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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.

JUNE 10, 1897

No. 19.

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY THURSDAY

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

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Village hand fire engine—standard size—double brass pumps; guaranteed in good order; black walnut box, double brakes; accommodates 15 to 20 men, throws two streams. Also second-hand rebuilt standard steamer, good as new. All thoroughly guaranteed—extra cheap. JNO. D. RONALD, Fire Engine Works, Brussels.

TENDERS

Tenders will be received up to 5 p.m., THURSDAY, THE 17TH INST., for the whole of the several trades required in the erection of a

Stone and Brick Detached Residence

on the east side of Walmer Road. The lowest or any tender will not necessarily be accepted. Plans and specifications may be seen and all information obtained at the office of the undersigned.

F. H. HERBERT, Architect,
York Chambers, 9 Toronto St., Toronto.

Tenders Wanted

Scaled Tenders, addressed to the undersigned and marked "Tenders for Debentures," will be received up to the 23RD DAY OF JUNE INST., at six o'clock p. m., for the purchase of \$40,000.00 Town of Parrsboro Water Debentures, bearing interest at four per cent., payable half-yearly. Debentures for \$1,000.00 each and payable in thirty years. Lowest or any tender not necessarily accepted. Debentures issued under authority of an Act passed 1897.

Office of the Town Clerk and Treasurer,
Parrsboro, N.S., June 5th, 1897.

N. H. UPHAM, Town Clerk.

BRICK SEWERS

Tenders will be received at this office (where plans and specifications may be seen) up to 5 o'clock on THURSDAY, 24TH JUNE, for

2,400 FEET OF BRICK SEWER.

Lowest or any tender not necessarily accepted.

A. ORMSBY GRAYDON,
City Engineer, London.

WILLIS CHIPMAN, C.E.,
Consulting Engineer.

Tenders for Bridge

TO BRIDGE CONTRACTORS

Tenders for a Steel Bridge on behalf of the County of Perth and County of Oxford, to be erected on the boundary of West Zorra and Gore of Downie, near Fairview, being 42 feet in clear (48 feet over all) and 24 foot roadway. Floor to be covered with pine joist tamarack floor, or all white oak.

Tenders to be in by 12 O'CLOCK, NOON, TUESDAY, JUNE 29TH, 1897, addressed to the undersigned.

Lowest or any tender not necessarily accepted.

JOHN CORRIE,
Inspector.

Stratford, June 8th, 1897.

CONTRACTS OPEN.

DESERONTO, ONT.—W. P. Miles is building a new residence.

CHALK RIVER, ONT.—A site has been granted for a Presbyterian church.

MOOSOMIN, N. W. T.—The town is talking of erecting a \$5,000 hospital.

COLDWATER, ONT.—The town will borrow \$3,000 for improving the roads.

MALLORYTOWN, ONT.—It is stated that a new custom house will be erected here.

TWEED, ONT.—The erection of a new school building will be proceeded with at once.

ESSEX, ONT.—A loan of \$5,000 will be made for improvements to the waterworks plant.

AMHERSTBURG, ONT.—Matthew Orr purposes erecting a residence on Church street.

EMBRO, ONT.—Miss Ross, of Woodstock, will build a large residence on Commissioner street.

SHERBROOKE, QUE.—An opera house will probably be erected here. C. H. Nutter is interested.

WINDHAM CENTRE, ONT.—Tenders are asked by George Hendry for the erection of a Presbyterian church.

CARMAN, MAN.—It is expected that an electric light plant will be placed in the new grist mill about to be erected.

PORTAGE LA PRAIRIE, MAN.—T. G. Silverthorne, architect, has prepared plans for a \$2,000 residence for V. G. O'Brien.

SAULT STE. MARIE, ONT.—An agitation is on foot for the construction of a sewerage system; estimated cost \$40,000.

BROCKVILLE, ONT.—The Brockville Light & Power Company will install additional machinery for the supply of power.

OSPRINGE, ONT.—Wm. McPhail will receive tenders until June 15th for flooring and desks for school-house in section No. 13, Erin.

TRURO, N. S.—Tenders are asked up to 16th inst. for purchase of \$7,500 of debentures. Address, W. D. McCallum, town clerk.

ST. JOHN, N. B.—Mr. Murdoch, C. E., has recommended the installation of an additional high level pumping plant at Silver Falls.

WATERFORD, ONT.—The Agricultural Society propose erecting a new Agricultural Exhibition building, 36 x 80 ft.; Mr Renwood, secretary.

