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THIS PAPER REACHES EVERY WEEK THE TOWN AND CITY CLERKS, TOWN AND CITY ENGINEERS, COUNTY CLERKS AND COUNTY ENGINEERS THROUGHOUT CANADA.

Vol. 4.

NOVEMBER 9, 1893

No. 38

THE CANADIAN CONTRACT RECORD.

PUBLISHED EVERY THURSDAY an Intermediate Edition of the "Canadian Architect and Builder."

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

C. H. MORTIMER. Publisher.

CONFEDERATION LIFE BUILDING, TORONTO.
Telephone 2362.

64 Temple Building -Bell Telephone 2299. Montreal.

Bell Telephone 2299.
Information solicited from any part of the Dominsion regarding contracts open to tender.

ADVERTISING RATES ON APPLICATION

At its Convention held in Toronto, Nov. 30 and 21, 1889, the Ontario Association of Architects signified its approval of the OANADLAN CONTRACT ARCORD, and pledged its members to use this journal as their medium of communication with contractors with respect to advertisements for Tenders.

their medium of communication with contractors with respect to advertisements for
Tenders.

The following resolution was unanimously adopted at the First Annual Meetiny of
the Province of Quebec Association of Architects, this in Montreal, Oct. 10th and 1thi,
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
ONNTRAOT RECORD affords us a direct
communication with the Contractors,—Resolved, that we piedge 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.

BARTER AND EXCHANGE.

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

RATES—12 words and under, 15 cents; each additional word, 2 cent (three figures count one word); on two or more subsequent insertions a discount of 10 per cent, will be allowed. Not more than four insertions of an adventisement can be granted.

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

WANTED-Three or four coils or radiators for steam. Box 575. Toronto Junction.

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. daily requirements.

Price, \$1.50; to subscribers of the Canadian Architect and Builder, \$1.00. Address

C. H. MORTIMER, Publisher,

Confederation Life Building, TORONTO. Montivel Office: 64 Temple Building.

TENDERS FOR AN

ELECTRIC LIGHT

Sealed tenders will be received at my office up to 6 o'clock on THURSDAY, NOVEMBER 30TH, for an ARCELECTRIC LIGHT PLANT for the City of London, Canada, including boilers, engines, etc.

Plans and specifications may be seen at this office.

office.

A. ORMSBY GRAYDON, ZGERALD. City Engineer.

ALD. F. J. FITZGERALD. Chairman No. 3 Committee.

TENDERS WANTED

Whole or separate tenders will be received by the undersigned up till

SATURDAY, NOVEMBER 11th, 1893, for the several works required in the erection of an

R. C. CHURCH IN TILBURY CENTRE,

The plans may be seen at my office up till Saturday, October, 28th, and at the office of Jos. M. Tiernan, P. L. S., Tilbury Centre, until November 11th.

Work to be commenced in the Spring of 1894.
The lowest or any tender not necessarily accepted.

HARRY J. POWELL, Architect, Stratford, Out.

TO CONTRACTORS

Scaled Tenders, endorsed "New Parliament Buildings, Victoria, Contract No. 2," will be received by the Honourable Chief Commissioner of Lands and Works up to one o'clock p.m. of Thursday, 30th November, 1893, for the several trades required in the erect.on of New Parliament Buildings at James Bay, Victoria, B.C., viz.:—

- The excavator, mason and bricklayer's work.

- The exercision and oricklaye the carpenter and joiner's work. The slater's and plasterer's work. The coppersmith's work. The smith and ironfounder's work. The plumber's work. The painter's work.

7. The painter's work.

Tenders will be received for any one trade or for the whole work.

The plans, details, &c., as prepared by F. M. Rattenbury, Architect, can be seen at the office of the undersigned on or after Monday, October 16th, 1893, and complete quantities clearly describing the whole of the work can be obtained on payment of \$20 for each trade. This sum will be returned to the contractors on receipt of a hour fide tender. bonn fide tender.

Each tender must be accompanied by an

Each tender must be accompanied by an accepted bank cheque equal to two per cent. on the amount of each trade tendered for, which will be retained as part security for the due performance of the work. The cheque will be returned to unsuccessful competitors, but will be forfeited by any bidder who may decline to execute a contract if called upon to do so.

The lowest or systender not necessarily accepted.

