

# 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. 12. OCTOBER 2, 1901 No. 35

**THE CANADIAN CONTRACT RECORD,**  
PUBLISHED EVERY WEDNESDAY  
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**TO ARCHITECTS**

ARCHITECTURAL DRAUGHTSMAN DESIRES A POSITION. Address Box 90, CONTRACT RECORD.

**Wanted**

Architectural Student. Must have good education and some aptitude for the profession.  
**GORDON & HELLIWELL**  
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A young man with good education and address desires employment with a contracting manufacturing firm where there would be opportunity to advance. Understands shipping and freighting of merchandise and material, and has done some travelling. Apply Box 35, CONTRACT RECORD.

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1 right and 1 left hand 48 inch Lefel Water Wheels  
2 No. 6 Rotary Pumps with large air chamber shafting, gearing and boxes complete  
1 large 12-cy Valve and connecting pipes, &c  
The above are in good condition and will be sold cheap. For further particulars apply to  
**J. W. SANDERS,**  
Town Clerk,  
Port Hope, 25th Sept., 1901.

**COAL TAR FOR SALE**

Would Contract to Supply  
Year's Output.

APPLY TO  
**Stratford Gas Co.**  
STRATFORD, ONT.

**To Excavators.**

Tenders for removing trees, fences, etc and excavating for a large building on University Avenue will be received by the undersigned up to 5 p.m., Friday, October 4th.  
**GOUNLOCK & BAKER, Architects.**  
714 Temple Building, Toronto.

**TENDERS WANTED**

**HOUSE OF REFUGE**

Sealed tenders will be received by the undersigned until **TUESDAY MORNING, OCTOBER 2, 1901**, for the erection of a House of Refuge for the County of Ontario.  
Plans and specifications may be seen at the offices of the architects, **G. M. Miller & Co., 50 Yonge street, Toronto;** of **James Carnegie, Chairman of the Building Committee, Port Perry,** and of the County Clerk, **Whitby.**  
The lowest or any tender not necessarily accepted.  
**JNO. E. FARWELL,**  
County Clerk, Whitby.

**TENDERS FOR A BRIDGE**  
IN THE  
**Township of Harwich**

Tenders will be received by the undersigned up to **FRIDAY, OCTOBER 27th, 1901, inclusive,** for the construction of a  
**Steel Pile Trestle Bridge,**  
75 feet long, in 3 spans of 25 feet each according to plans and specifications by **W. G. McGeorge, C.E., of Chatham, Ont., over McGregor's Creek, in the Township of Harwich.**  
Plans and specifications may be seen at the Clerk's office in **Blenheim,** or may be obtained by writing to the Clerk.  
The lowest or any tender not necessarily accepted.  
**GEO. M. BAIRD,**  
Township Clerk, Blenheim, Ont.



Sealed tenders addressed to the undersigned and endorsed "Tender for Heating apparatus, Windsor, Ont.," will be received at this office until **FRIDAY, OCTOBER 31st, inclusive,** for the supplying and placing in position of a heating apparatus at the **Drill Hall, Windsor, Ont.** according to plans and specification to be seen at the Department of Public Works, Ottawa and at the office of **Charles Smith, Clerk of Works, Windsor, Ont.**  
Tenders will not be considered unless made in the form supplied, and signed with the actual signatures of tenderers.  
An accepted cheque on a chartered bank payable to the order of the Minister of Public Works, equal to ten per cent. (10 per cent) of the amount of tender, must accompany each tender. The cheque will be forfeited if the party decline the contract in full or in part, or if the work contracted for, and will be returned in case of non-acceptance of tender.  
The Department does not bind itself to accept the lowest or any tender.  
By order,  
**FRED. GELINAS,**  
Secretary.  
Department of Public Works,  
Ottawa, September 17th, 1901.  
Newspapers inserting this advertisement without authority from the Department will not be paid for it.

**Tenders for Cast Iron Water Pipe, Special Castings, Hydrants and Valves.**

Sealed tenders, addressed to Chairman Fire, Water and Light Committee, for the supply of a quantity of Cast Iron Water Pipe, with Special Castings, Hydrants and Valves, will be received at the office of the undersigned up to 12 o'clock noon on  
**Friday, October 4, 1901**  
Specifications and forms of tender may be obtained at the office of **Col. H. N. Ruttan, City Engineer, Winnipeg, Canada.**  
Each tender must be accompanied by accepted cheque or cash deposit for the sum called for in form of tender supplied, which will be subject to forfeiture in case of failure to enter into a written contract with approved sureties if called upon to do so.  
The city reserves the right to reject any or all tenders or to accept any bid which appears advantageous to the City of Winnipeg.  
**C. J. BROWN,**  
City Clerk.

City Clerk's Office,  
Winnipeg, Sept. 18, 1901.

