This paper reaches every week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers, Purchasers of Municipal Debentures and leading Contractors in all lines throughout Canada.

VCL, 13.

OCTOBER 22, 1902

No. 36

THE CANADIAN CONTRACT RECORD,

PUBLISHED EVERY WEDNESDAY As an Intermediate Edition of the Canadian Architect and Builder.

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C. H. MORTIMER PUBLISHING COMPANY of Toronto, Limited,

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Advertising Rates on application.

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

Contractors' Notice

October 18, 1902.

October 18, 1902.

Tenders will be received by the undersigned for the erection of a House of Refuge for the poor of the County of Grey, according to plans and specifications to be seen at the Town Clerk's office in the town of Owen Sound, up to six o'clock p.m., on PRIDAY, THE 7TH DAY OF NOVEMBER, 1902. The lowest or nny tender not necessarily accepted. The building will be heated by steam.

CHAS. GORDON. Chairman House of Refuge Committee.

CITY ENGINEER FOR WINDSOR

WRITTEN APPLICATIONS

for the office of City Engineer for the Municipality of Windsor, Ont., will be received by the undersigned up till noon on SATURDAY, NOV-ENBER, 1,300?.

Applicants will please furnish a statement of qualifications for the efficient discharge of the duties of the office, showing particularly their experience in the construction of modern municipal pablic improvements, and also indicate the amount of salary required.

STEPHEN LUSTED. City Clerk.

Windsor, Oct 14, 1902.

HARBOR COMMISSIONERS OF MONTREAL

TENDERS FOR TIMBER AND PLANKS

Tenders scaled and endorsed "Tender for Timber," addressed to the undersigned, will be received up to 12 o'clock noon on MONDAY, 3RD NOVEMBER, 1982, for

TIMBER AND PLANKS FOR 1903

Specifications and Blank Tenders may be ob-tained upon application to Mr. John Kennedy, Chief Engineer, at this office. The Commissioners reserve the right to reject any or all of the tenders received.

DAVID SEATH. Secretary-Treasurer.

57 Common Street, Montreal 15th October, 1902.

LOGAL IMPROVEMENT

Sealed Tenders will be received by the under-signed up to 7 o'clock, NOVHMBRR 2011, 1902, for the purchase of \$3,860 20-100 Local Improve-ment Debentures of the Village of Lucan, bear-ing interest at 4 per cent., payable in 20 equal annual instalments of \$284 34-100 each.

Debentures date Dec. 1st., 1902. G. A. STANLEY, Village Clerk, Lucan, Ont.

for the supplying of material, building of abut-ments, centre piers and guards and superstruc-ture for a

Steel Swing Bridge

across the Welland River at Montrose, about four miles from Chippewa, in the County of Welland. Length over all about 190 feet, length of swing 110 feet, fixed span 80 feet, with a clear roadway of 16 feet. Concrete piers and abutuments.

Plans and specifications may be seen at the office of George Ross, Esq. C. E. Welland, Ont.
Separate tenders required for substructure and superstructure. Tenders to be accompanied by accepted cheque for two hundred dollars as a guarantee of good faith, and to be in my hands on or before TUESDAY, OCTOBER 2187, at 12 o'clock noon. Cheques of all unsuccessful tenderers will be returned Tenders to be endorsed "Tenders for Montrose Bridge" and addressed to Norval B. Hagar, Allanburg, Ont., Chairman of Road and Bridge Committee of the County Council of the County of Welland.

The lowest or any tender not necessarity accepted.

ROBERT COOPER. County Clerk.



SEALED TENDERS, addressed to the under signed, and endorsed "Tender for Drill Hall, London," will be received at this office until Friday, 7th November, 1902, inclusively, for the construction of a Drill Hall, London, Ont. Plans and specifications can be seen and form of tender obtained at this Department, and at the office of Messrs, Moore & Henry, Architects, London.

London.

Persons tendering are notified that tenders will not be considered unless made on the form supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted cheque on a chartered bank, made payable to the Honourable the Minister of Public Works, equal to ten per cent. (to p c) of the amount of the tender, which will be forfeited if the party tendering decline to enter into a contract when called upon to do so, or if he fail to complete the work contracted for. If the tender be not accepted the cheque will be returned

The Department does not bind itself to accept

The Department does not bind itself to accept the lowest or any tender.

er.