W. S. COPF

W. S. GORE,
Deputy Commissioner of Lands & Works.

Lands and Works Department, Victoria, B. C., September 28th, 1893.

Messrs. Gagnon & Prudhomme have formed a partnership to carry on business as contractors in Montreal. PRACTICAL man wanted to invest \$5,000 and have oversight of factory employing 30 men; preference to one favorably known to the architects and capable of taking off quantities, drawing details, etc. State experience; communications confidential. Address "F," office of CANADIAN CONTRACT RECORD.

CONTRACTS OPEN.

NAIRN, ONT .- It is proposed to crect a new town hall here.

AURORA, ONT. — Messrs. Naughton Bros. propose erecting a block of buildings in the spring.

KINGSTON, ONT.-Local firms have been asked to submit tenders for the raising of the Rosseau suction pipe.

BROOKE, ONT .- Mr. Paul Kingston for the construction of the 14th Con. drain.

RICHMOND, QUE.—Mr. E. F. Cleveland invites tenders until the 10th inst. for the purchase of \$10,000 worth of de-

GUELPH, ONT .- Alterations and additions are about to be made to the Bank of Montreal. Four stories will be added, at a cost of \$5,000.

WALKERVILLE, ONT.—Messrs. Hiram Walker & Sons will shortly commence the erection of a large rack warehouse, with a capacity of 40,000 barrels.

WHITBY, ONT. - A meeting of municipal councils will be held in this town next Saturday to discuss the question of establishing a house of refuge for South Ontario.

CHATHAM, ONT .- Mr. W. G. Merritt, Township Clerk, will receive proposals until the 15th inst. for the purchase of \$23,000 worth of Little Bear Creek drain debentures.

BUCKINGHAM, QUE.—A by-law will shortly be submitted to the ratepayers to authorize the Council to borrow the sum of \$25,000 to complete the waterworks and electric light projects.

QUEBEC, QUE.—The Civic Finance Committee has decided to recom-mend to Council to vote the sum of \$20,000 to the Richelieu Navigation Company if they will erect their workshops in this city.

VALLEYFIELD, QUE-A portion of the bleaching and dye works of the cotton mills have been torn down to make room for the new building. It is said the company propose employing a number of stone-cutters and quarrymen during the winter, preparing for further building operations in the spring.

WONNIPEG, MAN. - The Keewatin Power Company has been formed for the purpose of utilizing for power purposes the waters issuing from the Lake of the Woods. The capital of the company is \$1,000,000. Mr. Richard Fuller, of Hamton, is president, and Mr. John Mather, of Ottawa, vive-president.

SUDBURY, ONT .- Mr. Willis Chipman. C. E., of Toronto, has prepared a report on the construction of waterworks and sewage systems, and the purchase of an electric light plant. The cost of the whole is estimated at \$35,000. A committee has been appointed to report on the matter, which will be done in a couple of weeks.

OTTAWA, ONT.—Messrs. Perrault and Hibbard, engineers, are at present engaged in surveying the route of the proposed new trunk sewer.—Mr. Berkeley Powell contemplates the erection and equipment of a large cotton mill here. He is at present on a visit to the United States looking for information regarding the most modern appliances.

TORONTO JUNCTION, ONT.—At the meeting of the Town Council on Monday last, the report of the Town Engineer regarding the construction of a reservoir to supply the town with water was referred to the Superintendent of Waterworks to report on as soon as possible. The report showed that a reservoir could be constructed on Prospect Hill, at a cost of about \$55,000, having a capacity of 5,050,455 imperial gallons.

LONDON, ONT - The hospital trustees have decided that unless the Council de-cide to erect a new and more commodious building it will be necessary to make an addition to the present structure, at a cost of \$9,000 or \$10,000. Messrs. Moore & Henry, architects, are preparing plans for the same.—The London and Port Stanley Railway Company are negotiating for the lease of the L. E. and negotiating for the lease of the L. E. and D. R. railway. The city, under the lease, is to erect in this city a brick freight shed and landing house, 150 × 35 feet, and a round house with three stalls and turn-tables, a coal dock, to cost \$15,400 and a ware-house at Port Stanley, and a brick station at St. Thomas, to cost \$2,500.

at St. Thomas, to cost \$2,500.

