

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.

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No. 46

THE CANADIAN CONTRACT RECORD

PUBLISHED EVERY WEDNESDAY

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of Toronto, Limited,

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in advance.

CONFESSION LIFE BUILDING, TORONTO
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750-751 Union Bank Building, Winnipeg,
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should give prompt notice of same. In doing so
give both old and new address. Notify the pub-
lishers of any irregularity in delivery of papers

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 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 100,000 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.



TEMISKAMING AND NORTH- ERN ONTARIO RAILWAY COMMISSION

TENDERS FOR OFFICE BUILDING

Sealed tenders addressed to the undersigned
and endorsed "Tender for Office Building"
will be received up to 5 p. m. on the 1ST DAY
OF FEBRUARY, 1907, for the erection of a
General Office Building at North Bay, Ont.

Plans and specifications may be seen at the
offices of the Commission, 25 Toronto Street,
Toronto, and at the office of the Chief En-
gineer, North Bay.

A certified cheque for \$2,500 must accompany
each tender.

The successful tenderer must enter promptly
into a contract and furnish security for the
amount of \$10,000.00 for due completion of
same.

Cheques of unsuccessful tenderers will be re-
turned to them.

The lowest of any tender not necessarily
accepted.

H. W. PEARSON,
Secretary-Treasurer.

Toronto, Dec. 21st, 1906.

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

TENDERS FOR DEBENTURES

The Town of Selkirk [in Manitoba, population
2901, total assessment \$1,280,000] invites tenders
to be addressed in sealed envelopes to the un-
dersigned up to 12 o'clock noon.

FEBRUARY 10TH, 1907,

for the purchase of the whole or any part (not
less than \$25,000) of its debentures (authorized by
special Provincial Act) as follows:

A. \$70,000 Waterworks Debentures:
140 of \$500 each, payable as follows: 1 in each of
the 15 years commencing A. D. 1907 and ending
A. D. 1921; 2 in each of the 10 years commencing
A. D. 1922 and ending A. D. 1931; 3 in each of the
10 years commencing A. D. 1932 and ending A. D.
1941; 4 in each of the 10 years commencing A. D.
1942 and ending A. D. 1951; 7 in each of the 5 years
commencing A. D. 1952 and ending A. D. 1956,
each debenture to be payable on the first of De-
cember. Each debenture to bear interest (in the
form of coupons) at 5 per cent per annum, payable

on June 1st and December 1st throughout its currency.

B. \$80,000 Sewerage Debentures: 100 of \$200 each (that sum representing the aggregate amount payable for principal and 5 per cent. interest half yearly; there being no coupons) 50 of them payable as follows: 1 on May 1st in each of the 50 years commencing A. D. 1907 and ending A. D. 1957, and the remaining 50 to be payable as follows: 1 on November 1st in each of the said 50 years. These sewerage debentures are secured by law by a special rate or lien charged upon the particular frontages benefited.

The town proposes to deliver the debentures in installments from time to time as the work progresses throughout the present year, and the successful tenderer will be expected to accept delivery and pay accrued interest accordingly.

The lowest or any tender not necessarily accepted.

Dated at Selkirk, Manitoba, this 10th day of January, A. D. 1907.

THOMAS PARTINGTON,
Secretary-Treasurer of the said town.

CONTRACTS OPEN.

MOOSE JAW, SASK.—Hockin & Siddoner will erect a large building here.

BELLEVILLE, ONT.—It is reported that J. V. Jenkins will rebuild the Quinte Hotel.

MACLEOD, ALTA.—It is reported that T. Wilton will erect a stone hotel on Second avenue.

GUELPH, ONT.—L. N. E. Lafontaine has purchased property on which to erect a factory building.

TABER, ALTA.—Authorities here are advocating the construction of a bridge over the Belly River.

FLESHERTON, ONT.—Boyd & Blakely and J. Nuhn's dams have been washed away during recent floods.

ORANGEVILLE, ONT.—The ratepayers recently ratified a loan of \$15,000 to the Hurdall Novelty Manufacturing Co.

MERRITON, ONT.—The plant of the North American Smelting & Refining Company may be located in this town.

WAPPELLA, SASK.—The ratepayers will shortly vote on the question of completing the Town Hall at a cost of \$4,000.

COBDEN, ONT.—Authorities are advocating the establishment of a water works and sewerage system at a cost of \$25,000.

