Technical and Bibliographic Notes / Notes techniques et bibliographiques

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A Weekly Journal of Advance Information and Public Works.

ITS PURPOSE: TO SUPPLY TO CONTRACTORS ADVANCE INFORMATION RESPECTING CONTRACTS OPEN TO TEN-DER, AND TO ARCHITECTS, ENGINEERS, MUNICIPAL AND OTHER CORPORATIONS, A DIRECT MEDIUM OF COM-MUNICATION WITH CONTRACTORS.

ITS MERIT: ECONOMICAL AND EFFECTIVE SERVICE.

Vol. 2.

Toronto and Montreal, Canada, February 21, 1891.

No. 2

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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62 Temple Building, Montreal Hell Telephone 2299.

Information from any part of the Dominion regarding contracts open to tender, sent exclusively to this journal for publication, and not elsewhere published, will be liberally paid for.

ADVERTISING RATES ON APPLICATION.

At its Convention held in Toronto, Nov. 20 and 21, 1889, the Untario 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.

Tenders.

The following resolution was unanimously alloyled at the First Annual Meeting of the Province of Quebea Association of Architects, held in Montreal, Oct. 10th and 11th, 1850: "Moved by M. Perrault, seconded by A. F. Dunlop. that we the Architects of the Province of Quebea 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."

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



NOTICE TO CONTRACTORS.

Steel Plate Rivetted Pipe

Tenders will be received by registered post, addressed to the City Engineer, Toronto, up till 11 oclock a.m. on TUESDAY, MARCH 3RD, 1851, for the delivery of 255 feet of Steel Plate Rivetted Pipe.

delivery of 255 feet of Steel Plate Rivetted Pipe.

Plans can be seen and forms of tender can be obtained at the City Engineers office on and after the 20th day of February, 1891.

A deposit in the form of a marked cheque, payable to the order of the City Treasurer, for the sum of 2½ per cent. on the value of the work tendered for, must accompany each and every tender, otherwise it will ook be entertained. All tenders must bear the bona file agnatures of the contractor and his sureties (see sectionations), or they will be ruled out as informal.

The Committee do not bind themselves to account the

The Committee do not bind themselves to accept the lowest or any tender.

JOHN SHAW, Chairman Committee on Works

Committee Room, Toronto, February 17th, 1891-

TENDERS WANTED.

Chs. Chausse & E. Mesnard, Architects, and floor, Imperial Bullding, Montreal, will receive tenders during the week ending 28th instant, for building different classes of Stores in some places and Cottages in others.

TO CONTRACTORS.

The undersigned will receive tenders on THURSDAY, 5711 MARCH, for the several works required in the erection of Two Houses in Hutchison Street in this city.

JAMES NELSON, Architect, British Empire Building, Montreal, February 19th, 1891.

NOTICE.

Mr, Chs. Chausse, Architect, Imperial Building, Montreal, practising in that city for more than ten years past, has taken into partnership Mr. E. Mesnard, recently from Messrs. Perrault & Mesnard's offices. The new firm will conduct business under the name of Chs. Chausse & E. Mesnard. The young man, J. A. Chausse, who a few months ago opened an office on St. James Street, has no connection with above firm. Street, has no connection with above firm,

TENDERS WANTED

Electric Light Plant.

Scaled tenders, addressed to the undersigned by registered mail, will be received up to 6 o clock p.m. on SATURDAY, FHE 28TH DAY OF FEBRUARY, 1891, to equip and fit up a complete Electric Light Plant of one thousand light capacity of 60 candle power each.

The lowest or any tender not necessarily accepted.

cepted, Information will be given on application to Thos, Gillies, Esq., Chairman of Committee All tenders to be marked." Tender for Electric Light" and addressed to

ROBT. J. LEIGH, Fown Clerk, Box 313 West Toronto Junction, Ont. West Toronto Junction, Feb. 10th, 1891.

SIZE OF HOUSE SEWERS.

