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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. 6.

JULY 11, 1895

No. 23.

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY THURSDAY

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

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

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Advertising Rates on application.

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TO CONTRACTORS

Tenders will be received by the Secretary of the Board of Trustees up to no n of the 23rd inst. for the several works required in the erection and completion of a

HIGH SCHOOL BUILDING IN THE TOWN OF GANANOQUE.

Plans and specifications may be seen on and after the 5th inst. at our offices, Kingston and Gananoque.

Lowest or any tender not necessarily accepted.

POWER & SON, Architects.



Notice to Contractors

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to 11 o'clock a.m. on SATURDAY, JULY 13th, 1895, for the following works:

CEDAR BLOCK PAVEMENT

on Northcote avenue, from Queen street to Afton avenue; on Sullivan street, from Spadina avenue to Beverley street.

ASPHALT PAVEMENT

on Avenue road, both sides of street, from Bloor street to Davenport road.

to Davenport road.

Plans can be seen and forms of tender obtained at the City Engineer's office, on and after Saturday, July 6, 1895.

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 \$1000, and 2½ per cent. for the value of the work tendered for over that amount, must accompany each and every tender, otherwise it will not be entertaired.

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.

DANIEL LAMB.

DANIEL LAMB, Chairman Committee on Works.

Committee Room, Toronto, June 28th, 1895.

TORONTO Public Schools

TENDERS WANTED

FOR THE FOLLOWING WORKS:

Sealed Tenders will be received by the Secretary-reasurer of the Toronto Public School Board, until son on TUESDAY, JULY 16TH, for the following noon o works:

A new school in Rosedale.

Enlargement of Palmerston avenue School.

Enlargement of Borden street School.

Midsummer Repairs at several Schools, all trades.

Plans and specifications may be seen and all informa-tion obtained on and after Monday, July 8, at the office of the Board, corner York and Richmond streets, or application to Mr. C. H. Bishop, Superin-tendent of Buildings, between the hours of 7 a. m. and 10 p. m.

Each tender must be accompanied by the deposit mentioned in the said specification and form of tender, as per regulations of the Board.

The lowest or any tender will not necessarily be ac-

W. W. HODGSON,

Chairman of Committee.

W. C. WILKINSON.

Sec. Treas. T. P S. Board.

1



Notice to Contractors

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to 11 a.m. on SATURDAY, JULY 13th, 1895, for the following works:

CEDAR BLOCK PAVEMENT

On D'Arcy Street, from Spadina Avenue to McCaul

CONCRETE WALKS

On Yonge Street, east side, from Maitland Street to Bloor Street.

On Sherbourne Street, east side, from Wellesley Street to Howard Street.

Plans can be seen and forms of tender obtained at the City Engineer's office on and after Saturday, July 6th, 1895.

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 a½ per cent. for the value of the work tendered for 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.

DANIEL LAMB, Chairman of Committee on Works

Committee Room, Toronto, July 2, 1895.

Office of S. HAMILTON TOWNSEND, Architect, 15 Gerrard St. E., Toronto.

Tenders will be received at this office until Saturday, July 20th, for the various works necessary in the erection of a Farm House on the Hamilton Estate, near Newtonville. Drawings and specifications may be seen at Mr. Gordon's house, Newtonville, at the Bank of Stanley Patterson, Esq., Port Hope, and at the architect's office. The lowest or any tender not necessarily accepted.

Office of S. HAMILTON TOWNSEND, Architect, 15 Gerrard St. E., Toronto.

Tenders will be received until SATURDAY, JULY 20TH, for the varions works necessary in the erection of a

RESIDENCE IN ROSEDALE.

Drawings and specifications may be seen and all information obtained at office. The lowest or any tender not necessarily accepted.



Scaled Tenders addressed to the undersigned, and endorsed "Tender for Coal, Pubic Buildings," will be received until THURSDAY, 18711 JULY, for Coal supply for all or any of the Donnmon Public Buildings. Specification, form of tender and all necessary information can be obtained at this Department on and after Thursday, 27th June.

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

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

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

By order,

E. F. E. ROY,

Secretary.

Department of Public Works, Ottawa, 26th June, 1895.



NOTICE TO CONTRACTORS

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up to 11 o'clock a.m. on SATURDAY, JULY 20, 1895, for the following works:

CEDAR BLOCK PAVEMENT

on Oxford Street, from Spadina Avenue to Augusta Avenue.

