this work to be accompanied by a specification of the work to be done.

Specifications and further information to be had on application at this office.

The council reserve the right to reject any and all tenders.

JOHN TISSIMAN,

County Clerk.

Chatham, Ont., March 12th, 1896.

TENDERS FOR BUILDING A CHURCH

Tenders will be received by the undersigned in sealed envelopes (marked Tender for Church) up to SATURDAY, APRIL 4TH, A.D., 1896, at 7 p. m., for erecting a Brick Church in the Village of Crediton.

Plans and specifications can be seen at the office of H. C. McElrde, Architect, London, or at the office of the undersigned, after March 20th, 1896. The lowest or any tender not necessarily accepted.

HENRY EILBER, Crediton, P. O.,
Chairman of Committee.

SEALED TENDERS

Addressed to the Architects will be received up to 12 o'clock, noon, on FRIDAY, MARCH 20TH, for the erection of a

BRICK RESIDENCE IN THE ANNEX.

The plans and specifications may be seen at the office of the Architects.

The lowest or any tender not necessarily accepted.

CURRY, BAKER & CO., Architects,
70 Victoria Street, Toronto.

USEFUL HINTS.

GLUING FOR STRENGTH.—It is stated that in putting together quartered pine or any other kind of wood in fact, greater strength and durability can be obtained by placing the grain of the wood at an angle of sixty degrees than can be obtained by crossing at ninety degrees. The reason for this is that as all wood expands and contracts more or less under the variations of moisture in the atmosphere, the pieces glued at an angle of sixty degrees can expand and contract to a certain extent without tearing themselves apart, as is the case when glued at an angle of ninety degrees. The sixty degree glue joint simply pulls the object out of a place a little and disturbs its shape, while the ninety degree glue joint pulls things all to pieces in its effort to accommodate itself to climatic conditions.

Take india rubber, cut into small pieces and digested in sulphuret of carbon, a jelly will be formed; this must be treated with benzine, and thus a much greater proportion of caoutchouc will be dissolved than would be done by any other method. The liquid might be strained through a linen cloth and the sulphuret of carbon be drawn off by evaporation in a water bath, after which the remaining liquid may be diluted at will with benzine, by which means a transparent, but still yellowish, liquid may be obtained. This liquid incorporates easily with all fixed or volatile oils. It dries very fast, and does not shine, unless mixed with resinous varnishes. It is extremely flexible, may be spread in very thin layers, and remains unaltered under the influence of air and light. It may be employed to varnish geographical maps or prints, because it does not affect the whiteness of the paper, does not reflect the light disagreeably, as resinous varnishes do, and is not subject to crack or come off in scales. It may be used to fix black chalk or pencil drawings, and unsized paper, when covered with this varnish, may be written on with ink.

CONTRACTS OPEN.

BLYTHESWOOD, ONT.—B. Roadhouse is preparing to build a brick dwelling in the spring.

QUEBEC, QUE.—It is stated that new churches are to be erected at Hedleyville and at the Palais.

PORT ELGIN, ONT.—A deputation has requested the government to improve the harbor at this place.

GRAND MANAN, N. B.—Burnham & Morrill, Portland, Me., will erect a lobster factory here, 100 x 20 feet.

WALKERVILLE, ONT.—Hiram Walker & Sons are negotiating for a site on which to erect a five-storey hotel.

NEWMARKET, ONT.—The installation of an electric light plant has been decided upon by the town council. Estimated cost, \$8,000.

FLINTON, ONT.—The congregation of the Church of England has purchased village lots for the purpose of building a brick church.

HAVELOCK, ONT.—The proposed Methodist church will be solid brick, estimated to cost from \$3,000 to \$4,000. Contract not yet let.

ELORA, ONT.—The Cockroft, Talbot & Harvie Carpet Co. propose operating a carpet factory here. The capital of the company is \$99,000.

GALT, ONT.—The market committee have been instructed to procure plans for enlarging the market building. The cost will be about \$5,000.

FREDERICTON, N. B.—A bill has been introduced in the Provincial legislature providing for the construction of a system of sewerage for the town.

AMHERSTBURG, ONT.—Application has been made to the government for a charter for the construction of an electric railway from Amherstburg to Harrow.

DUNDAS, ONT.—Mr. Bertram has given notice in Council that he will introduce a by-law to provide for the erection of a new fire hall at the next meeting.

WINDSOR, ONT.—The Water Commissioners are considering a scheme of constructing two wells for waterworks purposes, each 50 x 20 feet and 18 feet deep.

WOODSTOCK, ONT.—The congregation of Knox church have decided to erect a new edifice. The site has been purchased and plans will be prepared at once. The cost will be about \$35,000.

AYLMER, ONT.—The Aylmer Canning Co. propose erecting a brick addition to their factory in Hamilton and a frame addition to their buildings in this town. Estimated cost \$3,500. Contract not yet let.

BARRIE, ONT.—The Joint Stock Company have adopted the plans of Messrs. Kennedy, McVitte & Co., for the new agricultural building, to be used as a hockey and curling rink in winter; size 207 x 70 feet. The Public School Board

have adopted the plans of the same architects for the additions to the model school here. The above architectural firm are also receiving tenders for three dwellings for E. Levigny and for the improvements to John Coffee's hotel.

MOSGROVE, ONT.—F. W. Harmer, township clerk, will receive tenders until Friday, the 20th inst., for the erection of a town hall. Plans may be seen at the office of M. E. Edey, architect, 51 Sparks street, Ottawa.

FAIRVILLE, N. B.—The question of furnishing a water supply for the town is under consideration. A proposal has been made to secure the necessary supply from the system at St. John by means of water mains.

KINGSTON, ONT.—T. O. Bolger, City Engineer, will receive tenders on behalf of the city until the 19th inst. for the following supplies: 200,000 feet B. M. of 2 and 1½ in. plank; 40,000 feet lineal of 5x4 cedar sleepers; hardware, etc.

TORONTO JUNCTION, ONT.—The Board of Health have decided to cooperate with the municipalities of Weston, North Toronto, East Toronto and the Township of York in the erection and maintenance of an isolation hospital.

ST. CATHARINES, ONT.—Tenders are invited by Johnson Clench until Friday, the 13th inst., for an addition to the general and marine hospital, also for the heating and plumbing required. Specifications may be seen at the office of Wm. B. Allen, architect.

GRAND VALLEY, ONT.—The Railway Committee of the Ontario parliament have authorized the Grand Valley Railway Co. to change its proposed route from Berlin to Brantford, to extend to the village of Copetown, passing through the townships of Beverley and Ancaster.

GUELPH, ONT. M. Odell has purchased a building lot and proposes erecting a new residence. The chemical laboratory, which was burned last week, will be rebuilt at once, and will be made one storey higher. Part of the old walls will be utilized in reconstruction.

