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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.

NOVEMBER 9, 1898

No. 41.

THE CANADIAN CONTRACT RECORD.

PUBLISHED EVERY WEDNESDAY

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

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Branch Office New York Life Insurance Building, Montreal, Bell Telephone 2299.

information solicited from any part of the Dominion regarding contracts open to tunder

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 erregularity in delivery of paper.

Tenders Wanted

Sealed tenders, addressed to Alderman Sanders, will be received up till 12 o'clock, noon,

SATURDAY, THE 1218 DAY OF NOVEMBER, 1898,

for the Plastering, Plumbing, Metal Cornice Work, Painting and Glazing, Electric Wiring, and Hot Water Heating Work required for the NEW MUNICIPAL BUILDING for the City of St. Thomas, Ont.
Plans and specifications or no be seen, and forms of tender obtained, at the office of N. R. Darrach, Architect, Talbot Street, St. Thomas, Ont.
The lowest or any tender not necessarily accepted A deposit in the form of a marked cheque, for 2½ per cent. of the amount of contract price, must accompany each tender, also names of parties offered as security for the due completion of the work.

pletion of the work.

ALDERMAN SANDERS,
Chairman of Building Committee,
St. Thomas, Ont

THE CORPORATION

Gity of Three Rivers

Sealed tenders, for the Construction of a

Pier and Suction Pipe

into the River St. Maurice, in this city, will be received by the undersigned up to the 1st DECEMBER, 1898, at 4 o'clocl p.m.

Plan and specifications may be seen at the office of the undersigned.

Tenders must bear the bona fide signature of the contractor, and must be accompanied by an accepted cheque made payable to the order of the Co poration of the City of Three Rivers, equal to five per cent, of amount of tender. This cheque 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.

The Cattle Merce.

L. T. DESAULNIERS, Sec.-Treas. T. R. Corporation. City Hall, Three Rivers, and November, 1898.

TENDERS

Will be received until THURSDAY, 17th INST, for a LAUNDRY BUILDING on McCaul Street. No tender necessarily accepted. Plans and specifications may be seen at the office of

HENRY SIMPSON, Architect, 91/2 Adelaide Street East, Toronto.

TENDERS

Tenders will be received by the undersigned up to 5 p.m. on FRIDAY, THE 11TH INST., for the Mason and Brickwork, and up to 5 p.m. on WEDNESDAY, THE 16TH INST., for the Lalance of trades required in the control of the sec

A DETACHED RESIDENCE

on the south side of Maple Avenue, Rosedale, for James Henders n, 1 sq. The lowest or any tender not necessarily accepted.

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

TENDERS

FOR

ELECTRICAL POWER TRANS-MISSION PLANT

ORILLIA, ONTARIO, CANADA

The Corporation of the Town of Orillia, Ontario, Canada, invites tenders for the supply and i stallation of a plant for the Transmission of Electrical Energy from a point on the Severn River to the Town. The plant to consist of:

ALTERNATING CURPENT GENERATORS-TWO of 300 k.w. capacity each.
STEP-UP AND STEV-DOWN TRANSFORMERS—
600 k.w. capacity

STEP-UP AND STEV-DOWN TRANSFORMERS—

600 k.w. capacity.
TRANSMINSI IN LINE AND CONSTRUCTION—

Bighteen miles.
SWITCHBOARD EQUIPMENT - For Generating and Receiving Stations

HYDRAULIC MACHINERY — Including Masonry Construction.

Tenders to be mailed at despatching office not later an WEDNESDAY, THE 30TH DAY OF NOVEM-

than WEDNESDAY, 1712 3....
BER, 1893.
Copies of specifications and all information can be obtained on application to the undersigned.

RODERICK J PARKE,
Consulting Flectrical Engineer,
310 311 Temple Building,
Water,
Toronto, Ont., Can. C. J. MILLER,
Chairman Fire. Water,
and Light Committee,
Orillia, Ont., Can.

DATE OF PUBLICATION.

Architects, Engineers, Municipal Au-orities and others are reminded thorities 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 ensure 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.

The square of numbers ending in 5 can be obtained quickly mentally by multiplying the number to the left of the 5 by the next higher number, and suffixing 25 to the result. The square of 485, for example, is found thus: 48×49 equals 48×7×7 equals 2,352; suffix 25 and the square 235,225, is obtained. This rule is taken from a note by Her Edler in the Zeitschrift of the Austrian Society of Engineers and Architects.

CONTRACTS OPEN.

HULL, QUE.—Joseph Pilon will build a planing mill on Church street.

MISSISSIPPI, ONT .- Isaac Allan is preparing for the erection of a warehouse.

BERLIN, ONT .- A movement is on foot to secure the erection of a drill shed here

INGERSOLL, ONT .- J. S. Smith intends building a residence, corner Hall and King streets.

MAGOG, QUE.—A by-law was carried recently to raise the sum of \$10,000 by debentures.

VANCOUVER, B.C.—The Hastings saw mill will, in all probability, be rebuilt or the old site.

YARMOUTH, N.S.-Irvine A. Lovitt is about to commence the erection of a boot and shoe factory.

