

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

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.

SEPTEMBER 17, 1896

No. 33.

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 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

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

MUNICIPAL DEBENTURES FOR SALE

The Corporation of the Village of Huntsville will receive tenders for the purchase of

\$20,000.00

Waterworks Debentures at 5 per cent., 30 years.

\$5,000.00

Electric Light Debentures at 5 per cent., 20 years.

Sealed tenders will be received by the undersigned at his office in the Village of Huntsville, up till 7 o'clock p. m. on MONDAY, THE 28TH DAY OF SEPTEMBER, 1896, from whom full particulars may be obtained.

WILLIAM RUMSEY,
Clerk of Municipality,
Village of Huntsville.

TENDERS WANTED

Sealed Tenders, addressed to the undersigned and marked "Tenders for Debentures," will be received up to and inclusive of OCTOBER 9TH, 1896, for the purchase of

\$49,917.67 of Sewer Debentures

bearing interest at 5% and payable in thirty years. Also tenders for the whole issue of \$109,000; the tenders to include accrued interest.

Lowest or any tender not necessarily accepted.

JOHN ROBINSON,
Town Clerk.
Town Clerk's Office,
Niagara Falls, Ont., Sept. 9th, 1896.



NOTICE TO CONTRACTORS

Piling and Filling over Conduit

Tenders will be received by registered post only, addressed to the City Engineer, Toronto, up to 10 o'clock a. m. on

Friday, September 18, 1896,

for piling and filling over conduit, in Blockhouse Bay, south of Hanlan's crib.

Specifications may be seen and forms of tender obtained on and after Tuesday, Sept. 15, 1896, at the office of the City Engineer, Toronto.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2½ per cent. on the value of the work tendered for, must accompany each and every tender, otherwise it will not be entertained.

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

BERNARD SAUNDERS,
Chairman Committee on Works.

R. J. FLEMING, Mayor,
Chairman Board of Control.

Toronto, Sept. 14, 1896.

BUSINESS NOTES.

Peter McHaffie, carpenter, Duneden, Ont., has assigned to W. H. Hamilton.

J. A. Close, brick manufacturer, Woodstock, Ont., has assigned to E. W. Nesbitt.

The assignment is reported of Charles C. Parker, carpenter, Renfrew, Ont., to T. H. Grant.

George E. Brady, builder and contractor, London, Ont., is said to have assigned to H. M. Douglas.

CONTRACTS OPEN.

PERTH, ONT.—R. A. Brown intends building next spring.

SHERWOOD, N. S.—It is reported that a new hotel will be erected here.

DIGBY, N. S.—An electric railway is to be built from Milton to this town.

APPIN, ONT.—The corner stone of the new English church was laid last week.

LINDSAY, ONT.—S. J. Fox is preparing to erect a two-storey white brick cottage.

TORONTO JUNCTION, ONT.—David McDonald has been granted permission to construct an abattoir in town.

METCALFE, ONT.—The erection of a High School building in this village is being agitated.

BRANTFORD, ONT.—The T. H. & B. Railway Co. will erect a station building here, to cost \$4,000.

ALBERNI, B. C.—Mr. Halfpenny, whose saw mill was recently burned, has not yet decided to rebuild.

ST. STEPHEN, N. B.—Findlay & Shurtleff, of Milton, N. B., will probably build a paper mill at this point.

SOUTHAMPTON, ONT.—The government will have a survey made of the harbor with a view to dredging.

MALLORYTOWN, ONT.—It is reported that a summer hotel will be erected next season at Mallorytown Landing.

PRESCOTT, ONT.—An annex will be erected to the elevator here which will give a capacity of 500,000 bushels.

ARNPRIOR, ONT.—Mr. James Morris C. E., has prepared plans and estimates for a drainage system for this town.

ALMONTE, ONT.—Bell & Wilkie, surveyors, are making a preliminary survey of the proposed new line of railway from Carp to Almonte.

PORT ALBERT, ONT.—The Minister of Public Works has been urged to improve the harbor by extending the pier and carrying out some necessary dredging.

PORT ARTHUR, ONT.—The Sault Ste. Marie Pulp & Paper Co. are taking steps to commence work at once on the development of the water power of the Kakabeka Falls.

PENETANGUISHENE, ONT.—Steam heating will be put in the Hotel Penetanguishene this fall, a large bathing-house built, and a new sanitary system put in.

STONEY LAKE, ONT.—John Morgan, of Warsaw, and A. P. Morgan, of Peterboro', will erect at this place a large hotel, on the second flat of which will be 24 bedrooms.

SHERBROOKE, QUE.—The Talbot Brussels Carpet Co. will establish their work on the Magog river. The estimated cost of buildings is \$30,000, and of the equipment \$50,000.

RAT PORTAGE, ONT.—Appropriations will be made by the Dominion govern-

ment for improvements to Rainy river and the erection of lighthouses on the Lake of the Woods.

STRATHROY, ONT.—F. F. Craig, town clerk, will receive tenders until Monday, the 5th of October, for the purchase of \$10,000 of debentures, bearing interest at 5 per cent. and payable in 20 years.

STRATHALLAN, ONT.—James Anderson, Clerk of East Zorra, will receive tenders until Monday, the 28th inst., for the construction of a drain in the 9th and 10th concessions, lots 23 and 24, East Zorra.

CACHE BAY, ONT.—Mr. J. R. Booth, lumberman, of Ottawa, has offered \$10,000 towards the construction of a consumptive sanatorium in Algonquin Park. It is probable a site will be selected near this place.

QUEBEC, QUE.—Mr. Choquette has asked in the Dominion parliament if it is the intention of the government to grant aid towards the construction of a bridge over the St. Lawrence at this city. The government have promised to consider the matter.

