CANADIAN

Contract Record

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

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. 15.

TORONTO, MONTREAL AND WINNIPEG, JANUARY II, 1905

No. 48

THE CANADIAN CONTRACT RECORD

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TENDERS

up till noon, January 19th, 1905, for all trades in the erection of a Gate Lodge at St. James Cemetery, Toronto.

ry, Toronto.

DARLING & PEARSON, Architects,
Toronto, Ont

TO CONTRACTORS

Tenders are invited up to 5 p. m. SATURDAY, 14TH INST., for the different trades work required in the construction of a Presbyterian Building at Deseronto, Ont. Plans and specifications may be seen at the residence of the Rev. P. J. Hartigan, Napanee, Ont., and at the office of the architect, Kingston, Ont.

H. P. SMITH.

H. P. SMITH, Architect.

Anchor Building, Market Square

CONCRETE PILES

For Procuring Cheap Permanent Foundations in Filled or Soft Grounds. I am prepared to put in concrete piles, or to furnish contractors with the necessary cores on a Royalty basis, under my Patents. Estimates furnished on application. Address,

A. A. RAYMOND. Office of Medler & Arnott Foot of Berkeley St., Toronto, Ont.

TENDERS WANTED

Tenders will be received up till 5 o'clock, 14th OF JANUARY, 1905, for all Trades required in the erection of Brick Town Hall in the Village of Alisa Craig ciffications may be seen on and after MONDAY, THE 19TH, at the office of E. B. Smith, Ailsa Craig, or J. A. Humphris, 8t. Mary's.

Mary's.

The lowest or any tender not necessarily accepted.

E. B. SMITH, Village Clerk, Ailsa Craig.

BRIDGE TENDERS WANTED

Tenders will be received by the undersigne on behalf of the County of Ruron, at Wingha Post Office, Ont., until 5 o'clock p. m. on

Saturday, the 21st day of January, 1905

on behalf of the County of Huron, at Wingham Post Office, Ont., until 50 volcote, p.m. on

Saturday, the 21st day of January, 1905 for the erection of the superstructure of the following steel bridges in the said county, vis., 1st, One to be erected over the Higheen Mile River on the Lake Shore Road in the township of Ashfield, about 2 miles south of Amberley, about 10 miles from G. T. R. station at Ripley. The bridge is to be of one span, 95 ft. clear between the abutments. Pratt truss, to be 18 ft. high of six panels. Roadway, 16 ft. wide, steel joints at 3 feet centres, floor of 3-inch Rock Rim or cedar. Railing to be 4 ft. 3ch of a tiers of 15/16 inch gas pipe, strength 170 lbs. per square foot of floor surface, and large safety factor; to be strong enough for concrete floor. About 30 ft. from bed of stream to floor, gravel bottom, little water. The bridge is to be completed on or before the 13th day of August next, 1905.

2nd – A steel bridge to be erected over the Nine Rock Rim of Creek, about 2 miles south of the ween the townships of West Wawanosh and Ashfield. It is to be of one span 63 ft. clear between the townships of West Wawanosh and Ashfield. It is to be of one span 64 ft. clear between the townships of West Wawanosh and 6ft, wide, steel joints at 2 feet centres, floor of 3-inch Rock Rim or Tamarack. Wheel guards 5x5 inches of pine or cedar. Railing to be 4 ft. high of 4 tiers of 1½ inch gas pipe, truss to be of panels, strength 170 lbs. per square foot of the panels

The deposits of unsuccessful tenderers will be

The deposits of unsuccessful tenderes will be returned.

The lowest or any tender not necessarily accepted.

JOHN ANSLEY, Co. Com. for Huron County. Wingham, Ont., Jan. 4th, 1905.

WANTED

Architectural Draughtsman, thoroughly competent to take charge of Toronto office. Good at designing and perspective. State experience and salary (expected. Box 24, CONTRACT RECORD.

CONTRACTS OPEN.

HIGH RIVER, MAN. - Lane & Emerson intend building a new block

MUNSTER, ONT. - Wm. Tubman purposes building a brick house in the

ALEXANDRIA, ONT.—The Council propose to issue debentures for \$14,620.89.

VIRDEN, MAN.—A site has been purchased on which to build a new school.

STRATHCONA, N.W.T.-The town proposes to install waterworks and sewerage systems.

SANDWICH, ONT. - The Bishop Fur Co. will commence work at once on a new building.

LUMSDEN, N.W.T. — It is the intention of G. E. James to build a new residence in the spring.

LACOMBE, N.W.T.—It is probable that steps will be taken this year to install a nearworks extension.

FORT ERIE, ONT.—The question of constructing waterworks and sewerage systems is under consideration.

