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# CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF PUBLIC WORKS

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. 6.

FEBRUARY 28, 1895

No. 4.

## THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY THURSDAY

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

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CONFEDERATION LIFE BUILDING, TORONTO.  
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Information solicited from any part of the Dominion regarding contracts open to tender.

Advertising Rates on application.

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## FOR SALE

Two second-hand Mantels and Grates. Apply corner Bellwoods Avenue and Arthur Streets, Toronto.

## LUMP TENDERS

Will be received at No. 106 Wellington Place, Toronto, for

### Alterations to Two Houses on Farley Avenue.

Plans may be seen from two to five P.M. from MONDAY, 4TH MARCH TO SATURDAY NOON.

HERBERT G. PAULL,  
Architect.



## NOTICE TO CONTRACTORS

### Pavement of Tracks on Avenue Road

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to eleven o'clock a.m. on SATURDAY, MARCH 7, 1895, for the following work:—

On Avenue Road, track allowance between Blue Street and Davenport Road, an asphalt pavement with street tooling.

On Avenue Road, from Davenport Road to C. P. Railway tracks, cedar blocks on concrete, with granite tooling.

Specifications may be seen and forms of tender obtained at the office of the City Engineer, Toronto, on and after the 2nd day of March, 1895.

A marked cheque payable to the order of the City Treasurer, for the sum of 2½ per cent. on the amount of the work tendered for, must accompany each and every tender, otherwise it will be ruled out as informal. The lowest or any tender not necessarily accepted.

DANIEL LAMB,  
Chairman of Committee on Works

Committee Rooms, Toronto, Feb. 25, 1895.

Send for a copy of the second edition of the CANADIAN CONTRACTOR'S HANDBOOK, containing 150 pages. Price, \$1.50; 10-subscribers, \$1.00.

## TENDERS WANTED

Propositions for sinking an artesian well or wells at the village of Alexandria, stating terms per foot of depth, will be received up to the 20TH DAY OF MARCH, 1895. Address to undersigned.

D. A. McDONALD,  
Reeve.

Alexandria, Feb. 21st, 1895.

## TENDERS

Tenders will be received at my office (where specifications may be seen or obtained) up to 6 o'clock on THURSDAY, 14TH MARCH, for the following:—

Plank Sidewalks, Artificial Stone Walks, Sewer Pipes and Cement; Lumber, Wire Nails, Gravel, Crossing Stone, Iron Castings, Stone Kerbing and Flagstone Walks.

ORMSBY GRAYDON, City Engineer.  
ALD. WM. HEAMAN, Ch. No. 2 Com.

City Engineer's Office, London, Ont., Feb. 26, 1895.

## TENDERS

Separate or bulk Sealed Tenders delivered or sent in registered letter addressed to the undersigned, and endorsed "Tenders for Town Hall and Fire Station," will be received until March 15th next, inclusive, for all trades required in the erection and completion of municipal buildings and fire station combined, for the town of Carleton Place, according to plans and specifications to be seen at the Clerk's office, Carleton Place, or at the office of Geo. W. King, architect, Toronto.

Tenders will not be considered unless made on the terms supplied, and signed with the actual signatures of tenderers and their bondsmen.

An accepted bank cheque, payable to the order of A. R. G. Pedree, Town Clerk, Carleton Place, for the sum of not less than 2½ per cent. on amount of tender, must accompany each tender, together with the signatures of two responsible parties who will go security for the full amount of the tender.

Cheques will be forfeited if the party declines the contract, or fails to complete the work contracted for, and will be returned in case of non-acceptance of tender. It is expected that town labor will be employed as far as possible.

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

A. R. G. PEDREE,  
Town Clerk.

Carleton Place, Feb. 25th, 1895.



Sealed Tenders addressed to the undersigned, and endorsed "Tenders for Hot Water Heating Apparatus, Wolseley, Assa," will be received until TUESDAY, 10TH MARCH, for the construction of a Hot Water Heating Apparatus at the Wolseley, Assa, Court House.

Plan and specification can be seen and form of tender and all necessary information obtained at this Department, and at the office of D. Smith, Winnipeg, Man., after Tuesday, 26th February.

Persons are notified that tenders will not be considered unless made on the printed form supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted bank cheque, made payable to the order of the Honorable the Minister of Public Works equal to five per cent. of the amount of the tender, which will be forfeited if the party decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned.

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

By order,  
E. F. E. ROY,  
Secretary.

Department of Public Works,  
Ottawa, 20th Feb., 1895.

## TENDERS FOR SUPPLIES

Tenders, marked "Tenders for Supplies," will be received at this office up to 5 o'clock, P.M., of MONDAY, THE 18TH DAY OF MARCH, prox., for furnishing the corporation of the town of Chatham with the following supplies for one year, from the 1st day of April, 1895.

### VITRIFIED SEWER PIPE CEMENT AND CURBING STONE

Specifications for the above may be had on application to the undersigned.

The Council reserve the right to reject any or all tenders.

JOHN TISSIMAN,  
Town Clerk.

