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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL

EVERY

PUBLIC WORKS • TENDERS •
ADVANCE INFORMATION •
AND MUNICIPAL PROGRESS

SATURDAY

Vol. 3.

Toronto and Montreal, Canada, February 20, 1892.

No. 2

THE CANADIAN CONTRACT RECORD,

A Weekly Journal of Public Works, Tenders, Advance Information and Municipal Progress.

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Information solicited from any part of the Dominion regarding contracts open to tender.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1891, the Ontario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. P. Dunlop, that we the Architects of the Province of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors, - Resolved, that we pledge our support to it by using its columns when calling for Tenders."

The publisher desires to ensure the regular and prompt delivery of this Journal to every subscriber, and requests that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so, should give both old and new address.

TO CONTRACTORS.

Tenders will be received until the 27th inst. for the following works: Brick, cut stone and terra cotta, carpenter and joiner, plaster, copper and galvanized iron, painting and glazing, slating and tile work, steam heating and plumbing in connection with the erection of a building for the

TORONTO ATHLETIC CLUB, LIMITED.

Plans and specifications can be seen and all other information obtained at the office of the Architect.

E. J. LENNOX, Architect.

TO CONTRACTORS.

Sealed tenders will be received by the undersigned up to 12 o'clock noon on SATURDAY, FEBRUARY 27TH, for the different works required in the erection of a TWO-ROOM SCHOOL HOUSE in the village of Tyrone, according to plans and specifications prepared by Mr. Wm. Hunney, Registered Architect, Bowmanville. Plans and specifications can be seen at Mr. Hunney's office on and after Saturday, February 20th. Tenders must be separate for the different works. The lowest or any tender not necessarily accepted.

W. R. CLEMENS, Sec. to the Board,
Tyrone, Ont.



TENDERS

FOR

FIRE HOSE.

Tenders addressed to the City Engineer will be received by registered post up to 11 o'clock a.m. on TUESDAY, THE 23RD DAY OF FEBRUARY, 1892, for the furnishing of 600 feet of 2 1/2 inch Fire Hose. The hose to be in sections of fifty feet lengths, the weight of each section, without couplings, not to exceed 40 pounds avoirdupois and guaranteed to bear a water pressure of at least 300 pounds to the square inch.

Forms of tender can be obtained on application at the City Engineer's office, Toronto.

A cash deposit or marked cheque equal to 5 per cent. of the total amount of the contract, must accompany each and every tender, and the same will be forfeited to the city in the event of the person whose tender is accepted failing to execute the necessary contract or give satisfactory securities for the due fulfilment of the same.

The lowest or any tender not necessarily accepted.

JOHN SHAW,

Chairman Committee on Works,
Committee Room, Toronto, Feb. 13, 1892.



Notice to Contractors.

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to Eleven o'clock a.m. on TUESDAY, FEBRUARY 23RD, 1892, for the following works:

CEDAR PAVEMENTS

On Halton Street, from Dundas Street to Shaw Street.

On lane between St. Patrick Street and D'Arcy, from Beverley Street to Huron Street.

On Lowther Avenue, from Brunswick Avenue to Howland Avenue.

Quantities and forms of tender can be obtained on and after February 16, 1892, at the City Engineer's office.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 5 per cent. on the value of the work tendered for under \$1,000, and 2 1/2 per cent. over that amount, must accompany each and every tender, otherwise it will not be entertained. All tenders must bear the bona fide signatures of the contractor and his sureties (see specifications), or they will be ruled out as informal.

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

JOHN SHAW,

Chairman Committee on Works,
Committee Rooms, Toronto, February 12, 1892.

CHANGE OF DATE.

The attention of our readers is drawn to the fact that the date for the reception of tenders for the Athletic Club building, Toronto, has been extended to the 27th inst., as per advertisement.

TENDERS.

Sealed tenders will be received up to February 29, 1892, for the building of an

IRON OR STEEL BRIDGE

on boundary line between the Townships of Downie and Blanshard, in the County of Perth, same to be completed by August 1st, 1892.

Span 77 feet in the clear, 80 feet over all, square abutments; roadway 18 feet in the clear, timber for the floors and joists to be of best white oak.

Tenders will be opened in the Committee Room, Stratford Court House, March 1st, at 2 p.m. Bridge Committee do not bind themselves to accept the lowest or any tender.

