

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	15X	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.

APRIL 2, 1896

No. 9.

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.

G. H. MORTIMER, Publisher,

CONFEDERATION LIFE BUILDING, TORONTO.
Telephone 2362.

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

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 CONTRACTOR'S 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

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

TENDERS FOR BUILDING A HOUSE

Tenders will be received up to TUESDAY, THE 9TH OF APRIL, at the office of the Bicycle Accident Repair Co., 25 Jordan Street. Plans and specifications may be seen at the above address.

Lowest or any tender not necessarily accepted. The house to be begun immediately and finished as soon as possible.

M. B. R. GORDON,
25 Jordan Street, Toronto.

CORPORATION DEBENTURES

For the purpose of consolidating its floating debt the

CITY OF HULL, P. Q.

is authorized to issue DEBENTURES, at forty years, to the

Amount of \$108,000.00,

bearing interest at 5 per cent., payable semi-annually, and is prepared to receive offers for the same.

Any information required will be furnished on application to

A. P. THIBAUT,
Hull City Treasurer.

Hull, P. Q., March, 1896.

TENDERS WANTED

Whole or Separate Tenders will be received up to and including TUESDAY, 14TH DAY OF APRIL, 1896, for the erection and completion of a new

HOUSE OF REFUGE

to be built at Stratford, Ont. Tenders to be sealed, marked "Tender for House of Refuge," and addressed to

WM. DAVIDSON,
Clerk of County of Perth.

The lowest or any tender not necessarily accepted. Plans and specifications may be seen at the office of HARRY J. POWELL, Architect, Stratford, Ont.

Stratford, March 27th, 1896.

BUSINESS NOTES.

W. Angus, painter, Pembroke, Ont., has comprised at 25 cents on the dollar.

Charles Lafond and Theodore Gaudet, contractors, Montreal, have dissolved partnership.

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

Darby & Beckman, carpenters, Guelph, Ont., have dissolved partnership. F. W. Darby continues.

J. B. L. Prescott, contracting carpenter, Montreal, is reported to have assigned, with liabilities about \$11,000.

Alex. Milne, plumber, London, Ont., has effected a compromise with his creditors on a basis of 30c. on the dollar.

It has been decided to close up the estate of Robert Heath, contractor and builder, Toronto, who recently assigned. The statement shows liabilities of \$15,000 and assets in real estate of about \$25,000.

The Columbia Fire Proofing Co., of Pittsburg, have entered suit against Robert Simpson, of Toronto, the Hamilton Bridge Co., and the Canada Landed and National Investment Co., for \$7,783, to enforce a lien.

When painting on plaster it is best to make the first coat chiefly oil, using very little lead. A good job cannot be obtained in less than four coats.

A very handsome and bright green may be obtained by using extra light chrome green glazed over with the emerald green, or, as it is often called, Paris green.

An illustrated German technical journal shows a method of fastening to stone that may be of interest to members of the trade. The illustrations presented are of insulators for electric wires, knobs, etc., but the principle may, perhaps, have a wider application. The hole in the stone is filled with plaster of Paris, and in the center of the hole is a double wire coil. The coil consists of two wires, wound right and left, and when this is placed in the middle of the plaster of Paris it forms a rough thread for the screw end of the bolt or fixture that is to be fastened.

CONTRACTS OPEN.

COOKSTOWN, ONT.—A fire hall will be erected here.

INGERSOLL, ONT.—The erection of a hospital is being considered.

BLAKE, ONT.—Robert Allan intends building a brick house this summer.

WEYMOUTH, N. S.—Joseph Ethier is preparing to erect a two-storey store.

FORT WILLIAM, ONT.—The C. P. R. will erect a large elevator at this point.

WHEATLEY, ONT.—T. Coulter is considering the erection of two new houses.

SOMERSET, QUE.—Francis Kousseau will rebuild his saw mill recently burned.

WATERLOO, ONT.—H. Kreig intends erecting several new residences this summer.

SARNIA, ONT.—The street railway will probably be converted into an electric road.

PORT STANLEY, ONT.—Wm. Fraser proposes enlarging the Fraser House in this town.

FENWICK, ONT.—W. W. H. Fry will shortly commence the erection of two tenement houses.

PETROLEA, ONT.—It is reported that a new Y. M. C. A. hall is to be erected here, at a cost of \$15,000.

NANAIMO, B. C.—The Town Council are inviting plans for a system of sewerage for the town.

FITCH BAY, QUE.—L. H. Rand intends building a warehouse on the site of the one burned two years ago.

CORNWALL, ONT.—Joseph Primeau is arranging for the erection of a new dwelling house on Sydney street.

GANANOQUE, ONT.—It is said that plans are being prepared for a large summer hotel to be erected here.

HALIFAX, N. S.—Contracts have not yet been let for the new building proposed to be erected by Gordon & Keith.

JANETVILLE, ONT.—A Methodist church, to cost \$2,000, will be built here. The sum of \$800 has been subscribed.

TWEED, ONT.—P. K. Newton is preparing to erect a block on Colborne street. —John Downey will build a business block here.

CAMPBELLTON, N. B.—Proposals are invited from contractors for supplying the town with a system of waterworks. For particulars address A. E. Alexander, mayor.

VANCOUVER, B. C.—E. A. Charteris has applied to the City Council for a bonus of \$100,000 to construct a pontoon dock in this city.

DESCHENES MILLS, QUE.—Mr. Conroy is considering a proposition to erect a factory for the manufacture of agricultural implements.

TRENTON, ONT.—Gilmour & Co., of this town, will erect a large saw mill during the coming summer at the end of the first ten mile section of the unconstructed

portion of the Ottawa, Arnprior and Parry Sound railway.

VALLEYFIELD, QUE.—A new railway station will be constructed by the New York Central railway.

NEWCASTLE, ONT.—The large crown stone bridge east of the G. T. R. station has been swept away by floods.

CARLETON, N. B.—E. R. Taylor is about to commence the erection of a brick and stone warehouse, corner Duke and Union streets.