Town Clerk's Office,  
Chatham, Ont., Feb. 25, 1895.

## SETTING AND BURNING PIPES AND TILES.

In the majority of yards it is usually found desirable to burn mixed kilns—that is to say, kilns crowded with bricks, pipes and tiles, and occasionally such goods as squares, crees, copings, &c. Much judgment is necessary in setting and building such a kiln, or there will be a large proportion of spoilt and soft goods. Excellent results in Scotch kilns are obtained by crowding in bricks for two-thirds of the space, then overlaying these with a tier or two of pipes of various sizes, and finishing off with the tiles. The pipes should be nested—that is, the smaller sizes packed within the larger sizes—this economizes space and checks the draught. The firing of such a kiln requires much more attention than is necessary for a kiln of bricks, since the tiles and pipes are thinner. After the live-holes are set going, no attempt should be made to push the fires for at least five hours, unless the goods are exceptionally dry. Then the firing should be increased progressively for the next thirty or thirty-five hours. At this stage the burner must be guided by watching the colour of the goods in the flues, and by observing "how she settles," as well as by noting the colour of the heated goods from the top of the kiln. The setting having proceeded regularly, and there being no "black spots" above, the kiln is damped down with ballast, and then the live-holes are banked up with ashes, the doors closed and plastered over, and the kiln is suffered to cool gradually. At the end of the second day "she may be opened" somewhat, the ballast being raked off the top and the doors of the live-holes unfastened. Finally, on the third day the clammins may be unpacked, and the kiln should be ready for drawing on the morning of the fourth day.—British Clayworker.

## CONTRACTS OPEN.

**FERGUS, ONT.**—The Commercial hotel is to be enlarged.

**COLDWATER, ONT.**—The purchase of a fire engine is under consideration.

**MIDLAND, ONT.**—The stores recently burned will be rebuilt without delay.

**ANDERSON, ONT.**—Antoine Rocheleau will erect new buildings in the spring.

**STOUFFVILLE, ONT.**—The Council are considering the question of constructing a system of waterworks for the town.

**DASHWOOD, ONT.**—The Evangelical church congregation intend erecting a \$4,000 building the coming summer.

**PERTH, ONT.**—William Wooden is making preparations to build a new residence. W. J. Rabb will also erect a residence.

**BRANTFORD, ONT.**—Additions to Darling street school, to cost from \$6,000 to \$6,500, have been decided on. Plans are being prepared.

**VANCOUVER, B. C.**—J. W. Horne has had plans prepared for a store to be built at the south-west corner of Richards and Cordova streets.

**BRAMPTON, ONT.**—T. J. Blain, Town Clerk, invites tenders until the 18th of March for the annual supply of lumber and nails for 1895-96.

**WHITBY, ONT.**—Wm. Brown will in all probability purchase the foundry here, and will make extensive alterations and improvements to the buildings.

**STAFFA, ONT.**—John Sadler proposes erecting a new residence in the spring. Mrs. Herron has purchased three lots and also intends erecting a fine residence.

**FORT WILLIAM, ONT.**—It is stated that a solid brick block will be erected in the spring, on one of the principal streets, for which plans are now being prepared.

**PORT HOPE, ONT.**—Tenders are invited by H. V. Saunders, Town Clerk, until Wednesday, the 20th of March, for the purchase of \$30,000 of waterworks debentures.

**NORTH TORONTO, ONT.**—The Council will probably issue debentures to cover the cost of constructing an electric railway or to purchase the plant of the Metropolitan street railway.

**HALIFAX, N. S.**—The City Engineer has reported that the amount required for water construction for the year would be \$18,000. The extensions proposed included those on Campbell road and Willow park.

**KINGSTON, ONT.**—The School Property Committee has engaged Joseph Power, architect, to report on the condition of Queen street and Central schools, and estimate the cost to put them in complete repair.

**GUELPH, ONT.**—The Guelph Railway Company will make application to the Ontario Legislature for incorporation to construct an electric railway along the streets of that city and extending to adjacent towns. The promoter is George Steeman.

**WINNIPEG, MAN.**—The Committee on Works have recommended to the City Council that the legislative committee be instructed to obtain such legislation as will enable the city to issue debentures, without submitting a by-law to the ratepayers, to the amount of \$9,500 to meet the cost of rebuilding Osborne street bridge with a steel superstructure.

**NEW WESTMINSTER, B. C.**—D. Robson City Clerk, invites tenders on behalf of the city, until Wednesday, the 30th of March, for the purchase of two issues of debentures of \$20,000 and \$400,000 respectively. The latter issue is required for the construction of the proposed railway and traffic bridge across the Fraser river, and may be delivered in whole or part.

**ST. HENRI, QUE.**—The Catholic School Commissioners will ask authority from the provincial legislature to borrow a sum of money to liquidate their present indebtedness and to erect a new school house, to cost \$18,000.—The Road Committee will interview the authorities of the Grand Trunk railway with reference to the building of a freight and passenger station.