RIMOUSKI, QUE.—Tenders are invited by the Department of Public Works, Ottawa, until Tuesday, the 29th inst., for the erection of a post-office in this town. Plans may be seen at the above department and at the office of J. A. Talbot, merchant.

GODERICH, ONT.—Wm. Mitchell, Town Clerk, will receive offers until the 30th inst. for the purchase of the following: \$20,000 4 p. c. sewer debentures; \$12,000 4 p. c. waterworks extension debentures; \$6,500 4 p. c. incandescent electric light debentures.

PETERBORO', ONT.—No tenders having been received by the City Council for electric street lighting, steps will be taken at once by the corporation to install an electric light plant. A committee, composed of the Mayor and councillors Mills and Best, have been appointed to further the scheme.

LITTLE CURRENT, ONT.—Tenders are invited until the 12th of October, addressed to John J. MacIntyre, Niagara Falls, N. Y., for the construction of forty-two miles of the Manitoulin and North Shore railway, extending from Little Current to a point on the Soo branch of the Canadian Pacific.

VICTORIA, B. C.—J. Maclure, architect, has prepared plans and is receiving tenders for additions to the St. Joseph hospital, consisting of four storeys and a basement, 68 x 53 ft., with laundry addition 19 ft. square, electric elevator, hardwood floors, perfect system of ventilation, hot water heating, etc.

WINNIPEG, MAN.—The Northwest Hotel Co. is seeking incorporation, to buy and improve land, erect hotels, office buildings, etc. Capital \$100,000. The applicants are: W. H. Adams, F. W. Ferguson, J. H. Ashdown, John Leslie and W. S. Reaman.—L. W. Compton invites tenders until the 18th inst. for the erection of a residence.

QUEBEC, QUE.—The construction of a new church at St. Alphonse of Thetford Mines, is decided upon. David Ouellet, architect, is calling for tenders, which will be received until the 30th of September. Building permits have been granted as follows: Repairs of a house for Ch. Bergevin, of the Mountain Hill House; repairs of a house on Grant st., for F. X. Blouin.

NICOLET, QUE. A new cathedral is to be erected to replace the one now in use. It is to be of the Renaissance style of architecture and will be built of Deschambault stone. The dome of the steeple and the cross are to be of aluminum. The edifice is to be 192 feet long, 97 feet high, with steeple 185 feet high. At the rear a two-storey sacristy is to be erected, the whole to be completed by May 1st, 1899.

PORT ARTHUR, ONT.—A deputation from Fort William and this town last week interviewed the Minister of Railways and Canals at Ottawa urging the government to grant a bonus of \$3,200 per mile for 150 miles of the Rainy River road, connecting the Port Arthur, Duluth and Western railway with the Rainy river. The Ontario government has already pledged aid, and the promoters expect the Manitoba government to grant liberal aid to connect the road with Winnipeg.

ST. JOHN, N. B.—Tenders are invited by the Board of School Trustees, addressed to Edward Manning, secretary, until Monday, the 24th inst., for the plumbing and heating and ventilation of the new High School building now in course of erection. Plans may be seen at the office of G. E. Fairweather, architect, 84 Germain street.—Plans have been prepared by the Department of Public Works at Ottawa for the scows required in connection with the harbor improvements at this city.—It is stated that the St. John Street Railway Co. will erect, at an early date, a larger power house.

LONDON, ONT.—McBride & Farncombe, architects, have in hand the erection of a brick residence on Queen's avenue, this city, and a residence at Arva.—It is probable that further additions to the Western Fair buildings will be made by the directors next year.—Moore & Henry, architects, have prepared plans for enlarging St. James Anglican church by adding 20 feet to its width, 10 feet on each side, and rearranging the seating accommodation. An addition will also be made in the rear to provide accommodation for the choir, and the church will be lighted by electricity. Estimated cost \$5,000. Tenders will be invited at once.

HAMILTON, ONT.—The Toronto Hamilton & Buffalo Railway Company is seeking authority from the government to build a line to Ridgeway.—The City Council has given notice of its intention to construct pipe sewers on the following streets: Stanley avenue, between Locke street and Garth street, cost \$1,625; Herkimer street, between Locke street and Garth street, from the end of the present sewer to Garth street, cost \$950. The Garth street sewer will probably be extended to Aberdeen avenue, at a cost of \$5,000.—Dr. Bryce, secretary of the Provincial Board of Health, has approved of the plans prepared by the city engineer for the sewerage interception works.

MONTREAL, QUE.—The Road Department has given notice that it is proposed to construct a sewer on Seaton street, from Mary Ann street to Mount Royal avenue.—At a meeting of the council of the Board of Trade held last week, the president reported that the Dominion government had been memorialized to widen and deepen the ship canal. The necessity of enlarging the dry dock at Levis was brought to the attention of the council.—C. St. Jean, architect, will shortly invite tenders for a villa to be erected at Sault aux Recoillets for M. Smith.—Messrs. Sincennes & Courval, architects, have received tenders for a house, three tenements, to be erected on St. Famille street for R. R. Wilson. The same architects are preparing plans for a block of ten lodging houses and four stores to be erected at the corner of Notre Dame and Levis street for M. Ferdinand Bayard; also for one cottage on City Hall avenue for Thos. Forest.—Alcide Chausse, architect, has prepared plans for repairs of a house, corner of St. James and St. Gabriel sts. The work will be done by day labor.—Building permits have been granted as follows: One house, three stories, two stores and two tenements, stone and brick, corner Leguachetiere and Hermine sts.; repairs of three houses on Aylmer st. for J. D. Clifford.