The first consideration is evidently as to the amount of water, per unit of sur-race, for which provision must be made. Formerly the records kept of rain storms gave merely the total fall per hour, leaving it uncertain whether this was uniform or, as more generally the case, the greater part had fallen in a comparatively short time. However, the Meteorological Observatory has obtained for a number of years an automatic record of the rain-fall, showing for each storm the maximum rate and its duration, which evidently gives the data required for determining the size of the drains. These records show that, during the eight years from 1880 to 1887 inclusive, there were in all thirty storms with rates there ther with rates breater than one inch per hour.
Number of Rais. Duration
Storms, Inches per hour. in minutes.

- 13

nes per nour.	in minutes.			
1 10 2	20 to 60			
* a to 3	10 to 30			
3 to 4	8 to 15			
4 to 5	15			
5 to 6	5			
6 to 7	3 10 10			
7.5				

Thus in the eight years covered by the records there have been three storms with a rainfall of the rate of more than six inches per hour, lasting from two to ten minutes. As a very few moments of such a storm would wet and cool a roof or paved surface sufficiently to check evaporation, nearly the whole amount of water must have reached the house. It is therefore considered wise to provide for a maximum fall of six inches per hour, as the damage inflicted by a single storm, when the drains were sufficient, would more than outweigh the additional cost of the larger pipe. At the same time the other and equally important fact should be kept in view that the drain should be made, as far as practicable, self-scouring under the ordinary conditions, and to accomplish this the diameter should be kept as small as may be consistent with safety.

The second consideration in determining the requisite size of the drain is the velocity of the water in the pipe. This should evidently be, not that derived from a theoretic equation, but such as can be attained in practice after making all due attained in practice after making all due allowances for traps, short bends, etc. It is doubtful whether a velocity of six, or even five, feet per second could be obtained through a six-inch quarter bend, unless the pipe were discharging full and under pressure. A maximum velocity of four feet is assumed as after four feet is assumed as safe.

Again, to prevent the drain running quite full, an available sectional area of .18 square feet is assumed for the six-inch This, with a four-foot velocity, would give a capacity of .72 cubic feet per second. With a six-inch rainfall per hour, one square foot of roof surface would receive about .000140 cubic feet of water per second. The six-inch drain should there fore carry the water from about 5,000 square feet of surface, if it have an effective grade of one-quarter inch per foot.

With a grade of one-half inch per foot, which is often practicable, and a fairly straight run of pipe, the velocity may be raised to six feet per second, and therefore the capacity and amount of surface drained the capacity and amount of surface drained increased to one-half. In this case the six-inch sewer would safely carry the storm water from 7,500 square feet of roof. The following table gives the size of placs, with the corresponding area of roof drained when the effective fall is respectively onequarter and one-half inch per foot.

Diameter of Drain.		oof Area h Fall.	DRAINED. 3-Inch Fall. 7.500 square feet.			
6 inches	5.000 sq1	ure feet.				
7 ''	6,900	••	10.300	**		
8 "	9.100	••	13,600	••		
o	11.600	••	17.400	••		

For large areas it is always better to use For large areas it is always better to use two or more small sewers rather than a single large one, as under the ordinary conditions of sewerage flow the small pipes will be more thoroughly flushed. The effective grade of the heuse drain should also, for safety, be measured from above the hydraulic grade line of the public sewer, which in this city, during the heaviest storms, will be at least as high as the arch of the sewer.

CONTRACTS OPEN.

HALIFAX, N. S.—The Board of Health has decided to erect a garbage crematory.

ENDERBY, ONT.—The Episcopalians are making arrangements for electing a new church.

*VICTORIA, B. C.—A prominent citizen has offered to donate five acres as a site for the proposed House of Refuge.

AMHERSTBURG, ONT. — The Council want tenders immediately for the construction of a water works system.

W. TORONTO JUNCTION,—The Council will seek power from the Legislature to borrow \$75,-000 to complete the subway, and other works.