**QUEBEC, QUE.**—H. J. Beemer is said to have decided to carry into effect at an early day his scheme for an electric railway in and around this city, and to La Bonne St. Anne. The establishment of a large hotel and park at Montmorency Falls in connection therewith is also talked of. The Quebec Steam Laundry has been secured by the C. P. R. authorities and will probably be enlarged and improved.

**WINDSOR, ONT.**—Smith & Sewell will build a frame house on Church street.—A deputation consisting of A. H. Clark, of Windsor, and John Donnelly, of Detroit, had an interview last week with the Minister of Marine at Ottawa, and asked permission to lay an additional main under the Detroit river, from Windsor to Detroit. The statute requires that such mains must be in 22 feet of water. Provided all the requirements are complied with, the request will likely be granted.

**AYLMER, QUE.**—At a recent meeting of the town Council, W. J. Poupore, the contractor for the new waterworks, proposed a larger system of waterworks for the town, which would meet the requirements of the Underwriters' Association. The proposal is to substitute the six-inch for nine-inch pipes and larger pipes in the same proportion. Mr. Poupore asks the council to raise the price for construction from \$35,000 to such a figure as would be the cost estimated by a board of arbitrators. It is the intention to extend the intake pipe three thousand feet into the lake instead of one thousand feet as at present. There will also be a tower tank erected on the highest point in the town.

**LONDON, ONT.**—At the last meeting of the Hospital Trust, it was decided to ask the Council for a grant of \$1,500 for a new operating room. The question of erecting a new \$16,000 wing to the hospital was also discussed, and the general opinion seemed to be in favor of issuing debentures to raise the money.—The vestry of St. Matthew's church have decided to build a new edifice on the site of their present building in the east end. The cost will probably be about \$10,000.—The members of St. James church, South London propose to build a \$1,500 addition.—Tenders are asked for tearing down the walls and removing the debris from the old site of the Dundas street Methodist church.—It is probable that new bridges will have to be erected this year over Kettle and Mill creeks.—The Board of Education will probably require the sum of \$48,000 for new buildings this year. A new school is to be erected on Colborne street, and several additions will be built.

**OTTAWA, ONT.**—A scheme is under consideration by certain members of the Y. M. C. A. for adding an additional storey to the building. The proposal is to take off the roof of the building, raise it a storey, and put in a swimming bath and bowling alley, at an estimated cost of about \$10,000.—The Canadian Southern Railway Company give notice of application for incorporation of "The Langenburg and Southern Railway Company," to build a railway from Langenburg, Assiniboia, to join the Canadian Pacific Railway between Red Jacket and Elk Horn, Man.—The Sisters of the Good Shepherd have been granted a building permit for a \$30,000 extension to the convent at the foot of St. Andrew street.—John Henderson, City Clerk, invites proposals on behalf of the corporation until Thursday, the 14th of March, for the purchase of \$300,000 of debentures, repayable at the end of twenty years.

Further particulars may be obtained from the City Treasurer.

**HAMILTON, ONT.**—Wm. Stewart & Son, architects invite tenders until the 8th, of March, for a new front, new roofing and for electric lighting of the Centenary Methodist church.—E. A. C. Pew, projector of the Lake Erie canal, states that the plans for the scheme were filed on Feb. 8. It is now proposed to utilize the water from the Welland River, about one and a half miles east of the Wellandport, from this point the canal will run to the Jordan river, where the power-house will be built. From this point the company will run 60 wires to transmit the electric power to Hamilton. The canal will cost \$1,000,000.—The Waterworks Committee have decided to ask for an appropriation of \$82,000, \$9,000 of which is for enlarging a main, and \$6,000 for enlarging new hydrants. The City Engineer is in favor of engaging an expert to look into the question of increasing the water pressure.—A report is current that Inspector Hodgins has reported against the payment of the annual Government grant to the Hamilton Collegiate Institute unless a new building is erected.

**TORONTO, ONT.**—Tenders are asked for a brick boarding house on Roncesvalles avenue. Plans at C. A. Mitchell's shop, rear 13 Grange ave.—The Council of the County of York passed a by-law on the 3rd of February providing for the issue of \$25,000 of debentures.—A sub-committee of the Fire and Light Committee last week inspected Brock avenue fire hall, and decided to report in favor of the erection of a new hall on the site already purchased on Dundas street.—The City Engineer desires to have the machine shops of the Water Works Department removed to the main pumping station. And new shops will probably be erected, at a cost of from \$7,000 to \$8,000.—The Management Committee of the Public School Board will recommend the following additions to schools:—Four rooms to Ryerson street school, six to Bolton avenue, four to Gladstone avenue, four to Queen Victoria, two to Kew Beach, four to Palmerston avenue, and two to Clinton. The cost of these additions will be about \$70,000.—The City Engineer, in his fortnightly report, presented to the Board of Works on Monday, recommended the construction of asphalt pavements on Selby street, from Huntley to Sherbourne streets, estimated cost, \$4,640. and on St. Joseph street, from Yonge to St. Vincent streets, estimated cost, \$6,900. The attention of the Board was drawn to the fact that new pavements were required on a number of streets, and the City Engineer will recommend that the work be carried out. With respect to the Queen street subway, it is recommended that it is not advisable to ask for tenders for the work until the matters in dispute between the railway companies and the city are finally settled.—The adoption of the down-draught, smoke-consuming furnaces at the main pumping station was recommended, the estimated cost of changing the furnaces being placed at \$7,500.—City Commissioner Coatsworth has recommended the erection of a wharf at the foot of Bay street, with a frontage of 300 feet, and extending out to the windmill line. The cost will probably be from \$15,000 to \$20,000. The recommendation has been passed by the Property Committee, and the amount will be placed in the estimates.—The Fire and Light Committee decided, at a meeting held on Tuesday last, to submit the question of purchasing an electric light plant to a vote of the ratepayers before taking any further action in the matter.—J. J. McLaughlin's mineral water factory on Sherbourne street was totally destroyed by the explosion of a boiler on Monday last. It is estimated that it will cost about \$5,000 to erect a building similar to the one destroyed.—Building permits have been granted as