ST. STEPHEN, N. B.—The town engineer has been authorized to invite tenders for sewers, for which the sum of \$3,000 has been appropriated.

COBourg, ONT.—The county council will shortly let the contract for the erection of two bridges, one at Pidgeon river and the other at Campbellford.

DRUMMONDVILLE, QUE.—The Montmency Cotton Company is preparing to

erect a large cotton mill here, and to utilize the water power of the river St. Francis.

ROSSLAND, B. C.—Willis Chipman, C. E., of Toronto, and Col. T. H. Tracey, C. E., of Vancouver, have been asked to submit estimates of a sewerage system for this town.

LINDSAY, ONT.—A proposal to erect a hospital in this town was discussed at a recent meeting, and a committee was appointed to make the necessary arrangements.

HULLETT, ONT.—The town will shortly invite tenders, to be received before June 19th, for the construction of a wood and iron bridge on side-roads 30 and 31, concession 7.

BERLIN, ONT.—The G. T. R. authorities are said to have made a proposition to the town to erect a new depot, provided the waterworks and sewerage systems are extended.

NEEPAWA, MAN.—Rev. C. H. Houghton invites tenders this week for erecting an Anglican church here, the plans for which were prepared by S. Frank Peters, architect, Winnipeg.

LISTOWEL, ONT.—On July 27 the ratepayers will vote on two by-laws, one to borrow \$15,000 to construct a waterworks system, and the other to raise \$5,000 for an electric light plant.

CHARLOTTETOWN, P. E. I.—Among the new buildings to be erected this season are the new cathedral, to cost \$50,000, Prince of Wales college, cost \$20,000, and a new wing to the provincial asylum.

BARRIE, ONT.—It is reported that the board of management of the Barrie hospital have purchased Mr. R. E. Fletcher's residence on High street, with the intention of converting it into a hospital.

RENFREW, ONT.—By-laws to provide \$53,000 for water works and \$19,000 for sewerage extensions have been carried by the ratepayers.—Tenders are asked up to the 11th inst. for erecting a brick school. Address, W. M. Dickson.

GRAND FALLS, N. B.—The Grand Falls Water Power & Boom Company propose to develop the power of the Grand Falls and erect a large pulp mill. James Nanchester, of St. John, is a member of the company.

QUEBEC, QUE.—The Anglican congregation have decided to build an Episcopal residence, at a cost of \$6,000.—Tenders for the supply of 1,000 feet of cotton hose are invited until the 15th inst. by A. Malouin, secretary Fire Committee.

PARRY SOUND, ONT.—McMurrich township council has passed a by-law to raise funds for building a school house in S. S. No. 1.—The town has decided to purchase a road roller—A new mill will be built here for Keightley & Marcon, to be 50 x 100 feet, with boiler house 32 feet square.

HALIFAX, N. S.—Tenders are asked this week by John E. Wood for the construction of several exhibition buildings,

from plans on view at the city engineer's office.—An English syndicate will, it is said, erect a factory here for the manufacture of terra cotta.

WETASKIWIN, N. W. T.—The Brackman & Ker Milling Co., of Victoria, B. C., have decided to build a \$50,000 elevator here.

PRINCE ALBERT, N. W. T.—Tenders are asked by E. F. E. Roy, Department of Public Works, Ottawa, for the construction of a hot water heating apparatus at the court house and jail in this town. Plans may be seen at the Dominion Public Works office, Winnipeg.

CHATHAM, ONT.—The architect has been instructed to invite tenders for the erection of an isolated hospital building.—The school board will shortly ask tenders for seats and blackboards for the new central school.—Steps have been taken by the town and county councils looking to the erection of a House of Refuge.—Some ratepayers advocate the appointment of a city engineer.

WINNIPEG, MAN.—J. H. G. Russell, architect, has in hand alterations and additions to Nos. 696 and 700 Main street.—It is said that a prominent citizen of Winnipeg has decided to erect an opera house in Fort William, at a cost of \$24,000.—The city has made a grant of \$10,000 towards the erection of a wing to the general hospital.

FREDERICTON, N. B.—The superintendent of waterworks has been instructed to purchase the season's supply of water pipe.—Geo. W. Upham, of Woodstock, will erect a saw mill here, with rotary, lath and other machines.—The corporation will shortly invite tenders for a fire alarm system and for improvements to the city hall building.

ST. CATHARINES, ONT.—The R. H. Smith Company are erecting an addition to their saw works.—J. Rollinson, city clerk, invites offers up to noon of the 11th inst., for the construction of concrete and plank sidewalks.—The County Commissioners will ask the Dominion government to construct a bridge over the hydraulic raceway near the Lincoln paper mills.

