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# CANADIAN CONTRACT RECORD

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

EVERY WEDNESDAY

*This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.*

VOL. 9.

FEBRUARY 16, 1898

No. 3.

## THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY WEDNESDAY

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

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

**C. H. MORTIMER, 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*

## TO BUILDERS

Tenders will be received at my office until **TUESDAY, FEBRUARY 22ND**, for the erection of a Pair of Houses on Bedford Road.

The lowest or any tender not necessarily accepted.

**S. H. TOWNSEND, Architect,**  
15 Gerrard St. E., Toronto.

## TENDERS

FOR

### Cast Iron Water Pipe

FOR CITY OF ST. JOHN, N. B.

Tenders will be received by the "Board of Management" of the Department of Public Works, at their office, in the city of St. John, until **FRIDAY, THE FIRST DAY OF APRIL, 1898**, at 12 o'clock, noon:

For the supplying of about 2,116 tons of best quality 24 and 12 inch Cast Iron Water Pipe, according to the specification and drawings prepared by Wm. Murdoch, Esq., C.E., Engineer and Superintendent S. and W. Supply, copies of which specification may be had on application to the director.

Tenders must be made on forms furnished by the department.

The board do not bind themselves to accept the lowest or any tender.

Each tender must be accompanied by a certified bank cheque or deposit of money amounting to five hundred dollars (\$500), said amount to be forfeited should the party to whom the pipe is awarded decline to enter into contract; and a further deposit equal to five (5) per centum on the estimated full value of contract at prices named in bid, will be required to be made on entering into contract, this deposit to be forfeited should the party receiving the contract refuse to proceed therewith, or fail to complete the work as required by specification and drawings.

**A. CHIPMAN SMITH, Director.**

Board of Management, Department of Public Works,  
St. John, N.B., Feb'y 4, 1898.

## TOWN ENGINEER WANTED

Good opening for a Civil Engineer in the town of Waterloo. Apply to

**A. B. McBRIDE**  
Town Clerk.

## TO CONTRACTORS—TENDERS

Tenders will be received until 5 p. m. on **THURSDAY, FEBRUARY 24th**, for the whole of the several trades required in the erection of

### A DETACHED BRICK RESIDENCE

on the east side of Walmer Road for John A. McKee, Esq. The lowest or any tender not necessarily accepted. Plans and specifications may be seen and all information obtained at the office of the undersigned.

**F. H. HERBERT, Architect,**  
9 Toronto Street, Toronto.

## TENDERS FOR STEEL BRIDGE

Tenders will be received by the undersigned till 3 o'clock p.m. **FEBRUARY 23RD**, and opened at 10 a.m. **FEBRUARY 24TH**, at Tara, for the erection of a Steel Bridge, 100 ft. c. to c. of end pins; roadway 18 ft. clear, one sidewalk 6 ft. wide; moving load, 120 lbs. sq. foot.

Also for about 100 cubic yards Masonry, quarry stone, rock finish, to be built with Cement Mortar. State price per cubic yard.

Bridge about 50 yards from railway siding. The lowest or any tender not necessarily accepted. A cheque for \$200, marked good payable to the Treasurer of County of Bruce, to be sent with each tender.

Further information may be had from James Warren, Engineer, Walkerton, or from the undersigned.

**ANDREW FREEBORN,**

Invermay.

Tara, Feb. 3rd, 1898.



## NOTICE TO CONTRACTORS

Tenders will be received, by registered post only, addressed to the Chairman of the Board of Control City Hall, Toronto, up to noon on **WEDNESDAY, MARCH 2ND, 1898**, for the following works:

### MACADAM ROADWAYS

On Harbord Street, from St. George Street to Huron Street.

On Davenport Road, from Yonge Street to Hazleton Avenue.

### CEDAR BLOCK PAVEMENT

On Arthur Street, from Euclid Avenue road to Bathurst Street.

Plans and specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after Monday, February 21st, 1898.

A marked cheque, payable to the order of the City Treasurer, Toronto, for 5 per cent of the amount tendered for up to \$1,000, and 2½ per cent of the amount over that sum, must accompany each and every tender, otherwise it will be ruled out as informal.

The lowest or any tender not necessarily accepted.

**JOHN SHAW, Mayor,**  
Chairman Board of Control.

City Hall, February 15th, 1898.

## TO CONTRACTORS

Sealed tenders, addressed to the undersigned, will be received until noon on **WEDNESDAY, THE 2ND OF MARCH, 1898**, for the following work:

1. For building a Howe Truss Bridge, with pile piers and abutments, over the River Thames between Middlesex and Elgin Counties, at the site known as the Coyne Road bridge. This work consists of one span 160 feet, one span 36 feet, and one span 37 feet long, all in the clear.

2. For building two concrete abutments for the Lang bridge on the County line between Middlesex and Elgin.

3. For building two concrete abutments for the Robbins Bridge in the Township of Southwold.

Plans and specifications for the above works can be seen and blank forms of tender obtained at the office of the undersigned.

A certified cheque for the amount stated in the specification, and made payable to the treasurer of the County of Elgin, must accompany each tender.

The lowest or any tender not necessarily accepted.

**JAS. A. BELL,**  
County Engineer, Elgin.

St. Thomas, Feb. 14th, 1898.

