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CANADIAN CONTRACT RECORD

A WEEKLY JOURNAL OF THE BUILDING INDUSTRY

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EVERY THURSDAY

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CONTRACTS OPEN.

GRAND FORKS, B.C.—Negotiations for a loan for waterworks construction are in progress.

DELHI, ONT.—Improvements will be made this fall to the Methodist church, at a cost of \$1,300.

EEL RIVER, N. B.—It is said that Mr. Matheson, of Springhill, will erect a saw mill at this place.

NELSON, B.C.—The Church of England congregation will build a new church, for which tenders have been invited.

BARRIE, ONT.—Competitive plans are invited for a House of Refuge, to be built by the county.

SHERBROOKE, QUE.—A deputation will petition the Minister of Militia to build a new drill shed here.

SIMCOE, ONT.—The township of Windham will borrow the sum of \$793 for drainage work in said township.

CHICOUTIMI, QUE.—There is talk of the erection of a large hotel here, the promoters being a strong company.

VANCOUVER, B. C.—The Remington Company hope to secure a bonus of \$100,000 from the city for the erection of a smelter.

AMHERST, N.S.—Tenders have been invited for the erection of a fire station and town hall, to be of brick, with stone trimmings.

PETERBORO, ONT.—The town council is taking steps to secure the erection, by the Dickson Company, of a saw mill in this town.

SHAWVILLE, QUE.—The Ronald Fire Engine Works, of Brussels, Ont., are urging the village to purchase a fire engine instead of constructing a waterworks system.

GRAND MERE, QUE.—It is stated that the Laurentide Pulp Co. will spend \$1,000,000 this year in construction work, including the erection of a number of cottages.

KASLO, B. C.—The ratepayers have voted on a by-law to raise \$12,000 for improving streets and extending water mains. The result of the vote has not yet been learned.

FERGUS, ONT.—By-laws have been passed providing for the construction of cement walks. The ratepayers will be asked to provide the sum of \$3,000 for a new high school.

AMHERSTBURG, ONT.—Mr. Scotten has commenced the excavation for a large block, to include store, telegraph and telephone and post office. It is also his intention to erect a new hotel.

WELLINGTON, B.C.—The question of a water supply is again under consideration. Long Lake has been suggested as the source of supply, the utilization of which would entail an expenditure of \$3,000.

CHARLOTTETOWN, P. E. I.—The gas works at the eastern end of the city have

been sold to Mr. H. R. Lordly, C.E., of St. John, representing a syndicate of capitalists. The plant will be remodelled.

FREDERICTON, N. B.—A proposition is being considered by the city council to ask authority from the legislature to borrow from \$30,000 to \$50,000 to be expended next year on street improvements.

LENNOXVILLE, QUE.—At a meeting of the corporation of Bishop's College, held last week, the question of college extension was referred to a committee. This committee will report to the corporation before the close of the present year.

GUELPH, ONT.—It is said that two residences will shortly be erected on the property of the late John Mayberry, corner Oxford and Dublin streets.—Mrs. Duncan has purchased a site on Woolwich street on which she will erect a brick residence.

CHILLIWACK, B. C.—It is rumored that the congregation now worshipping on the camp ground have in contemplation the erection of a modern church edifice, a site for which has not yet been selected. It is expected the building will be erected next year.

PENNBROKE, ONT.—It is said to be the intention of the council to submit a by-law to the ratepayers to raise funds for the construction of a system of sewerage. The cost is estimated at \$16,000.—The Ottawa & Parry Sound Railway Co. are said to be negotiating for the extension of their line to this town.

ROSSLAND, B. C.—Mr. Shaughnessey, of the C. P. R., has stated that the company will build into Rossland at once, and that the necessary capital would be furnished to erect a smelter in the vicinity.—The architects of the town have been invited to submit competitive plans for a new school building.

KINGSTON, ONT.—Power & Son, architects, have invited tenders for improvements and extensions to brick houses on Queen street, for J. B. Carruthers.—W. Newlands, architect, is taking tenders this week for the erection of a residence, corner Princess street and University avenue, for Dr. H. R. Duff.

CHATHAM, ONT.—Dr. Bryce, secretary of the Provincial Board of Health, was in the city recently in connection with the reconstruction of the sedimentation basin. He advised, as the best method to pursue, to give the wall a slope of about two to one, cutting away from the top, and facing the wall with cobble stones set in puddled clay.