NEWMARKET, ONT .- The Wm. Cane & Sons Mfg. Co. purpose enlarging their factory buildings.

KINMOUNT, ONT .- Buildings are being erected here to replace those destroyed by the recent fire.

NINGA, MAN.—The business men of the town are considering the erection of a 100-barrel flour mill.

THESSALON, ONT.—A vote of the rate-payers is to be taken on a proposition to acquire the waterworks system. STAYNER, ONT .- Voting on the by-law

to provide funds for a waterworks system will take place on December 13th. WOODVILLE, ONL.-The corporation

will probably take steps in the near future to provide adequate fire protection.

LAKE MEGANTIC, QUE.—The Electric Light Company have purchased property on which to erect their power house. OSGOODE, ONT .- New buildings

shortly be erected on property owned by C. Cleland, J. Miller and W. Levere. GUELPH, ONT .- The Dominion govern-

ment is believed to have in view the erection of a new armory in this city.

KINGSTON, ONT .- A petition has been presented to the city council asking for the construction of a sewer on Nelson street.

WINDSOR, ONT.-The vestry of All Saint's church has decided to build an addition to the Sunday School building; cost \$3.000.

WATERLOO, ONT.—On the 21st inst-the tatepayers will vote on a by-law to raise \$50,000 for the purchase of a waterworks system.

VERSCHOYLE, ONT .- Alex. Bell will receive tenders up to 23rd inst. for the construction of the Cat-fish drain, in the township of Dereham.

ASHBURNH M, ONT. - The works system has been completed, but it is not expected that the house connections will be put in until next spring.

WOODSTOCK, N. B. - Those interested in the proposed pulp mill will this week consult with Charles Lorins,

pulp imill_expert, of Liverniore Falls, Maine.

OWEN SOUND, ONT.—Tenders for the construction of a fire alarm telegraph system close on the 15th inst., instead of on the 5th, as reported in last issue.

THOROLD, ONT.—The Electric Light Committee has recommended the extension of the electric light plant as far as possible under the present conditions.

MIDDLETON, N.S.—The sum of \$6,000 has been subscribed towards the rebuilding of S. F. & W. E. Roop & Co.'s woodworking factory, burned a few weeks ago.

PEMBROKE, ONT.—The report of Mr. Roderick J. Parke, of Toronto, on the cost of installing a municipal electric light plant, will be presented in a few days.

BARRIE, ONT.—Voting on the by law to provide funds for purchasing the existing waterworks system took place on Monday last, but the result of the vote has not been learned.

SIMCOE, ONT. — The funds realized from the recent sale of debentures will be expended in deepening what is known as the Beauchamp creek, in the south of the township of Grey.

SANDWICH, ONT.—A by-law to provide \$1,500 for the extension of the water main has been provisionally passed by the council, and will be voted upon at the January elections.

OTTERVILLE, ONT. — A number of business men, including S. Smiley, R. A. Hawes, John Cornell and William Holmes, have in view the building of a saw mill at Wiarton.

EDMONTON, N. W. T.—A new Roman Catholic church is about to be built here, from plans by k. Deggenderfer, architect. Tenders have been taken for the foundation stone and brick.

ACTON, ONT.—The by-law to provide \$6,000 for the purchase of an electric light plant has received the sanction of the rate-payers. Arrangements will be made immediately for the installation of the plant.

BUXTON. ONT.—Proposals for the purchase of \$7.98624 of ten year and \$5,849.01 of five year drainage debentures are invited up to November 12th. Address, A. E. Robinson, clerk of Raleigh township, this place.

ST. CATHARINES, ONT.—The local Board of Health has forwarded to the Provincial Board of Health a protest against the proposed scheme for draining the swamps in the township of Wainfleet into the Welland canal.

WALKERTON, ONT. — Tenders are wanted by November 21st for furnishing of the county of Bruce House of Refuge, including steel range, hardware, iron beds, window blinds, furniture, etc. Address, W. S. Gould, county clerk.

PERTH, ONT.—A small hose reel house will be built by the town.—The new addition to the public school, on which tenders have been taken, will be 132 × 48 feet. The walls are to be of blue himestone. G. T. Martin, of Smith's Falls, is architect.

STRATFORD, ONT.—Mi. A. W. Hepburn, architect, is about to let the contract for ornamental plaster work for Knox church. The improvements being made to this church are quite extensive, representing an expenditure of about \$15,000.

LEVIS, QUE.—J. D. King & Son, boot and shoe manufacturers, Toronto, have leased the building recently occupied by the Standard Shoe Co., and will install new machinery.—The council has rejected a proposal to construct a system of waterworks.

VICTORIA, B. C.—The by-law to provide \$20,000 for improving the fire protection was last week voted down by the ratepayers.—Thomas Hooper, architect, is taking tenders for the erection of a brick and stone building on Johnson street for S. Williams.

HALIFAX, N. S.—A special committee has been obtaining information as to the advisability of the city undertaking its own street lighting, and as a result the city electrician and engineer have been instructed to prepare plans and invite tenders for a plant.