BROCKVILLE, ONT.—The Public School Board is negotiating for the purchase of Victoria Park for a school site.—The Young Men's Christian Association will erect an \$8,000 building this summer.—A gymnasium costing \$3,000 will be built to the Collegiate Institute building.

STRATFORD, ONT. A project for the construction of a steam or electric railway from Embro to Stratford, a distance of seventeen miles, is being considered by the Board of Trade.—The County Council have resolved to purchase 53 acres of the Idington farm for a House of Refuge site.

HALIFAX, N. S.—Plans for the new building to be erected by Mr. J. E. Roy have not yet been prepared.—Tenders are invited by J. C. Dumaresq, architect, until Monday, the 23rd inst., for the erection of a new wing to the school for the blind and for making alterations to present buildings.

WOODSTOCK, N. B.—The town is asking authority from the legislature to raise \$10,000 by a vote of the ratepayers for the extension of the water works system.—The chairman of the water works committee has been authorized to get tenders for the building of a wooden or steel bridge across the creek.

VANCOUVER, B.C.—Dyking operations are being carried out in the Fraser river valley. The Provincial government have guaranteed interest on \$254,000. The advisability of a grant from the Dominion and Provincial governments for a survey of the Fraser river, with a view to improve the channel and prevent floods by dredging, is also being discussed, and will be brought before parliament.

CHATHAM, ONT.—The Chatham City & Suburban Railway Co. are seeking incorporation to construct an electric railway through the city to a point near the Raleigh and Harwich town line at Lake Erie, with a branch through the township of Dover to the town of Petrolia.—The question of the city's water supply is still under consideration. At a recent meeting of the Council Mr. Jewell, of Chicago, explained his filter system, which he offered to place at about \$8,000 for a 1,000,000 gallon plant.

LONDON, ONT.—The City Engineer will receive tenders until the 12th inst. for the supply of 500 cords of stone.—The city council will apply to the Ontario Legislature for permission to borrow \$205,000 for the construction of the proposed sewerage system.—Work will shortly be commenced on a new business block on the Higgins property on Dundas street. The block will consist of four large stores, and will be three storeys in height. The building will have a pressed brick front, with cut stone trimmings. The cost will be \$12,000 to \$15,000. McBride & Farncombe, architects.—Burke & Horwood, architects, Toronto, invite tenders until the 14th inst. for the erection of a Baptist church in South London. Tenders received at the office of H. C. McBride, architect.—The School Board is considering the question of additional school accommodation. A special committee has reported in favor of the erection of thirty-two new rooms.—Plans are being prepared for additions to the car stables of the Street Railway Company.

OTTAWA, ONT.—Building permits have recently been issued as follows: D. Cuthbertson, for E. W. Clark, four storey brick veneered terrace on Second avenue, to cost \$5,600; D. Cuthbertson, for Mr. Plumb, double brick veneered house on Fourth avenue, to cost \$1,800; E. H. Holby, frame dwelling, on Jane street, \$900; W. A. Bradshaw, frame dwelling on Fifth avenue, \$900; D. O'Grady, frame dwelling on Cambridge street, \$1,000. Mr. O. B. Sheppard was recently in this city in connection with the proposal to erect an opera house here. The site proposed is at the corner of Bank and Somerset streets. The Ottawa Amateur Athletic Club are considering a project to build a \$16,000 wing to the Elgin street end of the present building. The basement will be devoted to a bowling alley, the second storey to the secretary and director's rooms, and the third storey will give a stage, to be added to the present gymnasium, with large boxing rooms and bathroom.—The Board of Directors of the Protestant hospital have finally adopted the plans prepared by Mr. Calderon, architect, for the proposed alterations. The cost of the work is not to exceed \$4,500.—Nixon's confectionery establishment on Sparks street is to be enlarged and improved.—The School Board has recommended the purchase of a site in St. George's ward for a new school building.

HAMILTON, ONT.—The Wentworth Cycling Club, which is applying for incorporation, propose to erect a club house at an early date.—In connection with the scheme to divert the east end sewer, the city engineer intends to propose a system of interception.—The police commissioners are discussing the proposal of introducing the call-box system. The cost is placed at \$5,000.—The market committee have decided to erect a shelter at once, plans therefore to be submitted on the 20th of April. It will be 300 feet long and will cost \$6,000.—The J. G. Brill Co., car builders, of Philadelphia, are said to be considering the location of a branch factory in this city.—The Hamilton Radial Railway Co. and Lake Shore Electric Railway Co. have applied to the Nelson Township Council for right of way over a portion of the Beach. The first mentioned

Company proposes to build from Hamilton to Burlington this year. The Lake Shore Company has a charter to build a line from Hamilton to Oakville.—The R. C. Y. C. have decided to rebuild the club house, at a cost of \$3,000. A Toronto company is considering the erection of a factory near the smelting works for the manufacture of mineral wool.—It is rumored that the Hamilton Radial Railway Company proposes to buy the old post-office building on James street north and convert it into a station.—G. F. Simpson is promoting an enterprise to supply electricity for lighting and power purposes.—Forty-one tenders have been received for the construction of the Collegiate Institute and Normal School. A meeting will be held in a few days to award contracts.

WINNIPEG, MAN.—It is said to be the intention of the government to grant \$200,000 towards the improvements of the St. Andrews rapids, near this city.—The Board of Trade opposes granting exclusive rights to the Hudson Bay Canal & Navigation Co. It is believed the Dominion government should undertake the construction of the proposed water way from the southern boundary of the province to Hudson Bay.—The Committee on Works has recommended the construction of the following pavements: Assiniboine avenue, from Main street to Kennedy street, cost \$12,669; York avenue, from Smith street to Kennedy street, cost \$5,347; St. Mary avenue, from Main street to Donald street, cost \$4,109; Graham avenue, from Main street to Donald street, cost \$4,109; Ellice avenue, from Notre Dame avenue to Donald street, cost \$2,377; Market street, from Main street to Bertha street, cost \$4,930; Kennedy street, from Assiniboine avenue to Broadway, cost \$5,482; Donald street, from Assiniboine avenue to Portage avenue, cost \$14,710.—The Provincial government has been requested to take into consideration the extension of the Stonewall branch of the Canadian Pacific railway for a distance of 15 miles.—The city council are considering the proposal to grant \$30,000 for permanent improvements to the Exhibition grounds.—Local capitalists are considering a proposition to erect a large opera house with a seating capacity of 1,200 persons. Among the promoters are Messrs. John Galt, Robert Kerr and A. M. Nanton.—Gen. Browne, architect, is preparing plans for a stone and brick residence for W. H. Culver, two storeys, with attic and basement and all modern convenience. Mr. Browne also has plans in course of preparation for a residence for Wm. Blackwood.