HULL, QUE.—A new iron bridge will be constructed across the Lievre river, between Masson and L'Ange Gardien. The chief engineer of public works for Quebec recently selected a site for the bridge.—Mr. H. J. Beamer, of the Ottawa and Gatineau Valley and Pontiac & Pacific Junction railways, was recently in the city in connection with the extension of the

latter railway to Hull. It is announced that the Hull Lumber Company will not rebuild their saw mill recently burned.

VICTORIA, B. C.—Tenders are invited for the erection of a brick building, 54 x 34 feet, on Cole's Island, Esquimault. Plans on application to the assistant civil engineer, H.M. Naval Yard, Esquimault.—The Dominion authorities invite tenders until Monday, October 25th, for the construction of fittings in the post-office in this city.

INGERSOLL, ONT.—A site for the new post-office building has been secured at the corner of Thames and Charles street. The building is to include post-office, customs and gas inspector's offices, and will cost about \$20,000.—The waterworks system is not proving satisfactory, and it is probable that the council will decide to erect a duplicate set of pumps at the station.

ST. JOHN, N.B.—Plans are now being prepared for extensive improvements to be carried out by the Dominion government on the east side of the harbor, at the terminus of the Intercolonial Railway, which will include the erection of a grain elevator, warehouses, etc., and involve an expenditure of about a million dollars.—A new abiteau is to be built on the western side of the Grand Pre dyke, at a cost of about \$3,000.

DUNDAS, ONT.—James Moore, town clerk, will receive tenders up to noon on Saturday, 9th inst., for the construction of a dam. Plans at the town clerk's office.—The Toronto Carpet Co., of Toronto, have been negotiating for the removal of their factory to this town, where they propose to purchase the Dundas cotton mill. According to agreement the company would spend some \$20,000 on improving the property.

HAMILTON, ONT.—W. C. Biennan, Secretary Parks Committee, will receive tenders up to the 15th inst. for a fountain to be erected in Woodlands Park, to cost \$500.—The City Council have adopted the report of the sewers committee recommending that an overflow sewer be constructed on Catherine street north, at a cost of \$20,000.—An agitation is on foot to improve the drain from near the Mountain View Hotel to Mount Albion, the cost of which is estimated at \$10,000.

WALKERVILLE, ONT.—Mr. Joseph De Gurse, chief engineer of the Lake Erie and Detroit River Railway, writes that the company have decided to ask for new tenders for dredging, sheet piling, etc., at Port Stanley, the work to be completed on or before the 1st day of August, 1898. The work consists of 400 linear feet of crib work, sufficient dredging to obtain 15 feet of water, and the necessary sheet piling, with the construction of an apron, to enable car ferries to ply between Port Stanley and the south shore of Lake Erie.

RAT PORTAGE, ONT.—The Willow Creek Gold Mining Company, of which Mr. E. Todd, of Brantford, is president, are about to undertake the construction of an electric railway from Bell City to Island Bay, on Bad Vermillion lake. The railway will be four miles in length, and will be extended as occasion demands. It is proposed to utilize the water of the falls on the Vermillion river and Grassy lake for power purposes, and to put in sufficient electrical machinery to operate a custom stamp mill as well as the railway. Mr. M. W. Hopkins, electrical engineer for the company, will shortly make a report on the water power.

LONDON, ONT.—Tenders are invited by A. O. Graydon, city engineer, up to 5 o'clock to-day (Thursday), for the supplying and laying of 966 feet of 15" and 2,075 feet of 12" glazed or concrete sewer pipe. Building permits have been granted as follows: William Kerr, brick residence on Central avenue, between Adelaide and William streets; J. A. Gauld, architect.

Mrs. Welper, two-storey brick residence on Talbot street, cost \$2,000.—It is understood that the board of Centennial Methodist church will shortly consider the question of erecting a parsonage.—The water commissioners have secured the Griffith property, on the south side of the river at Byron, and propose to utilize the same for waterworks purposes.

QUEBEC, QUE.—The directors of the Baie des Chaleurs Railway are said to have succeeded in raising money for the construction of the road, and hope to commence work at once. The line will be opened to Paspébiac this fall.—We are advised by the manager of the Chateau Frontenac that the architect of the proposed improvements to the hotel is Mr. Bruce Price, 150 5th avenue, New York. Tenders have been closed and the ground will probably be broken this week. The extension is a continuation of the original building, which completes the chateau circular court; it will mean 106 additional rooms, with baths connecting, a power house in new building for 320 horse power, sufficient to heat the present building and addition, and, if necessary, run the dynamo. It is expected the extension will be finished and equipped for summer business.