CHARLOTTETOWN, P. E. I.—Tenders close on the 22nd inst. for the purchase of \$18,000 debentures, issued for the construction of the Prince of Wales College. Particulars from Angus McMillan, provincial treasurer.—Tenders are wanted by Richard Smith, secretary of Public Works, up to December 1st, for supplies for the Hospital for the Insane.

SHERBROOKE, QUE.—The Canadian Rand Drill Co. purpose erecting new works.—Mr. J. S. Broderick, who recently returned from Quebec, believes that the government will shortly undertake the building of a court house here.—The North Hatley Electric Light Co. has purchased a water power on Magog river, and purposes supplying light and power to this city.

BRANTFORD, ONT.—The Waterous Co. will, it is said, make further extensions to their building.—The Ontario government has granted the necessary permission to this city to issue water works debentures to the amount of \$20,000.—The city engineer has issued permits for an addition to the factory of the Knowles, Ham & Nott Co., and for a brick residence, corner Brock street and Park avenue, for Ed Braund.

FREDERICTON, N.B.—A meeting of the shareholders of the Grand Falls Water Power & Boom Co. was held in this city recently, at which it was reported that the capital stock had been subscribed. Plans of the proposed works, which will consist of pulp and paper mills, etc., and will cost upwards of \$1,000,000, have been approved of by the Governor-General in Council. Sir William Van Horne, Hon. R. A. Alger and Hugh H. McLean are directors.

SMITH'S FALLS, ONT.—The Hornerites will build a new church, to cost \$2,800 — John McGillivray purposes erecting a business block on Beckwith street. It is also learned that Mrs. Matthews intends building a row of houses on William street. Other buildings are spoken of, and the outlook for building operations next spring is considered good.—The ratepayers will vote on a by-law to grant a bonus of \$10,000 to the Smith's Falls Malleable Iron Works Company. An enlargement of the factory of this firm is contemplated.

WINNIPEG, MAN.—The question of raising the sum of \$60,000 for the installation of an arc plant for street lighting is still receiving some consideration.—The Market and Health Committee have recommended that a by-law be submitted to the ratepayers to raise \$18,000 by debentures for the erection of a crematory building.—The University Council have selected a site for the proposed new University building.—Contracts will this week be let for new skating rink, corner Garry and York streets.

NEW WESTMINSTER, B.C.—Plans have been approved of for a new opera house, frame, two and one-half stories, 50×110 feet, with gallery and balcony, giving seating capacity for 900. The plans were prepared by Gunther & Van Acre; estimated cost,\$5,000.—The British Columbia Telephone Co. has been registered in London, England, with a capital of £100,000, to acquire telephone lines in the province of British Columbia.—Major Dupont, of Victoria, has announced his intention of rebuilding the Dupont block, corner Columbia and McKenzie streets.—G. W. Grant, architect, has taken tenders for rebuilding the Oddfellows' block.

Hamilton, Ont.—The Massey-Harris Co. are considering the extension of their works.—It is probable that J. Hoodless& Son, manufacturers of furniture and fit-

tings, will be compelled to extend? their premises. They have been offered inducements to remove to St. Catharines.— The Management Committee will recommend the Board of Education to convert the old Collegiate Institute into an eightroomed public school.—The Fire and Water Committee have adopted the scheme of waterworks extension as submitted by the city engineer. The engineer recommends the division of the city into two districts, high and low level, 18 and 20 inch mains to supply the needs of the southern district, and a new 20 inch main on Barton street to supply the northern district. The cost is estimated at \$160,000.

MONTREAL, QUE.—The Road Committee has recommended that the plans prepared by the city surveyor for the establishment of a sewage farm at the north end of St. Denis street be adopted. It is estimated that the cost of putting the farm in condition will be about \$15,000.—The municipality of DeLorin ier have asked the City Council to construct a drain on La Rochelle street.—A special committee of the City Council has approved of the plans submitted for the new G. T. R. offi es. It is expected that work will be commenced this fall.—A report has been made to the Department of Public Works at Ottawa by Mr. Anderson, engineer, upon the channel between Montreal and Quebec. Mr. Anderson recommends, the immediate carrying out of a number of improvements, including the placing of 25 additional spar buoys and additional lights. Messrs. McGibbon, Casgrair, Ryan & Mitchell are seeking incorporation for the Beaver Portland Cement Co., capital \$150,-000. It is believed that the company purpose operating at Marlbank, near Kings-