TORONTO, ONT.—The City Council has appointed a sub-committee to consider the advisability of asking the citizens for \$1,000,000 with which to construct a trunk sewer.—A resolution has been passed by St. George's Society praying that steps be taken by the City Council to provide a suitable building for the care of aged and infirm people.—The City Engineer has recommended a cement concrete sidewalk on the south side of Richmond street, between Yonge and Victoria sts., cost \$630, and a concrete sidewalk on Bay street, from Adelaide street to a point 124 feet north, to cost \$279.—Mr. E. J. Lennox, architect, waited on the Property Committee on Monday last with regard to the steam-fitting, ventilation, plumbing, and electric lighting of the new court house and city hall. The committee decided to recommend to the Board of Control that tenders be called for the work. It is estimated that it will cost in the neighborhood of \$150,000.—Proposals are invited by the Chairman of the Board of Control until the 18th inst., for piling and filling over conduit in Blockhouse Bay, south of Hanlan's crib. Specifications at the office of the City Engineer.—J. W. Siddall, architect, has prepared plans for the following buildings: Two residences on Bloor street east for Drs. McKenzie and Galloway, with separate buildings for their offices, cost \$10,000; an addition to W. A. Murray & Co.'s store, King street east, and an addition to the Huron house, London, Ont.—A new steel bridge is to be constructed over the Etobicoke river at Burnhamthorpe, between the counties of Peel and York. The estimated cost is \$2,000, and tenders will be invited at once.—The City Council has given notice of its intention to construct the following local improvements: Asphalt pavement on Carlton avenue, cost \$1,500; on Front street, from Yonge to Church street, cost \$14,000; on Parliament street, from Queen to Gerrard street, cost \$26,700.—The City Engineer, in his report presented to the Board of Works on Monday last, recommended the construction of the following pavements as local improvements: Bick—Gladstone avenue, Queen to Dundas street, cost \$18,200; Foxley street, Dundas street to Dovercourt road, cost \$3,270; Palmerston avenue, College to Robinson street, cost \$19,200; Lippincott street, Nassau to Bloor, cost \$27,420; Davenport road, Avenue road, 636 feet westerly, cost \$4,200; Huntley street, Bloor to Earl street, cost \$8,540; Johnson's Lane, Adelaide street to south side, cost \$840. Asphalt—Carleton street, Sherbourne to Parliament street, cost \$14,800; Dundas street, Queen to Arthur, cost \$18,600. Macadam—Terauley street, Queen to College street, cost \$9,270.—A building permit has been granted to A. E. C. May, 414 Euclid ave., for 2 pr. s. d. two story and attic bk. dwellings, at No. 8 Brunswick ave., cost \$12,000.—At a meeting of the Board of the House of Industry, held on Tuesday last, the question of erecting a new building or enlarging the present one was discussed. A special meeting will be held on Tuesday next to consider the matter.

FIRES.

Wm. Resse's dwelling at Belleville, Ont., has been burned. Loss \$1,000.—At Berwick, N. S., fire destroyed the Berwick foundry, the company's store and adjoining buildings and the Berwick registry office.—A large residence at Buctouche, N. B., owned by C. Bourque, was destroyed by fire last week. Insurance \$2,300.—J. Langlier's candle factory at Longueuil, Que., has been damaged by fire to the extent of \$10,000, partially covered by insurance.—The building of the Montreal Steam Laundry, owned by T. H. Love, was completely gutted by fire on the 10th inst. The total loss is estimated at \$200,000, with

insurance of \$50,000.—The large saw and shingle mill at Fenelon Falls, Ont., owned by J. W. Howry & Son, was consumed by fire on Wednesday of last week. The loss is \$40,000 and insurance \$22,000.—Two dwellings and several out houses at Chambly Basin, Que., were burned on the 15th inst. The total loss is \$5,000.—A building on Jarvis street, Toronto, owned by the Beard Estate and the Canada Permanent Co., was damaged by fire last week to the extent of \$4,000, fully covered by insurance.

CONTRACTS AWARDED.

GALT, ONT.—Hanson Bros., of Montreal, were the successful tenderers for the purchase of debentures.

WINGHAM, ONT.—A. Graham, of London, is the successful tenderer for granolithic sidewalks in this town, at 13 cents per foot.

ST. THOMAS, ONT.—A three years' contract for street lighting has been entered into with the St. Thomas Gas Company.

BLENHEIM, ONT.—The J. F. Pease Furnace Company, of Toronto, have been awarded the contract for heating the new town hall here.

MONTMORENCY FALLS, QUE.—Walter Sharpe has been awarded the contract for erecting an addition to the Riverside Mfg. Co.'s works, to be built of brick and stone.

WINNIPEG, MAN.—The tender of Kelly Bros. has finally been accepted for an asphalt pavement on Assiniboine ave. and Kennedy street, at the price of \$18,964.60.

DESERONTO, ONT.—Frank Dolan, of Belleville, has been awarded the contract for erecting the R. C. church here. The amount of contract is \$9,000, exclusive of furnaces, pews, altars, etc.

WOODSTOCK, ONT.—The contract for heating Knox church has been awarded to the J. F. Pease Co., of Toronto, at the price of \$1,700. The furnishing contract has been given to the Globe Furniture Co., of Walkerville, the figure being \$2,900.

CHARLOTTETOWN, P. E. I.—The Government have accepted the tender of Walter Lowe, of this city, for the proposed addition to the asylum at Falconwood. The price is about \$22,000. Seven tenders were received, ranging from \$22,000 to \$27,000. C. B. Chappell, architect.

GUELPH, ONT.—Mr. Robert Melvin has awarded contracts for an addition to his residence as follows: Foster & Rundell, mason work; George Steven, carpentering; J. J. Mahoney, plastering; W. Holman, painting; Feek & Co., plumbing and gas work. J. Day, architect.