BRUCEFIELD, ONT.—William Dixon is making arrangements for the rebuilding of his hotel. It will be brick, of the most modern plan.

CHICOUTIMI, QUE.—The town offers exemption from taxation and a bonus to the first industry establishing not less than 200 employees.

NORWAY, ONT.—The ratepayers have accepted the plans of Percy Over, architect, for a new school building. The cost will be about \$3,000.

FREDERICTON, N. B.—R. Everett has purchased lots on Brunswick and St. John streets and intends erecting modern cottages this summer.

COLLINGWOOD, ONT.—A deputation from this town has gone to Ottawa to endeavor to secure a grant for harbor dredging at this place.

PENETANGUISHENE, ONT.—A deputation from this town has requested the Ontario Legislature to carry out necessary improvements to the harbor.

IRONDALE, ONT.—Davey & Son intend to rebuild their saw mill destroyed by fire last fall. It will be 30 x 70 feet in size, with an addition 24 x 70 feet.

WESTMOUNT, QUE.—The town will receive applications, addressed to the secretary-treasurer, until the 7th of April, for the position of town engineer.

ANNAPOLIS, N. S.—A company has been formed to engage in the manufacture of hardwood barrels for apple and fish packing. A site has been selected on the Lequille river.

MOUNT FOREST, ONT.—A by-law has been given its second reading in council to issue debentures to the amount of \$45,000 for the construction of a system of water works.

WOODSTOCK, ONT.—The construction of a new fire hall is being considered by the council.—The county is asking for proposals for the purchase of \$16,000 of 4 per cent. debentures.

REGINA, N. W. T.—At a recent meeting it was resolved to form a company, with a capital of \$5,000, to erect a creamery Messrs Mowat, Lamont, R. Martin and Sinton are interested.

WESTON, ONT.—D. Rowntree will receive tenders until the 8th inst., for the erection of a brick residence. Plans may be seen at the Weston Trading Co.'s store. J. A. Ellis, architect, Toronto.

OTTAWA, ONT.—Plans have been prepared for the extension of the Ottawa electric street railway to Britannia, a distance of four miles. Work will be commenced about the middle of this month.

WINDSOR, ONT.—The officers of the 21st Battalion have sent to Ottawa the plans of an armoury which it is proposed to erect, one building for each company. The buildings will be of brick, 40 x 20 ft., cost \$1,000 each.

KEMPTVILLE, ONT.—Mr. Bowen, of Mountain, has requested a bonus of \$5,000, a free site and exemption from taxation for the erection of a large roller mill at this place. It is probable that the offer will be accepted.

RICHIBUCTO, N. B.—Prospects are somewhat bright for the construction of a pulp mill here. Interested parties have

stated that if \$40,000 can be raised by the town, they will furnish the balance and commence work at once.

NORTH SYDNEY, C. B.—J. N. Armstrong, town clerk, will receive applications until the 10th inst. for the position of superintending engineer in connection with the construction of the proposed waterworks services to commence April 15th.

KINGSTON, ONT.—The City Council have still under consideration the question of municipal ownership of its electric light plant. It is claimed that the city could install an arc plant of 110 lamps at a cost of \$30,000, and operate the same at a cost of \$7,000 per year.

CHATHAM, ONT.—The School Board have decided to erect a new twelve-roomed building in South Chatham and a four-roomed addition to McKeough school. The Building Committee has been instructed to procure plans for same. Dr. Cornell can give particulars.

MONCTON, N. B.—A meeting of shareholders of the Moncton Street Railway, Heat & Power Co. will be held on Friday next for the purpose of appointing directors and taking action in connection with the construction of the proposed railway. The capital of the company is \$100,000.

KENFREW, ONT.—Work will shortly be commenced on the improvements to Dr. Cleary's block. The present front will be taken out and a new one of modern design put in, of brick and plate glass.—Mr. T. R. White proposes to erect a new brick block this spring. The new store will be 75 x 27 ft., with front of iron and plate glass.

HAMILTON, ONT.—Robert Clohcy, architect, will receive tenders until 5 p.m. to-day (Thursday) for the erection of a brick residence on John street south.—The township of Barton has passed a by-law to permit the Hamilton Electric Railway Co. to run cars over certain highways in the township.—The by-law to issue debentures for \$85,000 to build the Normal School and Collegiate Institute has received its second reading in Council.

SHERBROOKE, QUE.—It is understood that a grant of \$10,000 has been made by the Dominion government towards the building of a new drill shed here.—Arrangements are said to have been completed with an American syndicate for the construction of a street railway. It is expected that the work of construction will be commenced as soon as the weather will permit.—A new convent will be erected for the Sisters of the Ste. Famille on the site of the St. Charles house. The building will be 80 by 30 feet, two stories, with mansard roof, and will be constructed in solid brick.

STRATFORD, ONT.—David G. Baxter, architect, is preparing plans for a block of stores in Mitchell for J. J. Middlemiss, plumber, 33 ft. 6 in. frontage, 75 feet deep, red stock brick, iron roof, etc., two stories, also plans for a similar block for J. J. B. Little, at Mitchell, two stories, felt and gravel roof, store fixtures; fancy and plate glass for both blocks. Tenders to be called about April 1st.—Tenders are invited in this issue of the CONTRACT RECORD for the erection of the House of Refuge for the county. The building will be 140 x 44 feet, with an extension 30 x 30 feet, basement 9 feet high. It will be constructed of white brick, with brown stone facings and slate roof, and heated by hot water. Estimated cost \$14,000.

LONDON, ONT.—Tenders are invited for the erection of a brick veneered church, with basement, for the Glendale congregation. Plans may be seen on application to C. W. Hound, this city.—Mr. Fred. Henry, architect, of this city, recently visited St. Thomas in connection with the preparation of plans for an addition to the

Catholic convent in that city.—Tenders are invited until the 15th inst. for erecting a brick school house. Plans may be seen at the residence of Fred Fitzgerald, London township.—Tenders are invited by John M. Moore, superintendent waterworks, until the 7th inst. for annual supplies for the department, as follows: iron pipe and pipe laying, brass fittings, hydrants, valves, valve chambers, iron castings, lead pipe, lumber, coal, illuminating and lubricating oils, and hardware.