LONDON, ONT. — The Parnell-Dean Steam Baking Co. will build an addition to their bakery on Bruce street.

TILSONBURG, ONT.—It transpires that the by-law to give a bonus to the Woodstock Wind Motor Co was defeat-

IRON BRIDGE, ONT .- Plans have been prepared and tenders invited for a new school to be built here, probably of concrete.

TORONTO JUNCTION, ONT.— The question of building a Carnegie library here will likely be taken up at an early date.

PELEE ISLAND, ONT. — Wm. Stewart will receive bids up to January 28th for the purchase of \$800 5 per cent. debentures.

STRATFORD, ONT.—J. A. Cline, upholsterer, Ontario street, will probably erect a new factory during the coming summer.

ST. ANDREWS, N.B. — A public meeting will be held on January 16 to consider the question of installing an electric light plant.

CORNWALL, ONT .- James Leitch,

Chairman High School Board, will receive tenders up to Monday, 16th inst., for alterations to the present school building.

MEDICINE HAT, N.W.T. — It is understood that the Dominion Government will build a new post office and customs house here.

MONCTON, N.B.—B. E. Smith is negotiating with the W.C.T.U. for the purchase of their property with a view to erecting a brick block on the site.

KINGSTON, ONT. — Although the Okill street sewer by-law was defeated, the work will be proceeded with and the money taken out of current revenue.

PORT ARTHUR, ONT. — It is probable that the new Council will consider the installation of another power plant on the Current river.

WOODSTOCK, ONT. — It is now stated that the by-law granting a loan to the Eureka Planter Co., of Windsor, Ont., was carried, instead of being defeated as at first reported.

ST. THOMAS, ONT.—Bids will be received by O. P. Surrey, City Treasurer, up to Wednesday, February 15, for the purchase of \$200,000 4½ per cent. debentures.

BRODHAGEN, ONT.—Bids will be received by Francis Jacob, Township Clerk of Logan, up to Friday, 20th inst., for the purchase of \$6,500 4 per cent. debentures.

LADYSMITH, B. C.—It is understood that the Esquimalt and Nanaimo Railway Co. will build modern foundry and machine shops on Haslam Flat, four miles north of this place.

ST. JOHN, N.B.—Raymond & Doherty, proprietors of the Royal Hotel, have purchased a large building on Germann street which they will remodel and enlarge for the purposes of sample rooms.

GALT, OI:T. — The Sewers Committee have decided not to accept the tenders received for the construction of Section No. 2 of the lateral sewers, they being in excess of the engineer's estimate.

PORTAGE LA PRAIRIE, MAN.— R. P. Campbell has disposed of property on Saskatchewan ave. having 43 feet frontage to an eastern implement firm, who will erect a brick block on the site.

HULL, QUE. — The City Engineer has been instructed by the City Council to prepare estimates for an electric plant for furnishing street and commercial lighting.

DOMINION CITY, MAN. — The Pocock Power Co. have submitted a proposition to the Council to light the municipality from a power plant to be installed on the Roseau river.

ST. THOMAS, ONT.—Norsworthy & Co. intend increasing their foundry plant next spring.— The St. Thomas Brass Co. purpose building an addition to their works, to be 40 × 60 feet.

Drass Co. purpose building an addition to their works, to be 40 × 60 feet.

QUEBEC, QUE. — The Lake St. Joseph Hotel Co. are formulating their plans for the building and equipment of the proposed hotel. J. G. Scott and Harold Kennedy are directors of the company.

GLACE BAY, N.S.—The Dominion Government voted \$25,000 to re-open the harbor, repair wharves, etc. The wharves have been repaired, but the erection of shipping piers are still matters for consideration.

ST. JOHN, NFLD.—It is announced that Sir Alfred Harmsworth, of the London Daily Mail, has closed a deal with the Newfoundland Government to establish pulp and paper mills costing upwards of \$5,000,000.

SAULT STE. MARIE, ONT.—The Algoma Conper Range Railway Company is being organized to build a mining railway from Bitche vauning, on Lake Superior, to Aubrey Falls, a distance of about 75 miles.

WESTMOUNT, QUE.—The special water committee of the Council have reported in favor of renewing the contract for a water supply with the Montreal Water & Power Co. on condition that they install a filtration system.

OWEN SOUND, ONT. — The tylaw granting exemption from taxation to the Carney Lumber Co., to assist them in building a saw mill, was carried by the ratepayers on January 2nd. The bridge and dock by-laws were defeated.

FORT WILLIAM, ONT.—It is said that an extensive addition will be made to the tank section of the King cleaning elevator. — The Town Council propose to raise \$5,000 for fire protection purposes, es, including the purchase of a new hook and ladder truck.