KINGSTON, ONT.—Tenders for the construction of a hot water heating apparatus at the custom house in this city will be received until to-morrow (Thursday), by E. F. E. Roy, Ottawa. Plans at the office of Arthur Ellis, architect.—The new residence to be erected in connection with the Hotel Dieu will be of stone, four storeys, and will cost \$25,000.—The city engineer has been instructed to invite tenders for construction of granolithic sidewalks.

HAMILTON, ONT. The county council is considering the advisability of erecting a poor house.—Mr Barrow, city engineer, has reported against the plans suggested by Mr. G. H. Meakins for increasing the water pressure, and recommends that the standpipe be raised.—The following building permits have been granted: Thomas Allan, two-storey brick dwelling, Ray street north, cost \$1,400; George Mills, two-storey brick dwelling, Herkimer street, cost \$1,800.—Tenders will shortly be called for sewer pipe and other supplies.

RICHMOND, QUE.—The town recently invited tenders for electric lighting, specifying no conditions except that the tenders were to be received before March 15th. The local company tendered for a five years' contract at a figure which was approved of by the council, but the latter asked that the electric light company sign a contract for one year at the same price, which they refused to do. Consequently the lights have been turned out, and it is probable that new tenders for a term of years will be asked for.

OTTAWA, ONT.—It is rumored that the C. P. R. intend building a central station in this city. E. F. E. Roy, secretary Department of Public Works, invites tenders for hot water heating apparatus at Prince

Albert, N. W. T., and at Kingston, Ont.—The owners of the Russell House have decided on extensive improvements. The reading room will be extended to Canal street and increased in height by two stories. The rotunda is to be relaid in tile or mosaic, and improved plumbing put in.—The board of directors of St. Luke's hospital have purchased property on Ann street for a new building.—The E. B. Eddy Co. will put in a separate system of waterworks, having 40 hydrants, with a pumping force of 5,000 gallons per minute.

MONTREAL, QUE.—The finance committee of the city council has made the following appropriations: Repairs to and lighting of market buildings, \$2,000; construction of sewers, \$19,000; new fire engines, \$8,000.—P. W. St. George, city surveyor, is receiving tenders this week for the supply of scoria blocks, paving bricks, etc., and for the construction of asphalt and brick pavements on Notre Dame street and Chaboillez square west.—The plans prepared by Messrs. J. W. McGregor and J. G. Papineau, architects, for the proposed civic building show a structure of Renaissance style, to contain recorder's court and offices, central police station, morgue, etc.—G. A. Monette, architect, is preparing plans for two houses to be built on St. James street for B. Ethier.—Gamelin & Huot, architects, are preparing plans for two houses to be erected on St. Denis street for Mde. A. Duperrault.—L. R. Montbriand, architect, is preparing plans for three cottages to be erected at Pointe aux Trembles for O. M. Ange. Tenders will be called shortly for the above works.

TORONTO, ONT.—The city commissioner has been authorized to make repairs to St. Lawrence market.—The city engineer, in his fortnightly report presented to the Board of Works on Monday last, recommended the construction of the following pavements and sidewalks:—College street, from Spadina avenue to Yonge street, asphalt; Church street, from Queen to Wellington, asphalt; Charles street, from Church to Jarvis, cedar block; Wellesley street, from Parliament to Sumach, cedar block; Gwynne avenue, from Queen to King, gravel; Close avenue from King to Springhurst, gravel; Cowan avenue, from King to Queen, gravel. Brick sidewalks:—Queen west, north side, opposite No. 1190 and 1192; Parliament street, east side, from Carlton to Winchester street; Oxford street, south side, from Augusta to Bellevue avenues; Yonge street, from Bloor to Davenport road.—The engineer also recommends the construction of a sewer from the corner of Gladstone avenue and Peel street southerly to the Noble street sewer, at a cost of \$750.—The Board of Control have finally passed the estimates for the year. The following are some of the principal items of construction—Macadam road repairs, \$12,000; cedar block repairs, \$4,000; general repairs to unimproved roadways, \$3,000; asphalt pavement repairs, \$3,000; stone and wooden crossing repairs, \$2,000; stone and wooden kerbing repairs, \$2,000. Exhibition grounds—repairs to buildings, sidewalks, etc., \$1,000; painting buildings, \$1,000; new pig pens, \$2,500; new ring for harness horses, \$1,000; new stables, \$1,000.—J. N. Lake, of Hamilton, will superintend the alterations to be made in the U. E. buildings, King street west, this city, for the North American Life Assurance Company. The improvements will cost about \$15,000.—Petitions have been received by the city clerk against the construction of a gravel pavement on Landsdowne avenue, brick sidewalks on south side of Wellington street, between Bay and York streets; north side of Queen street, between Ter-aulay and Chestnut streets, and west side of Brunswick avenue, between College and Ulster streets.—The Commissioners of County Property have reported to the

