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CANADIAN CONTRACT RECORD

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. 4.

DECEMBER 28, 1893

No. 45

THE CANADIAN CONTRACT RECORD,
PUBLISHED EVERY THURSDAY
As an Intermediate Edition of the "Canadian Architect and Builder."

Subscription price of "Canadian Architect and Builder" (including "Canadian Contract Record"), \$2 per annum, payable in advance.

C. H. MORTIMER, Publisher,
CONFEDERATION LIFE BUILDING, TORONTO.
Telephone 2362.
64 Temple Building Montreal.
Bell Telephone 2299.
Information solicited from any part of the Dominion regarding contracts open to tender.
Advertising Rates on application.

At its Convention held in Toronto, Nov. 30 and 31, 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."

Subscribers who may change their address should give prompt notice of same. In doing so, give both old and new address. Notify the publisher of any irregularity in delivery of paper.

TOWN OF NEW GLASGOW, N.S. TENDERS FOR DEBENTURES.

Sealed tenders, addressed to the Town Clerk, will be received by the Finance Committee of the Town of New Glasgow, N. S., up to and including the 15TH DAY OF JANUARY A. D., 1894, at 3 o'clock p.m. for the purchase of

TEN THOUSAND DOLLARS
Debentures of the Town of New Glasgow, N. S. These debentures are issued under authority of an Act of the Legislature of the Province of Nova Scotia passed the 30th day of April, 1892, Chapter 220, and are dated July 1st, 1893, and bear interest at the rate of 4 1/2 per centum per annum, and are in sums of \$1,000 (one thousand dollars) each, and run for 20 years from date.
The purchaser will be required to pay the accrued interest on the coupon attached dated July 1st, 1894.
The tender to state the amount to be taken and price offered. The debentures will be delivered on the 1st day of February, 1894.
(Signed) J. LESLIE JENNISON, Mayor.
(Signed) A. M. FRASER, Town Clerk.
New Glasgow, N. S., December, 22nd, 1893.



RIDEAU CANAL.

Sealed tenders, addressed to the undersigned and endorsed "Tender for Sheet Piling Deep Cut, Ottawa," will be received at the Rideau Canal Office, Department of Railways and Canals, Ottawa, up to JANUARY 3RD, 1894, for the necessary labour and material required in connection therewith.
Plans and specification, together with form of tender, can be seen at the above mentioned office on or after Friday, 22nd inst.
The lowest or any tender not necessarily accepted.
F. A. WISE,
Rideau Canal Office, Sup. Engineer.
Ottawa, December 15th, 1893.

Notice to Contractors

CANADIAN CONTRACTORS' HAND-BOOK

A new and thoroughly revised edition of the Canadian Contractors' 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
C. H. MORTIMER, Publisher,
Confederation Life Building, TORONTO.
Montreal Office:
64 Temple Building.

WATER-PROOF MASONRY.—What was at first considered a doubtful experiment, viz., the use of coal tar as a means of rendering masonry impervious to water, especially in positions exposed to direct contact with the latter, has proved a practically valuable resort. Used as a coating for masonry built up of very porous stone, tar renders it quite impervious, even at a depth of some fifty feet of water, and, according to the opinion of those whose experience has been extensive with it, the article should be utilized in all public buildings, particularly those designed for the preservation of works of art, the dissolving action of the water, even upon mortar of superior quality, being well known, and also the unfavorable effect of the exudation of water charged with lime salts from the mortar. Two methods of using the tar are named, viz., in a boiling state in one or several layers, this being suitable for surfaces exposed to the air; or it may be made to flame up before using, this being appropriate to surfaces which have to be covered up. It is stated that when boiling coal tar is employed in three coats of masonry the result is a black and very brilliant varnish, which perfectly resists the action of frost, water and sun, being likewise absolutely impervious; and the tendency of the black coating to absorb heat may be overcome by white-dusting the whole before the tar is quite dry.

CONTRACTS OPEN.

MONTE BELLO, QUE.—The proposed new R. C. church will cost in the neighborhood of \$75,000.

LAKE TAMISCAMANGUE, ONT.—A number of residences will be built here next summer.

KNOWLTON, QUE.—The School Commissioners are contemplating the erection of a new academy.

WESTMINSTER, ONT.—The ratepayers will vote, early in January, on the question of erecting a town hall.

RIMOUSKI, QUE.—A delegation a few days ago appealed to the government to improve the harbor at this place.

WHITBY, ONT.—Mr. Donald McKay, County Treasurer, wants tenders for the purchase of \$20,000 worth of debentures of the County of Ontario.

QUEBEC, QUE.—The Water Committee of the city Council is asking for tenders for the excavating for pipe laying on Bridge and St. Simon streets.

ST. BONIFACE, MAN.—The by-law granting the sum of \$75,000 for the construction of a bridge over the Red River was defeated by the ratepayers.