Tenders to be addressed to
JOHN CORRIE,
Bridge Inspector, County of Perth,
Stratford, February 16, 1892.

CONTRACTS OPEN.

PICTON, ONT. A new Roman Catholic Church will be erected here.

BRIGHTON, ONT. A canning factory is shortly to be erected in this town.

WALKERVILLE, ONT.—Mr. Thos. Reid will erect a handsome residence.

MALDEN, ONT.—Mr. Thos. H. Parks will erect a residence at a cost of \$2,500.

FORT WILLIAM, ONT.—The school trustees are talking of erecting a new school building.

KINGSTON, ONT.—The Thousand Island Investment Company will erect a club house on Murray Hill Park.

INDIAN TOWN, N.B.—Mr. Chas. Miller will in all probability erect a new saw mill on his property near this town.

COLBORNE, ONT.—A by-law has been carried by the ratepayers to issue debentures for the purchase of an electric light plant.

NORTHFIELD, B.C.—The works of the Hamilton Powder Company will shortly be enlarged to meet the requirements of their business.

GELPH, ONT.—Mr. Geo. Gray, of Harrison, has been selected architect for the new hospital to be erected in connection with the county poor house.

CLINTON, ONT.—Mr. Jas. Howe has decided to purchase an electric light plant.—Mr. Whitehead, mayor of this town, will erect a brick block on the site of the buildings recently destroyed by fire.

DAKEMOUTH, N.S.—Tenders will be received by the Water Commissioners until the 25th inst. for the supply of service and valve boxes, corporation cocks and lead pipe. Specifications at the Engineer's office.

NELSON, B.C.—Messrs. Houston & Ink have purchased the Hills lots at the corner of Baker and Josephine streets. They will at once commence the erection of a building with a frontage of 60 feet on Baker and 70 feet on Josephine street.

CLAREVILLE, ONT.—The trustees of school section No. 5, Toronto Core, 9 Etobicoke and 22 Vaughan, will receive separate tenders until the 22nd inst. for the erection of a school house. Plans at the residence of Mr. Wm. Porter, this village.

COOKSHIRE, QUE.—A company composed of Messrs. W. B. Ives, M.P., of Sherbrooke, R. H. Pope, M. P., Albert Hazelton, of this town, has been formed for the purpose of building a pulp mill. The Council has voted a bonus of \$1,500 for said purpose.

HAMILTON, ONT.—Mr. James Balfour, architect, will receive tenders until this (Saturday) noon for the erection of a dwelling on Jackson St. west.—Mr. W. A. Edwards, architect, will receive tenders until the 1st of March for the erection of a brick church and school on the Plains East road, near this city. Mr. Robert Campbell will erect a brick warehouse on Locke St., between Canada and Jackson Sts.—The promoters of the new theatre are negotiating for the purchase of the old Government site.

LONDON, ONT.—The directors of the V. M. C.A. are discussing the erection of a new building, at an estimated cost of \$50,000.—The City Engineer has been instructed to call for tenders for block paving Hyman, Wellington and Clarence streets, and also for sidewalks and materials. Moore & Henry, architects, will receive tenders until 5 p.m. on Friday, the 29th inst., for the erection of a brick Episcopal church at London.—Mr. O. Graydon, architect City Hill, will receive tenders until the 24th inst. for the erection of a residence for Mr. S. H. Graydon.

WINNIPEG, MAN.—Local capitalists contemplate the building of an electric railway from this city to Selkirk. It is said that the Northern Pacific Company are the promoters of the scheme.

The South Eastern Railway Company has engaged Mr. Stewart, engineer, to make a complete survey of the line, which has been approved of at Ottawa. It is the intention of the company to commence operations when spring opens and to build at least thirty miles during the season.

Superintendent White, of the C.P.R., recently visited Montreal and conferred with Mr. Van Horne regarding the projected works to be carried out this summer, which will include the building of branch lines and the erection of several new stations.