ROTHESAY, N. B.—Mr. Heaton, of Hampton, N. B., is considering the formation of a company to establish an acetylene gas works here.

ST. CATHARINES, ONT.—The North American Smelting & Refining Co. may locate their plant, which is to cost \$275,000, in this city.

GODERICH, ONT.—The Rogers Manufacturing Co., the Furniture Co., and Carriage Co. bylaws were all carried at the recent elections.

ST. GEORGE, ONT.—The Presbyterian congregation are about to erect a new church and have accepted the plans of Architect Hall, of Hamilton.

ANNA POLIS, N.S.—G. B. Hardwick and B. B. Hardwick have purchased the Masonic Building and contemplate making extensive alterations to same.

CAYUGA, ONT.—A bylaw to give the Window Glass Machine Company of Cayuga, fourteen acres of land was carried by the ratepayers on the 7th inst.

QUEBEC, QUE.—The Grand Trunk Pacific Railway have purchased the Lemoine block, corner of St. Peter and Dalhousie streets, at a cost of \$25,000.

VEGREVILLE, ALTA.—Tenders will be received up to January 31st, by F. A. Morrison, Town Secretary-Treasurer, for purchase of \$8,000 6% debentures.

PEMBROKE, ONT.—Tenders will be received by A. Miller, Chairman Building Committee, Board of Education, up to January 23rd, for erection of

additions to two school buildings. Plans at above address.

SMITH FALLS, ONT.—The Canadian Pacific Railway are re-surveying a short line about ten miles east of the town with a view to obtaining a shorter road.

SELKIRK, MAN.—A deputation from this town recently waited on the Manitoba Government seeking financial assistance in the erection of a new hospital to cost \$12,000.

BERLIN, ONT.—The Berlin and Waterloo Street Railway has been valued by arbitrators at \$75,200, and this the Berlin council will pay for the plant if the company will sell.

EDMONTON, ALTA.—An addition will be made to Alberta College to cost \$3,000 and it is probable that competitive designs may be called for an entirely new building to cost \$50,000.

BELMONT, MAN.—The Town Council have decided to cancel the contract held by R. B. Watson for construction of a bridge on boundaries of Roblin, Argyle and Strathcona.

HALIFAX, N.S.—Brock and Patterson have purchased a warehouse at 172 Granville street and Harris & Houton, architects, are now preparing plans for the remodelling of the building.

DESERONTO, ONT.—On January 7th, a bylaw to loan \$10,000 to the Deseronto Furniture Company was carried by a large majority. It is the intention of the company to erect a factory.

ST. JOHN, N. B.—Tenders will be received up to January 24th, by the Common Clerk of St. John for construction of wharf and pile trestle.—The Y.M.C.A. will shortly call for tenders for erection of a new building.

BRANDON, MAN.—The City Council have passed a by-law authorizing the International Gas & Light Co. to do business in this city. The concern will commence the erection of their plant as soon as the weather is favorable.

LETHBRIDGE, ALTA.—G. C. Eckstrom is considering the erection of a new theatre.—The Lethbridge Brewing & Malting Co. will add another storey to their premises.—The Presbyterians of this town have decided to erect a new church.

VICTORIA, B. C.—J. O. Smith, Commissioner of Immigration, is completing arrangements for the erection of a new immigration hall and hospital.—F. M. Rattenbury, architect, has been instructed to prepare plans for additions to be made to the High School, cost \$20,000.

VANCOUVER, B. C.—The Fire Chief has recommended the erection of three new fire halls.—E. A. Marshall and associates have purchased property corner of Granville and Cordova streets, and will erect an office building thereon.—E. Henderson has purchased property on which to erect twenty-two houses at a cost of 70,000.

PORTAGE LA PRAIRIE, MAN.—A By-law will be introduced to authorize the purchase of the Central Electric Light Company's plant at a cost of \$50,000.—The Public School Inspector has recommended the erection of a new school.—It is reported that the Singer Machine Co. have purchased property here on which to erect a branch factory.

NICOLET, QUE.—Tenders will be received by F. G. Inas, Secretary, Department Public Works, Ottawa, up to January 21st, for construction of a hot water heating system in Post Office building here. Plans at Public Works Department, Ottawa, and office of P. Rivard, Clerk of Works, this town.