NELSON, B. C.—The Nelson Mining and Hydraulic Company has been formed to develop claims on Forty-Nine Creek. Kirk & Ritchie, land surveyors, are among the promoters.

LONDON, ONT.—Application will be made to the Legislature of Ontario to authorize the corporation to exempt from taxation a cold storage warehouse to be erected in this city by Messrs. Hodgson Bros.

FENELON FALLS, ONT.—Tenders are invited until the 10th of January for the purchase of the pulp and saw and shingle mills in this town. Particulars may be obtained from Messrs. Robinson, O'Brien & Gibson, solicitors, Toronto.

BROCKVILLE, ONT.—The plans for the proposed new international bridge across the St. Lawrence river are now being prepared by Engineer Smellie. Mr. C. J. Pusey, the chief promoter of the scheme has taken up his residence here.

METCALFE, ONT.—F. Iveson, Clerk Township of Osgoode, will receive tenders until Tuesday, the 9th of January for the deepening and widening of Grey's Creek. Profiles may be seen at the Township Clerk's office and at the office of J. B. Lewis, Brunswick hotel, Ottawa.

COLLINGWOOD, ONT.—At a public meeting held here last week, a scheme for an air line railway from this town to the city of Toronto was formulated by Mr. Frank Moberly, C. E., and a committee was appointed to urge upon the Town Council the necessity of taking immediate action in the matter. Another meeting will be held at an early date.

HAMILTON, ONT.—Mr. A. Stuart, Treasurer of the city, will receive proposals until Saturday, the 6th of January, for the purchase of \$2,350,000 worth of de-

betures.—A meeting of citizens was held last week to discuss the project of erecting a university for women. A committee of laymen was appointed to further the scheme.

KINGSTON, ONT.—At a meeting of the Rectory Committee held last week, a resolution was passed approving of the preliminary sketch submitted by Messrs. Power & Son, architects, and instructing them to prepare plans for an office building to be erected on the site of the old Ocean saloon, corner of King and Clarence streets.

VANCOUVER, B. C.—Mr. J. W. McFarland, Sec.-Treasurer, will receive proposals until the 10th of January for the construction of the Nikola Valley Railway Co.'s railway from Spences bridge to Nicola Lake. Particulars may be obtained at the company's offices, 161 Cordova street, this city.—The Episcopalians at the North arm have decided to erect a new church.

BALTIMORE, U. S.—Competitive plans are invited for a new court house, to cost \$1,400,000. Prof. Wm. R. Ware, of Columbia College, has been appointed consulting engineer, and under his direction the conditions governing the competition have been formulated. A pamphlet of instructions may be obtained by addressing the mayor, Ferdinand C. Latrobe, Baltimore, Md.

OTTAWA, ONT.—The Board of Health will shortly call for tenders for the construction of a bridge from St. Patrick st. to Porters Island.—A meeting of the promoters of the proposed maternity hospital was held on Thursday of last week. Plans prepared by Messrs. Arnoldi & Calderon for the erection of a building to cost \$9,000 were submitted and approved of, and if the subscriptions warrant the building will be proceeded with on the lot purchased adjoining the Stanley Institute.

MONTREAL, QUE.—The City Hall Committee will ask the City Council for an appropriation of \$9,600 to repair the heating apparatus.—Tenders are invited until noon of Saturday next, the 30th inst. for heating apparatus for Montcalm school. Plans may be seen at the office of the architect, Mr. Jos. Haynes, 180 St. James street, and tenders are to be addressed to the Board of Catholic School Commissioners, P. O. Box, 1944.—The City Clerk has received a proposition from the Montreal Cold Storage and Freezing Company offering to erect a morgue on their property.—At a recent meeting of the Water Committee it was decided to ask the City Council for \$50,000 to enable the Superintendent to lay water pipes during the winter.

TORONTO, ONT.—The construction of the proposed new wharf at the foot of Yonge and Lorne streets will in all probability not be proceeded with at present, the owners of the various steamboat lines having refused to pay an increased rental.—The Board of Management of the

Industrial School Association, Mimico, held a meeting a few days ago to decide upon a fitting memorial to the late W. H. Howland. A sub-committee was appointed to make arrangements for the erection of a memorial hall, and another meeting will be held shortly to receive their report.

FIRES.