VANCOUVER, B.C.—The British Columbia Iron Works Co. has decided to erect additional buildings and increase their plant. Plans have been prepared for the erection of a 3-story brick building on the corner of Pender and Richard Sts.—An award of \$300,000 was made last session by arbitration against the Government for defects in the construction of the Underdonk sections, of this Province, said sum to be expended by the Canadian Pacific railway company upon the improvement of these sections under the supervision of the Government. Arrangements have been made by which the repairs to these sections will be begun at once, and Mr. Lynch, C.E., of the railway department, Ottawa, has been despatched to supervise the work.—It is said that the Canadian Pacific railway company will erect extensive repair shops in this city.

MONTREAL, QUE.—Plans are completed for the widening of Notre Dame St.—The Water Department of the City Council have furnished the following list of streets on which mains are to be laid during the coming summer: Ontario, from Cuvelier east; St. Catherine, from Harbor

St. east; John lane; Burnett St., Bern St., from Commissioners to Notre Dame; Panet, Sherbrooke St. hill; Marie Ann, Rivard to Champ-lain, Pine Ave., Arcade to St. Denis; Cadieux, Prince Arthur to Rachel; Fortier, eastern section, German, Fortier to Sherbrooke; Perreault, lane; Prince Arthur, Cadieux to Shuter; Park Ave., Sherbrooke to Pine Ave.; Hutchison, Prince Arthur to Pine; Durocher, throughout; Dowd St., Sherbrooke, University to McTavish; St. Maurice, McGill to Dupre lane; Grey Nun, throughout; Common, Grey Nun to Duke and under the canal to Mill St.; Queen, Common to Ottawa; Nazareth, throughout; Duke, William to Ottawa; Dalhousie, throughout; Ann, throughout; Murray, McCord to William; Brichest; Inspector, Chaboullier Sq. to St. James; St. Maurice, McGill to Dupre lane; Versailles, Barre to Notre Dame; Guy, from Notre Dame southwards; Argyle Ave.; Aqueduct, Overdale Ave. to St. Antoine; Richmond, from Richmond Sq. to St. James; St. Matthew, from C.P.R. track to St. Antoine, Basin, from Richmond westward; Congregation, from Wellington southwards; Notre Dame, from city limits west to Atwater Ave., Grand Trunk, west of Napoleon, and part of Butler St.—Ald. Jeannotte is urging the erection of new police stations for Hochelaga and St. Lawrence wards.—Ald. Germain, Gauthier and Clendenning have been appointed a sub-committee to report on sites for incinerators.

TORONTO, ONT.—Messrs. H. A. Massey, J.T. Johnston, of this city, Mr. John Marder, of Marder, Luce & Co., Chicago, and others, are seeking incorporation as the Toronto Type Foundry, with a capital stock of \$150,000, to erect and operate a type foundry in Toronto.—At a meeting of the senate of Toronto University, held last week, plans and estimates were presented for the new chemistry buildings to be erected near the observatory, at a cost of \$60,000. A committee was appointed to estimate the cost of requisite accommodation for the proposed departments of mineralogy and geology.—The estimates which have just been presented in the Ontario Legislature, include the following appropriations: Government and Departmental buildings, \$59,000; public buildings, \$418,350; public works, \$31,178; colonization roads, \$95,600. Under the head of public works \$14,000 is placed aside for repairs. Under the head of public buildings there is a new vote of \$50,212 for Mimico cottages, \$70,000 for an asylum for eastern Ontario, cottages at Brockville to accommodate 500 patients, the estimated cost of which is \$250,000, of which \$70,000 will be required for this year's operation, \$75,000 for six new dining rooms in the London asylum, and at the Central Prison \$15,500 for a new building for extension of industries and \$25,000 for machinery for the same; \$6,500 for an iron fence to surround the Normal School, Toronto.—Messrs. Smith & Gemmill, architects, Bank of Commerce Building, will receive tenders until Wednesday, the 24th inst., for the erection of a brick and frame residence on Summerhill avenue, North Toronto.—Building permits have been granted as follows: Mrs. E. Sexton, nine attached 4-storey brick stores and dwellings, n. w. cor. Brunswick ave. and College st., cost \$100,000; Geo. Murray, three attached 2-storey and attic bk. dwellings, w. side of Ontario st., n. of Wellesley st.; James Hewlett, three det. 2-storey and attic bk. dwellings, n. side Dale ave., cost \$10,000.

FIRES.