MONTREAL, QUE.—Although it is believed that building operations in this city will not be brisk this season, considerable work will be carried out. The new C. P. R. station will be commenced shortly, and the foundations built this year. The Street Railway Company contemplate making extensions to their car sheds, power-house, etc., besides laying considerable additional track. Watson & Foster's mammoth wall paper factory will also be built, the plans for which have been prepared by Mr. A. C. Hutchison. The building will be 325 feet x 106 feet, with an additional warehouse measuring about 108 feet square. The main building will consist of a basement, with one floor above, while the extra warehouse will be three stories high. The old Standard building, in which the Ville Marie Bank is located, will receive two additional stories this year, bringing it up as high as the company's new structure alongside. Mr. A. F. Dunlop, architect, has the work in hand. There will be a hydraulic steam elevator, while the plumbing will be entirely renewed. It is stated that the company estimates the cost of alterations at \$25,000.—The Lachine Rapids Hydraulic & Land Co. will receive proposals until the 25th inst., for genera-

tors, etc., necessary for the transmission of about 16,000 horse power. W. Mc Lea Walbank, managing-director, 214 St. Jamesstreet. The Harbor Commissioners invite tenders until the 17th inst. for the supply of castings, iron, spikes, bolts, oil and other stores required for the next twelve months, also for supplying 5,000 tons of steam coal. Alexander Robertson, secretary. — The Commissioners have decided to request the Dominion government to advance a sum not exceeding \$2,000,000 to be applied for the redemption of certain debentures and for the construction of necessary works in the harbor. — A. C. Hutchison, architect, is preparing plans for a pressed brick residence for H. Watson. Same architect is also calling for tenders for a store and dwelling for Mr. S. White. — A. T. Taylor, architect, is preparing plans for the proposed additions to the Jeffrey Hale hospital in Quebec. — A building permit has been granted to the Sisters of the Providence, for the erection of a presbytery on Dufresne street, two stories, in stone, to cost \$4,000.

TORONTO, ONT. — The following sums have been placed in the government estimates for the Province of Ontario for public works: To provide new channel for flood water and repair lock at Magnetawan village, \$5,000; Peninsula Creek, to dredge channel, \$2,500; Gull and Burnt river works, to rebuild dams at outlets of Kenesis, Grace and Bear lakes, and to extend Hawk lake slide, \$5,000; Scugog river, to improve channel below Lindsay lock, \$3,000; Madawaska river, to construct swing bridge at Combermere, \$1,100; Nation river, reconstruction of bridge over Nation river, near Castleman, \$2,000; for improvement, Mississippi river at Ferguson's Falls, \$1,500; constructing dredge for completion by the Dominion government of work of dredging and deepening channel of Nation river, \$4,000; Castor river improvement, \$5,000; River Aux Raisin, deepening and removing rock obstructions from channel, \$2,000 — Mr. J. J. Wutrow, president of the Industrial Exhibition Association, is urging upon the city council the necessity for increasing the accommodation in the main building at the exhibition grounds. It has been suggested that the building might be enlarged by extending southwards the full length of the building, at a probable cost of \$20,000. The machinery hall requires improvements, to cost \$6,000. An improved building for heating apparatus is also required. — The Parks Committee have decided to expend \$1,700 on painting and decorating the Horticultural Pavilion. The interior work will be done this year. — Mr. F. E. Fellows, C.E., will receive tenders until the 17th inst., for the construction of a grand stand and other structures in the new annoury, for the Canadian horse show. — Property in Parkdale is reported to be meeting with considerable demand, and plans are in course of preparation for several new houses. — Mr. Keating, city engineer, has stated that the general plans and specifications for widening the Queen street subway have been approved of by both the Grand Trunk and Canadian Pacific Railway Companies, the only matter yet in question being the superstructure. — The Board of Works has recommended that in accordance with the recommendation of the City Engineer, a by-law be submitted to the people to raise \$75,000 for constructing a new steel conduit across the bay. — The Caledonian Society and St. Andrews Society are considering the erection of a memorial hall to be built in honor of the late Robert Burns. — Building permits have been granted as follows: Wm. White, pr. s.d. two-storey and attic bk. dwellings, s. e. cor. Lopald and Darling ave., cost \$4,500, also pr. s. d. two-storey and attic bk. dwellings, 105-7 Springhurst ave., cost \$4,500; J. Ferris Smith, pr. s.d.

two storey and attic bk. dwellings, 1411 King st w., cost \$4,500; Rev. Peter Addison, two-storey and attic bk. dwelling, 28 Markham st., north of Harbord st., cost \$2,100; Hutchins & Burns, pr. two-storey and attic dwellings on Crawford st., cost \$5,000.

FIRES.

The residence of John T. Campbell, at Eagle, Ont., has been destroyed by fire. — The McMaster Manufacturing Co.'s establishment at Orangeville, Ont., was totally consumed by fire on the 7th inst. The building, which is owned by Mr. Stephenson, is valued at \$5,000, on which there is an insurance of \$2,500. — At Fordwich, Ont., on the 4th inst., J. C. Bell's hardware store and Dr. Spence's drug store were burned. Loss, \$3,000, partially covered by insurance. The fruit house of William Wade at Brighton, Ont., has been burned. Loss on building, \$1,000. — Daniel McCaskell's residence at Beamsville, Ont., has been burned. The Presbyterian mission church at Pottersburg, Ont., was destroyed by fire on the 9th inst. — The Cole block and the Williams block at Castleton, Ont., were burned on Monday last. The loss on buildings will reach \$10,000, partially covered by insurance. — Buckle & Sons' lace factory at Port Hope, Ont., was completely destroyed by fire on Tuesday last. Loss, \$6,000; insurance on building, \$800. — The residence of Joseph Long at Melbourne, Ont., has been burned. Loss, \$2,000.

CONTRACTS AWARDED.

SARNIA, ONT. — The town council have disposed of \$5,000 of debentures to George A. Stimson & Co., of Toronto.

MONCTON, ONT. — Davis & Ezerman, of Mitchell, have obtained the contract for the erection of the Methodist parsonage here.

CLINTON, ONT. — Cooper Bros., of this town, have been awarded the contract for a two-storey brick residence for G. Jenkins, of East Wawanosh.

KINGSTON, ONT. — The Smead-Dowd system of heating has been recommended for the new school building. The cost of the system placed at \$1,800.

BROCKVILLE, ONT. — The Gardiner Tool Works have let a contract for the erection of an addition to their brick factory, 42 by 60 feet, three storeys high.

MONTREAL, QUE. — W. A. Fleming has been awarded the contract by the Ottawa fire department for 1,000 feet of new Era rubber brand of fire hose, and also by the Lachine fire department for 500 feet of Trial brand of the Fabric fire hose.