OTTAWA, ONT.—The Board of Governors of St. Luke's hospital may erect a memorial to the late Dr. H. P. Wright.— The directors of the Central Canada Fair have authorized the preparation of plans for a new grand stand, to be built along the Nicholas street frontage, and to cost \$4.000.—St. Patrick's Asylum is now overcrowded, and the directors are considering the advisability of enlarging the building. A stone wing will likely be built.—The Board of Works has recommended the appointment of Mr. Willis Chipman to the position of city engineer.—E. F. E. Roy, secretary Department of Public Works, will receive tenders up to Monday, November 14th, for the renewal of the roof of the post-office in Monireal .- The steamship companies engaged in the St. Lawrence trade have requested the Dominion government to extend the telegraphic communication with the lower St. Law-rence as far as Belle Isle.—The Russell County Council will request the Minister of Railways and Canals to have a bridge built over the Rideau canal, from Mutchmor street to a point in Ottawa East.—Mr. H. J. Beemer states that there is little probability of the Gatineau Valley railway being converted to an electric system. — Building permits have been granted as follows: James Heavey, three brick veneered dwellings on Nepean street, cost \$2,500; Albert Emery, brick veneered dwelling on Wilbrod street, cost \$800.—L. K. Jones, secretary Department of Railways and Canals, invites tenders up to the 21st inst. for the construction of a power house and the installation of electrical apparatus for operating the lock, bridges and other structures, and lighting the Soulanges canal.

TORONTO, ONT.—A meeting of the General Committee in charge of the project for the building of a consumptive sanitorium near Toronto was held last week. Mayor Shaw was appointed president of the committee, and steps were taken looking to the carrying out of the project.

—The city will construct an asphalt pavement on Classic ave., from Spadina ave.

to Huron street, cost \$3,440, a concrete sidewalk on both sides of Orford ave., cost \$414.50, and a cement concrete side-walk on both sides of Homewood ave., cost \$3,695.—Mr. W. R. Symons and Assessment Commissioner Fleming have been authorized to report on the remodelling of St. Lawrence Hallfor the purposes of a Technical School.—City Commissioner Coatsworth has submitted to Council a plan and estimate for converting seven acres of Stanley Park into an addition to the cattle market. The lot would contain 84 cattle pens, 30×60 feet, caretaker's office and weigh scales, and the approximatecost would be \$30,815. A plan has also been submitted for raising the old cattle market, the cost being as follows: Levelling 60,000 yards earth, \$18,000; reconstruction of yards, \$37,100.—The promoters of the proposed Palace hotel on King street have secured an extension of the options on the proposed site until Febru-It is reported that up to the present they have been unable to float the scheme.—A report from Quebec states that Mr. George Taylor, of this city, con-templates the erection of a large pulp mill on the Manitou river, some distance below Seven Islands, in Saguenay district.— David Roberts, architect, has just taken tenders on excavating for a large cellar on Suncoe street.-Improvements are being made to the building at No. 10 Toronto street, occupied by the Receiver General's Department. The old system of lighting by gas will be supplanted by electricity. The cost of repairs will amount to \$1,500. A vinegar trust is announced to have been formed, having for its object the amalgamation of nearly all the vinegar manufactories in Ontario. The syndicate, of which William Wilson, of this city, is president, will erect a large factory, to cost \$25,000, probably in Tolento. The proposed building, for which plans have been prepared, will be 125 x 110 leet, with provision to extend the premises as required. -The Bell Telephone Co., in answer to a request from the Mayor, has offered to install a separate switchboard service in the new civic buildings, at an annual cost of \$1,750.—The T. Eaton Company have been granted a permit for their new clothing factory to be built on Albert street, and which will cost \$21,000. It will be five stories, of brick, 132 × 102 feet. The factory will be heated and lighted from the main building, and an underground railway will connect the two buildings.— Building permits have been granted as follows. W. G. Harris, factory and warehouse, 17 William street, cost \$4,500 (J. A. Ellis, architect); H. C. Stevens, residence, 1471/2 Dunn ave., cost \$2,500; Mr. Davidson, residence, Simpson ave., near Broadway, cost \$1,200; Mrs. Ross, five storey extension to mattress factory, 42 Melinda street, cost \$2,500.—The president of the Canadian Express Co. has made the suggestion that a new building be erected t the east end of the Union station, to be used entirely by the express companies. - Messrs. Bond & Smith, architects, are preparing plans for the interior design and decoration of the new steamer Toronto, now being built by the Bertiam Co. for the Richelieu & Ontario Navigation Co. The interior work will cost between \$40,000 and \$50,ooo, and will be executed in natural hard-wood finish, enamelled work, staff decoration and hammered wrought from work. The steamer will cost upwards of \$250,000. Mr. C. J. Gibson, architect, is taking tenders up to Saturday next for a residence on Bloor street west for Dr. Thorburn. He has taken tenders and will award contracts this week for two houses on Dewson street.-Mr. Henry Simpson, arch-tect, is preparing plans for a ware-house for J. F. Brown & Co., to be built in tear of their present premises, Queen street east. Same architect invites tenders up to 17th inst. for a laundry building on McCaul street .- In this issue Mr. F

H. Herbert, architect, invites tenders for the several trades required in the erection of a detached residence on the south side of Maple ave., Rosedale, for James Henderson.—A proposition is under consideration to establish a reference library for the city and province. At a recent meeting of interested persons, Mr. Byron E. Walker was elected chairman, and a committee was appointed to devise ways and means for carrying out the scheme. It is proposed to erect a building for the purpose adjacent to the legislative buildings, the cost of same to be met by the issue of debentures guaranteed by the province.

FIRES.