Avenue.

Plans and specifications may be seen and forms of tender obtained at the office of the City Engineer on and after Saturday, July 13th, 1895.

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 2½ per cent, for the value of the work tendered for over that amount, must accompany each and every ten der, 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.

DANIEL LAMB, Chairman Committee on Works.

Committee Room, Toronto, July 9, 1865.

TO CONTRACTORS

Separate Tenders will be received by the undersigned up to July 15th, for all trades required in the erection of a Town Hall and Fire Station at Carleton Place, Ont. Plans can be seen at the office of the architect, GEO. W. KING, 9½ ADELAIDE ST. E., TORONTO, and at Carleton Place, on application to the Town Clerk.

Lowest or any tender not necessarily accepted.

A. R. G. PEDEN, Town Clerk, Carleton Place, Ont.

TENDERS

Will be received by the undersigned at his office up to 5 o'clock P.M. on Saturday, 27th July, 1895.

1st. For the furnishing of materials and construction of a Heavy Stone Culvert over run of water on Queen Street East, between East Toronto Village and the Township of Scarboro.

2nd. For re-planking the Moore Park steel viaducts, situate & of a mile east of Yonge street, at Deer Park. Plans, specifications, etc., can be seen at said office.

Lowest or any tender not necessarily accepted.

PETERS CHEON CE & OLS

PETER S. GIBSON, CE. & O.L.S., York Tp. Engineer.

Office at WILLOWDALE, (2 miles north of electric railway terminus on Yonge St.), 10th July, 1895.

CONTRACTS OPEN.

KILLALOE, ONT.—The Presbyterians are preparing to erect a new church.

BALTIMORE, ONT. - Tenders are wanted for building a brick farm house

RAT PORTAGE, ONT.—The by-law has been carried to issue debentures for \$10,000 for local improvements.

WINGHAM, ONT .- Work will likely be commenced shortly on a new brick factory for the Union Furniture Co.

PALMERSTON, ONT.—S. Caswell, Town Clerk, invites tenders for the purchase of \$17,000 of 4½° 30 year debentures.
Windson, Ont.—The Council will ask

for tenders for a new boiler and other improvements for the electric light plant.

CHATHAM, ONT.—The School Board will probably purchase property on Queen street, on which to erect a \$25,000 school building.

NIAGARA FALLS, ONT .- John Robinson, Town Clerk, invites tenders until the 3rd of August for the purchase of \$5,000 of 5 per cent. debentures.

CORNWALL, ONT.—The Council has given notice that it is proposed to construct a nine-inch tile sewer en Amelia street, at a cost of \$1,506.

KAMLOOPS, B. C.—The corporation invites tenders until the 1st of September, for the purchase of \$15,000 of five per cent, debentures. Address, M. J. McIver.

LINDSAY, ONT .- The building committee of the Board of Education have been instructed to secure plans and advertise for tenders for the building of a gym-

OTTAWA, ONT.—Mr. Hibbard, C. E., is making plans for the drainage of the western end of the city, with a view of allowing the village of Hintonburg to use the city outlet.

HAWKESBURY, QUE. — The Great Northern Railway Co. has been informed that the railway committee of the privy council has approved of the plans of its bridge at this place.

WOODSTOCK, N. B.-M. R. Kinsey, sanitary engineer of New York, is making plans and estimates for a complete system of sewerage for the town, which will be submitted to the Council at an early date.

ST. CATHARINES, ONT. Wright & Cunningham intend to rebuild their foundry shortly. Wm. A. Mitteberger, Treasurer, will receive proposals until the 17th inst., for the purchase of \$15,000 of drainage debentures.

BARRIE, ONT.—The Barrie & Allandale Electric Street Railway Co. are applying for incorporation, to construct a street railway through Barrie, Allandale, Oro, Vespra and Innisfield. The capital stock is placed at \$50,000.

QUEBEC, QUE.—H. J. Beemer is at present in New York making arrangements for the construction of the proposed electric railway.—The Champlain monu-ment committee are asking for tenders for a monument to cost \$30,000.

FREDERICTON, N. B.—The question of constructing a complete sewerage system for the town will likely be voted on by the ratepayers shortly. A. G. Beckwith has been instructed to prepare plans and an estimate of the cost of the work.