By order,

FRED GELINAS,

Secretary.

Department of Public Works,
Ottawa, 17th October, 1902.
Newspapers inserting this advertisement without authority from the Department will not be raid for it. be paid for it.

The dissolution is announced of the firm of Webster Bros. & Parkes, mantels, cement and drain pipes, Montreal. George M. Webster has registered as proprietor of the business.

CONTRACTS OPEN.

MOWBRAY, MAN. - Stead & Harriett will build an elevator at this place.

SUNDERLAND, ONT .- The West-

ern Bank is erecting a new building here.
DUTTON, ONT. - The Michigan Central Railway will build a new station

PICTOU, N. S. - John Munro will erect a building on the Munro Estate corner.

FORT WILLIAM, ONT. - R. D. Hawks is taking tenders on building a three-storey brick block.

ALMONTE, Ol.T. - Negotiations are under way for the extension of the telephone system to Clayton.

HAWKESBURY, ONT .- The sum of \$2,000 has been subscribed towards building a new skating rink.

ARNPRIOR, ONT .- W. J. Keyes, a farmer in McNab township, will move to town and erect sales stables.

BRUSSELS, ONT .- Lockridge Bros. purpose purchasing the woollen mills and installing new machinery therein.

ST. JOHN, N. B - The St. John Street Railway Co. purpose carrying out a number of extensions next spring.

ST. THOMAS, ONT .- E. H. Pink will erect four frame cottages at corner of Fourth avenue and Wellington street.

RICHMOND HILL, ONT.-French & Son have commenced the excavation for an addition to their carriage factory.

TRENTON, ONT.—On October 27th the ratepayers will vote on a by-law to raise \$7,500 for a municipal electric light plant.

FENELON FALLS, ONT -T. H. DeCew & Sons, stave manufacturers, have decided to locate in Eastern Untario.

BRANDON, MAN. - It is reported that the Lake of the Woods Milling Co. have decided to build their new mill in BRANDON, this town.

NIACARA FALLS, ONT.—Tenders have been taken on brick addition to public school, from plans by Mr. Nicholls, architect.

SYDNEY, N.S.—It is reported to be the intention of the Nova Scotia Steel Company to erect another blast furnace at Sydney Mines.

FIELD, B.C.-The C.P.R. has invited tenders for an addition to the company's hotel here. Plans on application to H. J. Cambie, Vancouver.

NEEPAWA, MAN.—Col. Ruttan, city engineer of Winnipeg, has been commissioned to report on a drainage system for this town.

FREDERICTON, N.B.-Plans have been prepared for a gymnasium for the University of New Brunswick, 60x80 feet, brick, cost about \$6,000.

SHUBLINACADIE, N. S. - R. E. Fitch is this week taking tenders on carpenter work, masonry, and plumbing for alterations to building.

VICTORIA, B. C.—Tenders are invited by the Provincial Government up to 27th inst. for erection of fish hatchery and cottage near Seton Lake.

INGERSOLL, ONT.—A movement is on foot to erect a large opera house here, and it is reported that Dr. Mc-Kenney is one of the movers.

ST. BONIFACE, MAN .- The corporation has just taken tenders on construction of sewer 500 feet in length; T. Bertiand, secretary treasurer.

REVELSTOKE, B.C.—Henry Floyd, city treasurer, will receive offers up to November 14th for purchase of \$70,000 5 per cent. 25 year debentures.

STURGEON FALLS, ONT.-It is understood that the Sturgeon Falls Pulp & Paper Co. purpose proceeding with further additions and improvements.

GREENWOOD, B. C. - The rate-payers will be asked to approve of an issue of debentures to provide funds to construct the Greenwood-Phoenix tramwav.

TORONTO JUNCTION, ONT. -The question of increasing the accommodation at the Elizabeth street school is being considered. A new school may

CAMPBELLTON, N. B. - Kilgour Shives states that the contracts for machinery for the new saw mill of the Kilgour Shives Lumber Co. have not yet been awarded.

LONDON, ONT. - The Dominion Governmentt is asking for tenders up to November 7th for erection of a drill hall in this city. Plans at office of Moore & Henry, architects.

WARDNER, B.C.—The East Koote-nay Lumber Co., of Cranbrook, will con-mence at once to build a large saw mill here, and next spring will build a mill in the Kootenay district near the boundary.

