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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF PUBLIC WORKS, TENDERS, ADVANCE INFORMATION AND MUNICIPAL PROGRESS

EVERY THURSDAY

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. 8.

JANUARY 27, 1898

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THE CANADIAN CONTRACT RECORD,

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

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BUSINESS NOTES.

A. Creed & Sons, plumbers, Montreal, have discontinued business.

The assignment is reported of Moffatt Bros., painters, Guelph, Ont.

Geo. Bowie and F. Jackson have registered as proprietors of the firm of Bowie & Jackson, contractors, Montreal.

The Burrows, Stewart & Milne Manufacturing Company, manufacturers of heating apparatus, etc., Hamilton, will ask incorporation.

Julie Forget dit Despatie, wife of Napoleon Laporte, has registered as proprietress of the firm of N. Laporte & Co., contractors, Montreal.

The Hamilton Iron and Steel Co., Limited, has assigned to C. S. Scott. This company were the successors of the Hamilton Blast-Furnace Company.

CONTRACTS OPEN.

SHELburne, N. S.—A new public building is urgently required.

MOOSE JAW, N. W. T.—The erection of a new town hall is proposed.

ALMA, N. B.—Alonzo Clark is preparing to build a residence in the spring.

VALETTA, ONT.—T. Cooper intends erecting a residence in the spring.

LEAMINGTON, ONT.—L. Wible intends building a two-story brick store, 25 x 85 feet.

ORMSTOWN, QUE.—Tenders will shortly be invited for an addition to St. Paul's church.

ST. PAUL'S, ONT.—G. Murray and A. Atchison intend erecting residences next summer.

HINTONBURG, ONT.—E. J. Rainboth has plans before the council for a system of waterworks.

HALIFAX, N. S.—A proposition is now before the city council for the erection of a grain elevator.

EXETER, ONT.—Building prospects are better than last year at this time in this part of the country.

ARDEN, ONT.—A committee has been appointed to report on the advisability of building a new church.

MORDEN, MAN.—Steps will be taken towards the erection of a manse in connection with Knox church.

BLAIRHAMPTON, ONT.—The school trustees intend erecting a new building during the midsummer vacation.

VANDELEUR, ONT.—The Artemesia Agricultural Society will erect a hall, 60 by 30 feet, during the coming summer.

PERTH, ONT.—John Butler, of Harper, intends erecting this year a brick addition to his store, 24 by 36 ft., with hall above.

JANEVILLE, N. B.—A meeting of ratepayers will shortly be held to consider the question of erecting a new school building.

OSHAWA, ONT.—The Oshawa Electric Light Company will purchase a 1500 or 2000 light alternating dynamo and transformers.

DIGBY, N. S.—The Nova Scotia Hotel and Improvement Company have made a proposition to the town council to erect a large hotel.

MOUNT FOREST, ONT.—The ratepayers have sanctioned a by-law to raise the sum of \$25,000 for the construction of a system of waterworks.

KNOWLTON, QUE.—The School Commissioners will engage an expert to supervise the heating and ventilation of the new academy building.

EADY, ONT.—There is a movement on foot in favor of erecting a new Methodist church. A meeting looking to this end was held last week.

BATTLEFORD, N. W. T.—The Sisters of Assumption intend building a large addition to their convent as soon as the weather will permit.

MALDEN, ONT.—A by-law has been passed by the Malden township council to raise \$3,000 for the construction of tile, stone and timber drains.

HIGHGATE, ONT.—The Methodist congregation are discussing the erection of a new church. Plans for a structure to cost \$8,000 have been prepared.

TWEED, ONT.—Proposals are invited up to noon of February 15 for the purchase of \$12,138 of school debentures. Wm. Wray, township clerk.

WINDSOR, ONT.—The Essex county council will build two steel bridges this year at a cost of \$1,800 each, one over the Canard river and the other over the county line.

FREDERICTON, N. B.—The City Water Department have recommended the enlargement of the boiler house and the addition of another large boiler, at a cost of \$2,000.

ANNAROWE, P. E. I.—Tenders are asked by James Coady up to the 29th inst. for the erection of St. Anne's church, at lot 65, from plans prepared by W. C. Harris, architect.

ANNAPOLIS, N. S.—The by-law authorizing the town to operate its own electric light plant, and to borrow \$12,000 for the purchase of a plant, was defeated by the ratepayers.

PARRY SOUND, ONT.—In his inaugural address to the City Council, the Mayor-elect stated that he intended seeking the assistance of the government in purchasing a stone crusher.

CORNWALL, ONT.—A committee was appointed, at a recent meeting held in this town, to arrange for plans and obtain estimates for erecting a combined creamery and cheese factory.

