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# THE Canadian Contract Record

A Weekly Journal of Advance Information and Public Works.

Vol. 1.

Toronto and Montreal, Canada, June 7, 1890.

No. 17

## THE CANADIAN CONTRACT RECORD,

A Weekly Journal of Advance Information and Public Works.

PUBLISHED EVERY SATURDAY

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

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The purpose of this journal is to supply Contractors, Manufacturers and Dealers throughout Canada, with advance information regarding contracts open to tender, and to furnish Architects, Municipal and other Corporations with a direct medium of communication with Contractors.

Information from any part of the Dominion regarding contracts open to tender will be gratefully received.

### 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 publisher of the "Canadian Contract Record" desires to ensure the regular and prompt delivery of this Journal to every subscriber, and requests that any cause of complaint in this particular be reported at once to the office of publication. Subscribers who may change their address should also give prompt notice of same, and in doing so, should give both old and new address.

### BRICK PAVEMENTS.

MR. OSCAR BRASHEAR, Mayor of Stebenville, Ohio, writes to the *Western Architect and Building News* as follows concerning the brick pavements of that city and the mode of making them :

In the spring of 1884 this city put down as an experiment one block of pavement made of hard burned firebrick, and after using it three years concluded to adopt it, and to-day our streets are all complete with brick pavement. The first block, now down five years, is to all appearances as good as those just completed. Now I will give you in detail our method of paving. First—By all means know that your materials are good. Second—Excavate your street to a depth of twenty inches ; put in a good foundation of gravel or broken stone and raise to within ten inches of surface of grade, allowing in this ten inches six inches of sand and four inches depth of brick. After foundation materials have been put in place, you should get a heavy roller, not less than twenty tons. Roll and reroll until made perfectly compact, then put on your sand to depth of six inches, and shape with a broad scraper from centre of elevation to curb line, then lay your brick, and before spreading any sand on them take and roll complete and then spread on sand to close cracks. The pavements are comparatively noiseless, very durable, clean, easy on horses and vehicles, and in this country, where fire-clay is plenty, our pavements cost, complete, \$1.25 per square yard.

The Canadian Contractor's Hand-Book, 50 cents to RECORD subscribers.

### REMOVAL OF GREEN DISCOLORATION FROM BRICK-WORK.

An efficient method of removing green discoloration from brickwork is by the use of very weak solution of impure carbolic acid, as weak as 1 per cent., and in some cases, where the growths have just started, a still weaker solution. The mode of applying is about thus. A wineglass full of impure carbolic acid is placed in an ordinary bucket of water and thoroughly mixed before applying with a broom to all the affected surfaces. This then is allowed to remain for some little time, when the whole stoop or surface may be washed with a hose and the growths come off. The rubbing to remove the growth must not be done immediately after applying the solution, as the process going on is that of the solution destroying the growths, and thereby loosening their hold. Thus if the solution is applied a short time before a rain-storm, the rain when it arrives does the most of the after work. But should the solution be applied in the morning, for instance, the hose washing the next morning would be effectual. However, if the growths were very old and of long standing, it may require two or three such applications as the above, but in any case this operation will be found very successful.

### DISCHARGE OF STEAM THROUGH ORIFICES.

While the question of steam discharge through orifices has been ably investigated from a theoretical standpoint, there is a lamentable deficiency of experimental data on the subject. The following table calculated for steam pressures ranging from 10 to 150 pounds per square inch above the atmosphere will, therefore, prove valuable. It has been calculated by means of formula given in a Report on Safety Valves in the Transactions of the Institution of Engineers and Shipbuilders in Scotland, and stated to agree with the results of experiments for pressures not lower than 10 pounds per square inch with a surprising degree of exactness :

VELOCITY OF EFFLUX OF STEAM INTO THE ATMOSPHERE.