PORT HOPE, ONT. — The Presbyterian congregation have decided to build a new church here, after the plan of the new Presbyterian church at Mitchell. It will be of pressed brick and stone, (with towers. Particulars may be obtained from J. F. Clark.

from J. F. Clark.

MOOSE JAW, N.W.T.—The Moose

Jaw and Edmonton Railway Company will make application to the Dominion Government for incorporation, with power to construct a railway from Moose Jaw to Edmonton. McGiverin & Haydon, of Ottawa, are solicitors for the applicants.

SARNIA, ONT.—It is said that the Grand Trunk Railway Co. are taking tenders for the substitution of electricity for steam power in the tunnel here. The plans call for the erection of a power house on the company's property on the banks of the St. Clair river.

VANCOUVER, B. C. — M. Grossman has purchased two lots on Pender streets, between Abbott and Carrall streets, on which he intends building a warehouse. — C. J. Weeks has purchased Lot 5 on Pender street on which he will build in the near future.—T. F. McGuigan, City Clerk, desires tenders by Monday, 23rd inst., for supply of cast iron pipe.

FREDERICTON, N.B. — The City Council have not yet reached a decision regarding the advisability of installing an electric plant for lighting the municipal buildings.—C. H. LaBillois, Commissioner of Public Works, will receive tenders up to Monday, January 16, for rebuilding St. Augustine bridge over the Middle Branch Barnaby River, Northumberland County.

GRONDINES, QUE. — F. Gelinas, Secretary Department of Public Works, Ottawa, is asking for tenders up to Friday, January 27, for the enlargement of the wharf here. Plans at the office of the Clerk of Dominion Public Works, Quebec, the Department of Public Works, Ottawa, and on application to the Postmaster here. Cheque for \$1,800 to accompany each tender.

VICTORIA, B.C.—Tenders are in for the construction of the C.P.R. hotel in this city, but it is improbable that the contract will be awarded before a week or ten days. The building will be an eight-storey stone structure.—The Capital City Packing & Canning Co. purpose building a cannery in Esquimault. They have also in contemplation three traps, all of which will be constructed next

spring.

HAMILTON, ONT. — A. C. Havill has purchased 31 feet of land on Bold street, near James, on which to build a residence. — Henry New has purchased 120 feet frontage on King street and 130 feet on Main street, adjoining the G.T.R.

station. It is reported that he intends building a warehouse and factory on the site.—It is understood that Trebles, Limited, propose a further addition to their store at corner of King and James street.

NIAGARA FALLS, ONT. — E. D. Pitt, architect, is asking for tenders up to January 25th for the erection of a brick veneer residence on Peer street for Herman R. Misener. Contracts will be awarded about February 15.—The Canadian Shredded Wheat Company of Ontario, Limited, will establish a large plant here for making the shredded wheat products.

products.

OTTAWA, ONT. — H. C. Stone, architect, of Montreal, has prepared plans for a new building to be built on Slater street, this city, by Woods, Limited. The new building will be 70 x 200 feet and 7 stories high.—D. Ewart, Chief Architect of the Department of Public Works, is prevaring plans for vaults for the storing of gold.—The Government propose to add another flat to the Commons and Senate buildings, and there is talk of building a northerly addition to the west wing.

EDMONTON, N. W. T.—Only two tenders were considered by the Council for the construction of the west end water works and sewer extensions, as follows: F. Fry, \$44,975; City Engineer, \$31,585. The contract has not yet been awarded for either construction or for supply of materials, and it is probable that new tenders will be invited. — H. Williams is organizing the Egg Lake Oil Co. for the purpose of acquiring and developing property in the Egg Lake district, about thirty miles northwest of this town. — The Calgary and Edmonton Railway Co. are seeking power from the Legislature to issue \$1,000,000 of bonds for the construction of a high level bridge over the Saskatchewan river, between Edmonton and Strathcona.—The Edmonton, Yukon & Pacific Railway Co. want an extension of time for commencing their road.

MONTREAL, QUE.—Castle & Son, 20 University street, have acquired the properties at 2446 St. Catherine street and 79-81 Drummond street, which they will remodel and utilize for their stained glass works. — The Montreal Street Railway Co. have arranged for the expenditure of \$500,000 during the present year in securing and distributing additional power and making improvements over the system. Three sub-stations will be built at different terminals.—Smith, Markey, Montgomery & Skinner, of this city, are seeking incorporation—for the Athabasca Northern Railway Co., to construct a railway from Edmonton to Athabasca Landing, N. W. T.—A. E. Dunlop, architect, is preparing plans for the new building to be built by C. W. Lindsay, Limited, on the site recently purchased on St. Catherine street, near Peel.—It is the intention of N. Valiquette to erect a five-storey factory facing St. Andre street and extending to St. Catherine street and extending to St.