QUEBEC, QUE.—It is stated that the Sisters of Charity will purchase the Florence hotel and convert it into a branch of their establishment.—F. X. Drouin, Q.C., who recently purchased the Pye property on St. Ursule street, intends to rebuild the structures thereon and transform the property into dwelling houses.—A new presbytery and a church belfry is to be erected at St. Christine, Portneuf.—Plans have been prepared for Michael Côté for the construction on St. Joseph street, near the Palais, of a restaurant labyrinth, to be known as the Hotel des Illusions.—A four-storey wing, 84 feet long, is about to be added to the Levi College.—The work of construction of the new church at Bienville will commence early this month.—Berlinguet & Lemay, architects, have prepared plans for a colonnade to mask the extremity of Archevêché avenue. The plans have been accepted and the work will be commenced shortly.—The interior of Maurice chapel will be completely refinished. The architects, Tanguay & Vallee, are completing plans.

WINNIPEG, MAN.—It is stated that a new four-roomed school building will be erected on the Wellington street school site this summer.—At a recent meeting of the Board of Trade it was decided to make a strong representation to the Minister of Public Works at Ottawa to place a sufficient sum in the estimates for improving St. Andrews rapids.—A meeting of citizens was held last week to consider plans for the erection of an opera house. Five propositions were laid before the meeting by Mr. Brewery. The prospects for its erection are considered good.—The Manitoba & Northwestern Railway Company have requested the Dominion government to grant a subsidy of \$6,200 per mile instead of \$3,200 per mile, which they have found insufficient to finance the enterprise. Should the grant be given, the construction of 100 miles towards Prince Albert is promised at an early date.—The City Council has given notice of its intention to construct macadam pavements on the following streets: 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 \$5,630; Kennedy street, from Assiniboine avenue to Broadway, cost \$5,482; Donald street, from Assiniboine avenue to Portage avenue, cost \$14,710.

MONTREAL, QUE.—The Catholic freeholders of St. Lambert have authorized an expenditure of \$6,000 for the erection of a new church upon the land recently purchased.—The Canadian Pacific Railway Co. have finished plans for the east-end station, work on which will shortly be commenced.—The selection of a site for the proposed No. 7 fire station, Dalhousie Square, has not yet been made by the fire committee.—The erection of a new building for the chemistry, mining and architectural departments of McGill University will in all probability be commenced this year. It is hoped that the building will be completed for the

opening of the college term in October of next year. The chemical and mining laboratories of the new structure will be equipped with the latest and most improved apparatus.—Mr. W. Johnston, of the Dominion Cold Storage Company, will request the Dominion government to guarantee interest at 4 per cent. on \$300,000 for ten years, to enable the company to erect cold storage warehouses in different cities.—W. E. Doran, architect, is preparing plans for tenement brick buildings on Campeau street for Mr. Vicent.—C. Dufort, architect, is preparing plans for a summer villa at Beauharnois for Estate Hon. C. S. Rodier. The building will cost about \$7,000. The construction will be 3 in. plank lined with pressed brick, roof will be of slate and galvanized iron. Tenders will be called shortly.—J. & H. C. Nelson, architects, Notre Dame street, are preparing plans for a first-class residence, two and a half stories, stone front, on Laval avenue. Tenders will be invited at an early date.—G. A. Monette, architect, is preparing plans for three two-storey tenement buildings, brick front, for J. P. St. Denis, St. Gabriel.—A building permit has been granted to Mr. J. A. Madore, for two stores and dwellings, corner St. Catherine and Desery streets.—L. R. Montbriant, architect, has prepared plans and is receiving tenders for the following works: Two three storey stone and brick tenement buildings on Beaudry street for Mde. M. Lapierre, and one store and dwelling, stone front, three stories, on St. Denis street, for A. R. Archambault.—C. N. Armstrong, managing director, writes that plans for the proposed bridge over the St. Lawrence river, from Montreal to Longueuil, are now being considered, but it will be a month or two before steps are taken in connection with construction.

TORONTO, ONT.—Tenders are invited by Morgan Baldwin, harbor master, on Tuesday, the 17th inst., for sundry repairs to the sheet piling and breakwater at the Queen's wharf. Plans may be seen at the harbor master's office, Board of Trade building.—The Lieutenant-Governor in council has approved of the by-law to provide \$15,000 for the island waterworks system. Work will therefore be proceeded with at once.—The following bills have been read a third time by the Ontario legislature: respecting the Sault Ste. Marie & Hudson Bay Railway Co.; respecting the London Street Railway Co.; to amend the act incorporating the Ontario, Belmont & Northern Railway Co. Second readings have been given to the bills incorporating the South Essex Electric Railway Co., and respecting the Hamilton Electric Radial Railway Co.—The report of the Committee on Manufacturers, recommending that P. McIntosh & Son be granted a fixed assessment of \$50,000 on the old street railway stables, to be used for manufacturing purposes, has been referred back by the City Council. The firm agree to spend \$20,000 on machinery and \$10,000 on a new building.—The question of the erection of a large hotel on the old Upper Canada College grounds is again under consideration. The site is owned by the University authorities and the Ontario government. The promoters are: Edward Gurney, J. W. Langmuir, E. B. Osler, Robert Glockling, W. D. Matthews, George H. Bertram, John Dryman, W. T. Murray, S. Caldecott, H. P. Dwight, Robert Jaffray and T. Roper.—Mr. Geo. W. Gouinlock, architect, King street east, has invited tenders for the excavation required for an addition to the Foresters' Temple, corner Bay and Richmond streets. This addition will face O' Bay street, and will be heated by steam; cost upwards of \$70,000. Tenders for construction will be asked during the present month.—The Clerk of East Toronto has been instructed to prepare a

by-law for raising \$10,000 by the issue of debentures.—A committee of the City Council have resolved to rent the old drill shed and adjoining lot to the Dominion Cold Storage Company for the establishment of a warehouse. The company propose erecting a five-storey building, at an expenditure of \$150,000. Mr. McGregor is manager.

