

CANADIAN CONTRACT RECORD

*A Weekly Journal of Engineering, Public Works,
Tenders, Advance Information and Municipal Progress*

This Paper Reaches Every Week the Town and City Clerks, Town and City Engineers, County Clerks and County Engineers, Leading Civil Engineers and Contractors throughout Canada, and Purchasers of Municipal Debentures.

VOL. 17.

TORONTO, MONTREAL — JANUARY 30, 1907 — WINNIPEG, VANCOUVER

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THE CANADIAN CONTRACT RECORD PUBLISHED EVERY WEDNESDAY

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of Toronto, Limited,

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in advance.

CONFEDERATION LIFE BUILDING, TORONTO
Telephone Main 2363.

Branch Offices:
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Telephone Main 2599.

750-751 Union Bank Building, Winnipeg.
Telephone 1274

Davis Chambers, 611, Hastings St., Vancouver,
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should give prompt notice of same. In doing so
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WANTED

Two second-hand Hoisting Engines, either triple
or double drum, size about 10 x 12 or 8 x 10.
Slate condition and price.

THE CADWELL SAND & GRAVEL CO.
Box 117, Windsor, Ont.

TENDERS

will be received by the undersigned up till
FRIDAY 8th FEBRUARY, for wrecking the
buildings at 124 and 126 King street east, Toronto.
All information obtained on application to
DARLING & PEARSON, Architects,
Toronto, Ont.

CONTRACTORS

The undersigned having acquired the Canadian
Rights for the use of the Raymond Concrete
Pile, are prepared to lease to responsible con-
tractors the exclusive right to use this form of
piling in certain specified territories. Address
communications to
THE RAYMOND CONCRETE PILE CO.
of Canada,
Corstine Building, Montreal

TENDERS

FOR THE SALE OF

\$15,000 HIGH SCHOOL DEBENTURES
TOWN OF PICTON

Sealed tenders addressed to Mayor G. M.
Parrington, for the sale of \$15,000 4 per cent.
High School Debentures of the Town of Picton,
Ont., will be received up to six o'clock p. m. on
MONDAY, THE 4th DAY OF FEBRUARY,
1907. Full information will be furnished on
application to the Town Clerk.

R. A. NORMAN,
Town Clerk.

Dated at the Clerk's Office, Picton, January
22nd, 1907.

For Sale

Two Canadian patents, covering Labor-
Saving Device. Information given on
application.

Box 512, St. Catharines, Ont.



TEMISKAMING AND NORTH- ERN ONTARIO RAILWAY COMMISSION

Sealed tenders addressed to the undersigned
at 25 Toronto street, Toronto, and endorsed
"Tender for Grading, Ballasting, etc.," will
be received up to five o'clock p. m. on

WEDNESDAY, THE THIRTEENTH
DAY OF FEBRUARY, 1907,

for the construction of an extension of the
Temiskaming and Northern Ontario Railway,
including clearing of right-of-way, bridging,
grading, ballasting, and tracklaying complete
and ready for operation, in accordance with
plans and specifications prepared by the Chief
Engineer of the Commission, such extension
being from a point on the T. & N. O. Railway,
100 miles north of New Liskeard, northerly
or north-westerly direction to a point forming
a junction with the Grand Trunk Pacific
(Transcontinental) Railway, a distance of forty
(40) miles more or less.

Plans and specifications of the work may be
seen at the office of the Chief Engineer of the
Commission at North Bay.

The rails, fastenings and ties will be de-
livered to the contractor at the southerly end
of the work (say 100 miles north of New
Liskeard).

Tenders will not be considered unless made
on the form supplied by the Commission and
signed with the actual signatures of the parties
tendering. An accepted cheque on a chartered
bank, for \$10,000 payable to the order of the
Chairman and Secretary-Treasurer of the Com-
mission must accompany each tender.

The cheque of the party whose tender is
accepted will be forfeited if such party fails
or declines to enter into a contract in form
satisfactory to the Commission, or fails or
declines to furnish security to the satisfaction
of the Commission for the due completion
of the work at the rates, and on the terms
stated in the offer submitted.

The cheques of parties whose tenders are
not accepted will be returned to them on the
contract being awarded.

The Commission is not bound to accept the
lowest or any tender.

Dated at Toronto this seventh day of Janu-
ary, 1907.

H. W. PEARSON,
Secretary-Treasurer.

Papers inserting this advertisement without
authority will not be paid for same.

TENDERS FOR

Portland Cement

Sealed tenders addressed "S. R. Armstrong,
City Clerk, Peterborough Ont." and endorsed
"Tenders for Cement", will be received up to
FEBRUARY 19th 1907, for supplying 5,000
barrels more or less of Portland Cement.

Tenders will state whether cement is packed
in sacks or barrels, net weight per sack or
barrel and price f.o.b. Peterborough. Sample
tests will be made from consignments before
acceptance. Delivery to commence not later
than May 1st, 1907. A marked cheque for an
amount equal to 5 per cent. of total contract
must accompany each tender. Specifications
furnished on application. The lowest or any
tender not necessarily accepted.

S. R. ARMSTRONG,
City Clerk.

GOVERNMENT OF THE PROVINCE OF SASKATCHEWAN

Public Works Department

Tender for Land Titles Offices.

Sealed tenders will be received up to 4.30
p.m. of

MONDAY, FEBRUARY 4TH, 1907,

for the erection of a Land Titles Office Building
at Regina, Saskatchewan.

The building will be about 80 ft x 80 ft. rein-
forced concrete fireproof construction, cut
stone facing and two storeys in height and
other details to match this style of work.

The plumbing, heating and ventilating and
electric light wiring will not be included in this
contract.

Each tender must be accompanied by an
accepted cheque for other satisfactory deposit
for the amount of \$5,000.00.

This deposit will be forfeited if the tenderer
fails to execute the contract and bond when
requested and will be returned when the con-
tract and bond is signed and the work is
commenced.

The deposit of unsuccessful tenderers will be
returned when the contract is signed.

The right to reject any or all tenders and to
waive any defects or irregularities therein is to
be at the discretion of the Commissioner of
Public Works.

Plans specifications form of tender and all
information may be obtained on application to
the undersigned.

The unauthorized insertion of this advertise-
ment will not be paid for.

F. J. ROBINSON,

Deputy Commissioner

of Public Works,
Department of Public Works,
Regina, Dec. 31st, 1906.

[FOR ADDITIONAL ADVERTISEMENTS FOR TENDERS SEE NEXT PAGE]

**CITY OF WOODSTOCK
DEBENTURES**

Sealed tenders, addressed to the undersigned, will be received till noon of WEDNESDAY, THE 27th DAY OF FEBRUARY NEXT, for the following City of Woodstock debentures: \$1,000 for Public Library site, 10 years, due December 31, 1926 interest 4 1/2 per cent. \$7,000 Consolidated Debentures, 30 years, due December 9, 1936 interest 5/2 per cent. \$10,000 for addition to Collegiate Building, 30 years due December 31, 1936 interest 4 1/2 per cent. \$16,500 for Sewerage purposes, 30 years, due December 1, 1935, interest 4 1/2 per cent. Interest payable yearly. The highest or any tender not necessarily accepted.

JOHN MORRISON,
City Clerk,
City Clerk's Office, Woodstock, January 24, 1907.