BROCKVILLE, ONT .- G. A. Allan, architect, is inviting tenders for the new to the Brockville General hospital. wing will be three stories in height, and will contain nurses and help rooms, operating rooms, public wards and a few isolated wards.

CARLETON PLACE, ONT .- The Town Council will issue tenders in a few days for the building of a new town hall on the river bank on Main street. The building will contain a fire hall, opera house, police and division courts, etc. The estimated cost will be for coo cost will be \$25,000.

RICHMOND, QUE.-Tenders are invited by the Department of Public Works, Ottawa, addressed to E. F. E. Roy, secretary, until Friday, the 26th inst., for the erection of a post office in this town. Plans may be seen at the Department of Public Works, Ottawa.

DEUX RIVIERES, ONT .- M. Hickey, secretary-treasurer of the School Board, will receive tenders until noon on Monday, the 15th inst., for the erection of a stone foundation under the school house of S. S. No. 4., Township of Clara. Plans may be seen at the post office here.

GRAND FALLS, N. B.—A party of American capitalists, among whom are Senator Redfield Proctor, of Vermont, and Mr. Parker, president of the Washington Board of Trade, were recently in this town in connection with the possible development of the water power here.

HUNTINGDON, QUE.—The ratepayers have approved of a by-law granting a franchise for water works, sewerage and electric light systems to the Stadacona Water, Light & Power Co., of Montreal. The company must have the works in operation by the 1st of November next.

ST. LAMBERT, QUE.—The construction of a system of waterworks and drainage is under consideration by the ratepayers, and a committee consisting of W. B. Powell, D. Beatty, E. Perras, J. M. Trudeau, T. H. Henderson, A. Parent and A. Dogherty has been appointed to further the scheme.

ST. STEPHEN, N. B .- D. F. Maxwell, civil engineer, is laying out the road for the St. Stephen and Milltown railway, the contract for which has not yet been awarded.—It is the intention of Wm. Lipsett to erect a new house.—The St. Croix Soap Mfg. Co. will build another addition to their factory, three storeys, 22 by 30 feet in size.

ST. JOHN, N. B.—J. T. C. McKeen, architect, is asking for tenders until Saturday, the 13th inst., for the erection of a frame warehouse for James Pender & Co.—The City Engineer has been requested to prepare a plan and estimate of cost of placing a sewer on Strait Shore road.—W. C. Purves is considering the rebuilding of his saw mill.

LONDON, ONT .- Herbert Matthews has been appointed architect for the Board of Education.—The congregation of Knox church, South London, have instructed Mr. McBride, architect, to prepare new plans for the proposed improvemens to the church, with a view of curtailing the expense.—The City Council has given notice to the ratepayers of its intention to construct genealt, payements on Dundas construct asphalt pavements on Dundas street, between Ridout and Wellington street, and on Richmond street, between Fullerton street and G. T. R. track, at a

cost of \$25,375.95 and \$20,038.15 respectively. Tenders for the work will be intively. Tenders vited this week.

HAMILTON, ONT.-The waterworks department is considering the advisability of introducing down draught furnaces.-Plans are being prepared for a large four storey brick block on the corner of James and Main streets. The building will be 75 by 105 feet, and will cost \$40,000.—It is reported that the deal which has been pending between the T. H. and B. railway company and the Canadian Pacific Railway Co. is likely to be consummated. The original plans to have a line from The original plans to have a line from Welland to Toronto and from Hamilton to Waterford will be carried out and the construction pushed to completion as rapidly as possible.—The City Clerk is asking for tenders until Friday, the 19th inst., for the erection of a city jail, from plans prepared by A. W. Peene, architect. The City Council has decided to engage Mr. C. Kenchling, civil engineer, of Rochester, N. Y., to make plans for a system of sewerage.—It is said that a syndicate is being formed to purchase Hiram Broadbent's property at the corner of Hunter and James streets and erect thereon a large hotel.

MONTREAL, QUE.-W. C. Macdonald, tobacco manufacturer, will rebuild his tactory recently destroyed by fire.—Theo. Daoust, architect, has been instructed by the Catholic School Commissioners of St. Henri to ask for tenders for a new school in St. Elizabeth parish, to be 120 by 55 feet in size, with solid stone front, the remainder of the building being in brick.