FIRES.

The store of Richard Tackaberry, at Lion's Head, Ont., was destroyed by fire on the 26th of March. Insurance \$2,000.—The printing office of the Sault Express at Sault Ste. Marie, Ont., was burned on Saturday last. Total loss, \$8,000.—The Queen's hotel at Teeswater, Ont., owned by George Lafrance, was burned last week. Loss on building, \$2,000.—The Graham property at Odessa, Ont., owned by John McDonald, has been burned.—Fire at Weymouth, N. S., on the 25th inst., destroyed Charles Burrill & Co.'s general store, loss \$50,000, two houses belonging to Henry Oakes, and the sample rooms of the Goodwin hotel. The hotel and G. D. Campbell's store were badly damaged.—The Commercial hotel at Thurso, Que., has been totally destroyed by fire.—Dalglish's woollen mill at Ottawa, Ont., was consumed by fire on the 17th ult. The loss will reach \$15,000, principally on machinery. The building will be promptly rebuilt.—At Lockport, N. S., on the 28th ultimo, fire destroyed eleven buildings, among which were the following: Churchill & Co.'s dry goods store; three buildings belonging to the estate of Mrs. H. Locke, and Mr. Payzant's tin shop. The total loss is \$35,000, largely covered by insurance.

CONTRACTS AWARDED.

ST. CATHARINES, ONT.—Nicolson Bros. have secured the contract for building a brick residence for James Griffis.

GALT, ONT.—Scott Bros. have the contract for the work in connection with extensive alterations to the store of J. A. A. Menhennick.

STRATFORD, ONT.—David G. Baxter, architect, has let the contract for the erection of a residence for A. Buck, of Mitchell, to Davis & Eizerman.

KEMPTVILLE, ONT.—Martin & Jones, contractors, have been awarded the contract for the erection of a number of dwellings during the coming summer.

TORONTO, ONT.—Purdy, Mansell & Mashinter have been awarded the contracts for the plumbing of the residences of H. B. Moore, Acton, and Geo. Heaven, Oakville.

VICTORIA, B. C.—The contract for the erection of an operating theatre for the Jubilee hospital has been awarded to Mr. Catterall, at the price of \$3,614. Mr. Teague, architect.

TAVISTOCK, ONT.—David G. Baxter, architect, of Stratford, has awarded the contract for heating the Progress House in this town to Clare Bros., of Preston, and the mason work to Wolfe & Juehl.

FOREST, ONT.—Contracts for building the St. John's parsonage have been let as follows: carpenter work, Jos. Johnston, Camlachie; brick work and plastering, Forkin & Simpson, of Sarnia; painting, Yard & Son, Sarnia.

WINNIPEG, MAN.—S. Hooper, architect, has let the contract for improvements to P. Gallagher's residence to J. & J. McDermid, for \$2,200.—The successful tenderers for St. Mary's church will be given in the next issue.

SKEAD'S MILLS, ONT.—Contracts for the erection of a new town hall have been awarded by the township council of Nepean as follows: masonry, J. Park; carpentry, Gilchrist & Buchanan; other trades not yet let. M. C. Eddy, architect, Ottawa.

CANNINGTON, ONT.—C. H. Shipman has let contracts as follows for a brick residence on his farm: carpenter work, J. T. V. May; mason work, Halward Bros. The same contractors have secured the contract for erecting a brick house for John Sackville.


OTTAWA, ONT.—It is reported that James Corry, of this city, is the successful tenderer for the Peterboro' and Lakefield section of the Trent Valley canal.—G. A. Crain has the contract for a \$10,000 brick residence for W. A. Rowley, to be built on lots 18 and 19, Queen street.

GUELPH, ONT.—T. W. Tanner has let contracts as follows for a pressed brick cottage, 32 x 40, seven rooms, for A. Worswick: stone and brickwork, Rundle & Foster; carpenter work, R. Mahoney & Son; plastering, T. Robinson; tinsmithing, Geo. Howard; painting, Moffat Bros.

QUEBEC, QUE.—The contract for the construction of the steeple and presbytery at St. Christine, Portneuf, has been awarded to M. C. Emile, Morissette. David Ouellet, architect.—The tenders for the cathedral at Charlottetown, Prince Edward Island, have been opened, but nothing is known yet. Berlinguet & Lemay, of this city, are the architects.

KINGSTON, ONT.—Contracts have been awarded as follows for alterations to Steacy & Steacy's premises: carpentering, M. Sullivan; tinsmithing, heating, plumbing, etc., McKelvey & Birch: painting and glazing, Robinson Bros.—Contracts have been awarded as follows for a new building for Wilson Estate: mason work, A. Newlands; metal work, plumbing and gas fitting, McKelvey & Birch; carpenter work, B. Asselstine; painting and glazing, Robinson Bros. W. Newlands, architect.

MONTREAL, QUE.—W. E. Doran,
(Concluded on Page 4.)

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.