WINDSOR, ONT.—The congregation of St. John's Church, Belle River, will creet a new building.—The charters of the Windsor and Sandwich Street Railway have been sold to Detroit capitalists, whose intention is said to be to extend the line, and substitute electricity for horses.

ALLANDALE, ONT.—Mr. L. G. Seargeant, General Manager G.T.R., Montreal, invites tenders until the 28th inst., for masonry in connection with the renewal of bridges and culverts on the northern and northwestern division of the G.T.R. Plans and specificants to be seen at the office of Mr. Holgate, engineer, at this place.

BRANTFORD, ONT.—The Council has instructthe City Clerk to notify the Minister of Militia that the present site of the dilapidated drill shed is required by the city for park purposes, consequently they desire the old building removed within three months, and the proposed new drill shed be creeted with reasonable despatch.

NEW WESTMINSTER, B. C.—The Dominoin Government is said to have granted permission for the construction of a bridge across the North Arm of the Fraser river at Lulu Island. This important work will now be pushed forward with all possible vigor.—Application is being made by the Ckanagan Land and Developmen: Company to the Provincial Legislature for permission to divert ail the available water near the town site of Vernon and to erect water works, etc.

KINGSTON, ONT.—The Congregationalists whose church was destroyed by fire a week ago, will make arrangements to rebuild.—Subscriptions are coming in rapidly for the proposed Y.M.C.A, building, the construction of which will probably be commenced in the spring.—It is believed the construction of the Kingston and Ottawa Railway will be commenced shortly.—The University authorities will erect buildings for the accommodation of female medical students.

GUELPH, ONT.—Tenders addressed to the City Clerk will be received up to Friday, 27 inst. 4 for the following materials: 60,000 feet or more of 2-inch pine plank—8, 10 and 12 inches wide, 12 feet long; 20,000 feet or more of 3×4 and 4 x 4 cedar scantling; 8,000 feet or more of 3·inch tamarac plank—12, 14 or 16 feet long; 12 cords or more of cedar blocks; nails per 100 lbs. The Board of Education has appointed a deputation to visit Toronto and obtain information to be utilized in the erection of a new school in St. George's ward.

OTTAWA, ONT.—Mr. John James Brown, e architect, of Montreal, has prepared plans for two stores on Sparks street, with offices on 1st and and floors, for Messrs. Seghold & Gilson, to be completed by 1st of May next; also store on Sparks street with large plate glass windows, having also a frontage on Queen street, for Dr. O'Connor.—The Government's approval has been given to the recommendation of the Chief Engineer of Canals that a new canal be constructed on the north shore of the St. Lawrence, extending from the Cascades to McDonald's Point. Parliament will be asked to make an appropriation for commencing the work.

SEAFORTH, ONT.—The Council has appointed a special committee, composed of the Mayor, Reeve, Deputy-Reeve, and Councillors John A. Wilson, Geo. Good and Jas. Gillespie, to ascertain, 1st. The probable cost of having tiles placed in all the existing open drains and having them

properly covered in; also the cost of constructing a sufficient number of tile drains to secure the thorough drainage of he town. 2nd. The probable cost of stone paving Main street, from Goderich street to the milway station. 3rd. The probable cost of erecting a town building on Main street, with a hose tower, said building to be sufficiently large to provide a suitable place on the first floor for a fireman's Hall and store room, and on the second flat a division court and council room and clerk's office. 4th. The probable cost of replacing the present water mains with 10 rinch pipe and extending-the-water-pipes so that all parts of the town can have the protection and benefit of the water works. 5th. The probable cost of procuring a new steam pump for the water works.