CARLETON PLACE, ONT. - Ald. Latimer has given notice in council of a by-law to raise \$10,000 for new sidewalks. Debentures for the sum of \$1,400 will be issued under the Detenture Act of 1895.

BLIND RIVER, ONT .- It is reported that the Mississaga Lumber Co., of which Mr. Brennan is president, will build a large saw mill here.—There are rumors of a shingle mill being built here

NORTH BAY, ONT. - A site has been selected for the proposed hospital. The Canadian Pacific Railway, in addition to building new sidings, cattle yards and station, will erect a large elevator

WINDSOR, ONT.—The representa-tives of the townships interested in the Ruscom river drain have discontinued litigation and agreed to permit the work to proceed. The cost of the drain will be about \$25,000.

MONCTON, N.B.—The annual meeting of the New Brunswick Petroleum Co. took place here last week, H.R. Emmerson presiding. The directors were given power to take steps to borrow money to erect a refinery.

AYLESFORD, N. S.-A. Mahon desires tenders by November 15th for erection of brick and stone court house at Kentville. Plans at residence of A. E.McMahon, at office of and L. A. Fairn, architect, Wolfville.

MANIWAKI, QUE .- Bids are invited up to November 1st by James Martin for construction of iron bridge across the Desert river; length of span 165 feet, width 18 feet; height of piers 22 feet; length of approaches 50 feet.

WELLAND, ONT .- The time for receiving tenders for the steel superstruc-ture of the Montrose bridge over the Welland river has been extended to October 20th. Further particulars from George Ross, C.E., this place.

NEW WESTMINSTER, B.C.expected that a new race track will be built at the exhibition grounds, at a cost of \$10,000.—Nelson Carter is building a shingle mill at Port Haney, in which an electric plant will be installed.

LISTOWEL, ONT. - The Listowel Furniture Co. have decided to proceed this fall with the erection of addition to factory, which will be 36x70, ft. and three-storeys high. An electric light system will be installed throughout the factory.

MIDLAND, ONT. - None of the tenders received for waterworks and dock debentures were considered satisfactory, and R. Raikes, Chairman of Finance, has been instructed to again offer the debentures for sale, bids to be received by November 10th.

FORT FRANCES, ONT .- Negotiations are said to have been completed for the development of the water power of the Koochiching Falls at this place. W. Backus, of Minneapolis, is interested in the scheme, which includes the construction of a dam and one or more re-

NORTH SYDNEY, N. S. - Baird, Rolph & Meredith, architects, have pre pared plans for new town hall.—At a meeting of the A. C. Thompson Co., held last week, it was decided to proceed at once with the erection of the foundry. Thompson is president of the company.

HULL, QUE.—It is expected that the council will this week ratify the agreement under which the International Cement Co., of Durham, will establish works here. A McConnell is acting as solicitor for the company, which agrees to expend half a million dollars on buildings and machinery

OWEN SOUND, ONT. - A gentle man interviewed Mayor Reed last week regarding the establishment here of a large wood-working factory. He will probably submit a proposition to the council at next meeting. — The plans of J. S. Russell, architect, of Straiford, have been accepted for the proposed House of

LINDSAY, ONT .- The Raven Lake Portland Cement Co. are about to commence the erection of buildings and plant at Raven Lake, on the Coboconk branch of the Grand Trunk Railway. Their power house will be located at Elliott's Falls, on the Gull river, north of Cobe-conk. The head office of the company

is at 16 King street west, Toronto.

DAWSON, YUKON TERRITORY.

The Yukon Consolidated Water & Power Co. has been granted a Dominion charter, with capital of \$2,000,000, to provide a water supply for working mines in the Dawson district. Charles Archer, of this place, is attorney for applicants, also for the Stewart River Development Co. of Canada, capital \$500,000, organized for a similar purpose.

SAULT STE. MARIE, ONT.—It is expected that the building of an addition to the hospital, to cost \$50,000, will be commenced next year.—The town engincer is preparing plans for a 12-inch sewer on Bruce street hill. It is likely that a by-law will be submitted to the ratepayers to provide funds for this and other work.-The Sisters of St. Joseph are considering the establishment of an academy for girls.