follows:—Mr. Hopkins, 3 storey bk. hotel, s. w. cor. Church and Carleton sts., cost \$13,000. F. H. Herbert, architect; E. J. Lennox, architect, re-erection of warehouse, 34 Wellington street w., cost \$4,500; R. Lennox, 3 storey bk. hotel, 829 Yonge st., cost \$8,000; Michael Fennell, alterations to dwellings, 104-6 Farley ave., cost \$2,000; J. Y. Reid, to rebuild 27-29 Wellington st. w., cost \$9,000.—The rebuilding of Webb's building will be open for tender next week at the office of Mr. E. J. Lennox.

#### FIRES.

The residence of James Costello, at Westmeath, Ont., was burned recently. Loss above insurance, \$800.—The residence of William Matthews, at Lakefield, Ont., has been burned. Loss, \$1,000; no insurance.—Dalton & Co.'s general store at Carberry, Man., which also contained the post-office, was burned on Tuesday last. Loss, \$14,000; insurance on building \$2,000.—The Hudson Bay Co.'s flour mill, at Prince Albert, N. W. T., together with the elevator was consumed by fire on the 25th inst.—James Minchinton's residence at Napanee, Ont., was burned recently. No insurance.—The Patron store at Hepworth, Ont., owned by Geo. Moore, was burned on the 21st inst. Loss covered by insurance.—A store at Stratford, Ont., owned by S. R. Hesson, was destroyed by fire last week.—The stables of the Halifax Street Railway Company were totally consumed by fire on the 21st inst. Sixteen cars were burned. The loss is only partially covered by insurance.—R. H. Toy's bake shop at Kingston, Ont., was destroyed by fire recently. Loss, \$3,000; insured.

#### CONTRACTS AWARDED.

QUEBEC, QUE.—P. Boulanger has been given a contract to erect a residence for F. X. Jobin, St. Roch's, at a cost of \$9,000.

HULL, QUE.—F. Gougeon, contractor, of this town, has been awarded the contract for the erection of a villa residence at Wakefield for H. Bate.

PRESTON, ONT.—The contract for the erection of an opera house has been awarded to Henry Wildfong, of Berlin. The promoter is Otto Homuth. The building will be two storeys, 64x75 feet.

MONTREAL, QUE.—Messrs. Wright & Son, architects, have awarded contracts as follows, for alterations to the Ottawa building for R. H. Stephens: carpenter and joiner's work, S. Anderson; iron work, R. Donaldson & Son.

COLLINGWOOD, ONT.—The contract for building Mr. Tucker's house, which is to be brick cased, was let to D. Peterman & Son last week, for the sum of \$1,462.—Messrs. Stevens & Burdette have received the contract for removing the obstructions out of Mad and Nottawasaga rivers. The work was let by the corporation of Sunnidale township, and the amount to be paid for the work is \$3,464.

OTTAWA, ONT.—The Board of Works have awarded tenders as follows for the supply of limestone for macadam purposes: east of the canal, John Holt, 50 toise at \$3.65 per toise (delivered); Victor Laporte, 20 toise at \$3.65; John Sullivan, 20 toise at \$3.65; C. B. Wright & Co., 115 toise at \$1.50 per toise at the quarry. West of the canal: Thos. McLaughlin, 270 toise at \$1.50; John Mahony, 50 toise at \$3.80; G. Bishoprick, 50 toise at \$1.25 at the quarry.—The following are the tenders received by the Board of Works for the asphalt of Bank and Sparks streets: the Warren Scharf Co., New York, Trinidad asphalt, \$4.85 per sq. yard, granite tooting, 90 cents per lineal foot, dressed limestone curbing, \$1.05 per lineal foot; Bastien and Valiquette, Montreal, rock asphalt, \$3.94, Trinidad, \$4.00, Bermuda Lake, \$4.50, granite, 75 cents, limestone