BROCKVILLE, ONT.—The James Smart Mfg. Co. have contracts for the following buildings to be heated with "Kelsey" warm air generators: Newton Cossitt's large store, Brockville, to be occupied by O'Donohue Bros.; Grace Methodist Church, Gananoque, with three Kelseys; R. C. convent, Cranby, Que., with one No. 30 Kelsey.

LONDON, ONT.—The McClary Mfg. Co. recently shipped four large 6 ft. wood furnaces to Eganville, for heating the new R. C. church in that town.—The bulk contract for the erection of the G.T.R. car shops here has been let to George E. Mills, of Hamilton, and work will be commenced at once. The amount of contract is said to be upwards of \$100,000. Sub-contractors have been awarded to Hamilton contractors as follows: Woodwork, Donaldson & Patterson; slate work and roofing, Irwin & Scr; plumbing, H. O. Wallace; painting and decorating, Ross Bros.

TORONTO, ONT.—Purdy, Mansell & Mashinter, of this city, have been awarded the contract for steam-heating of the

Crawford House at Windsor, Ont., for the Crawford Estate, also hot water heating of Loreto Convent, Sarnia, Ont.—Contracts for pavements were awarded by the Board of Control on Monday as follows: Lowther avenue, Avenue road west, brick on concrete, \$2,991, D. L. Van Vlack; Huron street, College to Bloor, brick on concrete, \$17,590, D. L. Van Vlack; Spencer ave., King to Huxley st., \$4,891, brick on gravel, D. L. Van Vlack; Grand Opera House Lane, brick on gravel, \$465, J. F. C. Shields.

MONTREAL, QUE.—Labelle & Payette, of this city, have obtained the contract for the laying of the foundation of the East End station.—R. H. Buchanan & Co. have been awarded the contract for supplying the pumping machinery and placing the same in position for the Chambly waterworks, Chambly, Que.—A. Sincennes & E. Courval, architects, have awarded the contracts for reparations of a house, corner of St. Lawrence and St. Catharine streets, for Edm. Payette, all trades to W. Garipey.—Clif. & Pope, architects, have awarded the contract for one residence at Pont de Sault, two stories, for G. M. Day, all trades to Damase Joron.—J. Alcide Chausse, architect, has let the contracts as follows for reparations of a house on Shaw street for E. Chausse: heating and plumbing, David Ouimet; other trades by day work.

HAMILTON, ONT.—Tenders have been accepted as follows for the new market building: Galvanized iron work, Thos. Irwin, \$44; mason and brick work, Thos. Landers, \$900, and \$300 extra for a concrete floor; painting, James Matthews & Sons, \$110; slate tables, James Findlay, \$375; carpenter and wrought iron work, Richard Press, \$644.—Leitch & Turnbull, of this city, have been awarded the following contracts for elevators: One hydraulic, for John P. Graham, Windsor, N. S.; two hand power, for Wyatt Block, Winnipeg; one hand power, for Gurney, Tilden Co., Winnipeg; one hand power, for Union Shoe and Leather Co., Winnipeg; one hand power, for F. Krug, Tavistock, Ont.; one belt power, for Welland Vale Mfg. Co., St. Catharines, Ont.; one belt power, for Government printing office, Victoria, B. C.—Alex. Thompson has been awarded the contract for the following buildings in connection with the Toronto, Hamilton and Buffalo railway. A brick round house and frame repair shop on Garth street, cost \$10,000 and \$4,000 respectively; frame station at Bartonville and a station at Stoney Creek.

Among the colors upon which lime has no bad effect, and which may therefore be employed with safety for water-coloured ceilings, walls, &c., are siennas and umbers, Vandyke brown, ivory black, Naples yellow, French ultramarine and Chinese vermilion.

RELATIVE STRENGTH OF WOOD AND STEEL.

Dr. Robert H. Thurston, in a recent article, discusses various materials in which comparisons of interest are made. At the outset he gives the following generally accepted figures: Cast iron weight 444 pounds to the cubic foot and an inch square bar will sustain a weight of 16,500 pounds, bronze, weight 525 pounds, tenacity 36,000; wrought iron, weight 480, tenacity, 50,000; hard "struck" steel, weight 490, tenacity 78,000; aluminum, weight 168, tenacity 26,000. A bar of pine just as heavy as a bar of steel an inch square will hold up 125,000 pounds, the best ash 175,000 and some hemlock 200,000 pounds. Wood is bulky. It occupies ten or twelve times the space of steel.

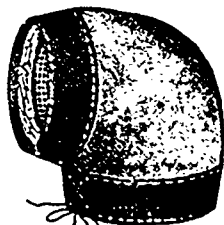
USEFUL HINTS.

The best way to keep varnish brushes is to suspend them in the same varnish for which they are usually used. The disadvantage of this method is the hardening, which is bound to occur, but if a cover is used when the brushes are to be kept for any length of time this objection will be removed.

In finishing pitch pine it is not necessary to size the work; the varnish may be applied directly to the wood and two coats will be required. A coat of size between each application of varnish is an improvement. One coat of size on the wood and one coat of varnish is another method, and is the one usually employed by the manufacturers of school furniture.

A very handsome walk can be laid out by using two or three shades of brick, and disposing them in patterns similar to those which are so successful in tile floors. If it is not possible to secure bricks of uniform hardness, a good effect and evenness of wear can be secured by selecting the hardest for the center of the walk, and using the softer bricks for a border design.

To clean glass that has been smeared or spotted with paint that has been allowed to dry on, first scrape off as much as possible with a sharp knife, taking care not to scratch the glass. Then rub off the remainder with turpentine and linsced oil, mixed in equal proportions with powdered pumice stone. Finish by washing with soap and water, polishing with a clean rag.



ELBOW

MICA BOILER AND STEAM PIPE COVERINGS

The Highest Non-Conductor and the Cheapest Covering on the Market.

