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Vol. 3.

Toronto and Montreal, Canada, July 30, 1892.

No. 25

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY SATURDAY As an Intermediate Edition of the "Canadian Architect and Builder,"

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

C. H. MORTIMER, Publisher.

14 King St. West, . Turonto, Canada Telephone 2561.

64 Temple Building, Bell Telephone 2299. Montreal

Information solicited from any part of the Daminion regarding contracts open to tender.

ADVERTISING BATES ON APPLICATION.

At its Convention held in Toronto, Nov. As us convention held in Toronto, Nor. 20 and 21, 1889, the Ontario Association of Architects signified its approved of the CANADIAN CONTRACT RECUID, and piedged its members to use this journal as their medium of communication with contractors with respect to advertisements for Toroders.

Tenders.

The following resolution was ununimously adopted at the First Annual Meeting of the Province of Quebec Association of Architects, held in Montreal, bet. 10th and 11th, 1890: "Moved by M. Perrault, seconded by A. F. Dunlop, that we the Architects of the Procince of Quebec now assembled in Convention being satisfied that the CANADIAN CONTRACT INFOUND approach us a direct communication with the Contractors,—Resolved, that we pleade 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.

TENDERS WANTED.

1 will receive tenders up to THURSDAY NEXT, AUGUST 4.11, for the election of an Hotel on Sincor street. Toronto. No tender

necessarily accepted.
HERBERT G, PAULL, Architect Plans at 519 Queen street West. Correspondence, 106 Wellington Pl.

SEALED TENDERS

Will be received by the Corporations of the Counties of Perth and Middlesex, at the County Clerk's Office, London, until noon on WED-NESDAY, THE THIRD DAY OF AUGUST.

Iron Superstructure of a Bridge

over the River Thames, on the boundry line between the Lownships of Blanshard and West Nissouri, known as "The Perth Bridge." Said superstructure to consist of two spans, vir one of 86 feet and one of tot feet, each in the clear. of 86 feet and one of 101 feet, each in the clear. The roadway is to be fourteen feet in the clear, and the superstructure is to be proportioned to a rolling load of 100 pounds on each square foot of roadway surface with a facjor of safety of four. The floor planks and joists are to be of white pine. Tenders are to be accompanied by detailed plans and specifications and straining sheets showing the strains on each part and section in square inches. Tenderers to give the names of two solvent surfaces for fulfillment of contract. The lowest or any tender not necessarily accepted. The work to be completed on or before the 15th day of October next.

JOHN CORRIE, Commissioner for Perth. T. E. ROBSON County Clerk. Middlesex. F. B. TALBOT.

Commissioner for Middlesex. London, July 21st, 1892

TENDERS

will be received until AUGUST 87H for erection of Church of St. John the Evangelist, Toronto. Plans at my office.

EDEN SMITH, Architect, 14 King St. W., Foronto.

School Desks

TENDERS

Will be received by the undersigned until

6th August Next.

FOR

for High School, with 28 rears, seats 17 in high for delivery about 15th December next.

with separate seats, sizes 12 to 10 m., with necessary rears, 96 of same debierable immedi-ately, balance about 15th December next.

Must be of latest and most approved style. Tender to state price per desk according to size and guarantee delivery in good condition at Vancouver. It is desirable that a sample desk should accompany tender.

A. H. B. MACGOWAN, Secretary to Board of School Trustees Vancouver, B. C., July 21, 1892



Notice to Contractors

Tenders will be received by registered post addressed to the City Engineer, Toronto, up to Eleven o clock a.m. on IUESDAY, AUGUST 9TH, 1892, for the following work and supply of Cement:

CEDAR BLOCK PAVEMENT

On McMurnch Street, from Davennort Road to Belmont Street.

Supply of Coment for the current year.

Specifications and forms of tender may be obtained on and after August 2nd, 1892, at the office of the City Engineer. A deposit in the form of a marked cheque payable to the order of the City Treasurer, for the sum of Five per cent. on the value of the work tendered for under \$1,000, and 2\frac{1}{2} per cent. for the value of the work tendered for over that amount must accompany each and every tender otherwise it will not be entertained.

All tenders must bear the bona fide signatures All tenders must bear the bana fide signatures

of the contractor and his sureties (see specifications), or they will be ruled out as informal.