WINNIPEG, MAN.—Tenders are being taken this week for cedar block and macadam pavements.—Some local capitalists contemplate building a pleasure steamer to ply on the Red river.—J. L. Doupe, C.E., of the C.P.R., has left for Wabigoon to finally locate the route of the steam tramways on the portages between Lake Wabigoon and Lake Manitou, and from thence to Rainy River. It is intended to commence construction this season.—Plans have been prepared for improvements to the Oriental Hotel.—The question of erecting a new church or repairing the present building is being considered by the Wesley church congregation.—D. W. Alton, secretary treasurer of the municipality, has invited tenders for the erection of a new brick school house at Sydney.—At the last meeting of the city council, Mr. Hermy's report on the proposed waterworks system was considered, but no definite action was taken.

MONTREAL, QUE.—J. Alcide Chausse, architect, is preparing plans for three dwellings on St. Denis street and three on Drolet street for Mr. H. St. Pierre, nine dwellings on Sussex street for Mr. Alexandre Hogue, and four dwellings on Mance street for Mr. Joseph Hogue.—The G. T. R. have decided to build 1000 freight cars, of which 500 will be built at the shops in this city and at London.—The engineers appointed to report on the pollution of the Little Riviere St. Pierre have recommended that steps be taken to induce the government to deepen the bed of the river and straighten the banks.—Tenders have been invited by the Sewers Committee for the construction of sewers on Albina street, from St. Denis street eastward, and on Chambord street, from Gifford street northward.—The city council requested the Grand Trunk Railway to establish a city office. In reply the manager stated that for some time the question of erecting a large building in the centre of the city had been under consideration, and that a definite answer would be given at an early date.—G. A. Monette, architect, is preparing plans for a residence to be built at Cote St. Antoine.—Gamelin & Huot, architects, are preparing plans for a house, two tenements, to be built on De Lonmier avenue for Mde. C. E. Forest, also for a residence on same avenue for Mde. T. Gagnon.

OTTAWA, ONT.—The schools of the city are becoming overcrowded, and it may be found necessary to increase the accommodation next year.—The Hull & Alymer Electric Co. purpose erecting more car sheds and a new station at

Deschene. The buildings will be of stone, the plans for which are now being prepared by an Ottawa architect, and tenders will shortly be invited.—E. F. E. Roy, secretary Department of Public Works, will receive tenders until Monday, October 25th, for the construction of fittings in the post-office building at Victoria, B. C. Plans at the public works office, Victoria, and at the above department.—Hon. R. W. Scott, Secretary of State, has invited designs, from Canadian artists only, for statues of the late Hon. Alex. McKenzie and Her Majesty, the Queen, for which the sum of \$10,000 was voted by parliament last session. These statues will be erected in the grounds of the parliament buildings in this city.—The Bank of Ottawa is said to be looking for a suitable property in this city on which to erect a branch bank, and are considering a site at the corner of Rideau and Nicholas streets.—Two tenders were received for the new fire station, corner Albert and Lyon streets, as follows: Wm. Stuart, \$18,577; H. Burgess, 16,600. The Fire Committee considered these tenders too high, and the architect has been instructed to prepare plans for a building one storey lower, and to invite new tenders for construction.

TORONTO, ONT.—Ground has been broken for a new residence to be erected on the east side of St. George street, just north of Lowther ave.—Mr. A. Davis, of Montreal, was recently in this city in connection with the proposed new tunnel, for which he is consulting engineer.—In response to a resolution of the council, the City Engineer has reported that the cost of cribwork necessary to carry out Harbor Park to the new windmill line would be \$35,000.—The Board of Control have adopted the report of the Parks and Gardens Committee recommending the erection of a cottage at the Island for the caretaker.—The general council of the Toronto Bible Training School have appointed a committee to take steps to secure a permanent building. A site will be selected and plans obtained this fall, and it is hoped to commence work in the spring. The president of the school is Rev. Elmore Harris.—A sitting of the Court of Revision will be held on the 15th inst. for the hearing of appeals respecting the following local improvements: Cement concrete sidewalk on King street, north side, from Simcoe street to University street, cost \$670; on Bay street, east side, from Wellington street to 77 Bay street, cost \$380; brick sidewalk, Gould street, from Mutual street to Church street, cost \$474; on Bond street, west side, from Shuter street to Wilton avenue, cost \$817.—Mr. G. H. Stinson, real estate broker, reports the sale of several lots on St. George street, on which the purchasers intend erecting residences.—The Ontario government will at once reconstruct the broom and rope factories at the Central prison.