HAMILTON, ONT.—Mr. Joseph Powell, nachitect, invites tenders until 6 p. m. today (Thursday for rebuilding dwellings and making additions to No. 448 James street north. - Mr. Robert Clohecy, architect, is inviting tenders this week for the erection of a brick dwelling on Market street.—The directors of the Hamilton, Grimsby and Beamsville railway state that the work of construction will be begun next week, and that nine-tenths of the right-of-way has been acquired. During next week, and that nine-tenths of the right-of-way has been acquired. During the winter all the necessary poles, ties, etc., will be purchased, and it is expected to have the road ready next summer.—Building permits have been granted as follows: George H. Milne, two story brick dwelling on Wentworth street, between King and Main streets, cost \$1,600; Mrs. Cumming, two story brick dwelling and store on James street, between Macaulay and Wood streets, cost \$1,500.

MONTREAL, QUE—At the last meeting of the Town Council of Cote St. Antoine, the Fire and Water Committee was authorized to purchase a site on which to erect a fire station.—Dunlop & Heriot,

authorized to purchase a site of which to erect a fire station.—Dunlop & Heriot, architects, have prepared plans for two stores on Bleury street for Miss A. Hill, also plans for two houses, cor. Sherbrooke and Cresent streets, for Dr. Wm. Camp-bill.—R. Findlay, architect, is preparing

plans for two semi-detached houses, to be built of pressed brick and stone, on Sherbrooke street, Cote St. Antoine for Mr. Alfred G. Walford.—Messrs. Ogilvy & Sons, dry goods merchants, have decided to erect a large business establishment at the corner of St. Catharine and Mountain streets, the site for which has been purchased.—The Montreal Temple Company was organized on Tuesday night last, the object being to erect a Masonic Temple. The following directors were elected:—J. H. Steaine, F. Fdgar, B. Tooke, Fred. Massey, John McLean, James Fyfe, W. W. Whyte, J. B. Fressider.

TORONTO, ONT.—The excavating is being done for a pair of houses to be erected on the east side of Madison ave., north of Lowther ave.-Several new houses are to be erected on the west side of Bedford Road, north of Lowther ave.— The site is being cleared for the erection of a new building on the east side of Clare street immediately south of Queen street.

The City Council has given notice of its intention to construct a cedar bloc pavement with stone kerbs on Carr street, from Esther street to end of street, at a cost of \$3,000.—The City Council at its meeting on Monday last, adopted the re-port of the Property Committee recommending that tenders be asked for at once for the extension and enlargement of the Youge street wharf, the cost of which is placed at \$25,000.—Mr. E. R. Babington, architect, 28 Toronto street, wants tenders for building a stable, also for plumbing.—The City Engineer is preparing a report on the opening of Bellair street through report to Ketchum Park. The cost, including the roadway, is estimated at \$10,000.—A Court of Revision will be held on the 20th inst. for the hearing of appeals against the construction of the following works: Sewer on Severn street, cost \$775; cedar block roadway on Ulster street, cost \$775; cedar block roadway on Mansfield avenue, cost \$700; cedar block roadway on Watsfield avenue, cost \$700; cedar block roadway on Watsfield avenue, cost \$700; cedar block roadway on Watsfield avenue, cost \$820; grading on Wilson street, cost \$900 grading on Kippendavie avenue, cost \$4,198,29; sidewalk on Oxford street, cost \$156.—At the last regular meeting of the Technical school board, a resolution was brought forward asking that the City Council be petitioned to provide increased and permanent accomodation for the said school.—Building permits have been granted as follows: B. Pickering, 70 Hazleton ave., two det. 2 story and attic brick dwellings, 64 and 66 Glen Road, cost \$17,000; Bickell & Wickett, 3 story brick addition to tannery, e. side Cypress street, cost \$2,000; Mrs. S. S. Ramage, two story brick dwelling, 192 Munro st., cost \$1.800 cost \$1,800.

FIRES.