A new double dwelling house at Halifax, N. S., owned jointly by Geo. Grant and J. Stanhope, was destroyed by fire on the 25th inst. Insurance \$1,000.—The music hall at Creemore, Ont., was burned recently. The loss is mostly covered by insurance.—The new opera house at Woodstock, Ont., was totally consumed by fire on the 22nd inst. Insurance \$10,000. It will in all probability be rebuilt. The building was owned by E. W. Waborn.—The flour mill at Tavistock, Ont., of which the Ratz Bros. are the principal stockholders was destroyed by fire last week. Loss, \$23,000; insurance, \$4,000.—The Rathbun Company's office and freight sheds at Belleville, Ont., were burned on Friday last. Loss, \$9,000, covered by insurance. The Bromell House at St. Thomas, Ont., was destroyed by fire recently. Loss, \$4,000; insurance, \$2,000.—W. A. Benson's residence at Northport, Ont., was burned to the ground on Tuesday last.—The flax mill at St. Thomas, Ont., owned by J. Lindsay and operated by Mr. Keith, was destroyed by fire on the 26th inst. Loss, \$4,000; no insurance. It is said the owner will not rebuild.—C. Lacroix's frame dwelling house at Sarnia, Ont., was burned on the 20th inst. Loss, \$1,200.—The cheese factory at Cherry Hill, Ont., was burned recently. Loss, \$2,500; fully covered by insurance.—Fawcett's foundry at Halifax, N. S., was destroyed by fire on the 24th inst., including the moulding shop, nickel rooms, furnace and engines. The loss will amount to over \$75,000.—Edwin R. Wrights buildings on Campbell road, Halifax, N. S., were burned last week. Loss, \$4,000; insurance, \$1,200.

CONTRACTS AWARDED.

RED DEER, ALTA.—The contract for constructing a traffic bridge across the Red Deer River has been awarded to Mr. D. W. McKenzie, of this place.

OTTAWA, ONT.—Mr. W. A. Currie, of Bank street, has been awarded the contract for painting and glazing for the proposed contagious diseases hospital.

VANCOUVER, B. C.—The contract for the construction of the Sumas dykes has been given to Messrs. McLean Bros., and for the boilers, engines, etc., for the same to the British Columbia Iron Works Co.

HAMILTON, ONT.—It is said that contracts for the erection of the proposed smelting works have been awarded to a large American firm, the contractors agreeing to take half the contract price in stock.

BERLIN, ONT.—The offer of the Ontario Mutual Life Assurance Co., of Waterloo, of \$23,300 for the issue of \$22,000 of 5% debentures of this town, payable in 30 equal instalments, has been accepted.

TORONTO, ONT.—The Peterboro' Bridge and Engineering Company have finally been awarded the contract by the Board of Works for the supply of steel pipes for the extension of the Yonge st. sewer, at the tender of \$7.48 per foot. The Board also awarded contracts as follows on Tuesday last: Severn street sewer, J. H. McKnight & Co., \$757; Hill street sewer, and May street sewer, A. J. Brown, \$551 and \$718.

MONTREAL, QUE.—The governors of Laval University last week awarded contracts as follows for the erection of new University buildings on St. Denis street, near St. Catherine street, in accordance with plans prepared by Messrs. Perrault, Mesnard & Venne, architects: stonework, Boncher & Huberdeau; brick-work, Pl. Brunet; steel and iron-work, Loignon & Frere; wood-work, U. Pauze, plastering, E. Morache; painting and glazing,

and plumbing-work, Pelletier & Brosseau; heating apparatus, Lesard & Harris; roofing, Pelletier & Brosseau. The building is to be of Montreal limestone four stories high with basement, and will cost about \$150,000. The style of architecture is Renaissance.

BUSINESS NOTES.

G. Smith, plumber, Montreal, has been burned out.

Massey & Dufresne, contractors, Montreal, have dissolved partnership.

Cameron & McKay, masons, Deloraine, Man., have dissolved partnership.

Mr. Joseph Nott is commencing business as a plumber at Vancouver, B. C.

It is announced to be the intention of the E. Chanteloup Co., of Montreal, shortly to go out of business.

The firm of Nelson & Maughan, sash and blind manufacturers, Richmond, Que., has been dissolved, Mr. Maughan retiring.

ELECTRIC DRILLS IN A QUARRY.

The electric percussion drill, since it was first put into practical operation, has undergone many changes, each in the line of improvement, until to-day it competes successfully either with steam or compressed air drill. One of the most interesting percussion drill plants is that in operation at the limestone quarries of the Solvay Process Company, near Syracuse, N. Y. This plant has now been working continuously for several months, and the results attained, both in amount of work done by the drills and the convenience and economy of their operation and maintenance, have given thorough satisfaction to the company first undertaking their general employment. Installed by the General Electric Company of New York at the commencement of last winter, the drills have operated without interruption from the intense cold, and have practically demonstrated the advantages derivable from the use of electricity in quarry work. Had steam been the only available power, conditions were such at this plant that the loss in transmission by condensation at 20 deg. below zero would have been so great that the drills could not have been worked. The quarry is situated in a desolate spot on an elevated plateau, where intense cold found full scope for action. At the present time three "Type E" General Electric Company's drills are in continuous operation for ten hours per day, drilling holes from six to ten feet in depth, and from 2 to 2½ inches in diameter at the top. The rate of drilling according to the record kept by the superintendent, is from 45 to 75 feet per ten hours, averaging 50 feet per day, or 1,500 feet per month of 30 days. The average distance of the drills from the power station is about 2,000 feet at the present time, the circuit, three lines of bare No. 0 copper wire, being extended to a distance of 3,000 to 5,000 feet from the power station in one direction. The manipulation of the drill is in every respect as simple as that of the steam or air drill, stopping and starting being accomplished by merely throwing a handle to the right or to the left, making or breaking the contact between the cable and the terminals of the coils. Not the slightest difficulty is experienced in lubricating the wearing parts or in handling the drill. The general dimensions of the "Type E" drills, three of which are doing all the deep-hole drilling for the quarry are:—Length over all, 49 inches; outside diameter, wrought-iron tube, 7½ inches; blows per minute, 380. The generator which supplies the power is of the bipolar type, running at normal speed, and is provided with a device for directing the current alternately into the upper and lower coils of the drills. The difference of potential at the fixed brushes of the generators is 240 to 250 v. The generator is belted to a 9 inch by 12 inch straight line engine, supplied with steam at 90 pounds pressure from a horizontal tubular boiler; fuel for which is brought for three miles