MONTREAL, QUE,-Mr. Larin, of this city, has purchased a site at St. Lambert, on which he proposes to erect in the spring a hotel capable of accommodating 100 guests,-The Council of St. Henri will ask the approval of the ratepayers to a by-law authorizing a loan of \$100,000 for public improvements.—Mr. J. A. P. Bulman, architect, is preparing plans for a new church on the corner of St. Catharines and St Constant Streets, for the congregation of St. John's church (French Presbyterian. Plans ready next week .- Tenders will be received by the City Engineer until March 11th, for the supply and delivery of 800,000 feet, board measure, of 3 inch yellow pine deals (fourth quality); also for 50,000 lineal feet tamarac floats, 100,000 feet, board measure, of 3 inch plank and 10,000 lineal feet of tamarae floats to

. delivered before the first of May, 1891, the valance as ordered.—The Water Department is asking the Council for an appropriation of \$60,000, in order to place mains in Sherbrooke street west, and in the continuation of Atwater avenue.—The St. Jean Baptiste Society has signed the promise of sale made to it by the Wurtele estate of the property facing the market on St. Lawrence street and measuring 18,000 feet. The purchase price is \$44,000, and the national monument will be commenced on this site early in the spring.

TORONTO, ONT .- A Committee of the Board of Management of the House of Industry recommend the expenditure of \$15,000 to put, a new roof on the present buildings and erect a couple of new wings.-The congregation of Trinity Methodist Church have resolved to proceed at once with the erection of an additional building for Sunday School and lecture room purposes. The estimated cost is from \$18,000 to \$20,000.-The Weston, High Park and Toronto Street Railway Company, state that they are prepared to commence the construction of an electric street railway, immediately right of way is granted by the city.-The School Monagement Committee of the Public School Board recommends: That additional school accommodation be provided in order to relieve the following schools. Parkdale, Gladstone avenue and Rose avenue, that a small school be erected near the eastern limit of St. Lawrence Ward; that a school be erected in St. Matthew's Ward, north and east of Bolton avenue school, that additional accommodation be provided to relieve Lansdowne and Palmerston avenue schools; that proper accommodation be provided for the pupils attending Howard street school.-The City Council has approved of the erection of bridges crossing the milway tracks at Dundas St.-The City Engineer has been asked to prepare conditions and specifications upon which tenders will be invited for the reclamation of Ashl ridge's bay.

CONTRACTS ÂWARDED.

BRUSSELS, ONT.—Contracts for the new American hotel have been let as follows. D. Lowery, Brussels, stone and brick work, \$3,000; George Hughes, Mount Forest, carpenter work, roofing, painting and plumbing, \$3,000.

Messrs. Leitch & Turbull, of Hamilton, have recently been awarded the following contracts. Electric elevator for G. E. Prior. Victoria 4 Conhydraulic passenger elevator for the Geo. 17 chief

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Co., Belleville; two hydraulic freight elevators for John Proctor, Hamilton; one belt power elevator for each of the following: McKinnon, Dash and Hardware Co., St. Catherines; Allen Mfg. Co., Toronto; W. A. Freeman, Hamilton; A. Harris Sen & Co., Brantford.

BIDS.

SPRINGHILL, N. S.—The following tenders have been received by the Council for the construction of water works: Wm. Sutherland, Pictou, \$58.220; Wm. Sutherland, Pictou, \$18.000; Wm., Sutherland, Pictou, \$50.556; Jas. Brown & Co., Amherst, \$64.000; Thomas Campbell, St. John, \$59.240; Pickett & Yorston, New Glasgow, \$70.119, Forbes & Fitzsimmons, Moncton, \$68.800; J. D. Ronald; Brussels, Ont., \$65.000; P. A. McGinley, Springhill, \$45.000; Jas. K. McDonald & Co., \$52.550; W. E. Gilmore, \$47.000; W. E. Gilmore, gravitation scheme, \$65.000. The Council has deferred action until the 16th inst.

FROST-RESISTING POWER OF STONES.

Experiments on the frost-resisting power of natural and artificial building stones have been made by Mr. Bauschinger, as stated in the Journal of the Society of Chemical Industry, with twenty-one different kinds of natural building stones, three to six pieces of each being used. The tensile strength, dry and wet, their capacity for absorbing water, their alteration in volume, tensile strength and behavior toward water after freezing and thawing twenty-five times, and their specific gravity were determined. Out of this number of samples, ranging from limestone to sandstone, only six were found to resist repeated freezing-viz., one of dolorite, one of diorite and four sandstones. Four other samples were found to resist freezing fairly, but not absolutely; but of forty-one samples of artificial stone similarly tested, only three were found thoroughly unaffected, while eight proved fairly resistent.