FIRES.

The Central Prison at Toronto was damaged by fire on Monday last to the extent of \$60,000. The loss is divided as follows: On the cordage factory and machinery, \$30,000; on the broom factory and machinery, \$9,000; on the stock in the broom factory, \$15,000; on the lumber, \$4,000, on the conservatory, \$2,000. All this is the property of the Ontario government, with the exception of the stock in the broom factory, which is owned by Messrs. H. A. Nelson & Sons.—The brick residence of G. Suggitt, of Blackstock, Ont., was burned last week, together with the post-office block owned by R. H. Prust; loss, \$5,000.—A large frame building occupied by Mr. Labrecque, cigar manufacturer, of Levis, Que., was gutted by fire recently, at a loss of \$3,000.—The residence of Rev. James Metcalfe, at Grimsby, Ont., has been destroyed by fire; loss \$5,000, covered by

insurance.—Gagnon's store, the Thurst cheese factory, the Union Hotel, and James Hammond's store, at Thurso, Que., were consumed by fire on the 2nd inst.—A large saw mill at Sand Point, Ont., owned by Gillies Bros., of Braeside, was burned to the ground on the 29th ult. It is said there was no insurance.—Perry & Black's saw mill at Monkland Mills, near Fergus, Ont., was completely destroyed by fire last week. The loss is heavy, the insurance being only \$1,300.—At Ste. Rose, Que., fire destroyed the residences of Mr. Legault, Mr. Hubert Leclair and Mrs. Louthier. The total loss is placed at \$10,000.—Cowan's wholesale hardware store on Dundas street, London, was damaged by fire recently to the extent of \$2,000.—The mill of the Hamilton Coffee & Spice Co., at Hamilton, Ont., was damaged by fire recently. The loss to the building, owned by Ross Bros., is about \$2,000.

CONTRACTS AWARDED.

RAT PORTAGE, ONT.—Mitchell & McComb have secured the contract for Kingdom's brewery.

ST. MARYS, ONT. Johnston & Wright have secured the contract for J. Elliott's two-story brick residence.

ST. JEROME, QUE.—J. W. Munro, of Pembroke, Ont., has secured the contract for station and restaurant here for the C. P. R.

WATERLOO, ONT.—C. Kreutziger has been awarded the contract for erecting a new skating rink, 185 x 80 feet, to cost \$2,000.

WINCHESTER, ONT.—Clark, Connolly & Co., of Toronto, have been given the contract to construct the Main street sewer.

NEW HAMBURG, ONT.—The contract for the erection of Mrs. J. Rau's residence has been secured by Henry Wiederhold.

L'ASSOMPTION, QUE.—Architect J. Alcide Chausse, of Montreal, has awarded the contract for all the repairs to the R.C. church to J. Lamouroux, of this place.

WALKERTON, ONT.—The council have let the contract for an extension of 1,260 feet of sewer on Main street, to T. Luscombe, of Belleville, at the price of \$985.80.

WINNIPEG, MAN.—The council of Springfield have let the contract to Mr. Corregal, of Sunnyside, to deepen the main ditch from Dugald westward, at a cost of \$1,500.

ST. ZOTIQUE, QUE.—Architect J. Alcide Chausse, of Montreal, has awarded the following contracts for repairs to the R.C. church: Woodwork, roofing and painting, E. Belanger; plastering, S. Gosselin; stonework, J. Tessier.

LONDON, ONT.—The city council have accepted the tender of Simon Pearson, of McGillivray, for the erection of a bridge over the Thames river at Kilworth, at the contract price of \$4,157. The other tenders were L. Hardy, of Steven, and Tracey Bros., of St. Mary's.

CORNWALL, ONT.—St. Onde & Thompson have secured the contract for building the piers of the bridge over the Castore river at Embrum. Mr. Hendershott, of Montreal, will build those of the Nation river bridge at Chrysler, all in connection with the Ottawa & New York Railway.

GUELPH, ONT.—G. R. Bruce, architect, has accepted tenders as below for a two-story red brick residence for Mr. Holliday, King street. Stone and brick work, S. Rundell; carpentry, Mahoney & Beckman; painting, John Goss; tin-smithing, George Howard; plumbing, Feek & Phillips; plastering, Shaw & Dunbar.