WINNIPEG, MAN.—Darling, Pearson & Over, architects, are preparing plans for a new rectory for Holy Trinity parish, brick, cost about \$10,000.—It is understood that the authorities of the German Lutheran church will rebuild in another part of the city.—Alderman J. G. Latimer has purchased 200 feet on the east side of Furby street, near Ellice ave., and, it is understood, intends erecting a terrace of modern houses early next spring.—Minneapolis parties are reported to have purchased 25 feet frontage on Pembina street, on which to build a planing mill.—F. Morton Morse, of the Street Railway Co., has purchased 200 feet on Wellington Crescent, opposite St. Mary's Academy, and will build a red

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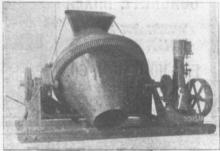
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brick residence in the spring. — Dr. S. C. Corbett recently purchased 180 feet on Central ave., Armstrong's Point, and it is said to be his intention to erect a residence on the property early next spring. — The southwest corner of Logan and Patrick streets recently changed hands, and it is understood that the purchaser, whose name has not been learned, will erect a fine store early this spring. — The report that the contract for the double tracking of the C.P.R. between Winnipeg and Fort William has been let is denied by Mr. Whyte, second vice-president of the company. — Cecil Goddard, town engineer of St. Boniface, is preparing plans for a combined fire hall and police station to be built at the corner of Horace ave. and St. Joseph street. It will be equipped with a chemical engine of the latest pattern. — The Lebonk and Thunder Bay Railway Company is seeking incorporation, to construct a railway from a point on Thunder Bay northerly to the Lebonk mine, in Township of McTavish, thence westerly to the scuth shore of Loon Lake. T. L. Metcalf, of this city, is solicitor for the applicants. — Tenders are being invited for the erection of a large addition to St. Boniface College, work on which will commence early in the spring. — The City Engineer has reported that a sewer on Corydon avenue, from Lilac street to Cambridge street, and on Jesses avenue and Lilac street, will cost \$30,000, and that an asphalt pavement on Corydon avere, from Cambridge street to Pembina street, will cost \$70,000. The works will be advertised. — The City Clerk will receive tenders up to January 24 for the supply of four carloads of tamarac piling.

TORONTO, ONT. - The Bank of Nova Scotia have purchased the north-

west corner of Brock ave. and Dundas street and wil', as soon as possible, erect a substantial bank building on the site.—
The Stándard Loan Co. have disposed of the Yonge street Arcade to an American company, who will probably make extensive alterations.— Darling & Pearson, architects, are taking tenders up to the 19th inst. for the erection of a gate lodge at St. James' Cemetery.— R. Anderson & Co., machiaists, 111 Adelaide street west, intend building a new two-storev machine shop on the corner of Farley ave. and Esther street.— S. G. Curry, architect, has completed plans for extensive alterations to the custom house. They have been forwarded to Ottawa and it is expected that the work will be proceeded with at an early date.— The City Engineer has asked the Board of Control for permission to advertise for tenders for a hydraulic dredge, to be used on the island improvements next season.— The Alumni Association of the University of Toronto, are anxious to proceed with the erection of a convocation hall this year. Some \$50,000 has been raised by subscription and the Government has promised an additional \$50,000, while the plans for the hall as proposed call for an expenditure of about \$15,000.— Plans of the proposed subway under the G. T. R. and C. P. R. tracks at Lunsdowne ave. have been forwarded by the City Engineer to Ottawa for approval.—Building permits have been granted as follows: Jas. Henderson, K.C., two-storey and attic brick and cut stone dwelling, \$4 Madison ave., cost \$10,000; Walter Nash, six 2½-storey brick dwellings, south side Galley ave., near Ron: esvalles, cost \$11,400; Canada Metal Co., new steel and cement