Two residences at Hintonburg, Ont, owned by Mr. Jones and Mr. Thomas Matthews, were destroyed by fire last week. Loss, \$1,500 on each house.—The factory of the British Columbia Jute and Cooperage Company, at Vancouver, B.C., was destroyed by fire on the 2nd inst. Loss, \$30,000, covered by insurance.—A residence on Queen street, Quebec, owned by Mrs. Bedard, was burned last week. Loss, \$1,200.—Mr. C. Audet's machine shop at St. Anselme, Que., has been destroyed by fire, Loss, \$25,000.—Wm. Posseltrate's carriage and paint shop at Merrickville, Ont., was burned recently. Loss, \$2,000.—The machinery in the works of the Dominion Horseshoe Nail Company, 61 Dalhousie street, Montreal, owned by J. E. Beaudoin and F. Dagenais, was danaged by fire on Monday last to the extent of 5,000. The loss is covered by insurance.—Mr. William Mitchell's residence at Droummonville, Que., was burned last week. Loss \$8,000.—The church of St Andrew's Kirk at Pictou, N. S., a stone and brick structure, was destroyed by fire on Tuesday last. Loss, \$35,000; insurance \$10,000.—The Legal and Commercial Exchange reports the destruction by fire of the Armstrong Hotel

at Armstrong, B. C., loss, \$6,000, and the Palace Hotel at Booners' Ferry, B. C.

CONTRACTS AWARDED.

MONTREAL, QUE.—Dunlop & Heriot, architects, have let the contract for the erection of a brewery for H. A. Ekers. The building will be 83x50 ft., three stories high, front to be of Montreal stone and of Normal style. Mr. Wm. Oman has the contract for masonry, other trades will be carried out by day work.

OTTAWA, ONT.—Mr. George Goodwin, one of the contractors for the Soulanges canal, has transferred section 11 to Mr. T. F. Frency. Mr. Goodwin has five sections still to construct.—The contract for the erection of the new contagious disease hospital on Porter's island has been awarded to Mr. John Bruce. The price is \$16400. Mr Bruce will commence operations as soon as the arbitrators have decided the price to be paid for the island.

BUSINESS NOTES.

Petit & Coulter, brick manufacturers of Otterville, Ont., have assigned to R. Paxton.

Mr. G. E. Grove has purchased the wall-paper business of Faircloth Bros. Toronto.

Mr. S. R. Armstrong was appointed Town Clerk of Peterboro', Ont., at a meeting of the Council on Monday last.

A statement of the affairs of John Goddard, stonecutter and contractor, Toronto, who assigned recently, shows a nominal surplus of \$23,550.

Rochon & Frere, contracting carpenters, Montreal, have assigned at the demand of Alphonse Pallascio, with liabilities of about \$20,000.

The creditors of Messrs. C. B. Wright & Sons, cement manufacturers, of Hull, Que., have formed themselves into a joint stock company to carry on the business.

The Legal and Commercial Exchange report the following: Phileas Hetu, plumbers, Montreal, has assigned, liabilities about \$7,000.—The stock of W. H. Mc-Alpine, lumber dealer, Montreal, is advertised for sale.—Taylor & Davis, painters, Vancouver, B. C., have dissolved partnership, Mr. W. S. Taylor continuing.

FIRE CLOSETS.

The question of open water closets, their attendant unsanitary evils and inconvenience, together with possible solutions of the difficulties originated by their existence, have formed the subject matter of very many articles in architectural and sanitary journals. These open receptacles of filth and disease have been subjected to universal condemnation not only by sanitary and medical authorities, but even by the persons who are so unfortunately situated as to be enforced to make use of them. Owing to the absence of sewer and water privileges, they are left no alternative but to use the open pit.

The intolerable odors arising from open closets, though decidedly objectionable, are not necessarily the greatest source of danger, for the most poisonous of these gases are often free from any perceptible odor. Thus persons forced to make use of the privy pit are in a state of constant dread no matter what precaution they may take. So-called Deodorizers do not de-stroy the dangerous germs, and are too often more disagreeable than the odors they are expected to counteract. purpose is not then to reiterate the acknowledged fact that privy pits are a fruitful source of the worst forms of fever and disease, but to direct the attention of our readers to recent experiments which appears to have solved this vexed question in a sanitary and practical way by applying the only certain agent known to science for the absolute destruction of disease germs, viz, fire. We learn that patents have recently been taken out by parties in both the United States and Canada, and that fire closets in all sizes are even now being manufactured, which are applicable to public buildings, schools,

factories and dwellings. These closets are erected with ventilating pipes, and so designed that fire is applied at intervals as required (when closet is filled) and their whole contents cremated. The apparatus is so constructed that not only the solid matter but all gases created in its burning are likewise destroyed. Thus the process of cremation is complete. Such a closet should prove an incalculable benefit to all those who, have been heretofore compelled to use open pits. The chief merit of this new apparatus appears to be that it provides for the immediate destruction of the excrement before it has had time to become insanitary.