The committee do not bind themselves to ac

cept the lowest or any tender

JOHN SHAW. Chairman of Committee on Works. Committee Room. Toronto. July 28. 1892.

TO BRIDGE BUILDERS and Contractors.

Scaled tenders will be received by the undersigned up to 6 p.m. on AUGUST 15TH, 1892, for the construction of a

Wrought Iron or Steel Bridge

in the Town of Wesdstock Specifications may be seen at the office of the Town Engineer G. C. EDEN,

USEFUL HINTS.

Candle power, which is used as the standard of illuminating efficiency, means the light of a sperm candle, % in diameter, burning at the rate of 128 per

A modern process of making mosaics is now commonly employed at Rome. A plate, generally of metal, of the required size is first surrounded by a margin rising about three quarters of an each from the surface. A masac cement, composed of powdered stone, lime and linseed oil, is then spread over as a coating, perhaps a quarter of an inch in thickness. When set, this is again covered with plaster of paris rising to a level with the margin upon which is traced a very circful out line of the picture to be copied, and just so much as will admit of the insertion of the small pieces of smalto glass is removed from time to time with a fine chisel. The workman then selects from the travs, in which are kept thousands of varieties of color, a piece of the tint which he wants, and carefully brings it to the necessary shape. This piece is then moistened with a little cement and bed ded in the proper situation, the process being repeated until the picture is finished, when the whole being ground to an even face and polished, become an imperishable work of art.

"Mortality in-Relation to Occupation," a paper read at the late congress on hygiene and demography, by Dr. Wm. Ogle does not seem to waste much time on the dust of the occupation of carpenters and joiners. The dust from the ordinary woods used by such men does not seem to have any very baneful effect upon the air passages, for the mortality of these workmen, both from phthisis and other deseases of the lungs average lower for males generally. "The harder kinds of wood, however, such as are used by cabi net-makers, are said to give off a much more injurious dust than do the softer woods used by the carpenters; and that

this is so is not only probably a priori. but is supported by such scanty statistical evidence as I can adduce. For though I am unable to give the mortality of cabinetmakers from phthisis and respiratory diseases by themselves, their mortality from all causes, together is considerably higher than that of carpenters, the mortal ity figure in Table Afor those latter is 14%, while that of cabmet-makers and men generally in the upholstering business is 173."

THE MASONRY OF BOILER SETTINGS. The brickwork about boiler settings is

often very imperfectly laid. It is mostly done by contract, with no one to supervise it who understands the severe use to which it is to be put. The buck-layer, who may never have worked on a job of this kind before, builds good looking in side and outside walls, but the space be tween is apt to be filled up with odds, and ends in the most promiseuous manner burthermore, he puts the same joints in that he would use if he were building a house, and this is just what we do not want in a boiler-setting, particularly in the tire-brick hinng of the fornace. The joints throughout the setting should be thin, and the work should be done as faithfully inside as outside. Kaolin or prepared five-clay is used in laying the fire-brick, and it should be mixed up so thin that it can not well be used with a trowel. Some mill owners who have had experience in this direction will not allow a trowel to be employed at all, but require the men to use iron spoons. The fire brick should be dipped in water as they are used, so that when they are laid they will not immediately "drink up" the water from the cement. They should then receive a thin coating of the prepared fireclay or kaolin paste, and be carefully placed in position with as little of the kaolin or fire-clay as possible. Every sixth course, beginning with the grates, should be a row of headers, well bonded into the masonry behind. The headers are of little use unless they are well secured into the walls of the setting, for when the lower courses of fire-brick have burned away more or less, we have to rely on these headers to a considerable extent to hold the upper part of the wall in posi-tion. In repairing fire-brick linings the lower courses, which burn out fastest, can be removed and replaced without disturb ing the upper part of the wall, provided the headers are secure, while if they are not, the entire wall may have to be rebuilt, and this can not be done without either removing the boiler or tearing down a considerable part of the setting .-- Wood-

CONTRACTS OPEN.

PEMBROKE, ONT.—A new general hospital is to be erected.

Ashiburnham, Ont.—The establishment of a high school is being discussed,

REGINA, N. W. T .- New schools are to be erected here, at a cost of \$5,000.

HASTINGS, ONT.—A new bridge will be built across the river Trent, at the Narrows.