Notice to Architects
Designs for New Departmental and Justice Buildings, Ottawa.
EXTENSION OF TIME

The time for receiving competitive designs for the proposed new Departmental and Justice Buildings at Ottawa, is hereby extended from April 15 to July 1, 1907.

By order,
FRED. GELINAS,
Secretary,
Department of Public Works,
Ottawa, January 24, 1907.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.



NOTICE TO CONTRACTORS
Construction of Hydraulic Dredge

Tenders will be received by registered post only, addressed to the Chairman of the Board of Control, City Hall, Toronto, to NOON ON TUESDAY, FEB. 19TH, 1907, for the construction of a Hydraulic Dredge complete.

Envelopes containing tenders must be plainly marked on the outside as to contents. Plans and specifications may be seen and forms of tender obtained at the office of the City Engineer, City Hall, Toronto, on and after Monday, January 14th.

The usual conditions relating to tendering, as prescribed by City By-law, must be strictly complied with or the tender will not be entertained. The lowest or any tender not necessarily accepted.

EMERSON COATSWORTH (Mayor),
Chairman Board of Control,
City Hall, Toronto, Jan. 9th, 1907.

PUBLISHERS' ANNOUNCEMENT

To ensure the publication of the CONTRACT RECORD on time, advertisers are requested to strictly observe the following regulations:

Copy and cuts for change of advertisements must reach the publication office in Toronto not later than Saturday preceding the date of publication. The copy should show the size of the cuts, if any, as sometimes there is delay in transmitting the latter through the mails.

Transient advertisements for Tenders must reach the publication office by TEN O'CLOCK A. M. ON TUESDAY, but our patrons will confer a favor by forwarding advertisements earlier whenever possible.

Draughtsman Wanted

Good Draughtsman wanted for Toronto Office. Must be accustomed to detailing. Apply Box 102, CONTRACT RECORD, Toronto.

WANTED

Two first class Architectural Draughtsmen. Apply at DARLING & PEARSON, 2 Leinster Lane, Toronto.

CONTRACTS OPEN.

ST. ANNE'S, C. B.—R. H. McLeod, is to erect a new store here.

PORT STANLEY, ONT.—M. Loney will erect an opera house here.

EGLINTON, ONT.—Additions are to be made to St. Clement's church.

FOREST, ONT.—H. J. Pettypiece will erect a cement block building here.

DARTMOUTH, N. S.—The Ferry Co. will erect a new station here to cost \$12,000.

NIAGARA FALLS, ONT.—New tenders will be called for remodeling of the city hall.—An addition is to be made to the foundry of the Niagara Falls Machine & Foundry Co.

WIARTON, ONT.—It is rumored that Siemon Bros. will erect a large flooring factory.

KENORA, ONT.—W. R. Wilson has decided to erect a new rink with a seating capacity of 4,000.

WOODSTOCK, ONT.—The City Council are considering the erection of a new city hall.—The Inspector of prisons has recommended the erection of a new jail.

VICTORIA HARAOR, ONT.—A new station is to be erected here for the Grand Trunk Railway.

MOUNT PLEASANT, B. C.—It is probable that additions will be made to Mount Pleasant Church.

PORT ARTHUR, ONT.—G. Hunter will erect a block of building corner Water and Lorne streets.

MEDICINE HAT, ALTA.—The Town Council are considering the construction of an incinerator.

HALIFAX, N. S.—Tenders will shortly be called for alterations to the Morris street engine house.

RATHWELL, MAN.—McGowan and Co. have purchased property on which to erect a store building.

DEPOT HARBOR, ONT.—The Grand Trunk Railway will erect a concrete and steel round house here.

BRANTFORD, ONT.—G. Foster & Sons have decided to erect a three-story and basement fire proof warehouse.

NORWAY, ONT.—Mr. Mead, architect, will prepare plans for a school building to be erected here, cost \$17,000.

CHARLOTTETOWN, P. E. I.—A new church is to be erected here shortly by the congregation of Zion Church.

REGINA, SASK.—A franchise has granted Springer & Eaton, of Cleveland, Ohio, to operate a gas plant in this city.

ESTEVAN, SASK.—Architect Prevost has prepared plans for a brick office building to be erected on Fourth street.

HANOVER, ONT.—The Public Library Board are looking for a site with the intention of erecting a building thereon.

KINCARDINE, ONT.—The Town Council have decided to reject the tenders received for the erection of a library building.

PORT SYDNEY, ONT.—It is reported that A. Bymer, jr., has purchased property with the intention of erecting a residence thereon.

ALVINSTON, ONT.—The Alvinston Power Co. will shortly purchase a new engine and generators for use in their power house.

DEAD CREEK, ONT.—The Methodists of this village are negotiating for the purchase of a site on which to erect a new church.

CHILLIWACK, B. C.—The Bank of Montreal recently acquired property on which a residence, costing \$3,000, will be erected for the manager.

BRACEBRIDGE, ONT.—The Power and Light Committee will have figures prepared as to cost of developing power at High and Wilson's Falls.—A deputation from the Muskoka Navigation Co. recently waited on the Ontario Government in reference to proposed improvements of the Muskoka Lakes.

FORT WILLIAM, ONT.—The Kamistiki Power Co. will shortly install machinery necessary to double the present capacity of their plant.

MINITONAS, MAN.—The Village Council are having plans prepared for a proposed bridge to be constructed over the Swan river at Fraser's Crossing.

MINTO, MAN.—A deputation from this town recently waited on the Provincial Government asking a grant to aid in the construction of roads and bridges.

SMITH FALLS, ONT.—The Canadian Pacific Railway are preparing to begin operations on the double tracking of their road from this town to Montreal.

GLENCOE, ONT.—The Fletcher Manufacturing Co., of Toronto, have acquired the Alfred Foundry building, and intend to make alterations to same.

STRATHCONA, ALTA.—The Fire, Water & Light Committee have recommended the purchase of 500 feet of new hose and the installation of a fire alarm system.

KAMLOOPS, B. C.—The Town Engineer has recommended the purchase of a direct connected electric generator, new switchboard and laying of a new intake pipe.

RED DEER, ALTA.—Tenders will be received up to February 14th, by M. A. Munro, Secretary-Treasurer School District No. 104, for purchase of \$35,000 debentures.

BERLIN, ONT.—At the recent elections the following by-laws were carried: Erection of market buildings, cost \$20,000; improvements to sewer farm, and power by-law.

FERNIE, B. C.—S. E. Van de See, of St. Louis, Miss., has been in this town representing Eastern capitalists, who are considering the construction of a tramway in this neighborhood.

PRINCE ALBERT, SASK.—G. E. Nobles, architect, Regina, has been instructed to prepare plans for a proposed new school building to be erected here, and also for an addition to the present building.