## BUSINESS NOTES.

A. W. M. Kelly, contractor, Montreal, is reported to have assigned.

It is reported that Mr. Tetu will resign his position as city engineer of Hull, Que.

Bulmer & Bulmer, contractors, Westmount, Que., have dissolved partnership.

Smith & McKay, contractors, Fort Steele, B.C., have dissolved partnership, Mr. Smith continuing.

## IMPORTANT NOTICE

With the object of conveying information more promptly to subscribers, and thus increasing the value of the **CONTRACT RECORD**, it has been decided to change the publication day from Thursday to Wednesday of each week. Commencing with the issue of February 16th, the **CONTRACT RECORD** will be published

**EVERY WEDNESDAY MORNING.**

To ensure insertion in the current week's issue, advertisements and news items must reach the office of publication not later than **TWO O'CLOCK ON TUESDAY**, as the paper will go to press at 3 p. m. in the afternoon of that day.

Architects, Municipal Officers and others are asked to kindly note the above change, and to forward matter for publication in accordance therewith.

## CONTRACTS OPEN.

ALMONTE, ONT.—Archie McLean purposes erecting a new building.

PAPINEAUVILLE, ONT.—T. Monhomme will build a saw mill, to cost \$3,000.

COULSON, ONT.—Mr. Egerton intends erecting a brick dwelling next summer.

CLINTON, ONT.—It is said that the Doherty Organ Co. will rebuild at once.

PORT COLBORNE, ONT.—Plans will be prepared at once for a waterworks system.

GLENCOE, ONT.—There is an agitation on foot to secure the erection of a town hall.

ELFRIDA, ONT.—Chas. Mannary purposes building a brick residence in the spring.

RENFREW, ONT.—Plans have been prepared for the rebuilding of McDougall bridge.

WOODSTOCK, N. B.—The Woodstock Sash Balance & Lock Co. is seeking incorporation.

OUTREMONT, QUE.—Tenders have been invited for the purchase of \$50,000 of drain debentures.

ASHERS, N.S.—The large bridge over the Stalee river, built some years ago, collapsed recently.

EAST TORONTO, ONT.—E. Hales has commenced the erection of a new building on Queen street east.

VRDEN, MAN.—A deputation from this place last week urged the C.P.R. to erect a new station here.

NEWBURG, ONT.—W. H. Asselstine, of this place, is arranging to erect a steam saw mill at Harlowe.

DARFMOOUTH, N. S.—The question of erecting a new town hall is being considered by the Council.

REGINA, N. W. T.—Improvements to the Government House here will be carried out at an early date.

AYLMER, QUE.—The wardens of St. Paul's church have decided to ask tenders for improvements to the building.

BELLEVILLE, ONT.—Tenders have been invited for repairs to the city hall, from plans prepared by Walter Alford.

PEMBROKE, ONT.—Thos. Dunbar, Box 294, will receive tenders up to 26th inst. for extensive alterations to a residence.

WALKERVILLE, ONT.—On March 2nd the ratepayers will vote on a by-law to raise \$1,725 by the issue of debentures.

AMELIASBURG, ONT.—The erection of a bridge between Huff's Island and Massassa Point, to cost \$2,000, is advocated.

RAT PORTAGE, ONT.—The erection of a large paper and pulp mill at this place will, it is reported, be commenced in the spring.

FERGUS, ONT.—At the last Council meeting a committee was appointed to report on the question of building a new school.

PORTAGE LA PRAIRIE, MAN.—The Portage Produce Co. have purchased the old Union Hotel and will remodel the building.

MIDLAND, ONT.—Mr. Hayes, general manager of the G. T. R., states that the contract will shortly be let for an elevator to be built here.

BARRIE, ONT.—Arthur Craig, County Treasurer, will receive offers until the 25th inst. for the purchase of \$50,000 of county debentures.

BRANTFORD, ONT.—The County Council of Brant will meet on the 29th of March to take into consideration the erection of a House of Refuge.

POWASSAN, ONT.—Milton Carr is making preparations to build a large brick store next summer. Porter & Co. also intend erecting a large store.

BROCKVILLE, ONT.—A by-law has been passed in council authorizing the borrow-

ing of a sum of money to meet current expenses.

ALVINSTON, ONT.—The Duffy-McCallum Co. have purchased property on Front street, and are making preparations to build thereon.

GALT, ONT.—The Engineer, in his next report to Council, will recommend the construction during the year of cement walks to the value of \$7,000.

AMHERSTBURG, ONT.—The Gosfield North Council have requested Mr. Alex. Baird to prepare plans and specifications for the repair of the Lovelace drain.

THOROLD, ONT.—The town is prepared to receive tenders up to Monday, 28th inst., for the survey of the town and preparation of a map. W. T. Fish, town clerk.

WINDSOR, ONT.—The Detroit, Belle Isle & Windsor Ferry Co. are asking for tenders for erecting a building, 65 x 114 feet, on their summer resort on Bois Blanc.

OTTAWA EAST, ONT.—It is probable that a franchise for a waterworks system will be given to E. J. Rainboth, who will also construct a system for Hintonburg.

ESSEX, ONT.—The Ontario Natural Gas Co. is opposing the granting of a charter to the Essex Standard Co., which proposes to pump gas from Essex county to Detroit.