COLCHESTER SOUTH, ONT. — S. C. Zimmerman has the contract for Andrew Elliott's new residence. The building will be 18 x 26 feet and two storeys high.

Bertrand & Little have been awarded the contract for a brick building to be used as an implement warehouse by the Massey Harris Co.

QUEBEC, QUE. — The contract for the construction of the new church at St. Malachie, County of Dorchester, has been given to Mr. Elzear, Metivier, contractor, of St. Damien de Buckland. It will cost \$15,500. — Ed. Guigras has been given the contract for a two-storey brick house, 30 x 30 feet, for J. Marauda, to cost \$1,200.

WALKERTON, ONT. — The Stratford Bridge Co. secured the contract for building the superstructure of the steel bridge at Tara, at the tender of \$1,285. George Baker, of Allenford, secured the stone work for abutments, at \$5.00 per cubic yard, to include all excavation and coffer dam, to be built with quarry stone, all to be completed July 15th, 1896.

QUEBEC, ONT. — The Board of Directors of the General Hospital have accepted tenders for the new wing as follows: stone and brickwork, Thos. Irving; carpenter work, R. Mahoney & Son; plastering, Hoide & Son, Toronto; painting, Moffatt Bros.; roofing, Rennie & Son, Toronto; tinsmithing, J. R. Jackson & Co. The plumbing and heating tenders are not yet awarded. Cost, \$12,000.

OTTAWA, ONT. — H. McColl has secured the contract for placing elevators in Cluff's new hotel and in the new building now being erected by Orme & Son. The elevators are being built by Kerr & Morgan, of Montreal. — The Ottawa Gas Company has let the contract for a new gas-holder tank to Felix McCulloch. It will be built of brick, laid in Portland cement. The total cost, including structure to contain the tank, will be about \$50,000.

BUSINESS NOTES.

A. V. McDonald, contractor, Vancouver, is reported to have left the country.


Linnard & Corbin, contractors, Vancouver, B. C., are opening a branch office at Rossland.

F. Duclos, plumber, Montreal, is reported to have assigned. Liabilities about \$10,000.

W. R. Wetmore, plumber and steam-fitter, Yarmouth, N. S., has made an assignment. Liabilities, \$3,300.

Jerome Lecompte, Fils & Cie, plumbers, Montreal, have dissolved, and a new partnership has been formed, composed of Jerome Lecompte, Gaspard Lecompte, and E. Lecompte; style unchanged.

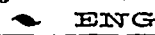
The aluminum process for the decoration and preservation of iron and steel is intended to take the place of nickeling, tining and coppering. The coating leaves the sharpness of the outline unimpaired, and adheres close to cast and wrought iron work.

EUREKA  **MINERAL WOOL**

SECTIONAL

STEAM PIPE and BOILER COVERING

Gives Dry Steam at long distances without loss of power.

ASBESTOS GOODS  **ENGINE PACKINGS**

EUREKA MINERAL WOOL & ASBESTOS CO., - 124 Bay St., TORONTO

THE G. & J. BROWN MFG. CO.

Railway and Contractors' Plant.

BRIDGE BUILDERS

BELLEVILLE, ONT.

MISTAKES IN THE BUILDING TRADE.

A paper was read before the members of the Glasgow Building Trades' Exchange at the last monthly meeting by Mr. Alexander Muir, of Messrs. Alexander Muir & Sons, builders, on "Mistakes in the Building Trade." The author dwelt briefly on the imposing grandeur of the buildings of the ancients as compared with those of the present day. He instanced the Grand Colonnade of Palmyra with its 1,500 columns, the fragments of which now served to house a few Arab peasants. He laid the blame of our pettier structures on the fever heat at which we now lived. Our buildings, like everything else, were rushed. In the far back days buildings were planned and erected calmly and without hurry, and consequently gained in dignity. Even within the present century very much more time was allowed to builders than at present, and then builders seemed to take more enjoyment out of life, to labour less and to gain greater profits. In these days very many proprietors were resolved on getting a magnificent structure at a ridiculously small price. They started the economizing process by employing an inferior architect; and architect and measurers too frequently combined to persuade the economist that his notions could be carried out for the sum he proposed to expend. In the end he discovered that the cost was greatly in excess of his anticipation. This method of doing things told against the contractor, as, in order to keep the proprietor as long as possible in ignorance of the ultimate cost, he was only granted instalments in proportion to the schedule price. Consequently he was kept lying out of considerable sums. At the end of the contract, too, there was always the greatest difficulty in getting payment of the inevitable extras from the disgusted proprietor. In connection with these extras, Mr. Muir protested against the practice of architects or measurers altering the contractors' prices without consulting them, and of submitting these to a clerk of works to be checked. They ought to be gone over with the contractor himself and adjusted. He maintained that in all contracts the selecting of an efficient inspector was very essential. Mr. Muir dwelt on the old custom of contractors measuring the work for themselves, which, he stated, was of course impossible in their city. This practice, he said, was still carried on in Australia, and apparently beneficially to not a few contractors. He advocated the strict adherence, where practicable, to the adopted modes of measurement and clear details in schedules as tending to prevent mistakes and misunderstandings, and spoke strongly against measurers endeavouring to get

cheaper estimates by misleading descriptions in schedules. Mr. Muir vigorously deprecated the over-anxiety of contractors to secure, if possible, every contract that was issued, for the mere sake of leaving monuments to their memory. He held that no contractor should take a contract unless at a reasonable profit. The present keenness of competition was not conducive to good work. Every man should have time to eat, drink and enjoy the fruits of his labour. In conclusion, advertising to municipal structures, Mr. Muir regretted that in the design of the new art gallery, erected by Glasgow funds, the gentlemen responsible should not have seen their way to employ Glasgow talent, of which, he contended, there was abundance; and that in connection with the Jamaica Bridge, for the sake of a few thousands, the original broad scheme should have been abandoned.

BRICK-DUST MORTAR AS A SUBSTITUTE FOR HYDRAULIC CEMENT.

The use of brick-dust mortar as a substitute for hydraulic cement, where the latter cannot be obtained, is now recommended; experiments made with mixtures of brick-dust and quicklime showing that blocks of one-half in. in thickness, after immersion in water for four months, bore, without crushing, crumbling, or splitting, a pressure of 2,500 pounds per square inch. It is considered too that the addition of even as small a proportion as one-tenth as much brick-dust as sand to ordinary mortars, is preventive of the disintegration so often characterizing mortars used in the masonry of public works. The use of brick-dust mixed with lime and sand is said to be generally and successfully practiced in the Spanish dominions, and is stated to be in all respects superior to the best Rosendale hydraulic cement in the construction of culverts,

drains tanks, or cisterns and even roofs, whether for setting flat tiles or for making the usual tropical flat roof. The proportions used there in the manufacture are, approximately one of brick-dust, one of lime, and two of sand, mixed together dry and tempered with water in the usual way. —Arthur Lee in Stone.