County Council recommending that a bridge be constructed over Mimico creek, at the town line between Peel and York. The Board of Control will advertise for tenders for the alterations to Exhibition Machinery hall, new pig pens, and two new horse stables.—The City Engineer has recommended that the street railway tracks be extended on Gerrard street from Pape ave. to Leslie street, and that the track allowance be paved with brick on concrete foundation, also that a brick walk be constructed on the west side of West Market street, from Front street to King street, and a cement granolithic walk on Queen street, opposite Osgoode Hall.

FIRES.

Stewart's planing and saw mill at Lucknow, Ont., was destroyed by fire last week, at a loss of \$12,000; no insurance.—The furniture establishment of Renaud, King & Patterson, Craig street, Montreal, was recently damaged by fire. The building is owned by the Tiffin estate.—S. Siggins bicycle rim factory at Woodstock, Ont., has been damaged by fire to the extent of \$6,000; partially covered by insurance.—The Salvation Army barracks at Comber, Ont., has been burned.—The immigration building at Port Arthur, Ont., was burned on the 5th inst.—Henry Serles' store, H. Teeter's hotel and Wm. Perkins' shop, at Waterford, Ont., were burned on Monday last. Loss, \$20,000.

CONTRACTS AWARDED.

LEAMINGTON, ONT.—E. M. Roach has secured the contract for building a residence for William Smith.

CHATHAM, ONT.—The contract for Stevens & Campbell's cooper shop has been let to Jas Oldershaw.

STPATHROY, ONT.—James Elliott has purchased a stone crusher from the F. C. Austin Company, of Chicago.

BERLIN, ONT.—The Ingersoll Artificial Stone Company have secured the contract for laying walks, at 11½ cts. per foot.

MITCHELL, ONT.—Hanson Bros., of Montreal, have purchased from the town \$15,000 of 20 year 4 per cent. debentures.

PORT HOPE, ONT.—The contract for rebuilding the Traders' Bank block in this town has been given to Thomas Rutherford, of Peterboro.

ST. MARYS, ONT.—The contract for the stone abutments of a bridge across the Sydenham river has been let to John Elliott, at \$7.75 per cubic yard.

PETERBORO', ONT.—The George street Methodist church trustees have awarded the contract for the new parsonage to H. C. Stabler, at the price of \$3,250.

GRANBY, QUE.—Neil & Kemp are the successful contractors for the Victoria Memorial Hall, the plans for which were prepared by Cox & Amos, architects, Montreal.

WALKERTON, ONT.—The contract for the town hall has been let to H. Clark, of this town, at \$9,650, W. J. Whitlock securing the plumbing and heating. The plans were prepared by A. R. Denison, architect, Toronto.

HAMILTON, ONT.—Contracts for sewers have been let as follows: Lock street, William Spence, 37 cents a foot; Hannah street, William Spence, 44 cents; Murray street, William Spence, 37 cents; Bay street, J. J. Armstrong, 44 cents.

KINGSTON, ONT.—W. Newlands, architect, has let contracts as below for a three-story brick building opposite St. Andrews church. Masonry, G. Newlands, carpenter work, A. Williamson; unsmithing and gas fixtures, McKelvey & Birch; painting and glazing, Robinson Bros.

COLLINGWOOD, ONT.—The contract for cement walks has been let to H. G. Wynes, at 11¼ cents per square foot.—Boone & Armstrong, to whom was given the con-

tract for deepening Collingwood harbor, will commence work about the middle of this month. A powerful dredge has been purchased for the work.