PORTAGE LA PRAIRIE, MAN.—The Ladies of the Dorcas Society are vigorously canvassing for subscriptions towards the proposed hospital. Mrs. Halstead is president of the society.

ST. CATHARINES, ONT.—E. Gardner, township engineer of Grantham, has submitted a scheme for the drainage of that township, which will involve the expenditure of considerable money.

OWEN SOUND, ONT.—A deputation from this town has gone to Ottawa to interview the Dominion Cabinet in regard to the improvement of the harbor and the building of a dry dock here.

ORILLIA, ONT.—The ratepayers will probably be asked to vote at an early date on the proposed power transmission scheme. It is intended to transmit the power a distance of 12 miles.

GUELPH, ONT.—Tenders are invited by G. R. Bruce, architect, for the erection of a dwelling house for the estate of the late John Stewart, to be situated on lot 19, seventh concession of Eramosa.

STRATFORD, ONT.—The plans of H. J. Powell, architect, have been accepted for the new city hall building.—It is undet-

stood that the Stratford Amusement Company, of which Mr. Fred. J. Carrie is president, will erect an opera house in the spring. The city council are asked to exempt the property from taxation.

DARTMOUTH, N. S.—A committee has been appointed by the town council to report upon the advisability of purchasing the Reform Club hall for a town hall, also as to the cost of remodelling same.

ST. MARY'S, ONT.—The Town Council have instructed the Road and Bridge Committee to prepare plans and specifications for a bridge on Water street, with stone abutments and steel superstructure.

PONTIAC, QUE.—It is rumored that a branch railway will be built to the Grand Calumet Mining Company's property on Calumet Island, thence across the Roche Fondu and up the Ontario shore to Pembroke.

TILBURY, ONT.—The trustees of School Section No. 13 will erect a new school building, of brick, 46 x 30 feet, with seating accommodation for 80 pupils. J. W. Fleming and Wm. Doolittle are members of the building committee.

KINGSTON, ONT.—The Board of Trade and City Council have passed resolutions requesting the Dominion government to proceed without delay with the work of dredging the harbor and the placing of buoys in the old ship canal.

AVLMER, QUE.—The Victoria Hotel Company will build an annex to the hotel, giving twenty-eight new bed rooms and accommodation for bowling alleys and servants' apartments. A \$12,000 water chute will also be built in the spring.

PEMBROKE, ONT.—Wm. Russell & Company, who have the contract for the construction of the Pembroke Southern railway, expect to commence work at an early date. Considerable building material will be required for this contract.

GATINEAU POINT, QUE.—The citizens are discussing the question of using six-inch pipes for the water works system, the contract for which has been given to Smith & Co. The matter will probably be submitted to a vote of the ratepayers.

DESCHENES MILLS, QUE.—The Deschenes Electric Light Company are having plans prepared for a dam to be built at Deschenes rapids, which will furnish 3,000 horse power. The contract will be let in a few days for the erection of a power house.

BARRIE, ONT.—Thos. Kennedy & Company are receiving tenders for the remodelling of Frawley & Devlin's store in Orillia, which was recently partially destroyed by fire. The work will consist of new flooring, counters, shelving, office, plate glass front, etc.

HULL, QUE.—Several local capitalists contemplate building a woollen mill in this city, to cost \$25,000. The necessary capital has been subscribed.—It is rumored that the Canadian Rubber Company, of Montreal, contemplate erecting a branch factory in this city.

VANCOUVER, B. C.—The British Columbia Gold Trust Company have purchased property on Granville street, and will, it is said, erect a brick block costing in the neighborhood of \$100,000.—It is probable that a railway will be built along the Skeena river to the Omineca country.

NORTH BAY, ONT.—The town is offering for sale \$8,500 of consolidated debentures, bearing interest at 5 per cent. Tenders close February 11th. W. J. Small, chairman Finance Committee.—The Roman Catholic congregation have purchased a site on which to erect a new church building.

VICTORIA, B. C.—The Victoria-Yukon Trading Company, Ltd., has been incorporated, to engage in lumbering, mining, etc. The company is capitalized at \$100,000.—The Mayor, in his inaugural

address, pointed out that the sum of \$13,000 would be required this year for completing the reservoir.

RAT PORTAGE, ONT.—As soon as spring opens, work will commence upon the new waterworks system.—Messrs. F. Fraser, J. Sydham, A. Boyer and A. Taschereau, government engineers, are now making a survey of the Rainy river from Long Sault to Fort Frances, with the object of proceeding with the improvement of navigation.