Mr. Langmaid's residence, near Whitby, Ont., was burned on Tuesday last. Insurance small.—The residence of Mr. John Redmond, at Oil City, Ont., was destroyed by fire on the 15th inst.—The McKellar house at Glencoe, Ont., with all its contents, was burned to the ground on the 15th inst. The building was insured for \$1,000.—The residence and bakery of E. Stevens, at Wallaceburg, Ont., was entirely destroyed by fire on Saturday last. Insurance on building, \$1,500.—The grist mill belonging to Mr. W. L. Hicks, at Selkirk, Ont., was totally destroyed by fire on the 12th inst. Loss \$3,000; insurance \$1,000.—Mr. F. S. Ree's bakery shop on Princess St., Kingston, was destroyed by fire on Saturday last. Loss \$2,000.

CONTRACTS AWARDED.

OTTAWA, ONT.—The contract for the new lighthouse to be erected at Point Anglais wharf on the Ottawa river has been awarded to Mr. Chas. Christian, of this city, for \$1,950.

VICTORIA, B. C.—Messrs. McGregor & Innes, of this city, have been awarded the contract for the erection of the new building for the Victoria Brewing Co. The contract price is said to be between \$60,000 and 70,000.

VANCOUVER, B. C.—Messrs. W. Archer & Co. have awarded the contract to Messrs. Franklin & Patterson for the erection of a large two-story building on Westminster Ave.—The City Council have accepted the tender of Messrs. Bell-Irving & Patterson, of this city, for supplies for the waterworks at the following prices: Special castings, \$60.20 per ton; pig lead, \$70.60; lead pipe, \$102.00.—Messrs. Doherty & Co., of Sarnia, Ont., are the lowest tenderers for valves and hydrants, but the contract has not yet been awarded.

USEFUL HINTS.

TO STAIN WOOD BLUE.—Boil a quarter of a pound of turnsole for an hour in three pints of lime water, and color the wood with it.

Aluminum has been substituted for cast iron in the specifications for the dome of Philadelphia's new City Hall. It will save the constant expense of painting and reduce the weight of the tower about 400 tons.

To frost brass work, boil in caustic potash, rinse in clean water, and dip in nitric acid till all oxide is removed; then wash quickly, dry in boxwood sawdust, and lacquer while warm. This will give brass an ornamental finish.

The method prescribed for cleaning brass in United States arsenals is said to be to make a mixture of one part common nitric acid and one-half part sulphuric acid in a stone jar, having also ready a pail of fresh water, and a box of sawdust. The articles to be treated are dipped into the acid, then thrown into the water and finally rubbed with sawdust. This immediately changes them into a brilliant color. If the brass has become greasy it is first dipped into a strong solution of potash and soda in warm water; this cuts the grease, so that the acid has full power to act.

The following recipe gives a useful white-wash for external walls coated with common plaster, as in lath-and-plaster houses. It is the kind used on public works in the United States, and is very reliable. Take $\frac{1}{2}$ bushel of best lime, slaked with boiling water; 1 peck salt, dissolved in warm water; 3 lbs. ground rice, boiled to a thin paste; $\frac{1}{2}$ lb. ground whiting, and 1 lb. clear glue dissolved in warm water. Mix altogether, add hot water to bring to proper state for application, and let stand for several days. When required, heat and apply with a large brush.

They have a way in the North of correcting varnish when it blooms by removing it in this manner: They get a cup-full of flour and empty it into a silk handkerchief which they tie up lightly. With this pounce they gently rub the blooming varnish and then dust off any flour that may be clinging to the wall. It is said that this is an effectual cure and the blooming nuisance never troubles them any more. Some use fine sifted fuller's-earth in the same way (adding, in some cases, a little raw linseed oil), but

the flour plan is certainly the cleaner method and is said to be more effectual.

WHY TIN RUSTS.—An explanation of the rusting of block tin, as given in the *Mineral Water Review*, states that, on being exposed to the action of the air, pure tin is not affected at ordinary temperatures, but as soon as a portion of the tin is removed by injury so as to expose even a tiny speck of iron surface, corrosion at once sets in and proceeds very rapidly. The reason of this is of an electrical nature—that is, iron and tin together form what is a "galvanic couple," which will decompose the water, charged with carbonic acid, deposited upon them from the air; oxygen and hydrogen gases are liberated, and the iron, having the greater affinity for the oxygen, is the metal attacked; in particular, such corrosion is very rapid when the exposed iron surface comes in contact with water highly charged with carbonic acid, as in a mineral water factory.