architect, has awarded contracts as follows for the fencing of St. Patrick church: Stonework, Hughes & Brisson; iron work, H. R. Ives & Co.—Resther & Sons, architects, have awarded contracts as follows for a five-storey factory, stone front, on St. Maurice street, for J. M. Fortier: masonry, Onesime Martineau; brick, Joseph Brunet; carpenter and joiner's work, R. Chartrand; painting and glazing, Nap. St. Charles; iron work, Dominion Bridge Co.—W. McLea Walbank, architect, has awarded contracts as follows for one platform for the Mount Royal Park Incline Railway Company.. painting, carpenter and joiner's work, R. Neville; iron work, Dominion Bridge Co.—Gamelin & Huot, architects, have awarded the following contracts. two three storey houses, stone front, on Quiblier street, for the Estate Masson. masonry, Boucher & Huberdeau, brick, A. Beland; carpenter and joiner's work, D. Houle; plastering, J. Morache, painting and glazing, J. Lavoie; plumbing, roofing and heating, Pelletier & Brosseau; electric wiring, the Canada Electric Co. Two three storey houses, stone front, on Oliver street, Cote St. Antoine, for Mr. A. C. Hutchins, advocate: masonry, brick and plastering, M. Riopel; carpenter and joiner's work, painting and plumbing, A. Bail; electric wiring, Drapeau & Savignac.—L. R. Montbriant, architect, has awarded contracts as follows for two three storey buildings on St. Lawrence street for Benjamin Voyer: masonry, Labelle & Payette; brick, P. Brunet; carpenter and joiner's work not let; plastering, H. Contant; painting and glazing, C. Carrier; plumbing, roofing and heating, Martin & Vezina.—The harbor commissioners have awarded contracts for annual supplies as follows: Ordinary Canadian bar iron, Norway iron and cut nails, Frothingham & Workman; Lowmoor iron, carriage bolts and nuts and waste, B. J. Coghlin; bar machinery steel, Park Brothers & Co.; pressed spikes, R. Donaldson & Sons; long wharf spikes, Peck, Benny & Co.; machinery bolts and coach screws, Lewis Brothers & Co.; washers, Pillow, Hersey & Co.; new hemp oakum, James Wilson & Co.; navy oakum and manila rope, William Sclater & Co.; coal oil, Rogers, Robertson & Co.; castor oil, Henry Dobell & Co.; linseed oil and oxide of iron paint, A. Ramsay & Son; white lead paint, McArthur, Corneille & Co.; turpentine, P. D. Dodds & Co.; tallow, Chas. Charters; iron castings, Wm. Rodden & Co., also from John McDougall, and Carrier, Laine & Co., of Levis; steam coal, the Dominion Coal Company, Messrs. Kingman, Brown & Co., agents.—A contract has been awarded by the Montreal Park and Island Railway Co. to Wm. G. Reid, representing a syndicate, for the construction of 35 miles of electric tramway, including ties, rails, power houses, car sheds, rolling stock, electric appliances, etc. The amount involved will reach well up to \$1,000,000.

NEW COMPANIES.

ELMIRA, ONT.—Winger Woolen & Felt Co., applying for incorporation, capital stock \$25,000.

DRUMMONDVILLE, QUE.—Drummond Electric Co., incorporated; capital \$10,000; to supply electric light. Promoters, Wm. Mitchell, L. Newton, W. Houston and others.

ST. JOHN, N. B.—New Brunswick Cold Storage Company, seeking incorporation.

capital, \$125,000; applicants, J. F. Robertson, A. C. Smith, A. L. Goodwin, Ira Cornwall and others.

MONTREAL, QUE.—The Dominion Woolen Manufacturing Co., incorporated; capital \$300,000; to manufacture blankets, woolens, etc.—Blaisdell Paper Pencil Co., incorporated; capital \$50,000; to manufacture paper pencils, etc.

OTTAWA, ONT.—Yukon and B. C. Development and Trading Company, incorporated, capital, \$500,000. Applicants, C. N. Hill, London, Eng.; Benj. Green, of Kootenay, B. C., H. J. Munn, of Brandon, and Gemmell & May, Ottawa.

WOODSTOCK, ONT.—The Barnes Cycle Co., incorporated; capital \$25,000; Incorporators, Dr. A. B. Welford, D. Rice, W. Griffith, W. L. McKay, W. G. Clark, W. A. Karn, R. N. Bail and S. G. McKay, of Woodstock; object, to manufacture bicycles.

VANCOUVER, B. C.—Lightning Gold Gravel & Drainage Co., incorporated; capital, \$1,000,000. Trustees, R. G. Tatlow, Thos. Dunn and W. D. Burdis.—Antler Creek Mining Co., incorporated; trustees, R. G. Tatlow, Thos. Dunn and D. Oppenheimer.

LEQUILLE, N. S.—The Annapolis Mfg. Co., applying for incorporation; capital stock, \$10,000; to manufacture barrel stock, hard and soft wood, etc. It is proposed to put in machinery suitable to supply barrel stock for a new apple barrel to be made of hard wood.

VANKLEEK HILL, ONT.—Temiscamingue Lithographic Stone & Mining Co., incorporated; capital, \$100,000. Promoters, Dr. Pattee, Bernard Kelly, John Mode and Donald McLeod, of Vankleek Hill, and N. McCallum, of West Hawkesbury; to quarry stone and mine for gold and silver.

HAMILTON, ONT.—Saw Bill Gold Lake Mining Co., seeking incorporation; capital, \$100,000. Provincial directors, John H. Tilden, William Southam, F. C. Bruce, G. T. Marks, Thomas W. Lester, H. N. Kittson, H. Beckett, John Hoodless and George S. Lynch-Staunton. H. N. Kittson, secretary-treasurer. Objects, to develop gold mines.

Many new ceilings are whitened before they are dry, with the result that they have a smeary appearance when finished. If there is any sign of moisture on a ceiling it is not in a proper condition to be whitened.

When gilding on plaster of Paris, to satisfy the absorbent nature of the plaster, brush it over with linseed oil, at intervals of twenty-four hours, till it will absorb no more. Then go over it with oil gold size, ground with yellow ochre into a paste. If this size does not work easily thin it with linseed oil. When this is so far dried as to be just tacky, gild in the ordinary way with gold leaf, using a tip. Press the gold gently but firmly down with a bob of cotton covered with soft washing leather; then rub off superfluous gold, and smooth the surface with a second bob of cotton not covered.