HALIFAX, N. S.—The City Council will advertise for a loan of \$30,000 to be expended on paving the streets.

EGANNILLE, ONT.—Mr. Jas. Morns, C. L., is preparing plans for a new bridge across the Bonnechere river.

OWEN SOUND, ONT.—Mr. J. C. Forster, architect, is preparing plans for a new school at Heathcote, to cost \$2.500.

NIAGARA FALLS SOUTH ONT—The Council will shortly advertise for tenders for the construction of a system of water-works.

HARROW, ONT. Tenders will be received until August 6th for the building of a Presbyters ian church in this village. Plans at W. H. Hood's.

ST. THOMAS, ONT.—Negotations are in progress for the purchase of the street railway. Should the transfer be made the tracks will be extended and the cars run by electricity.

PENETANGUISHENE, ONT.- The Fire and Water Committee have decided to ask the Council to submit a by-law to the ratepayers to tase the sum of \$25,000 for extending the water works system.

GATINEAU. ONT.—The Townships of East and West Templeton have agreed to grant the sum of \$5,000 each, towards the erection of a new bridge over the Gatineau river leading into Hull.

BRANTFORD, ONT.—The expert appointed by the Council to report on the tenders received for electric street lighting, has recommended that the city purchase an electric light plant and operate the same.

VANCOUVER, B. C -Mr. G. W. Towle, architect, of New Westminister, has completed plans for the new edifice for the congregation of the First Presbyterian church, and tenders will be called for at an early date.

HAMILTON, ONT. —William Stewart, architect, is calling for tenders for the erection of a four-story wholesale iron warehouse to be erected on the south-east corner of Hughson and King William streets, for Messrs, Wood, Vallance & Co.

GANANQUE, ONT.—The Rathbun Company, of Deseronto, have made a proposition to the Council that they will build an iron bridge across the Gananoque river on the condition the Government grant them the \$14,000 already promised for the purpose, the town paying for approaches and filling in.

KINGSTON, ONT.—The Freemasons are discussing the erection of a fine temple on Princess street.—The Government will be asked for the Tete du Pont barracks as a site for the proposed grain elevator. The cost of the building is estimated at \$200,000, a bonus of \$50,000 being asked from the city.

LONDON, ONT.—It is proposed to erect a new edifice to replace St. Mary's church on Hill street.—The City Engineer will receive tenders until Monday next for the construction of tile drains on Stanley street, Thornton avenue and Oxford street, also for a cedar block pavement on Adelande street, between King and Dundas street.

WINNIPEG, MAN.—Mr. H. G. Carter, architect of Minneapolis, is preparing plans for the new opera house to be erected by the Ross-Mc-Kentie syndicate. The building will be of brick and will cost about \$40,000. Tenders will be called for immediately on completion of the plans, in order that the building may be completed this fall.—A new block will be erected next spring on the corner of Portage avenue and Main streets.

OTTAWA, ONT.—E. F. E. Roy. Secretary Department of Public Works, will receive tenders until Friday, the 12th August, for the erection of Land and Registration Offices at Prince Albert, N.W.T.—It is stated that tenders will be asked, during the present month, for the remaining sec-

tions of the Soulanges canal,—Tentlers will be received at the Department of Public Works, until Friday 12th August, for the erection of a post office at St. Henri, Que. Plans at above Department and at office of A. Rara, architect, Montreal.—The C. P. R. are considering the construction of a line of railway from Cobden to Parry Sound. Chief Engineer Ramsay is at present taking surveys.—The Trustees of the Seindlinavian church have selected a site on Ann street on which to erect the proposed new edifice. Rev. A. H. Hvistendahl, pastor.

OWEN SOUND, ONT.—The Secretary of the Department of Public Works at Ottawa will receive tenders until Saturday, the 6th August, for dredging the harbor at this place.