The fires of the past week included the following: Residence of Charles Lyttie, at Cochrane, Man., totally destroyed.—Summer cottage belonging to Messrs. Roy at North Hatley, Que.—Shirt factory of H. A. Sims & Co., Latour street, Montreal; loss \$10,000, covered by insurance.—At Collingwood, Ont., the Grand Trunk Railway freight sheds, building and wharf, and the Great Northern Transit Company's steamer Pacific. The latter was valued at \$50,000, and was insured for \$25,000.—The steamer Northern Belle, owned by the Great Northern Transit Co., of Collingwood, totally destroyed.

CONTRACTS AWARDED.

DAUPHIN, MAN.—The contract has been let for a \$5,000 school.

TILBURY, ONT.—Brown & Wylie, Tilbury Iron Works, have secured contracts for iron bridge over drain in Tilbury East.

BROCKVILLE, ONT.—Robert Jones has secured the contract for two story stone addition to factory of MacLaren & McCready.

FORT WILLIAM, ONT.—The appointment of superintendent of electric light plant has been given to W. H. Smith, of Goderich.

WATERLOO, ONT.—The tender of the Ontario Mutual Life Assurance Co. has been accepted for the purchase of \$9,000 of debentures; bonus \$250.

GRANBY, QUE.—Contracts for new Shefford field battery armory have been let as follows: Building, Neil & Kent, \$2,975; stone work, Wilfrid Fournier, \$180.

SUDBURY, ONT.—Thomas Evans & Son, of this place, have secured the contract for building a store and warehouse at Missinable, Algoma, for the Hudson Bay Company.

MADOC, ONT.—The contract for building a new Methodist church has been awarded to Finney & Gordon, of Peterboro', at the price of \$8,940, exclusive of seating. An organ will also be purchased, at a cost of about \$1,000.

CAMPBELLTON, N. B.—The town clerk writes that two tenders were received for installation of electric light plant, as follows. Royal Electric Co., Montreal, \$13,400; Duncan & McLellan, machinists, Campbellton, \$12,950 (accepted).

WINNIPEG, MAN.—Tenders were received as follows for an asphalt pavement on Portage avenue: Kelly Bros., with five year's guarantee, \$52,967.50, with ten year's guarantee, \$57,285.50; Warren Scharf Co., five year's guarantee, \$52,806,10; City Engineer, \$43,806.10. The city engineer's tender has been recommended for acceptance, the work to be done by day labor.—For the supply of vitrified sewer pipe, tenders were received as follows, and were referred to the city engineer: J. H. Ashdown, \$1,740.50; J. M. O'Loughlin,\$1,975; W.F Lee,\$1,793.25.—The respective tenders of W. F. Lee and Dobson & Jackson for sewers on Bushnell street and Furby street have been accepted by the Board of Works.

MONTREAL, QUE. — The Protestant School Commissioners have accepted tenders as follows for building an annex to the Mount Royal school: Wilson Bros., masoniy, \$1,574; W. H. Boone, brick, \$440; L. Paton & Son, carpentering, \$2,995; John Morrison & Son, plastering, \$545; Montreal Roofing Company, roofing, \$382; Garth & Co., plumbing, \$113; A. Craig, painting, \$597; Dominion Bridge Co., steel beams, \$197; total \$10,843. — The Harbor Commissioners have accepted the following tenders for the supply of stone: M. Campeau, sections 17, 18 and 20 to 26, 760 toises, at \$693 per toise; Adolphe Chartier, sections 35 to 46, 260 toises at \$8.50 per toise; H. Lionais, sections 5 and 6 and 9 to 11, 180 toises at \$8.65 per toise.—Eric Mann, architect, has awarded to the Montreal Roofing Company the contract for cement roofing, ornamental iron work and flooring of new residence for C. N. Blakely.

TORONTO, ONT.-Messrs. Gordon & Helliwell, architects, have accepted the following tenders for factory building on Queen street east for Toronto Fence and Ornamental Iron Works: Masonry, Bed-Ornamental from Works: Masonry, Bed-ford Bros.; carpentry work, T. A. Ouder-kirk; sheet metal work, A. B. Ormsby & Co; felt roofing, W. D. Hutson; paint-ing, T. A. Berridge.—Contracts for the reconstruction of the factory of W. J. Harris on William street have been let as follows: Carpenter work, Brown & Cooper; masonry, Witchall & Co.; painting, J. Richards; roofing and galvanized iron work, A. Matthews. Mr. J. A. Ellis is architect .- The Bennett & Wright Company have contracts for heating, ventilating, electric wiring and plumbing of the new Telegram building; for steam heating part of the Methodist Book Room: for plumbing in residence of John Morrison, Jarvis street, and for steam heating of cottage at Gravenhurst sanitorium. The John Ritchie Plumbing & Heating Company have contract for plumbing in residences of R. J. Chisholm, W. S. Davies and John McKay, at Oakville, Ont.—Mr. F. H. Herbert, architect, has awarded contracts for decached residence on Jarvis street, for John Morrison, as follows: Carpenter work, Andrew Nelson; plastering, C. B. Simpson; painting, H W. Johnston; roofing, Rennie & Son; galvanized ion, A. B. Ormsby & Co; plumbing, the Bennett & Wright Co. Same architect has awarded contracts for erecting a pair of semi-detached residences on north side of Bloor street, just east of Spadina road, for Dr. G. S. Ryerson, as follows. Masonry, Bedford Bros.; car-penter work, Andrew Nelson; other trades not let. For remodelling stable and coachhouse for Mr. H A. Taylor, Mr. Herbert has accepted the tender of Oakley & Holmes for masonry and that of G. H. Ferguson for carpenter work.