According to A. Dannenberg, the washing of fat clays cannot be recommended, this process being of advantage only for the separation of sand and pebbles from calcareous clays, meagre clays, etc. By washing, fat clays are slowly dissolved, which to a considerable extent limits their effective capacity. Furthermore, fat clay-mud dries so slowly that notwithstanding all appliances and labor, the material washed in the Winter and Spring can in wet years rarely be used in Summer. However, when a clay-mill is used, the clay can be dug and spread out in Summer and in one or two days may, as a rule, be brought bone-hard into the clay-mill or the storage-shed. The construction of the mill is very simple. It consists of an iron frame, shaft with gearing, and six steel arms which comminute the clay. The latter is cleaned by falling into and passing through a conical cylindrical sieve.

SEWER VENTILATION.

The views of Mr. W. Santo Crimp, M. I. C. E., Assistant Engineer to the London County Council, are summarized as follows:—1. That the wind is the only agent which produces measurable movements of sewer-air in an ordinary system of sewers. 2. That the fullest use of the wind should be made in effecting the proper ventilation of sewers. 3. That the offensiveness of sewer-air should be lessened to the fullest practicable extent, by systematic flushing and cleansing of the sewers and by keeping them structurally in a thoroughly effective condition. 4. That small pipe-sewers need not be ventilated to the same extent as those large enough to admit of men working in them, vents high overhead being alone required. 5. That in all systems where practicable, ventilating pipes should be carried up high buildings or other objects, where they may discharge their foul contents into the atmosphere high overhead, and that street ventilators should then be reduced to a minimum. 6. That if every house were properly drained and proof against sewer-air, ventilation of sewers, as ordinarily practised, would be unnecessary.

Hubert Prevost, contractor, Montreal, has assigned with liabilities at \$18,917.

MUNICIPAL DEPARTMENT.

OUR MUDWAYS.

"The wealth and prosperity of a country may be seen in its well made and kept highway."—*Ibid.*

Editor Municipal Department.

SIR,—With the first meetings of the various County townships, and other councils throughout the land, is not the present time an opportune one to again call attention to the question of roads and their management? We need go no further than across the line south of us to learn how largely this question has increased in interest in as short a time as the past five or six years. This is conceded even in very small places (which might be named) where, as a rule, any outlay of over \$500 would have before created a furore in the village council, if asked for to be spent on road repairs, but where now the ratepayers cheerfully laying themselves under tribute for sums varying from five to ten times that amount, in order to procure the necessary machinery for their purpose. The conditions warranting such outlays as not only expedient, but in the end strictly economical in such cases, are not unknown here. On the roads north, east and west of us, what will be their condition in a few weeks other than the usual one of utter impassability from mud, and afterwards in the dry weather, almost as useless (for pleasure quite so) from dust.

This must and always will be the case so long as the present prevailing method of road construction and maintenance is pursued, and the universal horror against toll gates is not to be wondered at, since they fail to make any improvements in the purposes they were established for.

That the present annual waste (labor and material) now going on can be controlled, requires no loud assertion. Any road leading into Toronto, having a sufficiently energetic trust board, commissioner or other official that would adopt some ordinary specification, such as is now called for for country roads, and work closely to this for even say a distance of ten or twelve miles, will be more than amply repaid, it is to be believed, by the increased traffic and consequently largely augmented receipts in tolls.

To the farmer, good roads mean better prices for his product, consequent on less wear of vehicles and animals, with quicker transport to the citizens generally, healthful pleasure in many forms, besides the more frequent visits of their surrounding customers: to the country at large, universal and enlightened advancement.

FASCIA VAPORE.

IRON AND OAK PAVEMENT.

A block pavement composed of iron and wood was put down in Columbus, Ohio, on May 30, 1890 and has been in use ever since that time with satisfactory results. The section laid is small, and is composed of blocks of wood about 5 inches long and $3\frac{1}{2}$ inches square, set on end in suitable cast-iron pockets, which in turn are supported on cast-iron base plates. The blocks project about two inches from the cast-iron, and in August, 1890, after having been in service about three months, it was found that about one-eighth inch was worn off the wood.