WINNIPEG, MAN.—No decision has as yet been reached regarding the tenders for furnishing an electric light plant. An electrical expert will be engaged to report thereon.—The accommodation in the city hall has been found inadequate, and an architect will be engaged to inspect the building with a view to making alterations.—The Hudson's Bay Company will shortly build at Winnipegosis.

MONTREAL, QUE.—The City Hall Committee have reported in favor of plan No. 3 for the better sanitation of the city hall. The cost of carrying out the work is estimated at \$8,000.—A. J. Corriveau gives notice of application for incorporation of the Montreal and Champlain Canal Company, to construct a canal from the St. Lawrence to the Rochelieu river, a distance of 18 miles. The company will have a capital of \$6,000,000.

ST. JOHN, N. B.—H. H. Mott, architect, is receiving tenders for the erection of a dwelling house for C. H. Peters.—The Board of Safety will ask the city council for authority to call for tenders for a hose wagon.—Tenders for 20,000 square yards of cedar blocks, 5,000 square yards of Princess pine blocks, and 5,000 lineal feet of granite curbing, have been invited by A. Chipman Smith, Director Public Works Department.

WABIGOON, ONT.—The Rainy River and Ontario Exploration Company, which was recently organized in London, Eng., with a capital of £150,000, will erect several quite important buildings at this place.—H. Ferguson, C. P. R. inspector of bridges and buildings, is making surveys for the new docks at this place. It is anticipated that work will commence in the spring. The docks will be 16 feet wide and 200 feet long, and will be supported on six stone filled curbs.

CHATHAM, ONT.—T. J. Rutley, architect, has in hand the erection of a brick residence on William street.—The House of Industry Committee have accepted the plans of Powell & Carswell, architects, of Stratford, for the proposed House of Refuge. Seven sets of plans were received.—Applications are wanted by W. G. Merritt, City Clerk, for the position of city engineer, to take charge of the public works, electric light plant and water works. The date limit is February 15.

BROCKVILLE, ONT.—The Bohemian Amateur Athletic Association purpose building a club house. Tenders for the erection of same close on February 15. John B. Hart, secretary.—Mr. W. R. Gardner, of Sherbrooke, Que., was recently in town endeavoring to form a company to manufacture electric light carbons.—The Brockville & New York Bridge Co. are applying for permission to extend the time for the completion of their works, and to change the name of the company to the Brockville & St. Lawrence Bridge Company.

QUEBEC, QUE.—Mr. McDonald, of Montreal, will probably erect a pulp mill at St. Joseph d'Alma, utilizing the water power owned by Narcisse Garipey, of Bay St. Paul.—F. Goudreau, Deputy Minister of Marine and Fisheries, has invited tenders for repairs to the steamship "La Canadienne."—Berlinguet & Lemay, architects, have been commissioned by the Prince Edward Island government to prepare plans for complete repairs at the

Falkenwood asylum.—The plans of the proposed Quebec bridge have been completed by Mr. E. A. Hoare, C. E., and forwarded to the Railway Committee of the Privy Council for approval.

HAMILTON, ONT.—Frank E. Walker has purchased property on King street east, adjoining the Victoria hotel. It is said he will erect a furniture warehouse thereon.—Charles Mills has taken out a permit for a pair of two story brick dwellings on Robinson street, between Bay and Caroline streets, to cost \$3,000.—At the meeting of the Board of Works on Monday last, Chairman Dunn suggested that the committee should get a special appropriation for renewing the city roads, many of which are in bad condition. He favored macadam pavements.—It was decided to join with the County Council to compel the G. T. R. to lower and widen its bridge over the Guelph and London branch.

LONDON, ONT.—It is probable that a new municipal building will be erected, to be used for both city and county purposes. The question is now under consideration by the city council. The City Engineer has received instructions to have the damaged portions of the old city hall repaired.—E. Fitzgerald will erect two brick stores on Dufferin ave.—St. Andrew's church congregation have decided upon extensive improvements, including a new school building and church officer's house, to cost \$9,000, and the renovation of the church, to cost \$5,000.—Westland Bros. have taken out a building permit for a frame cottage on Garfield ave., to cost \$800.—The City Engineer has been instructed to call for tenders for pipe laying to be done during the coming season.

BRANDON, MAN.—Considerable building will be commenced in the early spring. F. Nation will erect a large business block, from plans prepared by W. H. Shillinglaw, architect. McLeod & Hanley will erect an implement warehouse on 9th street, Sifton & Hellyar will build a similar block on same street, and directly opposite Zink Bros. will erect a substantial double tenement brick dwelling house. Thompson & Co., marble dealers, will probably build commodious premises on 8th street, and I. R. Strome contemplates putting up a brick block, corner 7th street and Rosser ave. In addition to the above, the Methodists have decided to construct a church, to cost \$30,000. There are also several railway schemes talked of, some of which may be carried out.