MONTMAGNY, QUE.—Tenders

will be received up to January 21st, by F. G. Inas, Secretary, Department Public Works, Ottawa, for construction of heating system in Post Office building here. Plans at offices of above department and N. Dumont, Clerk of Works, this town.

MORRIS, MAN.—The Town Council will issue debentures as follows—\$15,000 to retire those outstanding at present; \$7,500 for purchase of an acetylene gas plant, and \$3,500 for construction of a bridge.—Tenders will be received up to January 25th, by D. M. Ure, Town Secretary-Treasurer, for construction of three bridges. Plans at above address.

MONTREAL, QUE.—The Prince of Wales Fusiliers have under consideration the erection of a new armory, corner of Espalade avenue and Rachel streets.—The options on the property on which it is proposed to erect the new hotel have been extended. Davidson & Wainwright are solicitors for the promoters of the company.

HAMILTON, ONT.—The passing of the bylaws recently voted on means the carrying out of the following works: Erection of Home for incurables, cost \$30,000; erection of new east end fire station and engine, cost \$30,000; erection of Isolation Hospital, cost \$75,000; construction of sewerage system for annex, cost \$120,000.—Ford & Featherston will erect a large factory here.

REGINA, SASK.—Tenders will be received by F. J. Robinson, Deputy Commissioner of Public Works, up to February 4th for the erection of a lands title office building in the city, to be about 80x80 feet, two storeys, reinforced concrete fire proof construction with cut stone facing. Tenders are to be accompanied by a deposit cheque for \$8,000.—The J. I. Case Threshing Machine Co. will erect a large warehouse here.

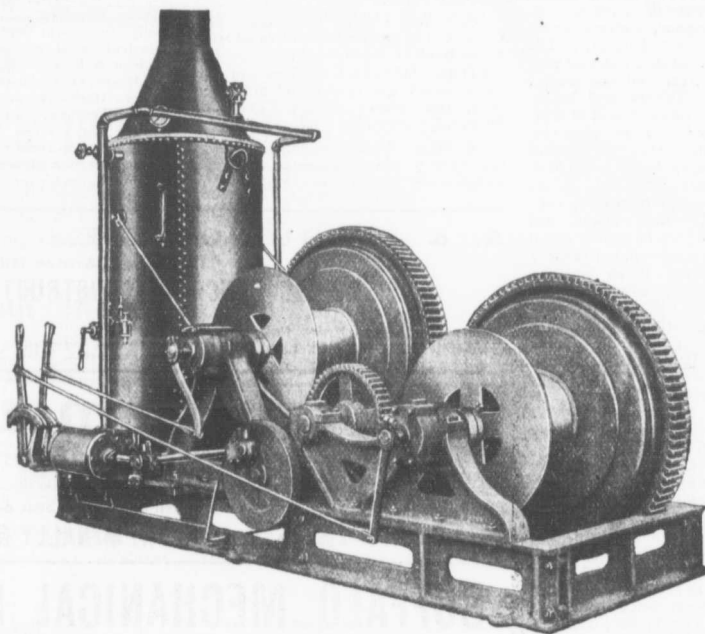
PETERBORO, ONT.—Tenders will be received up to February 1st by Fred Gellinas, Secretary, Department of Public Works, Ottawa, for construction of a drill hall here. Plans at Secretary's office and office of A. J. Grant, Chief Engineer, this city.—The ratepayers carried by-laws on the 7th, inst. for repairing and constructing bridges; construction of Trunk sewer; and diversion of the north end stream and the Ashournham creek.

WINNIPEG, MAN.—The city council will seek legislation to issue debentures for \$135,000 to pay for incinerator, plant and \$25,000 for exhibition purposes.—The congregation of St. John's Church have selected a site corner of Cathedral avenue and West street on which to erect a new edifice.—Tenders will be received up to February 20th, by Secretary of Militia Council, Ottawa, Ont., for construction of an additional storey on "D" and "E" block, Fort Osborne Barracks, Winnipeg. Plans with District Officer Commanding Military District No. 10, Winnipeg, and Director of Engineer Services, Ottawa.