In a recent issue of the London Times, reference is made to a new ventilating system worked out by Mr. D. G. Hoey. The main features of the system are stated to be the admission of fresh air without draughts, and the carrying away of the vitiated air with certainty. At Messrs. Barclay's bank in Lombard Street the inlet ventilation is effected by means of freth-air reservoirs, in which are enclosed the ranges of hot-water pipes all round the walls, and tye hot-water coils in the centre of the bank. By this means a constant and regular supply of fresh, warmed air is brought into the bank. The vitiated air passes away through an opening in the wall at the ceiling level, a wire gauze moveable screen or shutter being used to regulate the outflow of the air. From this opening the air passes up a vertical shaft having a sectional area of 20 square feet and rising to an altitude of 90 feet above ground-level. It is surmounted by a large revolving cowl, and is fitted internally with vertical division plates of iron, which can be heated by Bunsen burners, if necessary, to promote the up-draught. The velocity of exit of impure air up the shaft is under immediate control by simple means, and it is claimed that it causes the unintermittent and automatic renewal of the entire atmosphere of the bank twice every hour. This can be in-creased or diminished at will to any desired extent, the whole atmosphere being renewed, it is said, without draught or felt current.

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

EFFECT OF TURPENTINE.

The following account given originally by Rev. Canon Mosely, and cited by Prof. Tyndall in one of his lectures, will show the difficulties encountered in the use of material under the expansion and contraction caused by changes of temperature.

The choir of Bristol Cathedral was covered with sheet lead, the length of the covering being 60 feet, and its width 19 feet 4 inches. It had been laid on in the year 1851, and two years afterward, viz., in 1853, it had been moved bodily down for a distance of 18 inches. The descent had been going on continually from the time the lead had been laid down and an attempt made to stop it by driving nails into the rafters had failed; for the force with which the lead descended was sufficient to draw out the nails. The roof was not a steep one, and the lead would have rested on it forever without sliding down by gravity. What then was the cause of the descent? Simply this, the lead was exposed to the varying temperatures of day and night. During the day the heat imparted to it caused it to expand. Had

it lain upon a horizontal surface, it would have expanded equally all around, but as it lay upon an inclined surface, it expanded more freely downwards, i.e., in the direction of least resistance.

When the lead contracted under the lower temperature of the night it contracted also in the direction of least resistance, i. e., downward. So it pushed its lower edge downward in the day, and drew its upper edge downward at night, thus by degrees it crawled through a space of eighteen inches in two

years. Every local change of temperature, also, during the day and during the night contributed to the result; indeed, Canon Mosely afterwards found the main effect to be due to these quicker alterations of temperature.

To ascertain whether an article is made of steel or iron pour on the object to be tested a drop of nitric, acid 1.2 specific gravity, and after it has acted for one minute rinse with water. If iron, the spot will be of a whitish gray color; if steel, it will appear as a black stain.

The liability to err in mixing cement with wet and dry sand is described by M. Candlot, and an abstract of his paper given in the Journal of the Society of Chemical Industry. Feret has pointed out the possibility of serious mistakes in the proportions of mixtures of cement and sand due to a disregard of the condition of the sand—whether wet er dry. The addition of comparative little water largely increases the L out of all proportion to For instance, 2 per cent. cause

of a cubic meter of the moistened sand to decrease 269 kilos; that is to say, 18.5 per cent, of the original weight. Such differences would cause great fluctuations, hitherto generally overlooked, in the composition of mortar mixtures intended to be of a certain strength.

Prices of Building Materials.

LUMBER.