floor to building, 25-31 William street, cost \$1,000; George Rennie, 2½-storey brick dwelling, 32 Russet ave., cost \$1,800; Harry Love, pair two-storey and attic brick and roughcast dwellings, north side Smith street, near Logan ave., cost \$2,800; Frank Darling, two-storey brick and stone addition to dwelling, 11 Walmer road, cost \$1,000; J. D. Farquhar, five two-storey brick and roughcast dwellings, Gildersleeve ave., near Sumach street, cost \$6,500; Baxter Advertising Co., alterations to brick store at south-east corner Yonge and Advertising Co., alterations to brick store at south-east corner Yonge and Advertising Co., alterations to brick store at south-east corner Yonge and Advertising Co. government of the control of the store two-storey roughcast dwelling, Eastern ave., near Pape, cost \$1,500; Gordon Osler, alterations to brick and stone dwelling, 6 Rosedale road, cost \$3,000. Francis C. Jones, two two-storey brick veneered additions to dwellings, Blank street, near Dufferin, cost \$3,000.—It is understood that the owner of the Elliott House is considering plans for increased accommodation, and it is rumore! that a new hotel will be built on the opposite corner of Church and Shuter streets.—Ald. Vaughan has given notice of motion in council to request the city engineer to furnish an estimate of the cost of connecting Queen's wharf with the Western Island sand-bar by a swing bridge.—At a meeting of the York Towoship Council on Monday last, P. S. Gibson & Sons, township engineers, were instructed to advertise for tenders for a bridge over the creek near Somerville ave.

FIRES.

Sydney Hotel at Sydney, N. S., owned by E. LeRoi Willis, damaged 10 the extent of \$5,000. — Warehouse at Chipman, N. B., owned by Sayre & Holly, of

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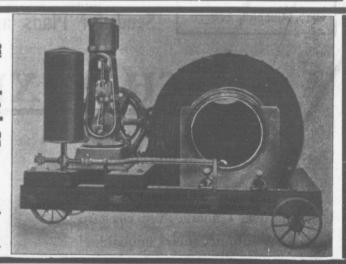
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NADA

- Factory of the Canada Carriage Co. at Brockwille, Ont., totally destroyed; loss \$200,000,—Moulding shop of the London Brass Co., 34 Carling street, London, Ont., damaged to extent of \$2,500.—Bishop Fur Co.'s plant at Sandwich, Ont. almost tally destroyed; loss \$2,500.—Bishop Fur Co.'s plant at Sandwich, Ont., almost totally destroyed; loss \$20,000. CONTRACTS AWARDED. GIBSON, N.B.-The Water Commissioners have awarded the contract for nasonry for the new reservoir to George

St. John, totally destroyed; loss \$25,000.

— Factory of the Canada Carriage Co.

PRINCE ALBERT, N. W. T. contract for building a post office here has been awarded to Lamoine & Fortin,

of Pembroke, Ont., price \$80,000.

SYDNEY, N. S.—Heyl & Patterson, of Pittsburg, have secured the contract to install an additional electric crane in washing plant of the Dominion Iron & Steel Co.

STRATHROY, ONT. - Frank Gutteridge and H. Edge, of Seaforth, have been awarded the contract for the erection of a bank building here for the Can-adian Bank of Commerce.

TORONTO, ONT. — The Jones & Moore Electric Co. have been given the contract to install two 500 light dynamos, direct connected to Robb engines, in W. A. Murray & Co.'s departmental store.

PORT COLBORNE, ONT. -Dominion Government have awarded the contract for the foundations of the proposed elevator here to Larkin & Sangster of St. Catharines, price about \$200,000.

DUNNVILLE, ONT.—The contract for erection of House of Refuge for the county of Haldimand, to be located here, has been let to J. E. Cutler and M. Vanderburgh, of Welland, the contract price heins 5.7 for. being \$17,500.

FREDERICTON, N. B — The Commissioner of Public Works has awarded contracts to William Brewer for construction of the Munro bridge, McCallum Creek bridge, Forest City bridge and

JOHN S. FIELDING Mem. Soc. C. R. West Penn. '87.

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Five Mile Brook bridge, all in York county.

MONTREAL, QUE.—The Canadian General Electric Co. have secured the contract to install a turbine power plant for the Canada Car Co. of this city.—The James Smart Manufacturing Co., of Proclaville, but secured the carried Brockville, have secured the contract for heating and ventilating the new East End Methodist church in this city. Three Kelsey generators will be used.

BIDS.

GALT, ONT. — Three tenders were received for the construction of Section No. 2 of the lateral sewers, as follows: J. F. Connolly, Toronto—For complete work, \$1.4,500; storm drains, \$2,500; house connections, \$1.90 per foot; street willaws. gulleys, \$40 each; connections, \$1.50 per foot; rock excavation, \$2.50 per cubic yard. Thomas Fletcher, Gait—Complete work, \$14,910.65; storm drains,\$2,513 70; house connections, \$1.75 per foot; street gulleys, \$45 each. Thomas McLaughlin —Work complete, including storm drains, \$16,251; house connections, \$2 per foot; street gulleys, \$35 each; rock excavation, \$3.16 per cubic yard. The engineer's estimate was \$11,615 for the work complete and \$2,890 for the storm drains. It is probable that new tenders will be invited.