Gauge Pressure.	Velocity of Discharge in Feet per Second.	Pounds of Steam Discharged per Minute per Square Inch of Opening.
10	861	22.2
15	867	26.6
20	871	30.9
25	874	35.3
30	877	39.5
35	880	43.8
40	882	48.0
45	884	52.3
50	886	56.5
55	888	60.7
60	890	65.0
65	892	69.3
70	894	73.5
75	895	77.6
80	896	81.9
85	898	86.0
90	899	90.3
95	900	94.4
100	902	98.6
110	904	106.9
120	906	115.2
130	908	123.5
140	910	131.9
150	912	140.2

For obvious reasons no table can be calculated for the flow of steam through pipes since the element of pipe length there must be considered, and no two cases in practice would have the same length of pipe. In Robert Briggs' "American Practice in Warming Buildings by Steam," however, extensive tables are given for different conditions to which it may be interesting to refer.—*Engineering and Building Record.*

CALENDAR.											
1890				1890				1890			
Jan.	Tue.	Wed.	Thu.	May	Sat.	Sun.	Mon.	Sept.	Tue.	Wed.	Thu.
1	2	3	4	1	2	3	4	1	2	3	4
5	6	7	8	5	6	7	8	5	6	7	8
9	10	11	12	9	10	11	12	9	10	11	12
13	14	15	16	13	14	15	16	13	14	15	16
17	18	19	20	17	18	19	20	17	18	19	20
21	22	23	24	21	22	23	24	21	22	23	24
25	26	27	28	25	26	27	28	25	26	27	28
29	30	31		29	30	31		29	30	31	

# CONTRACTS

## CONTRACTS OPEN.

**BEALTON, ONT.**—The Methodists will erect a new church.

**COMBER, ONT.**—A new brick block will be built this summer.

**MIDLAND, ONT.**—The Presbyterians have decided to build a manse.

**STANLEYVILLE, ONT.**—The Catholics are about to build a new church.

**DEHLI, ONT.**—A new Presbyterian church is to be erected this summer.

**WAVERLY, ONT.**—St. John's Parish are collecting funds for a new church.

**OTTAWA, ONT.**—Tenders are asked for the construction of an electric street railway.

**ELORA, ONT.**—Money is being subscribed for the erection of a tower for St. John's Church.

**ORILLIA, ONT.**—Mr. Croker invites tenders for the erection of two brick school houses in Section No. 1 South Orillia.

**DARTMOUTH, N. S.**—The sum of \$122,000 is to be borrowed for the establishment of a ferry and school purposes.

**WOLSELY, N. W. T.**—Tenders will be asked for the erection of a stone or concrete school building to cost about \$2,000.

**BRANTFORD, ONT.**—Tenders are wanted for the erection of a telegraphic fire alarm system. Address Chairman Fire, Light and Sewers Committee of the council.

**SMITH'S FALLS, ONT.**—Subscriptions are being asked by the Anglican clergy towards the erection of a permanent residence for the Bishop, to cost about \$12,000.

**GANANOQUE, ONT.**—Mr. Willis Chipman has at the request of the council reported on the cost of a water-works system. His estimate is \$43,000; or \$19,000 for fire purposes only.

**PORTAGE LA PRAIRIE, MAN.**—E. F. Hutchins, of Winnipeg, will build a brick block.—The N. P. and M. Railway Co. will erect a brick depot.—The Bank of Montreal will build a business block.

**WINCHESTER, ONT.**—W. L. Pahnier, Secretary Citizen's Committee, asks tenders for furnishing 30 incandescent lamps, 16 c. p. and 20 lamps, 32 c. p. and the necessary generating plant to be run by purchasers.

**MONTREAL, QUE.**—The water committee has been given an appropriation of \$181,000 for pipes and pipe laying.—The plans of Messrs. Power & Son, architects, Kingston, Ont., for the enlargement of Dominion Square Methodist church, have been accepted, and tenders will be asked for the work.

**LONDON, ONT.**—By-laws have been passed giving \$40,000 to the school board for building purposes, issuing debentures for \$130,000 for extension of water mains.—Plans have been accepted for additions to St. Paul's Cathedral to cost about \$35,000. Work will be commenced as soon as sufficient funds are available.—It has been decided to re-seat St. John's Church, put in a furnace and insert stained glass windows.

**WINNIPEG, MAN.**—A by-law appropriating \$30,000 for buildings, etc., for a Provincial Exhibition will be submitted to a vote of the ratepayers on July 9th.—An electric railway is proposed for Fort Rouge.—The Y. M. C. A. have purchased a lot at the corner of Smith street and Portage avenue on which to erect a new building.—A committee has been appointed to secure information as to designs suitable for the proposed exhibition buildings.