MONTREAL. QUE. - The City Surveyor will receive tenders until Wednesday, the 3rd of August, for the construction of sewers on the following streets. St. Alexander street, from Craig street to Lagauchetiere street, Beaudry street, from St. Catherine street to Robin street; Barre street, from Eleanor street westward; St. Catherine street, from eastern city limits to Nicolet street, Duluth avenue, from St. Urbain street to Esplanade avenue; St. Ehzabeth street, from St. Catherine street to Mignonne street; King street, from Co mon street to William street; Ontario street, from eastern city limits to Nicolet street; Ontario street, from Gale street to Harbor street. -The City Council has given notice that sewers will be constructed on Cherrier street from end of existing sewer, westward, and on St. Catherine street, from Marlborough street westward -The Council are looking for suitable siles on which to erect the proposed incinerators.-The congregation of Erskine church have decided to expend the sum of \$2,000 on improvements.

TORONTO, ONT.-Mr W. F. Oliver will shortly erect a large pressed brick residence on Enderly Road, East Toronto.-Mr. Disern will also erect a residence on Enderly Road. - A company has applied for incorporation for the purpose of building railway rolling stock. The The procapital of the company is \$500,000. moters of the enterprise are: Win. Wainwright, G.T.R., Montreal: Samuel Insull, Chicago Edison Company; Isaac Anderson, Standard Oil Company, Toronto: M. D. Barr, Edison Company, Ioronto.-Mr. J. O. Orr, chairman paiks and gardens committee, will receive tenders until Thursday, the 4th day of August, for the earth work and carpenter work required to be done at the new rifle range on Lake Shore Road. -Mr. George Verral, chairman markets and license commutee, will receive tenders until Monday, August 8th, for the construction of a subway under the Grand Trunk and Canadian Pacific radways at the south side of the old cattle market.-H. G. Paull, architect, 106 Wellington Place, is preparing plans for ten stores to be e seted on Queen street west. Tenders will be called for at an early date. - The following building permitshavebeengranted: Ed. Davey, cor. Berryman rd. and Berryman st., two story bk. dwelling, n. side 48 Bernardave., nr. Bedford rd. cost \$1,200; Toronto Electric Light Co., bk boiler house and wooden dynamo house, covered with iron, and bk, office, foot of Scott st., cost \$20,000; Trustees Church of Messiah, rectory, cor. Avenue rd. and Dupont st., cost \$6.000; Jas Robertson & Co., s.w. cor. Dorset and King sts., add. to factory, cost \$1400; Trustees Bethany Chapel, chapel bldg, n.e. cor. University and Christopher sts., Chas, Steinle, alterations and additions to No. 2 Ontario st., cost \$3.000; also, packing house, rear of 266-270 King st. E., cost \$8,000 --Mr. J. A. Fowler, architect, has prepared plans for a residence to be erected on Sherbourne street.

FIRES.

The Convent de Notre Dame, at Williamstown. Ont., was destroyed by fire last week. The loss is said to be very heavy, the building only being insured for \$1,500. The erect on of a new building will be commenced at once.—The shortdy mills of Messrs. Harting & Co., at Simcoe, Ont., were burned on Monday last, loss \$2,000, insurance \$2,000.—On the 22nd inst., fire destroyed Mr. Mann's private dwelling, store and outbuilding at Stutsville. Ont., also the dwelling of Mr. Curdy, loss over \$10,000, insurance \$7,500.—Mr. S. L. Purdy's saw and shingle mill at Carleton, Ont.,

was barned on Tuesday last, loss \$2 000 - The residence of Mr. Fred Abraham, at Sarnia, Ont., was destroyed by fire on the 26th inst.

CONTRACTS AWARDED.

OTTAWA, ONT. -Mr. W. W. Wylle is building an electric street car for the Winnipeg electric street railway.

SRLKIRK, MAN.—The contract for the erection of the new fish hatchery has been awarded to Messrs. Thomson & Co., of Winnipeg.

BELLEVILLE, ONT.—The G. & A. Brown Manufacturing Company, have been awarded the contract for building steel bridges at Elmira and Thornbury, Ont.

HAMILTON, ONT.—Messrs, Pennington & Baker of this city, have been awarded the contract for furnishing the new opera house at Lindsay, and a Presbytenan church at Prescott.

BROCKVILLE, ONT.—Mr. Chas. E. Simpson has been awarded the contract for the erection of the new Durham block on the corner of King and Broad streets, the contract price being \$10,625.

ST, IOHN, N.B.—Contracts have been awarded for the erection of the power house on Union street for the electric street railway. Messis, B. Mooney & Sons have secured the mason work, and Mr. W. L. Price, the carpenter work.