U. Cyr & Fils, painters, St. Henri, Que., have dissolved.

BUSINESS NOTES.

The death is announced of Paul Breton, sr., contractor, Quebec.

Connery & Richardson, builders' suppliers, Winnipeg, have dissolved.

Jones & Henry, painters, Montreal, have dissolved, R. E. Jones continuing.

The dissolution is announced of A. Rousseau & Company, builders, Mon-

H. Smith will continue the business carried on by Reid & Smith, painters, Winnipeg.

A demand of assignment is reported to have been made upon Arthur Chatelle, contractor, St. Henri, Que.

Octave Plant & Fils, plumbers, of Quebec, are announced to have assigned, with assets of \$1,390 and liabilities of \$2,770.

C. G. H. Chamberland & Company, painters, Montreal, have dissolved and the business will be continued by C. G. H. Chamberland.

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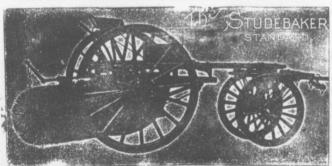
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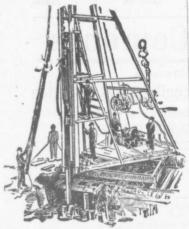
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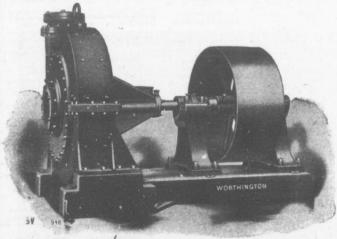
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A RECENT INSTALLATION OF A LIERNUR SEWERAGE SYSTEM.

The pneumatic sewerage system invented some years ago by a former officer in the American volunteer army, Captain Liernur, has recently been introduced at Stansted, England. As this is the first application of the system in England, the following statements concerning it are of interest. They are taken from a summary of reports by medical officers of health in

"The village is a large one, having a population of about 2,000; the higher portion has for some considerable time possessed a system of sewerage by water carriage, but to similarly sewer the lower portion was found to be impossible, having regard to the large expenditure of water which would be found necessary for the copious flushing required owing to the peculiar basin-like formation of the district.

"After considerable inquiry the council decided to adopt the Liernur system, which may be described as a vacuum system of collection. As far as possible the sewage is conveyed to the works by gravitation, and a considerable portion of the liquid part of the sewage flows to the works by this means. For the carriage of the re. maining portion, including that from the lower part of the village, vacuum suction is employed. At Stansted from the central pumping station a tubular sewage network of 4-in. cast-iron pipes leads to the streets. A vacuum is created in the cylinder at the station by means of a vacuum pump, and the whole buik of the ewage is brought to the station without the addition of flushing water, so that the bulk of the sewage is not increased by extra water. By means of the suction a great velocity is attained in the sewers, from 10 ft. to :5 ft. per second.

"This air velocity, it is claimed, gives absolute security against stoppages, and in this way manholes, inspection chambers and overflow arrangements are done away with, besides which there is economy in construction of the works. At Stansted the quantity of sewage dealt with is about 10,000 gallons per day, and the whole system of the conveyance of the sewage lasts only ten minutes. There has to be no special provision for storm waters, as there is a separate system of drains for surface water.

"The discharge syphon is moved periodically, so that there can be no stagnation in the sewer. It could be emptied twenty times a day, if required, as it is done automatically. The cost comes to under 1s. per head of the population per annum. By this vacuum suction system the whole of the sewers are also cleaused and filled with pure air every day, or as often as desirable, and from the starting of the gas engine the complete service of system over the whole network of street



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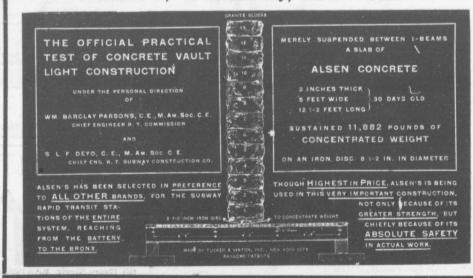
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"It is stated that a saving in construc. tion is affected, compared with the ordinary sewerage systems, by the small amount of excavation required, the absence of flushing chambers, manholes, ventilatng columns, etc., and the small diameter of the pipes laid down.

"The economy in working expenses arises mainly from the fact that at the pumping station the quantity of sewage received is kept at the lowest possible limit for discharging into the high level gravitation sewer, and this is effected without prohibiting the use of water for flushing the closets, sinks, etc. Stoppages are said to be infrequent, and can soon be remedied and at little cost. No fall or incline of the ground is necessary for this system, but is used where available.

