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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 THROUGHOUT CANADA.

Vol. 5.

OCTOBER 18, 1894

No. 37

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY THURSDAY

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

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C. H. MORTIMER, Publisher,

CONFEDERATION LIFE BUILDING, TORONTO.
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New York Life Insurance Building, Montreal.
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Information solicited from any part of the Dominion regarding contracts open to tender.

Advertising Rates on application.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Ontario Association of Architects signified its approval of the CANADIAN CONTRACT RECORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

The following resolution was unanimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, Oct. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. F. Dunlop, that we the Architects of the Province of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT RECORD affords us a direct communication with the Contractors,—Resolved, that we pledge our support to it by using its columns when calling for Tenders."

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Notice to Contractors

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A new and thoroughly revised edition of the Canadian Contractor's Hand-Book, consisting of 150 pages of the most carefully selected material, is now ready, and will be sent post-paid to any address in Canada on receipt of price. This book should be in the hands of every architect, builder and contractor who desires to have readily accessible and properly authenticated information on a wide variety of subjects adapted to his daily requirements.

Price, \$1.50; to subscribers of the CANADIAN ARCHITECT AND BUILDER, \$1.00. Address

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Send for a copy of the second edition of the CANADIAN CONTRACTOR'S HAND-BOOK. Price, \$1.50; to subscribers, \$1.

TO ENGINEERS AND CONTRACTORS

Sealed tenders, marked "Water Works," will be received by the undersigned on or before the

FIRST DAY OF NOVEMBER, 1894,

for the plans, specifications, surveys and supervision of a Complete System of Water Works, Sewerage and Electric Light, in the town of Sudbury, Ontario.

For particulars apply to R. T. MacEwan, Chairman of Fire, Water and Light Committee, Sudbury.

The lowest or any tender not necessarily accepted.

ARTHUR FERRIS,

Clerk Town of Sudbury.

Sudbury, Ont., Oct. 13th, 1894.

BARTER AND EXCHANGE.

This department has been opened for the speedy barter and exchange of second-hand plant or material, or small lots of new or second-hand materials by builders and others not regularly engaged in the sale of such articles. Advertisements other than those of the above description will not be inserted.

RATES—12 words and under, 15 cents; each additional word, 1 cent (three figures count one word), on two or more subsequent insertions a discount of 10 per cent. will be allowed. Not more than four insertions of an advertisement can be granted.

Replies to advertisements may be addressed to a box at this office, in which case necessary stamps must be sent for re-mailing replies. Advertisements for this department must be prepaid.

FOR SALE—Wood and glass partition, 9 feet high, 18½ feet long, including door 3½ feet. Pine, natural finish, ground glass in panels. In use little more than a year. Cost over \$30; will be sold at a sacrifice. Box 50, CONTRACT RECORD office.

BUILDING MATERIALS AND FIRE.

The supervising architect of the Treasury Department, Mr. Mullett, in 1872 made the following statement at that time: Cast iron, absurd as the statement may appear, will not resist as much heat as good, sound oak timber of the same dimensions. Fire expands the iron and breaks it very easily. Indeed, if oak timber should be treated by any of the processes of liquid silicate, or other non-combustible ingredient, it may be considered almost a fire-proof material compared with cast iron. As for stones suitable for building purposes, as I told you before, there are few that are fire-proof, though some approximate the necessary conditions, and, except in severe conflagrations, may be generally depended upon. Granite, marble and sandstone are not to be trusted, as they soon perish by exposure to the heat, as has been shown a thousand times. But I am strongly in favor of liquid silicate as a preparation for wood to be used for building purposes. My attention was directed to this material some years since, but I have not had an opportunity to investigate the subject fully. I believe, however, that it merits more attention than any other suggestion that has been made public, and may yet prove one of the most practical solutions of the question of non-combustible construction that has yet been offered. Whether this or some other process for making wood incombustible is the more desirable, I am not prepared to say. I am, however, decidedly of the opinion that any process by which wood can be rendered non-inflammable at a reasonable cost would

not only be an inestimable blessing to the public, but its use should be rendered imperative by law.—Exchange.