**Corporation**  
OF THE  
**City of Three Rivers**

Sealed tenders will be received at the office of the undersigned until 1 o'clock p.m., **MONDAY, THE TWENTY-FIRST (21ST) DAY OF OCTOBER NEXT,** for the purchase of Debentures of the following denominations:—**25, Maurice Bridge bonds, to the amount of one hundred and twenty five thousand dollars (\$125,000); Drainage bonds, to the amount of twenty-five thousand dollars (\$25,000); "Living Bonds," to the amount of ten thousand dollars (\$10,000); and second twelve-mo. bonds, to the amount of eight thousand dollars (\$8,000), all of which will be redeemable in six years from the first May, 1901, and bearing interest at the rate of three and a half per cent. (3 1/2 per cent) per annum payable semi-annually.**

**L. T. DESAULNIERS,**  
Sec.-Treas. Three Rivers Corporation.  
City Hall, Three Rivers, 25th Sept., 1901.

**DATE OF PUBLICATION**

Architect, engineers, municipal authorities and others are reminded that the **CONTRACT RECORD** is printed every Tuesday afternoon, and that advertisements should reach the office of publication not later than 2 o'clock p.m. on that day to insure insertion in the issue of the current week. Advertisements are frequently received too late for insertion, to avoid which special attention is directed to this announcement.

Gillespie & Grier, planing mill, Parry Sound, Ont., are announced to have assigned to **F. R. Powell.**  
Carroll Bros., plumbers, and Joseph Charlebois, contractor, Montreal, have filed consent of assignment.

## CONTRACTS OPEN.

EDMONTON, N. W. T.—M. Leclerc is building a new residence.

WESTMOUNT, QUE.—James Elliott has purchased property on Greene avenue.

OVEN SOUND, ONT.—Steps will be taken at once to lay additional cement sidewalks.

SARNIA, ONT.—William C. Dillon has purchased property on which he will erect a brick block.

RIDGETOWN, ONT.—It is reported that Howard township will erect a township hall, at a cost of \$5,000.

DUNNVILLE, ONT.—The Ontario Beet Sugar Co. are considering the erection of a factory at this place.

MARMORA, ONT.—It is the intention of The Pearce Company to install stove and heading machinery.

KINGSBURY, QUE.—Tenders are invited by George Lyster up to 8th inst. for building addition to school house.

DIGBY, N. S.—Land has been purchased here for a new summer hotel, to be built in time for next year's business.

GALT, ONT.—The Board of Trade has endorsed the proposal for the establishment of a beet sugar factory in this town.

RICHIBUCTO, N. B.—The Government has selected a site on Water street for the proposed post office and custom house.

RAYSIDE, ONT.—W. H. Sutherland is asking for tenders up to October 5th for construction of the Bott drain, in West Zorra.

ENNISKILLEN, ONT.—Tenders are invited by William McDonnell, up to October 5th, for purchase of \$604 5 per cent. debentures.

KINGSTON, ONT.—It is possible that a petition may be presented to the C. P. R. asking that company to build a summer hotel here.

ORILLIA, ONT.—The civic authorities are looking into the question of the most suitable sewerage system to be constructed for the town.

LINDSAY, ONT.—Victoria county proposes to take advantage of the Government appropriation for building roads throughout the province.

IROQUOIS, ONT.—The ratepayers yesterday voted on a by-law to raise \$12,000 for installation of electric light plant. Result not learned.

ST. THOMAS, ONT.—The Port Stanley Gravel Road Co. will build a new bridge to replace the one north of Rudolph & Begg's brewery.

VICTORIA, B. C.—The Provincial Lands and Works Department are this week taking tenders for the erection of a Government office at Alberni.

POINT EDWARD, ONT.—It is said that the Grand Trunk Railway Co. will begin at once to build a steel elevator to replace the one burned last week.

SOUTHAMPTON, ONT.—The by-law to raise \$16,000 for construction of system of waterworks will be submitted to the ratepayers on October 14th.

GLACE BAY, N. S.—Tenders for heating, ventilating and plumbing new hospital are invited up to 5th inst. Plans at the office of Hopson Bros., Sydney.

TORONTO JUNCTION, ONT.—J. A. Ellis, architect, has prepared plans for a large residence to be built on High Park avenue by Mr. McConnell, engineer.

NEW WESTMINSTER, B. C.—The Pacific Coast Lumber Co. have applied for a lease of certain water lots on which to build a large saw mill.—It is expected that construction work will begin immed-

ately on the new railway line between this city and Vancouver, to connect with the Great Northern.

LEVIS, QUE.—The Mayor has received a communication from an English syndicate of capitalists regarding the construction of a waterworks system here.

BROCKVILLE, ONT.—B. Dillon, architect, invites tenders up to 3rd inst. for erection of summer residence near Jones' Falls, Ont., for A. L. Fenessy, of New York City.

GEORGETOWN, ONT.—The ratepayers will this month vote on a by-law to grant a bonus of \$10,000 to Arnold Bros., leather goods manufacturers, who wish to locate here.

RODNEY, ONT.—The township of Aldborough invites offers up to October 1st for purchase of about \$11,000 4 per cent. debentures, Particulars from E. A. Hugill, township clerk.

ELORA, ONT.—The ratepayers will ask the council to submit a by-law to grant a bonus of \$25,000 to Mr. Mundell to enable him to acquire the Bun property and build an addition to his factory.

HINTONBURG, ONT.—It is probable that an addition will be built to the Methodist Church.—In connection with the agitation for municipal ownership of electric lighting, it is stated that a plant could be installed at a cost of \$4,000.