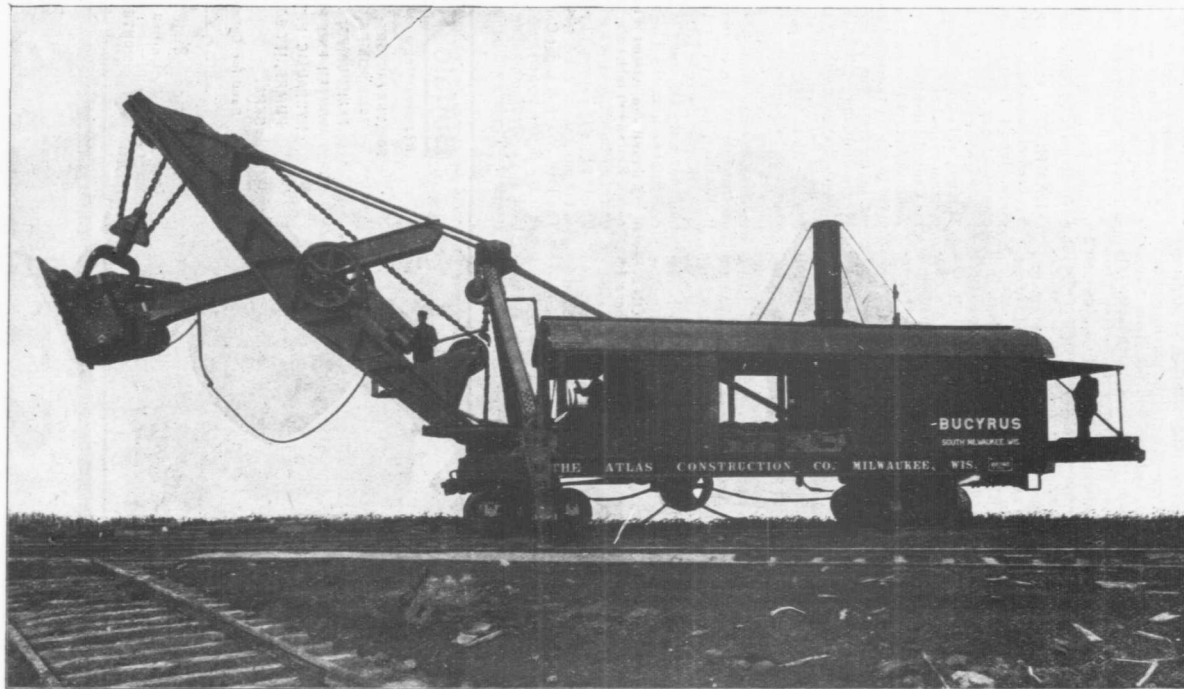
LITTLE SANDS, P. E. I.—It is probable that a public hall will be built here in the near future.—A deputation will wait on the Dominion Government recommending the construction of a breakwater at this point.

COLLINGWOOD, ONT.—The Collingwood Southern Railway Co. are applying to the Dominion Parliament for incorporation with power to construct a road from Collingwood to Baxter and from Collingwood to Orillia.

LONDON, ONT.—The Ontario Government have granted \$50,000 to

January
BUCYRUS STEAM SHOVELS ARE THE BEST

BUCYRUS STEAM SHOVELS ARE THE BEST



RAILROAD PILE DRIVERS, RAILROAD CRANES, LIGHT LOCOMOTIVES, DUMP CARS, HAND CARS, TRACK TOOLS, ROCK CRUSHERS, CONCRETE MIXERS, HOISTING ENGINES, WIRE ROPE AND FITTINGS.

WRITE FOR CATALOGUES.

MUSSENS LIMITED

Formerly W. H. C. Mussen & Co.

Head Office: MONTREAL

ward the foundation of a Hygienic Institute in this city. The city proposes to donate a free site on which to erect the necessary building.

GUELPH, ONT.—J. H. Medcalf has purchased property on Edinburgh road with the intention of erecting a number of houses.—The validity of the Morlock by-law, which was recently voted on, has been upheld by the Courts.

NEW WESTMINSTER, B. C.—It is the intention of the Schaake Machine Works to erect new buildings, including foundry, machine shop, business offices, etc. They will be equipped with electric crain and operated by electric power.

LETHBRIDGE, ALTA.—D. J. Whitley has decided to erect a three-story brick building on Redpath street.—Hon. Dr. DeVener will erect a brick residence here, cost \$7,000.—The Provincial Lumber Co. will install a brick plant.

OWEN SOUND, ONT.—W. P. Tello, M. P., is interested in the formation of a company who propose to erect a cold storage warehouse in this town.—The Grand Trunk Railway will erect a new freight shed 200 feet in length.

REGINA, SASK.—T. Watt has purchased land here, and it is reported that a hotel building will be erected thereon.—The City Council have decided to erect a building 144 x 101 ft., having seating capacity for 2,000 persons. Estimated cost \$15,000.

LACOMBE, ALTA.—Tenders will be received by A. M. McDonald, Secretary-Treasurer Nelson School District, up to February 19th for erection of a three story brick school building in this town. Plans with W. F. Breit, Chairman of School Board.

GALT, ONT.—The Water Commissioners have recommended extensions to the waterworks system, to cost \$7,000.—An American concern who manufacture plumbers' supplies are considering the establishment of a plant here, in which case several large buildings will be erected.

CALGARY, ALTA.—The Palace Hotel, has been sold to a syndicate, who, it is understood will erect a modern hotel building on the property.—W. H. Stone, architect, Winnipeg, is preparing plans for a new station to be erected here by the Canadian Pacific Railway at a cost of \$200,000.

BARRIE, ONT.—The Town Council will probably apply to the Dominion Government for a grant to assist in the erection of a new post office.—James Peat & Sons, Petrolia, have been instructed, to send a representative to confer with the Town Council in reference to the boring of several water wells.

BELLEVILLE, ONT.—The Lehigh Portland Cement Company, of Allentown, Pa., who are about to open a branch in this town, are desirous of receiving information from Canadian

manufacturers who are in a position to tender for the supply of pumps, engines, crushers, rolls and other cement machinery.

BRANDON, MAN.—The Provincial Government have decided to erect an insane asylum here at a cost of \$17,000 also residence for superintendent, cost \$10,000.—It is rumored that a hotel will be erected on property recently purchased by F. Nation.—Clement Bros. will erect a four-storey office building corner of Ninth street and Rosser avenue.

VICTORIA, B. C.—The fire Chief has recommended that additions be made to two fire stations, also the purchase of two engines, hydrants and fire alarm boxes.—Hooper & Watkins, architects, are preparing plans for a four-storey grain elevator for Sylvester Feed Co., also for a storey to be added to their present premises. Total cost \$6,000.—The Victoria Phoenix Brewing Co. are erecting several new buildings at a cost of \$10,000.

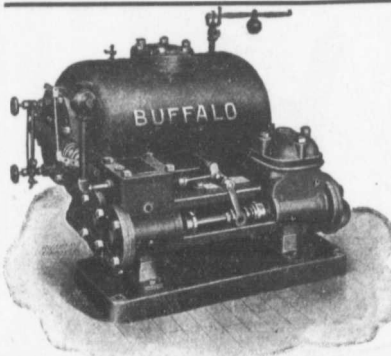
PETERBORO, ONT.—Plans will shortly be prepared for a new Roman Catholic church to be erected in this city.—The Water Commission are considering the advisability of installing a filtration system.—Tenders will be received up to February 19th, by C. R. Armstrong, City Clerk, for the supply of 5,000 barrels of Portland cement for the city.—A. W. Cressman has acquired building adjoining his present premises and intends making extensive alterations.