HULL, QUE.—In consideration of a bonus of \$40,000, the Toronto Rubber Co. offer to erect a building to cost \$30,000, and to expend \$70,000 on plant.

THREE RIVERS, QUE.—It is rumored that the C.P.R. will build a large hotel here in the spring.—Development work will shortly be commenced at the Shavenegan Falls.

COLLINGWOOD, ONT.—A deputation from this town waited upon the Minister of Public Works at Ottawa last week urging the improvement of the harbor facilities here.

TILBURY NORTH, ONT.—Wm. Newman, C.E., of Windsor, has been engaged by the Tilbury North Council to report on the repair of Tremblay Creek, between the M.C.R. and C.P.R.

AYLMER, ONT.—Mr. Wooster has submitted to the Town Council plans for remodelling the town hall, the work to cost \$2,500. The money will be raised by issuing debentures.

ORILLIA, ONT.—A by-law to issue debentures for \$4,600 was carried at the last Council meeting. The proposal to obtain power from Ragged Rapids was also further considered.

RUSSELL, ONT.—Albert Helmer will receive tenders up to Saturday, March 5th, for the construction of a bridge over Castor river, on town line between counties of Russell and Carlton.

ST. CATHARINES, ONT.—W.G. Thompson, superintending engineer of the Welland canal, will receive tenders until Friday, 25th inst., for the supply of timber, hardware, oil, etc., for the current year.

VICTORIA, B. C.—Senator Scott has stated that it is the intention of the government to secure the construction of a line of railway from the terminus of the supposed railway at Glenora to a point near Ashcroft.

TORONTO JUNCTION, ONT.—By-laws have been passed by the Town Council authorizing the issuing of debentures for \$991,500 and \$76,788, in accordance with an act passed at the recent session of the Ontario legislature.

WOODSTOCK, ONT.—The Richards Soap Co. are making arrangements to largely increase their facilities.—Burford Council has decided to build an iron

bridge, on stone abutments, over Horner's Creek, at third concession of Burford.

VANCOUVER, B. C.—The Cowichan Lumber Co. have applied for permission to construct a logging railway on Vancouver Island.—The Brackman & Kerr Milling Co. will erect a two-story warehouse, 33 x 122 feet, on Hastings street.

CHATHAM, ONT.—The City Council have passed a by-law authorizing the borrowing of \$140,000, as required.—The Medical Health Officer has recommended that steps be taken by the Council to adopt a system for the construction of sewers.

MAISONNEUVE, QUE.—The School Commissioners will receive tenders until noon of the 21st inst. for the erection of a school building, from plans prepared by J. Alcide Chausse, architect, of Montreal, and which may be seen at the office of the secretary-treasurer.

BERLIN, ONT.—By-laws for the establishment of an electric light plant for the town, and for a county House of Refuge, were carried by the ratepayers last week.—Ignatius Wey, architect, will receive tenders up to the 19th inst. for the erection of a school house at New Germany.

KINGSTON, ONT.—Increased accommodation will be provided at the Royal Military College. This will include the building of dormitories and a hospital.—Dr. Bordon, Minister of Militia, was here last week, and inspected the site for the proposed drill hall, the plans for which have been prepared.

HAMILTON, ONT.—The Fearman Packing Co. have made a proposition to the city to erect a large factory and plant in East Hamilton.—School Section No. 1, Barton, is considering the erection of a new school building.—The Ontario Rolling Mills Co., whose building and plant were burned last week, will probably rebuild at once.

ST. JOHN, N. B.—The C. P. R. is reported to be considering the building of an elevator near the present one at Sand Point.—At a meeting of the Good Roads Association held last week, a recommendation was passed requesting the Board of Works to consider the suggestions for street improvements made by Mr. A. W. Campbell, Ontario Good Roads Commissioner.

LONDON, ONT.—Building permits have been granted as follows: R. S. Wilson, brick veneer residence and stable on Richmond street, corner of Oxford, cost \$1,200; J. L. Holmes, one and a half story frame dwelling on Egerton street; A. Globe, brick veneer residence on Raglan street.—It is rumored that the Hamilton road Methodist church congregation have in view the erection of a new edifice.

PETERBORO', ONT.—At a conference of the joint committee of the Town Council, County Council and Ennismore Council, the reconstruction of Mud Lake bridge was considered. It is estimated that a suitable bridge will cost \$35,000. The Dominion and Provincial governments will be asked to grant financial assistance.—The question of building a House of Refuge was also discussed, and a committee appointed to obtain information.

LINDSAY, ONT.—Frank Marks has purchased property on William street, and will erect several dwellings thereon.—The Lindsay Council, at its last meeting, passed a resolution requesting the Provincial government to assist in the erection of a bridge across the Scugog river, at the foot of Rideau street.—The contract for street lighting expires on May 1st. The Council are therefore obtaining information as to the cost of a civic lighting plant.

QUEBEC, QUE.—A rumor is current that the Grand Trunk Railway Co. contemplate building a mammoth hotel here.—The Estate of the late Hugh O'Donnell

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have decided to build a three-story building on Couillard street, to be faced in stone, and to cost \$6,000.—David Ouellet, architect, is preparing plans for a new building for the Bell Telephone Co., to be erected on St. John street.—Jos. P. Ouellet is preparing plans for the finishing of the interior of St. Flavie Station church, also for a presbytery for the same parish.—Nothing has as yet been decided regarding the reconstruction of the facade of the Congregation church, St. Roch, for which Mr. Raymond has prepared plans.