DEBENTURES PURCHASED

Municipalities issuing debentures, no matter for what purpose, will find a ready purchaser by applying to G. A. STIMSON & CO., 9 Toronto Street, Toronto. Any assistance required in computing calculations in connection with sinking fund, etc., will be gladly given. N. B.—Money to loan at lowest rates on first mortgage

MUNICIPAL DEBENTURES

BOUGHT AND SOLD ON FAVORABLE TERMS.

A. E. AMES & CO.

— Bankers and Brokers —

10 King Street West - TORONTO

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, Ltd.

WALTER MILLS, General Manager.

Head office: INGERSOLL, ONT.

*Water Works
Fire Hydrants
Stop Valves
3" to 36"*

BOILERS, TOWERS & C, ENGINES AND GENERAL WORK

JNO. PERKINS CO'Y

Toronto Engine Works TORONTO

BELLHOUSE, DILLON & CO., 30 St. Francois Xavier Street MONTREAL

Sole Agents in Canada for the

COMPAGNIE GENERALE DES ASPHALTES DE FRANCE

(ROCK ASPHALT)

PORTLAND CEMENT

NORTH, CONDOR, SITTING LION AND

WHITE CROSS BRANDS

Paving and Fire Brick a Specialty

Drummond McCall Pipe Foundry Company,

MONTREAL

MANUFACTURERS OF

CAST IRON WATER AND GAS PIPES

WORKS: LACHINE, QUE.

PRICES ON APPLICATION.

ST. LAWRENCE FOUNDRY COMPANY Manufacturers of

CAST-IRON WATER & GAS PIPES.

ARCHITECTURAL IRON & STEELWORK.

Front St. East
TORONTO, ONT.

MUNICIPAL DEBENTURES

wanted for foreign clients. We can place Debentures direct with foreign clients without charge to municipalities.

: : : Commission allowed to persons introducing new business : : : :

ÆMILIUS JARVIS & CO.

—(Member Toronto Stock Exchange)—
Stock and Bond Brokers. Investment Agents. 23 King St. West, TORONTO

ELECTRIC RAILWAY BONDS PURCHASED,

STOCK EXCHANGE ORDERS PROMPTLY EXECUTED.

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

Paving Granite

Granite Sets for Street Paving.
CURBING cut to any shape ordered.
Quarries, St. Phillippe d'Argenteuil, P. Q.
Address all communications to
JOS. BRUNET - COTE DES NEIGES, MONTREAL

W. McNALLY & CO.
Building and Contractors'
Supplies

SEWER PIPES & PORTLAND CEMENTS

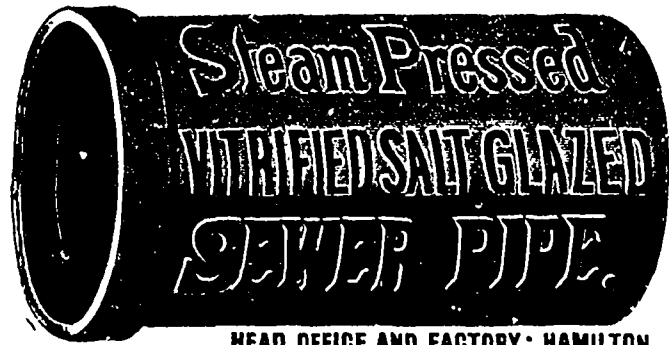
PATENT WALL PLASTER—The hardest, quickest
drying and cheapest material made.
Corner McGill and
Wellington Streets, **MONTREAL**

DRAIN PIPES
CEMENT . . .
FIRE BRICKS

AND ALL KINDS OF
Builders' Supplies

F. HYDE & CO.
51 Wellington Street, - **MONTREAL.**

HAMILTON AND TORONTO SEWER PIPE CO.

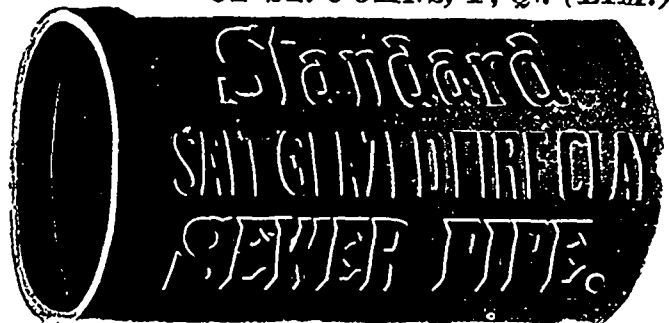


— FOR —
SEWERS,
CULVERTS
AND
WATER PIPES.
INVERTS
Fire Brick Sewers
Write for Discounts.

HEAD OFFICE AND FACTORY: HAMILTON, CANADA.

THE STANDARD DRAIN PIPE CO.

OF ST. JOHNS, P. Q. (LIM.)



Manufacturers of
Salt-Glazed
Vitrified
SEWER
PIPES

Double Strength
Railway Cul-
vert Pipes,
Inverts, Vents,
AND ALL KINDS OF FIRE CLAY GOODS.

JOHN McDOUGALL CALEDONIAN IRON WORKS **MONTREAL, P. Q.**

WORTHINGTON PUMPS



**BOILERS
ENGINES**

. . . . MACHINERY OF ALL KINDS

STEAM AND POWER

FOR ALL DUTIES



NORTHEY CO.
LTD.

TORONTO, ONT.

THE LAURIE ENGINE CO., MONTREAL
Sole Agents for Province of Quebec.

The Central Bridge and Engineering Company, Ltd.

Capital Stock ± PETERBOROUGH, ONT. ± \$200,000.00



WM H LAW Manager and Engineer

Manufacturers of

**RAILWAY
HIGHWAY BRIDGES**

Viaducts, Piers, Roofs, Turntables,
Girders and Architectural Work.

:: CAPACITY: 5,000 TONS PER ANNUM ::

G. N. REYNOLDS, Toronto Agency
North of Scotland Chambers, 20 King St
West. Telephone 111.

MUNICIPAL DEPARTMENT

ASPHALT PAVEMENTS.

Editor CANADIAN CONTRACT RECORD.

