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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. 4.

JANUARY 4, 1894

No. 46

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

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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. 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. E. 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 120, 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 21st day of February, 1894.

(Signed) J. LESLIE JENNISON,
Mayor.

(Signed) A. M. FRASER,
Town Clerk.

New Glasgow, N. S., December, 22nd, 1893.

Notice to Contractors

CANADIAN CONTRACTOR'S HAND-BOOK

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

C. H. MORTIMER, Publisher,
Confederation Life Building, TORONTO.
Montreal Office:
64 Temple Building.

LEGAL DECISIONS.

The Supreme Court of Indiana held, in the recent case of McElwane et al. vs. Hoxey et al., that the Indiana act of March 9, 1889, concerning liens of mechanics, laborers and material men, is broad enough to include teamsters; that the act of 1885 (acts 1885, sec. 3) making debts due for manual or mechanical labor preferred claims where the debtor's property passes into the hands of a receiver, does not apply as to those who gave no notice where, prior to the appointment of a receiver, the property has been assigned by the debtor to part of the creditors in payment of discharge of preexisting indebtedness, and that the machinery erected and used for drilling a gas well does not constitute a mill within the meaning of section 1 of the lien law of 1889 creating a lien without notice.

In the process of enamelling on green brick the first requisite is a suitable clay, which should be a buff colour when burned and perfectly capable of standing a high heat without warping or twisting; though this is not so essential as freedom from iron in a more or less state. If the clay is tough it can be made to withstand the heat by various well known methods. Lime in the clay will cause the enamel to crack, and at high heat will act as a flux, making it appear thin and transparent, which is objectionable. Iron or lime produces discoloured spots on the face of the brick; but if evenly diffused and chemically combined with the clay, the presence of quite a percentage of iron is unimportant unless in a free state. An excess of lime in any form is objectionable. Almost any tough buff clay will answer in the process, and many of the shorter clays will produce good results. If a short clay is used that will bear only a moderate heat, however, its fire resisting qualities will be inferior and consequently less valuable.

CONTRACTS OPEN.

BRANTFORD, ONT.—The bridge over the canal at the White bridge was washed away by the recent flood.

KINGSTON, ONT.—Mr. Johnston Brown has purchased the City Hotel property and contemplates making extensive improvements.

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

GODERICH, ONT.—The ratepayers of this town on Monday last voted in favor of establishing a House of Refuge for the County of Huron.

WINNIPEG, MAN.—The Winnipeg Waterworks Company will receive proposals until noon of the 8th inst. for supplying 750 cords of dry tamarac; Alex Moffat, Sec.-Treasurer.

WINDSOR, ONT.—The Water Commissioners have been restrained by injunction from proceeding with the proposed work of pipe laying, and the bids have been returned unopened. Nothing further will be done in the matter until a settlement is arrived at.

LONDON, ONT.—The by-law granting a bonus of \$100,000 to the G. T. R. Company for the erection of their car shops here, was carried by a large majority, the other two by-laws providing for the purchase of an electric light plant and the granting of a sum of money for the laying of a new waterworks main were defeated.

VANCOUVER, B. C.—Mr. Fripp, architect, has been engaged to prepare plans for the Old Men's Institute to be erected at Kamloops, and for which an appropriation was made last year by the Provincial Government. The plans will shortly be submitted to the Government for approval.

SOREL, QUE.—The new South Shore Railroad Company have asked the City Council for a bonus of \$50,000 to aid in the construction of a bridge over the Richelieu river at this place. The government has voted that amount for the work conditionally on a similar amount being given by the city.

TORONTO, ONT.—At a recent meeting of the Toronto Presbytery permission was given to the congregation of Ruth Street Presbyterian Church to erect a new church between the present edifice and Queen street.—The rebuilding of the Jarvis Street Collegiate Institute will probably be considered by the High School Board in the near future.

HAMILTON, ONT.—Messrs. Bruce & Company have been granted a building permit for alterations to their building recently destroyed by fire, to cost \$6,000.—Messrs. R. R. Wardell and A. E. Carpenter will probably organize a company to build a street railway from Dynes, along the Beach road to the canal, and easterly to the Black Bridge. The by-law granting the company the necessary power was passed in 1876.—Mr. George

Hope, assignee, invites tenders until the 24th inst. for the purchase of the stock and plant of the Laidlaw Mfg. Co.