PILE DRIVING.

A falling body cannot do more work when its progress is arrested than has been done on it when lifting it up to the height from which it has fallen. This is a fundumental and unalterable principle. Thus, for example, let us suppose that the ram of a pile driver weighs one ton, and that it falls 4 feet onto the head of a pile; then the work in the ram cannot be either more or less than that which is equivalent to four-foot tons. Thus, the work in the ram at the moment it touched the head of the pile would be sufficient to raise the ram up again to the point from which it fell; or to raise a weight of tour tons to a height of one foot; or to raise one pound through a height of 8,560 feet; or to raise forty-eight tons through a height of one inch. Now, it is clear that if the ram were employed to raise one ton through a height of four feet, it must exert a force of one ton throughout the distance of four feet. If it did not it would not remove one ton at all, for it would be over-balanced. If it were called upon to raise four tons through a height of one foot, then it must exert a push of four tons through a distance of one foot; if to lift a weight of forty-eight tons, then it must exert a push of forty-eight tons through the distance of one inch, and so on. Bearing this in mind, there will be no

Bearing this in mind, there will be no difficulty in understanding the following simple rule: The force of a blow is measured by dividing the whole distance passed through by the ram before impact by the distance passed through after impact, and multiplying the weight by the quotient. Thus, let the ram weigh one ton, let the fall be forty-eight inches, let the pile descend one inch at each blow, then the push or effort exerted by the ram on the top of the pile will be 48 = 48 × 1 = 48 tons. It must be understood that this is the mean or average force of the blow. Its initial effort may be much greater and its terminal effort much less, because at the instant of impact the ram is moving at its full velocity, while at the instant the pile ceases to descend it will have no motion at all, and consequently will exert no push, except that due to its weight.

Three factors are in all cases necessary, namely, the weight, the height of fall, and the distance through which the body which receives the blow moves. In practice it is by no means easy to ascertain the latter with precision; and the energy in the falling body can be expended in more ways than one. For example, when the head of a pile is struck, two effects take place simultaneously, the ram is shortened and so is the pile. The elastic rebound of each immediately takes place, and the ram jumps up from the top of the pile. Again, the top of the pile becomes highly heated. The elacticity of the pile plays an important part in influencing the rate of its descent. A ram weighing 100 pounds, falling a height of fifty feet, will have stored in it on impact 5,000 pounds, and if the progress of the pile were one inch, its driving force would be 60,000 pounds. A ram weighing 1,000 pounds and falling five feet, would also have 5,000 foot pounds of work in it, and would exert a driving force of 60,000 pounds over a space of one inch; but it does not follow that the former would be equally effective in driving the pile. On the contrary, the lighter ram striking the pile with a higher velocity might be much the less efficient of the two, because the force of the blow would not be transmitted through the pile, but would be expended in compressing the top of it. When a pile is struck on the top, what is known as a wave of compression pauses through it; and this wave requires time for its passage. Such a wave is set up in all columns when stress is suddenly brought on one end. The effect of a heavy ram falling a short distance on a pile head resembles a push, in a sense, and gives time for the transmission of the effort throughout the whole pile, but when a light ram falls the effect may be confined to the top of the pile, which is shattered.

The velocity with which a ram strikes a pile head is calculated by the extracting of the square root of the height of fall in feet and multiplying it by eight. Thus, let the ram fall four feet; the velocity will be sixteen feet per second. If the ram falls fifty feet it would strike the pile with a velocity of fifty-six feet per second. If this speed was greater than that at which the wave of transmission could pass through the pile, then little or no effect would be produced in the way of causing its descent; at nearly the whole of the work would be done in compressing the top of the pile, or in shattering it, and the driving effect would be nothing. The effect of the element of time is not sufficiently well understood. About the only thing fully understood or accepted is that heavy ram falling from a moderate height is, other things being equal, much more efficient than a light ram falling from a great height.—The Mechanical

MUNIGIPAL DEPARTMENT.