DEAR SIR,—It is popularly supposed that asphalt pavements are more slippery than any other kinds of pavement, but careful observations, extending over a long period, show that such is not the case. In 1885 systematic observations were made in ten different cities, extending over a period of 192 days, in which over 800,000 horses were observed, and it was shown that on an average a horse travelled 583 miles before falling on asphalt and only 413 miles before falling on stone, or in other words, that for the same distance travelled, there were 41 per cent. more accidents on stone than on asphalt. The gritty surface of the

1890, and two years before a piece of Trinidad asphalt of about equal area and the same grade had been laid on another portion of Madison ave. The two pavements were subjected to identically the same conditions and afforded a good opportunity for testing their relative merits on the score of slipperiness. Careful observations were therefore made on an extended scale, lasting through a period of five weeks or 30 days (Sundays excepted), from January 19th to February 21st. The number of passing vehicles was carefully counted on the Trinidad pavement at the intersection of 27th street and on the Sicilian or bituminous limestone pavement at the intersection of 39th street. The number of horses falling within a distance of 200 feet on either side of each observation point was also recorded, and the accidents were classified into complete falls, falls on knees and falls on haunches. The observers were changed from one pavement to another at the end of two weeks and their reports were all verified by affidavits. The following results were obtained:—

HOURS	VEHICLES				ACCIDENTS				REMARKS
	Less than 1 ton	Between 1 ton and 3 tons	Over 3 tons	Total	Falls on knees	Falls on haunches	Complete falls	Total	
Jan. 19-31	21,700	7,121	320	29,141	15	28	41	84	Sicilian Rock asphalt cor. 39th St.
Feb. 2-14	21,595	9,551	1,206	32,352	27	20	102	149	
Feb. 16-21	11,008	4,939	560	16,505	7	13	54	74	
	54,301	21,611	2,086	77,998	49	61	197	307	
Jan. 19-31	21,171	9,456	2,842	33,472	3	1	.....	4	Trinidad Asphalt cor. 27th St.
Feb. 2-14	22,467	13,261	2,632	38,350	.....	.....	.....	.....
Feb. 16-21	13,305	6,276	1,227	20,808	.....	.....	.....	.....
	56,945	28,993	6,701	92,639	3	2	.....	5	

Trinidad asphalt pavements, due to the combination of sand and bitumen, is incapable of taking the polish which makes the stone pavements so slippery. The stone surface yields no security to the horse; it is only by catching his shoe in the joints that he is enabled to retain his footing; if his shoe slips beyond the second joint it is almost impossible to recover himself, and it is due to this cause that more horses fall in the long run on stone than on asphalt.

The asphalt pavement also dries quickly after a rain, and thus escapes in a measure the damp, greasy condition which renders wood so slippery. The pavements of French rock asphalt or bituminous limestone have not been extended of late years in Paris or London, as already stated, because they are so very slippery that they are dangerous. They were definitely rejected after full trial in Washington for this same reason, while the Trinidad pavement has obtained a development of 125 miles in that city. The bituminous limestone pavements of Washington as well as those laid on Fifth avenue in New York and in other localities, have been taken up and replaced by pavements of Trinidad asphalt. During the years of 1890 and 1891 the pavement of rock asphalt or bituminous limestone was again introduced in New York, only to be again abandoned on account of its slipperiness. None of it has been laid since 1891. A piece of it was laid on a portion of Madison ave. in New York in

In other words there were more than sixty times as many accidents on the Sicilian pavement as on the Trinidad, and of the accidents on the Sicilian pavement, more than half were complete falls. Nothing further is required to show the vast difference between the rock asphalt pavements as laid in England and elsewhere and the Trinidad asphalt pavements as laid in Toronto.

Yours truly,
W. G. MACKENDRICK.

NEW MATERIAL FOR STREET PAVING.
—An iron brick for street paving has been invented by William H. Nevins, of Rock Island, Ill. The iron brick is the size of ordinary paving brick, and is hollow, with open ends. In the upper or surface edge are a series of perforations, through which sand is swept after the pavement is laid, until it is filled. The sand is meant to add strength to the brick and deaden sound, while the holes admit water to drain off and serve as a vent so that no damage can result to the iron by the action of frost. The cubes are even and regular, and are cast strong enough to prevent breaking under the heaviest load; a street laid with them would be ideally level and the spacing would afford a foothold for horses. Mr. Nevins says that these bricks can be cast from stove plate iron at any foundry, which would be an advantage to any town in which they were used, affording employment in their manufacture to the home manufacturers.

MAINTENANCE OF A SEPARATE SYSTEM OF SEWERS.*

By T. HARRY JONES, A. M. Can. Soc. C. E., Brantford.

The Brantford sewerage system was designed by Willis Chipman, Civil and Sanitary Engineer, Toronto, in 1889, and constructed in 1890, 1891 and 1892, Mr. Chipman being the Chief Engineer, and the writer Resident Engineer.

During the past three years, the system has been in charge of the writer as City Engineer, and all work in connection with the extension and maintenance of the system has been performed by the city by day labour.

The following summary will give an idea of the extent of the system:

Population of the City of Brantford.....	16,314
Assessed value.....	\$5,760,420
Total expenditure on sewers, including cost of street portion of house sewer and maintenance to end of 1894	\$137,314
Total length of main sewer 15 in. to 24 in. in diameter.....	2.1 miles
Total length of sub-mains and laterals, 9 in. to 15 in. in diameter.....	11.2 miles
House sewers. On streets 4.3 miles. On property 5.1 miles. Total.....	9.4 miles
About 1 per cent. of the above is of 6 in. pipe and the balance 4 in.....	
Number of connections with sewers.....	497
Population using sewers.....	3,000
Average annual increase of population using sewers.....	500
Number of Manholes.....	178
Number of lamp-holes.....	75
Number of flush tanks.....	32

The general character of the soil is sand and gravel, with clay and quicksand in a few sections.

FLUSH-TANKS.

Of the 32 flush-tanks in use, 9 are the Van Vranken and the remainder a compound of the Field and Van Vranken, consisting of the Field syphon and the Van Vranken tilting tank. The best results we have obtained from the Van Vranken.

Monthly inspections are necessary in order that they may be kept properly working, it being generally found that on each visit two or three require some slight attention, such as regulating the water or giving air. We found that during the year some three or four need repairing, the chief difficulty arising from the rusting and catching of the tilting tank.

Each tank holds about 200 gallons of water and is set to discharge once a day.

FLUSHING.

The flush-tanks are generally found sufficient to keep the 9 inch sewers clear, although it is occasionally found advisable to turn the water in the flush-tanks on to the full extent.

It has been found necessary to pass the plunger through only two of the 9 inch sewers during the past three years, each of these sewers having been flushed once in this manner.

There are two of the 12 inch sewers which require flushing about once in every three months. In one of these the sewage backs up owing to a fungus growth becoming attached to the pipes. The other 12 inch sewer—known as the Clarence street sewer—was constructed under great difficulties, being laid for a distance of 2,300 feet in running sand, and at an average depth of 12 feet below the ground and 5 ft. below the water level, and running parallel to and about 15 feet distant from a line of railway.