BRANTFORD, ONT.—Messrs. Patterson & Corbin, of St. Catharines, have secured the contract to furnish the city with electric street ears.—It is understood that Messrs. Elliott & Phin, of this city, are the lowest tenderers for the construction of the electric street railway.

WOODSTOCK, ONT.—Two tenders have been received for furnishings for the new Court House, viz., Office Specialty Co., Toronto, \$8.135, and the Canadian Office and School Furniture Co., Preston, \$7,470. The latter tender has been accepted by the committee.

MONTREAL, QUE.—The road committee have awarded the contract for St. Hubert street sewer to Mr. Robert Parker, at \$9,337. Mr. Laporte secured the contract for a sewer on Mount Royal avenue, between Cote St. Louis and Montreal.—Messrs. Bourgin & Cadieux have been awarded the contract for the repairs to No. 3 fire station, at the price of \$3,650.

TORONTO, ONT.—The following tenders were accepted at a meeting of the road committee held on Tuesday last Cedar block pavement with granite toothing on track allowance, Queen street from Davies avenue easterly to the railway crossing, D. L. Van Vlack, \$8,490. Spadina avenue Queen street to Bloor street, same kind of pavement, Toronto Construction and Paving Company, \$26,659; sewer on Roseberry avenue, Smith & Wilson, \$400.

For preserving wire ropes, carried under water or under the earth's surface, a mixture of 35 parts of slaked lime and and from 50 to 60 parts of tar is recommended. The compound is boiled and applied to the article hot. For dry-lying cables a thick mixture of graphite boiled in tallow, and one of crude linseed oil and vegetable tar have both been tried with success.

WHITE CEMENT.-White cement of the same character as Portland cement is made by grinding together three parts of chalk and one of kaolin, burning at a red heat and grinding again. The cement made by this process hitherto has shown a tensile strength only about one half as great as that of good Portland cement, but it has the hydraulic quality and other characteristics of Portland cement, and it is to be hoped that the manufacture may be so improved as to increase the tensile strength to the point required for making artificial stone. If a white cement can be found for a matrix it will be easy to obtain aggregates of light color by utilizing white sand, marble dust, white tale, and so on, suitable for making a concrete which could be used in place of marble.

MUNICIPAL DEPARTMENT.

PAVED AND DIRT ROADS COMBINED.

During the summer of 1891, the project of constructing a permanent road between the city of Bloomington and the town of Normal, Illinois, was agitated with considerable vigor and enthusiasm. The distance to be built was about 1,4 miles. The soil is the ordinary dark loam, which becomes so muddy when it is wet and so hard and smooth when it is dry. road material is near by. Plans of vari-ous kinds of roads were proposed and discussed. To make a complete paved road like the city streets, with stone or plank curbing, was too costly, and besides for a general mixed travel it was generally conceded that a dirt road, when smooth, was preferable to any other that could be constructed. The result of can-vassing the matter fully was the adoption of a roadway combining the excellence of both, which could be built at an expense not considered expensive. The plan was proposed by Dr. Z. Waters, of Bloomington, and would have been carried out had not financial difficulties arisen which preented the execution of the plan at that time.

The road consists of a paved center road-way made of good paving brick. In the place of curbing for the purpose of holding the brick in position, the outer edges of the roadway are arched or curved downward so as to be supported by the firm earth. Just inside of the ends of the brick on each side of the center are laid tile drains about 18 inches deep, and parallel with the road center, for the purpose of keeping the roadbed dry, and especially for keeping the earth firm at the outer edge of the pavement. The pavement is 18 feet wide, but the outside foot on each side is taken up in making the curve, leaving an available brick roadway of 16 feet. The earth is drawn over the outer curve or arch, so that a well prepared earth is left on each side, which it is expected will be generally used during the summer and fall, when earth roads are good everywhere, but when too wet for use the hard road will be used, leaving the dirt road to dry without being runed by travel when it is not suitable tor use.