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 Barytic 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

PORTLAND CEMENT (ROCK ASPHALT) NORTH'S CONDOR SITTING LION, and... WHITE CROSS . . . BRANDS

Paving and Fire Brick a Specialty

ST. LAWRENCE FOUNDRY COMPANY, LTD. Manufacturers of



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) — 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. Philippe 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**

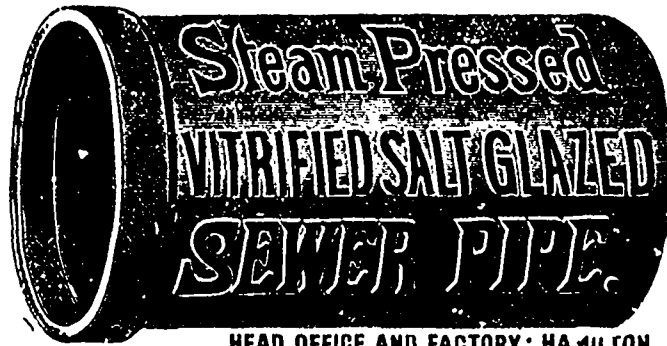
AND ALL KINDS OF

Builders' Supplies

F. HYDE & CO.

31 Wellington Street, - **MONTREAL.**

HAMILTON AND TORONTO SEWER PIPE CO.



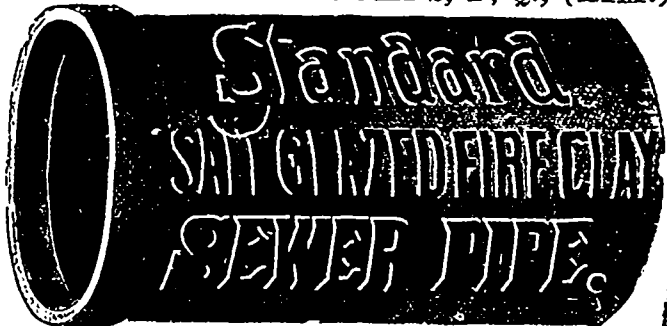
— FOR —
**SEWERS,
CULVERTS :
AND
WATER PIPES.
INVERTS**
Fire Brick Sewers

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 **MONTREAL, P. Q.**
IRON WORKS

WORTHINGTON PUMPS



**BOILERS
ENGINES**

. . . . MACHINERY OF ALL KINDS

STEAM AND POWER

FOR ALL DUTIES



**NORTHEY CO.
LTD.**

TORONTO, ONT.

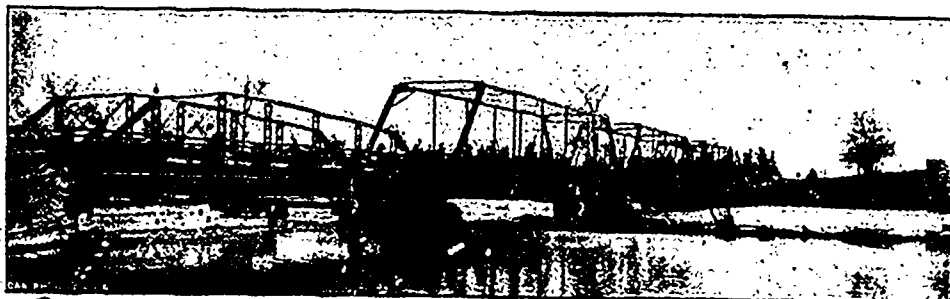
THE LAURIE ENGINE CO., MONTREAL
Sole Agents for Province of Quebec.

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

ROAD METAL.*

By HERRERT J. BOWMAN, C. E., BERLIN, ONT.

The term "Road Metal" is used to designate the material forming the impervious covering of roads and may be composed of broken stone, blast furnace slag, gravel or even burnt clay.

GRAVEL.—This is the most common material used in making the country roads of Ontario, and where good pit gravel can be obtained close at hand, it is without doubt the most economic road metal. There is considerable difference in the quality of gravel, that found in the eastern part of the province making a harder wearing surface, as it is composed of fragments of much harder rocks than those found in western Ontario. This, no doubt, partly accounts for the excellence of the gravel roads of the County of Hastings. In the western part of the province where gravel is found at all, it is chiefly composed of pebbles of soft limestone, which quickly grind to powder under heavy traffic, and in some districts no gravel is to be found within a reasonable distance. For these districts burnt clay may be found to be the most economic material for the road covering, but so far, its use seems to be confined to the Western States. For ordinary country roads, unscreened gravel of a depth of ten inches may be used with the larger stones broken by hand and a road covering formed good enough for all practical purposes, but for leading roads a better road may be formed by screening the gravel, although there is some difference of opinion as to the number and size of screens to be used. The following quotation from a treatise on "The Science of Road Making," by Clemens Herschel, M. Am. Soc. C. E., is worthy of note.

"In gravelly soil all the materials that are needed for a good road are frequently on the spot; they only need sorting out and relaying. For this reason a common gravel sieve often constitutes the principal instrument, whose judicious use will make a good road out of a miserable string of ruts and cobbly elevations. It would only be necessary to sift out and separate the soil under the road to a sufficient depth, into cobbles, coarse gravel, fine gravel and sand; then replace them in the order named and with the proper thickness of layers of each; wet down and roll, and the result would be a good road."

Where gravel is scarce or has to be hauled a long distance, an excellent road may be built having a Telford foundation of field stone, on top of which screened gravel is placed in two layers, each to be thoroughly rolled. In this method six inches in depth of gravel is quite sufficient.

*Paper read at the annual convention of the Association of Ontario Land Surveyors, Toronto, Feb. 25th, 1896.

Roads of this nature are the favorite ones in Central Park, New York, where Rhoa Hook gravel is used, and "it being more than ordinarily clean and hard, bears an intermixture or adulteration of twenty to twenty-five per cent. of inferior material to perfect its binding properties."

BROKEN STONE.—For leading country roads and town or city streets a better road metal is required than the gravel found in most parts of Ontario, and broken stone will best meet this requirement. Blast furnace slag is also an excellent road metal and is being largely used in the construction of the Rochester, N. Y., boulevards, but the supply of slag in this province is limited to the product of the new smelting works at Hamilton. Rocks suitable for breaking up into road metal should be hard and tough and proof against the action of the weather, qualities not always found together. Co-efficients of quality for various road materials have been obtained by the engineers of the French "Administration des Ponts et Chaussées" as given in the following table, where the co-efficient twenty is equivalent to "excellent," ten to "sufficiently good" and five to "bad."