**TORONTO, ONT.**—It is the intention of the Safety Barb Wire Company to erect steel and wire mills in this vicinity.—The City Engineer recommends the construction of sewers on the following streets: Drummond place, Jemima street, Perth avenue, Richmond street and Jordan street.—New tenders will be asked for the erection of a conservatory at the Horti-

cultural Gardens.—The Academy of Music is to be refurnished.—The following building permits have been issued: Jewell & Kinnear, additions to 60 Colborne st., cost \$2,500; J. C. Noble, pr. one-storey dwells., Sydenham st., cost \$12,000; Disciples of Christ church, cor. Spadina ave. and Cecil st.; Munes & Booth, 2 storey and attic dwelling, Jameson ave., cost \$5,000.

## CONTRACTS AWARDED.

**WINDSOR, ONT.**—The contract for the first ward school has been awarded to Sutherland & Co., for \$13,977.

**BOWMANVILLE, ONT.**—Mr. John Gand has secured the contract for the new Disciple Church, for the sum of \$4,100.

**LONDON, ONT.**—Mr. James Drummond has been given the contract for block paving Maitland street at \$1.73 per yard.—The contract for stone paving Queen's ave. has been given to G. Powell & Sons, at 22 cents per square foot.

**ST. THOMAS, ONT.**—Cowan & Co., of Galt, have been given the contract for boilers, etc., for the new water works pumping station. The contracts for the erection of the necessary buildings were awarded to Messrs. Jas. Finney, W. P. O'Donnell, W. Davis and John Riddell.

**W. TORONTO JUNCTION.**—The Board of Works recommend the acceptance of the tender of the Dominion Bridge Co., of Montreal, amounting to \$10,250, for the iron work necessary for the construction of the Keele St. subway, and the tender of Mr. Barnabas Gibson, of Toronto, amounting to \$54,772 for excavating and masonry.

## SIZE OF NAILS.

The following table will show any one at a glance the length of the various sizes and the number of nails in a pound; they are rated "3-penny" up to "20-penny." The first column gives the name, the second the length in inches, and the third the number per pound.—

3-penny,	1 inch,	557 nails per lb.
4 "	1 1/4 "	353 " " "
5 "	1 3/8 "	232 " " "
6 "	2 "	167 " " "
7 "	2 1/4 "	141 " " "
8 "	2 1/2 "	101 " " "
10 "	2 3/4 "	98 " " "
12 "	3 "	54 " " "
20 "	3 1/2 "	34 " " "
Spikes	4 "	16 " " "
"	4 1/2 "	12 " " "
"	5 "	10 " " "
"	6 "	7 " " "
"	7 "	5 " " "

From this table an estimate of quality and suitable sizes for any job can be easily made.

## PAINTS THAT PROTECT.

**T**HE Dutch State Railways have recently carried on a series of interesting experiments for the purpose of ascertaining the relative resistance of various pigments to atmospheric changes and to the corrosive action of sea water. The results have proved that the red lead paints are less affected by atmospheric influences than those which are composed of the brown oxides of iron, on account of their adhering more closely to the metal, and of their possession of great elasticity. It was also discovered that any sort of paint afforded an increased protection if the plates were pickled in hydrochloric acid before its application. The prevention of corrosion by salt water was found to be possible by the the admixture of the oxide of some electro-positive metal, such as caustic lime and soda; but the efficiency of such a covering diminished when its alkaline properties have been neutralized by the absorption of carbonic acid. Magnesia, however, was proved to be the most serviceable, seeing that it does not absorb carbonic acid; and not only does it protect the iron from galvanic action, but it also does not affect the anti-fouling qualities of the paint.

Silicified wood, which is found in vast quantities in Arizona, is said to be a new material which is coming into use for ornamental, fancy and interior work and house finish, taking the place of marble and slate.