TORONTO, ONT.—Mr. Geo. M. Wrong, 469 Jarvis street, has taken tenders for the erection of buildings for the Haver-gal Ladies College. G. M. Miller & Co. are the architects.—J. Francis Brown, architect, is about to let tenders for the remodelling of the premises of A. J. H. Eckhardt, on the Esplanade.—Robert Davies will make improvements in Victoria Park next season, including the erection of several summer cottages.—Mrs. T. H. Ball has donated the sum of \$2,000 for the building and furnishing of a cottage at the Sanitorium, Grayenhurst.—Ald. Lamb is promoting a scheme for the utilization of the sand bar south of Ashbridge's Bay as a recreation ground. He proposes to build a bridge over McNamee's cut, at Cherry street.—Building permits have been granted as follows: N. W. Williamson, 1885 Queen street east, factory on Eastern ave., near Water street, cost \$3,500; Separate School Board, new school on south side McDonnell square, cost \$5,500; M. S. Kellow, two dwellings, Nos. 50 and 52 Howland ave., cost \$5,000; Mrs. H. Baker, Springhurst ave., two-story brick dwelling, west side Rusholme road, south of Bloor street, cost \$1,500; Dr. Norman Allen, Carlton street, pair 2-story attached brick stores, 721 and 723 Queen street east, cost \$2,500.—The rate-

payers of East Toronto will probably take steps to secure street lighting.—The Royal Canadian Bicycle Club have made arrangements with ex Ald. Russell to erect a three story brick club house on the east side of Broadview ave., just north of Queen street. It will cost \$10,000, and in the basement there will be a bowling alley, while reception rooms and offices for the club will take up the ground floor. On the second floor will be parlors, committee rooms, smoking and reading rooms, and on the top floor the assembly hall and gymnasium.—The buildings recently damaged by fire at 36-40 Adelaide street west will be immediately rebuilt. Mr. F. H. Herbert, architect, has the work in hand, and will call for tenders next week through the medium of the RECORD.—Mr. F. H. Herbert, architect, has prepared plans for alterations to a store on Yonge street, which will be occupied by the Lozier Bicycle Company.

OTTAWA, ONT.—Mr. Surtees, city engineer, is preparing specifications for the straightening of Sparks street at its juncture with Wellington.—G. M. Bayley, architect, invites tenders until Monday, 31st inst., for the erection of a building, corner Bank and Gilmour streets, for H. H. Brennan.—Ald. Hasty is advocating the erection of a new fire station in St. George's ward. During the year it will be necessary to purchase a large quantity of fire hose.—The temporal committee of Knox church will hold a meeting at an early date to decide upon necessary improvements to the building.—A syndicate is said to be negotiating for the purchase of two blocks on Rideau street, on which new buildings will probably be erected.—Mr. W. T. Jennings, C. E., on behalf of the government, has surveyed a route for a railway from Telegraph Creek, on the Stikine river, to Teslin lake, in British Columbia. He reports that a standard gauge road can be built for \$25,000 per mile, and a narrow gauge road for \$20,000. The distance is 125 miles.—At a recent meeting of the School Board, a communication was received from the trustees of the German Lutheran church asking that a grant of \$1,000 be made towards a new school to be erected this year.

FIRES.

The Montmorency Power Company's office at Quebec, Que., was recently damaged by fire to the extent of \$2,000.—W. W. Carter's shoe store at Deseronto, Ont., recently suffered from fire to the extent of \$2,500.—Fire at Alvinston, Ont., on the 21st inst., destroyed the stores of Richard Code, Scandrett Bros. and John Cummings, and the Oddfellows' Hall.—The car barns of the Metropolitan Railway Company, North Toronto, containing nearly all the rolling stock (equipment of the road, was completely destroyed by fire on Sunday last. The loss is about \$10,000, fully covered by insurance.

CONTRACTS AWARDED.

HANOVER, ONT.—The Disney & Devlin Manufacturing Company have secured the contract for seating the Karlsruhe Separate School.

CHATHAM, ONT.—The S. Hadley Lumber Company, of this town, have secured the contract for ties and poles for the St. Thomas street railway.

WINNIPEG, MAN.—Lalonde & Milord, contractors, of this city, have been awarded the contract for inside fittings of the new post-office building at Portage la Prairie.

ST. JOHN, N. B.—Frank E. McMannus, of this city, has been awarded the contract for the plumbing of the new I.C.R. railway station at Moncton, at a price in the vicinity of \$10,000.