AUSTRALIAN PAVING WOODS.

The use of Australian timber in England is increasing year by year, and it is crowding out all other woods, domestic and foreign, for street paving. The betand foreign, for street paving. The better woods are much more expensive than those grown in Europe or America, but it has been proved beyond a doubt that while the first cost may be greater, in the end it is the cheapest. It is now only about six years since the first shipments were made to London of jarrah and karri woods for street paving, and owing to the unsatisfactory results of previous experiments with oak, elm, beach and pin, there was much opposition to their introduction, but so far they have given excellent results and are being largely adopted for the carriage-way pavements of London. From Engineering published in London, we learn that these woods have been put down in eighteen wards, and that whereever the wood has been laid down in a proper manner it has given the most satisfactory results. Three thousand one hundred and sixty-seven loads, each of 600 square feet of jarrah and karri woods were used in the city in one year, and its consumption is rapidly increasing.

SEWAGE UTILIZATION.

Some important results have lately been obtained in the utilization of sludge from the sewage of London as a fertilizer. The enormous sewage of the Brush Metropolis, poured into the lower Thames, caused such a nuisance that chemical treatment was adopted. This precipitated the solid matter in settling basins, leaving the liquid to run into the sea in a harmless condution. The solid matter, or sludge, was then taken far out to sea in steamers and dumped in deep water.

and dumped in deep water.

Last year the furtilizing qualities of this sewage sludge, pressed into cake, were given a test that demonstrated its value. Ten tons of it were spread upon poor sandy soil alongside one area treated with the best farmyard manure, and another with artificial fertilizers. The best results were obtained from the sewage sludge and the worst from the artificial fertilizers.

This has started a demand for the sewage sludge on the part of farmers, and the metropolitan board of works, in charge of the London sewage, has decided to press the sludge into cakes in proportion

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

to the demand for architectural purposes No charge is made for it at present, and the farmers simply have to pay the cost of taking it away by water or rail. It is believed that ultimately a revenue can he derived from its sale as a fertilizer.

The London sewage amounts to 120,-

oo,ooo gallons a day, and this yields about 3,000 tons of settled sludge, which, by pressure into "sludge cake," can be reduced to about 900 tons. The economic value of this enormous quantity of material, hitherto wasted, applied to the land should be were considerable. should be very considerable. Possibly the results thus obtained in London may point to a similar utilization of the solids from sewage in the large cities in this

Municipalities issuing debentures, no matter for what purpose, will find a ready purchaser by applying to G. A. STIMSON, 9 Toronto Street, Toronto. N.B.—Money to loan at lowest rates on first mortgage.

Established 1841.

THOROLD CEMENT

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 Gentlemen: In reply to yours of September 19th last as to the eement 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 Nater Works - Sourceage Seirage Disposal 103 BAY STREET - TORONTO.

J. McDOUGALL, C. E., ENGINEER COUNTY OF YORK

Consulting Busineer 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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DRAIN AND WATER PIPES SANITARY EARTHENWARE LONDON PORTLAND CEMENT GUARANTEED GENUINE.

Paving and Scoria Bricks for Stables,
Sidewalks, Yards, etc.
Large quantities on hand and to arrive. We handle
only the best quality. Prices lower than ever.

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Sole Agents for
THE "GRAHTRYX" SMOKE TEST AND

DISINFECTING MACHINE.

Drummond McCall Pipe Foundry Company, MONTREAL

MANUFACTURERS OF

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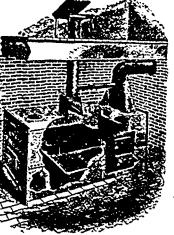
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Prices of Building Materials.

CONDITION OF THE MARKET.

The condition of the market remains unchanged. Lumbermen are sanguine that the approaching season will be a fairly good one. Hardware and paints and oils are somewhat quieter than last week. Portland cement is in good demand, and stocks on spot are light for this season of the year. There are three or four steamers yet to arrive in Montreal with round lots, and there will probably be an average quantity of stock to be carried over for the spring trade.

LUMBER. THMRER.