MONTREAL, QUE.—Tenders are invited at the offices of John James Browne, architect, 207 St James Street, until noon on Wednesday, the 10th inst. for the several works including electric wiring required in making an extensive addition to a residence on Redpath street.—The Road Committee has been granted the sum of \$78,600 by the City Council for the paving of Notre Dame street east, between Lacrôix and Papineau streets, and \$22,900 for grading and macadamizing Cedar avenue.—A meeting of the shareholders of the Montreal Union Abattoir Company has been called for the purpose of authorizing an issue of one hundred thousand dollars worth of debentures.—The Montreal Temple Company have purchased a site on Dorchester street on which to erect the proposed Masonic Temple, and as soon as final arrangements are completed, the work of construction will be commenced.

OTTAWA, ONT.—A meeting of the promoters of the new opera house will be held at an early date to select plans and secure a site. The proposed building is expected to seat 2,000 persons.—On Monday last the by-law granting the sum of \$150,000 to the Gatineau Valley and Pontiac and Pacific Railway for the construction of a traffic bridge across the Ottawa River at Nepeau Point was carried by the ratepayers.—The by-law providing \$364,000 for a drainage system was defeated by a large majority.—E. F. E. Roy, Secretary Department of Public Works, invites tenders until Friday, the 19th inst. for the construction of an additional length to the wharf at Grande Riviere, Que. Plans may be seen at the post-office at Grande Riviere and at the above department.—A deputation representing the Lady Stanley Institute recently waited on the Countess of Aberdeen to solicit her support towards the erection of a Maternity Hospital in connection with the County of Carleton General Hospital. The deputation were favorably received, and a public meeting will be called shortly to discuss the project.

FIRES.

Fawcett's foundry at Sackville, N. B., was burned recently. Loss, \$75,000; insurance small. It will in all probability be rebuilt.—The Columbian Handle and Turning Factory, owned and operated by W. H. Braddon, of St. Thomas was destroyed by fire last week. There is said to be some insurance on the building.—The Co-operative Company's store at Cow Bay, N. S., was burned recently. Loss, \$2,000; insurance, \$1,000.—Frost & Wood's building, G. Hornberger's harness store and Samuel Cowan's hotel at Miami, Man., were destroyed by fire last week.—The furniture factory of A. Jette, on Ontario Street, Montreal, was damaged by fire recently to the extent of \$12,000, which is mostly covered by insurance.—At Carberry, Man., on the 30th ultimo,

fire destroyed A. E. May's implement warehouse, owned by James Thompson, D. Hunt's large livery stables, M. Lyon's residence, Walker's auction rooms and E. Ross's office, the latter owned by J. Thompson.—Two stores on Front street, Belleville, Ont., owned by Mr. Templeton, were totally destroyed by fire on the 1st inst. Loss on building, \$7,000; insurance, \$5,600. An adjoining building owned by Thos. Walters and John Lewis, was also gutted by fire on the same date. Loss on building, \$1,800; insurance, \$1,500.

CONTRACTS AWARDED.

YARMOUTH, N. S.—The contract has been awarded for building the Nova Scotia Coast Line Railway from this place to Lockport.

CORNWALL, ONT.—Mr. Lyons, of Ottawa has been awarded the contract for the erection of the new St. Columban's church. The contract price is \$44,000. Work will be commenced early in the spring.

VANCOUVER, B. C.—The Penticton Townsite Company has arranged with the British Columbia Iron Works Company for the construction of a waterworks plant sufficient to provide an ample water supply from OKanagan Lake.