LONDON, ONT. The Sewers Committee received the following tenders for the steel bridge at the foot of King street: Hamilton Bridge Company, \$7,959; Central Bridge & Engineering Company, Peterboro', one plan, \$6,020; another, somewhat similar, \$5,627, and a truss bridge, \$2,400 for the 163 feet span only; King Bridge Company, Toledo, \$8,500, or \$8,200. The tender of the Central Bridge & Engineering Co. has been accepted. The tenders for pipe were: Gartshore & Co., cast iron, \$3.90 per foot; Hamilton Bridge Company, steel pipe, \$3.98; E. Leonard & Sons, \$3.20; Geo. White & Sons, \$4.20. That of E. Leonard & Sons has been accepted. The tenders for section "J" of the sewerage system were: Wm. F. Grant & Co., of Toronto, \$19,335; Burnett & Son, London, \$21,750; Geo. D. Cameron, London, \$20,620. The tender of W. F. Grant will probably be accepted.—The tenders for section "K" of the sewerage system have been found to be 100 high, and new tenders will be invited.

OTTAWA, ONT.—Tenders were received by the city for fire engines as follows: Waterous Engine Company, Brantford, two engines for \$6,950, taking also the Old Conqueror engine, with a second size engine from the same firm for \$4,650 each, or both engines for \$8,600; E. H. Thomas, of Brussels, one standard engine, \$4,000, a second style for \$4,200, allowing \$600 for the Conqueror; the American Fire Engine Company, Seneca Falls, the Clapp and Jones engine for \$5,150 each; the "La France" engine, by Aheain & Soper, Ottawa, \$6,500 each; Walter Wonham & Son, Montreal, the triple cylinder Merryweather, \$6,800 each; John D. Ronald, two engines he had on hand, \$4,500 and \$3,300; Thomas B. Brown, Windsor, Ont., one engine for \$5,170 or two engines for \$10,340. It was decided to purchase a second-hand Merryweather from Newfoundland, and one of the Ronald engines.

MONTREAL, QUE.—The Dominion Bridge Company, of this city, have a contract to furnish 50 spans of bridge work for the Newfoundland railway, now being built by R. G. Reid.—Building permits have been granted as follows: One house on St. Christopher street, St. James ward, brick and stone front, for Mde. R. Prefontaine—architect, Georges Janin; masonry, P. Picotte. Three houses, rock and cut stone front, on Notre Dame street east, for Messrs. Naud & Brosseau—masonry, M. Gilbault. One building, stone and brick front, on McGill College avenue, St. Antoine ward, for William Jacobs—architect, Walter Livermore; masonry, Heggie & Stewart; bricklaying, A. E. Wand.—Contracts have been awarded as follows: Robert Findlay, architect, residence at Westmount mountain top, for Arthur Hodgson—all trades to D. M. Long. Two residences on Cote St. Antoine road, for Mrs. Geo. Waits—masonry, Heggie & Stewart; bricklaying, Wm. McCarthy & Son; carpenter and joiner's work, J. A. Lambert; roofing, W. G. Graham; plumbing, E. C. Mount. Additions to Sun Life Insurance building—all trades to W. Swan. Clift & Pope, architects, hotel on Victoria street, for E. H. Dohan—all trades to Simpson & Peel. Jos. Sawyer, architect, one house, stone front, on Park avenue, for D. Gagne—carpentry, D. Gagne. Robert Falbord, architect, residence at Cote des Neiges, 3 stories, for Chas. Legare—bricklaying and masonry, F. Dufresne, jr., of St. Laurent, carpenter and joiner's work, Isaie Lalonde, of St. Henri; roofing, heating and plumbing, Blouin, Desforges & Latourelle; painting and glazing, Eug. Berthelette. One residence at Valleyfield for R. S. Joron—all trades to Damase Joron. One villa at

Cartierville, two stories, for R. O. Pelletier—all trades to Einauel Lecavalier. Four houses on Victoria street, Westmount, three stories, for Chs. Depocas—masonry, Jos. Lapointe; carpenter and joiner's work, Isaie Lalonde. M. C. St. Jean, architect, interior of St. Therese church, for the Rev. M. Pilon—plastering, Jos. Fabien; estimated cost, \$5,300.

OBLIGATIONS OF CONTRACTORS.

The term "entire contract" which is often used with reference to building contracts, has two distinct meanings: (1) In its ordinary meaning it is a contract to do the whole of a piece of building work as opposed to contract to do one or more of the component parts of the work. It is a common thing to undertake an entire contract in this sense and to apportion it out among sub-contractors, who are responsible to the contractor and not to the building owner, and for whose acts and defaults the building owner is, as a general rule, not liable. (2) In its legal meaning it is an indivisible contract, one where the entire fulfilment of the promise by either party is a condition precedent to the right to call for the fulfilment of any part of the promise by the other. In this sense it is opposed to divisible, severable, or apportionable contracts.