PORT HOPE, ONT.—The Nicholson File Co., of Providence, have purchased the works of the Globe File Mfg Co. It is the intention of the purchasers to increase the present plant in the event of exemption from taxation being granted by the council.

ST. JOHN, N. B.—Plans have been prepared by F. N. Brodie, architect, for a double tenement house to be built by James Spruile.—Russell Sage, of New York, has purchased the South Shore Railway between this city and St. Stephen and will put it in running order.

QUEBEC, QUE.—It is likely that William McLimont & Son, wholesale dry goods merchants, will build a new store in Lower Town.—It is reported that American capitalists are forming a joint stock company to build a new palace hotel here, in the vicinity of the Plains of Abraham.

HAMILTON, ONT.—A. W. Peene, architect, is taking tenders from some trades for another large addition to the factory of F. W. Fearman & Co.—Thomas Reid has been granted a permit for a brick dwelling house on Sherman avenue, between Cannon and Burton streets, to cost \$900.

HULL, QUE.—The Consolidated Phosphate Co., of Toronto, propose building a factory here for the manufacture of fertilizers, the machinery of which would cost about \$40,000.—John Kennedy, C. E., of Montreal, has been engaged to advise regarding the work under way on the water works system.

SYDNEY, N. S.—The Dominion Iron & Steel Co. invites tenders up to

October 20th for quarrying, crushing and delivering f.o.b. vessels or cars about 300,000 tons of stone per year, to be taken from the quarries at Marble Mountain and George's River. Work to begin November 1st. A bond of \$10,000 must accompany each tender.

COLLINGWOOD, ONT.—Thomas Gibson has decided to erect a brick residence on the corner of Pine and Fourth streets.—E. S. Brown is taking tenders on brick addition to his store.—The council has given notice of its intention to construct cement sidewalks to cost \$5,346.—Mr. Goodmurphy intends to erect a residence on Cedar street.

LONDON, ONT.—The Canadian Pacific Railway intend erecting a handsome office building on Trafalgar Square. The plans, prepared by Bruce Price, architect, of New York, are now awaiting the approval of Mr. Shaughnessy.—John Collins is building a frame cottage on Blackfriars street.—Herbert Matthews, architect, is calling for tenders for a new residence on Albert street for J. W. Westervelt; also a new residence in South London for L. Jeffery.—T. H. Haskett, of Princess avenue, is building a brick cottage on Oxford street.

MONTREAL.—It is said that the Minister of Public Works has refused to sanction the plans accepted by the Harbor Commissioners for proposed million bushel elevator, the contract for which was given to J. A. Jamieson. It seems that the contractor's idea is to build it of composite material, whereas an all-steel elevator is demanded by the Government.—The municipality of St. Louis is again discussing the question of a bonus of \$16,000 to N. O. Grophe & Co. to establish a cigar factory.—The South Shore Railway Co. is about to issue bonds to be applied to equipping and rebalasting the road, erecting new stations and purchasing rolling stock.—Hutchison & Taylor, architects, are letting contracts for the new building for the Point St. Charles Railway Association.—The accommodation at the Y.M.C.A. is inadequate, and steps may be taken at an early date to erect a new building.—R. E. T. Pringle, F. H. Leonard, jr., E. E. Cry, and others, of this city, have been incorporated as the Ampere Electric Manufacturing Co., to manufacture electrical apparatus and to engage in the development of electric energy.

OTTAWA, ONT.—G. Gelanis, secretary Department of Public Works, invites tenders up to Friday, 4th inst., for installing heating apparatus in drill hall at Windsor. Plans at above Department and at office of Charles Smith, clerk of works, Windsor.—A new Hebrew synagogue to replace the one on Murray street will be built in the Sandy Hill district. It is to be completed by the end of next year.—Roland Miller, of Montreal, and V. H. Lyon and others, of this city, have been incorporated under the name of the Canadian Power Co., with a capital stock of \$25,000.—Building permits have been granted as follows: American Bank Note Co., raising present building two storeys and erecting store

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TORONTO MONTREAL ST. JOHN HALIFAX

house 2 Wellington st., cost \$25,000; Ottawa & New York Railway Co., addition to workshops Nicholas street west, cost \$4,000; T. Lemay, alterations and addition to warehouse 1 Murray st., cost \$3,500; James Usher, two brick veneered dwellings 31 Queen st., cost \$2,400; W. H. Lester, brick veneered dwellings 21 Second ave., cost \$1,200; James Whyte, brick veneered dwellings 1 James st., cost \$1,100; Dr. J. L. Chabot, brick dwellings, Theodore st., cost \$6,000; Ald. D. Storey, addition to store 19 Bank st., cost \$1,500.—Tenders close October 11th, at the Department of Public Works, for installation of heating apparatus in drill hall at Brockville, Ont.