Full Particulars from

The Mica Boiler Covering Co. - 9 Jordan St., Toronto.

THE G. & J. BROWN MFG. CO.

Railway and Contractors' Plant.

BRIDGE BUILDERS

BELLEVILLE, ONT.

THREE RIVERS IRON WORKS CO.

The Montreal Gazette prints the following particulars regarding the works of the above company in connection with a description of the St. Lawrence Valley Exhibition :

"These works are situated adjacent to the river St. Maurice. The company was formed about two years ago, taking over the works standing upon some fifteen square acres of land, previously carried on in the name of the Canadian Water Pipe Company, with the distinct intention of entirely changing the system upon which the pipe castings were produced, to make it second to none in Canada, and, if possible, far ahead of anything adopted in this country. It is stated by persons of experience in such matters and well qualified to give an opinion, that the object has been fully attained. It appears that the whole of the old plant and appliances have been discarded, and, practically, nothing now remains beyond the mere location. Further, that these are the only works in the Dominion producing cast-iron gas and water pipes in long lengths of so small a diameter as 2 inches and 3 inches. The pipes are cast vertically in revolving flasks with the head, or bell, downwards, ensuring soundness and uniformity in thickness, only the best and most suitable material being used. The pipes are all tested to 300 pounds to the square inch by hydraulic pressure, and whilst sustained at that pressure are tapped with a two-pound hammer, and not a single pipe is permitted to leave about which there is the slightest doubt.

The motto is "quality" and "excellence of finish," and waterworks and other engineers have already testified to the superiority of the pipes made at these works. Indeed they are considered to be the very best produced in Canada, and when this fact has become more widely known it is anticipated that large orders result. Hitherto the company has not will cared to push their make in the market, preferring to wait until the changes had been completed and fully tested.

An extensive shop, containing the most modern machinery and tools, has been erected so as to enable the company to supply their improved "barking," "double-edgers," "slab-splitters," "scantling," and other sawmill machinery, also to supply their improved friction and other pulleys, shafting, couplings, bear-

ings, general shop gearing, etc., and to construct any special machinery. There is likewise a large foundry for casting hydrants, valves, special pipe castings, as well as general iron and brass castings. So far, the neighboring works have found this a great convenience, and it has been fairly well patronized.

It would be well to mention that Law's patent improved anti-freezing hydrant, of which this company are the sole manufacturers, is making its way steadily amongst the various municipalities, and is giving the best results. The works are very conveniently situated as regards transportation, either by railway or by

navigation. The company is represented in Montreal by Mr. Jas. Stubbs, whose office is at No. 54 Imperial Building."

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.

FOR ARTIFICIAL STONE PAVEMENTS, ROOFING GRAVEL, CONCRETE, ETC.

USE CRUSHED QUARTZITE

SILICA SAND & GRAVEL CO. MONTREAL

Telephone 2444

15 Mill Street

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

Drummond McCall Pipe Foundry Company,

Canada Life Building - MONTREAL.

MANUFACTURERS OF

CAST IRON WATER AND GAS PIPES

WORKS: LACHINE, QUE.

PRICES ON APPLICATION.

THE THREE RIVERS IRONWORKS CO.

Montreal Office: IMPERIAL BUILDING.

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.

ST. LAWRENCE FOUNDRY COMPANY, LTD. Manufacturers of



Front St. East TORONTO, ONT.

CAST IRON WATER PIPES

From 4 in. to 36 in. Diameter.

BELL AND SPIGOT • TURNED AND BORED

AND EVERYTHING NECESSARY FOR

A Complete Water or Gas System

SUPPLIED BY The LONDONDERRY IRON CO., Ltd.

LONDONDERRY, NOVA SCOTIA

THE MOST COMPLETE IRON WORKS IN CANADA (ESTABLISHED 1852.)

Send for Drawings and Estimates of our work.

ALL PIPES CAST VERTICALLY

- WE MAKE
- PIG IRON
 - WATER PIPES
 - PUDDLED BAR
 - HYDRANTS
 - VALVES
 - PIPE SPECIALS
 - HEAVY CASTINGS
 - STRUCTURAL WORK
 - ARCHITECTURAL WORK
 - MACHINE WORK
 - HYDRAULIC MACHINERY
 - TURBINES

--- BRAND "SIEMENS" ---

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

DEBENTURES BOUGHT

Municipalities saved all possible trouble.

G. A. STIMSON & CO.

Investment Dealers

9 Toronto Street - TORONTO

MUNICIPAL DEBENTURES

BOUGHT AND SOLD ON FAVORABLE TERMS.

A. E. AMES & CO.

— Bankers and Brokers —

10 King Street West - TORONTO

..Grushed Granite..

(Best Quality)

FOR GRANOLITHIC SIDEWALKS

GEO. WILSON, Granite Contractor. KINGSTON, ONT.

EVERY ENGINEER AND CONTRACTOR

Should possess a copy of the Second Edition of the Canadian Contractor's Hand-Book, a compendium of useful information for persons engaged on works of construction, containing upwards of 150 pages. Price \$1.50; to subscribers of the CANADIAN ARCHITECT AND BUILDER, \$1.00.

Address

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

Branch office: New York Life Building, Montreal.

THE HAMILTON AND TORONTO SEWER PIPE CO.

(LIMITED.)



— FOR — SEWERS, CULVERTS AND WATER PIPES. INVERTS For 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 Culvert 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 and HIGHWAY BRIDGES

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

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

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



MUNICIPAL DEPARTMENT

THE USE AND MISUSE OF WATER.

In concluding a paper read before the British Association of Waterworks Engineers, on the above subject, Mr. R. E. Berrington, C. E., F. G. S., summarized his remarks as follows:

1. That 15 gallons of water per head for domestic purposes is ample; that in many towns the quantity actually used is much under this; that most of the water above 15 gallons is so much waste, and can be saved.