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t % and thicker, pickings, Am ins	27	œ
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t inch strips, common 11 00		
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XXX shingles, sawn 2 30		
XX shingles, sawn 1 30		3
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Metallic Roofing Co. of Canada:

NR4 Notre Gome Street, Montreal. October 14 1890

6. H. Mortiner Seg. But anadian architect & Builder. Record.

following resolution is adopted, at the first annual meet rounce of ductice association of architecto held in Montical on 10 1 11 inch! moved by M. Fraut. of Eustic now accembled in con-vention being satisfied that the decorded by: a. 7. Dimlop. Canadian Contract Record affords

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Veore	tangs,
Heavy Eastlake painted steel shingles,	
Light Eastlake Painted steel shingles,	4 00
Tower or Mansard galvanized steel	3 75
shingles, per sq	6 25
gles, per sq	4 50
Terra Cotta painted steel Tile, per sq.	7 ¢0
Eastlake painted steel siding, per sq., Manitoba galvanized, steel siding, per	3 50
Heavy Manitoba painted steel siding	4 75
Light Manitoba painted steel siding	3 50 3 25
Heavy sheet steel pressed brick	3 50
Light sheet steel pressed brick	3 25
Painted crimped steel, siding or ceiling	3 50
Price of Copper shingles according to weig	nt.
Hayes Patent Metallic Lathing.	
Broad Rib Roofing, galvanized, per sq. painted, per sq	\$ 5 25
Northwestern Steel Siding, painted,	3 75
per sq	3 25
Canada Galvanizing & Steel Roofing	
Corrugated Iron, galvanized, 26 W.G.,	
corrugated Iron, galvanized, 28 W.G.,	5 cts.
Corrugated Iron, painted, 26 W. G.,	5%
per square	4 00
Corrugated Iron, painted, 28 W. G.,	3 50
Broad Rib Roofing, galvanized, per	- •
Square Broad Rib Roofing, painted	5 50
Westlake shingles, steel, galvanized,	4 00
per square	5 00
Westlake shingles, steel, painted Standard shingles, "Walter's patent,"	3 50
Standard shingles, "Walter's patent,"	
galvanized, per square	5 50
painted	
Northwestern steel siding, patented, per square.	4 00
per square	3 50
Metallic Finish Brick, per square	3 75
c Finish Clapboard, per square	3 50

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YARD QUOTATIONS. Mill cull boards and scantling		10 00
		13 03
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	12 00	15 00 35 00
Beaded sheeting, dressed	2 65	12 00
Sawn lath Red oak White	30 00	3 20 40 00
Basswood, No. 1 and 2	15 00 18 00	45 00 20 00
White ash, No. 2 and 2	70 00 25 00 20 00	70 00 85 00 30 00
White ash, No. 1 and 2. Black ash, No. 1 and 2. Dressing stocks. Picks, American inspection.	16 00	22 00 40 00
three uppers, American inspection		50 00
Common Walling		\$7 50
Good Facing	8 50	9 00
Pressed Brick;		
Plain brick, f. o. b. at Milton, per M		\$18 00 14 00
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Terra Cotta Tile, per sq Ornamental Black Slate Roofing		7 50 25 00 8 00
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Yellow chrome	5 15	10
Green, chrome	7 25	12
Blue observation	15	25 25
Oil, linseed, raw (& Imp. gallon) boiled refined,	68 7≥	70 75 80
Pully	78 21/4	2 1/2 1 00
Whiting, dry	75 6%	1 25
Sienna, burnt. Umber, "	15	20 12
CEMENT, LIME, etc.		
Lime, Per Barrel of 2 bushels, Grey White		40 55
Plaster, Calcined, New Brunswick Nova Scotia		3 00
Hair, Plasterers, per bag Cement, Portland, per bbl Thorold,	3 00	1 00 3 50 1 50
" Queenston, "		1 50
		2 50
Cut Nails:		
American Pattern, 1% inch, per keg 13/2 to 1% inch, per keg Canadian Pattern, 1% inch, per keg 13/2 to 1% inch, per keg 13/2 to 2% inch, 11 13/2 to 2% inch, 11 13/2 inch and larger		4 15 3 40
ii ii 1½ to 1½ inch, per keg		3 15
" 2½ to 2½ inch, "		2 15 2 90 2 65
Steel nails for per keg extra. Finishing nails, z inch, per keg.		-
" 2½ to 2½ inch, " 3 inch and larger Steel nails ror, per keg extra. Finishing nails, 1 inch, per keg 1½ inch, " 1½ inch, " 1½ inch, "		5 7 <u>5</u> 5 05 4 50
" and larger		4 20