BIDS.

TORONTO, ONT.—The Board of Control again opened tenders last week for elevators for the new municipal buildings. The ten lers were for three hydraulic elevators, with pumping plant for five, and were submitted as follows: Portland Elevator Company, Portland, Maine, on architect's specifications, \$22,800; Leitch & Turnbull, Toronto and Hamilton, own specifications, \$17,500; Fensom Company, Toronto, architect's specifications, \$23,000; Otis Elevator Compiny, New York, architect's specifications, \$28,850, own specifications, \$27,900; Stindard Elevator Company, Chicago, architect's specifications, \$29,800; Whittier Company, Boston, architect's specifications, \$31,950. The tenders were referred to the architect for a report.

Alfred Goulet has registered proprietor of Goulet & Co., contractors, Montreal.

THE CEMENT MARKET.

The arrivals of cement at Montreal last week were 1,850 barrels English and no Belgian or German, as against 1,000 English and 15,201 Belgian for the previous week, making a total for the season of 236,764 Belgian and German and 30,405 English. Importers state that a very fair trade has been done, there being a good demand for small lots from local buyers. Stocks are at present small, but now that all the large contracts have been completed, and as there is still five vessels to arrive before the close of navigation, with fair quantities, the indications are that supplies will be ample to fill all requirements during the winter months. Advices from English makers state that the prospects are that there will be a big demand next season, and in consequence, present prices will more than likely be maint sined. The receipts of firebricks last week were 61,961, as against 135,544 for the previous week, making a total up to date of 1,170,605. The demand is good, and prices are unchanged at \$16 to \$21 per 1,000, as to brand.

FREEZING TESTS FOR BRICKS.

One of the most important features in structural materials of all kinds is their permanence under atmospheric influences. Of all these, perhaps the one that exercises the greatest mechanical effect is frost, which tends to disintegrate bricks and stone by the expansion in the act of freezing of the water enclosed in the pores, with a consequent separation of particles or flakes when thawing ensues. Probably very few of our readers have ever thought of testing the permanency of their goods under such conditions; the winter time provides a seasonable opportunity and there is no reason why every manufacturer should not, if there is frost enough, be able to ascertain to what extent his

goods will stand frost. The British Brickbuilder says this can be determined by a very simple test-namely, by direct freezing. Let tropical samples of the goods be chosen during frosty weather, and saturated with water, and then alternately frozen or thawed a dozen times or more. Now, if the samples to be tested are weighed dry, and the loss of exfoliation determined also on the dry samples, the thing is accomplished. It would be possible to create a standard of permanency by counting a given percentage of loss as unity (this would have to be chosen arbitrarily) and then referring other percentages of loss to it. Thus might be created a scale of permanency, and when about to enter into a contract this might be referred to just in the same way as the resistance to crushing strain is now quoted .- National Builder.

PUMPS FOR CONTRACTORS' USE.* (Concluded).

CHAIN PUMPS .- Another very useful contractors' pump is the chain, which, owing to the entire absence of valves, will work well no matter how gritty or full of foreign substances the water may be. It consists, briefly, of an endless chain, to which is attached at intervals a series of circular iron discs, slightly concaved, to prevent splashing. The upper part of the chain passes over a sprocket wheelwhich engages with the links, and is actuated by hand, steam, or other power. The lower part of the chain dips into the water, and as the discs rise with the chain they pass through a pipe carrying the water with them. In the most improved patterns the piping is made of wrought iron, which is lighter and less liable to fracture than cast. The working parts are covered in to prevent splashing. The

* J. L. Crathorne, in the Contract Journal.

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base-plate which supports the driving gear should be adjustable, so that the pump can be raised or lowered as desired. Owing to their few working parts, these pumps are little liable to get out of order from rough usage or frost, and when damaged can usually be repaired by a blacksmith

HAND-PUMPS .- When the quantity of water to be dealt with is small, har. pumps will be found useful. For contractors' work, where they are liable to be subjected to rough usage, barrels of wrought iron can be recommended. The valves-preferably of gun-metal-should be of simple type and ample area, and readily adjustable for wear. Suction and delivery pipes should also be of wrought iron, as this material is lighter and less liable to fracture. A telescopic suction is a useful arrangement when varying depths have to be dealt with. Though theoretically a pump in perfect order should lift up to 34 ft., this is never possible in practice. Given a well packed bucket with tight valves, a depth of suction of