ST. THOMAS, ONT.—It is rumored that the Lake Erie and Detroit River Railway will ask a government bonus to extend its line from Ridgetown to this city.—E. T. McDonald, architect, is preparing plans for the Y.M.C.A. offices in the new building to be erected by F. M. Griffin at the corner of Talbot and Railway streets. This structure will be two stories in height, 65 by 75 ft., containing reception room, lecture hall, complete lavatories, offices, etc.; estimated cost, \$10,000.—Messrs. Bell and McCubbin, engineers, have made a survey in Grey township for the extension of a government drain.—A. E. Root, manager of the new Grand Opera House, intends to remodel the building in the spring.—The City Engineer is urging the Council to purchase a road roller.—At the last Council meeting a committee was appointed to secure information regarding the different classes of street pavement. The question of repaving Talbot street is under consideration, and a majority of the Council appear to favor brick.

MONTREAL, QUE.—Plans are being prepared for the new fire station for St. Henri, a site for which has been secured at the corner of St. Elizabeth and Notre Dame streets.—The C.P.R. Telegraph Co. have decided to string a heavy copper wire from Montreal to the Pacific coast. It is stated that a second cable will also be laid from Vancouver to Victoria, B. C., a distance of 45 miles.—Representatives of the G.T.R. and the municipality of St. Lambert appeared before the Railway Committee of the Privy Council at Ottawa last week regarding a subway at Victoria avenue. A deputation also interviewed the Premier urging the necessity of constructing a bridge over the Lachine canal at Atwater ave., between Verdun and St. Cunegonde.—J. A. Chausse, architect, is preparing plans for one store, two tenements, to be built at the corner of Chambord and Marianne streets, for J. W. Guerin. Tenders will be invited shortly.—Messrs. Prefontaine, St. Jean, Archer & Decary are solicitors for the North Shore Electric Railway Company, which purposes building an electric railway on the north shore of the St. Lawrence river.

HALIFAX, N. S.—The Nova Scotia Iron and Steel Company, with a capital of \$1,000,000, have an application now before the Provincial legislature for incorporation. The company propose to establish steel and iron works in Cape Breton, probably at Sidney, as that town has already offered a bonus of \$50,000 for the works. Buildings, railways, breakwaters, etc., will be constructed in connection with the project. Graham Fraser and Harry Graham, of New Glasgow, are among the promoters.—The Halifax and Bedford Electric Company, which is seeking incorporation, is composed of Dr. Chisholm, ex-Mayor Keefe, E. F. Freeman, and others, of this city. The proposal is to build an electric railway from Halifax to Bedford, with such extensions as may be approved of by the municipalities. The head office of the company will be in this city, and the capital stock is placed at \$250,000.—A bill is now before the Legislature to authorize the municipalities of East and West Hants to borrow money for repair of the county court house and jail. Another bill introduced provides for the construction of a

system of sewerage for the town of Sydney.

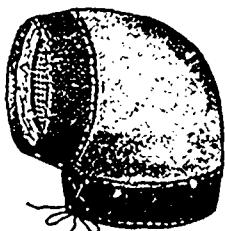
WINNIPEG, MAN.—There is a probability that the Pipestone branch of the C.P.R. will be extended to the Moose Mountain district next summer. The distance is about 45 miles.—Steps are being taken to secure the erection in this city of a Y. M. C. A. building.—At the last meeting of the Fire, Water and Light Committee the question of purchasing a new steam fire engine was discussed. It is probable that new trucks, reels and hose will also be purchased.—Subscriptions amounting to \$6,000 have been secured towards the erection of a working man's hotel.—The sum of \$128,000 is required for providing additional school accommodation. It is probable that a by-law to raise this amount will be submitted to the ratepayers.—H. McGowan, architect, has prepared plans for improvements to the Central school.—The Ogilvie Milling Co. will probably erect a large steel elevator here, with a capacity of 500,000 bushels.—The city will receive proposals, addressed to H. Wilson, chairman Finance Committee, for the purchase of \$306,117 of debentures. Tenders close March 25th.—A deputation from Arthur municipally waited upon the manager of the C.P.R. recently urging the construction of a railway from Deloraine to Wascada, a distance of 22 miles.