In December, 1891, after a service of nearly sixteen months, about one-quarter inch was found to be worn away. The section is in front of the "Big Four" freight depot, and is subject to very heavy traffic. J. W. Cole, in a paper before the American Society of Engineers, considers that this pavement meets the requirements of good street pavements in that it is substantial for heavy traffic, affords a good firm foothold for the horse, and is practically noiseless.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

MUNICIPALITY—WHARF PROPERTY.—The power of a municipal corporation to acquire land for the purpose of erecting wharfs thereon and to charge wharfage is not a necessary incident of its charter, but must, like all its other powers, be derived directly from the legislature to be exercised within the limits and upon the conditions of its grant, according to the decision of the Kentucky Court of Appeals in the case of Roberts et al. vs. City of Louisville.

GAS AND WATER PIPES DECLARED TO BE IMMOVABLES.—Judge Tait rendered a most elaborate and very important judgment at Sherbrooke, a few days ago, in the case of the Sherbrooke Gas and Water Company and the Corporation of the City of Sherbrooke. This was an appeal from a decision of the municipal council homologating the valuation roll, in which the valuations placed on two parcels of land belonging to appellants were increased from \$6,000 and \$8,000 to \$36,000 and \$78,000 respectively. The increase represents the value put on the gas and water mains and pipes running through the streets of the city. The pretension of the appellants was that these pipes were not placed upon the lots and did not form part thereof, but were placed throughout the streets by special permission of the Legislature, formed no part of the real estate of the city and were not taxable property. The learned judge after quoting the leading authors and a number of precedents, here as well as in France and the United States, came to the conclusion that the pipes must be considered as an immovable, as, apart from the authorities quoted, common sense shows that they are but the limbs of the body and a part of it. The Court must therefore decide that the respondents had a right to tax the mains and pipes as part of the real estate belonging to appellants, and the petition must be dismissed with costs.

SANITARY AND UNSANITARY RELATIONS OF UNDERGROUND WATERS.

BY W. H. BYRCE, M.D., TORONTO, CANADA.
It is not my intention to deal at any length with this subject, but rather to present some of the principles to be observed in the selection of drinking waters. Much has been said with regard to the dangers of drinking water from wells; but it has not been until recently that the differentiation has been made as regards wells that are dangerous and those that are healthy.

As a general principle it may be said that practically all really underground waters are sanitariously good; but it must be clearly understood what is meant by underground water. For instance:

1. A water lying in a shallow dug-out in prairie or bog land, down only to the impervious clay or rock below, cannot fairly be called underground water.

2. Neither can a well down even into a true water-bearing stratum of sand or gravel be called an underground water if the water of the upper organic soil layer is allowed to percolate toward the well laterally without really moving downward through the underlying beds of clay loam, sand or gravel, which serve to sterilize the waters in their passage downward.

3. Neither can a well be called underground if, as is commonly the case, the well is covered with boards or a wooden framework, thereby allowing the filth washings from the surface of the boards to be carried down through cracks into the water of the well.

Carl Fraenkel and others have carefully examined into the water of pit-wells, and such have by Pflugge been called "hygienic monsters."

Clearly, then, underground waters mean those which have primarily fallen upon the surface, have there been contaminated with soil microbes, but which have, in their passage downward, through percolation to the water-bearing zone situated on some impervious stratum, been purified by the several natural agencies which are at work.

PUBLICATIONS.

Mr. Chas. Baillairge, City Engineer of Quebec, has kindly favored us with a copy of his report for 1890-91, which shows the sum of \$68,266.38 to have been expended on street repairs and improvements.

Mr. H. J. Jennings, who for years held the position of town clerk and treasurer, Division Court clerk, etc., at Penetanguishene, is reported to have left the town for parts unknown.

The town of Toronto Junction will ask for applications for the position of water works superintendent, at a salary of \$1,000; two assistants, at \$500 each, and town engineer at a salary of \$1,500, out of which sum must come the salaries of assistants.

ALAN MACDOUGALL,
CIVIL AND SANITARY ENGINEER,
32 ADELAIDE STREET EAST,
TORONTO

R. E. H. BUGKNER,
32 Adelaide St. East, TORONTO.

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Inverts, Vents,

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Viaducts, Piers, Roofs, Turntables and Girders in Steel and Iron.