CONTRACTS OPEN.

REGINA, N. W. T.—J. R. Marshall is preparing to erect a carriage shop and dwelling.

VALLEYFIELD, QUE.—The Montreal Cotton Company will erect a number of cottages here next spring.

NIAGARA FALLS, ONT.—The Dominion Suspender Company will erect a new building next spring, 100 x 50 feet.

WOLFVILLE, N. S.—A company has been formed to build a new hotel, to cost \$25,000. Work is to be commenced this fall.

HUTTONVILLE, QUE.—The Hutton Electric Light Company will probably purchase a new alternating current dynamo

VANCOUVER, B. C.—N. S. Hoffar, architect, has prepared plans for a brick and stone block to be erected by J. F. Gardner.

HALIFAX, N. S.—The City Treasurer will receive proposals until the 8th of November for a loan of \$20,000 for sewerage purposes.

MONCTON, N. B.—Alex. Carter has prepared plans for a large ice rink, 200 x 100 feet, to be erected on Church street. Construction work will be commenced at once.

NANAIMO, B. C.—The City Surveyor is preparing an estimate of the cost of obtaining a water supply from the Nanaimo river. It is thought the cost will be about \$120,000.

KNOWLTON, QUE.—A by-law will likely be submitted to the ratepayers by the Council asking for authority to raise funds to construct a system of waterworks and sewerage.

GUELPH, ONT.—An effort is being made to organize a company to build a rolling mill for the manufacture of iron. Particulars may be obtained from James Watt, President of the Board of Trade.

EDMONTON, N. W. T.—The construction of a bridge across the river at this place will probably be commenced at an early date by the Dominion Government. The cost will be about \$60,000, and the Town Council has agreed to make a grant of \$15,000.

OTTAWA, ONT.—Mr. Fuller, chief architect of the Public Works Department, has had plans prepared of a proposed dairy building, which is to be erected adjacent to Rideau hall. It will be fitted up with all the latest appliances.

WINDSOR, ONT.—Tenders are invited by the City Clerk until to-day, (Thursday), for the construction of the Cameron avenue sewer.—Mr. McLean, architect, has prepared plans for the proposed Children's Home. The cost will be in the neighborhood of \$7,000.

WINNIPEG, MAN. H. McCowan, architect, has prepared plans for improvements to the Oddfellow's hall, corner Princess street and McDermott avenue.—C. H. Wheeler, architect, is preparing plans for a stone basement under the Harris block, corner Main and Market streets.

LONDON, ONT.—Building permits have been granted as follows: T. Macbeth, residence, corner Ridout and Maple streets, cost \$3,000; Peter McKenzie, two storey brick veneer cottage on John street, cost \$1,000; J. H. Vanstone, two-storey brick residence, Stanley street, cost \$1,600.

BROAD COVE, C. B.—W. P. Hussey, Manager Broad Cove Coal Company, invites tenders until the 25th inst. for dredging and building a breakwater at this place. Plans may be seen at the office of Wm. H. Wiswell, County Treasurer, Halifax, N. S.; Bacon Bros., St. Paul st., Montreal, and at the Superintendent Engineer's office, Broad Cove.

MEAFORD, ONT.—On the 23rd of November the ratepayers will vote on a by-law authorizing the expenditure of \$20,000 for waterworks purposes. The items are as follows: engine house, \$1,000, one set duplex pumping engines, \$2,000, storage tank, \$2,000; 400 feet 10 inch suction pipe, \$1,400; 1½, 100 feet of distributing main, \$12,400; hydrants, \$950; stop valves, \$250.

HAMILTON, ONT.—W. A. Edwards, architect, is calling for tenders this week for the erection of a brick residence on Catherine street south.—Building permits have been granted as follows: John Martin, 2 two-storey brick dwellings on Kinade ave., cost \$1,800; R. J. Larkin, two-storey brick house, Simcoe street, cost \$2,200; E. Patterson, two-storey brick house, Augusta street, cost \$1,250.