VANCOUVER, B. C.—The Chinese Empire Reform Association have decided to erect a building at the corner of Carroll and Dupont streets, to be of brick and stone, and to cost about \$20,000. It will be used as a Home.—The Stave Lake Power Co.'s negotiations with eastern capitalists, for the financing of the proposition, has been completed. The money for development is being furnished by Stone & Webster, of Boston, and work will begin at once in connection with the installation of the plant. Power will be transmitted to Vancouver and New Westminster. The cost of the work is estimated at \$65,000, including \$280,000 for a tunnel two miles in length, dam, etc., and \$385,000 for generating plant and pole line.—W. R. Wilson, architect, has prepared plans for a three-storey annex to the business premises of E. G. Prior & Co. It will be of brick, 60 x 60 feet.—A Puget Sound lumberman has chosen a site here on which to build a shingle mill.—William Blackmore & Son, architects, are this week taking tenders for erection of two residences for R. Robinson.—Mr. Grant, architect, is preparing the working drawings for the proposed Carnegie library, and tenders for construction will be invited within a few days.—The Chinese Reform Association have had plans prepared for a large business block to be built in this city, to cost about \$12,000.—The Vancouver Engineering Works, of which George Walkem is manager, will build a new shop and probably add a foundry. The company may also engage in ship-building.

WINNIPEG, MAN.—Tenders have just been taken by the city for the erection of a crematory building.—The following works have been authorized by the city council: Sewers—Nassau street, Spadina avenue to Gertrude avenue, cost \$4,065; Henry avenue, cost \$5,100; Corydon avenue, from Pembina street to C. N. Railway track, cost \$1,320; Wellington Crescent, from River avenue to Spadina avenue, cost \$1,625; River avenue, from Syndicate to Rachel street, cost \$1,425; Sherbrooke street, from Notre Dame to Sargent, cost \$3,050; McMicken street, from Sargent to Notre Dame avenue, cost \$2,770; portions of Shurman street, Alexandra avenue and Xante street, cost \$6,500; Jarvis avenue, Charles to King street, cost \$2,360. Macadam pavements—King street, from Point Douglas to Flora avenue, cost

\$6,780; Pembina street, Corydon avenue to Arnold street, cost \$11,750; Jarvis avenue, Main street to Hallett street, and a portion of Hallett street, cost \$5,390. Asphalt pavements—Notre Dame avenue, from Portage avenue to Charlotte street, cost \$21,050; Assiniboine avenue, Donald to Main street, cost \$21,385; Balmoral street, Qu'Appelle avenue to Portage avenue, cost \$7,510.—The building at present occupied by the Lake of the Woods Milling Co., corner James and Main streets, has been purchased by a Brantford gentleman, who will remodel it.—A Chicago syndicate, represented by H. Burkholder, purposes building a seven storey apartment house in this city, at a cost of \$200,000. Plans for same have been prepared by Ernest Kennedy, architect, of Minneapolis, and provide for a seven storey fireproof building, 200 x 120 feet, containing 60 suites of from six to seven rooms, and 40 bachelor suites of from two to three rooms. The site selected is at the corner of Smith and Ellice streets.

TORONTO, ONT.—Fred Kent, of the firm of Ambrose Kent & Sons, proposes to erect a residence, probably in Rosedale.—Hon. George E. Foster, ex-Minister of Finance, has purchased a lot on the west side of University avenue, between Caer Howell and Orde streets, and will begin at once the erection of a large high-class flat house similar to the one on St. George street.—President Herriman, of Lindsay, in his address at the Conference of Charities and Correction last week, advocated the erection in Algonquin Park of a sanatorium for consumptives.—The residents on Wardell street are about to petition for a new pavement.—The works committee of the city council have recommended an expenditure of \$7,000 in the reconstruction of the western garbage crematory.—Charles B.

Jennings, of the Imperial Varnish Company, has purchased land on Howard avenue and intends building a residence next spring. A. E. Ames & Co. have purchased the block on the east side of Jordan street, from King to Melinda streets. It is expected that a large building will be erected on the property.—Herbert G. Paull, architect, has commenced the erection of a large pair of residences on Bathurst street, and is preparing plans for a large refreshment pavilion and offices near High Park, including residence and ball room, boat house, etc., with about 400 feet run of 8 feet wide verandas. The whole of the establishment is to be covered with metal inside and outside. Foundation to be on piles and concrete and floors to be of hardwood. The building is to be erected on the lake shore this fall, and most of the work will be done by day labor.—Building permits have been granted as follows: John E. Hoare, two-story brick residence, 69 Howland avenue, cost \$3,500; James Dempster, two-story brick bakery, on Dandass street, near Ossington avenue, cost \$2,000; Lewis Brown, two-story detached brick residence, north side Eastern avenue, cost \$1,800; A. Horton, three pair two-story and attic brick dwellings, north of Howard street, east of Glen Road, cost \$12,000 (C. J. Gibson, architect); Jane McMartin, two-story brick store and dwelling, Dupont street, corner Bathurst, cost \$2,500; Massey-Harris Co., one-story brick storage warehouse, south side King street, near Crawford street, cost \$1,100, also three-story brick shop and warehouse, cost \$7,200; Mrs. A. Colne, two-storey brick store, 136 Margueretta street, cost \$1,600 (Mr. Davis, architect, R. G. Kennedy & Son, contractors); Martin McKee, two two-store detached rough cast dwellings, north side Boulbee avenue, near Jones avenue, cost \$1,000.