LUMBER. CAR OR CARGO LOTS.						
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	\$	иц, \$	¥. MΩΠΠ	iom.		
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to a three uppers, Am	ns.	37 ∞				
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better		25 00	18 ∞	20 00		
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z x to and x2 common		14 00	8 ∞	10 00		
x x to and x2 spruce culls		11 00	20 00	32 00		
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r inch clear and picks	,28 🚥	3200	33 ∞	35 ∞		
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z inch siding, common		13 00	33 00	14 00		
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Cull scantling	8 ∞	900	800	900		
2% and thicker cutting	up	,		,		
plank		25 cc	22 00	25 00		
z inch strips, 4 in. to 8 in.	mill					
TUD		15 00	74.00	1500		
z inch strips, common	11 00	13 00	11 00	1200		
z inch flooring	16 00	17 00	14 00	1500		
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	32 ft	37 00		270		
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Cutting up planks, 11/2 and	Black lamp
thicker, dry	Blue, ultramarine Oil, linseed, raw, & Imp. gal. boiled
INCKET, DORTU	boiled
Cedar for block paving, per cord 500 500	Putty. refined, "
Cedar for Kerbing, 4 x 14,	Whiting, dry, per 100 lbs Paris white, Eng., dry
per M 14 00 14 00	Paris white, Eng., dry Litharge, Am
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Red pak	ii London
White	n Belgian " "
White	n Canadian "
White ash, No. 1 and 294 00 35 00 30 00 35 00	Parian "
Black ash, No. 1 and a20 00 30 00 18 00 30 00 Dressing stocks	" Superfine "
Picks, American inspection. 30 00 40 00	Calcined plaster, per barrel.
Three uppers, Am. Inspection 50 00 50 00 BRIOK—# M	" Superfine " Keene's Coarse "Whites" Calcined plaster, per barrel Fire Bricks, Newcastle.per M " Scotch " Lime. Per Barrel. Grev
Common Walling 7 50 6 00	Lime, Per Barrel, Grey White
Good Facing 9 00 8 50	White
Sewer 8 50 9 00 8 50 9 00	Plaster, Calcined, N. B
Pressed Brick, Per M:	Hair, Plasterers', per bag
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Hard Building	CUT NAILS, FENCE
100 3 00 10 00	40d, hot cut, per 100 lbs
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First quality, f.o.5. at Campbellville	23' 3' H H H
and quality, f.o.b 14 00 20 00	4d to 6d 11 11 11
Ornamental, per 100 3 00 10 00 3 00 10 00	
Tiles 24 00 25 00	2d. "" "
Plain brick, "A" fo b, Don Valley 18 00 25 00	4d to 5d cold cut, not polished or blued, per 200 lbs
11 11 "B" 1600 2200	
II II "C" 13 00 18 00 Trojan or Buff 24 00 30 00	TATELY
Trojan or Buff	INDE
Plain brick, f.o.b. Port Credit 18 00	in
Hard Danding	
Omamental, per 100 3 00 10 0 SAND.	Architects.
Per Load of 11/2 Cubic Yards 2 25 1 25	Ontario DirectoryIII Quebec Directory vi
STONE.	
Common Rubble, per toise, delivered	Architectural Soulp-
Large flat Rubble, per toise,	tors and Carvors.
	Carnovsky, B. H IV Hicks, W. Stivens II
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Black lamp	15 85	12 25		AL WATCHER		
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Sienna, burnt	75 20	12 15	10d, " " ,	60 60		
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Keene's Coarse" Whites"			COMMON BARREL MAIL	3.		
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INDEX TO ADVERTISEMENTS In the "Canadian Architect and Builder."						