Materials	Co-efficient of Wear.	Co-efficient of Crushing
Basalt	12.5 to 22.2	12.1 to 16.
Porphyry	14.1 " 22.9	8.3 " 16.3
Gneiss	10.3 " 19.	13.4 " 14.8
Granite	7.3 " 18.	7.7 " 15.8
Syenite	11.0 " 12.7	12.4 " 13.
Slag	14.5 " 15.3	7.2 " 11.1
Quartzite	13.8 " 30.	12.3 " 21.6
Quartzose Sandstone	14.3 " 26.2	9.9 " 16.6
Quartz	12.9 " 17.8	12.3 " 13.2
Silex	9.8 " 21.3	14.2 " 17.6
Chalk flints	3.5 " 16.8	17.8 " 25.5
Limestone	6.6 " 15.7	6.5 " 13.5

A rougher classification of rocks in the order of their value for road metal is as follows: (1) Basalt or Trap, (2) Gneiss, (3) Granite, (4) Limestone, (5) Sandstone; and it will be interesting to investigate where these may be found in Ontario.

The first three rocks are found in unlimited amounts at most points north of a line drawn from Gananoque to the mouth of the Severn river. Upon reference to a geological map, the best one being that attached to the report of the royal commission on the mineral resources of Ontario, issued in 1890, it will be seen that this line represents the southern edge of the Laurentian area in Ontario. Trap rock, which is no doubt the best for road metal, is said to be found in dykes from a foot or two to forty or fifty feet wide in the gneiss near Gananoque, and could, no doubt, be found at many points in the Laurentian of northern Ontario, but is most common in the Huronian. In this latter formation near Bruce mines an excellent trap (quartz diabase) is found and is shipped to cities in the United States to be broken up into road metal. It was used last summer in the construction of the Telford roads constructed in Cleveland, Ohio, for the board of park commissioners of that city.

South of the Laurentian area trap, gneiss and granite are found only in the shape of boulders brought down during the ice age and dropped as moraines. Thus along the band of moraines, or rough stony hills, stretching from Trenton to the lower end of the Georgian bay,

plenty of material for road metal may be obtained good enough for ordinary purposes. Scattered over a large part of the western peninsula of Ontario, large boulders may also be found, and if care is taken to exclude the soft limestone and disintegrated granite and gneiss, a fair road metal may be made, often the only kind that can be obtained at a reasonable cost. Plenty of limestones, often hard and fairly durable as road metal, may be found among the Trenton limestones stretching from Kingston to about Bowmanville, and across to the Georgian bay. Some good material may also be obtained from the Niagara limestones along the "mountain" or escarpment between Niagara Falls, Hamilton, and a point near Collingwood, also from the Guelph limestones between Niagara Falls and Southampton. In many of the limestones in this part of Ontario there are cherty bands which would produce excellent material for road metal, and in many of the more rapid rivers considerable accumulations of hard cherty boulders are found.

Although small cobble stones are not desirable for broken stone on account of the smooth water-worn surfaces of the greater part of the product, this objection only holds good to a limited extent when large boulders, often several hundred pounds in weight, are used.

CONCLUSION.—As the best obtainable material for road metal is often the cheapest in the end, further information is required as to where the best rocks are found. No complete geological survey of Ontario has ever been made, and the only information as to the older part of the province that can be obtained is from Sir William Logan's "Geology of Canada" (1883), and this publication of the geological survey is quite out of print and is found only in a few libraries.

The thanks of the writer are due for much valuable information to Dr. George M. Dawson, Director of the Geological Survey of Canada, to Professor A. P. Coleman, of the School of Practical Science, and to A. Blue, Esq., Director of the Ontario Bureau of Mines, and it is hoped that the members of the Association of Ontario Land Surveyors will, in the discussion, give much additional information as to the qualities of road metal in actual use throughout the province.

Few people have any idea of the amount of water that will run through a pipe in a given time. If they had, they might probably be more intolerant of water waste and more tolerant of meters—if, indeed, they did not universally demand them, as a matter of municipal economy, and therefore of indirect saving to the pockets of the taxpayers. The following official figures from Bangor, Me., will show how fast water will run through a pipe: With a pressure of 100 pounds there will run through an orifice an eighth of an inch in diameter 270 gallons per hour; through a quarter-inch aperture, 1,080 gallons per hour; through a half-inch, 4,320 gallons per hour; through a three-quarter-inch, 11,160; and through an inch, 17,100. This would be using water pretty fast, and illustrates how much water would run to waste in the course of a cold night if a tap were left running wide open.—Fire and Water

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

LAW BROS. & Co.

FOUNDERS AND MACHINISTS



OTTAWA, ONT.

Hydrants

Valves

Waterworks Supplies

Specials

Also CASTINGS of every description.

MERRIFIELD & WESTCOTT

ENGINEERS and CONTRACTORS

— FOR —

WATER WORKS AND GAS PLANTS

269 Front Street East, TORONTO.

G. H. MASSY, B. E., M. C. S. C. E.

CIVIL ENGINEER

Railways, Waterworks, Foundations,
Drainage, &c., &c.

180 St. James Street - MONTREAL

WILLIS CHIPMAN, B. A. Sc.

M. Can. Soc. C. E.; M. Am. Soc. C. E.;
M. Am. W. V. 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. C. 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 MAGDOUGALL