MONTREAL, QUE.—The Civic Roads Committee have voted \$5,500 for completion of sewers in St. Henry yard.—A company is being organized with the intention of establishing a large car construction works in this city, to cost \$5,000,000. It is reported that F. Eaton, President of the American Car & Foundry Co., Berwick, Pa., is interested.—The Canadian Pacific Railway have purchased the St. Lawrence hall property on St. James street, and will eventually erect a modern building thereon.—The Dominion Government have decided to erect a new post office building in this city.—The Catholic School Commissioners have purchased

property on which to erect a new school building.

VANCOUVER, B. C.—Two stories are to be added and other improvements made to the Bank of British North America building to cost \$100,000.—The Bank of Montreal have purchased property corner Westminster avenue and Cordova street on which they intend to erect new premises.—The City Water Works engineers will shortly commence carrying out the following works; laying seven miles of mains from the new intake; laying cast-iron main across Second Narrows; laying 15-inch main on Cardero street, Georgia street to Beach avenue, and a 10-inch main on Beach avenue, Denman to Burrard Streets.—Tenders will shortly be called for construction of a pier and floating wharf and erection of bathing pavilion for the city. Plans of latter prepared by Parr & Fee, architects.

HAMILTON, ONT.—A committee has been appointed by the congregation of St. John's Presbyterian church to ascertain the cost of erecting and equipping a gymnasium.—J. Lyle, architect, Toronto, will shortly call for tenders for erection of the new church building for the Central Presbyterian congregation.—Kahn & Co., of Detroit, Mich., have decided to erect a two-storey factory building in the east end of the city.—The Wentworth County Council have decided to proceed at once with the erection of a House of Refuge.—The Hamilton Radial Electric Railway Co. are applying to the Dominion Parliament for amendments to their charter authorizing an extension of their road from Mimico to Toronto; construction of a road from Brantford to Windsor, extension of their line to Niagara river and construction of several branches in the County of Wentworth.—A deputation from the Council, County of Wentworth, will confer with the Grand Trunk Railway in reference to construction of a new bridge at Waterdown.—The Chief of Fire Department has recommended the purchase of 2,000 feet of hose.—The Fire, Water & Light Committee will shortly call for tenders for supply of a hook and ladder combination wagon and steamer.—Tenders will be received up to



Buffalo Pumps

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FEED PUMPS, UNDER-
WRITER FIRE PUMPS,
HYDRAULIC PRESSURE
PUMPS, JET CONDENSERS.

Send for Catalogue.

Canadian Buffalo Forge Co.,
Limited
OFFICE AND FACTORY:
MONTREAL, QUE.



STAR

THE CANADIAN STANDARD

THE CANADIAN PORTLAND CEMENT CO., LIMITED

502 TEMPLE BUILDING,
TORONTO

BOARD OF TRADE BUILDING,
MONTREAL

February 22nd by F. Gélina, Secretary, Department of Public Works, Ottawa, for construction of pier head at Burlington channel. Plans at office of Postmaster, this city, J. G. Sing, Confederation Life Bldg., Toronto, and Department of Public Works, Ottawa.

WINNIPEG, MAN.—Tenders will be received up to February 6th, by Chairman, Board of Control, for supply of water meters as follows: 4,500 half-inch, 150 three-quarter inch, 125 one inch, and 52 two inch.—City Engineer has recommended the purchase of a portable asphalt plant.—Tenders will shortly be called for the supply of from 3,000 to 5,000 tons of asphalt for the city.—Tenders will be received up to February 25th by Chairman, Board of Control, for construction of 24 miles single track tram-

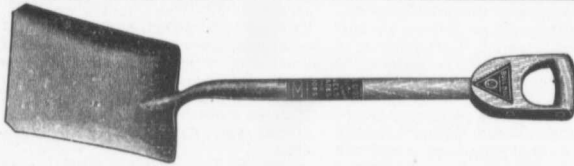
way between Lac du Bonnet and Pointe du Bois. Plans at power engineer's office.—The estimates of the Provincial Government include \$20,000 for land titles offices throughout the Province and \$5,000 to cover preliminary expenses in connection with erection of a new Court House in this City.—Tenders will be received up to February 12th, by A. & W. Melville, architects, for erection of brick veneer residence.—Tenders will be

received up to February 1st, by Darling and Pearson, architects, for erection of a bank building at Deloraine, Man.—Tenders will be received up to March 1st, by Board of Control, for purchase of \$1,594,506.55 city debentures. Further information on application to D. S. Currie, City Comptroller.—The city will lay a granolithic walk on Carlton street,

"PRIESTMAN'S" EXCAVATOR AND DREDGER

It seems peculiar that the "PRIESTMAN'S" EXCAVATOR AND DREDGER is not used in Canada as it is all over the rest of the world, inasmuch as it will do more work with less labor than any Excavator at present in use and the first cost is less than most. For particulars write to G. P. WALLINGTON, Canadian Representative, 11 Front Street East Toronto

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WRITE FOR PRICES
METALLIC ROOFING CO.
LIMITED
TORONTO, CANADA.
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forged from one piece of High Carbon Bar Steel without weld or rivet, solid neck and blade, tempered in oil, straight chucked handle can be replaced when broken.

CANADIAN SHOVEL & TOOL CO. LIMITED
HAMILTON, CANADA
WRITE FOR CATALOGUE



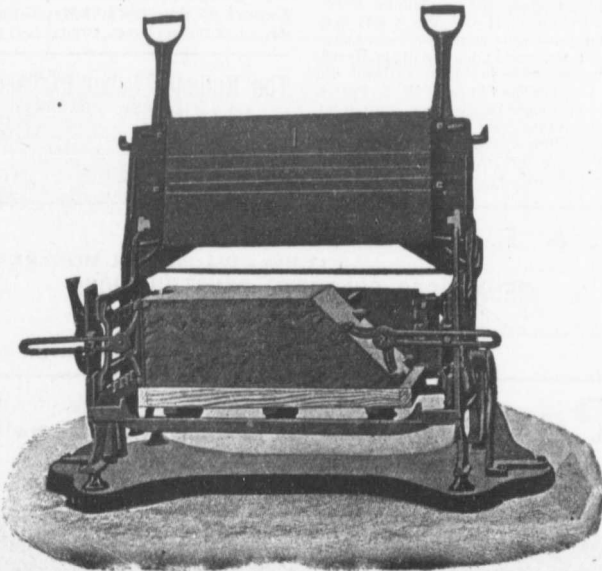
Sectional View of finished One-piece Shovel, showing gauge or thickness of steel at different points

Note Solid Shank

... Speaks For Itself ...

THE MILES CONCRETE BUILDING BLOCK MACHINE

Makes 40 Different Sizes of Stone in Any Design, as well as the Specials, viz.:
Water Table, Gable, Circle, Angle, Chimney, Cornice, Pier Blocks, etc.
Catalogues and Information Cheerfully Furnished.



This Machine makes all blocks face down—"the only practical way"—allowing of a richer and finer facing, producing blocks that are perfect in appearance and impervious to moisture.

Let us tell you how the "Miles" will pay for itself over any other machine in three months' operation.

Manufactured and Sold by
VINING BROS. M'fg. Co.
Niagara Falls, - Can.