WOODSTOCK, N. B .- Alex. Dunbar & Sons are making extensive additions to their works. A machine shop, 45x120 feet, is now under way, a blacksmith

shop, will be built this fall and next spring it is intended to erect a foundry 85x40 feet, and convert the old machine shop into a wood-working factory.—A new Salvation Army barracks is about to be built, brick, 30x55 feet, two and one-half storeys.

QUEBEC, QUE.—The Trans-Canadian Railway Co. was finally organized in this city last week, Reginald Gardiner being appointed secretary and A. E. Doucet chief engineer. A provisional contract was executed with Col. George Earl Church, of London, England, for the construction of the first division of the road from Roberval to the western boundary of the Province near James Bay, a distance of about 400 miles.

COLLINGWOOD, ONT.-John Wilson, has prepared plans for re-sidence to be built on St. Marie street by S. D. Andrews.—It is likely that the Northern Navigation Co. will rebuild their steamer United Empire this winter. -Capt. James Wilson intends building a new residence next spring.—The town council has authorized the treasurer to invite tenders for purchase of debentures, to be received by November 12th.

WINNIPEG, MAN.-J. D. McAnhur, lumber dealer, will erect a new office building.—Tenders are about to be invit-ed for a large clock for the city hall, to have four dials.—Tenders are invited up to 25th inst. for erection of school house, from plans by Walter Chesterton, archiroth plans by Walter Chesterton, architect.—The city clerk desires tenders by 27th inst. for 1,000 feet of 2½ inch cotton rubber-lined hose, 44 firemen's rubber coats, 44 pairs rubber boots, 44 cloth caps, and 88 pairs woollen mits.

VANCOUVER, B. C.—The Canadian Bink of Commerce has purchased a site in this city on which to erect a new building, but work cannot be commenced until the present leases have expired.— The erection of new buildings for the Vancouver College and the High School is being considered by the School Board. The site is being cleared in Fairview for the new public hospital, work on which will be commenced immediately.

HAMILTON, ONT .- The Sawyer-Massey Co. are about to let contracts for factory extensions, including fnew building, 175x50 feet for extras and samples, new paint shop 150x40 feet, addition of 100 feet to boiler shop and additional storey to wood-working shop. — The Cataract Power Co. are building a new transformer station on Victoria avenue north, which will cost about \$6,500.— The Grand Trunk Railway Co. are about to enlarge their freight accommodation .-The George E. Tuckett Co. will build an addition to their cigar factory, 200x70 feet and four-storeys high.—T. Allen, contractor, who has purchased the Mc-Nab Estate property, will erect four houses in addition to the three now under way.—Recent building permits included the following: T. J. Russell, brick dwelling, Elgin street, for James Murray, cost \$1,400; David Brown, brick dwel-

- The

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Highest market prices paid for

MUNICIPAL **DEBENTURES**

ling, Grant avenue, cost \$1,500: Thomas Allen, two brick dwellings, Elgin street, between Cannon and Robert streets, cost \$2,400.

OTTAWA, ONT.—A. Fraser & Co. have broken ground for their new saw mill to be built at Deschenes; estimated cost \$200,000.—H. A. Bate has purchased the Rene Steckel property on Bank street and intends remodelling and extending the building.—James Mather, this city, in conjunction with A. Stone, of Montreal (late of New York) are joint architects for the new building to be built by James W. Woods. Tenders will be called for early next month, as the building is to be completed by August 1st, 1903.—Ald. Plouffe will move in council that the sum of \$9,000 be provided for repairing and widening the Someiset bridge.—The vestry of St. John's church has decided to replace the Anglesea Square Mission Hall by a new building, plans for which are now being prepared. John Davis, of Clarence is one of the promoters.—It is reported that the Canada Atlantic Railway Co. will build several summer hotels along the route of its road.—The following building permits were issued last week: L. Charbonneau, brick dwelling, Nelson street, cost \$3,500; Ottawa Electric Company, storage battery room, Middle street, cost \$2,500; William Bradshaw, frame dwelling, Third avenue, cost \$1,000; G. Nelson, brick-veneered dwelling, Gilmour street, cost \$900.