The following is a description of the manner in which the road is to be built. The bed is to be prepared by excavating sufficient earth for the pavement, so that the surface of the pavement and dirt roads at the sides will be left at the desired grade when the work is finished. sub-grade for the pavement should be eleven inches lower than the top of the pavement when finished. Tile drains on either side should be lead a beauty than the top of the pavement when finished. either side should be laid about eighteen inches deep, just inside the outer border of the brick, and the trenches filled with porous material like coal cinders, though we do not think this is at all essential. After the road-bed is prepared and made the proper shape, it is to be rolled well with a heavy roller, after which a covering of coal cinders, two inches thick, shall be spread evenly, and well rolled. Upon this a covering of sand must be placed to form a bed upon which to place the foundation brick. Upon this prepared bed a course of brick is to be laid flat ways, the long way of the brick in the direction of the A covering of sand should be placed on this course of brick and brushed into the crevices, and sufficient left on the top to form a bed for the surface brick. Good paying brick should now be laid on edge with the long dimension of the brick cross ways of the road. The curved part of the pavement at the outer edge, how-ever, should be laid with the long dimensions of the brick, parallel with the line of the road, so that the curve may be well made, and also for the purpose of properly resisting the impact of loads as they are drawn on and off the pavement. The work is finished by placing a coat of sand upon the surface, and sweeping it into the crevices and rolling with a heavy roller. The earth is well drawn over the outer edges of the brick, and the outer surface ditches cleaned and graded to carry off the

MUNICIPAL ENGINEERS, CONTRACTORS, AND MATERIALS.

water, and the road is constructed and

ready for use.

The points claimed for this road are: First, it secures the excellence of the city paved street, and also the acknowledged beauty of the country road in its season. Second, it admits of early cleaning and repairs. Third, it is one of the most durable roads, when good material and workmanship are employed.

The estimated expense of the road completed was about forty-one dollars per lineal rod. While this expense is more than a country road can bear, yet for a heavily traveled road—which is almost a city street in the volume of travel which must be provided for—it is cheap, and can be profitably built. The part that is paved is equal to any street pavement, while the cost is less than half that usually expended. It is a question whether this kind of road may not be very profitably constructed in the streets of many of our smaller towns, where the expense of complete paved streets prevents all attempts to make their main thoroughfares any better.—C. G. Elliott, in Drainage Journal.

PENETRATION OF IMPURITIES INTO WATERMAINS.*

When water-mains under pressure are buried in the earth, there is generally no fear that matter will penetrate into them, even if openings occur in the pipe. On the other hand, there is everywhere a belief that if there is a hole in a pipe under pressure, and the water escapes, there will be no possible entrance for bodies from the surrounding earth. Neverthe-less this may be the case, and occurs in the maintenance of modern water-works. Naturally, the attendant circumstances are then exceptional, but are easily explained by an investigation of the nature and direction of the defects in the pipe and the velocity of the water.

When there is a flow of water through a main it is impossible for foreign matter to penetrate into the pipe through opento penetrate into the pipe through openings perpendicular to, or at an obtuse angle with, the direction of the flow, provided the main is under pressure. The case is entirely different, however, when the hole is at an acute angle with the direction of flow. In such a case, if there is a very slight or no flow in the pipe, the water will be forced out as in the former mistances, but it is different with a greater velocity. At a certain rate of flow, the water will begin to suck in substances through the orifice, after the principle utilized in an injector.

Such an occurrence has actually been noticed in a stop and waste cock of a service pipe in Beilin. The waste takes place through the side of seat.

Waste cocks are sometimes used in

Berlin by consumers on their own premises, but are not attached by the waterworks department because a waste through leakage often occurs. Such a defect occurred in the seat of the cock in det occurred in the seat of the cock in question. A small channel was formed between the valve and its seat, and the leakage gradually increased until large enough to permit a suction to arise through the hole, by which sand was drawn into the cock. This sand frequently settled in the bibbs, rendering it impossible to use them, and an investigation was accordingly made to determine the was accordingly made to determine the source of the trouble. In this way the absorption of sand and colored liquids through the cocks into the pipes was definitely proved and the interesting fact established that under certain conditions impurities may enter a system of pipes under pressure.

*A translation of a paper by G. Oestent Chief Engineer of the Municipal Water-Works of Berlin, in the Gesundheits-Ingenieur.

ISAAC USHER & SON, THOROLD, ONT.

Manufacturers of QUEENSTON CEMENT

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

Established 1841.