Yellow ochre.....	5	13
Yellow chrome.....	15	20
Green, chrome.....	7	12
" Paris.....	15	40
Black, lamp.....	15	24
Blue, ultramarine.....	15	25
Oil, linseed, raw (a Imp. gallon).....	68	70
" " boiled.....	71	75
" " refined, ".....	78	80
Putty.....	2 1/2	2 1/2
Whiting, dry.....	75	1 00
Paris white Eng., dry.....	90	1 25
Litharge, Am.....	6 1/2	8
Sienna, burnt.....	15	20
Umber, ".....	8 1/2	12
<b>ORMENT, LIME, etc.</b>		
Lime, Per Barrel of 2 bushels, Grey.....		40
" " White.....		55
Plaster, Calcined, New Brunswick.....	2	00
" " Nova Scotia.....		1 00
Hair, Plasterers', per bag.....		1 00
Cement, Portland, per bbl.....	3 00	3 75
" " Thorold.....		1 50
" " Queenston, ".....		1 50
" " Napanee, ".....		1 50
" " Hull, ".....		1 50
<b>HARDWARE.</b>		
<b>Cut Nails:</b>		
American Pattern, 1 1/2 inch, per keg.....	4	25
" " 1 1/2 to 1 3/4 inch, per keg.....	3	50
Canadian Pattern, 1 1/2 inch, per keg.....	3	75
" " 1 1/2 to 1 3/4 inch, per keg.....	3	15
" " 2 to 2 1/4 inch, ".....	3	35
" " 2 1/4 to 2 3/4 inch, ".....	3	00
" " 3 inch and larger.....	2	75
Steel nails 10c. per keg extra.....		
Finishing nails, 1 inch, per keg.....	5	75
" " 1 1/2 inch, ".....		5 05
" " 1 3/4 inch, ".....		4 50
" " 1 1/2 inch, " and larger.....		4 00

**MONTREAL PRICES.**

**Lumber, Etc.**

Ash, 1 to 4 in, M.....	\$13 00@18 00
Birch, 1 to 4 inch, M.....	15 00 25 00
Basswood.....	12 00 20 00
Walnut, per M.....	50 00 100 00
Butternut, per M.....	22 00 40 00
Cedar, flat.....	60 04 60 06
Cherry, per M.....	60 00 80 00
Elm, Soft, 1st.....	15 00 17 00
Elm, Rock.....	25 00 30 00
Maple, hard, M.....	20 00 25 00
Maple, Soft.....	16 00 18 00
Oak, M.....	40 00 95 00
Pine, select, M.....	35 00 40 00
Pine, 2nd quality, M.....	20 00 25 00
Shipping Culls.....	12 00 16 00
Mill Culls.....	8 00 10 00
Lath, M.....	1 10 1 92
Spruce, 1 to 2 inch, M.....	10 00 12 00
Spruce Culls.....	4 50 6 00
Shingles, 1st quality.....	2 00 3 00
" " and.....	1 25 1 50

**Cement, etc.**

Portland Cement, per barrel.....	\$ 2 70@ 3 00
Roman.....	2 70 3 00
Fire Bricks, per M.....	20 00 30 00

**Cut Nails:**

Hot-cut Am. or Can. pattern, 3 inch and above.....	2 75 52 85
Hot-cut Am. or Can. pattern, 2 1/2 inch and above.....	3 00 3 25
Hot-cut Am. or Can. pattern, 2 1/4 and 2 inch.....	3 25 4 20
Am. pattern, 1 3/4 and 1 1/2 inch hot-cut.....	3 50 5 60
1 3/4 inch.....	4 25 5 20
Can. Pattern, cold-cut, 1 3/4 and 1 1/2 inch.....	3 25 4 45
1 3/4 inch.....	3 75 5 95
Finishing Nails, per 100 lb. keg, 1 1/2 to 1 3/4 inch.....	75 cents advance on Hot Cut Nails.
Finishing Nails, per 100 lb. keg, 2 inch and up.....	

**Paints, etc.**

White Lead, pure, 25 to 100 lb. kegs.....	6 50 7 00
" " No. 1.....	5 25 5 50
" " No. 2.....	4 50 5 00
" " No. 3.....	4 00 4 50
dry.....	5 25 5 75
Venetian Red, English.....	1 50 1 75
Yellow Ochre, French.....	1 25 3 00
Whiting, London, washed.....	0 50 0 65
" " Paris, ".....	1 15 1 25

**Oils:**

Linseed, raw.....	0 3 0 55
" " boiled.....	0 66 0 58
Olive, pure.....	1 10 1 15
" " machinery.....	95 1 05
" " extra, qt., per case.....	3 00 3 25
" " pts. ".....	2 50 2 60
" " 1/2 pts. ".....	2 75 3 10
Spirits turpentine.....	0 67 0 70

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