2. That in all cases a regular and systematic inspection pays for itself; that the most efficient and complete system is that by waste-water meters and stop-taps; that excellent results may be obtained by house-to-house inspection, or by the use of valves and the stethoscope at night. The author has known of 11 or 13 burst services underground being discovered in one night by the simple use of valves and the stethoscope. No day inspection can in itself alone be considered effectual for arresting waste.

3. That where strict supervision of the house services and fittings exists stop-taps are a sine qua non.

4. That in every waterworks a system of stamping fittings should be in operation; and samples of approved fittings should be exhibited.

5. That it is not desirable that the supply of water—a necessary of life—should be controlled by a meter, but that people should be taught the proper use of it, and that all reasonable encouragement should be given to its use for sanitary purposes.

6. That mains should be laid with not less than 2ft. 6in. or 3ft. cover, and that they should be tested before being covered up. Service pipes ought also to be under the supervision of the engineer. In many existing cases mains and services are so shallow as to allow the water to be directly affected by the summer temperature, not to mention the dangers from frost.

7. That the water going to waste is not only so much loss especially under a pumping scheme—but that much of it being underground tends to produce damp foundations, and ultimately a large portion of the waste finds its way into the sewerage system, causing the local authority considerable expense. The author has found many broken mains communicating direct with sewers.

8. That the syphon cisterns so much used are an immense improvement on the old-fashioned arrangements, but that they are unsuitable for many positions, and that an ordinary careful consumer would use much less water with a first-class valve w. c.

9. That reliable self-closing taps may

be introduced with advantage in many cases, and without the concussion that used to be experienced with the old style of tap.

10. That with the rapid increase of population without an accompanying increase of water, and with the necessary appropriation of the large water sheds by the large municipalities of the country, the question of economy in water becomes more and more important.

11. Economy in water will often effect a saving in capital expenditure, annual working expenses, and wear and tear of machinery. The quantity of water which escapes through small apertures is enormous! The following table shows the result of some experiments made by the author:

Description of fitting under test	Gallons wasted in 24 hours.
$\frac{1}{2}$ in. bid-tap, washer bad.....	700
$\frac{3}{4}$ in. tap.....	920
$\frac{1}{2}$ in. tap screw stripped.....	12,720
$\frac{1}{2}$ in. ball-tap, washer bad.....	900
$\frac{1}{2}$ in. ball-tap, lever strained.....	200
Pipes burst by frost, $\frac{1}{2}$ in.....	11,280
" " " $\frac{3}{4}$ in.....	17,280
Taps left open, $\frac{1}{2}$ in.....	23,520
" " " $\frac{3}{4}$ in.....	12,000
" " " $\frac{1}{2}$ in.....	9,600

These were not specially selected. The waste would be more under pressures higher than 50 lbs.

The author will have accomplished his desire, if, in bringing this paper before the association, he obtains for the benefit of the country the opinion of "specialists" on this important subject.

ONTARIO GOOD ROADS ASSOCIATION.

The annual meeting of the above association was held in the city of Toronto last week, Mr. J. F. Beam, of Black Creek, first vice-president, in the chair.

A report was received from Mr. A. W. Campbell, Provincial Instructor in Road Making, regarding the work he is doing. The future prospects of the association were discussed and the following officers elected: President, Andrew Patullo, Woodstock; 1st vice-president, J. F. Beam, Black Creek; 2nd vice-president, P. Jelly, Jellyby; 3rd vice-president, J. H. Woolley, Simcoe. Executive Committee, James Sheppard, Queenston; James Beattie, Campbellton. A. Macdougall, Toronto; J. C. Judd, Morton; M. Kennedy, Owen Sound; W. S. Campbell, Brantford; A. W. Campbell, Toronto; E. Kidd, North Gower; Secretary-Treasurer, K. W. McKay, St. Thomas.

A meeting of the Executive Committee was afterwards held, when president-elect Patullo introduced the Hon. Mr. Fisher, Minister of Agriculture for the Dominion, who addressed the meeting in reference to road improvement and the value of good roads to the agriculturalist. He expressed his pleasure at seeing such a large exhibit of road-making machinery at the Toronto Industrial Exhibition, which, he said, had attracted a large number of municipal officers from all parts of the province, and was pronounced by all to be a most practical object lesson. He referred to the Quebec Road Association, which is now doing good work.

A NEW KIND OF HIGHWAY.

A new kind of highway introduced in California consists of a gutter steel track one-fourth of an inch thick and five inches wide, flat on the bottom, with sides half an inch high, then extending outward one and a half inch, then down the same. It is spiked to a longitudinal timber laid on cross ties, no spike heads being on the surface, and the track is perfectly smooth; the laying is four feet eight and one-half inches from center to center—the standard gauge of all the wagons and railroad cars. The middle and sides are filled in with stone, so that, in fact, the structure is a macadamized road, with steel tracks for the wagon wheels; and on this kind of track one horse will draw twenty times as much as on a dirt road, and the economic revolution involved in such a plan is not to be doubted, in view of the statement officially made, namely, that freight can be hauled on such a steel-track road for less than half the average charge on lateral roads.

PERSONAL.

Mr. Isreal David Bowman, clerk and treasurer of the County of Waterloo, died suddenly at Berlin, Ont., a fortnight ago from heart trouble. Deceased was a native of the county, being born in the township of Waterloo in 1830. He was a son of Henry Baer Bowman, who came to Upper Canada from Pennsylvania in 1825. He was educated at Rockwood Academy, taking a thorough commercial course. In 1858 he was elected reeve of the town of Berlin, and in '61 received the appointment of county clerk. In 1880 he was made county treasurer, succeeding the late Charles Stanton, and has held the joint office, together with that of town clerk of Berlin, ever since.