The experts appointed to report on the sanitary condition of the city hall, have submitted the following estimates for the required improvements: drainage in subrequired improvements: drainage in sub-basement, \$1,263; plumbing fixtures, \$3,214; tile and marble work, \$3,655; new copper water pipe, \$1,912; ventilat-ing fan, \$500; labor for plumbing, \$4,500; concrete in basement, \$2,000; excavation and new hardwood floors, \$3,646; tiled floors in corridors, \$12,514; ventilation, \$20,000.—It is rumored that the three government engineers appointed to enquire into the proposed harbor improvements here, have recommended that plan No. 6. be not completed, on the ground that the requirements do not demand the construction of such an extended system of high level piers. The extension of the of high level piers. The extension of the present low level wharves, or the construction of one or two high level piers, would, in the opinion of the engineers, meet the requirements of trade for a long time to come. The proposed widening of Commissioners street is also considered unnecessary, but the construction of the guard pier is said to be approved of. - The City Council has decided to borrow \$1,500,000, at 4 per cent.

TORONTO, ONT.—Tenders are wanted by C. Powell, for the erection of a brick farm house at Baltimore, Ont. Plans may be seen at 326 Spadina ave., this city.—The railway committee of the privy council, Ottawa, has approved of the design of the proposed bridge at York street, as embodied in the plans and specifica-tions recently filed.—J. P. Wheeler, secre-tary Public School Board, East Toronto, invites tenders until noon on Saturday, the 13th inst., for the erection of a four-roomed brick school house, from plans prepared by J. A. Ellis, architect, 4½ Adelaide st. east.—A committee consisting of H. A. Massey, W. J. Gage, Hugh Ryan, Dr. Powell, and Dr. Graham has been appointed to report on the available sites for the proposed consumptive hospital.—The City Council has given notice of its intention to construct the following works: macadam roadways, Adelaide street, Church to Jarvis street, cost \$970; Duchess street, Jarvis to Parliament street, cost \$3,400; Farley avenue, Spa-dina avenue to Bathurst street, cost \$2,300; Grange avenue, Spadina avenue to Bever-

ley street, cost \$1020; St. Vincent street, Grenville to St. Joseph st, cost \$3,650; sewer on Maude street, Perth avenue to a line between lots 100 and 101, cost \$425; brick pavement, Amelia street, Parliament to Sumach st., cost \$10,00; Parliament to Sumach st., cost \$10, 00; concrete sidewalks, York street, east side, Wellington street to Rossin house lane, cost \$866; Isabella street, both sides, Church to Jarvis street, cost \$1,460; Isabella street, both sides, Jarvis to Sherbourne street, cost \$2070.—Tenders are invited by the Mayor until Friday, the 19th inst., for the purchase of debentures aggregating \$1,223,500, bearing interest at 3½ per cent per annum.—Building permits have been granted as follows: E. J. Hobson, 2 story bk. addition, s. w. corner Yonge and Agnes streets, cost \$1,000; J. T. Scholes, 2 story r. c. addition, cor. Oak and Sumach streets, cost \$2,000; improveand Sumach streets, cost \$2,000; improvements to Musee Theatre, cost \$1,200; alterations to the Academy of Music, cost \$8,000; P. A. Scott, 4 3-story bk. stores, cor. Yonge and Czar streets, cost \$8,000.

FIRES.

The old St. Lawrence and Ottawa depot at Ottawa, Ont., was destroyed by fire last week. Loss, \$10,000; covered by insurance.—Fifteen buildings in the village of Elmvale, Ont., were destroyed by fire on Sunday morning last. Among the burned buildings are: Hunt's hotel, Callagan's tin shop, Tweed's hotel, Crawford's residence, White's drug store, Mrs. Stone's store and dwelling, Cooper's store and post-office, Nixon's store and dwelling and Haney's residence. The losses will aggregate about \$40,000, the insurance and Haney's residence. The losses will aggregate about \$40,000, the insurance being about half that amount.—A brick store at Arnprior, Ont., owned by Mc-Master & Co., of Toronto, was gutted by fire recently.—The Brunnette saw mills at New Westminster, B. C., together with dry kiln, box shed and blacksmith shop, were consumed by fire on the 3rd of July, also Laidlaw's cannery adjoining. The losses are: Brunette Saw Mill Co., \$120,000; insurance \$55,000; Laidlaw's cannery, \$40,000; insurance not known.—The village of Lorneville, Ont., a suburb of Cornwall, was swept by fire on the 7th inst., about three fourths of the buildings being burned. The loss is estimated at \$30,000.