over the cableway in the buckets used to transport the lime rock from the quarry to the works. As yet no estimate of costs of repairs can be given because up to date there have not been any. Should, however, any part break down it can instantly be replaced, as all the parts are interchangeable. The company states that the plant has aroused widespread interest among quarry operators in general, and has been visited and carefully inspected by many less prone to reject the good things which advanced science offers. That electricity is an ideal power for mine and quarry operation the working of these electric percussion drills does much to how.

HOW TO FIND THE STRENGTH OF CAST-IRON COLUMNS.

The method of finding the necessary sectional area of metal to support a given load at a certain height is as follows: Let us, says Work, take a case of a column 18 feet high, having to support a load of ten tons. The first point to be decided is what is to be the diameter of the column. Let us, to commence with, assume one 6 inches in diameter. This makes the number of diameters 36, which, by the diagram, we find wants a divisor, of 57.6. This must first be multiplied by the load (10 tons), then divided by 49—i. e., the number of tons required to crush a square inch of cast iron—which gives us 11.75 square inches of sectional area required. Now, to obtain the thickness of metal necessary to give such a column this amount of area requires a somewhat lengthy calculation. We must first deduct this 11.75 square inches sectional area from the area of a 6-inch circle (which is 28.27), and this gives us 16.52 as the area of the hollow space of which we wish to learn the diameter, viz., the inside diameter of the column. To obtain this, we divide 16.52 by .7854, getting a quotient of 21.03; and we then extract the square root of this amount, which gives us 4.58 inches as the diameter. By deducting this from 6 inches (the outside diameter), we get 1.42 inches as the thickness of the metal on the two sides, or .71 inches as the thickness of the metal required. If 9 inches be taken as the diameter and the same method followed, remembering that the column is 24 diameters, and therefore 33.3 is the divisor, it will be found that only 6.79 inches area are required, and this can be obtained by metal about ¼ inch thick; but in castings, such as columns of this size, nothing less than ½ inch metal should be used, and therefore a diameter of about 7 to 7½ inches would be the best to employ for such a position.

USEFUL HINTS.

A cord of stone, three bushels of lime, and a cubic yard of sand will lay 100 cubic feet of wall.

1,600 laths will cover 70 yards of surface, and eleven pound lath nails will nail them on. Eight bushels of good lime, sixteen bushels of sand, and one bushel of hair will make enough good mortar to plaster 100 square yards.

Cement, 1 bushel, and sand 2 bushels, will cover 3½ square yards 1 inch thick; 4½ square yards ¾ inch thick, and 6¼ square yards 1 inch thick; 1 bushel cement and 1 of sand will cover 2¼ square yards 1 inch thick, 3 square yards ¾ inch thick and 4½ square yards ½ inch thick.

The proportioning of radiation is a detail in the planning of an apparatus for warming, says *Heating and Ventilation*, which calls for careful judgment, and it is important that a full consideration be given to all conditions which would influence this estimate, forming as it does, the basis of computation for the entire work, and particularly for determining that most vital point in any system of warming—the boiler.

A STRONG CEMENT.—Common alum melted in an iron spoon over hot coals forms a very strong cement for joining glass and metal together. It is the best thing for holding glass lamps to their

stands or for stopping cracks about their bases, as kerosene does not penetrate it. Housekeepers ought to keep this in remembrance, for sad accidents may be prevented by its use.

MUNICIPAL DEPARTMENT.

BRIDGE SUPERSTRUCTURE AND FOUNDATIONS IN NOVA SCOTIA.