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For small pipes, wrought iron is to be preferred to cast, on account of its strength and consequent lightness. Small wrought iron pipes are sometimes screwed at the joints, and when rusted often give considerable trouble when it is required to disconnect them. For this reason, pipes with flanged joints held together by bolts are preferable. A foot-valve is usually required at the bottom of the suction pipe to retain the water when the pump is stopped, and in the case of centritugal pumps to save repriming. Great care must be taken to render suction pipes perfectly air-tight, otherwise the efficiency of a pump will be greatly reduced. To prevent solid matter getting into the pump, a strainer should be attached to the end of the pipe, care being taken that the combined area of the holes is two or three times the area of the suction pipe. Sometimes the strainer is placed close up to the pump to facilitate cleaning, etc. The delivery pipe should be of uniform size throughout, and when working against heavy pressures must have a relief valve, set at slightly greater pressure than the pump is forcing against, in order to prevent breakage of the pipe or pump if the discharge is bleshed from any cause. discharge is blocked from any cause. A check or delivery valve should also be provided, to relieve the pump of pressure when starting, and also to prevent the escape of water when it is taken to pieces for examination or repairs.

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TO MUNICIPAL OFFICERS.

The CONTRACT RECORD is desirous of publishing, as far as possible, advance information regarding projected works of construction in all parts of Canada, such as sewerage and waterworks systems, railways, street pavements, public and private buildings, etc. Municipal officers would confer a favor upon the publisher by placing at our disposal particulars of such undertakings which are likely to be carried out in their vicinity, giving the name of the promoter, character of the work, and probable cost. Any information thus furnished will be greatly appreciated.

THE LATE COLONEL WARING.

Much regret was expressed both in the United States and Canada at the death of Colonel Waring, Street Cleaning Commissioner of New York City, which occurred at his residence in that city on October 29th last. His commendable work during the past three years had placed him in the front rank of municipal officials, and his method of operation was a revolution in many respects. Col. Waring contracted yellow fever at Havana, while making an inspection of the sanitary conditions of that city for the United States government. He was appointed, on October 2nd, as the head of the United States commission, to select camp sites in Cuba and to arrange for the sanitary improvement of the cities there. It has been reported that the plan to be recommended to clean out the harbor of Havana was a tunnel from the harbor, whose waters are foul and sluggish, to the east, under the Cabanas, so that the harbor might drain into the westto-east current that sweeps by the north coast of Cuba. Col. Waring made a special study of Havana, with a view to suggesting plans by which that city could be put in perfect sanitary condition. He was to have reported to President McKinley almost immediately. The improvement of the sanitary condition of the Cuban coast towns will, it is believed, eventually prevent the recurring epidemics of yellow fever in the Southern States and save thousands of lives and millions of money there.

Col. Waring was born in Poundridge, N. Y., sixty-six years ago. He had a thorough training as an engineer, and took a special course in agricultural chemistry under the late Prof. Mapes. In 1857 he was appointed agricultural and drainage engineer of Central Park, and its present drainage system was designed by him. It was he who planted the two magnificent rows of elms on the Mall. He went to the front in the civil war as Major of the Garibaldi Hussars.

He was transferred to the Department of the Southwest and served as Colonel of the Fourth Missouri Cavalry. Mayor Strong appointed Col. Waring Street Cleaning Commissioner on Jan. 1, 1895, and he remained in office until Tammany came into power again on Jan. 1, 1898. The Citizens' State party this year nominated him for State Engineer and Surveyor.

TO PRACTICE AS LAND SURVEYORS.

A point of some interest to civil engineers was decided by Mr. Justice Martin at Vancouver, B.C., recently, it practically settling the question of the interpretation of the provisions of the act relating to the examination of candidates desiring to practice in the province. It came up on the argument on the motion of Mr. A. D. Crease, acting for Mr. John Coleman Fergusson, as to why a writ of mandamus should not issue to the board of examiners requiring them to grant a commission to Mr. Fergusson as a provincial land surveyor. Mr. Fergusson claimed that as he was a member of the Institute of Civil Engineers; a-recognized body, he should only be required to pass an examination on the system of surveying as applied to the province, and that the board should not compel him to undergo also an examination such as pupils had to pass.

The Attorney-General admitted that the board had no authority to pass a minute prescribing that a recognized civil engineer should go through the same examination as a pupil, but he put in affidavits from the examiners stating that Mr. Fergusson had failed to satisfy them as to his knowledge of the system of provincial surveys.

The motion was refused on this latter ground, namely, that Mr. Fergusson had not proved to the examiners a proper knowledge of the provincial system of surveys; the statement of the Attorney-General settles that a recognized civil engineer does not require to pass the pupils' examinatior.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

THE CITIZENS LIGHT AND POWER CO. VS. LEPITRE.—This was an action for damages resulting from the death of an employee of this electric company, which was caused by an electric shock. It appears that whilst engaged in placing wires

for the company, a man Lepitre, by accident, touched a wire which was alive and which he did not know to be a live wire, and that death resulted therefrom. It also appeared from the evidence that if the wire had been covered the accident could not have occurred. The Supreme Court rendered judgment dismissing the appeal, and held that the company was guilty of negligence in not causing the wires in question to be covered, and that the company was clearly liable for damages resulting from the death of its employe. Appeal was taken, but the case was dismissed with costs.