QUEBEC, QUE.—A large factory is to be built at the corner of de la Couronne

and Prince Edward streets for J. N. St. Pierre. The contractors are: Masonry, Francois Parent, joinery, Elisee Page, of St. Raymond. Probable cost, \$12,000.—D. Ouellet, architect, has awarded the contract for two cottages to be built on Des Erables avenue to N. Jobidon.

CHATHAM, ONT.—Tenders were received by the city council as follows for a tile sewer on Raleigh street: Richard Stevens, \$1,928; Thomas Martin, \$1,845; S. Horn, \$1,548; B. A. Leber, \$1,490; Geo. Fielder, \$2,175; T. Kime, \$1,600. The contract has been awarded to Mr. Leber. The following tenders were also received for a tile sewer on Edgar street, from Queen to Lacroix: Jas. W. Hayden & Findlay, \$367 (accepted); Thomas Martin, \$450; R. Stevens, \$575; R. Moase, \$400, and S. Horne, \$370.

OTTAWA, ONT.—The Ottawa Specialty Co. have completed their contract for the interior fittings for the new store of the C. Ross Company, and have secured contract for new bar fittings for the Russell House.—J. Herbert & Son are completing contract for roofing of C.P.R. shops at Carleton Place and the J. R. Booth grain elevator at Depot Harbor.—R. Y. Cowie has been awarded the contract for the erection of two brick veneer residences on Somerset st. and two on Henderson ave., for S. Davis.—O'Reilly & Murphy have the contract for installing electrical fittings in the Archbishop's Palace.

TORONTO, ONT.—The Board of Control last week awarded the following tenders: Gravel roadways—Dufferin st., from Peel avenue to Dundas street, Bryce & Co., \$2,945; Dovercourt road, Queen street to Dundas street, Bryce & Co., \$2,713; Foxley street, Dundas street to Dovercourt road, Bryce & Co., \$1,224. Brick pavements—Bellevue avenue, Bellevue place to Oxford street, D. L. Van Vlack, \$3,810; Carlton street, Sackville to Parliament street, Constructing &

Paving Company, \$4,991, Berkeley street, Wilton avenue to Gerrard street, Constructing & Paving Co., \$6,590. Brick sidewalks—Spruce street, Parliament to first lane east, Evans & Foley, 45 cents per lineal foot, Drummond street, Adelaide to first lane north, J. E. Webb, 42 cents per foot; Peter street, Adelaide to 144 feet south, J. E. Webb, 42 cents per foot; Wellesley street, Sherbourne to Homewood avenue, Constructing & Paving Company, 44 cents per foot. Concrete sidewalks—Front street east, front of Nos. 10, 12, 14, 16, A. Gardner & Co., \$1.70 per foot; College street, Elizabeth street to Mission avenue, Constructing & Paving Company, \$1.35 per foot; stone curb for same, Constructing & Paving Company, 50 cents per foot. Queen street subway sewer—W. F. Grant, \$1,786. Repairs to old hook and ladder truck at Portland street fire hall—Charles Collett, \$240.

MONTREAL, QUE.—J. Alcide Chausse, architect, has accepted Mr. T. Charpentier's tender for the general works of a three story dwelling house to be erected on St. Dominique street for ex-Ald. Thos. Gauthier.—Wright & Son, architects, have let contracts as follows for two houses at Westmount for W. McDonald. Masonry, W. Fournier, bricklaying, E. Berger, plumbing, A. Mackay & Co.; roofing, Campbell & Gilday, other trades not let. Same architects have accepted the following tenders for seven cottages to be erected on Waverley street, Montreal Annex, for R. Neville, jr.: Masonry, A. Dugas; bricklaying, F. Riordan; other trades not let.—Building permits have been granted as follows: One building, six tenements, 44 x 29 feet, on Canning street, for B. Ether—architect, G. A. Monette; carpenter, P. Forgues; probable cost, \$3,000. Seven houses, 14 tenements, 147 x 36 feet, two

(Continued on Page 4.)

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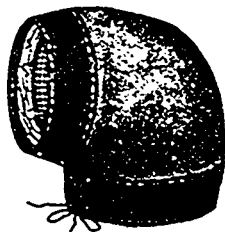
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stories, wood, lined in brick, for M. Thibodeau—masonry, C. St. Germain; carpentry, A. Chaliloux; cost, \$7,000. One building, 48x33 feet, ... stories, for Dame Vve. Louis Fortier—masonry, Gagnon & Charette; carpentry, K. Laberge. Repairs and modifications of a house (front elevation) on Peel street for A. G. Thompson—architect, R. Findlay; masonry, George Nicholson. One building and ice storage building, 47x31 feet, on Roy street, for A. E. Sheppell architect, Walter Livermore; masonry, A. E. Wand. One house, two tenements, 24x36 feet, two stories, brick, on Charlton street, for J. R. Lewis—architect, Geo. Stup; masonry, John Quinan, carpentry, J. McGee.