* Paper read at the annual meeting of Ontario Land Surveyors.

(To be Continued.)

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

LAW BROS. & Co.

FOUNDERS AND MACHINISTS

OTTAWA, ONT.



Hydrants

Valves

Waterworks Supplies

Specials

Also CASTINGS of every description.

Send for a copy of the second edition of the CANADIAN CONTRACTOR'S HANDBOOK. Price, \$1.50; to subscribers, \$1.

MERRIFIELD & WESTCOTT

ENGINEERS and CONTRACTORS

FOR

WATER WORKS AND GAS PLANTS

269 Front Street East, TORONTO.

WILLIS CHIPMAN, B. A. Sc.,

M. Can. Soc. C. E.; M. Am. Soc. C. E.; M. Am. W. W. Ass'n.

CIVIL AND SANITARY ENGINEER

Water Works - Sewerage
Sewage Disposal
103 BAY STREET - TORONTO.

GEO. WHITE - FRASER

C. E., D. T. S., A. AM. INST. E. E. ENG.

CONSULTING

ELECTRICAL ENGINEER

Electric Railways and Electric Light.
SPECIALTY: Specification and Superintendence of
MUNICIPAL PLANTS.
18 Imperial Loan Building - TORONTO

DAVIS & VAN BUSKIRK

Graduates Royal Military College of Canada.

- - Civil Engineers - -

SPECIALTY: Municipal Engineering, including
Drainage, Sewerage, Sewage Disposal, Water-
works, Roadways and Bridges.

W. F. Van Buskirk, A. M. Can. Soc. C. E., Stratford.
Wm Mahlon Davis, M. Can. Soc. C. E., Woodstock.

JOHN GALT, C. E. & M. E.

(Member Can. Soc. C. E.)

CONSULTING ENGINEER AND EXPERT

Specialties:
Water Supply and Sewerage, etc.
Electric Power, Lighting, Railways, etc.

Offices:
CANADA LIFE BUILDING - TORONTO

ALAN MACDOUGALL

M. CAN. SOC. C. E. M. INST. C. E.

CIVIL AND SANITARY ENGINEER

ABERDEEN CHAMBERS,

35 East Adelaide St. - TORONTO

New Telephone Number, 1252

INDEX TO ADVERTISEMENTS

In the "Canadian Architect and Builder."

Architects. Ontario Directory.....111 Quebec Directory... ii	Contractors' Plant and Machinery Rice Lewis & Son.... 1V	Heating. Gurney Foundry Co., 34 McDougall & Co., R., 21 Krug & Son, Warden, iv Ormsby & Co., A. B., 1 Toronto Radiator Mfg Co..... iii	Plumbers Ballantyne, James.... ii Douvillie, E..... ii
Architectural Sculptors and Carvers. Beaumont, H..... viii D. M. Art Woodwork Company..... v Holbrook & Mollington..... i Lamar & Meigs..... ii McCormack, W. N..... ii	Concrete. Brenner, Alex..... 1V Currie & Co., W. & F. P., xii Maguire Br. s..... i Owen Sound Portland Cement Co..... ix Rathbun Co., The..... II	Interior Decoration Cast e & Son..... viii Elliott, W. H..... vi	Roofing Materials Ormsby & Co., A. B., 1 Metallic Roofing Co., vii
Architectural Iron Work. Dominion Bridge Co. 1 Chanteloup Mfg. Co., 1	Drain Pipes Brenner, Alex..... 1V Currie & Co., W. & F. P., xii Hamilton and Toronto Sewer Pipe Co., II Maguire Bros.....	Time. Currie & Co., W. & F. P., xii Ontario Lime Association..... III	Reflectors Frink, I. P..... ii
Art Woodwork Dom. Art Woodwork Company..... vii Southampton Mfg. Co. ia	Draining Tables. Laughlin-Hough Drawing Table Co..... 1	Legal. Denton & Dods..... III	Roofers Ormsby & Co., A. B., 1 Douglas Bros..... ix Duthie & Sons, G..... ix Hutson, W. D..... ix Rennie & Son, R..... ix Stewart, W. T..... ix Williams & Co., H..... ix
Bricks (Pressed) Beamsville Pressed Brick Co. i Burlington Pres'd Brick & Terra Cotta Co., vi Morrison, T. A..... xii	Elevators Fensom, John..... 1V Leitch & Turnbull.... I Miller Bros & Toms.. v	Mantle Tiles and Grates. Rogers, Son & Co. Charles..... ii	Sanitary Appliances Toronto Steel Clad Bath & Metal Co..... viii
Builders' Supplies. Brenner, Alex..... 1V Currie & Co., W. & F. P., xii Clatworthy, Geo..... xi Maguire Bros..... i Ontario Lime Association..... 111 Rice Lewis & Son 1V	Electric & Gas Fittings. Keith & Fitzsimmons 1V	Machinery Petrie, H. W..... iv	Shingle Stains Cabot, Samuel..... 1V
Building Stone Dealers. Clark, Wm..... x Dartnell, E. F..... viii Fish, C. E..... x Samuel & Son, Thos... iv Turner & Brown..... 1V	Engravers. Can. Photo-Eng Bureau..... xii	Mortar Colors and Shingle Stains. Cabot Samuel..... 1V Maguire Bros..... i Muirneau, Andrew.... i	Stained and Decorative Glass Castle & Son..... v Dominion Glass Co.... v Horwood & Sons, H... v McCausland & Son... v McKenzie's Stained Glass Works..... v Longhurst, H..... v Lyon, N. T..... v
Builders' Hardware. Gurney, Tilden Co... iv Rice Lewis & Son.... 1V	Engraving. Can. Photo-Eng Bureau..... xii	Ornamental Plasterers. Hynes, W. J..... vii	Shingles and Siding Metallic Roofing Co., vii Ormsby & Co., A. B., 1
Creosote Stains Cabot, Samuel.... 1V	Fire Brick and Clay Brenner, Alex..... 1V Currie & Co., W. & F. P., xii Maguire Bros..... i	Paints & Varnishes. Muirhead, Andrew.... i	Terra Cotta Rathbun Co., The.... 11
Church and School Furniture. Can. Office & School Furniture Co..... v Snider, J. B..... v	Floor Deafener Lazier & Sons, S. A.. 111	Painters. Gilmor & Casey..... 111	Wall Plaster A abastine Co., The.. 1V Albert Mfg. Co..... x Hannaford Bros. Mfg. Co..... x Rathbun Co., The.... 11
Chimney Topping. Brenner, Alex..... 1V Currie & Co., W. & F. P., xii	Galvanized Iron Workers. Douglas Bros..... ix Ormsby & Co., A. B., 1	Plasterers Hynes, W. J..... vii	Window Blinds Seaman, Kent & Co... v Semmens & Evel.... ix
	Grates and Tiles. Holbrook & Mollington i Rice Lewis & Son.... 1V	Plastering. Cottingham, Walter H vi	
	Granite Brunet, Jos..... ii	Plate Glass McCausland & Son... v The Consolidated Plate Glass Co..... ii	
		Parquet Floors Elliott, W. H..... vi	
		Prismatic Glass. Prismatic Glass Co... 34	
		Patent Medicines. Ripar's Chemical Co... v	