OTTAWA, ONT.—The French Societies of Ottawa purpose erecting next summer a national building, for which plans have already been prepared.—Messrs. Onley, Henry & Stewart, of Tilbury, recently interviewed the Government with respect to Col. Tisdale's proposition for a canal line to shorten the distance between Lake St. Clair and Lake Erie. They ask Government aid for the project.—The directors have presented the the following figures as to the cost of proposed improvements to be carried out:—Grand stand and track, \$3,500; refreshment building, \$1,500; additions to machinery hall, \$3,000; land making, \$6,000; horticultural hall, \$750; iron for new main building, \$20,000; stock building, \$750; fire hall, \$250; alterations in other buildings, \$400. The main building will be 300 ft. long and 130 ft. wide, and capable of seating 10,000 people.—The Railway Committee of the Privy Council were last week asked to approve of the site and piers of the proposed bridge over the St. Lawrence between Quebec and Levi. The width of the main span will be 1,600 ft., and that of the anchor spans 500 ft.—A new Anglican church will be erected on the Glebe property on First Avenue, work on which will shortly be commenced. It is also rumored that a new church will be built at Sandy Hill.—Residents in Russell county and in the village of Metcalfe are advocating the building of an electric railway between this city and Metcalfe, a distance of 20 miles.—E. F. E. Roy, Secretary Department Public Works, will receive tenders until Monday, March 7th, for the extension of breakwater at Trout Cove, Centreville, N. S. Plans at office of C. E. W. Dodwell, Halifax, D. & O. Sproul, Digby, and at the above department.—The trustees of the First Congregational church have an option on property west of Bank street, and if purchased, will build a new church thereon.—Engineers are surveying the Ottawa river for the purpose of locating the five piers of the

proposed new bridge between Hull and Ottawa to be built next year by the Hull Electric Company.—Tenders are asked by the city until Saturday next for supplying 3,000 ft. of 2½ inch fabric hose. John Henderson, City clerk.—The British American Light and Power Company is seeking incorporation, to build electric tramways and operate systems for electric lighting in the Yukon district, Northwest Territories and Northern British Columbia. Hall, Cross, Brown, Sharp & Cook are acting as solicitors.

TORONTO, ONT.—The City Council has given notice of its intention to construct the following works: Asphalt pavement on Carlton street, from Jarvis street to Yonge street, cost \$15,450; brick pavement on Clinton street, from College street to a point 2,305 feet north, cost \$14,800; macadam roadway on road leading north from Queen's Park crescent to Bloor street, cost \$3,500; brick pavement on Huron street, from College street to Grange avenue, cost \$12,700; gravel roadway on Tyndall avenue, from King street to Springhurst avenue, cost \$4,540; concrete sidewalk on Bay street, from Esplanade street to Front street, cost \$790.—The City Engineer presented to the Board of Works on Monday last the estimates of expenditures for the current year. Among the appropriations are the following: Bridges—Repairs and maintenance, \$7,800; changes at Eastern ave. and Queen street bridges, \$56,000; new bridge over Humber, \$13,000; new deck at Sherbourne street bridge, \$6,000. Special works—Sand pump, etc., \$6,000; sewage disposal, \$5,000; concrete walk at new City Hall, \$1,000; concrete walk at Albert street, \$500. Construction—House services, \$5,000; valves and hydrants, \$5,000; concreting reservoir, \$10,000; building pattern shop, etc., \$2,000; draining hydrants, \$5,000; new fence at Main Station, \$1,780. Renewals—House services, \$3,000; cement mains renewed on Queen street, \$3,960, and on John street, \$1,150; old iron mains renewed on Queen street, O'Hara avenue and West Market street, \$9,817; new floor in engine house, \$1,400; converting engine, \$40,000. Special works for improvements of distribution and better fire protection—St. George street, \$6,260; Queen street, \$11,985; Church street, \$1,257; Melinda street, \$4,208; Colborne street, \$2,658; Don improvement, \$1,600; main from College street, \$135,500; improvement of connection from station to lake shore crib, \$450,000.—The Canadian Oiled Clothing Company, of Port Hope, have decided to remove to this city. They have purchased from the Land Security Co. a site at the corner of King and Atlantic streets, in Parkdale, and will erect thereon a three-story building.—The Albany Club are said to have purchased property on the south side of King street, between Church street and Leader Lane, on which to erect a new building. The removal of the buildings now on the site will be commenced at once.—The time for receiving tenders for elevators, marble and tile flooring and an electric light plant for the new municipal buildings has been extended until the 28th inst.—The Don Rowing Club have made arrangements for new quarters to be located at the foot of Cherry street. The present club house at the mouth of the Don will be towed to

(Continued on page 4).



ELBOW

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this place, where it will rest on a float and piles. A front will be added to the structure, the plans for which have been prepared by A. R. Denison, architect.—Edward Boisseau & Co., wholesale clothiers, 18 Front street east, have leased the vacant property on the south-west corner of Yonge and Temperance streets, formerly occupied by the John Eaton store, and will erect thereon a modern building, 70 x 150 feet, combining factory, wholesale and retail store. Building operations are expected to commence very shortly.—The Board of Works will shortly invite tenders for laying water mains in Parkdale.—The city have decided to erect a building in High Park for refreshment purposes, to cost \$3,000.—According to a report presented to the Property Committee by the architect, the sum of \$91,525 will be required to complete the new City Hall. This sum includes the following: To complete tower, \$5,600; to complete main entrance steps, \$1,000; tuck-pointing, \$3,875; carving, \$3,000; vault, \$1,000; concreting, \$3,300; rearranging and additional partitions, counters, etc., \$7,500; thirty vaults fitted up in wood, \$3,000; furniture, \$25,000, including mantels, grates and hearths, \$4,800; blinds, \$2,500; fire protection, \$1,600; prisoners' cages, \$5,500; treasurer's portable cash vault, \$2,000; to complete clock system, \$5,000.—Building permits have been granted as follows: Jessop & Sons, 13 Richmond street west, two storey brick warehouse, 80 Bay street, cost \$8,900; W. H. Hunter, 60 Close avenue, two pair semi-detached brick dwellings, north side Dundas street, opposite Sorauen avenue, cost \$3,200; Mrs. Nuttall, 188 Adelaide street west, two storey brick house, cost \$1,400.