(Continued on page 4.)

WILLIS CHIPMAN, B. A. Sc.,

M. Can. Soc. C.E.; M. Am. Soc. C. E.; M. Am. W. W. Ass n.

CIVIL AND SANITARY ENGINEER

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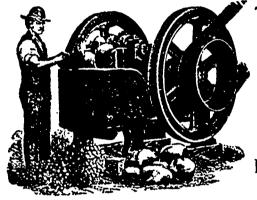
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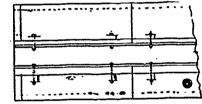
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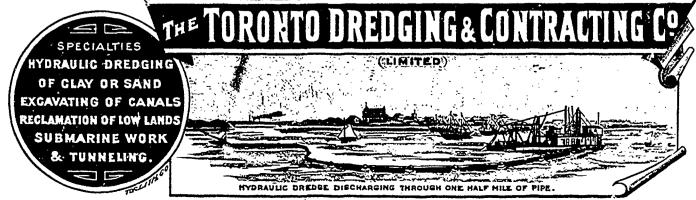


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ENGINEERS & CONTRACTORS. Office No 2 Church St. Toronto, Canada,

MUNICIPAL ENGINEERS, CONTRACTORS AND MATERIALS

CONTRACTS AWARDED.

MONCTON, N. B.—The contract for building a vault in the town hall has been given to T. M. Le Blanc, at the tender of \$915

CHATHAM, ONT. The contract for the construction of Raleigh Plains drain has been let to the Chatham Dredging Co., at the price of \$44,775.

PORTNEUF, QUE.—The contract for rebuilding the dam on the Marquise de Bassaino property has been given to Mr. Nelson, of Quebec, at \$3,000.

LONDON, ONT. - The contract for electric fixtures for the London Free Library has been awarded to Messrs. Rogers & Doss, electrical contractors, of

this city.

WINNIPEG, MAN.—The contract for the erection of J. H. Ashdown's warehouse has been let to P. Burnett for the masonry, and Mr. Cadham for the car-pentering.—The contract for the heating and ventilation of the new Wesley build-ing has been awarded to Plaxton Bros., of this city.

GUELPH, ONT.—The Separate School Board has accepted the tender of Feek & Phillips for the McEachren system of hot water heating and ventilation for the schools.—John Redwood has secured the contract for the erection of a two-storey brick house for W. F. Barber.—L. Wideman is the successful tenderer for a two storey terra costs basel densiling on Year

storey terra cotta brick dwelling on London road for Mrs. A. Waters.

MONTREAL, QUE.—The Grand Trunk
Railway Company have awarded to F.
Hyde & Co. the contract for their annual supply of Portland cement. They have selected Dumon's "Dagger" brand, which they have used for years. The contract is considered a large one.—W. McLea Walbank, architect, has awarded contracts for alterations and additions to a store on Notre Dame st., for Palmer & Son, as follows: stone work carpeter and ininfollows: stone work, carpenter and join-er's work, R. Neville; painting and glaz-ing, Geo. S. Kimber; cement flooring, Geo. W. Reed. Same architect has also awarded contracts for alterations to a house on Victoria st., for Hugh Graham, as follows: carpenter and joiner's work, roofing, plastering, painting and glazing, W. F. Coupland; plumbing and heating, las Booth Jas. Booth.