During the last few years the use of concrete for highway bridge abutments and piers has obtained much favor in Nova Scotia, owing largely to the efforts of Mr. Martin Murphy, M. Am. Soc. C. E., Provincial Government Engineer. There have been 147 highway bridges of metal superstructure and concrete foundations built within 10 years, 44 of which have been standing for five years. The use of concrete foundations is also being rapidly extended to railway bridges. These foundations have been subjected to heavy drift ice and to the extreme of climate, and but one failure has been recorded; this one was undoubtedly due to improper workmanship. The work is done under the supervision of the government engineers, and generally by men trained in the use of concrete. The cost of concrete work in bridge piers and abutments varies from \$5.50 to \$6.50 per cu. yd., and from \$7 to \$8 in arched bridges. The aggregates used vary according to the material most easily obtained in the neighborhood of the work. They are for the most part the natural gravels. Large rubble stones are commonly used imbedded in the concrete. The cement used is English Portland.

The construction of concrete foundations varies, of course, with the conditions of the foundation bed. On rock, iron or steel cylinders are commonly used. A crib containing voids for the cylinders is sunk over the pier site, and holes are drilled into the rock in which iron rods are placed. The cylinder is then placed outside of these rods and filled with concrete. Where quicksand covers the rock it is first removed and then a mattress of brush and small stones is sunk through which the piles are driven and the cylinder is placed on them. The space between the piles is filled with concrete, and the piles directly under the cylinder are allowed to extend up into the cylinder several feet. Cribwork and piles are also used in clay. In some cases caissons resting on piles, upon which a monolith of concrete is built, without cylinders, are used. It is stated in the paper read before the International Engineering Congress by Mr. Murphy, from which the above matter has been abstracted, that these foundations withstand the action of the climate and the shocks of drift ice better than masonry and that they are much cheaper.

CHEMICAL PRECIPITATION for disposing of 12,000,000 gallons, or one fifth of the sewage of Glasgow, Scotland, is to be tried in a plant designed by G. V. Alsing and erected at a cost of \$225,000. On entering the works it runs direct into the catch-basins, according to the *Industries and Iron*, where the heavier parts are precipitated by gravity and flow into sludge tanks. It is then run into filter presses and will be utilized as manure for agricultural purposes, if possible. The lighter flow from the catch-basins will be lifted by centrifugal steam pumps into the mixing chamber where the chemicals, sulphate of alumina and milk of lime, are added. The liquid then passes into the precipitation tanks, 24 in number, each 45' x 50' x 6' in depth, and with the capacity of 96,000 gallons. The work of separation over, the fluid on the surface is emitted through self-floating valves into a corresponding number of aerating tanks of similar dimensions. The effluent is discharged into Clyde, after filtration in 60 filters covering some three acres of ground.

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

AN INK THAT WILL RESIST CHEMICALS.—An ink that will resist all chemical agents may be made, says a German authority, by mixing 20 parts of caustic potash, 10 parts (by weight) of leather scraps cut fine, and 5 parts of sulphur. Place in an iron kettle on a sand bath, covering the materials with water, and evaporating the mass until it first becomes dry, and then, by the continual heat, again becomes pasty. The product is then dissolved in water, strained, and preserved in well-stoppered bottles.

Municipal Officers, Contractors and others are requested to mention the CONTRACT RECORD when corresponding with advertisers.

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THOROLD CEMENT

MANUFACTURED BY ESTATE OF JOHN BATTLE, Thorold, Ontario.

GRAND TRUNK RAILWAY CO. OF CANADA. CHIEF ENGINEER'S OFFICE, HAMILTON, ONT., Oct. 17, 1893.

REPRESENTATIVES OF THE ESTATE OF JOHN BATTLE, THOROLD, ONT.

Gentlemen: In reply to yours of September 19th last as to the cement manufactured at the John Battle Works, Thorold, Ontario, we have been using it on this Division of the Grand Trunk Railway for many years, and have found it to be of good quality.

Yours truly,

JOSEPH HOBSON, Chief Engineer.

WILLIS CHIPMAN, B.A.Sc.,

M. Can. Soc. C.E.; M. Am. Soc. C.E.; M. Am. W. V. Ass'n.

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PORTLAND CEMENT

BEST AND CHEAPEST IN TORONTO.

JOSSON, PETERS and BURHAM Brands for highest class work.

WHITE HORSE, R. W., IMPERIAL, &c., FROM \$2.00 PER BARREL.

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MANUFACTURERS OF

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Works: MONTREAL AND ST. HENRI, QUE.

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Manufacturers of

Salt-Glazed, Vitrified

SEWER PIPES

Double Strength Railway Culvert Pipes, Inverts, Vents,

AND ALL KINDS OF FIRE CLAY GOODS.

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London, Ont.

To Municipal Corporations and Contractors:

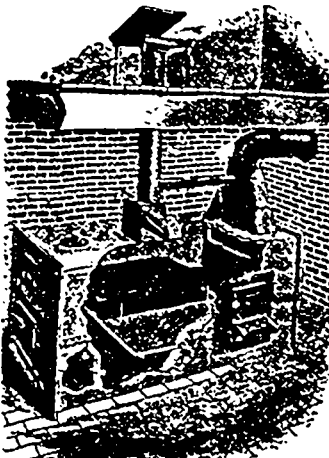
... WE MANUFACTURE ...