THOROLD CEMENT

ESTATE OF JOHN BATTLE,

Thorold, Ontarlo,

THOROLD, 28th March, 1870. JOHN BATTLE, Esq. Phorold

Sir - I beg to state that during the past four years about one million bushels of Thorold Hydraulic Cement have been used in the construction of the Canal Works in my charge. This experience enables me to testify to the excellence of the article, especially when carefully burnt and thoroughly ground in the manner now carnel out at your nulls

Lan sir your obedient servant. THOMAS MONRO

Engineer in charge of Welland Canal Enlargement,

National Meter Go.

GOWER & GO.,

204 St. James Street, . MONTREAL.



94,000 Moters sold and in use to date. GOWER & CO. will also quote for FILTERS, SIAND PIPES, CASI PIPES, SPECIALS, HYDRANTS, VALVES, and all Waterworks and Municipal Supplies.

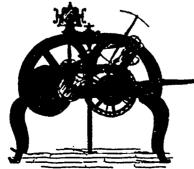


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3 inch clear		52 50	જ જ
x 10 and 12 dressing and			
better	00 20 00	18 ∞	20 00
I x 10 and 12 mill run13	00 14 00		19 ∞
T x to and 12 dressing 14			18 co
Ex 10 and 12 common 12	00 13 00	8 ∞	1000
Ex 10 and 12 spruce culls 10	00 11 00	10 00	11 00
t x 10 and 12 maple culls	9 00		000
z inch clear and picks 23	00 30 00	33 00	35 00
t inch dressing and better 18	00 20 00	18 00	2000
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t inch siding, common		12 00	14 00
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z inch siding, mill culls 8	∞ 9 ∞	-8∞	900
Cull scantling 8	00 900	800	900
all and thicker cutting up	•		•
plank 22	00 25 ∞	22 00	25 00
z inch strips, 4 in. to 5 in. mill	-		•
100	00 15 00	14 00	1500
z inch strips, common	00 12 00	11 00	1200
11 inch flooring	00 25 00	14 00	1500
134 inch flooring	00 16 00	14 00	16 00
XXX shingles, sawn, per M			
16 in 2	30 235	2 30	2 35
XX shingles, sawn t	30 1 35	1 30	1 35
		-	•••
VARD QUOTA	TIONS.		
Mill cull boards and scantling	10 00		10 00
Shipping cull boards, pro-			
miscuouswidths	13 00		1300
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Hemlock scantling and joist			
up to 16 ft.	00 13 00		10 00
up to 16 ft			
up to 18 ft	00 13 00	12 00	13 00
Hemlock scantling and joist	.,, .,		.,
ng to 20 ft	U9 14 00	13 ∞	14 00
Scantling and jout, up to 16 ft	14 (0	.,	1400
11 11 11 11 11 11	15 00		25.00
" " 20 ft	1600		1000
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n 11 24 ft	1000		1900
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386 "	93 00		23 ∞
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	. jaN	27 00		27 ∞	Blue, ultramarine
	. 16 N	31 60		39 50 31 ∞	Oil, linseed, raw, a lmp.,
Cutting up planks,		33 oo		33 €0 36 ∞	Dates
Cutting up planks, thicker, dry	35(And 3500	26 00	25 00	26 00	Whiting, dry, per 100 lbs. Paris white, Eng., dry Litharge, Am.
thicker, dry Cutting up planks, thicker, board	13≰ and	## 00		22 00	Litharge, Am
Cedar for block hav	ing, ber				Umber, "
Cedar for Kerbing,	4 × 14,	3 00		5 00	CHMENT
per M	B. M.	14 00		14 00	Cement, Portland, per bb
1 % in flooring, dresse	ed, F M. 18 00	31 00 22 00	28 00 18 00	31 00 22 00	" Queenston, " " Napanee, "
i inch flooring, roug	d, F M.17 00	30 00	27 OC	30 00	" Hull, " " Ontario "
tal nicosti	4	23 00	18 00 18 00	19 00	ii German ii London