York to Portages Avenues, cost \$1,776, by day labor.—Tenders have just been taken for construction of following works:—Sewers, Arnold avenue, Pembina to John streets, cost \$3,518; Eccles street, Florence to Morley avenues, cost \$4,880. Gravel sidewalks:—Oakwood avenue, Pembina to Fisher streets, \$2,481; Osborne street, Osborne street bridge to River avenue, cost \$1,056. Asphalt pavements:—Dromore avenue, Harrow to Cambridge streets, cost \$13,552; Eichel street, Harrow to Cambridge streets, cost \$15,125; Harrow street, Wardlaw avenue to Wellington crescent, cost \$20,395. Concrete block pavement:—Dufferin avenue, Pitt street to Sinclair street, cost \$27,873. The City Council give notice that a sewer will be laid on Gallagher avenue at a cost of \$5,070.

OTTAWA, ONT.—The plans for the erection of a new central depot for the Grand Trunk Railway have been completed. The site is on Rideau street.—The Canada Cycle & Motor Co. have purchased property on Sparks street on which to erect show rooms and repair shop.—The Dominion Radiator Co., of Lachine, Que., have secured premises in this city, and if the City Council agree to grant certain concessions the company will erect a new building.—A. E. Honeywell is making application to the Dominion Government for an act to incorporate the International Canal & Power Co. with power to construct canals, etc., so as to create a navigable waterway from Lake Superior to Brandon.—The Abitibi & Hudson Bay Railway Co. are seeking incorporation from the Dominion parliament, through their solicitors Murphy & Fisher, with power to construct a road from a point near Abitibi Lake to a point on James Bay near Albany river.—The Union St. Joseph will erect a 4-storey pressed brick apartment house, corner D'Armes and York streets. Plans by W. E. Noffke.—J. K. Poiry has had plans prepared for an apartment house to be erected on Elgin street, cost \$100,000.—J. J. Codville, of Winnipeg, Man., has decided to erect a residence corner Wurttemberg street and D'Armes, to cost \$15,000.—The Ottawa Hunt Club, who hold options on property on Richmond road, will probably erect a large club house. The following have been passed by the Dominion Government: Bill to extend time for the commencement of construction of the Indian River Railway; bill authorizing Manitoba & Northwestern Railway Company to construct two branch lines, one from near Theadore, connecting with the Qu'ill lake branch, and the other from Bradenbury to Kamsack, Sask.; bill incorporating the Eastern Townships Railway Company for construction of a railway from St. Leonard, Nicolet to the junction of the Quebec Central and Maine Central Railways in county of Wolfe; bill granting extension of time to Dominion Central Railway and Canada Central Railway Company were also passed.—The date for the reception of competitive designs for proposed new departmental and justice buildings in this city has been extended from April 15th to July 1st.—Tenders will be received up to February 22nd by F. Gellinas, Secretary, Department of Public Works, for construction of a pierhead at Burlington channel, Hamilton. Plans at office of J. G. Sing, Confederation Life Bldg., Toronto, Postmaster, Hamilton, and Department of Public Works this city.

TORONTO, ONT.—J. Lyle, architect, has prepared plans for a new church for the Central Presbyterian congregation at Hamilton. Tenders will shortly be called for the erection of the building.—M. Mitchell has purchased a lot 41 x 130 feet corner Simcoe and King streets.—

Rust & Weber, New York, are the promoters of a scheme to erect a new theatre on Richmond street, west of Bay, at a cost of \$75,000.—The building to be erected by the Andrew Darling Co., corner Spadina avenue and Adelaide street will be nine stories and of steel and reinforced concrete construction. The structure will be 112 x 97 feet, and the estimated cost is \$150,000.—The City Architect has been instructed to prepare plans for rebuilding of the pavilion in Allen Gardens.—E. J. Lennox, architect, will shortly let the contracts for the erection of new buildings for the Dominion Radiator Co. on Dufferin street. The buildings will be 2500 feet long, of brick and steel slow burning construction, and will occupy about ten acres of land. The estimated cost is about \$300,000.—The Canadian Northern Railway have acquired about 110 acres of land on the Don flats, and it is understood that round houses, car sheds, repair shops, etc., will be erected.—W. J. Newton has purchased the Imperial Hotel, corner of King and York streets, and intends to add two stories to the building. Tenders are wanted at H. Lyle's, 529 King street west, for construction of three attached brick houses on Wright avenue.—Nerlich & Co. have asked permission to add two stories to their warehouse on Front street.—Tenders will be received by the Chairman Board of Control as follows: Up to February 5th, for construction of asphalt pavements, Gladstone avenue, Dundas to College streets; Manning avenue, Queen to Robinson streets; concrete pavement, Glasgow street 280 feet north of Sussex street, to 101 feet further north; treated wooden block pavement, Wellington street, Bay to Yonge streets. Plan at City Engineer's office. Up to same date for repairs to asphalt and tar macadam pavements and for supply of rubblestone and granite field stone or lake boulders, also sewer brick. Plans at City Engineer's office; Up to February 4th for alterations required for alterations to Rose avenue fire hall. Plans at City Architect's office.—The Toronto Electric Light Co will erect 2 substations.—Tenders will be received up to February 8th by Darling & Pearson, architects, for wrecking buildings at 144 and 146 King street east.—Tenders will be received up to February 2nd by Phillips Manufacturing Company for erection of large factory building on Carlaw avenue.—The city architect has issued the following permits:—Dominion Radiator Company, brick and frame foundry, 1332 Dufferin street, cost \$160,000; H. G. Ngras, 3 attached, 2-storey and attic brick dwellings, Crawford street, cost \$7,000; William Heard, 3 attached 2-storey roughcast dwellings, Reid avenue, cost \$3,600; W. L. Purvis, 2-storey roughcast dwelling, brick front, Jones avenue, cost \$2,500; A. Pike, 2-storey brick dwelling, 612 Shaw street, cost \$3,000; F. C. Aisthorpe, 2 pair semi-detached 2-storey roughcast dwellings,

Franklin avenue, cost \$4,000; W. Pinkerton, 2 pair semi-detached 2-storey and attic brick dwellings, Havelock street, cost \$4,500; M. Manley, 2 pair semi-detached 2-storey and attic brick dwellings, 37-39 Lindsay avenue, cost \$5,000; H. Hutson, 2 pair semi-detached 2-storey and attic brick dwellings, Dovercourt road, cost \$11,000; H. Hutson, pair semi detached 2-storey and attic brick dwellings, Dewson street, cost \$6,000; W. C. Charters, 2 pair semi-detached 2-storey roughcast dwellings, brick fronts, Sproat street, cost \$5,000; W. C. Charters, pair semi-detached 2-storey roughcast dwellings, brick fronts, Leslie street, cost \$2,500.—Tenders will be received up to February 5th by Chairman Board of Control for construction of following sewers: Grace street, from a point 1,470 feet north of College street to a point 40 feet further north Hampton avenue, Sparkh II to Hogarth avenues; Sparkh II avenue, Hampton avenue to 102 feet 8 inches east; St. Clair avenue and Dunvegan road; Katherine street from a point 250 feet west of Peter street to Spadina avenue; Wallace avenue, Landdowne to Albert avenues; Alhambra avenue, Binstead avenue to Radford street; North Rosedale intersecting sewer. Plans at City Engineer's office.

CONTRACTS AWARDED.