Tension members forged without welds. Riveting done by hydraulic or compressed air machines. Specialties. Good workmanship and strict adherence to specifications and drawings.

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Municipalities seeking debentures, no matter for what purpose, will find a ready purchaser by applying to G. A. STIMSON, 11 Toronto Street, Toronto, N.B. Money to loan at lowest rates on first mortgage.

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THE EXAMINATIONS

OF THE

ROYAL INSTITUTE OF BRITISH ARCHITECTS.

NOTICE IS HEREBY GIVEN that after the close of the year 1893 all gentlemen who desire to qualify for candidature as ASSOCIATE of the Royal Institute of British Architects (except in special cases submitted to and approved by the Council) will be required to enter for the PRELIMINARY Examination, and having passed it, work up through the INTERMEDIATE to the FINAL Examination, which in 1894 will take the place of the present "Examination in Architecture." The only Examinations to which young Architects who are in practice and who desire to become Architects without passing the Progressive Examinations can enter, take place twice in the year 1892 and twice in the year 1893. Those therefore who may not be prepared to enter for the "EXAMINATION IN ARCHITECTURE" before the close of 1893, should take immediate steps to secure registration as Probationers, which they can do by passing the Preliminary Examination or obtaining the GRANT OF EXEMPTION THEREFROM.

ASHTON WEBB, Hon. Secretary.
WILLIAM H. WHITE, Secretary.

The Royal Institute of British Architects, 9 Conduit Street, Hanover Square, London W., 25th January, 1892.

St. George's Patent Sectional VITRIFIED CLAY SEWER

AND

CAST IRON STREET GULLEY.

THE undersigned begs to call the attention of town councils or those interested in the construction of sewerage, to the above mentioned patents, and will be pleased to send circulars and give any information required to those desiring such. The sectional sewer makes a CHEAPER and at the same time a more durable and efficient sewer than the ordinary brick. The cast iron street gully, of which there are 5,000 in use in Montreal, Toronto, Ottawa, Quebec, Peterboro', Owen Sound, Sarnia, St. Henry, St. Amelonde, and other places, is such a great improvement and saving on brick that corporations who have tried them never put in bricks again.

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AGENT.

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	\$	\$	\$	\$
1/2 to 2 clear picks, Am. ins.	30	00	27	00
1 1/2 to 2 three upper, Am. ins.	37	00	40	00
1 1/2 to 2, pickings, Am. ins.	27	00	30	00
3 inch clear	30	00	30	00
1 1/2 to and 12 dressing and better.	18	00	20	00
1 1/2 to and 12 mill run	13	00	14	00
1 1/2 to and 12 dressing	14	00	16	00
1 1/2 to and 12 common	12	00	13	00
1 1/2 to and 12 spruce culls	12	00	13	00
1 1/2 to and 12 maple culls	9	00	10	00
1 inch clear and pickings	28	00	30	00
1 inch dressing and better	18	00	20	00
1 inch siding, mill run	14	00	16	00
1 inch siding, common	11	00	12	00
1 inch siding, ship culls	10	00	11	00
1 inch siding, mill culls	8	00	9	00
Cull scantling	8	00	9	00
1 1/2 and thicker cutting up plank	22	00	25	00
1 inch strips, 4 in. to 3 in. mill run	14	00	15	00
1 inch strips, common	11	00	12	00
1 1/2 inch flooring	14	00	15	00
1 1/2 inch flooring	14	00	16	00
XXX shingle, sawn, per M	2	00	2	00
16 in.	2	00	2	00
XX shingles, sawn, per M	1	00	1	00
YARD QUOTATIONS.				
Mill cull boards and scantling	10	00		
Shipping cull boards, miscellaneous widths	13	00		
Shipping cull boards, stocks	16	00		
Hemlock scantling and joint up to 16 ft.	11	00	12	00
Hemlock scantling and joint up to 18 ft.	12	00	13	00
Hemlock scantling and joint up to 20 ft.	13	00	14	00
Scantling and joint, up to 16 ft	14	00		
" " " " " " " " " "	18	00		
" " " " " " " " " "	20	00		
" " " " " " " " " "	22	00		
" " " " " " " " " "	24	00		
" " " " " " " " " "	26	00		
" " " " " " " " " "	28	00		
" " " " " " " " " "	30	00		
" " " " " " " " " "	32	00		
" " " " " " " " " "	34	00		
" " " " " " " " " "	36	00		
" " " " " " " " " "	38	00		
" " " " " " " " " "	40 to 44 ft	36	00	
Cutting up planks, 1 1/2 and thicker, dry	25	00	25	00
Cutting up planks, 1 1/2 and thicker, board	18	00	18	00
Cedar for block paving, per cord	5	00		
Cedar for Kerling, 4 x 14, per M	14	00		

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Architectural Ironwork a specialty. Pleased to furnish estimates.