NOISY BRICK PAVEMENTS.—Concerning noisy brick pavements, Mr. Ernest Adam, engineer of the Street and Sewer Departments of Newark, N. J., writes that the rumbling noise complained of does not seem to remain in the same place, but appears to be shifting. A brick pavement has been laid on an avenue in Newark during the warm weather of the past two months, under a contract made last year, requiring joints to be filled with Portland cement grout. The same rumbling experienced on pavements laid in cold weather is heard, but not upon such large areas as upon those streets paved in the cold weather of last fall. On three of the blocks, each being about 800 ft. long, Mr. Adam had a joint about 1 inch wide along the entire length of the curb filled with paving mastic containing 20 per cent. asphalt in 100 parts residuum of coal tar. Also on each end of the block and in the middle spaces 15 feet in length running across the full width of the avenue had the joints filled with the same material. It is too early to judge the success of this experiment. Mr. Adam still believes that cement grout will have to be abandoned in order to fully obviate any noise.

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

INDEX TO ADVERTISEMENTS

In the "Canadian Architect and Builder."

ENGINEERS

WM. NEWMAN, C. E.
A. M. Can. Soc. C. E., M. Am. W. Wks. Assn.
CITY ENGINEER OF WINDSOR.
Civil and Sanitary Engineer
Waterworks, Sewerage, Drainage, Pavements, &c.
Fleming Block - WINDSOR, ONT.

G. H. MASSY, B. E., M. C. S. C. E.
CIVIL ENGINEER
Railways, Waterworks, Foundations,
Drainage, &c., &c.
180 St. James Street - MONTREAL

GEO. WHITE-FRASER
C. E., D. T. S., A. AM. INST. ELEC. ENG
CONSULTING
ELECTRICAL ENGINEER
Electric Railways and Electric Light.
SPECIALTY: Specification and Superintendence of
MUNICIPAL PLANTS.
18 Imperial Loan Building - TORONTO.

VAUGHAN M. ROBERTS
Civil and Sanitary Engineer
Waterworks, Sewers, Electric Light,
Electric Railways.
18 Ontario Street,
ST. CATHARINES
Plans and Specifications prepared.—Work
Superintended.

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

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.

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

Architects. Ontario Directory... 111
Quebec Directory... ii
Architectural Sculptors and Carvers.
Beaumont, H. ... ii
Carroll, Robert ... ii
Dom. Art Woodwork Company ... v
Holbrook & Mollington ... i
Lamar & Metge ... ii
McCormack, W. N. ... ii
Architectural Iron Work.
Dominion Bridge Co. 1
Art Woodwork
Dom. Art Woodwork Company ... v
Southampton Mfg. Co. xi
Boiler Covering
Mica Boiler Covering Co. ... 150
Bricks (Pressed)
Beamsville Pressed Brick Co. ... i
Brockville Pressed Brick Co. ... v
Port Credit Pressed Brick Co. ... v
Builders' Supplies.
Bremner, Alex. ... IV
Currie & Co. W&F.P. ... xii
Lawrence & Wiggin. 1V
Maguire Bros. ... i
Montreal Directory... x
Ontario Lime Association... III
Rice Lewis & Son... IV
Toronto Directory... x
Building Stone Dealers.
Credit Forks Mining & Mfg. Co. ... 149
Builders' Hardware.
Gurney, Tilden Co. ... viii
Rice Lewis & Son... IV
Vokes Hardware Co... v
Church and School Furniture.
Can. Office & School Furniture Co. ... v
Globe Furniture Co. ... vii

Cresote Stains
Cabot, Samuel. ... IV
Chimney Topping.
Bremner, Alex. ... IV
Currie & Co. W&F.P. xii
Contractors' Plant and Machinery.
Rice Lewis & Son... IV
Cements.
Bremner, Alex. ... IV
Currie & Co. W&F.P. xii
Maguire Bros. ... i
Owen Sound Portland Cement Co. ... IV
Drawing Tables.
Laughlin-Hough Drawing Table Co. ... II
Drain Pipe
Bremner, Alex. ... IV
Currie & Co. W&F.P. xii
Hamilton and Toronto Sewer Pipe Co. ... xii
Maguire Bros. ... i
Elevators
Fensom, John. ... I
Leitch & Turnbull... I
Miller Bros & Toms... vi
Electrical Engineer
Heathcote, W. ... ii
Engravers.
Can. Photo-Eng Bureau... II
Fire Brick and Clay
Bremner, Alex. ... IV
Currie & Co. W&F.P. xii
Maguire Bros. ... i
Galvanized Iron Workers.
Ormsby & Co., A. B. 1
Granite
Brunet, Jos. ... III
Grates, Mantles, and Tiles.
Holbrook & Mollington i
Rice Lewis & Son... IV
Rogers & Sons Co., Charles... ii

Heating.
Clare Bros. ... iv
Gurney Foundry Co. ix
King & Son, Warden III
McClary Mfg. Co. ... xi
Ormsby & Co., A. B. 1
Pease Furnace Co. ... iv
Toronto Radiator Mfg. Co. ... iii
The James Smart Mfg. Co. ... xii
The Howard Furnace Co. ... vi
Interior Decoration
Castle & Son... viii
Elliott, W. H. ... vi
Lime.
Currie & Co. W&F.P. xii
Mille Roches Lime Co., The... iv
Ontario Lime Association... III
Legal.
Denton & Dods... vii
Machinery
Petrie, H. W. ... vii
Mortar Colors and Shingle Stains.
Cabot, Samuel... IV
Maguire Bros. ... i
Muirhead, Andrew... i
Ornamental Plasterers.
Hynes, W. J. ... 150
Paints & Varnishes
Muirhead, Andrew... i
Painters.
Gilmour & Casey... III
Montreal Directory... x
Toronto Directory... x
Plasterers
Hynes, W. J. ... 150
Paints & Varnishes
Cottingham, Walter H vi
Muirhead, Andrew ... i
Parquetry Floors
Elliott, W. H. ... vi
Plate Glass
The Consolidated Plate Glass Co. ... ii