In the first sense the contractor is responsible for the performance by the sub-contractors of the parts of the work sublet to them, and the building owner has no remedy against them under the principal contract with the contractor. In the second sense it is of great importance to the builder on the question of performance and payment to know how far his right to

payment is contingent on complete performance of the whole bargain as to time, workmanship and materials, and whether he can or cannot insist on payment for any portion of the work before the whole is done. And on the other hand, it is of importance to the employer to know whether the builder is bound to finish the whole work.

Entire contracts may be of various kinds. There may be a contract to do the whole work in consideration of payment of a lump sum. Or the contract may be to do the whole work in consideration of payment of different sums for different parts of the work. Or the contract may be to do the whole work followed by part performance, no mention of price being made. Or the contract, again, may be to do all the parts of a whole work, or to do so many entire contracts. Payment on account or by instalments may (depending upon the construction of the contract) merely entitle the builder to payment of instalments as they accrue due, still leaving him liable for non-performance of the whole; or the entirety of the contract may be destroyed and the payment made apportionable, thus releasing the builder from any other liability than to complete that portion of the contract upon which he has started.

It is a general rule that, while a special contract to erect a house or other building remains open—i.e., unperformed—the builder cannot sue to recover any compensation for work and labour, nor can he maintain an action on the contract for what he has done until the whole is completed. For a builder is not entitled to

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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.

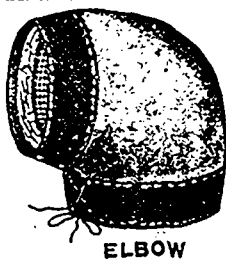
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recover the value of the building materials employed by him in building a house for the defendant, under a claim for goods sold and delivered. But where a builder engages to build a house, to be paid for his work and labour and the materials supplied by measure and value, or according to the customary rate of valuation, he is entitled to demand payment from time to time as the work proceeds. By agreement contained in the original contract the right may be given in certain events, or in case of deviations and alterations, to reduce the debt or claim arising under it by set-off; and where subsequently to a building contract the employer agreed to supply part of the materials, it was held that he was entitled to deduct from the contract prices the value of the materials so supplied. So where the employer had done part of the work himself, it was held that the contract prices must be diminished by the value of that portion of the work.

When plans and a specification for the execution of a certain work are prepared for the use of those who are asked to tender for its execution, the person asking for the tenders does not enter into any implied warranty that the work can be successfully executed according to such plans and specification. The contractor for the work cannot therefore sustain an action for damages as upon a warranty should it turn out that he could not execute it according to such plans and specifications. The mere employment of an architect to prepare plans and a specification for a house, and to procure a builder to erect it, does not render the employer responsible for the accuracy of the bill of quantities furnished by such architect to the builder.

Where a person undertakes and is employed to perform a work of skill and labour, and fails therein, so that his employer derives no benefit from the work, the former is not entitled to recover his demand, as the employer buys both his labour and his judgment, and he ought not to undertake the work if he does not know whether he can succeed or not. If a surveyor makes an estimate which turns out to be incorrect to a considerable amount through his omitting to examine the ground for the foundation of the work, he

is not entitled to recover anything for his plans, specifications, or estimates made for that work. In an action on a special contract for work done under the contract and for work, labour, and materials generally, the defendant may give in evidence that the work has been done improperly, and not agreeable to the contract, and the plaintiff in that case will only be entitled to recover the real value of the work done and the materials supplied.

(Concluded in next issue.)

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cement on the lines thus traced, and having thus formed his arch except the crown brick it is carefully raised and in two parts placed upon the walls. They proceed thus till the whole is finished. This part is only half a brick thick, but it serves them to turn a stronger arch over it.

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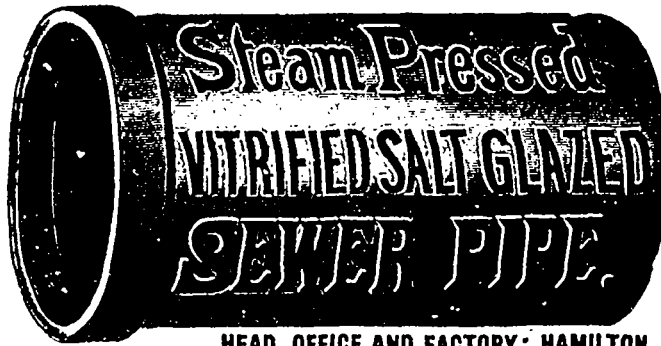
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The **CONTRACT RECORD** is desirous of publishing, as far as possible, advance information regarding projected works of construction in all parts of Canada, such as sewerage and waterworks systems, railways, street pavements, public and private buildings, etc. Municipal officers would confer a favor upon the publisher by placing at our disposal particulars of such undertakings which are likely to be carried out in their vicinity, giving the name of the promoter, character of the work, and probable cost. Any information thus furnished will be greatly appreciated.