Hydrants, Valves, Valve Boxes

and Water Works Supplies generally,

INCLUDING

Tools for tapping mains under pressure and Service Brass Work of all descriptions.



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ENGLE CREMATING CLOSET

A SUBSTITUTE FOR PRIVY VAULTS AND CESS POOLS.

A PERFECT SANITARY TRIUMPH,

Applicable to the uses of schools, colleges, hospitals, factories, asylums and dwellings.

This closet is invaluable where sewer and water privileges are not obtainable, possessing all the convenience of the modern water closet.

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CENTRAL BRIDGE AND ENGINEERING COMPANY, (LIMITED)
 Peterborough, Ont.
 WM. H. LAW, Manager and Engineer,
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RAILWAY AND HIGHWAY BRIDGES
Viaducts, Piers, Roofs, Turntables and Girders in Steel and Iron.
 Tension members forged without welds. Riveting done by hydraulic or compressed air machines. Specialties: Good workmanship and strict adherence to specifications and drawings.
 CAPACITY: 2,000 TONS PER ANNUM.

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 Proved by Government tests to be the best Canadian natural cement. Write for prices, &c.

OUR SALES OF
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 Portland Cement..
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25,499 BAGS.
 "Burham" Brand outranks all others.
 Try it and be convinced.
 Sole Consignees for Canada:
MCRAE & CO., OTTAWA

Prices of Building Materials.

CONDITION OF THE MARKET.
 We have to report prevailing quietness in the building trade, and consequently very little demand for builders' supplies. Dealers are preparing for the spring trade, which it is thought will be fairly brisk. A good demand is reported for plumbers' supplies. There is absolutely nothing doing in cement, lime and sand, and prices remain the same. Trade in glass shows some improvement, and the usual jobbing trade is reported in paints and oils.

LUMBER.
 CAR OR CARGO LOTS.
 Toronto. Montreal.

1 1/2 to 2 clear picks, Am ins.	33 00	36 00	40 00	45 00
1 1/2 to 2 three uppers, Am ins.	37 00	40 00	45 00	50 00
1 1/2 to 2, pickings, Am ins.	26 00	27 00	30 00	35 00
1 inch clear	59 50	60 00		
1 x 10 and 12 dressing and better.	20 00	22 00	28 00	30 00
1 x 10 and 12 mill run.	16 00	17 00	19 00	20 00
1 x 10 and 12 dressing.	20 00	22 00	28 00	30 00
1 x 10 and 12 common.	13 00	14 00	8 00	10 00
1 x 10 and 12 spruce culls.	10 00	11 00	10 00	11 00
1 x 10 and 12 culls.	9 00	10 00	9 00	10 00
1 inch clear and pickings.	28 00	30 00	33 00	35 00
1 inch dressing and better.	20 00	22 00	28 00	30 00
1 inch siding, mill run.	14 00	15 00	14 00	16 00
1 inch siding, common.	12 00	13 00	12 00	14 00
1 inch siding, ship culls.	11 00	12 00	10 00	11 00
1 inch siding, mill culls.	9 00	10 00	8 00	9 00
Call scantling.	8 00	9 00	8 00	9 00
1 1/2 and thicker cutting up plank.	24 00	26 00	22 00	25 00
1 inch strips, 4 in. to 8 in. mill run.	14 00	15 00	14 00	15 00
1 inch strips, common.	11 00	12 00	11 00	12 00
1 1/2 inch flooring.	16 00	17 00	14 00	15 00
1 1/2 inch flooring.	16 00	17 00	14 00	15 00
XXX shingles, sawn, per M	2 50	2 60	5 00	2 70
XX shingles, sawn.	1 50	1 60	1 60	1 70
Lath.	2 40			
YARD QUOTATIONS.				
Mill call boards and scantling	10 00		10 00	
Shipping call boards, promiscuous widths.	13 00		13 00	
Shipping call boards, stocks	16 00		16 00	
Hemlock scantling and joist up to 16 ft.	11 00	12 00	10 00	
Hemlock scantling and joist up to 18 ft.	12 00	13 00	12 00	13 00
Hemlock scantling and joist up to 20 ft.	13 00	14 00	13 00	14 00
Scantling and joist, up to 16 ft.	14 00	15 00	14 00	15 00
" " " " " " " " " "	15 00	16 00	15 00	16 00
" " " " " " " " " "	16 00	17 00	16 00	17 00
" " " " " " " " " "	17 00	18 00	17 00	18 00
" " " " " " " " " "	18 00	19 00	18 00	19 00
" " " " " " " " " "	19 00	20 00	19 00	20 00
" " " " " " " " " "	20 00	21 00	20 00	21 00
" " " " " " " " " "	21 00	22 00	21 00	22 00
" " " " " " " " " "	22 00	23 00	22 00	23 00
" " " " " " " " " "	23 00	24 00	23 00	24 00
" " " " " " " " " "	24 00	25 00	24 00	25 00
" " " " " " " " " "	25 00	26 00	25 00	26 00
" " " " " " " " " "	26 00	27 00	26 00	27 00
" " " " " " " " " "	27 00	28 00	27 00	28 00
" " " " " " " " " "	28 00	29 00	28 00	29 00
" " " " " " " " " "	29 00	30 00	29 00	30 00
" " " " " " " " " "	30 00	31 00	30 00	31 00
" " " " " " " " " "	31 00	32 00	31 00	32 00
" " " " " " " " " "	32 00	33 00	32 00	33 00
" " " " " " " " " "	33 00	34 00	33 00	34 00
" " " " " " " " " "	34 00	35 00	34 00	35 00
" " " " " " " " " "	35 00	36 00	35 00	36 00