MOUNT FOREST, ONT.—Ten tenders were received for the construction of a water works system. The successful con-

tractors are Clark & Connolly, of Toronto, their price being \$22,400.

PORT STANLEY, ONT.—Flood & Babcock, who have the contract for the slip dock at Port Stanley, have just closed a contract with the Detroit & Windsor Ferry Company for the erection of a dock opposite Amherstburg.

KINGSTON, ONT.—The Kingston and Montreal Forwarding Company has been given a contract for the construction of a large elevator at Coteau Landing, Que. J. W. Oldfing is the successful tenderer for heating the new wing of the Hotel Dieu.

MONTREAL, QUE.—H. R. Ives & Co., of this city, have received the contract for the stairs and ornamental iron work for the new Sun Life Insurance building at Ottawa. They are also said to have received the contract for heating the Sun Life building at Hamilton with their Buffalo heaters.—The contract for heating the town hall at Maisonneuve, Que., has been awarded to A. Mackay & Co., of this city.

TORONTO, ONT.—Contracts have been awarded by Messrs. John Stark & Company for the erection of a detached residence on South Drive, Rosedale, as follows: Masonry, Davidge & Lunn; carpentering, Samuel Smith; plastering, Chas. B. Simpson; painting, H. W. Johnston; roofing, Rennie & Son; galvanized iron, A. B. Ormsby & Co.; plumbing, Bennett & Wright. The architect is Mr. F. H. Herbert.

OTTAWA, ONT.—The contract for reconstructing the roof on the burnt wing at Ottawa University has been awarded to J. Bourque, of Hull.—Below is given the list of tenders received by the Waterworks Committee for annual supplies, together with the accepted tender: Oil, waste, grease, etc.—McKinley & Northwood, \$69 (accepted); E. G. Laverdure & Co., \$119. Lead service pipe, 17,000 lbs., and

6,000 lbs. of best pig lead, etc.—E. G. Laverdure, \$929.50 (accepted); Butterworth & Co., \$1,065.50; McKinley & Northwood for English pipe, \$982.50, and for Canadian pipe, \$965.50. Brass stop cocks, nozzles, etc.—Butterworth & Co., \$484.20 (accepted); E. C. Arnoldi, \$510.90; E. G. Laverdure & Co., \$487.40; J. W. Wurtele, \$682; McKinley & Northwood, \$491.55. 20 ordinary hydrants and ten large special hydrants, stop cocks, valves, etc.—F. & G. Low, \$1,907.50; The Chaudiere Foundry Co., \$2,275; Rice Lewis & Son, Toronto, \$1,763.50; Allan & Fleming, \$1,837.50; Law Bros. & Co., \$2,865; Thos. Lawson, \$1,464.50 (accepted). 5,000 lbs. of special castings, branches, bends, etc.—Thos. Lawson, \$96.50 (accepted); Law Bros. & Co., \$120; Allan & Fleming, \$106; Alex. Fleck, \$125.12; J. W. Wurtele, \$159; Rice Lewis & Son, \$128; Chaudiere Foundry Co., \$107.50; F. & G. Low, \$132.50. Water pipes, etc.—Chaudiere Foundry Co., \$5,850 (accepted); Rice Lewis & Son, \$6,925.50; E. G. Laverdure & Co., \$6,818.75; Alex. Fleck, \$6,041.25; Allan & Fleming, \$5,953.50. Supplies for fire alarm department E. C. Arnoldi, \$830.15; Robt. Anderson, \$235.70; J. W. Wurtele, \$291.17; Ahearn & Soper, \$219.01 (accepted).

MARKET CONDITIONS.

For some lines of building materials there is a fair demand, but general trade is quiet. At Toronto paints and oils have improved, and the demand for prepared paints is exceptionally good. Dealers, however, do not seem to be placing their orders for as early delivery as other years, many holding back, as the prices are high, in hopes of a decline. In the west there is very little doing in cement, while

(Continued on page 4).

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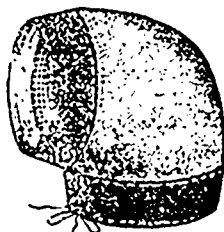
- THE McDONALD BUILDING**, Victoria Square, Montreal.
- THE YOUNG WOMEN'S CHRISTIAN ASSOCIATION BUILDING**, Montreal.
- THE ROYAL VICTORIA COLLEGE**, Montreal.
- THE PROTESTANT INSANE ASYLUM**, Verdun, near Montreal.
- THE GRAND HOTEL**, St. Hyacinthe, Que.
- THE NEW CUSTOMS-APPRAISERS STORES, NEW YORK**, now building, which will consume 5,000 tons.
- THE PARLIAMENT BUILDINGS, OTTAWA**, portion of which was recently destroyed by fire and rebuilt.