MONTREAL, QUE.—At the next meeting of the Richelieu and Ontario Navigation Company the advisability of building two new steamers for the lake route will be discussed. It is said the company have decided to erect temporary workshops at Sorel and to build permanent ones in this city at a later date. A railway from Bay Chaleurs to Sault Ste. Marie via Montreal will probably be built in the near future. The Montreal, Sorel and Bay de Chaleurs Railway Company are said to be negotiating a loan of £4,000,000 for the purpose. The Council of Cote St. Antoine have decided on the erection of a new city hall and fire station.—The cost of repairing Jacques Cartier Square has been estimated at \$24,000. The matter has been referred to the Market Committee. Mr. C. St. Jean, architect, has prepared plans for a stone front cottage for Mr. L. M. Naulin.

TORONTO, ONT. Thomas Crawford, Chairman Property Committee, will receive tenders until Thursday, the 25th, inst., for making alterations and improvements to the stalls at the south end of St. Lawrence Market. Plans may be seen at

the office of the City Commissioner, City Hall. The cost of the work is not to exceed \$4,000.—At a recent conference of the Council of the Board of Trade with several city representatives, regarding the feasibility of building the Nipissing and James Bay railway, a resolution was passed urging the Nipissing and James Bay Railway Company to proceed with the speedy construction of the road. Mr. A. Kent has purchased a lot on Walmer road.—The Metallic Roofing Co. of Canada are contemplating the removal of their Montreal factory to Toronto, and have written to the Property Committee asking for a lease of a site on the north-east corner of King and Dufferin streets.—It is stated that a Masonic temple, costing upwards of \$250,000, is to be erected in this city, on a central site. The Committee of Management will be composed of three representatives from each local lodge.—In his fortnightly report presented to the Board of Works on Monday last, the City Engineer recommended the construction of a 12-foot cement concrete walk on the east side of Church street, from King street to Front street. Permission was also asked to ask for tenders for the crib work necessary for the extension of the city dock at the foot of Frederick st.—Mr. A. A. Dickson will erect a large residence on Walmer Road. Mr. F. H. Herbert, architect, will prepare the plans. Mr. Herbert has also in charge the erection of 3 pair of semi-detached residences at Cote St. Antoine, Montreal.

FIRES.

A building at Kincardine, Ont., owned by the Merchants' Bank of Canada, was destroyed by fire on Tuesday last.—The carriage shop and dwelling house of W. H. Todd, at Goodwood, Ont., was burned to the ground a few days ago. Loss, about \$10,000; insurance, \$4,000.—Geo. Hunter's drug store at Sault Ste. Marie, Ont., was gutted by fire on the 12th inst. Loss covered by insurance.—Jas. Elliott's house at Ameliasburg, Ont., was destroyed by fire recently: insurance, \$1,500.—The Robinson Fish Company's large warehouse at Selkirk, Man., was consumed by fire on the 15th inst. The loss will reach \$40,000, which is mostly covered by insurance.

CONTRACTS AWARDED.

OTTAWA, ONT.—The tender of Torney & Geogeson has been accepted for heating the Maternity Hospital with steam.

AYLMER, QUE.—R. & W. Conroy have awarded the contract to Ahearn & Soper, of Ottawa, for supplies and the necessary dynamos for an electric light system.

TORONTO, ONT.—Messrs. D. McIntosh & Sons, of this city, have been awarded the contract for the erection of the pedestal for the statue of Sir John A. Macdonald in Queen's Park.

KINGSTON, ONT.—Contracts for James Browns new house, corner William and Wellington streets, have been let as follows: masonry, A. Gallinger; carpentry, O'Reilly & Hooper; plumbing, McKelvey & Buch; painting, T. Milo.