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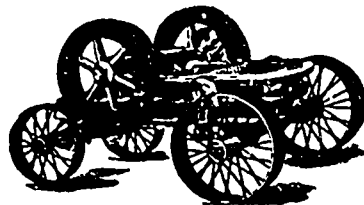
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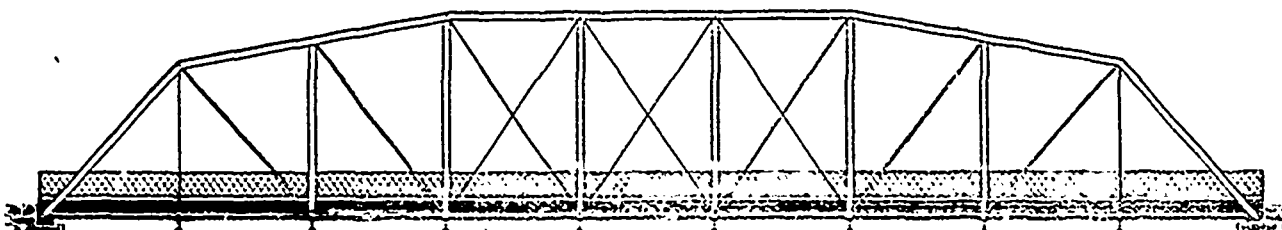
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 STEEL ROOFS and Every Description of STEEL LATTICE and GIRDER WORK BEAMS, CHANNELS, ANGLES and TIES always in stock

**FIRES.**

Residence at Carleton Place, Ont., owned by Jos. Lahaie—Brass foundry of Chadwick Bros., on King street east, Hamilton, damaged to the extent of \$10,000.—Residence of H. M. Whitney at Sydney, N.S., totally destroyed; loss \$20,000.—Balmoral Hotel at Britannia, Ont., leased by C. Mead, burned last week. The building was owned by Geo. Perkins.—Residence at Moose Jaw, N. W.T., owned by H. C. Massey.—A number of buildings in the village of Victoria Beach, near Digby, N.S., were destroyed by fire last week.

**CONTRACTS AWARDED.**

**SACKVILLE, N. B.**—Richardson & Burke have the contract for erecting as building for Capt. Peier Hanson.

**BRAESILE, ONT.**—The contract for Presbyterian church has been let to W. Rudd; C. J. Gibson, Toronto, architect.

**COLLINGWOOD, ONT.**—N. Smart has awarded the contract for building a new brick cased residence to J. Peterman.

**QUEBEC, QUE.**—The city council has let the contract for supply of water pipes to the Montreal Pipe Foundry Co.

**HAMILTON, ONT.**—The contract, for brickwork on F. W. Fearman & Co.'s factory addition has been given to George Webb.

**PICTOU, N.S.**—Willard Kitchen, of Fredericton, has secured the contract for new wharf and freight shed at this place for the I.C.R.

**NIAGARA FALLS, ONT.**—The Canadian Niagara Power Co. have let the contract for tunnel and portal to A. C. Douglas. The price is over \$500,000.

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**PIG LEAD, PIG TIN AND SOLDER**

Syracuse Smelting Works, Montreal, P.Q.

The tunnel will be 2,200 feet in length and 10 x 21 feet in diameter.

**ROCKLAND, ONT.**—J. P. McLaren, architect, of Ottawa, has awarded the contract for completing Presbyterian church to Guiroux Dailey.

**OWEN SOUND, ONT.**—The tender of A. W. Harrison, of Toronto, has been accepted for purchase of \$46,216.32, debentures at price of \$46,653 and accrued interest.

**COATICOOK, QUE.**—Mr. Shurtleff, of this place, has secured a contract to erect a building at Asbestos for the New York Asbestos Co., to cost about \$18,000.

**PAISLEY, ONT.**—Greenock township council has accepted the following tenders for bridge across Teeswater at Pinkerton: Superstructure, Hunter Bros. Bridge Co., Kincaidine, \$1,235; concrete abutment, Adam Knox and William Welsford, \$900.

**ST. JOHN, N. B.**—The tender of S. B. Lordly for supply of desks for Carleton

school building has been accepted.—A Cushing & Co. are converting the Miller & Woodman saw mill into a box factory. The contractors are: Power house and engine, B. Mooney & Sons; machinery, Fleming & Co.

**LISTOWEL, ONT.**—Horn & Calder are the successful tenders for the erection of a new factory for the Canadian Bent Chair Co., to be 52 x 58 feet, three storeys, with two storey boiler house 34 x 36 feet. The sub-contractors are: Brickwork, George Frit; stone work, Kritzer Bros.; painting and roofing, J. Seburger; plumbing, D. Boyer.