REGINA, SASK.—Erection of amphitheatre at Exhibition grounds: Snyder Bros., this city, contractors. Cost \$12,000.

STRATHCONA, ALTA.—Additions to Strathcona Brewery: Clayton Co., Chicago, Ill., successful tenderers at \$69,445.

VICTORIA, B. C.—Erection of residence on Vancouver street for R. Beaven: A. McCrimmon, this city, contractor. Cost \$5,000.

MONTREAL QUE.—Supply of hose for Fire Department: Canadian Rubber Co., this city, successful tenderers at 85 cents per foot.

VANCOUVER, B. C.—The Robertson Godson Co. have withdrawn their tender for valves for the city, and the contract has been let to Boyd Burns & Co.

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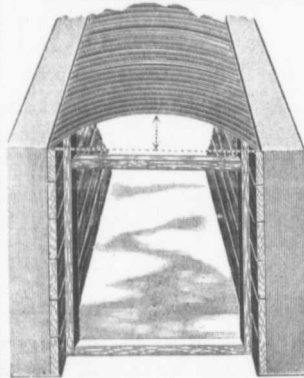
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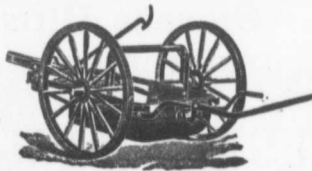
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NOTES.

S. N. Jarrat has been appointed city building inspector of Vancouver, B.C.

A deputation recently waited on the Prime Minister of the Province of Quebec with a view to securing aid for the foundation of a chair of civil engineering at Laval University.

At the last convention of the Union of Municipalities of Alberta, held at Red Deer, January 8th-10th, Messrs Paradis & Thorold, of Calgary, were appointed Consulting Engineers to the Municipalities belonging to the Union.

Sand in the water supply of the city of Evans, Colo., has been overcome by a method described as

follows by Mayor John H. Behrens. The supply was drawn originally from an 8-in. well sunk 108 ft. deep into a stratum filled with soft water. The water rose in this casing within 10 ft. of the ground surface, and was drawn from it with a large pump. The latter was so powerful that it sucked sand into the cylinder, where serious trouble was caused. A concrete curb or well, 12 ft. in diameter and 36 ft. deep, was then sunk and 4 6-in. wells were driven in its bottom to a depth of 106 ft., into the stratum containing soft water. The bottom of the curb or well was then concreted to keep out

the hard surface water, and the 6-in. pipes were cut off about 6 ft. above this concrete bottom. The water issues from them freely into the large well, which serves as a suction chamber for the pump. This method of obtaining the water has prevented all former troubles with sand.

A. LEOFRED
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Reinforced Concrete Casing for the Protection of Piles in Wharf Construction

By F. A. KOETITZ,

Member of the Technical Society of the Pacific Coast and Vice-President and Engineer of the Pacific Construction Company.

During the many years of my experience in construction work I have often wondered why some good practical means for the effective protection of wooden piling against the ravages of marine life and even against general deterioration had not been found, and from time to time I have investigated many so-called "pile protections," always to find them wanting in one or another necessary essential. After giving this matter considerable study I have finally designed a system that I am certain will prove effective as a protection, which being relatively cheap, can be used in many instances without any wooden piling, and it is the object of this paper to bring this system before the members of this Association.

The main feature of this construction is a reinforced concrete casing of practical length, or sections of such casing joined together, and with them either to encase wooden piles or to replace them entirely. When properly placed, in any of the ways in which these casings would be applicable, they are then to be filled with concrete and are ready to receive the superstructure.

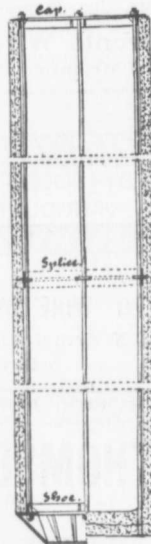
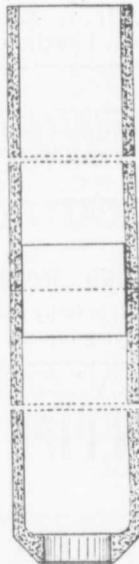
The casings may be made of almost any desired diameter and with any preferred reinforcement, and for those of 18 in. to 24 in. diameter the shell need not be over $1\frac{1}{4}$ in. thick, larger diameters to be proportionately thicker, and the casings are, therefore, easily handled.

Fig. 1 shows two such sections of the casings joined by a simple sleeve that is inserted and properly connected at the place of manufacture. This connection is designed for light work only, such as protecting piles or certain portions thereof, or for repairing old piles. The

Fig. 1.



Fig. 2.



bottom forms a shoe and at the same time serves as a guide in sinking the casing over the pile.

Fig. 2 shows a casing for heavier work, to be used more in the nature of a cylinder, with various sections joined together by proper cap, splices and shoe of metal, and the desired number of longitudinal rods.

The shoe, if preferred, may be made of concrete similar to that in Fig. 1. In this case, the sections are assembled at the site of the work, as needed; their are supported, while being sunk in place, by rods, and when placed these rods are embedded in the concrete filling and form an additional reinforcing of the concrete and an absolute bond of the joints.

Fig. 3 shows these casings in the construction of trestle bents or piers, with cap of wood or steel, anchored to the interior concrete, also with wood or steel bracing, attached in an approved substantial manner.

Fig. 4 shows the use of casings in conjunction with a reinforced concrete top work for piers or trestle where the head room is small and only a shallow bracing can be used. This combines the bracing and main girder all in one and will be found very rigid and durable.

Fig. 5 shows the use of the casings in the construction of wharves where they are admirably adapted to carry a reinforced concrete floor construction. Such a wharf would be almost indestructible, requiring practically no repairs, and would be entirely fireproof. It should be obvious to any builder, that such a wharf must be a better investment than a wooden one under almost any condition. Where this wharf is used for docking vessels, it should be surrounded, of course, with the usual spring lines of wooden piling.

While the upper parts of these casings are suitable for any style of superstructure, the lower parts can be constructed and adapted to fit almost any kind of foundation.

Fig. 6 shows, perhaps, the most common requirements. This consists of driving a pile to its proper

Fig. 4.

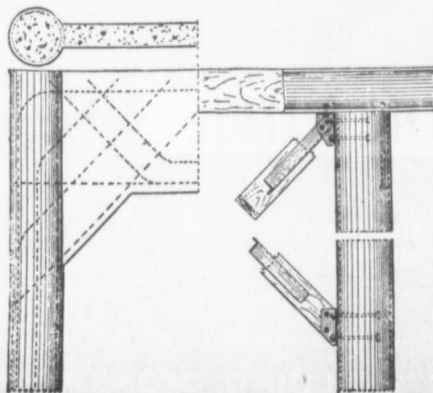


Fig. 3.