HAMILTON, ONT.—Brace Bros. & McNair, of Chicago, have been awarded the contract for the grading, trestles, culverts and masonry for the Toronto, Hamilton and Brantford railway from Brantford to the site of the west end station in this city.—The following tenders were received last week by the Board of Works for the construction of sewers, the lowest tender in each case being accepted. J. W. Blasdel—Young street, 34c.; Victoria ave., 48c.; John street and Alma ave., 90c.; Dominion and Markland streets, 61c. E. C. Murton—Victoria ave., 59c.; Young street, 44c.; Dominion street, 78c.; John street, \$1.43. David Newland—Young street, 55c.; Dominion street, 53c.; Victoria ave., 34c. J. J. Armstrong—Young street, 29½c.; Dominion street, 90c.; Victoria ave., 32½c. Wm. Spence—Dominion street, 75c.; John street, 99c.; Victoria ave., 32c.; Young street, 75c.—David Baird—Young street, 28c. Thomas Law-

son—Dominion street, 52c.; Victoria ave., 37c.; Young street, 32c.

MONTREAL, QUE.—The Road Committee last week accepted the following tenders: special castings, Wm. Rodden & Co., \$38.90 per ton; cast iron water pipe, Canada Pipe and Foundry Co., \$35.95 per ton; drain in St. Ignace street, from Rivard to Carrieres street, A. Benoit, \$5.27 per yard for ordinary work and \$4 for rock; drain on Panet street, from existing sewer to Sherbrooke street, P. J. Murray, \$5.14 per yard and \$4 for rock.—Mr. C. St. Jean, architect, has awarded contracts as follows:—Furnishing of church at St. Césaire, D. A. Beaulieu; floor tiling at the "Hospice Auclair," G. Baccarini. For a three storey stone front tenement building on Amherst street for Mr. Desforges as follows: masonry, M. Paquette; carpenter and joiner's work, H. Chagnon; brickwork, O. Deguise; painting and glazing, A. Garière. Fireproofing to the Deaf and Dumb Institute, A. Rousseau.—Messrs. Dunlop & Heriot have awarded the contracts for Mr. Hugh Graham's residence, corner Sherbrooke and Stanley streets, as follows: excavation and masonry, J. H. Hutchison; brickwork, T. W. Peel.—Mr. W. McLea Walbank has awarded contracts for the erection of a stable in rear of Drummond street for the Taylor estate as follows: masonry, J. B. St. Louis; carpenter and joiner's work, Beckham & Scott; roofing, G. W. Reed; iron work, R. Donaldson & Sons.

HOW TO MAKE AND LAY FLOORS, ROADS AND PATHS.

Floors.—Portland cement is used to a great extent as the chief material for making floors, and there is little doubt of its answering well for that purpose, if laid sufficiently thick and the material gauged in a proper manner.

For this purpose the cement ought to be gauged with an equal quantity of sharp sand, free from clay, both for first coat and for the second: for if the first coat is gauged with a greater quantity of sand than the second they will not bind together. Besides, pure cement swells more in setting than cement mixed with sand; therefore, if the finishing coat is made finer than the first coat it will be liable to blister, and so destroy the floor. The sand for the last coat should be well washed, and the two coats need not exceed 1 inch in thickness.

In many parts of England, where there are plaster mills near at hand, it is usual to lay plaster floors. But this plaster is of a much rougher kind than that which is generally used: in fact, it is a sort of dross from the mills. These floors are laid about 2 inches or 2½ inches in thickness, and finished at one operation. A plaster floor of Welsh lime is thought to be as good as grey plaster, and can be done at a third less cost.

Plaster as a Substitute for Wood Floorings.—M. Julhe has brought before the notice of the French Academy of Sciences a number of experiments made by him regarding the more extensive use of plaster, by such means as substituting it for wood in the construction of flooring.

His idea is based upon the augmentation of volume which takes place in plaster, after its application, while other mortars or cements, as well as wood, are liable to shrinkage or cracking as consequences of desiccation. When applied in layers

of sufficient thickness to resist breaking, it is unaffected by time and atmospheric changes, provided it is not exposed to water.