EXCUSES FOR NON-PERFORMANCE OF A CONTRACT.

The performance of building contracts is liable to be prevented from more than usual causes than other contracts. As a general rule, difficulty, and even impossibility in fact, is no excuse for non-performance by a contractor. An agreement may be impossible of performance at the time when it is made, and this in various ways. It may be impossible in itself that is, the agreement itself may involve a contradiction: as if it contains promises inconsistent with one another or with the date of the agreement. Or the thing contracted for may be contrary to the course of nature: as if a man should undertake to make a river run up a hill, or to construct a perpetual motion. It may be impossible by law, as being inconsistent with some legal principle or institution: as in the cases of attempts to enable a stranger to a contract to sue upon it by agreement of the parties, or as if a man should give a bond to secure a simple contract with a collateral agreement that the simple contract debt should not be merged. It may also be impossible, in fact, by reason of the existence of a particular state of things which makes the performance of the particular contract impossible: as where a lessee covenants to dig not less than 1,000 tons of a certain kind of clay on the land demised in every year of the term, but there is no such clay on the land.

Where from the nature of the contract it appears that the parties must from the beginning have known that it could not be fulfilled unless when the time for the fulfilment of the contract arrived some particular specified thing continued to exist, so that when entering into the contract they must have contemplated such

continued existence as the foundation of what was to be done, then, in the absence of any express or implied warranty that the thing shall exist, the contract is not to be construed as a positive contract, but as subject to an implied condition that the parties shall be excused in case, before breach, performance becomes impossible from the perishing of the thing without default of the contractor. Under this come all entire contracts to expend labor and materials upon the existing property of others. In such cases, in the absence of anything to the contrary, the contract is entered into subject to an implied condition that the thing exists or will continue to exist without any warranty on the part of the employer that it shall exist, and upon its ceasing to exist without the fault of either party the contract is at an end, and further performance by both parties is excused.

Defects in the soil do not excuse contractors from the performance of a contract to erect a building, and for failure to perform they are liable in damages. It is no defence to an action for such damages that the building, so far as it was erected, was constructed in accordance with the plans and specifications. This rule seems to apply equally to latent and patent defects. If a person contracts with the owner of a plot of land to build and complete a building and by reason of a latent defect in the soil it falls, the contractor is the loser.

In the absence of special provisions in the contract, strikes offer no excuse for non-performance. Where a strike excepted by the terms of the contract is so long that it puts an end, in a commercial sense, to the commercial speculation, or would frustrate the object of the undertaking, the strike would put an end to the contract, but not if it operates as a mere

delay. The exception will be good even though the strike was caused by the defendant lowering his workmens' wages. In no case, however, is it a defence that the delay was caused by a strike which took place after the time fixed for completion. The contractor cannot plead bad weather or winter as an excuse for defects in the work he has contracted to do unless, by postponing the work till an unsuitable season, the employer wholly departs from the contract originally contemplated.

As a general rule, the contract, if lawful, can only be rescinded by the consent of both parties. It is also a general rule that where one party to a contract repudiates it, the other party can sue at once. The employer may repudiate by giving notice to the builder not to do any more work. While a contract is executing, a party has the power to stop the performance on the other side by an explicit direction to that effect, but thereby subjects himself to liability for the payment of such damages as will compensate the other party for being stopped in the performance of the contract. Refusal by the employer to pay an account where nothing is due cannot be taken as a recession or abandonment of the contract by the employer. Non-payment of instalments, even when they are due, does not, per se (in the absence of a special clause in the contract), excuse the contractor for refusing or delaying execution of his part of the contract, but the circumstances may evince an intention to abandon or an incapacity to perform.

(To be Continued.)