TORONTO, ONT.—The following are the prices at which the contracts were awarded by the City Council for the annual supply of sewer pipe, the successful tenderers being the Mimico Sewer Pipe Co.: 6-inch pipe, 7½c. per foot; 9-inch pipe, 12½c. per foot; 12-inch pipe, 20c. per foot; 15-inch pipe, 32c. per foot; 18-inch pipe, 45c. per foot. Inverts, 1 ft. 2 in. x 1 ft. 9 in., 18c. per foot; 2 ft. x 3 ft., 27c. per foot. Stoppers 6-inch 3c. each; 9-inch, 5c. each. Curves, elbows and bends, 6-inch, 25c. each; 9-inch 40c. each; 12-inch, 75c. each; 15-inch \$1 each; 18-inch, \$1.50 each. Junctions of 2-foot lengths, 6-in. off 9-in., 60c. each; 6-in. off 12 in., 85c. each; 9-in. off 12 in. 85c. each; 6 in. off 15 in., \$1.15 each; 9 in. off 15 in., \$1.15 each; 6 in. off 18 in., \$1.60 each; 9 in. off 18 in., \$1.60 each; Reducers, 9 in. to 6 in., 40c. each; 9 in. to 4 in., 25c. each.

BUSINESS NOTES.

Jos. Dequire, lumber merchant, Montreal, has assigned at the instance of D. S. Marquis, with liabilities about \$6,500.

The *Legal and Commercial Exchange* reports the following: J. L. Gordon, lumber dealer, Pilot Mound, Man., has sold out to A. & E. Gordon.—Murdoch McLean, painter, of Moncton, N. B., has assigned.—The Bently Lumber Co. Lethbridge, N. W. T., has sold out to Stanbury & Clapman.—Mr. William Young, of Young Bros., plumbers, Hamilton, Ont., died last week.

CLOSE HIPS ON SLATE ROOFS.

One of the recent "fads" of the last decade, says the *National Builder*, is the use of "Close Hips" in slate roofing. Close hips were used originally as a matter of economy, and not on account of any merit possessed by them, architecturally or otherwise. At that time sheet lead, which was the material used for flashings, was very expensive, and hips were worked close to save the cost of that material by dispensing with the use of flashings. We are credibly informed that some slaters at this time work close hips without flashings, should the architect fail to mention the same in his specifications.

A close hip without flashings may not leak, or if it does leak it may be in such quantity as to be absorbed by the sheathing and hip rafters, and not appear on the ceiling below; in such cases it is well to remember that the sheathing and hip rafters will not dry out very rapidly by reason of the roof covering above, and this occasional wetting and slow drying will augment the rotting of the roof timbers at the hips. Where close hips are

insisted on being used, the "specifications" should require that "piece flashings be worked in with each course," the flashings to extend not less than three inches on each side of the hip, and to have an end lap on each course equivalent to the lap given the third course of slate over the first course, commonly called the cover.

VENTILATION SPACE.

Dr. Poore in his "Essays on Rural Hygiene" has something to say about ventilation and breathing space, and points out the average dinner party and the average "At Home" are alike in need of reform in this respect. He says:—The average London dining room is, perhaps 20 ft. by 16 ft. by 12 ft., and contains, inclusive of the space, occupied by furniture, &c., less than 4,000 cubic feet, or space considered sufficient for five convicts in prison. If we wish to do honor to our guests we invite sometimes as many as 18, and to wait upon these we employ four servants, and we light the room with half-a-dozen lamps or their equivalent, i. e., we put into our 4,000 cubic feet of space the equivalent of 28 people, and we give them 143 cubic feet of space each, and as we provide no adequate inlet or outlet for fresh air, it is not to be wondered at the discomfort often reaches agony point, and the conversation lags, nor is it a matter of purpose that the average London dinner, where you are suffocated and overfed, is reckoned among the duties rather than the pleasures of existence, and that the malaise of the following day is (often wrongly) attributed to the quality of the wine. Dr. Poore thinks that an "At Home," where the guests have about 50 cubic feet of air apiece, is worse still, and expresses a hope that it may some day be considered "bad form" to give guests not more than one-twentieth part of cubic space and far less than one-twentieth of the fresh air which is allotted to criminals. In this many weary-party-goers will sorrowfully agree with him.

USEFUL HINTS.

Paste may be kept several months without getting mouldy if a little pulverised blue stone is added while hot.

To imitate ground glass, paint the glass with the following mixture:—Mastic, 2 drachms; sandarach, 9 drachms; ether, 12 ounces; benzine, 8 ounces.

Amongst others, the following is given as a good recipe for polishing marble:—Magnesia, ½ oz.; oxalic acid, 2 oz.; with warm rain water, 1 pint. Polish with woollen cloths.