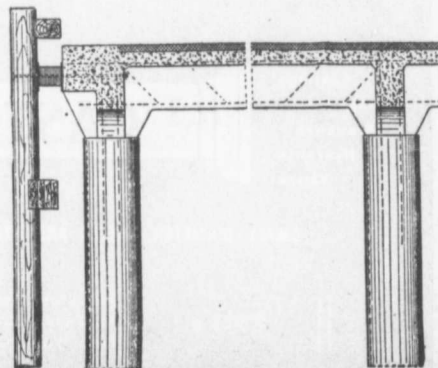
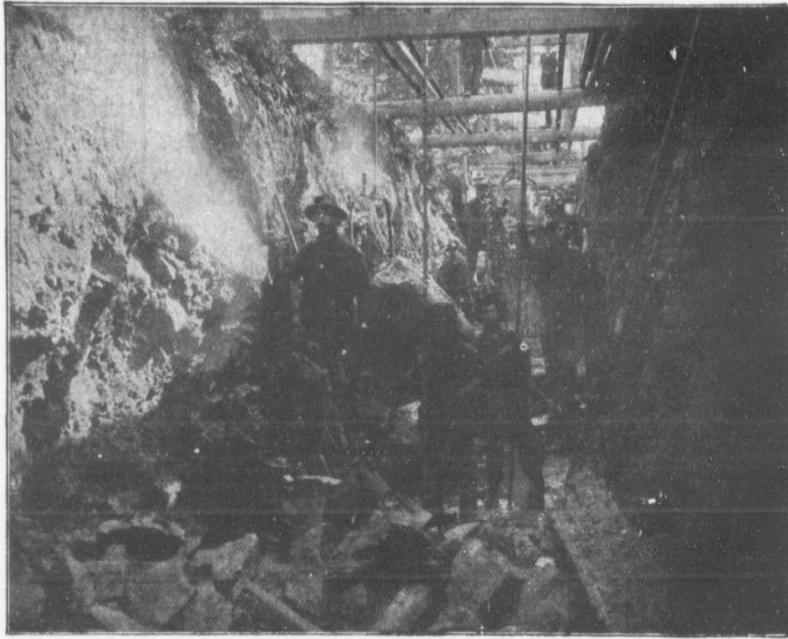


Fig. 5.

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bearing capacity, of cutting off the pile, thus driven, at the desired level (or of cutting off an old pile at such level), of sinking the casing over the pile to the required depth for the protection of the pile, of pumping out the casing and of filling the interior with concrete. The lower shoe, as shown, forms a guide to keep the casing always at a certain distance from the pile, so as to assure at least a certain fixed thickness of concrete between the pile and the casing. The conical shape of the shoe tends to throw the soil or mud away from the pile and will allow only a minimum amount to enter the casing. It also serves to compress the soil at the bottom, which gives additional bearing capacity to the pile. It also forms a practical seal against the ingress of water between the pile and shoe, which will allow the water to be pumped out, and also any mud which may have entered, before placing the concrete filling.

Fig. 7 shows a case where, for some reason, it is desired to sink the casing with hydraulic jet first and then drive a wooden pile with a follower to a firm bearing through and below the bottom of the casing. The jet shoe of the casing is attached so as to disconnect easily from the casing, and is shaped so as to act as a shoe for the wooden pile.

Fig. 8 presents a case where rock or other firm stratum is reached. The bottom of the casing in this case is closed except for a connection in the center for a water jet pipe, by which means it may be placed in the usual manner. When proper bottom is reached, cement grout may be forced through this water pipe, which will serve to

ing when the pile is entered, and the plate is of such thickness that it will readily shape itself to conform to the point of the pile when the pile is forced down to place.

There is provision for making different lengths of piles by adjustment of the top sections. After the foundation is secured and casing built up, if the top section is found too long, this section may be removed and one of exact required length substituted. In case a section is found to be too short, or it is not convenient to remove it, when short, the pile may be lengthened, as shown by Fig. 10, by placing a circular detachable form around the outside of the casing, placing the proper amount of reinforcing inside and filling the whole space with concrete, as desired. This same method may be used in constructing the upper concrete work shown in Fig. 4.

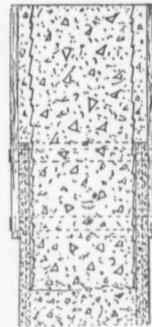
It would seem apparent, without going further, that it is easy to apply one or another of these examples to any requirement.

In closing, I may be pardoned for mentioning some of the advantages of this system over other similar forms of construction. Concrete, no doubt, being the principle requirement for good results, it becomes simply a question of using it in the best and most economical manner. If used in steel or wooden cylinders, the outer casing, it must be admitted, should be considered as only temporary, and the size of the concrete column is so made that, when the outer shell has served its purpose as a form, after due time, this concrete must stand by itself.

It being more or less difficult to determine just how successfully con-

of cost, or rather to relative cost, of this construction. It may be easily demonstrated that since the volume of the concrete, which is the most expensive item, is greatly reduced, the price, complete in place, for the same length and bearing capacity of the structure is at least no more, and probably in most cases rather less, than that of any of the other methods used, even allowing for the more expensive outer casing, and I am very certain

Fig. 10.



that its superiority is apparent.—
The Architect and Engineer of
California.

TAR MACADAM.

Experiments with tar macadam have been made on a 300-ft. stretch of the Victoria Embankment roadway, London. This length was divided into three equal sections. Mountain limestone, 2-in. granite and blast furnace slag formed the body of the three pavements. The

Fig. 6.

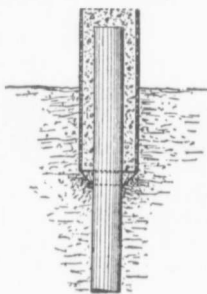


Fig. 7.

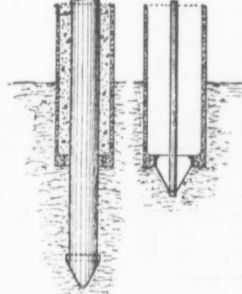


Fig. 8.

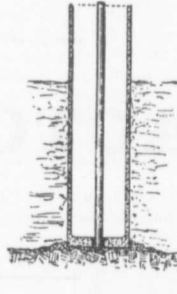
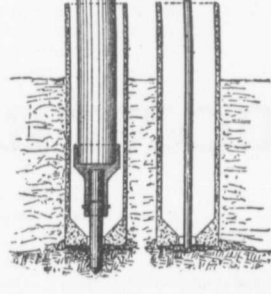


Fig. 9.



cement the casing to the bottom and give it a firm bearing.

Fig. 9 shows how an additional connection to the bottom may be made if desired. Drive with a follower a short steel pile, or pin, through the bottom of the casing after it has been sunk to place and bottom grouted. In this case the metal plate which closes the bottom of the casing, during the process of sinking, is so constructed that it will easily disconnect from the cas-

crete in cylinders has been made, and also for various other reasons, the cross section of the concrete column is usually made large which gives a correspondingly large exposed surface to the action of water or waves in the pier. With this concrete casing the best and most durable part of the column is on the outside, and the cross section may then be materially reduced, and with it, of course, the exposed surface. This naturally leads to the question

portions laid with limestone and slag were completed in good weather, but rain interfered with work on the granite section. The tar did not seem to soak into the granite at all, but both the limestone and slag were to a certain extent impregnated with it. Within a month the granite section showed signs of breaking up, probably attributable to the wet weather when it was put down. It was repaired, but soon gave way again. The limestone also showed

JOHN T. FARMER
MECHANICAL and
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signs of giving way in about three months, and Mr. M. Fitzmaurice, engineer to the London City Council, whose notes on these experiments were recently published by the Institution of Civil Engineers, decided to take up both limestone and granite. The slag macadam was allowed to remain, but apparently was not very satisfactory, since Mr. Fitzmaurice says that the results of the experiments do not indicate that tar macadam is suitable for heavy, fast traffic such as occurs on the Victoria Embankment. In each case the sample pavement was about 700 sq. yds. in area and 6 in. thick. The contract prices for material and laying, per square yard, were, limestone and slag, about \$1.10, and granite, about \$1.28.