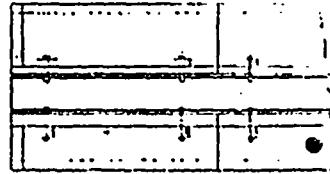
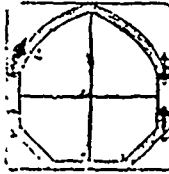
J. McDOUGALL, C. E.,
ENGINEER OF THE COUNTY OF YORK
GENERAL MUNICIPAL ENGINEER
Consulting Engineer for Municipalities in regard to
Electric Railway and other Franchises.
Specialties: Bridges, Foundations, Electric Railways,
and Roads. Surveys made; Plans, Specifications and
Agreements prepared, and work superintended.
COURT HOUSE, - TORONTO.

E. GARL BREITHAUPT
CONSULTING
Electrical Engineer
ASSOC. MEM. AM. INST. E. E.
Electric Lighting and Railway Work
BERLIN, ONT.

FOR ARTIFICIAL STONE PAVEMENTS, ROOFING GRAVEL,
CONCRETE, ETC.
USE CRUSHED QUARTZITE
SILICA SAND & GRAVEL CO.
MONTREAL
Telephone 2444
..... Write for prices delivered in your town.
15 Mill Street.

THE THREE RIVERS IRONWORKS CO.
THREE RIVERS, P. Q.
MANUFACTURERS OF
Cast Iron Water and Gas Pipes
of best quality, from 2 inches in diameter.
HYDRANTS, VALVES and GENERAL CASTINGS.

HERCULES INDESTRUCTIBLE CULVERT
20 percent. more water-way than circular form.
Unrivalled for Strength, Durability Cheapness.
Made in sizes of 20 in., 24 in., 30 in., 36 in. and 5 ft.
Write for prices to
EDWIN W. SMITH
344 Garth St., Hamilton, Ont.



Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: The prospects for building in Toronto this season are none too bright, and little demand is being experienced for general builders' supplies. A limited trade is reported in hardware, and on country account there is a fair demand for plumbers' supplies. Building paper has advanced in price. Quotations are: Plain, 45 to 50 c. per roll; tarred lining, 55 to 60c.; tarred roofing felt, \$1.60 to \$1.75 per 100 lbs.

MONTREAL: Several large buildings which are projected will create some demand for supplies, but as yet few orders are being placed. Some activity is reported in paints and oils, while there has been considerable inquiry for cement for spring delivery. Quotations are unchanged.

LUMBER.

CAR OR CARGO LOTS.

Toronto. Montreal

Table listing lumber prices for various types of wood, including clear picks, 2 pickings, Am ins., 1 inch clear, 1 x 10 and 12 dressing and 1 better, etc.

YARD QUOTATIONS.

Table listing yard quotations for mill cull boards and scantling, shipping cull boards, Hemlock scantling and joist, etc.

B. M.

Table listing prices for B. M. lumber, including 1 1/2 inch flooring, 1 1/2 inch flooring, dressed, B. M., etc.

BRICK—M

Table listing prices for various types of bricks, including Common Walling, Good Facing, Sewer, etc.

Toronto. Montreal.

Table listing prices for roof tiles, hip tiles, ridge tiles, 1st quality, f.o.b. at Port Credit, etc.

SAND.

Table listing sand prices per load of 1 1/2 cubic yards.

STONE.

Table listing prices for common rubble, large flat rubble, foundation blocks, Kent freestone quarries, etc.

OHIO FREESTONE, FROM THE GRAPTON STONE CO.'S QUARRIES.

Table listing prices for Ohio freestone, including No. 1 Buff Promiscuous, No. 1 Buff Dimension, etc.

SLATE.

Table listing prices for roofing slate, including red, purple, unflaming green, etc.

PAINTS. (In oil, @ lb.)

Table listing prices for various types of paints, including White lead, Red lead, Venetian, Vermillion, etc.

CEMENT, LIME, etc.

Table listing prices for Portland Cements, including German, London, Newcastle, etc.

Toronto. Montreal.

Table listing prices for Portland Cements, including Belgian, natural, Canadian, Roman, etc.

HARDWARE.

Table listing hardware prices, including Cut nails, 5cd & 6cd, per keg, Steel, etc.

CUT NAILS, FENCE AND CUT SPIKES.

Table listing prices for cut nails and cut spikes, including 40d, hot cut, per 100 lbs, 30d, etc.

FINE BLIND NAILS.

Table listing prices for fine blind nails, including 3d, per 100 lbs, 2d, etc.

CASING AND BOX, FLOORING, SHOOK AND TOBACCO BOX NAILS.

Table listing prices for casing and box, flooring, shook and tobacco box nails, including 12d to 30d, per 100 lbs, etc.

FINISHING NAILS.

Table listing prices for finishing nails, including 3 inch, per 100 lbs, 2 1/2 to 2 3/4, etc.

SLATING NAILS.

Table listing prices for slating nails, including 5d, per 100 lbs, 4d, etc.

COMMON BARREL NAILS.

Table listing prices for common barrel nails, including 1 inch, per 100 lbs, 3/4, etc.

CLINCH NAILS.

Table listing prices for clinch nails, including 3 1/2 and 2 3/4 inch, per 100 lbs, etc.

SHARP AND FLAT PRESSED NAILS.

Table listing prices for sharp and flat pressed nails, including 3 inch, per 100 lbs, 2 1/2 and 2 3/4, etc.

STEEL WIRE NAILS.

Steel Wire Nails, 75 % discount from printed list

Iron Pipe:

Table listing prices for iron pipe, including Iron pipe, 1/2 inch, per foot, etc.

Toronto, 65 per cent. discount. Montreal, 60 to 65 per cent. discount.

Lead Pipe:

Table listing prices for lead pipe, including Lead pipe, per lb., Waste pipe, per lb., etc.

Galvanized Iron:

Table listing prices for galvanized iron, including Adam's—Mar's Best and Queen's Head, 16 to 24 gauge, etc.

Structural Iron:

Table listing prices for structural iron, including Steel Beams, per 100 lbs, channels, angles, etc.

(Corrected up to March 11th)