" As to the cost of the installation at Stansted, the figures given by the secretary of the English syndicate show that the actual capital cost is below £2 per head for 1,000 people, that number being now actually connected to the system at Stansted. The present installation will serve three times the population, and the actual plant at the pumping station would erve probably six times. They are able to draw the whole of the sewer gases to the pumping station, and there burn them, and also by the same means ventilate and purity the sewage tank, which adjoins the pumping stat on.

As to the working expenses, the actual cost comes out between 10d. and 1s. per head per annum, including lifting the total sewage 35 ft. to high-level sewer. The cost of one suction for cleaning the whole of the sewers and house connections. removing deposits, sewage, noxious gases, etc., in all works out at 10d., that is 10d tor cleaning out nearly 2 miles of sewer pipes. This figure of 10d. includes the cost of collecting the sewage and of its discharge on the irrigation fields.

"The machinery is fairly simple, and consists of the following A boiler plate vacuum reservoir (with a capacity of about

2,800 imp. gal.), a gas engine, 8 h.p., a vacuum pump of three-quarters h.p., and a lifting pump, for pumping the sewage to the high-level sewer. Adjoining the pumping station is the storage tank, with a capacity of 30,000 gal., which represents the quantity of sewage estimated to be delivered in three days.

"The Liernur system of collection assists in the final disposal by delivering at the works a sewage which has been thoroughly broken up by the violence of its conveyance. It must be undoubtedly a great factor in the successful disposal of wage, whatever method may be employed, bacterial, chemical, or treatment over land, if a sanitary committee and their engineer can depend on the unvarying quantity and quality of the sewage delivered at the outfall, and these advantages seemed to be secured by the Liernur pneumatic sewerage system.

"The sewage having been pumped into the high-level sewer is conveyed by gravitation to the sewage farm, I mile southwest of the village; the land covers an area of about 3 acres, and has a subsoil of light loam and gravel; mangels and osiers are grown, £50 per annum having been obtained in one year by the sale of the former. The effluent is conveyed on to a pasture about 5 ft. above water-level,

ultimately finding its way into the river Lea."-Engineering Record.

Prices of Building Materials.

PRESSED BRICK, Per M. MII TON PRESSED BRICK AND SEWER PIPE CO.

		F.U.B.	F.U.D
	M	ilton, Ont.	Montreal
Red No. 1		Pie	\$18 00
" 2			16 00
** 3		A . F 8	14 00
Buff No. 1		OPT	20.00
it 2		200	18 50
Brown		0.70	25 50
Roman Red			30 50
** Buff			33 50
			40 50
" Brown			12 00
Hard Building			13 00
Semcip	**	克田岩	11 50
" Backing	**	400	11 20
DON VALLEY PRESSEI) B	RICK WORKS	is .
Nos. 1, 2 and 3, Red Pressed Nos. 1 and 2 Buff Pressed B No. 1 Brown Pressed Brick. Pompeiian Red, Buff and Brow Ornamental Bricks of all kind poses. Porous Terra Cotta Firep Descriptions. Vitrified Street-Paving Brick m i-Vitrified Foundation Br Common Stock Red and Gre Sewer Bricks. Stone or Macadamized Road	rick s fo	Pressed Brick or Mantel pu ofing of a	case write tohead offi Toronto St. Toron r catalogue and prio
(Continued on)		D4-1	