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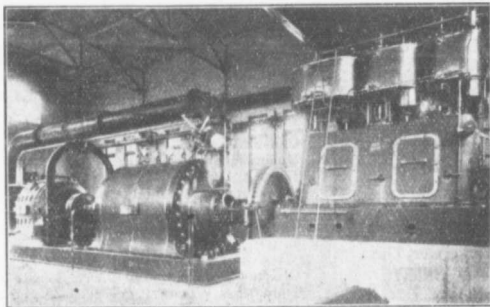


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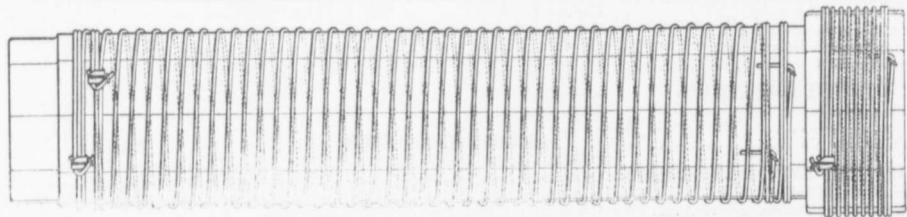
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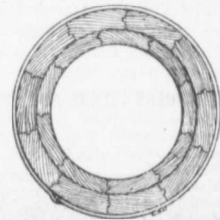
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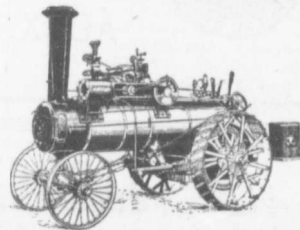
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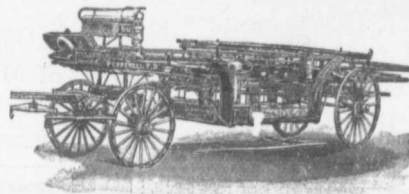
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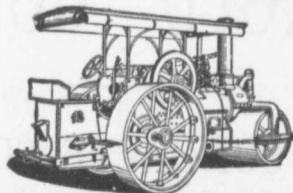


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each good road there is no longer any tendency to deny that these vehicles are responsible for a somewhat serious action on the surface of the highway, and that steps should be taken to prevent it. It is

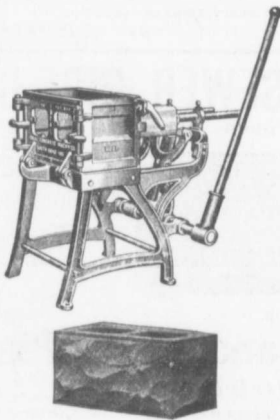
not wear in the usual sense of the term, but rather suction, and as its effect can be checked by the same means that are used to lay dust, the importance of these experiments can be readily appreciated.

E. Neville, contractor, London, Ont., is said to have assigned to E. J. Dawson.

It is reported that D. Houle and Co., contractors, Montreal, Que., have assigned.

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					Initial	Final	Neat.					3 (Sand) to 1 (Cement)				
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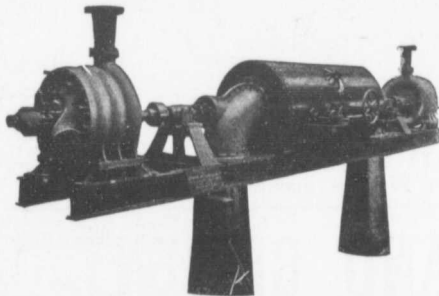
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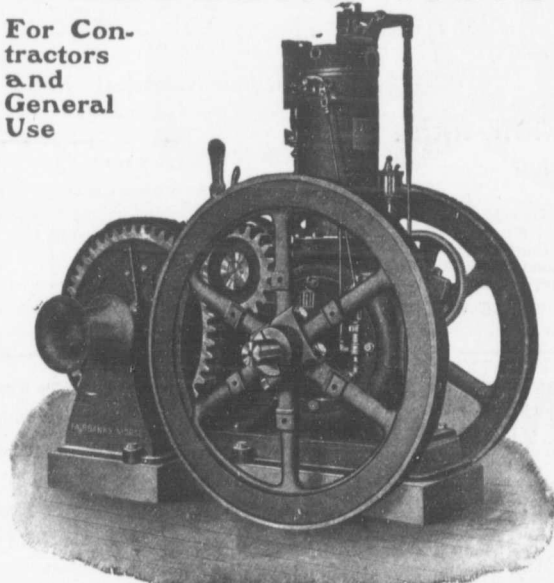
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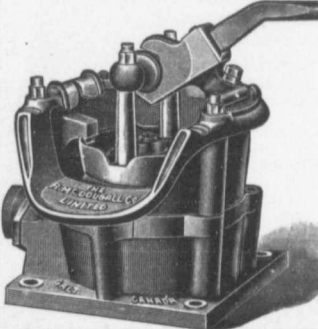
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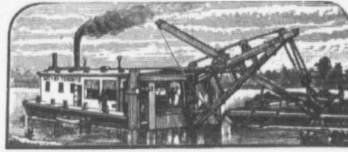
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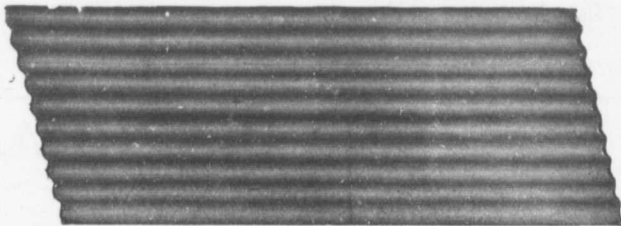
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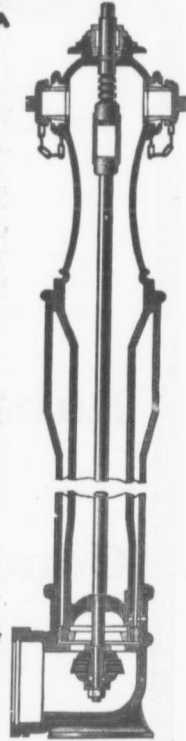
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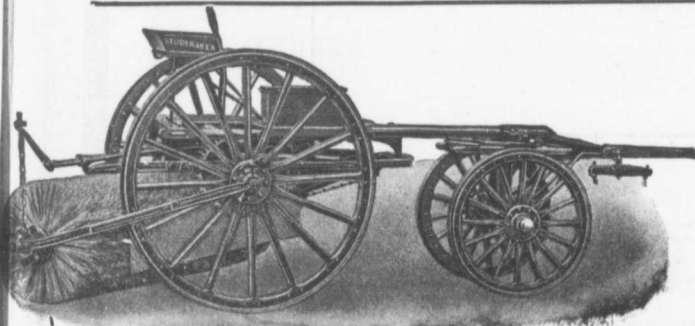
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