curbing, 70 cents; Heney and Smith, Ottawa, rock, \$3.05, Trinidad, \$3.02 1-2, Bermuda Lake, \$3.00, granite, 80 cents, limestone, 40 cents; Patrick Burns, Ottawa, rock, \$3.75, Trinidad, \$3.50, Bermuda Lake, \$3.50, granite, 60 cents, limestone, 60 cents; Jas. Cochrane, Montreal, for Sparks st., rock, \$4.04, Trinidad, \$3.81, Bermuda Lake, \$4.00, granite, 59 cents, limestone, 53 cents, for Bank st., rock, \$4.03, Trinidad, \$3.86, Bermuda, \$4.49; S. Poulin, Ottawa, rock, \$3.66, Trinidad, \$3.50, Bermuda, \$3.45, granite, \$1.25, limestone, 75 cents; Alex. MacLean, Ottawa, rock, \$4.05, granite, 45 cents, limestone, 50 cents; Baskerville, O'Connor, Cassidy and Loughran, rock, \$4.53, Trinidad, \$4.25, Bermuda, \$4.25, granite, 50 cents, limestone, \$1.00. The tender of Heney & Smith, of Ottawa, has been accepted by the Board, the total amount of their tender being \$28,680 for Sparks st., and \$22,818 for Bank st., which is \$7,125 less on the whole than the city-engineer's estimate.—Contracts have just been awarded for the building of three more 10-mile sections of the Ottawa, Arnprior and Parry Sound railway. The contractors are, E. Fauquier, O'Neil & Ferguson and Poulin Fitzpatrick. Mr. Fauquier will construct the first ten miles west of the present terminus of the line at Long Lake, O'Neil & Ferguson the next ten miles westward of Mr. Fauquier's section, and Poulin & Fitzpatrick the 10 miles eastward from Emsdale, the present terminus of the Parry Sound and Colonization railway. Between O'Neil's and Poulin's contracts, there remains 40 miles yet to be contracted for, and it is possible that these sections may not be constructed until next year.

#### CAISSONS V. DOCK GATES.

At a recent meeting of the Civil and Mechanical Engineer's Society, a paper was read by Mr. A. W. Ackermann, entitled "Caissons v. Dock Gates." He gave a concise history of caissons, which were apparently first used in France at the port of Rochefort in the year 1728 A. D. There is, however, some evidence of their having been used at a much earlier date by the Venetian Republic. General Bentham first introduced them into England for use in H. M. Dockyard, Portsmouth. The early caissons were constructed of wood and heavily ballasted. Iron caissons were first used at H. M. Dockyard, Woolwich. No great improvement in their design took place until 1865, when the extension works of H. M. Dockyards, Chatham and Portsmouth, were undertaken by Sir Andrew Clarke, R. E., K. C. M. G., Director of works for the Admiralty. The principles involved in designing caissons were explained. The advantages of caissons over dock gates were forcibly pointed out. The difference between ship and sliding caissons was clearly described, together with numerous details of their construction and the machinery used in connection with them.

CEMENT MIXER.—A practical and convenient apparatus has been devised by which much of the labor and trouble involved in the mixing of cement is saved. It consists of a substantial bowl of cast brass fitted with cross-arms, easily removable, which furnish a bearing for a center crank shaft. The hand crank, when rotated, transmits its motion to a short crank in the bowl. This crank carries a paddle which circles in the ma-

terial in the bowl, and, at the same time, a pinion on top of the paddle shaft engages with a fixed annular gear, which causes the paddle to rotate on its axis—the combined movements thus given to the paddle mixer producing a thorough distribution to all parts of the contents. An advantage of special note in this mixer is that it is constructed entirely of brass, except the hand crank outside. When ready to empty the bowl, all the working parts can be removed in a moment by drawing out a couple of pins.

#### WILLIS CHIPMAN, B. A., Sc.,

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## MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

## BUSINESS NOTES.

L. & C. Landry is a new firm of joiners in Montreal.

G. E. Steacy, contractor, Orillia, Ont., has made an assignment

Hughes & Stephenson, plumbers, Montreal, have dissolved partnership.

Lefebvre & Lefebvre painters, Montreal, have dissolved partnership.

Bélanger & Préfontaine, sash manufacturers, Valleyfield, Que., have dissolved

The creditors of J. G. Hahnan contractor, of Hamilton, will receive 20 cents on the dollar.

Joseph Robert & Fils, sash and door manufacturers, Montreal, have dissolved. Joseph Robert continues; style unchanged.

A partnership has been registered by Pierre Champagne and Napoleon Piche, plumbers, Montreal, under the style of Champagne & Compagnie.

The stock of Messrs. Bowman & Moore, hardware merchants, of Hamilton, has been purchased by Mr. Peter Bertram, of that city, at 40 cents on the dollar.

It is stated that Dill Bros., of St. Croix, N. S., have sold a new plaster quarry to Knowles & Co., of Avondale, for \$10,000, and the value of the plaster available is placed at \$100,000.

The Laughlin Hough Manufacturing Company, with a paid-up capital stock of \$55,000 has been organized at Guelph, Ont., for the manufacture of architects' and school supplies.