#### FIRES.

The Ontario Rollings Mills at Hamilton, Ont., were burned to the ground on Sunday last. The building was owned by the Grand Trunk Railway Co., and was valued at \$5,000. The loss on machinery is between \$20,000 and \$25,000.—A. W. Vermilyea & Son's boot and shoe store at Belleville, Ont., was seriously damaged by fire recently. The building was owned by James Vair, of Cobourg.—A building at Vankleek Hill, Ont., known as the Iron Store and occupied by John Northcott, was burned on the 14th inst.; insurance on building, \$1,700.

#### CONTRACTS AWARDED.

LONDON, ONT.—The contract of building the Napier bridge has been let to Henry Gough, at the price of \$1,075.

DUBLIN, ONT.—Jos. Krauskopf has let the contract for the erection of a brick residence to Davis & Eiserman, of Mitchell.

MONTREAL, QUE.—L. Z. Gauthier, architect, has let the contract for a church at St. Victor d'Alfred to L. J. Fauteux, of St. Benoit.

EMYVALE, P. E. I.—The contract for the exterior work of the new R. C. church has been let to D. C. McDonald, of this place, whose tender was \$4,300.

STRATHALLAN, ONT.—The East Zorra Council have accepted the following tenders for a new bridge: Stone abutments, Thos. Callan, of Innerkip, \$960; steel superstructure, Straford Bridge and Iron Co., \$590.

CALGARY, N.W.T.—Lossen & McGillivray, of this place, are reported to have

received a contract for all the bridge work of the Crow's Nest Pass railway, from Crow's Nest Lake to Moyle Lake, a distance of 200 miles.

MAISONNEUVE, QUE.—J. Alcide Chausse, architect, of Montreal, has awarded to Hamel & Bleau the contract for the erection of two three-storey factories, 50 by 100 ft., one for Jos. Larin, and the other for M. Daniel & Company.

St. JOHN, N. B.—R. Maxwell has been awarded the contract for the residence to be built by C. H. Peters. Sub-contracts have been let as follows:—carpentry, J. Drury; painting, J. H. Pullen; copper work, James McDade. The architect is H. H. Mott.

HAMILTON, ONT.—The following tenders for water works supplies have been accepted by the city:—Wood, Vallance & Co., lead pipe, pig lead and hose for street watering; Gartshore & Co., cast iron pipe and castings; Burrows, Stewart & Milne, iron stop-cock boxes; A. J. Nie, stop valves and hydrants; Chadwick Bros., cocks and nozzles; Gutta Percha Company, Toronto, hose.

TORONTO, ONT.—Contracts have been awarded by Mr. F. H. Herbert, architect, for alterations to store, 117 Yonge street, for the Cawthra estate, as follows:—Brickwork, R. Chalkley; carpenter work, Andrew Nelson; painting, F. E. Phillips; galvanized iron, Tucker & Dillon; roofing, John Reggin.—The contract for the mason and carpenter work in connection with the rebuilding of the factories, 36-40 Adelaide St. West, for Mr. C. H. Hubbard have been awarded by Mr. F. H. Herbert, architect, as follows: Brickwork, Richard Chalkey; carpenter work, Geo. Rathborne; iron work, The St. Lawrence Foundry Co. The balance of minor trades will be tendered for shortly by advertisement in the RECORD.

#### MARKET CONDITIONS.

The firmness of the cement market has been freely commented upon during the past week. Orders have been placed for more than the usual quantity, and as a result prices show a tendency to advance. Ontario buyers have placed orders in Montreal for 1000 barrel lots of English cement, for March delivery. This is an unusual occurrence at this season of the year, and shows that the available stock in the west is not considered equal to the demand.

Galvanized iron is moving freely at Montreal, and prices are quite firm. In pig iron there is a light movement. The destruction of the plant of the Ontario Rolling Mills at Hamilton will probably create more demand for American pig iron for a time. Notwithstanding that indications point to higher prices for iron pipe, there is considerable variation in

the prices asked by the different manufacturers.

At Toronto galvanized iron is moving actively at recent quotations. There is also a fair business doing in glass and paints and oils. The feeling is general that upon the opening of the building season there will be a considerable demand for supplies.

#### ALUMINIUM IN STRUCTURAL WORK.

In the use of aluminium for structural purposes the selection of the proper grade that should be used will depend largely upon the specific purpose to which it is desired to apply the metal, but, generally speaking, for purposes where aluminium is brought into tension, such as in sheets or in rolled shapes (as angles, beams, &c.), an ultimate tensile strength of from 32,000 lb. to 40,000 lb. per square inch may be reckoned upon, and a safety factor of four gives an allowable working strain of from 8,000 lb. to 10,000 lb. This, of course, is not for the pure metal, but for the stronger alloys.