**MONTREAL, QUE.**—Perrault & Lesage, architects, have accepted the following tenders for the erection of a seven story office building, 71-71A St. James street: Roofing, Bernier Freres; plastering, N. Contant; painting and glazing, D. Belange; plumbing, D. Ouimet; heating, Joseph Lamarche; tinsmithing, I. Leclerc Fils; zinc ceiling, Pedlar

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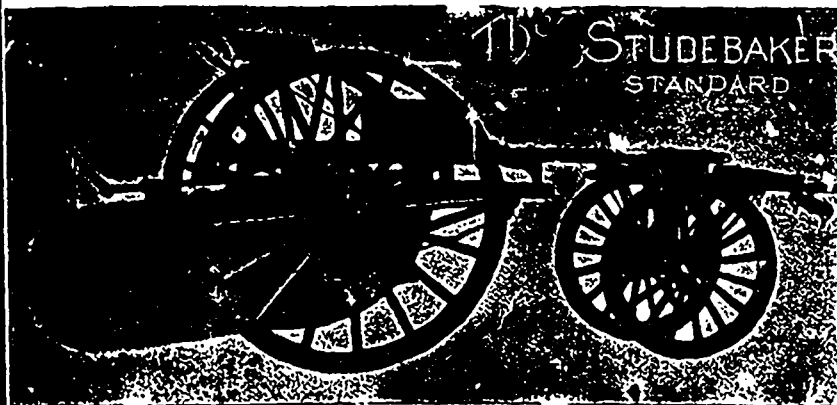
# The Canadian Bridge Co., Limited

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It Sweeps Clean. No sweeper is constructed with the same degree of care and mechanical precision.  
It Wears Well. "The Studebaker" has the smallest possible number of working parts, and has less wearing than any other sweeper made. It is free from unnecessary complications. With reasonable care it will not get out of order. Send for complete descriptive catalogue.

Metal Roofing Co.; elevators, Fensom Elevator Works; electric wiring, Canada Electric Co.

NELSON, B.C.—Contracts have been let as follows for construction of the British Columbia Southern road to connect with the Great Northern branch line north from Jennings, Mont., to the International boundary: First six miles, all steam shovel work, to Twohey Bros., of Spokane; second section, Burns & Chapman; third section, from Elk river to Elko, six miles, to Poupore & McVeigh; fourth section, three miles, steam shovel work, to Grant & Smith; fifth section, two and one-half miles of rock work, to J. G. McLean, of Seattle; sixth section, two miles of rock work, to W. G. McLean, of Nelson; seventh section, two and one-half miles of rock work, to Foss & McDonald, of Slovan; eighth section, five miles, Breckenridge & Lund. The balance is being located.

LONDON, ONT.—The Public Library Board has awarded the following contracts for alterations to the library: Mason and brickwork, Simpson & Murray, \$1,577; carpenter work, Jno. Purdom, \$1,105; plastering, R. Gash, \$133; painting, Geo. Howe, \$240; galvanized iron, H. J. Boyd, \$125; felt roofing, Geo. Roughley, \$95; plumbing, F. R. Leigh, \$124.—Robert Black has awarded the following contracts for a new residence on Queens avenue: Mason and brickwork, Martyn & Hammett; carpenter work, L. H. Martyn; plastering, J. Calhoun; painting and glazing, Pace & Fitzgerald; wiring, Electrical Construction Co.; plumbing, Smith Bros.—L. H. Martyn has been awarded the contract for extensive alterations to the Centennial Methodist Church.

TORONTO, ONT.—The Board of Control last week accepted the following tenders: Asphalt pavements—College street, Spadina to Bathurst, \$31,765, and

Hayden street, Church to east end, \$2,157, to Constructing and Paving Co.; College street, Beverley to Spadina, \$8,920; Parliament street, Gerrard to Carlton, \$7,300; and Pearson avenue, Macdonell to Sorauron, \$4,600, to Barber Asphalt Co.; Dufferin street, Queen to King, \$7,200, to City Engineer. Concrete sidewalks—Bedford road, Lowther to Bernard avenue, 50 cents; Dowling avenue, King to Queen, 50 cents; and Shelby street, Sherbourne to Huntley, 45 cents per lineal foot, to W. R. Payne; Spadina Crescent, west side, 59 cents, to Harvard Paving Co.; South Drive, north to Dunbar Road, 88 cents; Murray street, Caer Howell to Orde, 94 cents; and Shuter street, George to Sherbourne, 54 cents, to Gardner & Co.; Ontario street, Carlton to Winchester, 55 cents, to Grant & Co.; Lorne street, 67 cents; Bernard avenue, 56 cents; and Queen street, Lansdowne to West Lodge avenue, \$1.85, to City Engineer. Cedar block pavements—Dovercourt road, College to Bloor, \$6,095, to Dominion Paving Co., Lorne street, \$295; Wright avenue, Sorauron to Roncesvalles, \$4,350, to City

Engineer. Brick pavement—May street, \$2,399, to A. Chamberlain; Hayden street, Yonge to Church, \$2,200, and Balmuto street, Bloor to Czar, \$1,900, to J. H. McKnight.

**REAL ESTATE TRANSFERS.**

The following recent transfers of vacant property in Toronto have been registered: Canada Permanent and Western Canada Mortgage Corporation to John Walker, 34 x 129, west side Bathurst street, being lots 3 and 4, plan 1,125; assessed at \$850.

David Falconer to James Dempster, 54.6 x 100, north side Dundas street, being lots 8 and 9 and part lot 10, plan 667; assessed at \$1,090.