Besided sheeting, dre	rg 13 ∞	35 ∞	12 00 22 00		" Newcastle "
Clapboarding, dressed XXX sawn shingles,	per M	12 00		12 00	" Ce adian "
18 in		2 75 2 2 1	2 00	3 20	Panan "
Cedar				2 90	" Superfine " Keene's Coarse "Whites"
Redoak. White Basswood, No. 1 and Cherry, No. 2 and 2. White ash, No. 1 and Risch ash No. 1 and	35 00	40 00 45 00	30 ∞ 35 ∞ 18 ∞	40 00 45 00	Calcined plaster, per barre Fire Bricks, Newcastle,per
Cherry, No. 1 and 2.	70 00	20 00 70 00	70 00	80 00 20 00	Scotch "
CHARLE MAIL LION CONT.	2	35 OC 30 OO	30 00	35 00 30 00	Lime, Per flarrel, Grey White
Dressing stocks Picks, American inspe	16 00 ection	12 00 40 00	16 00	22 00 40 00	Platter, Calcined, N. B
Three uppers, Am. in:	apection	50 00		50 00	Hair, Platterers', per tag
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" and quali		10 00			rod, ho; cut, per roo lbs
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	65 63	63 65	FINK BLUKD N		•
		63 65	3d, per to fbs	1 40	
" refined, "	78 85	75 75	ad, " "	2 00	1 51
Putty	236 256	33, 33	CASING AND BOX, FLOORING, SHO		
Whiting, dry, per 100 lbs	73 100	60 73		- W 11.12	OBACCO INVA
Paris white, Eng., dry	84 135	9) 110	MAILS.		
Litharge, Am		634 8	12d to 30d, per 100 lbs	မှ 60	50
Sienna, burnt	15 80	12 15	8d and 9d, " "		70
Umber, "	816 13	12 15	6d and 7d, " "	75 90	25
UKMENT, LI	HE. etc.		4d to 50, " "	1 10	90 1 10
Cement, Portland, per bbl . 20			3d, " "	1 50	1 50
" Thorold, "			• •	-	. , ,
" Queenston, "	1 50 1 50		АН ОНІНЕННІМ		_
" Napanee, "	1 50		inch, per 100 lbs	85	85
. Hull,	1 50		או נו נון נון נון נון נון נון נון נון נון	1 00	(0:)
n Ontario n	1 10		2 10 878	11.	1 15
ii German "		265 235	173 10 174	1 35	1 35
11 London		7 45 295	1A	1 75	1 75
" Newcastle "		2 15 2 50	•	2 25	2 25
" Belgian "		23. 242	SLATING HAT	83	85
" Ca adian "		2 25 2 30	4d, " "	33	35
ii Koman "		2 73	3d, " "	1 25	8 j 1 2 g
Parian "		4 10 475	20. " "	1 75	1 75
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Keene's Coarse "Whites"		4 5> 4 75	CONHON BARKEI.		
Calcined plaster, per barrel		1 44 170	t inch, per toalba	1 50	1 50
Fire Bricks, Newcastle,per M		3 10 3100	33 44 45 44	1 75	25
Scotch		28 00 30 00		2 25	2 15
Lime, Per Barrel, Grey	40		CLINCH HAIL		_
White	55		inch, per to lis.	85	35
Playter, Calcined, N. H	2 00		273 AND 374	1 00	1 00
Walter Brown N. S	2 00 \$3		2 min 237	1 15	1 15
Hair, Plasterers', per bag	33		172 8110 174	1 35	1 35
HARDWA.	RE.		134	2 00	200
Cut nails, 5 d & 6 d, per keg	2 40	2 25	•	2 50	2 50
Steel " " " "	2 50	2 35	SHARP AND PLAT PRES		
CUT NAILS, PENCE AND	CUT SPIKE	S.	inch, per 100 lbs.	1 35	1 35
40d, hot cut, per 10 lbs	5	5	21/2 and 21/4 " " " "	1 50	1 50
30d, 11 11 11 11 11 11	1.	10	11/2 and 11/2 " " "	1 65	1 25
zod, 16d and 12d hot cut, per			135 8110 154	1 85 2 50	1 35
100 lbs	15	15	'A' " " " "	300	3 40
rod, ho; cut, per 100 lbs	70	20		-	, ,
ou, gu, 11 11	35	25	Structural I		
00, 70,	49	40	Steel beams, per 100 lbs	2 75	2 50
10 10 30,	60	to	"channels, "	2 85	25
3d,	1 (0	1 00	augies,	2 50 2 80	2 33
4d to 5d cold cut, not polished	ıto	1 50	(66),		2 5
or blued, per 1.0 lbs	50	50	Sheared seel bridge plate.	2 55 2 25	2 35
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