The Illustrated Carpenter and Builder says that the ultimate tensile strength of pure metal in plates and shapes may be taken at from 24,000 lb. to 28,000 lb., and with the same safety factor of four it gives an allowable working strain of from 6,000 lb. to 7,000 lb. For the alloys of cast aluminium in tension, the ultimate strength may be taken at from 18,000 lb. to 28,000 lb. per square inch. Using a safety factor here of five, as aluminium castings are quite uniform and solid, a working strain is obtained of from 3,600 lb. to 5,600 lb. per square inch. It is difficult to give a value for the ultimate strength of pure cast aluminium in tension, for the reason that while the ordinary pure aluminium will average about 16,000 lb. per square inch, this can be increased very considerably by cold working, and in some cases to as much as 24,000 lb. per square inch. Assuming the average strength and using a safety factor of four gives an allowable working strain of from 32,000 lb. to 48,000 lb.

In comparison the alloys of aluminium in rolled plates and structural shapes, such as struts, columns, &c., have an ultimate tensile strength of from 26,000 lb. to 34,000 lb. per square inch, which, using a safety factor of four, gives an allowable working strain of from 6,500 lb. to 8,500 lb. per square inch. Pure aluminium sheets and structural shapes in compression have an ultimate tensile strength of from 20,000 lb. to 24,000 lb. per square inch, which, with a safety factor of four, gives an allowable working strain of from 5,000 lb. to 6,000 lb. per square inch.

(To be Continued)

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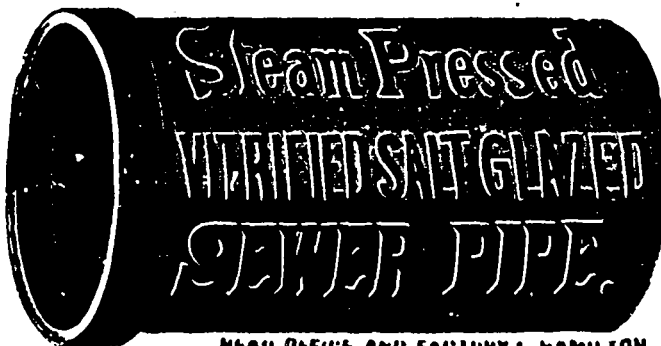
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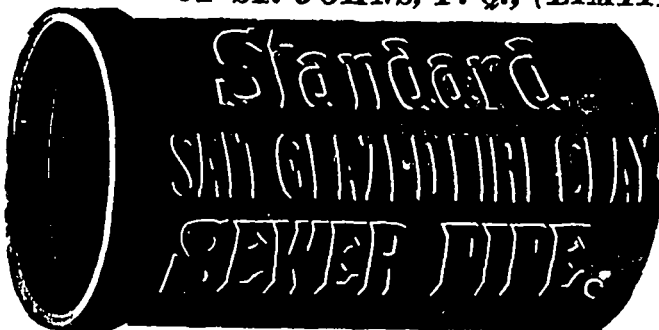


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## MUNICIPAL DEPARTMENT

### BRICK PAVEMENTS IN TORONTO.

Brick pavements seem to be increasing in popularity with the Toronto public, according to the last annual report of Mr. C. H. Rust, Deputy City Engineer, which contains some important data concerning them. They were first laid in 1895, on two residential streets; in 1897 four streets were so paved. The foundation is 4 inches of concrete with 1-inch sand cushion over it, and the joints are Portland cement grout except in one case, where paving pitch was used. A lane was also paved with brick on 6 inches of gravel during last year. All this work was done on the petition of abutting taxpayers, and petitions for more like it have been received. All the brick used in 1897 was made in Canada, and most of it was repressed and level-edged. It was subjected to abrasion and absorption tests before being accepted.

For the abrasion test three bricks of known weight were placed in a cast-iron cylinder 2 feet in diameter and 3 feet long, together with about 140 pounds of scrap iron varying in weight from about 10 ounces to 11 pounds, the average piece weighing about 3 pounds. The cylinder was then given 2,000 revolutions at the rate of 29 revolutions per minute, after which the bricks were taken out and weighed. They were then given another 2,000 revolutions and again weighed. If their loss was greater than 8 per cent. of their first weight after 2,000 revolutions, and 13 per cent. after 4,000 revolutions, the brick represented by the samples were rejected. The test has not been altogether satisfactory, owing to the pieces of iron becoming very much worn and the difficulty of determining exactly what the cylinder contained. Iron cubes were cast with corners rounded to a radius of about a quarter of an inch. They weighed 2, 4 and 8 pounds, and were used as a substitute for the scrap iron, but the largest two sizes were found too severe on the bricks and their use was discontinued. The abrasion test now in use is to put three samples in the cylinder with 100 2-pound round-edged iron cubes, and give them 3,000 revolutions at the rate of 25 revolutions per minute, their weight being taken at each 1,500. Those which lose more than 8 per cent. of their weight during 1,500 revolutions or 12 per cent. during 3,000 are rejected.

The absorption test, which formerly took three days, has been reduced to six hours by taking a small piece weighing from about 2 to 4 ounces from the inside of one of the sample bricks. This piece is first thoroughly dried, then weighed, and next immersed in water for six hours. At the end of this period it is dried with a cloth and weighed again. If the gain in

weight is over 2 per cent. the brick is rejected.