Bracey Bros, of Hamilton, contractors, for the construction of the Toronto, Hamilton and Buffalo railway, have made an assignment to J. C. Teetzel. A meeting of the creditors will be held to-morrow, (Friday).

The syndicate which purchased the Hamilton Bridge Works are considering the advisability of moving the works to another town. The new company will organize within the next two weeks, after which operations will be commenced.

At a meeting of the Kingston Chemical Fire Engine Company, it was decided to manufacture fire engines, and keep in stock firemen's supplies. The directors appointed are Messrs. John Hewton, George Richardson, Dr. Herald, A. Macdonnell, and H. Youlden. Mr. John Breden was appointed secretary-treasurer, and Mr. D. D. Wilson managing salesman.

At a meeting of the provisional directors of the Guelph Pavement Co. it was decided to make application for a charter of incorporation. The capital will be \$25,000, all of which has been fully subscribed. The board of directors will consist of Mr. W. J. Bell, president; Col. Higinbotham, ex-M. P., vice-president; ex-Mayor Smith; Mr. A. T. Jones and Mr. John Cunningham. Mr. Jones was appointed secretary-treasurer and Mr. Cunningham managing director. The company claim to have a very superior process for the construction of cement paving and a good arrangement for the purchase of material.

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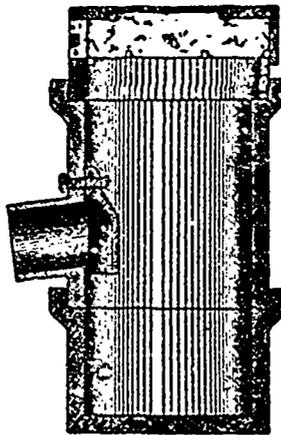
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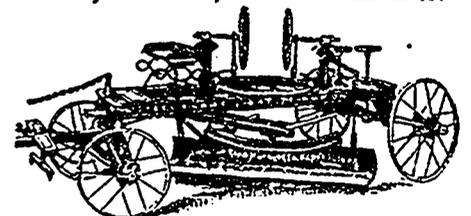
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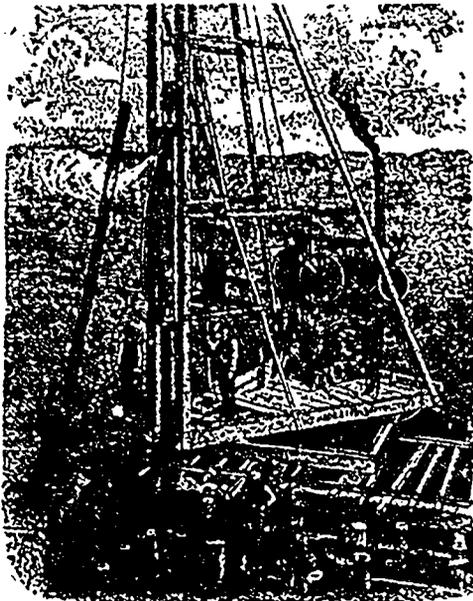
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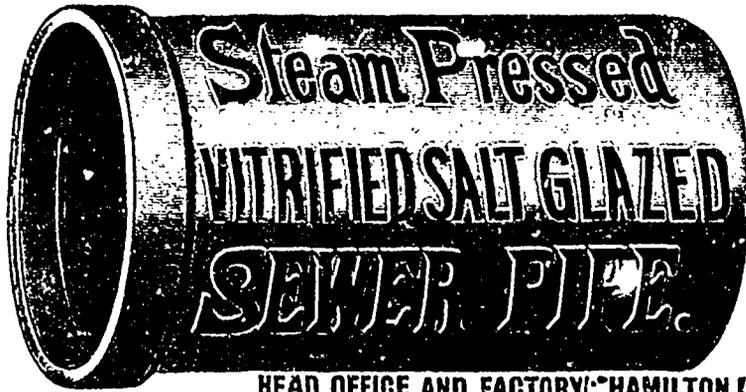


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# MUNICIPAL DEPARTMENT

## SEWER VENTILATION.

Editor CONTRACT RECORD.

SIR,—The necessity for the more thorough ventilation of our sewers being admitted, there still remains the question of how it may best be accomplished. During outbreaks of diphtheria and similar diseases it seems imperative that something be done with the utmost speed, but before the municipal machinery can be set in motion, the disease dies out or the afflicted ones die; the public outcry ceases, and the public servants relapse into the old routine. Possibly if some definite system had become recognized as the one correct thing to be done, it might be proceeded with in the ordinary course, but in the absence of such authority there is room for many theories and speculations. The inventors of improvements hope to profit by their introduction; several schemes, more or less costly, have been proposed, and there are more to follow, all having public expenditure and private gain as the prime object.