MONTREAL, QUE.—The Haroor Commissioners are asking for tenders by Monday, November 3rd, for supply of macadamizing stone, also for timber and deals.—Ald. Gallery has moved in council that steps be taken towards the construction of a subway in St. Denis street.—The Finance Committee of the City Council has decided to purchase three new boilers for the low level pumping station, at cost of \$15,000, and to give \$8,000 for the continuation of the lames street sewer. — At the last meeting of the Road Committee the question of purchasing an asphalt plant was considered. — Building permits have been granted as follows: Mrs. R. Roy, two-storey house, Duluth avenue, cost \$1,300; Beaupre & Fils, one-storey factory, 505 St. Paul street, cost \$2,800; Jos. and Ed. Latrelle, four three-storey houses and stores, Mount Royal avenue, cost \$10,000, Jos. Sawyer, three-storey house, Canning street, cost \$3,000; L. L. Renaud, 423 Paro Champlain, three-storey house, cost \$2,200; Arone Senecal, three-storey house, Stadacona street, cost \$2,000; T. L. Harrison, alterations to three-storey house, and store, 53 Metcalfe street, cost \$1,500; R. R. Young, three-storey association building, corner Sebastapol and Labor streets, cost

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\$25,000; Paul Galibert, store, corner Wellington and King streets, cost \$3,700; Chas. Benard, one-storey house, St. Hubert street, cost \$1,000; G. L. Bough, two-storey house, Huntley street, cost \$1.800; C. P. R., two-storey cabinet and upholstery shop, one-storey car machine shop, truck shop, planing mill, freight car shop, passenger car erecting shop, and passenger car paint shop, cost \$299,900.

TORONTO, ONT. — The Kemp Mfg. Co. purpose extending their premises at the corner of Gerrard and River streets.—A Toronto citizen has effered to give \$25,000 towards the erection of a hospital for consumptives to be located near this city, providing a suitable site can be secured.—The Grand Trunk Railway Co. have purchased the old Parliament Buildings property from the Ontario Government. It is understood that the property will be utilized for new freight sheds and yards and that ultimately a new passenger station may be built. The council has given notice of its intention to construct a macadam pavement on Ontario street, from Wilton avenue to Carlton street, at a cost of \$3,470, and an asphalt pavement on Elm avenue, from Sherbourne to Huntley streets, at a cost of \$4,435.—Col.

A.E. AMES & CO.

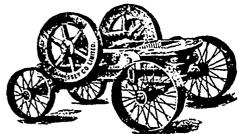
BANKERS.
18 King Street East, TORONTO.

Buy and Sell

GOVERNMENT, RAILROAD and MUNICIPAL SECURITIES.

Pellatt will shortly erect a costly residence at the head of Spadina road.—Geo. T. Gorrie contemplates the building of a residence.—C. J. Gibson, architect, 75 Yonge street, is taking tenders up to Saurday, 25th inst., for erection of pair of houses on Charles street.—A. F. Banks, of York Mills, is about to erect a pair of houses on the south side of Kensington avenue, N. r.h. Toronto.—A.d. Curry introduced a motion in council on Monday last that the engineer be requested to report as to the cost of erecting a temporary foot bridge across the railway tracks at foot of Yonge street, to remain in position until a permanent structure is constructed.—Building permits have been granted as follows: F. Terry, brick dwelling, Euclid avenue, near Leonox street, cost \$2,500; W. W. Vickers,

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MUNICIPAL DEBENTURES BOUGHT

ÆMILIUS JARVIS & CC. (Toronto Stret Freberge) 19-21 Ring St. Wast TORONTO, Ont

brick dwelling, corner Dowling and Laburnam avenues, cost \$5,000; R. Hills, addition to residence, 120 St. George street, cost \$1,000; Thomas Brown, brick dwelling, Chicora avenue, cost \$2,000; R. Cuibett, residence on Brock avenue, north of Bioor street, cost \$2 500; G. Watson, brick dwelling, 103 Close avenue, cost \$2,500; E. C. Carns, pair brick dwellings, south side College street, near Brock avenue, cost \$4,000.

FIRES.

Residence of Joseph Lacroix at Montmorency, Que., totally destroyed.—Store and tenement house of Archibard Steeves and residences of M. Thistle and E. S. Barton at Hillsborough, N. B.—Fire at Shediac, N. B., last week caused damage of \$150,000. The losers include: R. C. Tait, warehouse; Mrs. Gallant, post office building and People's Bink of Halifax; S. Poirer, store; A. McNeil, store; O. M. Melanson, store and warehouse.