John M. Clark to Luke A. Smith 38.6 x

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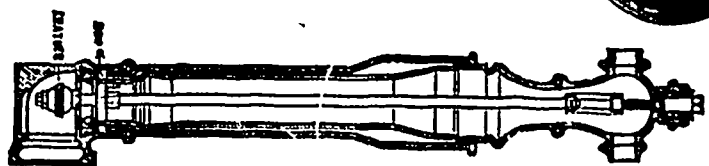
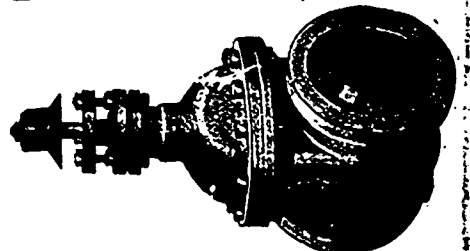
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127, east side St. Clarence avenue, being part lots 15 and 17 and lot 16, plan 1,030; assessed at \$270.

Walter S. Lee and Charles E. Lee to Alfred Gardiner, 30 x 88, north side lake shore, east of Lee avenue, being part block A, plan 560; assessed at \$400.

Wm. C. Slaney to Jeanne Nesbitt, 90 x 119, south side Langley avenue, being lot 28 and west half 27, plan 505; assessed at \$1,170.

Jeanne Nesbitt to Wm. J. Hewitt, 45 x 119, south side Langley avenue, being westerly part lot 28, plan 505; assessed at \$585.

John Hoskin to Harriet S. Addison, 62.2 x 270, south side to Castle Frank crescent, being part lot five, plan 686; assessed at \$1,119.

City of Toronto to Annie Dainty, 25 x 127, west side Manning avenue, being lot 60, plan 680; assessed at \$175.

Annie L. Thompson to Samuel Frenkel, 53 x 51.9, south side Wellington place, being part lot 12, section A of the military reserve; assessed at \$159.

Mayor and Treasurer of city of Toronto to Agnes Jardine, 9 x 106, east side McCaul street, being part of park lot 13, assessed at \$405.

William M. Macpherson et al, trustees of McMaster estate, to Wm. H. Hutchinson, 35 x 145 south side Crescent road, being part lot 11, plan 204 E, assessed at \$1,650.

**RULES FOR MIXING CEMENT MORTAR.**

One of the very common mistakes in mixing a cement mortar is the amount of water that is used. This is caused by the fact that no fixed rules can be laid down for the amount of water to be used. Very generally too much water is added, which will make the cement porous when it has dried, for all the water that is in excess of the necessary amount will evaporate and

leave air spaces which weaken the holding power of the cement very materially.

The following rules have been laid down as giving good results: 1. Fine sand mortar requires a little more water in making it up than coarse sand; 2. Sand composed of porous material requires more water than other sand; 3. As the proportion of sand to cement is increased, the proportion of water to cement should also be increased.

These three rules give a general idea as to the amount of water required, if remembered, that the consistency of the mortar should be such that when tamped down a perceptible film of water, possibly only a dampness, should be noticed on the surface.

The idea in mixing water with cement is to bring the particles into closer contact and to supply the water by means of which hydration takes place. In adding too much water, the cement is injured, both as to its setting powers and its ultimate strength.

In making concrete it is often found very difficult to make the mixture homogeneous, for the reason that too much water has been added to the mortar. The latter becomes too liquid and settles down through the crushed stone, leaving them without any binding material.

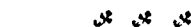
The temperature of the water has a very important bearing on the amount that is used. It is well known that the higher the temperature of the water, the more rapid the setting, consequently the cement seems to become plastic before sufficient water has been added. The kind of water also has some connection with the amount to be used, less saline water being required than ordinary water, to produce the same consistency.

The amount of water required for any new or special work should always be de-

termined by experiment and then the mortar made up with measured quantities of water. After the eye becomes accustomed to the appearance of the mixture, a hose can be used, but the amount of water must always be carefully watched

The Longford Quarry Company, of Longford Mills, Ont., has been incorporated, with a capital of \$50,000.

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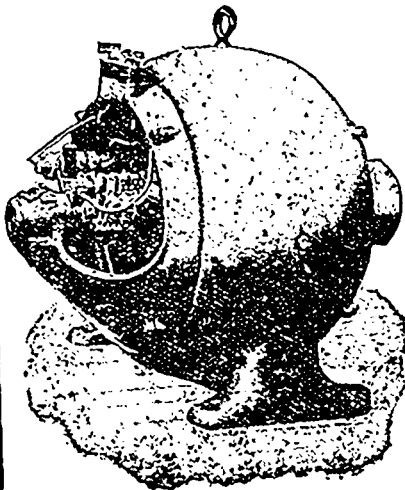
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## MUNICIPAL DEPARTMENT

### FRENCH PRACTICE IN THE MANUFACTURE OF CAST-IRON PIPES.\*

This industry has developed by leaps and bounds during the last few years, and much of its success is no doubt due to the very practical and workmanlike methods adopted by the French engineers and ironfounders.

France is now a competitor in both our foreign and home markets, and having the advantage of such shippingports as Antwerp, Hamburg, Le Havre, &c., where the lowest freights are obtainable, is securing a share of a department of trade which was originally entirely in our own hands.

The Engineer of February 23, 1901, contains a paragraph on this subject, of which the following is a summary, viz:—"In 1685 the first service of cast-iron pipes was laid at Versailles, France, and it was not until 1746, sixty-one years afterwards, that London has its first service of cast-iron pipe; still later Glasgow received its service of water through an iron main. The French engineers confined themselves to pipes with flanged joints, the same as are used at the present time, and it was not until 1800 that the practice of socket and spigot joints, with a groove for lead, was recognised as efficient."