TORONTO, ONT.—The Don Valley Pressed Brick Works have been awarded TORONTO, Pressed Brick Works have been awarded the contract for supplying bricks and terra cotta for the new Presbyterian church, Battle Creek, Mich.—Æmilius Jarvis & Co., stock brokers, of this city, have recently been awarded the following contracts for debentures: Regina, N. W. T., \$13,000 5% annual instalment debentures at 100.65; Town of Sydney, C. B., \$10,000 4½% 20 year debentures at 102.55, and City of Halifax, N. S., \$157,650 4% 25 year debentures at 100.15.—The following tenders have been recommended lowing tenders have been recommended for acceptance for the erection of the Dundas street fire hall: masonry work, Thomas Cruttenden, \$1,920; carpenter work, Phillips Bros., \$1,369; roofing and tinsmithing, W. D. Hutson and Sons, \$165; plastering, Duckworth Bros., \$175; painting and glazing, James Phinnemore, \$146. For the Lombard street hall the lowest tenders are a brickwork and masonry. tenders are: brickwork and masonry, H. Hamblin, \$1,700; carpenter work, F. Armstrong, \$1,260; roofing and tinsmithing, W. D. Hutson and Sons, \$80; plastering, F. B. Lockwood, \$345; plumbing. Purdy. Mansell Mashinter \$566. plastering, F. B. Lockwood, \$345; plumbing, Purdy, Mansell Mashinter, \$565; painting, Eyles and Livingston, \$95.— The Public School Board has accepted the following tenders for additions to schools: enlargement of Morse street school, masons' work, W. J. Chick, \$1,179.95; carpenters' work, George Henry, \$3,724; painters' work, Faircloth & Co., \$425; plasterers' work, E. Warren, \$300; plumbers' work, Keith & Fitzsimons, \$241; roofers' work, G. Duthie & Sons, \$565; metal ceiling work, G. Duthie & Sons, \$281; galvanized iron work, A. B. Ormsby & Co., \$57; heating and ventilation, Smead-Dowd Co., \$965. Enlargement of Queen Victoria school, masons' work, Thos. Crittenden, \$3,000; carpenters' work, George Henry, \$3,600; painters' work, Charles Davies, \$498; plasterers' work, E. Warren, \$324; plumbers' work, Keith & Fitzsimons, \$228; metal ceilings, A. B. Ormsby, \$600; galvanized iron work, A. B. Ormsby, \$85; heating and ventilating, Smead-Dowd Co., \$1,375.

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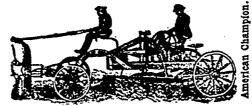
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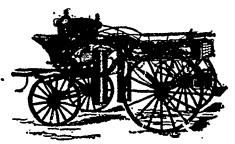
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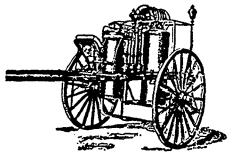
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MUNICIPAL DEPARTMENT

SANITATION: AN IDEAL AND A REVIEW.*

The lecturer described the condition of sanitary practice as he remembered it fifty years ago, and glanced at the improvements he had seen manifested in the course of that long period. He showed how great had been the advancement in all parts of the kingdom; how there had been records kept of the mortalities from different diseases; how some diseases like typhus, had almost passed away; how other diseases, such as cholera, had been largely controlled; how intramural burials had been done away with; how our armies had gained in the matter of health and longevity; how our gaols had been transformed from foci of disease to foci of health; how the medical officers of health had become a part of the health authorities of the kingdom, and had been followed by the sanitary inspectors; how sanitary institutes and other societies for the promotion of health had been started, and how completely the public mind had changed in considering the relations of preventative to curative medicine. What he had found wanting as a sanitarian, was the art of making people individually interested in the subject. He described the steps he had taken to bring about a change in this direction, and his construction, in 1875, in imagination of a model city, to which he had given the name of "Hygeia." He had taken care in the picture to describe everything that could be effected at that time, so that truly there was nothing visionary in the details, although the general outline partook to some extent of an imaginary quality. The effort succeeded. The model city, in parts, commenced to spring up everywhere, and the ideal of "Hygeia' as a working model had, as he had lived to see, become impressed for action on the popular mind. He had been requested to throw out some future ideals which, like the previous one, should be addressed to those who trusted in the future to improve still further the national health. In doing that he would suggest nothing that was impossible, although some things might appear at first to be extreme.

The first idea put forward was that of national main drainage. Nothing was simpler, and yet no systematic plan had ever been attempted. The only true way of draining a town, he pointed out, was to separate the sewage matter from the houses from storm water, and the well known adage of the late Mr. Ward, "The sewage to the soil, the storm water to the river," remained absolutely true. The whole country was now surveyed, laid out, leveled, and prepared with infinite toil