VALUABLE REPORT ON ROAD- MAKING.

Mr. A. W. Campbell, Provincial Instructor in Road-Making for Ontario, has issued his first annual report, which is a work of much interest and value to municipal officers, councillors, etc., containing as it does suggestions and methods for improving the streets in towns, villages and the country. Any person desiring a copy of the report may obtain the same upon application to the Department of Agriculture, Toronto.

CEMENT-CONCRETE SIDEWALKS.

Under the above heading Mr. Campbell says :

In connection with the improvements streets, there is a widespread tendency to replace wooden sidewalks with others of more permanent material. In fixing grades it will generally be necessary to undertake the construction of the entire street roadway, sidewalks, boulevards—if the best results are to be attained, and for the purpose of economically and easily handling the excavated earth. Wooden sidewalks are lacking in durability, need constant attention to keep them in a safe condition, are not agreeable to walk on when a little worn, and will, in their ultimate cost, be found more costly than those of cement-concrete.

In constructing this latter class of walk, the space over which it is to be laid should be excavated to a depth of twelve inches below the top of the proposed walk, perishable or objectionable material being removed to a greater depth if necessary. The bottom of the excavation is then

compacted by pounding or rolling until as firm as possible.

On the bed so prepared a layer of clean gravel or broken stone is spread to such a depth as will give, on thorough consolidation, a thickness of seven inches. Temporary curbs of pine should be set on each side of the excavation, to be removed after the walk has hardened.

On this foundation, and in the mould formed by the curbs, is placed four inches of concrete, which should be composed of small broken stone, of a size not greater than one and a quarter inches in any direction, and entirely free from dirt or dust; clean screened gravel, sharp sand and Portland cement. This should be thoroughly rammed, and may be of the following proportions :

Cement	1 part
Broken stone	5 parts
Clean gravel	2½ parts

Slab or flag divisions are then marked off from 16 to 20 feet in length. This provides for settlement, expansion and contraction from frost, and lessens the tendency of the walk to crack irregularly from these causes. The joints should be filled with sand or other approved separating material.

Before the concrete has set, and while it is still adhesive, there should be laid on it a wearing surface one inch in thickness. This surface coating may be composed, if a sand finish is desired, of :

Portland cement	2 parts
Sharp sand	3 "

Over this should be sifted a layer of the best Portland cement, the whole to be then levelled, neatly trowelled, and rolled with a tooth roller to make a surface which will not be slippery. A more durable surface coating, known as granolithic, may be had by using broken granite in place of the sand. This broken stone should have a square or cubical fracture, be clean and fresh, and of sizes three-eighths of an inch downward. The composition will then be :

Portland cement	2 parts
Broken granite	3 "

The work should be kept moist, and protected from the rays of the sun with canvas, until thoroughly set. Traffic should be kept off for a period of about fifteen days.

The various parts, cement, sand

and broken stone, should be measured and mixed when dry, water then added as required, and the whole again thoroughly manipulated and mixed. There is a great necessity for careful and skilled workmanship, and an experienced man should have charge of the work.

If the sub-soil is of a nature to retain water, is low-lying and not sufficiently underdrained, a line of common field tile should first be placed below the centre of the walk. The surface of the finished walk should have a slope towards the gutter of one-quarter of an inch to each foot of width.

When built by a contractor, he should be required to guarantee that the walk shall last and remain in all respects in perfect order and condition, and free from all cracks and defects, and of perfect hardness, consistency, smoothness and finish, for at least the term of five years from the date of its completion, unless subjected to other influences than the ordinary effects of wear and weather.

Colonel Waring is, as he should be, a man of ideas, and one of his latest ones, says the American Architect, is that a great deal of unnecessary waste goes on in New York, owing to the practice of throwing all kinds of rubbish indiscriminately into the sea, or burning it as garbage. It is said that a certain contractor, before Colonel Waring's time, made a fortune every year by monopolizing the privilege of picking over the garbage before it was put on the dumping-scows, and preparations are now being made for having the city do its own picking over, by having the dry refuse, or what the street-cleaning department calls "paper," dumped on an endless belt, which moves slowly between two rows of men, who pick out the bottles, corks, tin cans and other things that can be utilized. How much profit there will be in this operation remains to be seen, but, as Colonel Waring says, if every family of ten people should waste five cents' worth of utilizable matter per day, and the city could save it, the proceeds would amount to nearly four million dollars a year, or enough to pay the expenses of the street-cleaning department, and the cost of sprinkling the streets in addition.