Prismatic Glass.
Prismatic Glass Co... vii
Plumbers
Montreal Directory... x
Toronto Directory... x
Roofing Materials
Ormsby & Co., A. B. 1
Metallic Roofing Co. xii
Pedlar Metal Roofing Co. ... iv
Roof Snow Guards.
Gunn, R. A. ... IV
Reflectors
Frink, I. P. ... iv
Roofers
Ormsby & Co., A. B. 1
Montreal Directory... x
Toronto Directory... x
Sanitary Appliances
Dakin & Co., F. B. ... IV
Toronto Steel Clad Bath & Metal Co. ... vii
The Young & Bro. Co., Ltd. ... vii
Shingle Stains
Cabot, Samuel... IV
Stained and Decorative Glass
Castle & Son... viii
Dominion Glass Co. ... v
Howwood & Sons, H. ... v
McKenzie's Stained Glass Works... v
Loughurst, H. ... v
Lyon, N. T. ... v
Prismatic Glass Co. ... 150
Shingles and Slating
Metallic Roofing Co. xii
Ormsby & Co., A. B. 1
Pedlar Metal Roofing Co. ... iv
Sole Pipe.
Toronto Foundry Co. 150
Wall Plaster
Alabastine Co., The... viii
Albert Mfg. Co. ... II
Window Blinds
Semmens & Evel... xii

WILLIS CHIPMAN, B. A. Sc.
M. Can. Soc. C. E.; M. Am. Soc. C. E.;
M. Am. W. W. Assn.
CIVIL AND SANITARY ENGINEER
Water Works - Sewerage
Sewage Disposal
103 BAY STREET - TORONTO.

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.

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

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

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'S CONDROR ... SITTING LION, and... WHITE CROSS ... BRANDS
Paving and Fire Brick a Specialty

ALEX. GARTSHORE, PRESIDENT. J. G. ALLAN SECY & TREAS. JAS. THOMSON, VICE PRES. & GENL MGR.
ESTABLISHED 1870 THE GARTSHORE-THOMSON PIPE & FOUNDRY CO. LTD. MANUFACTURERS OF SPECIAL CASTINGS AND ALL KINDS OF WATER WORKS SUPPLIES. HAMILTON, ONT.
INCORPORATED 1896

Prices of Building Materials.

CONDITION OF THE MARKET.

TORONTO: Although the demand for builders' supplies is not active, a fair trade is doing in most lines. Plumbers' supplies are quiet on city account, but country trade exhibits more life. Cut nails are moving with more freedom, at the base price of \$2.75 per keg. An improvement is noted in building paper. In galvanized iron and iron pipe there is a steady trade. A slight advance in window glass has taken place in Belgium, and enquiries for plate glass are increasing.

MONTREAL: Few new features are reported in the line of builders' supplies, the demand being confined to small quantities for actual requirements. There is little doing in cut nails and the heavy metal market. Window glass is stronger, and some fair-sized sales have been made. Small lots of cement are meeting with good demand, and a moderately active business is reported at steady prices.

LUMBER.

CAN OR CARGO LOTS.

Toronto, Montreal.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes items like clear picks, pickings, spruce culls, and shingles.

YARD QUOTATIONS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes mill cull boards, shipping cull boards, hemlock scantling, and various sizes of planks.

B. M.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes flooring, shingles, and various types of wood.

Toronto, Montreal.

BRICK - M

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes common walling, good facing, sewer, pressed brick, and various types of buff and roman bricks.

SAND.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes per load of 1/4 cubic yards.

STONE.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes common rubble, large flat rubble, foundation blocks, freestone quarries, granite ashlar, and various types of freestone.

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

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes various types of buff, blue, and sawed ashlar, as well as granite paving blocks and curbing stone.

SLATE.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes roofing slate and terra cotta tiles.

PAINTS. (In oil, & lb.)

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes white lead, red lead, yellow ochre, and various types of putty and oil.

CEMENT, LIME, etc.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes portland cements from Germany and London.

Toronto, Montreal.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes portland cements from Newcastle, Belgian, and Canadian sources.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes hydraulic cements from Thorold, Queenston, Napanee, Hull, and Ontario.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes Keene's coarse "whites", lime, plaster, and hair plasterers' materials.

HARDWARE.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes cut nails and steel.

CUT NAILS, FENCE AND CUT SPIKES.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes hot cut, cold cut, and various sizes of cut nails and spikes.

FINE BLUED NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 3d and 2d fine blued nails.

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

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 12d, 10d, 8d, and 6d casing and box nails.

FINISHING NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 3 inch, 2 1/2 inch, and 2 inch finishing nails.

SLATING NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 5d, 4d, and 3d slating nails.

COMMON BARREL NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 1 inch, 3/4 inch, and 1/2 inch common barrel nails.

CLINCH NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 3 inch, 2 1/2 inch, 2 inch, and 1 1/2 inch clinch nails.

SHARP AND FLAT PRESSED NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes 3 inch, 2 1/2 inch, 2 inch, and 1 1/2 inch sharp and flat pressed nails.

STEEL WIRE NAILS.

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes steel wire nails with 70c and 5% discount from printed list.

Iron Pipe:

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes iron pipe of various diameters and discounts.

Galvanized Iron:

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes galvanized iron of various gauges.

Structural Iron:

Table with 4 columns: Description, Toronto price, Montreal price, and another Montreal price. Includes steel beams, channels, angles, tees, plates, and sheared steel bridge plate.