and engineering skill, in the network of railways which intersected everywhere, and it seemed to him clear that we had nothing to do but to construct along the side of all our great railways a series of iron or brickwork tubes-iron, perhaps, being the best-to start from every place where there were houses, and to let the sewage from those houses be pumped into the main by the side of the line, and be collected and conveyed away by side conduits to spots of land selected for utilization, so that the land might receive direct the benefits of sewage for the purposes of fertilization away altogether from the residences of man, and in a manner perfectly harmless to the health of communities. For such conveyance the levels were all prepared, and there was such open, ample and unused space, it would be no more difficult to lay the conduits down than it had been to place our telegraph lines. The conduits in the towns themselves would not be larger than the tubes which conveyed water, and in the case of the largest towns there would be so many starting points that every district would drain into the nearest conduit or principal conduit on the line, so that there would always be a brisk current towards the open country, with the minimum quantity of water to carry the solid material. The motors that would be required for the movement of the sewage would be of the simplest character, and the gradients would be so slight that the pumping power demanded would be comparatively inexpensive. At proper points there would be pumping stations, which, by exhaustion, would draw the sewage from the town, and by return stroke would raise it to fall to the level in the direction leading to the exit or exits, and as the main tube would be easy of access at any point, it would be possible to tap it, so to speak, anywhere in its course, in order to draw off its contents for utilization.

There were towns in this kingdom which were ready made, as it were, for this method of drainage, and in them the effect would be, if the exhaust system were adopted, that the houses during every moment of the day would be cleansed of all the impurities that were now lodged about them. They might begin the process with one town, large or small, and might extend as they pleased. They had all the open land of the country for the application of this newage removed, and in a very few years every part of the sewage, instead of being cast into the sea, or poured into the river, or laid up in the cesspool, could, without decomposing, be given back to the land for its natural services there. If conduits along railways could be constructed to take the sewage away, other conduits could be as easily introduced for bringing in from our large lakes the water necessary for the supplies of towns in quantities sufficient to bear away the sewage. Thus a complete circulatory system could be set up; a kind of arterial and venus system in every place while the storm water could be employed either as soft water for domestic purposes, or as a current, going back in an undefiled state to the river.

In addition to a perfected system of removing sewage from towns came also the disposal of refuse which could not be carried away by water. It was important in almost all places that a better method of disposal of refuse should be carried out than now existed. Refuse heaps, so common about towns, though they might not be a regular source of evil, like sewage unremoved, were often a cause of great evil. The ashpits in communities large or small became real nuisances, although the system of sorting might be fairly well carried out. To render such accumulations impossible, the course to be pursued was sufficiently easy, and should consist in the application of fire to everything that was consumable.

(To be Continued.)

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^{*}An address delivered by Sir Benjamin W. Richardson before the closing meeting of the Sanitary Conference at Manchester, England, and printed in the Building News.