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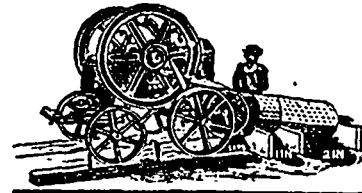
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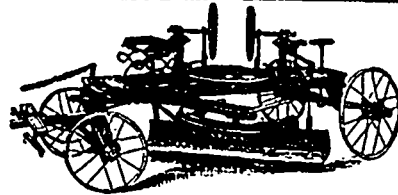


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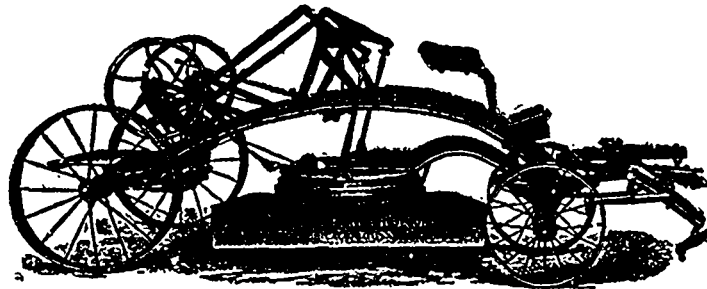
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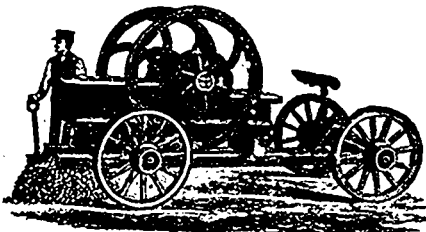
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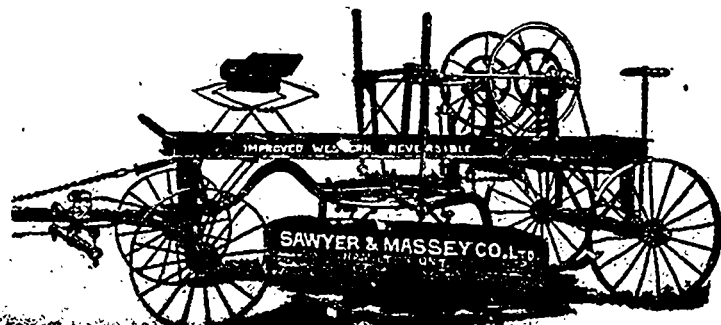
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In the "Canadian Architect and Builder."

Index listing various contractors and their services, including Architects, Contractors' Plant and Machinery, Interior Decoration, Reflectors, Roofers, Legal, Lumber, Machinery, Engravers, and others.

Table listing Kent Free Stone Quarries Moncton, N.B., with prices for various stone types like River John, N.S., and Quebec and Vermont rough granite.

Table listing Cement (Continued) with prices for Hydraulic Cements, Thorold, Queenston, Napanee, Hull, Ontario, Keene's Coarse Whites, Fire Bricks, and Lime.

Table listing Slate with prices for Roofing (per square) in red, purple, unisiding green, and black.

Table listing Hardware with prices for Cut nails, Steel nails, and Cut spikes.

Table listing Paints (In oil, lb) with prices for White lead, Zinc, Red lead, Venetian, Vermillion, Indian, Yellow ochre, Yellow chrome, Green, Paris, Black lamp, Blue, Ultramarine, Oil, linseed, raw, by bbl., Imp. gal., Oil, linseed, refined, Imp. gal., Putty, Whiting, dry, per 100 lbs., Paris white, Eng., dry, Litharge Eng., Sienna, burnt, Umber, Turpentine.

Table listing Iron Pipe with prices for Iron pipe, 1/2 inch, per foot, and Lead Pipe.

Table listing Portland Cements with prices for Gernar, London, Newcastle, Belgian, Jossou, artificial, North's "Condor", English, artificial, per bbl., Belgian, natural, per bbl., Canadian, Roman, Farian, Superfine.

Table listing Galvanized Iron with prices for Adam's-Mar's Best and Queen's Head, 16 to 24 gauge, per lb., 26 gauge, 28, Gordon Crown, 16 to 24 gauge, per lb., 26 gauge, 28, and Structural Iron.