Before being led into such experiments would it not be prudent, by rectifying one error, to perfect our otherwise excellent plumbing by-law? Toronto was one of the first cities to introduce the approved modern sanitary system, with licensed plumbers and all-powerful inspectors, quickly educating us up to as good workmanship as can be found in the world. There was just one oversight in passing our by-law, which has been remedied by all other cities in their more recent legislation, that was the retaining of the main trap on the private drain. Under the old slipshod method this trap was a necessary safeguard to the home, but with the back-vent or "break-syphon" and perfect workmanship, it is not only no longer necessary, but is an actual disadvantage to the sewer system in closing off all chance for the escape of the gases continually forming therein. True, a later and minor clause in our by-law permits the omission of the trap in the case of iron drain being used under the building, but the by-law properly calls for the trap and fresh-air inlet, and in our conservatism the old method is usually followed, "ours not to reason why." In the recent by-laws of all other cities the use of the trap is specially prohibited.

Though iron is certainly the best house drain, in the use of tile, where properly laid and tested, there could be no danger when the sewer gas has ample escape, as herein proposed, before becoming congested and putrid.

The outlets of our main sewers being under the water of the bay, the only openings are the few and very small manhole gratings. This is not enough for any admixture or dilution with fresh air, and the gases that ought to pass off readily while

harmless, are held in confinement and become dangerous. The tendency is to rise to the higher levels, where the constantly increasing pressure forces them out through the gratings into the up-town streets, in what should be our best residential neighborhoods.

The simplest remedy for this is to take out and leave out the main trap, so that the many thousands of soil-pipes may all do their share, and a part of their proper office, in permitting the rapid escape of sewer gas and its dilution with fresh air, which would then be sucked down through the street gratings.

The current through them would thus be reversed, and the danger and nuisance abolished. The soil-pipes being in the buildings, in our climate, are warmed, and the current of air through them would usually be upward, but whether up or down, would be equally safe. The pressure being relieved, and the gases being diluted with a constant stream of fresh air, sewer gas would cease to be a menace or bugbear.

The terrible microbe we may not hope to entirely escape, but we may expect to inhale a lesser number in pure air or diluted gas than in a lung full of the vile exhalations from the street grating in front of our parlor window, under our present system.

This proposed change would cost the city nothing, and in new work would effect a saving, though how the ornamental fresh air inlet bend would be missed!

Is there any power in the city sufficient to cause the change in by-law, or can any influence cause a change of heart in the inflexible inspector who has so valiantly upheld the infallibility of the present system?

M. B. A.

Sewage purification by the ferrozone and polarite process has been tried at Boulogne, France. According to Engineering, the plant was somewhat handicapped by the fact that the supply of sewage was very intermittent and had to be stored in a tank before purification. Below the storage tank were placed two smaller tanks, in one of which the precipitation by ferrozone was effected, while the other formed a reservoir for the decanted liquid before it passed to the polarite filter. From a chemical examination of the effluent from the filter, Mr. L. Vanflart, chief chemist of the departmental laboratory of Boulogne-sur-Mer, concludes that the plant removes 84 to 88 per cent. of the organic matter present in the raw sewage, the effluent remaining clear and odorless for 15 days. A bacterial examination by Dr. Billet, showed that when the original sewage contained 5,250,000 bacteria per cubic centimeter, the liquid decanted after treatment with ferrozone contained 812,500 bacteria and the effluent from the polarite filter 42,000 or less than 1 per cent. of those originally present.

Municipal officers are requested to mention the CONTRACT RECORD when corresponding with advertisers.

## WIDE TIRE EXPERIMENTS.

A wide tire test was made at the Ohio State University with the following results: An ordinary wagon with a new 3 inch tire was loaded with two long tons, or 4,480 pounds, and the draft was measured by a dynamometer. On an ordinary earth road in good condition and hard the draft was 254 pounds. On a grass field it was 468 pounds. On newly plowed land it was 771 pounds.

As the draft power of an ordinary horse of 1000 pounds is 150 pounds, two horses could draw this load with ease on an ordinary road and a ton and a half on a grass sod, while with a narrow tire half as much, or a single ton, is a full load for a double team. Besides this, the broad tires roll and level a road, so that the more it is used the better it becomes, while narrow tires cut it into ruts if at all soft.

## LEGAL DECISIONS AFFECTING MUNICIPALITIES.

CHRISTIE V. TOWN OF TORONTO JUNCTION.—Judgment on appeal by town corporation from order of Rose J., varying terms of award between the parties fixing the compensation to be paid by the appellants to David D. Christie for land injuriously affected by the raising of the grades of certain streets in the town, by increasing the amount awarded from \$200 to \$1,000, and by giving Christie High Court costs of the arbitration. Hagarty, C.J.O., and MacLennan, J. A., held that the judge, sitting in appeal from the award, had no power under sec. 404 of the Municipal Act to reduce or increase the amount awarded except upon the ordinary legal principles governing the court on appeals or motions to set aside verdicts, and, as in this case, there was abundant evidence to support the award, it should not have been interfered with, and should now be restored. Burton and Osler, J.J.A., were of the contrary opinion, and saw no reason to interfere with the decision of Rose, J. In the result, appeal dismissed with costs.