Table with columns for Toronto and Montreal prices for items like Black ash, Dressing stocks, Picks, American inspection, Three upper, Am. inspection.

Table with columns for Toronto and Montreal prices for Brick items like Common Walling, Good Facing, Sewer, Pressed Brick, Plain brick, Moulded and Ornamental, Roof Tiles, Diamond locking tile, First quality, Second quality, Ornamental, Plain brick, Trojan or Buff, Ornamental.

Table with columns for Toronto and Montreal prices for Stone items like Common Rubble, Large flat Rubble, Foundation blocks, Kent Freestone Quarries, River John, Granite, Mount Freestone, Credit Valley Rubble, Credit Valley Brown Course, Credit Valley Brown Dimension, Credit Valley Grey Coursing, Credit Valley Grey Dimension, Granite Rubble, Granite dimension floating, Toronto, per cubic ft.

Table with columns for Toronto and Montreal prices for Roofing items like Lake steel shingles, Eastlake steel shingles, Improved Broad Rib Roofing, Improved Broad Rib Roofing (painted), N.W. Western steel siding, Manitoba steel siding, Metallic finished brick, Tower or Mansard shingles, Tower or Mansard shingles (painted), Metallic Terra Cotta Tiles, Patent Metallic shingles, Corrugated iron, Corrugated iron, Patent Rib Roofing, Patent Rib Roofing, Weather shingles, Weather shingles, Standard shingles, Standard shingles, Northwestern steel siding, Metallic Finish Brick, Metallic Finish Clapboard, Slate items.

Table with columns for Toronto and Montreal prices for Paints items like White lead, Red lead, Yellow ochre, Green chrome, Black, Lamp, Blue, ultramarine.

Table with columns for Toronto and Montreal prices for Cement, Lime, etc. items like Cement, Portland, Thorold, Queenston, Napanee, Hull, German, London, Newcastle, Belgian, Canadian, Roman, Parisian, Superfine, Keene's Coarse Whites, Calcined plaster, Fire bricks, Lime, Plaster, Hair, Plasters.

Table with columns for Toronto and Montreal prices for Hardware items like Cut nails, Steel, CUT NAILS, PRICK AND CUT SPIKES, CASES AND BOX FLOORING, SHOOK AND TOBACCO BOX NAILS, FINISHING NAILS, SHANK AND FLAT FRESSED NAILS, Structural Iron.

Table with columns for Toronto and Montreal prices for Structural Iron items like Steel beam, channels, angles, tees, plates, Sheared steel b edge plate.

Table with columns for Toronto and Montreal prices for Blocks (Pressed) items like Beamsville Pressed Brick Co, Don Valley Pressed Brick Works, Hynes Terra Cotta & Brick Co, Milton Pressed Brick & Sewer Pipe Co, Morris, E. D., Toronto Pressed Brick & Terra Cotta Co, The Ontario Terra Cotta, Brick & Sewer Pipe Co.

Table with columns for Toronto and Montreal prices for Builders' Supplies items like Adamant Mfg. Co, Adamson, Joseph, Bremner, Alex, Maguire, William, Morris, E. D., McNally & Co, Rathbun Co, Rowe, Geo.

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Table with columns for Toronto and Montreal prices for Dumb Waiters items like King & Son, Warden.

Table with columns for Toronto and Montreal prices for Electric Lighting items like Royal Electric Co, Toronto Electrical Works.

Table with columns for Toronto and Montreal prices for Mantels and Ornaments items like Milbchamp Mfg. Co.

Table with columns for Toronto and Montreal prices for Metallic Lath items like B. Greening Wire Co, Metallic Roofing Co.

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