Two properties are, however, still needed before plaster could be used in the general manner indicated—hardness and resistance to pressure from above—and these M. Julhe considers he has found a method of supplying. He thoroughly mixes 6 parts of superior plaster with 1 part of fat lime, recently slaked and finely sifted. This composition is applied in the same manner as ordinary plaster. When dried, the object produced is steeped in a solution of any sulphate with a base capable of being precipitated by lime and an insoluble precipitate. Sulphate of iron and sulphate of zinc are the most suitable agents. The lime in the pores of the plaster decomposes the sulphate, and two insoluble substances are produced—sulphate of lime and oxide—which fill the pores of the object treated.

With sulphate of zinc the plaster remains white, and with sulphate of iron it passes through a greenish stage, by the action of time and desiccation, into the tint which characterises sesquioxide of iron. By using sulphate of iron greater hardness of surface is produced, and the resistance is twenty times that of ordinary plaster.

The proportions of lime and plaster are not exactly fixed, but may be varied in accordance with the results sought to be obtained. Still, the proportion of 1 to 6 has been found by M. Julhe to give the most satisfactory results. It is also recommended not to pass and re-pass the trowel for too long a time, the quickest workmen being the most suitable for this operation.

By using sulphate of iron an aspect of rust is obtained, but if there is passed over the surface some lithargized linseed oil (a little browned by heating), a mahogany tint is produced, while a certain superficial elasticity is likewise gained. The shade is improved by the use of a layer of hard copal varnish. A layer of plaster, 2½ inches to 3¼ inches in thickness, treated in the manner indicated, will make a perfectly smooth flooring, quite applicable as a substitute for oak, and at a quarter the price.

Gravel Walks.—Fifteen bushels of gravel, from 3 to 5 bushels of sand, and from 1 to 1½ bushels of lime. Coarse gravel requires more sand.

PAVING.

1 yard super.	requires 35	stock bricks laid flat.
"	" 54	" laid on edge.
"	" 34	paving bricks laid flat.
"	" 88	" on edge.
"	" 13	tiles (10 in.)
"	" 9	" (12 in.)
"	" 70	clinkers laid flat.
"	" 140	" on edge.
"	" 75	" herring-bone.

Paving (York) for ordinary purposes, 2½ inches to 3 inches. A *step of soft stone*, rendered with ¾ inches thickness of 1 Portland cement and 1 sand, will wear very well.

Concrete Paving, for racquet court, 6 in. thick (1 cement, 2 sand, 5 stone) of which the upper 2 in. are fine, covered with ¾ in. asphalt.

For ordinary paving, 4 in. cement concrete is generally sufficient.

Tar Pavement is composed of gravel, Kentish rag, limestone, granite, etc., mixed with tar—twelve gallons of purified coal tar to every cubic yard of stone. If the local coal tar is too thin, pitch should be added.

For road pavement 6 in. to 9 in. thick, the bottom layer (three-fourths total thickness) is of stone, broken to pass through a 3 in. sieve; the remainder to pass through a 1½ inch sieve.

For pavement 3 in. to 4 in. thick, the bottom layer (five-eighths total thickness) is of stone, broken to pass through a 2½ in. sieve, then a middle layer (one-fourth total thickness), to pass through a 1 in. sieve; the remainder (one eighth total thickness) to pass through a ½ inch sieve.

For pavement 2½ in. thick and under, bottom half is of stone, broken to pass through a 1½ in. sieve; then a layer one-third whole thickness, to pass through a ½ inch sieve.

Laying Tar Pavement Floor, 6 in. thick—Lower course 3 in. thick, stone to pass through a 2½ in. sieve. Middle course 2 in. thick, stone to pass through a 1½ in. sieve. Upper course 1 in. thick, stone to pass through a ¾ in. sieve. To be finished off with a top dressing of clean coarse grit. A 6 inch bed of concrete is first made, and allowed to stand fourteen days.