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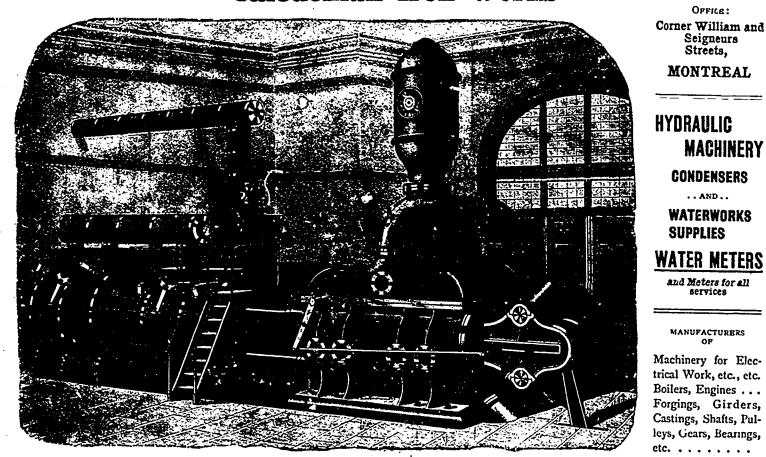
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CANADIAN CONTRACT RECORD. July 11, 1895 Prices of Building Materials. Toronto. Montreal. Toronto. Montreal. CONDITION OF THE MARKET. TORONTO: Trade in general remains steady. Roman Parian Superfine Plumbers' supplies are in good demand, and or-.. 650 700 5 50 8 00 ird "Hard building brick...... Ornamental, per 100...... ders are coming in freely. Prices on some lines in the United States have advanced, but no change has taken place in Canada. A scarcity of iron pipe in Toronto is noted, and prices are advancing. Red C Trojan and Corinthian..... MONTREAL: Increased firmness has marked the past week's trade. Cement and fire-bricks are moving freely, but the season is winding up for paints and oils, and the volume of 40 00 45 00 100 00 30 00 100 63 6 00 trade is smaller. Heavy iron and metals have a tendency to advance in price. HARDWARE. THE REEL Cut nails, 5cd & 6od, per keg 2 40 Steel 11 11 11 2 2 50 CUT NAILS, PENCE AND CUT SPIKES. 2 35 CAR OR CARGO LOTS. SAND. Toronto. Montreal. Per Load of x1/2 Cubic Yards 1 25 1 25 40d, hot cut, per 203 lbs \$ \$ 40 00@45 00 40 00 45 00 27 00 30 00 40 00 45 00 400, not cut, per 100 lbs ... 30d, " " " " ... 20d, 26d and 12d, hot cut, per 100 lbs ... 10d, hot cut, per 100 lbs ... 8d, 9d, " " " ... 6d, 7d, " " " ... 4d to 5d, " " " ... 3d, " " " " ... STONE. 2 25 2 30 2 35 2 50 2 70 3 10 3 60 14 00 14 00 2 35 18 co 20 00 19 00 18 00 8 po 10 po 8 po 10 po 9 po 35 po 40 po 18 po 20 po 12 po 16 po t 00 d, d to 5d cold cut, not polished or blued, per 100 lbs.....d to 5d cold cut, not polished or blued, per 100 lbs..... **2** 80 2 60 65 3d, per 100 lbs...... 3 60 4 10 CASING AND BOX, FLOORING, SHOOK AND TOBACCO NAILS. 2 d 12d to 3od, per 100 lbs..... 2 o 10d. " " 2 80 BOX 8 00 2 60 2 70 2 85 3 00 3 20, 3 60 1 75 3 25 2 95 3 10 3 30 60 75 200 FINISHING NAILS. 75 2.95 3 10 3 25 3 45 3 85 4 35 3 2½ to 2¾ 2 to 2¾ 1½ to 1¾ 1½ inch, per 100 lbs.. 1 15 YALD QUOTATIONS. 10 00 10 00 12 00 3 95 4 45 1 15 SLATING NAILS. 5d, per 100 lbs..... 3 05 3 05 8 45 3 95 1200 10 00 .300 1200 1300 COMMON BARRRI, NAILS. 14 00 13 00 14 00 5 00 500 14 00 14 00 16 00 17 00 17 00 21 00 23 02 25 00 27 00 29 50 31 00 CLINCH N inch, per 100 lbs. 2½ and 2½ " " " 2 and 2½ " " " 1½ and 1½ " CLINCH NAILS. 2 95 3 10 3 25 3 45 4 10 4 60 Scantling and joist, up to 22 ft 17 00 19 00 20 00 22 00 24 00 27 00 29 50 31 00 33 00 34 00 SHARP AND FLAT PRESSED NAILS. 3 inch, per 100 lbs. 3 45 3 60 3 75 3 95 4 60 5 10 2 and 2% 1% and 1% 1% 3 75 3 95 4 60 Rocfing (% square). " red..... " purple... " untading green " black SLATE. STREL WIRE NAIIS. Steel Wire Nails, 75, 10 and 5 % discount from printed list. 18 00 Iron Pipe: Terra Cotta Tile, per sq.... Ornamental Black Slate Roofing.... 7 8¾ 8 50 PAINTS. (In oil, ¥ lb. PAINTS. (In oil, White lead, Can., per 100 lbs. 6 25 " zinc, Can., " " 6 30 Red lead, Eng. 4 00 " venetian, per 100 lbs. 2 60 " vermillion. 90 " Indian, Eng. 10 Vellow ochre. 5 Yellow chrome. 7 " Paris. 20 Black lamp. 15 Blue, ultramarine. 15 Oil, linseed, raw, #/mp. gal. 54 " refined, 78 Putty. 24 Whiting der 20 20 lbs. Lead Pipe: 3 15 .7 14 12 60 63 Galvanized Iron: 20 59 63 85 21/4 1 00, 1 25 BRICK-W M Whiting, dry, per 100 lbs. 75 Paris white, Eng., dry. 90 Litharge, Eng. 4 Sienna, burnt. 10 Umber, 824 Gordon Crewn 8 50 16 to 24 guage, per lb.... 41/4 41/4 26 guage, " 41/4 41/4 28" Note.—Cheaper grades about 1/4 c. per lb. less Pressed Brick, Per M: 90 6¾ Red, No. 1, f.o.b. Beamsville " " 2 " " 3 Buff ... Brown ... Roman Red ... " Buff ... Buff ... Brown ... Kewer ... Hard Building ... 16 00

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