McLean vs. The Corporation of The Village of Verdun.—The plaintiff claimed from the corporation defendant a sum of \$127.17 for work and professional services as a civil engineer. The defendant pleaded that plaintiff was engaged by defendant to perform certain work as engineer in connection with the laying of a drain pipe, and that the remuneration for his services was to be two and one half per cent. on the total cost of laying the pipe. The defendant alleged that the amount due under the arrangement was \$63.17, which had been tendered to plaintiff, and the tender was repeated by the plea. The court held that it appeared by the evidence that the defendant was not indebted in any larger sum than \$63.17, and that the claim was unfounded as to the rest. The defendant's tender was therefore declared sufficient, and judgment was given for \$63.17, with costs of action of that class until plea filed, and the action was dismissed as to the surplus of the demand with costs.

The county of Simcoe has been successful in its suit against the London Guarantee and Accident Company, to recover upon a \$10,000 bond given as security for the county treasurer, Sanford, defaulted to the extent of \$62,000. action was tried before Mr. Justice Ferguson at Barrie. The bond was for \$10,000, for one year from its date, and during any year thereafter in which the premium of \$100 should be paid, against any loss the county might sustain by reason of embezzlement by its treasurer. The defence of the company was that the county was negligent in its dealings in regard to Sanford. His Lordship held that negligence to reliève a surety must amount to collusion, and it must be such as to imply connivance and amount to fraud. The surety guarantees the honesty of the person employed, and is not entitled to be relieved from the obligation because the employer fails to use all the means in its power to guard against the con-sequences of dishonesty. The evidence in the case in point did not disclose connivance, collusion nor fraud. Judgment was given the county for the full amount of the bond and costs.

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up to to ft	:	12 00		10 00	
Hemlock scantling and joist	11 00	2 00	19 00	3 00	
up to 20 ft		13 00	13 00	14 00	
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per M		14 00		14 00	
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Scantling and joist, up to 22 f	i	19 00		17 00	
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C tting up planks, 1½ and thicker, dry		28 00	25 00	30 00	
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B. M.					
1 14 in flooring, dressed, P M.	34 00	36 00	28 00	31 CO	
114 inch flooring, rough, BM.	1800	22 00	18 00	23 00	
114 " dressed, F.M.:	15 00	28 00	27 00	30 00	
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t " dressed		20 00	18 00	22 00	
t 11 undressed		15 00	12 00	15 00	
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onwalath, No. 2	z 75	2 00	2 50	2 60	
Cedar	10 00	2 90 40 00	30 00	2 90 40 00	
White		45 00	35 00	55 00	
Basswood, No. 1 and 2	18 00	30 00	35 00 18 00	20 00	
Cherry, No. 1 and 2	000	99 00	70 00	8000	
White ash. No. 1 and 2	4 00	35 00	30 00	35 ∞	
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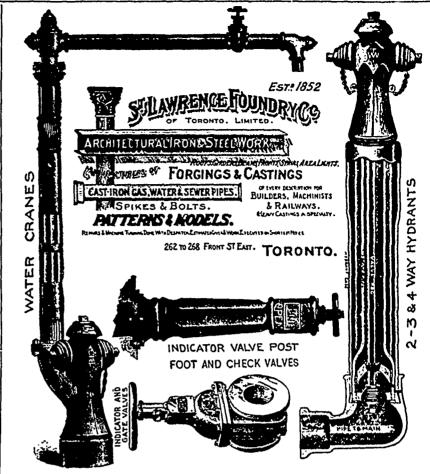
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Steel " " 100 195

CUT NAILS, PENCE AND CUT SPIKES. 40d, hot cut, per 10 · lbs ... 18
8d, 9d, 11 1 19
8d, 9d, 11 1 19
6d, 7d, 11 1 20
4d to 3d, 11 1 22
3d, 11 1 22
Cut snike, 10 cents per keg advance.
Steel Nails, 1. c. per keg extra. 1 85 1 95 1 95 2 00 1 93 1 95 2 00 2 05 2 30 2 55 3 85 80

Iron Pipe: 7 834 17 Toronto, 65 to 70 per cent. discount. Montreal, 70 per cent. discount. Lead Pipe:

7C. 35 per 75 cent. dis. Galeanised Iron:
Adam's—Mar's Best and Queen's Head:
16 to 24 guage, per lb.... 4%c. 4%c.
26 guage, " 4% 5
28 5 5%
Gordon Crown— 5 5% 松林

28 '' ... \$ 5%
Gordon Crown16 10 24 goage, per lb. ... 4% 4%
26 goage, '' ... 4% 4%
28 '' ... 4%
Note.—Cheaper grades about ½c. per lb. les. Structural Iron:

Steel Beam , per too lbs....

channels,
angles,
tees,
plazes,
Shaared steel bridge plate...

CORRECTED UP TO NOVEMBER STK.

(EMENT, LIME, etc.