CONTRACTS AWARDED.

PORT ARTHUR, ONT.-Store for Mr Aribur: A Stunders, contractor.

FORT WILLIAM, ONT.—Heating Western Book: Alex. Cameron, contractor.

LINDSAY, ONT.—Heating apparatus for fire hate: Keyes & Morrison, contractors, \$498.

HUNTSVILLE, ONT. — Twelve houses for Humsville Lumber Co. : Irons & Wandacock, contracters.

ARCOLA, N. W. T.- Union Bink Bock: Mr. Harrington, of Winnipek, contractor; price about \$10,000.

TILSONBURG, ON I. — Pavement on Broadway: Forest City Paving Co., London, contractors; price \$9,000.

KENTVILLE, N.S. — The contract for the Government sanitorium here has been let to James Reeves, of this place.

COLLINGWOOD, ONT.-Addition to Queen's Hotel: Brick work, Mr. Court; carpentry, Wison Bros.; plumbing and tinsmithing, E. Parrott; painting, M. J. Pomphrey.

MONTREAL, QUE. — Forgarty Bros. have secured the contract for instailing a complete electric light plant in the new building of William Rusherford & Co. at St. Henri.—W. E. Doran, architect, has awarded contracts for warehouse on King street for Lovell & Christmas to the following: Primbing, Billaniyne & Co.; roofing, Geo. W. Reid & Co.

TORONTO JUNCTION, ONT.— The contract for electric light plant for the town has been awarded to the Canadian General Electric Co., at the price of \$2.280

MEDICINE HAT, N. W. T.—The Merchant's Bank of Canada have purchased \$10,000 worth of 4½ per cent. debentures at par and \$22,000 worth of 5 per cent. debentures at a premium of \$1,000.

KINGSTON, ONT.-E. M. Storey, architect, has accepted the following tenders for residence for Thomas Sher-

wood, of Inverary: Plumbing, heating and timemitting, Lemon, Claxton & Lawrenceton; other trades, Riley Smith.

BUSINESS NOTES.

P. E. Rouel & Company, painters, etc., Montre it, have dissolved.

The death took place last week of James Sage, builder, of Hamilton.

The dissolution is reported of Laurin, Art & Company, painters, Montreal.

John Waddie, planing mill, Port Dover, Ont., is advertising his business for sale.

The well known firm of Clarke & Connolly, contractors, Toronto, has been dissolved.

The Montre il Pavement & Construction Company has registered partnership in Montreal.

The wood-working factory of Barter Bros., Avondale, N. B., was recently damaged by fire.

Lust Bros., builders and lumber manufacturers, Rodney, Ont., are advertising their saw and planing mill for sale.

Scott, Cross & Company, builders, planing mill, etc., Toronto, have dissolved, each member of the firm continuing.

A meeting of the creditors of Geo. W. Simser, contractor, South Indian, Ont., was held on the 21st inst. Result not learned.

The Warren Bituminous Paving Company, of Ontario, Lemited, has been formed, with head office in Toronto, to conduct business as contractors for pavements and dealers in supplies.

W. Owen, of London, England, is now in Toionto negotiating for the establishment of a factory or the manufacture of paving blocks. The process consists of the util zation of sand or gravel or refuse from a blast furnace, and the product is said to be much cheaper and more durable than asphalt. The blocks are

tested to stand 200 tons pressure to the square foot. Plants are already established in England, Wc., Australia and the Transvaal.

DEBENTURES

Municipalities contemplating the issue of Debentures will find it to their advantage to communicate with

G. A. STIMSON & CO.
Investment Dealers

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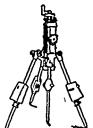
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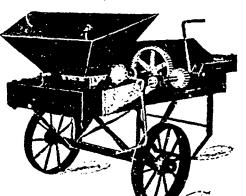
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Sales Agent.