	<i></i>	
Architects.	Church and School Furniture.	Grates and Tiles.
Ontario DirectoryIII		Bostwick, G. F xi Holbrook&Mollington i
Onebec Directory vi	Bostwick, Geo. F zi	Webster Bros. & Parkes vi
(Can. Office & School	Rice Lewis & SonIV
Architectural Soulp.	Furniture Co xvi	
	Office Specialty Co II	Heating.
tors and Carvors.	_	Heating. Bigley, Rxii
Carnovsky, B. H IV	Comonts.	Gurney Foundry Co., XVI
Hicks, W. Stivens II	Adamant Mfg. Coviii	Ives & Co., H. R xii
Holbrook & Molling.	Bremner, Alex iv	Manny & Co., E. A. xiv
toni	Currie&Co,W.&F Pxvi	McDougall & Co, R. xiii
	Estate of John Battle iv	King & Son, Warden. ziy
Architectural Iron-	McNally & Co., Wm. iv	Miller Bros. & Toms. vii
Work.	Maguire Bres i	Robb Engineering Co xii
	Morris, E. Dviii	Toronto Radiator Mfg
B. Greening Wire Co. II	Rathbun Coviii	Co xv
Dennis, R II Dominion Bridge Co. I	Usher & Son, Isaac iv	Iron Pipe.
	Webster Bros. & Parkes vi	
Mendows, Geo.B II Whitfield, John I	Contractors and	King & Son, Wardenxiv
At the training a grant and a	Builders.	Lime.
Architects' Supplies		Currie & Co. W &F P. xvi
Hearn & Harrison xi	Turner & Ca., G. W vi	Longford Quarry and Lime Coviii
Hearn & Harrison A	Contractors' Plant	Lime Co viii
4 4 TO	and Machinery	Morris, E. Dviii
Art Woodwork.	_	
Carnovsky, B. H IV	Rice Lewis & Son IV	Legal.
Knechtel, S 111	Rowe, Geo II	Denton & Dods IV
Otterville Mig. Coxvi		35
Ransom & Co., C.S	Cut Stone Con-	Mantels
Wagner, Zeidler & Co. x	traciors.	Bostwick, Geo. F xi
	Isaac Bros II	Webster Bros. & Parkes vi
Barristor, elc.	Oakley & Holmes II	Metallio Latin
Morgan, Godfrey St V		
	Chimney Topping.	Bostwick Metal Lath
Bricks (Pressed).	Bremner, Alex iv	B. Greening Wire Co. II
	Currie&Co., W & F.P. xvi	Metallic Roofing Co ix
Beamsville Pressed		manner trooping commen
Brick Co	Drain Pipe	Mortar Colors and
Morris, E. Dviii	Bremner, Alex iv	Shingle Stains.
	DIEMPET MEX 1V	

Ga

	Metanic Rooming Co IX
Drain Pipe emner, Alex iv urie & Co., W&F. P. xvi amilton and Toronto Sewer Pipe Co xiii cNally & Co., W iv aguire Bros i ne Colman - Hamil- ton Co iii ebster Bros. & Parkes vi	Hortar Colors and Shingle Stains. Cabot Samuel,
Dumb Walters	Paints & Varnishes. Muirhead, Andrew iv

Treater Diante Latines 11	22,000, 11 ,00000,0000
Dumb Walters King & Son, Warden xiv	Paints & Varnishes. Muirhead, Andrew iv
Elevators Fensom, John II Miller Bros. & Toms. vii Otis Brothers & Co I Leitch & Turnbull I	Painters. Delage, Theo vi Gilmor & Casey xi Paving. The Guelich Silica Barytic Stone Co II
Engravers. Can. Photo-Eng Bu- reau	Plasterers Hynes, W. J x

Lingravers.	Plasterers .
an. Photo-Eng Bu-	Hynes, W. J
Yro Brick and Clay	Plate Glass Hobbs Mig. Co McCausland & Son
olman-Hamilton Co., iii urrie& Co,W &F P., xvi	Pilkington Brothers Plumbers
IcNally & Co., W iv	McCrae & Watson
Cebster Bros & Parkes vi	Parquetry Floor

lvanised Iron	Elliott & Son
Workers.	Pipe Cope
er & Dillon I	Pipe Cover Can. Mineral Wo

Plumbing output
Malcolm, W. B. i
Sanitas Mfg. Co. v
St. Johns Stone Chinaware Co. iii
Toronto Steel Clad Bath
& Metal Co. III Plumbing Supplies

Roofing Materials Merchant & Co.... iv Metallic Roofing Co.. ix

Sanitary Appli-ances

Shingle Stains
Cabot, Samuel....xiv Sliding Blinds Lea & Seaman.,.... xi

Terra Cotta The Raritan Hollow & Porous Brick Co....viii

Terra Cotta Fireproofing

Rathbun Co.....viii
The Raritan Hollow &
Porous Brick Co....viii

Wall Paper and Celling Decorations
Elliott & Son..... II Staunton & Co.,.... ix

WireManufacturers

Wall Plasier Adament Mfg. Co. of America. viii ool Co vii Nowell & Co. B. L... xvi