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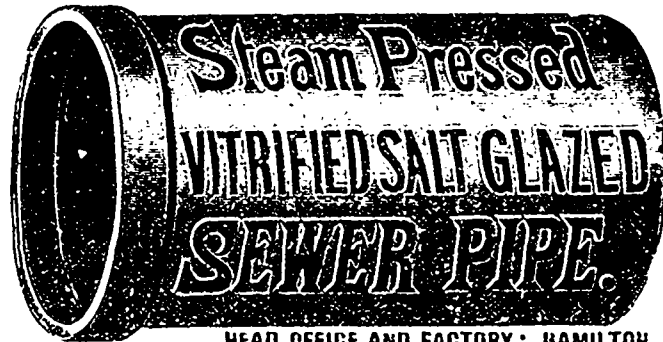
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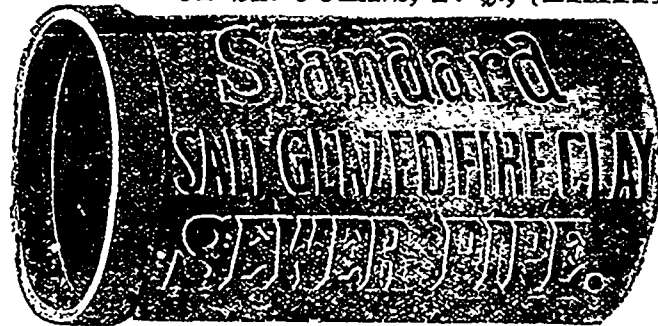


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SEWAGE SYSTEMS.*

I know that in mentioning here the danger of polluting by the sewage of the cities the streams which generally supply drinkable water to the same cities or their neighbors, the case I am advocating is already won; for, to Great Britain belongs the honor of having first submitted to her scientists the study of this great question, which has brought on, in 1878, the vote by the British Parliament of the "Rivers Pollution Protection Act," obliging the municipalities to practically eliminate the noxious principles of the sewage water before emptying them in the streams.

England's example was followed in the whole of Europe, especially in Paris, where the "Roads and Bridges Engineer's Corps," to which I had the honor to belong, has made the most marvelous progress in the establishment of purification fields at Gennevilliers and Acheres.

I am sorry to say that in this country we do not follow the march of progress, and that, boasting of the amplexness and copiousness of our rivers, our municipalities seem to court epidemics, in spite of the advice of their provincial board of health, and empty their impure sewage in the streams, at the bottom of which generally lie deposits or banks of sawdust from the numerous mills lining the shores. I can mention particularly two cases: one at St. Hyacinthe, where the sewage is emptied in the river from above the water-works—this very city has been this year afflicted by a serious epidemic of typhoid fever; and another case in Montreal, where one-half of the total sewage of the city pollutes the standing water of the pond situated between the wharves and the guard pier.

Thus, I intend to renew a prudent advice to my fellow citizens, rather than teach you anything you are not familiar with, when I mention here that all hygienists unanimously condemn the emptying into streams of impure sewage which, according to the latest experiments made, for example, by Muntz, analyst to the "National Agricultural Institute of Paris," have revealed in one cubic centimeter of this water the presence of 120,000 to 320,000 microgerms, most of which are pathogenic.

It may be added, from another standpoint, that the pouring of the organic substances contained in these sewage waters naturally deprives the river water of a considerable quantity of their oxygen. I have no doubt but that you are perfectly aware of this special danger, and if I can illustrate before you one of the best means to obviate it, I hope that amongst other benefits of your visit to this country an

era of progress in municipal hygienic condition will open to the great metropolis of Montreal.

Mr. Janin classified the methods in use as follows. Processes of separation, mechanical processes, chemical processes, soil purification processes.

After showing why the first three were unsatisfactory, he went on to say:—Soil purification of sewage is the method now in favor in England, Germany and France. In the last named country I had the honor of co-operating in the installation of the system with the learned engineer, Durand Claye, and his emulator, M. Masson, inspector of the drainage of the city of Paris. To this process I beg leave to call your attention. It consists in the filtration of the sewage through a permeable soil affording a sufficient thickness and all facilities for the outflow of the purified water, either by a sufficient slope of the previous stratum, or by artificial drainage

That the soil is the most perfect purifier of waters charged with organic matters is proved, first, by the organic purity of spring waters; second, by careful experiments with impure waters, which are subjected to analysis before and after percolation through the soil.

The first eight to twelve inches of earth act as a mechanical filter of a most efficient type. In the next stratum occurs an oxidation of the organic matter by the oxygen in the soil, aided by a living organism normally present in it. A column of three feet of arable soil suffices to completely purify the most objectionable sewage water and to render it quite free from germs of disease, although they may have been plentifully present in it initially.

Finally the soil is itself highly enriched by the organic matter which it takes from the sewage, and thus an economical value is given to the method of soil purification. Many analyses of vegetables grown on such soil have been made, and in no case has any diseased or unsafe food product resulted from the use of these fields as market gardens.