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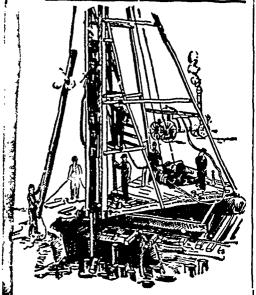
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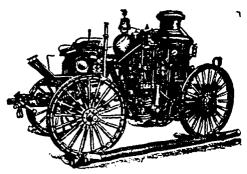


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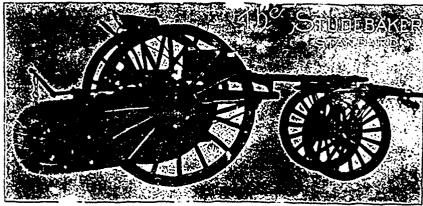
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Very frequently a painter may be asked to paint a floor, and in many cases is instructed as to the color, and other little matters. In the case of the floor being one that is to be done with oil paint, and to have much wear, the painter should select such coloring substances of certain earthy matters only, because the use of white lead for such a purpose is an error that should be avoided.

Many will advocate the use of lead in painting floor, because of its supreme density and body, under the mistaken idea that density adds to its wearing quality. As a matter of fact no oil paint will stand less wear than white lead or colors composed largely of white lead. It simply covers the surface, and is one of the best paints employed to protect woodwork where there is no great wear.

Othres make the best wearing paints. and they may be applied in several ways. They may be mixed with the oil, and applied when mixed with hot stale beer and glue water, and when dry two coats of oil may be laid on thinly with a good strong brush, and, if properly done, the work will be lasting and satisfactory.

Care must be taken that the floor is perfectly clean and dry before the color is applied, and if the latter is mixed with oil, the floor should receive two coats, both of which should be well brushed in-

With new floors certain stains may be applied, and give satisfactory results without any sizing. When water stains are used they can be allowed to thoroughly sink in, and should then be varnished.

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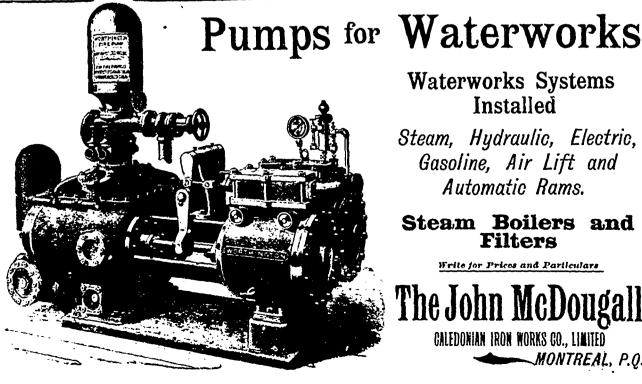
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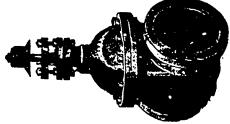
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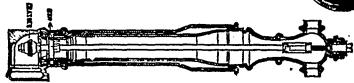
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In the spring of 1869, the city of Winnipeg found itself in possession of a waterworks system purchased from a private corporation for \$237,500, and with about \$462,500 available toward the construction of an improved plant. It was proposed to obtain a new supply from a series of wells, and work was begun by sinking a pump well 17 feet in diameter and 48 feet deep. The quantity of water encountered in this one well was so great, amounting to more than half again as much as the present consumption, 1,400,000 imperial gallons per day, that work on the chain of proposed supply wells has not been started. While there has thus beer no trouble with the quantity of the new supply, its quality has unfortunately left much to be desired in respect to hardness, and a softening plant has been recently built by the Pittsburg Testing Laboratory to remedy this defect. The annual report for 1901 of Col. H. N. Ruttan, city engineer, contains an interesting chapter on this plant, from which the following notes have been prepared.

The character of the water, in parts per million, is given in the following statement of analyses by Prof. E. B. Kenrick, of the University of Manitoba:

	Untreated.	Treated.
Calcium	. 91.5	21,1
Magnesium	. 67.6	42.8
Sodium	. 167 2	1678
Iron and aluminum	. Trace	Trace
Silicle acid	. 73	4.2
Sulphuric acid		172.4
Chlorine	242.0	242.0
Hardness as CaCO3 .	510.4	231,1

The temperature of the water in the ground is about 42 degrees Fahr., but the supply as it comes from the well runs through a surface condenser of a 75-horse power engine, which raises its temperature considerably.

The carbonates of lime and magnesium and the sulphate of magnesium cause the hardness of the water. The softening process removes only the first two, as it would be necessary to add soda ash to the water to remove the magnesium sulphate, and thus incur an expense out of proportion to the benefits derived. The extraction of the carbonates eliminates rather more than two-thirds of the hardening substances in the supply.