Toronto. Montreal.

Cutting up planks, 1 1/2 and thicker, dry.	25 00	28 00	25 00	26 00
Cutting up planks, 1 1/2 and thicker, board.	18 00	24 00	18 00	24 00
Cedar for block paving, per cord.	5 00		5 00	
Cedar for Kerbing, 4 x 14, per M.	14 00		14 00	
B. M.				
1 1/2 in. flooring, dressed, F.M.	26 00	30 00	28 00	31 00
1 1/2 inch flooring, rough, B.M.	18 00	22 00	18 00	22 00
1 1/2 " " dressed, F.M.	25 00	28 00	27 00	30 00
1 1/2 " " undressed, B.M.	18 00	19 00	18 00	19 00
1 1/2 " " dressed.	18 00	20 00	18 00	20 00
1 1/2 " " undressed.	18 00	19 00	18 00	19 00
Headed sheeting, dressed.	30 00	35 00	22 00	35 00
Clapboarding, dressed.	12 00		12 00	
XXX sawn shingles, per M				
18 in. flooring, dressed.	2 60	2 70	3 00	
Sawnlath.	2 50	2 60	2 50	2 60
Cedar.	2 90		2 90	
Red oak.	30 00	40 00	30 00	40 00
White.	37 00	45 00	35 00	45 00
Basswood, No. 1 and s.	38 00	30 00	18 00	20 00
Cherry, No. 1 and s.	70 00	90 00	70 00	80 00
White ash, No. 1 and s.	24 00	35 00	30 00	35 00
Black ash, No. 1 and s.	20 00	30 00	18 00	30 00
Dressing stocks.	16 00	22 00	16 00	22 00
Picks, American inspection.	30 00		30 00	
Three uppers, Am. inspection.	50 00		50 00	
BRICK—M				
Common Walling.	7 50		6 00	
Good Facing.	9 00		8 50	
Sewer.	8 50	9 00	8 50	9 00
Pressed Brick, Per M:				
Plain brick, f. o. b. at Milton	16 00			
" " " " and quality	14 00			
" " " " 3rd	8 00			
Hard Building.	4 50			
Moulded and Ornamental, per 100.	3 00	10 00		
Roof Tiles.	24 00			
Diamond locking tile.	16 00			
First quality, f. o. b. at Campbellville.				
2nd quality, f. o. b.	18 00	25 00		
3rd	14 00	20 00		
Ornamental, per 100.	11 00	17 00		
Tiles.	3 00	10 00	3 00	10 00
Ornamental, per 100.	24 00		24 00	
Plain brick, "A" f. o. b. Don Valley				
" " " " " " " " " "	18 00	25 00		
" " " " " " " " " "	16 00	22 00		
" " " " " " " " " "	13 00	18 00		
Trojan or Buff.	24 00	30 00		
Ornamental, per 100.	3 00	60 00	3 00	60 00
Plain brick, f. o. b. Port Credit				
" " " " " " " " " "	18 00			
" " " " " " " " " "	13 00			
" " " " " " " " " "	10 00			
Hard Building.	8 00			
Ornamental, per 100.	3 00	10 00		
SAND.				
Per Load of 1 1/2 Cubic Yards	1 25		1 25	
STONE.				
Common Rubble, per ton, delivered.	14 00		14 00	
Large flat Rubble, per ton, delivered.	18 00		18 00	
Foundation Blocks, per c. ft.	50		50	
Kent Freestone Quarries, Modeton, N. B., per cu ft., f. o. b.	1 00			
River John, N. S., brown Freestone, per cu. ft., f. o. b.	95			
Ballochmyle.	80	65	75	
New York Blue Stone.			1 05	
Granite (Stanstead) Ashlar, 6 in. to 12 in., rise 9 in., per ft.			70	25
Most Freestone.			70	80
Thomson's Gatelawbridge, cu. ft.			75	80
Credit Valley Rubble, per ton, delivered.	13 00	14 00		
Credit Valley Brown Coursing, per superficial yard.	2 50	3 00		2 90
Credit Valley Brown Dimension, per cubic foot.	90		90	
Credit Valley Grey Coursing, per superficial yard.	1 50	2 00		2 15
Credit Valley Grey Dimension, per cubic foot.	75		85	
Madoc Rubble, delivered, per ton.	14 00	14 50	14 00	14 50
Madoc dimension floating, f. o. b. Toronto, per cubic ft.	30	32		
Ohio Freestone, No. 1 Blue Promiscuous, f. o. b.	60			
No. 1 Blue Dimension.	65			
No. 1 Buff Promiscuous.	80			
No. 1 Buff Dimension.	85			
The above prices means freight and duty paid.				
2 in. sawed flagging per sq. ft.	22		23 1/2	
3 in. " " " "	23		24 1/2	
4 in. " " " "	24		25 1/2	
5 in. " " " "	25		26 1/2	
Duty to be added to these prices.				
Quebec and Vermont rough granite for building purposes, per c. ft. f. o. b. quarry	33	1 50		
For ornamental work, cu. ft.	35	2 00		
Granite paving blocks, 8 in. to 12 in. x 6 in. x 4 1/2 in., per M.	50 00			
Granite curbing stone, 6 in. x 20 in., per lineal foot.	70			
SLATE.				
Roofing (9 squares).				
" " red.	16 00		20 00	
" " purple.	9 00		10 00	
" " unslating green.	8 50		6 00	
" " black.	8 00		7 50	
Terra Cotta Tile, per sq.	22 00			
Ornamental Black Slate Roofing.	8 00			
PAINTS. (In oil, 1/2 lb.)				
White lead, Can., per 100 lbs.	6 25	6 50	6 00	6 25
" zinc, Can., " "	6 50	7 50	7 50	8 00
Red lead, Eng.	5 1/2	6 1/2		
" venetian, per 100 lbs.	1 60	1 75	1 60	1 75
" vermilion.	90	1 00	90	1 00
" Indian, Eng.	20	22	18	22
Yellow ochre.	5	10	4	6
Yellow chrome.	15	20	15	20
Green chrome.	7	12	7	12
" Paris.	25	40	20	20