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at Montreal a satisfactory jobbing trade is reported by dealers. The heavy metal trade is of fair volume, and the general feeling is steady. A weakening in pig lead is noted. Orders are coming in freely for galvanized iron. A number of case lots have been called for, principally American of the lighter gauges of 24 x 28. One and a half inch pipe has been advanced 12c. per 100 feet, being now quoted at \$6.50.

The production of pig iron in the United States increased nearly 42 per cent. during 1897, and the weekly output in December reached the enormous quantity of 226,224 tons, the largest in the history of the country. As to price, however, the showing was not so favorable, No. 2 foundry pig, for instance, being quoted at the close \$1.25 per ton lower than at the opening of the year.

Wholesale dealers in plumbers' supplies have been notified by the Customs Department that the duty on galvanized boilers has been advanced from 25 to 30 per cent. This means an addition to the cost of each boiler of about 50 cents.

ARTIFICIAL BLACK MARBLE.

A new discovery has been made by a Calabrian engineer—the manufacture of artificial black marble—and this industry is now being carried on in Catania. The artificial marble has been patented in Italy and other countries, says a writer to the American Architect. It can be made into any form desired, and fully takes the place of black marble, resembling it so closely that it is difficult to distinguish it from the real article, while its cost is said to be very much less.

The process is said to be as follows: Common white sandstone is first cut in the desired shapes; then the various pieces are placed in a large, square iron tank, upon a heavy wire-grating, the latter resting a few inches above the bottom of the tank, in order to keep the stone from touching the bottom, and to permit the fluid to penetrate freely everywhere; the stones must not touch each other. Then, through an iron pipe, a molten mass of volcanic asphalt and coal-tar pitch, mixed, I believe, in equal parts, is let into the tank from an adjoining boiler until the molten mass fully covers the pieces of sandstone. The liquid is kept boiling in the tank for thirty-six hours; then the stones are taken out, placed upon a brick floor to cool off and dry, and are afterwards polished in the same manner as other marble.

The artificial product is said to resist acids, is not damaged by atmospheric action, moisture, heat or cold, and is claimed to be aseptic.

In the same manner, the firm also prepares pressed tilings for flooring, roofing, etc., which are said to be perfectly watertight and aseptic.

I am told that a mass of sand, cement and water, after having been thoroughly kneaded, is put into forms, put under a press, which works quite rapidly, taken out and dried a while, and then placed in tank-boiler for thirty-six hours, as in the manufacture of the artificial black marble, and, after being cooled off, is placed in a rotary grinding or polishing machine. This machine consists of a large, round, stationary grindstone, upon which revolves an iron frame, with partitions therein for holding the tiles in place.

OWNERSHIP OF BUILDING MATERIALS.

The question of ownership of building materials has given rise to much litigation, says the Builder's Reporter. It was laid down by Lord Watson that materials provided by the builder and portions of the fabric, whether wholly or partially finished, although intended to be used for the execution of the contract, cannot be regarded as appropriated to the contract or as "sold" unless they have been affixed. But the building owner can obtain the right to unaffixed materials by contract or agreement, or delivery on ground is supposed by itself to confer some rights over materials on him. A case has just been decided at Liverpool in which an ingenious point was raised, for the defence turned on the argument that a building agreement to be valid in such cases required registration. The plaintiff, Mr. W. O. Callow, entered into a contract with a builder to sell the land for building purposes on a building agreement which vested the materials brought on the land in Mr. Callow, and gave him a right to take possession of and sell the land and materials on default by the builder in fulfilling his part of the agreement. The plaintiff having taken possession under the agreement, the defendants, Messrs. Galt, Edmunds & Co., a firm of timber merchants, with the consent of a partner of the builder, went on to the land and removed certain timber and materials which they had supplied to the builder and for which they had not been paid. The plaintiff thereupon brought this action for trespass to the land and for conversion of the timber removed by the defendants. It was held by Mr. Justice Bruce that the decisions in *Brown v. Bateman and Reeves v. Barlow* applied to the case. In them it held that the moment materials were brought upon premises the property in them passed in law to the building owner, and that an

agreement respecting them was not a bill of sale, and did not require registration. His lordship thereupon gave judgment for the plaintiff for £60, the agreed value of the timber removed, in addition to £1 paid into Court in satisfaction of the trespass.

TO KEEP BRICK WALLS DRY.