It is not generally understood how lime can remove lime from water. The confusion arises from the free use of the word "lime" to cover all the compounds of the element calcium. The lime in the water is in the form of carbonate of calcium, while the lime used for water softening is calcium oxide, two wholly different substances. Lime is made into lime water before it is used for softening water. Lime water is made by agitating water with an excess of slaked lime until it has become saturated. After that, even if filtered perfectly clear, it is of full strength still. One thousand imperial gallons of water

will dissolve 13 pounds calcium oΓ exide.

Hard water at Winnipeg contains carbonates of lime and magnesium besides other substances already mentioned, but of no importance in this connection. These carbonates are held in solution by carbonic acid was which the water dissolved from the air or soil before it was able to dissolve the carbonates of lime or magnesium from the rock. Any means which will abstract this carbonic acid from the water will soften it because the carbonates of lime and magnesium will at once separate from the water. Boiling softens the water for this reason. but it would be impracticable and undesirable to soften a public water supply in this manner. It is possible, however, to accomplish the same thing without the use of heat. If any substance having a strong affinity for carbonic acid is added to hard water, it combines with the acid and sets free the carbonates of lime and magnesium which thereupon separate and settle out as a white powder, leaving the water soft. Such a substance is found in the builders' line of the trade the best grade being the cheapest to use. For convenience it is slaked and converted into lime water. When the lime water is mixed with hard water, flakes and crystalline matter are observed to separate at once. These consist of carbonate of lime, formed by the union of the lime which was used with the ca-bonic acid in the water, also the carbonate of lime which was in the hard water, also the carbonate of lime which was in the hard water, and lastly, hydrate of magnesium produced by the action of the lime on the magnesium carbonate in the hard water.

It is thus apparent that all of the lime which is used for softening is converted in the process into carbonate of lime which separates immediately from the water, bringing with it the carbonates which were in the hard water.

(To be continued.)

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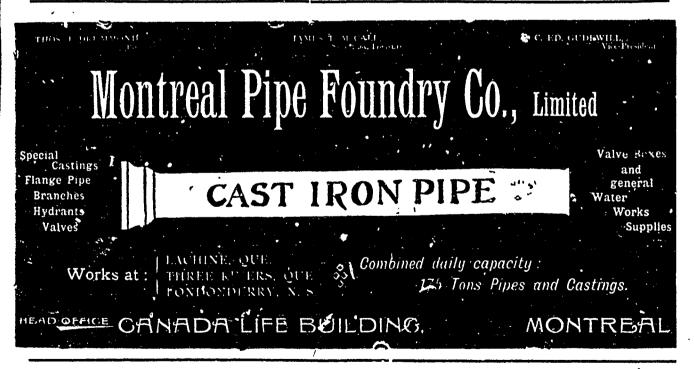
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	To	onto.	Montrea		
Raevel's 395 lb. bbl				200	
Levie Bros. "				250	
German-					
Offerbacher Brand	2 40	2 50	1 90	2 25	
Alsen's,	2 75	a 85	2 20	2 40	
Karlstadt	2 50			2 40	
Canadian —				•	
Star Brand	3 40	300			
Peaver Brand		300			
Ensign "		2 70			
Citadel "	200	- • -			
Trowel "			Z 75	z 85	
Samson Brand	25	⊋ 60	•••		
Manet		3 10			
Monarch 4	2 10	•			
Ma net *	3 10	2 25			
American-		•			
Alpha Brand	3 10	240	250	2 60	
Lenigh, in bbl., 3.5 lbs.		3 00	•	2 50	
Colton sacks, 250 bet		3.34		250	
aper begs		3 0		335	
D agor extra				3 33	
Karne's operative "Whites"	20 12			10 00	
Keene's Coarse "Whit s"		700	6 50	700	
Fire Bricks, Newcastle, perM		∞در		22 00	
" Scotch "	25 00	33 oo	1700	2 × 00	
Lime, 100 lbs., Grey		30			
" White					
Plaster, Calcined, N. Il		300		300	
" " N S		3 ∞		3 00	
Hair, Plasterers', per bag	80	100		1 00	
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THE IMPERIAL VARMISH AND COLOR CO, LIMITRU. (tlighe-t grade)

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