Plumbers should be careful not to use lead in contact with oak, unless the latter is perfectly dry and free from sap, otherwise the gallic or acetic acid in the wood will turn the lead into acetate of lead or ceruse.

In priming woodwork it is very necessary to remember that fine ochre or other pigment should be used. If the material be coarse the oil soaks into the wood and leaves the pigment on the surface. Zinc should never be used for priming.

Excavation on the site of the Roman city of Silchester, near Reading, shows that the whole of the rooms in one house, in the time of Julius Caesar, were warmed by a single fire, the hot air being allowed to pass under the floor of each room.

PAINTING WALLS WITH CEMENT COATING.—No glue should ever touch the cement, as it is apt to peel off. Take oil and coat the whole surface before painting. On such a base oil paints will adhere perfectly. Skim milk, sweet, mixed to the thickness of cream with fresh common cistern cement, any of the earthy pigments being added, makes an excellent paint for such surface, the lime in the cement and the caseine in the milk making an insoluble compound.

To cure the stickiness of varnished surfaces that is sometimes met with where the varnish has been applied to dirty or

somewhat greasy surfaces, such as seats, etc., one or more coats of shellac dissolved in alcohol will generally prove effective.

The art of producing mosaics is being extended to leather, the pieces being variously colored, some having metallic hues, others with a transparent glaze over another color. They are attached by glue to a hardwood ground, framed the depth of the pieces, which are shaped as required.

An electric light, with lens and mirror, has been advantageously used in the shaft sinking at the Walkinshaw colliery, near Paisley, Scotland. This light, fixed at the top of the shaft, had an illuminating power of 4,000 to 5,000 c. p., and was operated by an Elwell-Parker continuous current, compound-wound machine of the equivalent of 2 H.P. The shaft was circular, 13 ft. in diameter and 200 ft. deep, lined with brick. From the brilliancy of the light at the bottom it was believed that this light would have answered for a 1,200 ft. shaft. It could not, however, pierce the fog and smoke following a shot, and this was the most serious drawback.

CHEMICAL-COATED WIRE NAILS.—One of the great merits that was claimed for the wire nail at its introduction was its holding power, says *The Age of Steel*. This has been accentuated lately by the advent of what is known as the chemical coated wire nail. The nail is made of somewhat lighter gauge than the average standard wire nail, but has the same number of nails to the pound, and is sold by the count instead of by the weight. Thus a certain number of nails is guaranteed to the keg, and this number is branded on the keg, so that the user gets just as many nails as of the regular standard nails. The nail itself is coated with a preparation which gives it extraordinary holding powers, in fact, when the nail is once driven in it is almost impossible to pull it out again. For box makers' use and for other purposes it seems to be a most excellent article.

INCOMBUSTIBLE WASH FOR WALLS.—Slack stone lime in a large tub or barrel with boiling water, covering the tub or barrel to keep in all the steam. When thus slacked, pass six quarts of it through a fine sieve. It will then be in a state of fine flour. Now, to six quarts of this lime add one quart of rock salt, and one gallon of water; then boil the mixture, and skim it clean. To every five gallons of this skimmed mixture, add one pound of alum, half a pound of copperas, by slow degrees add three fourths of a pound of potash, and four quarts of fine sand or hickory ashes sifted. We suppose any kind of good hardwood ashes will answer as well as hickory. This mixture will now admit of any coloring matter you please and may be applied with a brush. It looks better than paint, and is as durable as slate. It will stop small leaks in the roof, prevent the moss from growing over and rotting the wood, and render it incomcombustible from sparks falling upon it. When laid upon brickwork, it renders the brick impervious to rain or wet.

A STEREOCROMIC PAINT FOR HOSPITAL WARD.—The first common rough-cast, which is only levelled superficially, is generally followed up, not with the usual fine finish, but with a finish composed of a mixture of two parts of finely sifted sand and one part of slaked lime with a solution of potash and water-glass, of which sufficient is taken to work the material into a stiff paste. This paste must be laid on as soon as possible, and polished as smoothly as circumstances will permit. When dry, the walls must be well whitewashed and, when this is dry a coat of water-glass be applied, a second being given 24 hours later. If it is desired to paint the walls, the colours used must be worked up with glass-water; certain colours, however, such as Prussian blue, chrome yellow, emerald green, &c., may not be used. Finally, wash down with water by means of a hose with moveable rose. This paint, or composition, may be cleansed with wet cloths and prevents the penetration of damp.