Gravel is screened, washed and then burnt, as follows: An ordinary fire of coals and wood made on the ground, and a layer of stones added when the fire has become strong. As combustion goes on lumps of coal are added and again covered with fresh stones. As the heat increases the amount of coal may be lessened. It should be kept burning night and day.

After about two days it may be found convenient to rake down the heap and enlarge the base. Stones may then be wheeled on to the top in barrows, coal being added as before. The burning should be carried on about five or six days by the gradual addition of stone and coal. The mass may then be shoveled into a conical form, and the fire allowed to burn out, which will take twenty to twenty-four hours.

MUNICIPAL DEPARTMENT.

A recent issue of the Pembroke Observer furnishes us with some interesting particulars regarding the new water works of that town, which were planned by Mr. Willis Chipman, C. E., of Toronto, the contractors being Messrs. Wm. Murray & Co., of Pembroke. The source of supply is Lake Allumette, an expansion of the Ottawa river. The intake pipe will deliver 1,200 gallons a minute, and is 2,300 feet long. The pump is a compound duplex, non-condensing engine, with a high pressure cylinder of 12 inches in diameter, and a low pressure cylinder 18½ inches in diameter. It makes 50 strokes per minute, pumping 750 gallons, or at the rate of a million gallons per day. By means of a valve the contents of the sand pipe can be discharged back through the intake pipe, thus flushing the intake and clearing out the screens. The boilers are large enough to furnish power for an electric light plant if necessary. In all there are 34,167 feet of piping laid. The cost of the system was \$45,320.

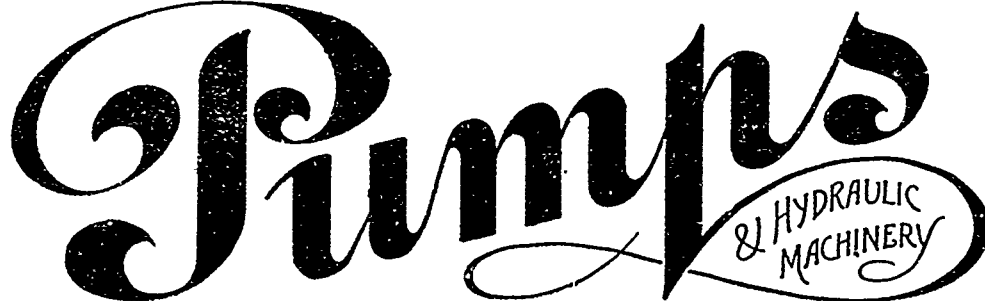
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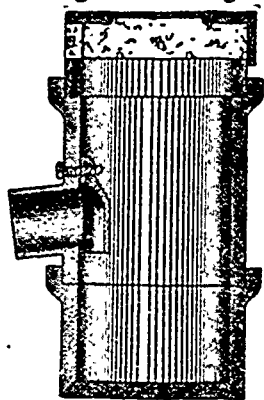
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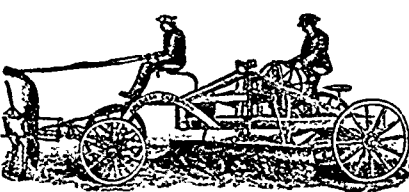
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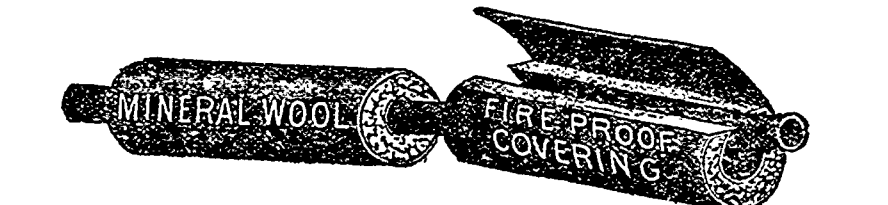
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