The National Builder says that to keep a brick wall dry apply the following solutions: One composed of castile soap and water. The proportions are three quarters of a pound of soap to one gallon of water, and half a pound of alum to four gallons of water, both substances to be perfectly clean and dry and the temperature of the hot air not above 50 deg. Fahr. when the compositions are applied. The first, or soap wash, should be laid on when boiling hot, with a flat brush, taking care to form a froth to the brickwork. This wash should remain twenty-four hours so as to become dry and hard before the second, or alum wash, is applied, which should be done in the same manner as the first. The temperature of this wash when applied may be 60 deg. or 70 deg. Fahr., and this also should remain twenty-four hours before a second coat of the soap wash is put on. These coats are to be applied alternately until the walls are made impervious to water. The alum and soap thus combined form an insoluble compound, filling the pores of the masonry and entirely preventing the water from entering the walls.

The cost of building is wonderfully reduced by machinery, says a writer in the *Manufacturers' Gazette*. Walls made of brick, stone, cement, plaster, etc., are reduced in cost more than one half. Large buildings, the estimate of which is about \$1 per cubic foot, can be built for 30 or 40 cents per cubic foot by the employment of labor saving machinery and devices. Cement and mortar, all the materials for stone work, with the brick and stone itself, may be mixed and handled almost entirely by machinery. A derrick, lifter and crane will perform in an incredibly short space of time work that it formerly took days and scores of men to complete. It would be advantageous if the same power and appliances could be so arranged as to be utilizable in small towns on the same principle as those used in large cities. As it now is in suburban localities almost everything is done by hand.

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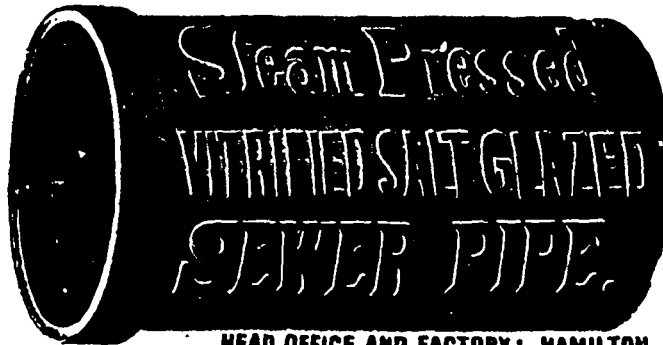
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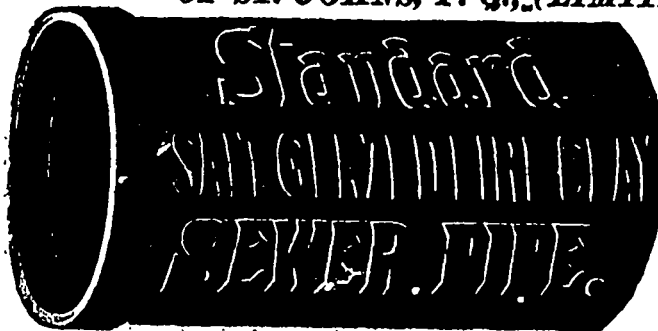


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THE DRAINAGE SYSTEM OF A TOWN.

Mr. C. D. Dempsey thus summarizes the principles underlying the drainage system of a town :

STATEMENT OF PRINCIPLES. — First. That the drainage of a town comprehends the means and processes of removing from it all the refuse waters and other matters produced by the population.

Second. That among these means is to be included the adequate supply of water, and among these refuse waters is to be included that resulting from the fall of rain upon the entire surface of the town, after it shall have been made, as far as may be necessary, subservient to the process of removing other refuse matters.

Third. That the total of these refuse matters shall be converted by chemical or other means to the most useful purposes for which they are or may be made applicable.

Fourth. That the combined operations of removal and conversion shall be conducted in such a manner as shall not impair or endanger the health of any part of the population.

Fifth. That, subject to the maintenance of the fourth principle, the measures for the drainage of towns shall be instituted and carried on with the utmost economy of capital and labor.

Sixth. That the total of matters to be drained from any town consists of (1) the used water supplied to the town for domestic and other purposes ; (2) the excrementitious matters produced in the town ; and (3) the quantity of water which falls upon its surface in the form of rain.

Seventh. That the only other sources of water as subjects for drainage which can be added to the proper drainage matters are (1) drainage from lands lying without the town, and (2) springs within the town ; and that the first of these should be intercepted outside the town, and thus prevented from access to it, by encircling catch-water drains, and the second should be applied to useful purposes, if possible, and the refuse afterwards conducted to join the stream of proper drainage.

Eighth. That efficient town drainage, therefore, properly requires a conducting only of the natural refuse water from the surface, and of the artificial refuse water which is or should be delivered either at or above the surface.