MUNICIPAL DEPARTMENT.

SINKING FUND VS. INSTALMENT PLAN DEBENTURES.

Editor CONTRACT RECORD.

DEAR SIR,—In answer to your enquiry, I certainly think that debentures issued payable at the end of the term, i. e. on the Sinking Fund plan, would sell for considerably more than those issued on the Instalment plan. The difference in price would much more than recoup the municipality for the extra work required in managing the Sinking Fund. It is not every purchaser of debentures who will buy those repayable in instalments and consequently municipalities issuing in that manner are deprived of reaching some of the best purchasers in the market.

I might just add that as there is so much trouble arising out of by-laws irregularly and wrongly drawn, it would well repay every municipality to have its by-laws drawn by some competent solicitor.

I shall always be glad to assist in any calculation in connection with Sinking Fund, etc., where it is intended to place debentures on the market for sale.

Yours truly,

G. A. STIMSON.

THE SYSTEMATIC CLEANSING OF DRAINS.

At a meeting of the Bexley Local Board, held a short while back, Mr. E. Reeve Boulter, the surveyor, submitted a report on this subject. He said the cleansing of house drains is a matter which requires the serious attention of all sanitary authorities. The cleansing of drains means not only the removal of solid obstruction matter, but also the prevention of gaseous accumulations. Many persons labor under the impression that when a drain is once laid no further attention is required in connection with it. They would, however, ridicule the idea if it was suggested that they should apply the same principle to the chimneys of their houses. These are periodically cleaned, and surely drains should have similar attention. Only very recently (within the last few months), in connecting a drain with the sewer, the drain in question having been in use barely six months, it was found that the disconnecting trap was completely clogged with matter, and the drain above the trap blocked. This state of affairs arose solely from want of attention and not from any defect in construction. In speaking of drains, all traps, chambers, &c., are intended to be included. A system of sewerage has lately been constructed in a portion of the district, and which will have to be periodically flushed to prevent accumulation. If this is necessary in the case of the sewer, is it not also necessary with respect to the drain? Carelessness and the want of attention are the principal sources of stopped drains. The owners of property are frequently called upon to have work done for the removal of stoppages (of course entailing expense) which might have been obviated by a little attention on the part of the tenant. It must be remembered, too, that a drain once disturbed is seldom or never made perfect again. Mr. Boulter says his attention has long been directed to the necessity of adopting some means by which, when a drain is once laid, it shall not be necessary to interfere with it again, so far as its position goes; but he finds it is not possible to keep it thoroughly cleansed under existing circumstances. His proposition is that the sanitary authority of the district should undertake the work, which is now generally neglected by the occupiers of houses (who are, in the majority of cases, ratepayers), and that the cost of carrying out this work should be a charge upon the rates. He proposes to deal with the question in the following way: A workman in the employ of the authority would be furnished with certain implements and deodorants (removed from place to place as necessity required, in a perambulator, similar to that in use at

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

Bexley for lighting purposes), and would visit all occupied dwellings and other properties. He would follow a certain line of sewer and would cleanse and deodorise the private drainage along that line. That being done, a flushing van would be employed to discharge into the manholes attached to the sewers such a quantity of water, mixed with the deodorant, as would efficiently cleanse and flush the sewer in question. The work would be carried out in sections, so arranged as to deal with the upper part, continuing down to the out fall of each section. It is his opinion that if this were done there would be fewer complaints with regard to smell from ventilators. The deodorant used would be manganate of soda, which has, for nearly three years, been successfully used in the cleansing of cesspools, upon the Bexley system. The cost of the deodorant for flushing purposes would be but small compared with the work accomplished.

A carefully designed system of blow-offs is in use in connection with the Providence water-works and was recently described in the Providence "Journal" by Mr. Edmund B. Weston, Am. Soc. C. E., engineer in charge of the works. About 30 6-in. and 8-in. blow-offs, discharging into the river or sewers, are located upon the 30 and 24-in. mains, from 700 to 3,500 ft. apart. When it is desired to clear a length of pipe, it is cut out by means of stop valves and water is admitted through some one or more of the smaller connecting mains, giving velocity of from 2 to 4 ft. per second in the blow-off pipe. For dead ends on small mains 1-in. pipes are provided, unless a hydrant is available. Dead ends are blown off upon complaint of dirty water. It is said that about 40,000,000 gallons of water were used last June in blowing off the low service system. —*Engineering News.*

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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. W. Ass'n.
CIVIL AND SANITARY ENGINEER
Water Works, Sewerage
Sewage Disposal
103 BAY STREET TORONTO.