COLORING STEEL A DEAD BLACK.—For coloring iron and steel a dead black of superior appearance and permanency the right article has long been sought, and, to meet this want, M. Mazure now proposes a fluid, of which the following is the formula: One part bismuth chloride, two parts mercury bichloride one part copper chloride, six parts hydrochloric acid, five parts alcohol and fifty parts water, these being of course well mixed. To use this preparation successfully—the article to be colored or bronzed being first made clean and free from grease—it is applied with a swab or brush, or, better still, the object may be dipped into it; the liquid is allowed to dry on the metal, and the latter is then placed in boiling water, the temperature being maintained for half an hour. If, after this the color is not so dark as is desired for the purpose, the operation is simply to be repeated, and the result is in the highest degree satisfactory.

The chief of the Hamilton fire department has published a list of fire losses in that city for years past, and the showing made is that in fifteen years Hamilton has lost by fire \$741,000, which is equal to only an average of \$49,000 a year. In 1835 the loss was \$93,000, in 1881 it was \$98,000, in 1893 it was \$103,000, while last year it was only \$25,922. To the sum last mentioned the fires of July contributed \$8,914.

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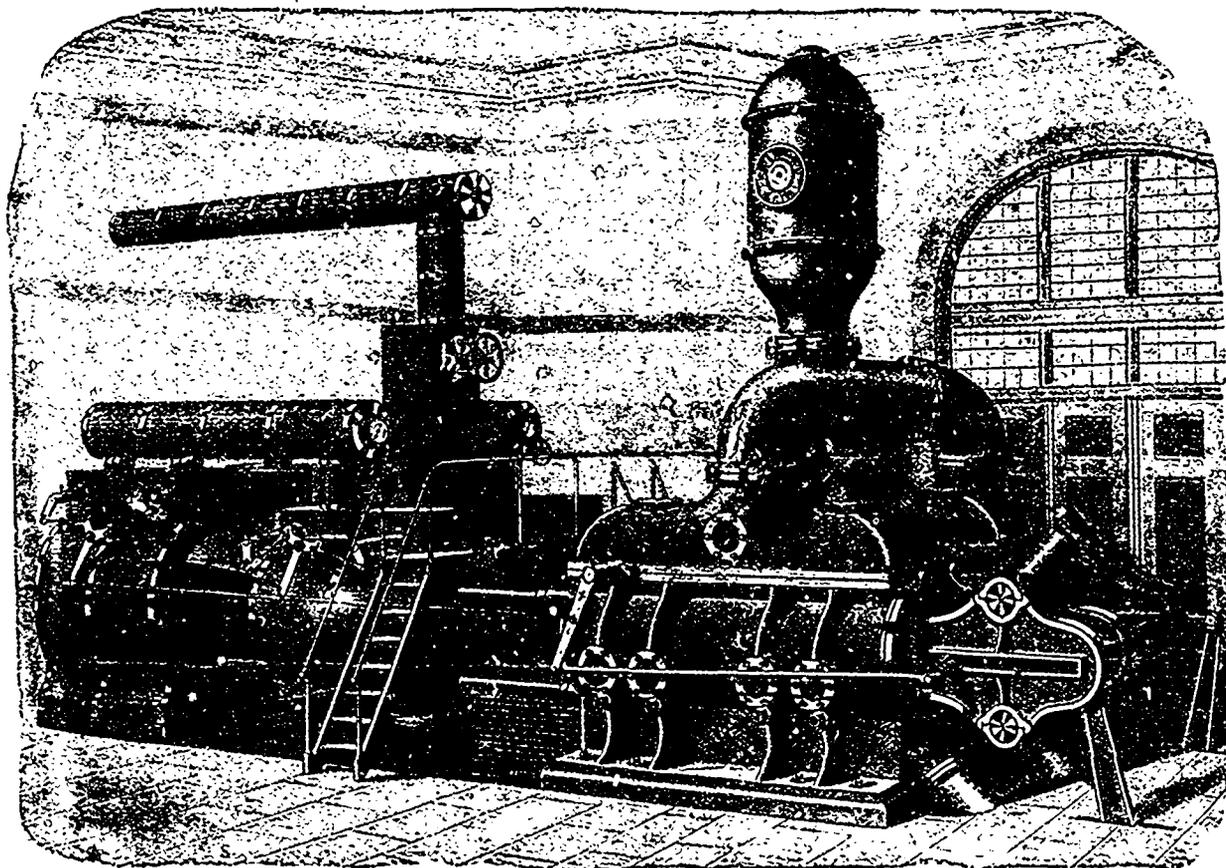
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Toronto. Montreal.

Toronto. Montreal.

CONDITION OF THE MARKET.

TORONTO: Some activity is noticeable in the demand for builders' supplies, and the outlook for the spring trade is said to be getting somewhat brighter as the season advances.

MONTREAL: The business in general hardware is confined to tools and shelf goods, which are in steady demand. In cut nails the jobbing demand is small, and makers do not report any special activity for carloads and larger lots.

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