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MONTREAL PRICES.	BUILDERS' SUPPLIES. Adamant Mfg. Co I	l. vi	METALLIC LATH, B. Greening Wire Co	ıv
Ash, 1 to 4 in , M	Adamson, Joseph Morrison & Co., T. A	l iv	MINERAL WOOL	22
Rasswood	Maguire, William McNally & Co	iv xi	Gast & Atchison ORNAMENTAL PLASTERERS.	
Rutternut, per M	Rathbun Co	vi	Baker, J. D	III vi
Cedar, flat	CRMENTS. Adamant Mfg. Co	vi	Littleford & Thorne	11
Elm, Rock	McNally & Co., Wm	xi	Wright, Jas	Ш
Maple, Soft	Maguire, William	iv Įv	Dill & O'Hearn	111
Pine, select, M	Rathbun Co	iv vi	Dunham, Frank T	
Mill Cults	Terry, Edward	iv 22	Hatch, W. J	- 11
Spruce, 1 to 2 inch, M 10 00 12 00 Spruce Culls	CHURCH AND SCHOOL FURNITURE.		Taylor, W. J.	III
Shingles, 1st quality 2 00 3 00 11 2nd 11 1 25 1 50	Bennet Furnishing Co	IV ii	PAINTS, VARNISHES, &G. Cottingham, Walter H	IV
Coment, etc.	Office Specialty Co	iii xi	Muirhead, Andrew	VİI
Portland Cement, per barrel	CHILANRY TOPPING.		Excelsior Pavement Co	viii
Fire Blicks, per M 20 00 30 00 Cut Natia:	Hansen, Harald M	ix	Forsyth. Robert	IV
Hot-cut Am. or Can. pattern, 3 inch and above	Consulting Engineer. Barry, A. B.	111	PLASTERERS.	П
Hot cut Am. or Can. pattern, 21 inch and above 3 00 3 25	CONTRACTORS AND BUILDERS.	•••	Fox, R. B	I
Hot-Cut Am. or Can. pattern, 21/2 and	Andrews, Francis	11	Magill, E. T]]]]
Am. pattern, 1½ and 1½ inch hot-rut 1½ inch " 350 560 2½ inch " 425 580 Can. Pattern, cold-cut, 1½ and 1½ inch 325 445 " 1½ inch	Amess, James Davidson & Kelly	23 []	Watson Bros	П
Can. Pattern, cold-cut, 11/4 and 11/4 inch. 3 25 4 45 11/4 inch. 3 75 5 95 Finishing Nails, per 100 lb. keg, 11/4	Davis, H	11 11	PLATE GLASS. McCausland & Son	ų
Finishing Nails, per 100 lb. keg, 1% 75 cents	Dick, James, sr. Dagenais, J Benjamin	23 23	Toronto Plate Glass Importing Co PLUMBERS.	xi
to 1½ inch	Hood & Co., C. Hancock, Thomas	23 11 11	Bennett & Wright	Ш
and up	Hannah BrosHumphrey, T. R	II II	McCrae & Watson Plumbing Supplies.	11
Paints, etc. White Lead, pure, 25 to 200 lb. kegs. 6 50 7 00 "No. 2	Hamilton, Edward	23	Booth & Son	ii
" No. 2 4 56 5 00	Lyall, Peter. Mortimore, Gco. T.	li	Higman, O	, i
" No. 3	Murison & Co., John	23]][St. Johns Stone Chinaware Co ROOFING MATERIALS.	iii
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