### UTILIZING GARBAGE.

The garbage of a great city is too often regarded as worthless. In St. Louis, Missouri, the refuse is placed in enormous vertical cylinders, surrounded by steam jackets, which evaporate the seventy-five to eighty per cent. of water in the garbage. The fatty substances are dissolved, and as the result of a number of processes a fertilizer is produced which is worth from nine dollars to twelve dollars per ton, the demand exceeding the supply. One of the purest and best soaps of the country was made of garbage grease before cottonseed oil entered the field. It is now proposed to light London by electricity for nothing. It now costs that city \$1.08 (4s. 8d.) to get rid of a ton of garbage. A combination of boilers and other apparatus has been devised that can burn the garbage at twenty-four cents (one shilling) per ton, and generate steam sufficient to run enough dynamos to light the entire city. London can thus save 3s. 8d. on each ton, and, in addition, illuminate its city without cost. Garbage, by a machine called the "dust destructor," is converted into clinkers, which can be used for roadways, as artificial stone for sidewalks, and as sand for mortar and cement. In Paris the invisible particles of iron, worn from wheels and from the shoes of horses, are rescued by passing powerful magnets through the sweepings.

In the city of New York the street cleaning department is under the able management of Colonel Waring, and during the year 1897 the death rate of that city was lower than it has been since a record of it was kept. Under the present municipal regulations, ashes and garbage are collected separately in New York, and the garbage is mainly disposed of at the works of the Sanitary Utilization Company on Barren Island. The ashes and cinders are, at present, thrown into the sea, but the Commissioner proposes a much more rational way of disposing of them, which is not only interesting, but novel. Analyzing the contents of the New York ash-barrels, Col. Waring finds that they include, on an average, twenty per cent. of recoverable coal, fifty per cent. of fine ash, and thirty per cent. of coarse ash, clinker and stone. Twelve hundred thousand cubic yards of ashes are collected in New York every year, at a cost of six hundred and forty thousand dollars. The

cost of separating this into its component parts, ready for utilization, would be about one hundred and fifty thousand dollars, which must be added to the cost of collection. The result of separation would be, however, to furnish on the city's premises, ready for sale, one hundred and forty-four thousand tons of coal, which, at two dollars and a half a ton, would be worth three hundred and sixty thousand dollars; six hundred thousand cubic yards of fine ashes, worth, at twenty-eight cents per yard, one hundred and sixty-eight thousand dollars; and one hundred and eighty thousand yards of clinker, worth, at seventy-five cents a yard, presumably for concrete work, one hundred and thirty-five thousand dollars; the total value, at these prices, being six hundred and sixty-three thousand dollars. Adding the cost of separation to that of collection, the city would thus save five hundred and thirteen thousand dollars a year. The American Architect asks how fine ashes could be sold, even at so low a price as twenty-eight cents a yard, but Colonel Waring points out that ashes, mixed with lime, make a mortar stronger and lighter than lime and sand, and that the dealers who manufacture the machine-mixed mortar, now almost universally used by builders in New York, would probably be glad, if the substitute could be legalized under the building acts, to take and use a material which would enable them to supply a mortar, as good as their present product, at less than two-thirds the price.

If the ashes and garbage can be so profitably utilized in New York, there seems no reason why some use could not be made of these materials in other cities.

London is said to be the healthiest city in the world of its size. Then it is easy to be remembered that there is no other city of the same size as London. The numerous hospitals are evidence of the great prevalence of disease within its borders and the activity of the coffin makers and undertakers is well known when the fogs come on. Some interesting figures have recently been given showing the cases treated at the voluntary hospitals and dispensaries of London and also at the hospitals of the Metropolitan Asylums Board. They amounted together to the total of 1,753,611 patients.

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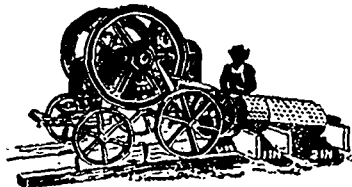
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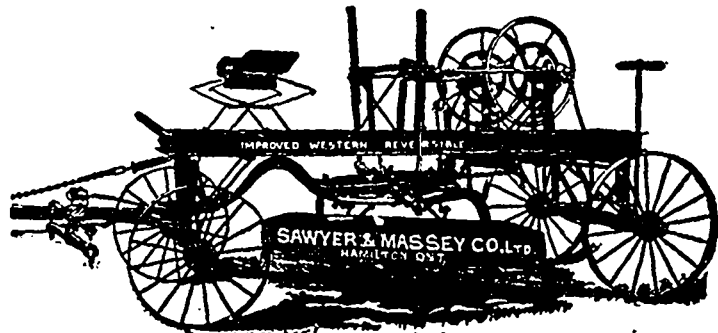
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Table listing prices for Hydraulic Cements, Thorold, Queenston, Napanee, Hull, Ontario, Keene's Coarse Whites, Fire Bricks, Lime, Plaster, and Hair Plasterers.

HARDWARE.

Table listing prices for Cut nails, Steel nails, and Cut spikes.

IRON PIPE.

Table listing prices for Iron pipe, Lead pipe, and Waste pipe.

Galvanized Iron.

Table listing prices for Adam's-Mar's Best and Queen's Head galvanized iron.

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Table listing prices for Steel Beams, channels, angles, tees, plates, and Sheared steel bridge plate.