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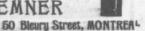
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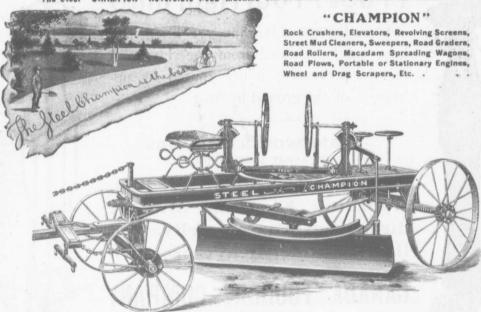
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Prices of Building Material	Philip Gray Saudstones f.o.b.	PORTLAND CEMENT			
(Continued rom page 12.)	per cubic foot		(CARLOADS.)		
TORONTO PRESSED BRICK AND TERRA COTTA WORKS F.O.B. F.O.B. Milton, Ont. Montreal.	blocks, 8 in. to 12 in. x6 in. x4 1/4 in. per M Grante curbing stone, 6x	50 00	Canadian (Packages, 350 Toro	onto.	Montrea
Red No. 1	Buctouche Olive Freestone 85 Olive Sandstone (Indian-	65	Rafhbun's Star 1 70	3 00	210 230
Buff No. 1	town, N. B) 80 Brown Sandstone (Sack-	70	Trowel	1 85	. 03 . 93
Brown 20 00 25 50 Roman Red 30 00 30 50	ville, N. B 80 Moat red sandstone, per	, 70	Monarch 1 80	1 90 1	80 1 90
" Buff	cu. ft	60	Imperial 2 30 E Diamond 350 2 20 " Giant" Brantford 1 75	1 75 2 40	195 20
Hard Building	Nova Scotia blue grey,per cu. ft. Coursers, 6 to 8 in. f. o. b. St.	50 65	"Giant" Brantford 1 75	3 00	185 19
Moulded and Ornamental from \$2.00 to \$5.00 per 100. Terra Cotta String Courses and Frieze, from 50c. to	Mary's, per cord	7 00	American (in Bags):		
\$2.00 per fi. run. Roofing Tiles, \$20.00 per 1,000, \$23.00 Montrea	Dimension Stone, f. o. b. St. Mary's, per cubic foot Granite (Laurentian Pink) Ash-	35	"Helderberg"		180 19
BEAMSVILLE BRICK AND TERRA COTTA CO. F.O.B. F.O.B. Beamsville, Montreal,	lar,6 to 2 in.,rise 9 in., per cft. Dimension Stock Granite, (Laur-	25	Lehigh, in bbls., 375 lbs.	2 35	2 10 2 20
Red Peerless Facing	entian Pink) for building pur- poses, per c. ft., f.o.b. quarries	40	"Iron Clad" in bags 350 lbs.	2 10	180 190
" No. 2 11 00 16 50 " No. 3 8 50 14 00	Do., for polishing purposes, up to 2 tons weight, per cubic foot F.O.B. E	70	"Invicta" " " " " "		165 176
Brown Paerless Facing 20 00 25 50 " No. 1 18 00 23 50 Briff Paerless 20 00 25 50	Dimension stock granite for	50	Vulcanite (The Toronto Potters	, Co	Timited
Buff Peerless	building purposes, per cu. ft. Do., for polishing purposes, up to 2 tons weight, per cubic ft.	1 00	Toronto) 35c lbs. per bbl. In paper bags	180	Aimiree
Moulded and Ornamental Brick from \$3 to \$10 per C:	Paving sets, per thousand block CREDIT VALLEY STONE.	60 00	" wooden bbls	2 00	
" Buff " " 28 00 33 50 Brown " " . 34 00 39 50	F.O.B. Qu	arries.			
Vitrified Paving Brick No. 1 18 00 23 50	Rubble, per ton	65	English in Barrels):		
Sewer 6:0 12:00 Roofing Tile 22:00 26:00	sup. yard Brown dimension, per cub.	85 70	Brook's Shoobridge Anchor 2 35	1 40	3 00 3 1
FIRE BRICK TORONTO POTTERY CO. F. O. B. Toronto	Grey coursi g, per sup. yard Grey dimension, per cub. ft	50	Belgian (in Barrels):		
Car lots Less 20 00 M. 25 00 M.	ROMAN STONE, F. O. B. Factor, Sills, tooled scated and throated	у.	" Josson' 2 60 2	70	2 20 2 3
W. W. Co	35c. per lineal foot Hollow Block, 12-inch wall, per		"North's Condor 2 05 2 "White Cross" 1 90 2	10	2 25 2 3 1 75 1 8
Ramsay 30 00 M. 30 00 M. TONE. Toronto. Montrea	superficial foot Window Heads and Ashlar, per	40	Hammer 2 15	2 25	180 19
Common Rubi le. per trise, delivered at building 13 50 11 00 Large flat Rubbie, per toise,	superficial foot, 4-inch bed String Courses, Molded and Ornamental, per lineal foot,	40	German (in Barrels)		
delivered 14 00 18 00	Soc. to	2 00 5 00	Alsen 2 65	2 95	2.4
Foundation Blocks, per c. ft. 45 50 Granite (Stanstead) Ashlar, 6 in, to 12 in., rise 2 in., per ft. 25	SLATE. Toronto. Mor		Dyckerhoff 2 65 Hercules 2 25		2 4
Amherst Red Sandstone	Rocfing (# squars).	80 00	Keene's Superfine "Whites' 10 00	12 00	8 50 00
Amherst, N.S., per cub. ft.	purple 9 cc unfading green 10 ce	10 00	Keene's Coarse "Whites" 6 50	7 00	18 00 22 0
Sacked NB, brown or red store f. o. b. Quarries 45 45 45 45 45	Terra Cotta Til., per sq . 25 00	9 00	Plaster Calcined N.B 28 00	33 00 1 70	19 00 23 0
Myers-Northport Red or River	Ornam intal Black State Roofing	77 30			
Myers-Northport Red or River		1	RY 10TH		