Notwithstanding the evident superiority of the soil purification system, I think proper, considering the prejudices still existing, to set forth briefly the rules regulating the establishment and working of the purification fields—the violation of which rules has caused the few failures of the system.

To sum up, the rules which govern a

good and complete purification are as follows:—

(1) To select ground porous enough to allow water to easily permeate and to give free access to a sufficient quantity of air for the working out of combustion. This degree of porousness of purifying power is determined by direct experiments, the best known being that of Dr. Frankland, which gives the quotation used as a basis for the next rule.

(2) To regulate the time of pouring and the quantity of sewage water poured each time, so that the water may take to run through the filtering soil all the time necessary for its purification.

(3) To underdrain, if necessary, in order to give the purified water a regular issue.

In a word, the object is to obtain as near as possible a continuous and regular distribution after purification—a phenomenon of slow combustion and aeration—a mechanical fact—are both regular and continuous.

Those are, gentlemen, as briefly announced as possible, the laws of operation of the purification of arable soil.

It follows, from this expose, that high-dosed pouring alone has caused partial failure; not because the system is bad in itself, but because the rules of purification by the soil imply certain absolute conditions, such as selection of the ground, apportionment of sewage waters, and underdraining, which are sometimes neglected on account of difficulties of ascertainment and of the great expense they entail.

On the other hand, in all cases where irrigation has been moderately practiced, and where vegetation has helped purification by returning to the atmosphere a portion of the purified water, success has been attained. To recall only a few of the successful experiments, I will quote the purification field of Gennevilliers (Paris), where the annual dose of irrigation amounts from one to four million gallons per acre; of Rheims (France), where the dose is about the same, and of Dantzig (northern Prussia), where the average annual dose is three million gallons.

Those purification fields do not only fill the hygienic programme of complete purification, harmlessness, absence of perceptible emanation in the neighborhood, but also fill the economical programme as in Gennevilliers, where the value of land has increased four-fold since it is irrigated; in Rheims, where a company has rented the purification field for a period of thirty-six years, and after paying a heavy annual rental to the city, still realizes large benefits, and in Dantzig, where one of our countrymen, Mr. Aird, rents the purification field and makes large profits.

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* Abstract of a paper by Mr. Geo. Janin, C. E., of Montreal, read before the British Medical Association, 10 Montreal, August, 1897.

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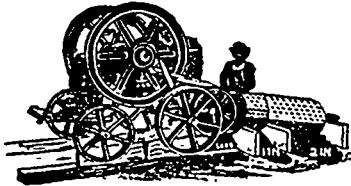
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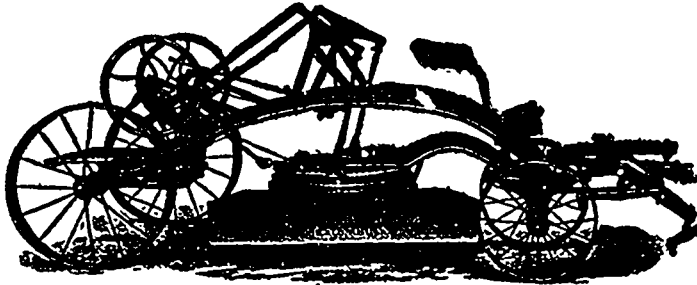
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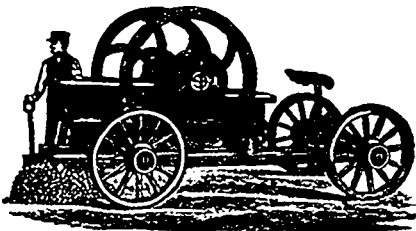


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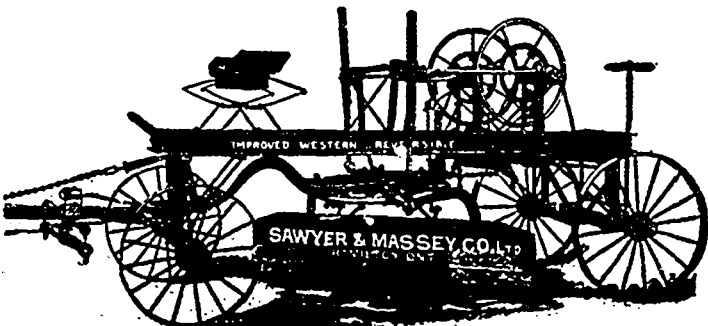
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