J. McDOUGALL, C. E.,
ENGINEER COUNTY OF YORK,
Consulting Engineer for Municipal Work.
Electric Railways and Bridges.
COURT HOUSE, - TORONTO.

JOHN GALT
C. E. AND M. E., M. CAN. SOC. C. E.,
Consulting Engineer.
20 Years' Practical Experience in England, United States and Canada in Civil, Sanitary, Hydraulic, and Mechanical Engineering.
SPECIALTIES:
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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.
Nichols, Smythe & Co., - 25 George St., Toronto.
CEMENT CONTRACTORS TO THE CITY OF TORONTO.
Telephone 1948 or call and see us.

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MANUFACTURERS OF
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THE STANDARD DRAIN PIPE CO.
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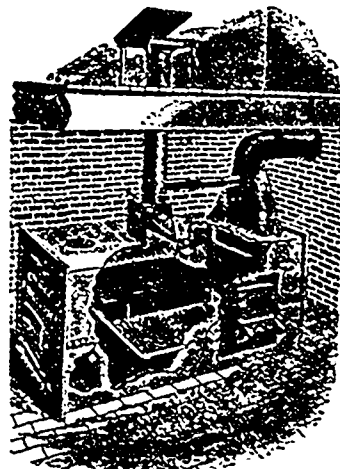


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Vitrified
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Double Strength
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Inverts, Vents,
AND ALL KINDS OF FIRE CLAY GOODS.



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Hydrants, Valves, Valve Boxes
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INCLUDING
*Tools for tapping mains under pressure
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A PERFECT SANITARY TRIUMPH,
Applicable to the uses of schools, colleges, hospitals, factories, asylums and dwellings.
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Railway and Contractors' Plant.
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CENTRAL BRIDGE AND ENGINEERING COMPANY, (LIMITED) Peterborough, Ont. WM. H. LAW, Manager and Engineer. MANUFACTURER OF

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.

ISAAC USHER & SON, THOROLD, ONT. Manufacturers of

QUEENSTON CEMENT

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

OUR SALES OF "BURHAM" Portland Cement..

for the past 8 months have been 25,499 GASKS.

"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.

Table with columns for Toronto and Montreal prices for various lumber types like 1x2 clear picks, 1x2 three uppers, etc.

YARD QUOTATIONS.

Table with columns for Toronto and Montreal prices for mill cut boards and scantling, shipping call boards, etc.

Toronto. Montreal.

Table listing prices for lumber and building materials in Toronto and Montreal, including cutting up planks, flooring, and sawn lumber.

BRICKS—M

Table listing prices for various types of bricks like Pressed Brick, Plain brick, etc.

SAND.

Table listing prices for different grades of sand like Common Rubble, Large flat Rubble, etc.

STONE.

Table listing prices for various types of stone like Common Rubble, Foundation Blocks, etc.

SLATE.

Table listing prices for slate products like Terra Cotta Tile, Ornamental Black Slate Roofing, etc.

PAINTS. (In oil, \$ lb.)

Table listing prices for various paint types like White lead, Red lead, Yellow ochre, etc.

Toronto. Montreal.

Table listing prices for various oils and putties like Black lamp, Blue, ultramarine, Oil, linseed, putty, etc.

CEMENT, LIME, etc.

Table listing prices for cement and lime products like Cement, Portland, per barrel, English, Belgium, etc.

HARDWARE.

Table listing prices for hardware items like Cut nails, Steel, etc.

Toronto. Montreal.

Table listing prices for various types of nails like Fine Blued Nails, Common Barrel Nails, etc.

INDEX TO ADVERTISEMENTS

In the "Canadian Architect and Builder."

Large index table listing various categories of advertisements such as Architects, Church and School Furniture, Galvanized Iron Workers, etc., with corresponding page numbers.