Ninth. That the proper channels for the conveyance of drainage matters are continuous lines of drains or sewers, which should convey the matters committed to them rapidly to the appointed receptacles or places of collection ; to be subsequently treated and dispersed for agricultural purposes. And that, in order to ensure this proper action of the sewers, they should be designed, constructed,

laid, and fitted according to the following rules : (1) That the entire length of the sewer shall be thoroughly impervious to the escape of any of the liquid discharged into it ; (2) that the dimensions of the sewer shall be proportional to the service required of it, and adequate for that service, without such excess of capacity as might retard the current through it ; (3) that the sewer shall be laid underground, but at the least practicable depth, so as on the one hand to secure it against injury, and on the other to facilitate access to it whenever required ; (4) that the sewer shall be laid with such declivity towards the receptacle into which it discharges as shall secure the constant motion of its contents, and with the greatest attainable rapidity ; (5) that the form of the sewer shall be such as will afford the maximum resistance against the external pressure of the soil in which it is laid, and at the same time aid the action of the sewer by preserving the full effect of small quantities of liquid ; (6) that the construction of the sewer shall combine economy with durability, and be such as will maintain the smoothest possible surface for the passage of the sewage ; (7) that all inlets to the sewer shall be effectually and permanently trapped, so that no effluvia can escape from the sewage into the buildings or thoroughfares of the town.

Tenth. That in order to attain a general uniformity in the size and functions of main sewers, which is desirable with a view to the general simplicity and efficiency of the system, the distance of the several places of collection from each other should be graduated according to the density of the intervening population, the nearer should be the collecting stations.

Let all the details of the drainage of a town be carried out in accordance with these principles, and their combined effect will be found to result in a system of considerable, if not perfect efficiency, in which public and private nuisances will be reduced to a minimum, and security afforded against the spread of pestilential and epidemic disorders among the population.

The Board of Arbitrators has been sitting for several days at Barrie, Ont., taking evidence on the valuation of the waterworks plant, which is proposed to be taken over by the town. The Waterworks Company have finished their part of the arbitration evidence, and the town solicitors are now being heard.

PERSONAL.

Mr. Geo. S. Counsell, who had been clerk of the county of Wentworth for thirty-six years, died at his home in Hamilton on the 23rd inst., as a result of heart trouble. The deceased was in his 65th year. When a young man he studied medicine, but never practised the profession. During the many years which he held the position of clerk of the county, he was considered a faithful officer, and was greatly respected by the county councillors.

Mr. Hurd Peters, C.E., who has had charge of the harbor improvements at St. John, N.B., was recently the recipient from his employees of a complimentary address, expressive of the appreciation of his services, and of the pleasant relations existing between himself and those under his charge. Accompanying the address was a gold headed ebony cane, suitably inscribed, as well as a silver ice pitcher. In acknowledging the gift, Mr. Peters referred to the fact that for forty years he had been connected with the city works, and had always had pleasant relations with his subordinates. The presentation, he said, was as a complete surprise.

The new waterworks system at Stouffville, Ont., which was designed by Mr. John Galt, C.E. and M.E., of Toronto, and constructed by Messrs. McQuillan & Company, of the same place, was thoroughly tested on the 15th instant. Several streams of water were easily thrown over the highest buildings. The system is by gravitation from springs and reservoirs in the ridges, three miles distant, and cost about \$25,000.

There was cast at the Londonderry Iron Works, Londonderry, N. S., last week, a water pipe which the company claim is the largest pipe of its kind ever manufactured in Canada. The pipe is forty-two inches in diameter, made of Nova Scotia iron, and weighs nearly three tons. It was ordered for a culvert on the P. E. Island railway and will be placed in position in a few weeks. The largest water pipe heretofore cast was thirty-six inches in diameter, and the casting of this monster forty-two inch pipe was watched with some anxiety, but the process was very successful. This class of water pipe is now being largely used in the construction of railway culverts.

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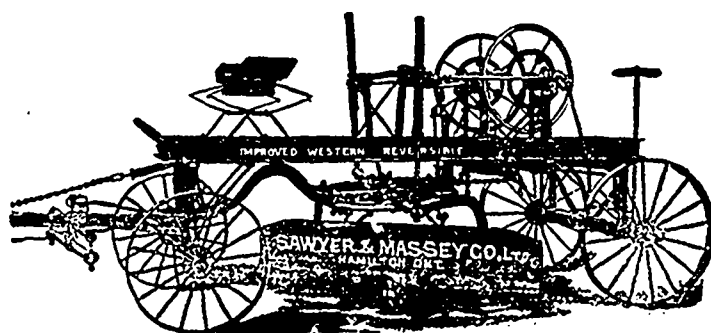
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