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... III Quebec Directory... ii	Contractors' Plant and Machinery Rice Lewis & Son... IV	Grants Brunet, Jos... III	Plumbers Ballantyne, James... ii Doville, L... ii
Architectural Sculptors and Carvers. Beaumont, H... ii Dom. Art Woodwork Company... v Holbrook & Molling... i Lamar & Metge... ii McCormack, W N... ii	Cements. Bremner, Alex... IV Currie & Co., W & F. P. xii Maguire Bros... i Owen Sound Portland Cement Co... xii Rathbun Co., The... II	Heating. Gurney Foundry Co... 34 King & Son, Warden... iv Ormsby & Co., A. B. I Toronto Radiator Mfg Co... iii	Roofing Materials Ormsby & Co., A. B. I Metallic Roofing Co... xii Estate of John Baitle... xi
Architectural Iron Work. Dominion Bridge Co. I Chanteloup Mfg. Co... I	Out Stone Contractors. Isaac Bros... III Oakley & Holmes III	Interior Decoration Castle & Son... viii Elliott, W. H... vi	Reflectors Frink, J. P... ii
Art Woodwork Dom. Art Woodwork Company... v Southampton Mfg. Co... xii	Drawing Tables. Laughlin-Hough Drawing Table Co... II	Time. Currie & Co., W & F. P. xii Ontario Lime Association... III	Roofers Ormsby & Co., A. B. I Douglas Bros... ix Duhne & 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	Drain Pipe Bremner, Alex... IV Currie & Co., W & F. P. xii Hamilton and Toronto Sewer Pipe Co... II Maguire Bros... i	Legal. Denton & Dods... ii	Sauntery Appliances Toronto Steel Clad Bath & Metal Co... vii
Builders' Supplies. Brenner, Alex... IV Currie & Co., W & F. P. xii Clatworthy, Geo... xi Maguire Bros... i Ontario Lime Association... III Rice Lewis & Son... IV	Elevators Fensom, John... IV Leitch & Turnbull... I Miller Bros & Sons... vi	Machinery Petrie, H. W... iv	Shingle Stains Cabot, Samuel... IV
Building Stone Dealers. Dartnell, E. F... x Fish, C. E... x Samuel & Son, The... v Turner & Brown... IV	Electric & Gas Fixtures. Keith & Fitzsimmons IV	Mortar Colors and Shingle Stains. Cabot Samuel... IV Maguire Bros... i Munnead, Andrew... i	Statued 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... IV Toronto Fence & Ornamental Iron Works... vi	Engravers. Can. Photo-Eng Bureau... xi	Ornamental Plasterers. Hynes, W. J... viii	Shingles and Siding Metallic Roofing Co... xi Ormsby & Co., A. B. I Pedlar Metal Roofing Co... viii
Cresote Stains Cabot, Samuel... IV	Fire Brick and Clay Bremner, Alex... IV Currie & Co., W & F. P. xii Maguire Bros... i	Paints & Varnishes. Muirhead, Andrew... i	Terra Cotta Rathbun Co., The... II
Church and School Furniture. Can. Office & School Furniture Co... v Snider, J. B... v	Floor Deafener Lazier & Sons, S. A... III	Patenters. Gilmor & Casey... III	Wall Plaster A'Alastine Co., The... IV Albert Mfg. Co... x Hannaford Bros. Mfg. Co... x Rathbun Co., The... II
Chimney Topping. Bremner, Alex... IV Currie & Co., W & F. P. xii	Galvanized Iron Workers. Douglas Bros... ix Ormsby & Co., A. B. I	Plasterers Hynes, W. J... vi	Window Blinds Seaman, Kent & Co. v Semmens & Evel... viii
	Grates, Mantles, and Tiles. Holbrook & Molling... i Rice Lewis & Son... IV Rogers, S. Co. Charles... ii	Plate Glass McCausland & Son... v The Consolidated Plate Glass Co... ii	
		Parquetry Floors Elliott, W. H... vi	
		Prismatic Glass. Prismatic Glass Co... ix	

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 BREITHAUP
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.

Telephone 2444

MONTREAL

15 Mill Street.

..... Write for prices delivered in your town.

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.

Drummond McCall Pipe Foundry Company,

MONTREAL

MANUFACTURERS OF

CAST IRON WATER AND GAS PIPES

WORKS: LACHINE, QUE.

PRICES ON APPLICATION.

Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: Enquire for builders' supplies have been few during the past week, orders being placed in a restricted manner. A slight improvement is to note in plumbers' supplies, while in glass trade from stock shows a slight increase. Other lines are marked by the same quietude which has prevailed for some time.

MONTREAL: Enquiries for cement for spring and future delivery have come to hand within the past few days, but little actual business has been done. The prospects for building are slightly improving, and may develop considerably as the season advances.

LUMBER.

CAR OR CARGO LOTS.

Toronto. Montreal.

Table with columns for item description and prices for Toronto and Montreal. Includes items like clear picks, spruce culls, and various shingles.

VAID QUOTATIONS.

Table listing various mill cull boards and scantling prices for Toronto and Montreal.

B. M.

Table listing prices for building materials like flooring, lath, and shingles.

BRICK—M

Table listing prices for various types of bricks and masonry materials.

Toronto. Montreal.

Table listing prices for roof tiles, ridge tiles, and various ornamental bricks.

SAND.

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

STONE.

Table listing prices for various types of rubble, granite, and freestone.

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

Table listing prices for Ohio freestone in various dimensions and finishes.

SLATE.

Table listing prices for roofing slate in various colors and thicknesses.

PAINTS. (In oil, @ lb.

Table listing prices for various types of paint, including white lead, red lead, and oil colors.

CEMENT, LIME, etc.

Table listing prices for Portland cements and other lime products.

Toronto. Montreal.

Table listing prices for Portland cements, hydraulic cements, and various types of plaster.

HARDWARE.

Table listing prices for cut nails and steel.

CUT NAILS, FENCE AND CUT SPIKES.

Table listing prices for various types of cut nails and spikes.

FINE BLUED NAILS.

Table listing prices for fine blued nails.

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

Table listing prices for casing and box nails, flooring nails, and shooK and tobacco box nails.

FINISHING NAILS.

Table listing prices for various types of finishing nails.

SLATING NAILS.

Table listing prices for slating nails.

COMMON BARREL NAILS.

Table listing prices for common barrel nails.

CLINCH NAILS.

Table listing prices for various types of clinch nails.

SHARP AND FLAT PRESSED NAILS.

Table listing prices for sharp and flat pressed nails.

STEEL WIRE NAILS.

Steel Wire Nails, 75 % discount from printed list

Iron Pipe:

Table listing prices for iron pipe in various diameters and lengths.

Lead Pipe:

Table listing prices for lead pipe.

Galvanized Iron:

Table listing prices for galvanized iron in various gauges and types.

Structural Iron:

Table listing prices for structural iron beams and plates.