Unlike the American pipefounders, the French founder is an ironmaster, and is fully alive to the advantage of obtaining a complete analytical knowledge of the iron used. Naturally this study has its reward, and by close application to experiments and the mixing of the different grades of pig-iron, a result is obtained which secures castings of the first quality, being dense, tough and of a close-grained nature. In order to secure uniformity in mixing the various grades of iron, French manufacturers are particularly careful in seeing that the right quantities of each grade of pig-iron are placed in the trolley before entering the cupola, an examination is then made by the chemist, who signs for the accuracy of the mixture and allows the trolley to pass to the cupola.

Casting pipes vertically is the only method accepted by the French engineers, even in the case of such small diameters as 30 mm., 50 mm. and 75 mm. (respect-

\*A paper read by Mr. A. G. Cloake at the meeting of the Association of Waterworks Engineers.

### DEBENTURES

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tively 1½ inch, 2 inches and 3 inches), a practice which is not, the author believes, followed in any other country. It is, of course, needless to point out to the members of this Association the superiority of vertically cast pipes over those cast on the slope, not only as regards strength, but also in respect of deterioration.

The pits of these pipes are built both circular and rectangular, and measure respectively from 30 feet to 40 feet diameter and 25 feet by 20 feet, with a depth of 16 feet. This depth is necessary because of the standard lengths of pipes, from 9 inches diameter and upwards, which are usually made to lay 4 metres (13 feet 2 inches), socket to socket.

The cores are made in one piece of hay or straw bands wound on a steel tube, afterwards worked up with sand, by machinery, which considerably expedites the manufacture and insures accuracy. The core ovens are adjacent to the pits.

The system of straining the molten metal adopted by the Societe Metallurgique d'Aubrives et Villerupt is that devised by the managing director, M. Jacquemart. This permits of the socket being cast upwards, with a feeding head from 8 inches to 12 inches above the socket, according to the size. This is connected to the pipe mould by an angular aperture from 1 mm. wide (for an 8-inch pipe), through which it is impossible for any

dross or sillage to pass, such impurities collecting at the top of the feeding head, 8 inches or 10 inches above the socket, and when the pipe is cold they can be struck off with a hammer. Under this system the spigot ends are rendered very dense, owing to their solidifying under pressure, and truly cylindrical and concentric castings are also obtained.

The usual English practice in filling the moules is to pour the metal direct from the ladle through gates or holes made in the mould, which are liable to get extended, and thus allow dross to pass, and the socket, if at the bottom, gets the first rush of the impurities. It is true that the metal is usually skimmed at the top, but this by no means prevents sillage and dross getting down into the casting, and a straining process is therefore indispensable to secure a clean and true casting.

(To be continued.)

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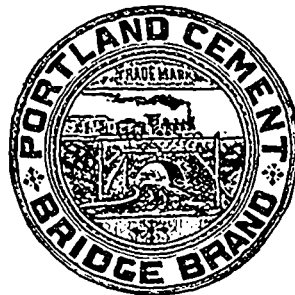
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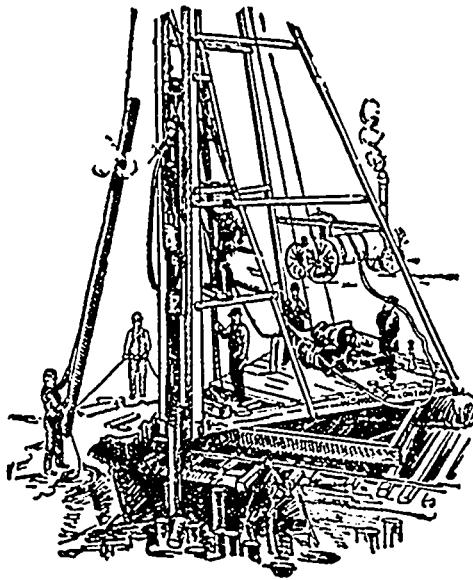


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Table listing various brick products from Don Valley Pressed Brick Works with prices.

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Table listing various brick and terra cotta products from Toronto Pressed Brick and Terra Cotta Works with prices.

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Table listing various brick and terra cotta products from Beamsville Brick and Terra Cotta Co. with prices.

Index to advertisements listing various categories such as Architects, Contractors' Plant and Machinery, Lime, Reflectors, etc., with corresponding page numbers.

Table listing prices for various types of stone, including East Peaseless, Moulded and Ornamental, Roman Red, etc.

STONE.

Table listing prices for various types of rubble and stone, including Common Rubble, Large flat Rubble, Granite, etc.

Table listing prices for various types of stone products, including Dimension stock granite, Do. for polishing, etc.

Table listing prices for various types of slate, including Roofing, Purple, etc.

CEMENT, LIME, etc.

Table listing prices for various types of cement and lime, including Portland Cements, North's "Grand", etc.

ARCHITECTURAL VARNISHES.

Table listing prices for various types of architectural varnishes, including Exterior wearing body, Exterior rubbing, etc.