Toronto. Montreal.

Black lamp.	15	25	12	25
Blue, ultramarine.	15	20	12	18
Oil, linseed, raw, Imp. Gal.	68	68	62	65
" " " " " " " "	68	72	66	68
" " " " " " " "	78	85	75	75
Putty.	2 1/2	2 1/2	2 1/2	2 1/2
Whiting, dry, per 100 lbs.	75	1 00	60	75
Paris white, Eng., dry.	90	1 25	90	1 10
Litharge, Am.	6 1/2	8	6 1/2	8
Sientia, burnt.	15	20	12	15
Umber, " " " "	15	18	12	15
CEMENT, LIME, etc.				
Cement, Portland, per bbl.	2 40			
" English	2 75	2 10	2 25	
" Belgium	3 25	1 95	2 05	
" Thorold	1 50			
" Queenston	2 25			
" Napanee	1 50			
" Hull	1 50			
" German	2 65	2 85		
" London	2 45	2 90		
" Newcastle	3 35	2 50		
" Belgian	2 30	2 40		
" Canadian	2 25	2 30		
" Roman	2 75			
" Parian	4 50	4 75		
" Superfine	6 50	7 00		
Keene's Coarse "Whites"	4 50	4 75		
Calced plaster, per barrel.	1 55	1 70		
Fire Bricks, Newcastle, per M	16 50	21 00		
Scotch	24 00	30 00		
Lime, Per Barrel, Grey.	40			
" " White.	55			
Plaster, Calced, N. B.	2 00			
" " N. S.	2 00			
Hair, Plasterers', per bag.	80	1 00		
HARDWARE.				
Cut nails, 5c & 6c, per keg	2 40		2 25	
Steel " " "	2 50		2 35	
CUT NAILS, FRICE AND CUT SPIKES.				
40d, hot cut, per 100 lbs.	5		5	
30d, " " "	10		10	
20d, 16d and 12d, hot cut, per 100 lbs.	15		15	
10d, hot cut, per 100 lbs.	20		20	
8d, 9d, " " "	25		25	
6d, 7d, " " "	40		40	
4d to 5d, " " "	60		60	
3d, " " "	1 00		1 00	
2d, " " "	1 50		1 50	
4d to 5d cold cut, not polished or blued, per 100 lbs.	50		50	

Toronto. Montreal.

3d to 5d cold cut, not polished or blued, per 100 lbs.	90		90	
FINE BLUED NAILS.				
3d, per 100 lbs.	1 50		1 50	
2d, " " "	2 00		2 00	