OTTAWA, ONT.—A number of capitalists are said to be interested in a scheme to construct an electric railway from this city to Montreal, Kingston and other western points. N. W. Lefler, of Lefler Electric Company, Chicago, is in this city in connection with the scheme.—F. Gellinas, Secretary, Department Public Works, will receive tenders up to January 21st, for construction of heating systems in post office buildings at Nicolet and Montmagny, Que., also up to February 1st, for construction of Drill Hall at Peterboro, Ont.—Mr. Ham. of Hamilton, is considering the erection of a factory here.—The Grand Trunk Rail-

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WE HAVE IT
IF A SPECIAL HOIST IS NEEDED
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MONTREAL

way have completed negotiations for the lease of the necessary property on which to erect a new central station to cost \$250,000.—Tenders will be received up to February 20th by Director of Engineer Services, this city, and District Officer Commanding Military District No. 10, Winnipeg, Man., for additions to Osborne Barracks, Winnipeg.—The Department of Militia and Defence have under consideration the erection of a new drill hall in this city.

TORONTO, ONT.—The City Council gives notice that the following local improvements will be made: Macadam roadway, Maple avenue, Glen road to Dale avenue, cost \$5,543; asphalt pavements as follows: Palmerston avenue, Barton to Follis avenues, cost \$3,859; Yarmouth road, Manning avenue to Christie street, cost \$3,836; Yarmouth Road, Miles Place to Shaw street, cost \$3,618; Massey street, King to Queen streets, cost \$6,659; Esther street, Queen to St. Patrick streets, cost \$9,233; Logan avenue, Gerrard street to Bloor avenue, cost \$11,791.—The City Venejar Co. have purchased property on River street and will erect a factory thereon.—Tenders will be received by the Chairman, Board of Control, up to February 19th, for construction of a hydraulic dredge. Plans and specifications at City Engineer's office.—The City Engineer will include in his estimates for this year \$200,000 for construction of an overflow sewer, and \$93,000 for construction of steel or concrete bridges on Shaw and Crawford streets.—The Grand Trunk Railway have leased property adjoining their Parkdale station and will make improvements to their station and freight sheds.—The following building permits have been issued: Bank of British North America, 2-story brick building, corner Bloor street and Lansdowne avenue, cost \$2,500; J. W. Maguire, pair semi-detached 2-story brick dwellings, 6-8 LaPlante avenue, cost \$3,350; W. C. Charters, 2-story and attic brick dwelling, Palmerston avenue, cost \$4,000; T. Lewis, pair semi-detached 2½ story brick dwellings 331 and 333 Davenport Road, cost \$7,000; A. M. Orpen, pair semi-detached 2½ story brick dwellings, Avenue Road, cost \$15,000; G. E. Case, pair semi-detached 2-story brick dwellings, Marguerite street, cost \$4,000; Thomas Lewis, pair semi-detached 2-story roughcast dwellings, Westmoreland avenue, cost \$2,500; F. M. Nicholson, 2½ story brick dwelling, Roxboro street east, cost \$4,000; Luke Crocker, pair semi-detached 2-story brick dwellings, Dewson street, cost \$5,000; Gordon, McKay Co., 5-story brick factory, Queen and Crawford streets, cost \$58,600; A. Macdonald, 3 pairs 2-story roughcast dwellings, Jones avenue, cost \$9,000; United Empire Bank, 3 story brick bank building, cost \$14,350; Richard Reed, pair semi-detached 2-story and attic roughcast dwellings, brick

fronts, Marjory avenue, cost \$3,600; A. Pike, 2 pair semi-detached 2-story brick dwellings, Shaw street, cost \$10,000; W. Francke, 2-story attic brick dwelling, Langley avenue, cost \$3,500; Toronto Public Library, 3-story brick library building, corner College and St. George streets, cost \$250,000; Geo. F. Macdonnell, 2-story and attic brick dwelling, L'Etz avenue, cost \$6,000; J. W. Walker, 3 attached 2-story and attic roughcast dwellings, brick fronts, Salem avenue, cost \$5,000.—The congregation of St. James Cathedral are considering the erection of a gymnasium.

the town of Arcola: The Ontario Wind Engine & Pump Co., Winnipeg, successful tenderers.

OTTAWA, ONT.—Supply of three motor cars for Intercolonial Railway: Rhodes, Curry & Co., Amherst, N. S., successful tenderers.

VICTORIA, B. C.—Erection of a residence for a Roman Catholic Archbishop; W. Luney, contractor. Estimated cost \$12,000.—Erection of a residence for Judge Lantam; Noble Bros., contractors. Estimated cost \$6,200.

WINNIPEG, MAN.—Erection of a train shed for the Canadian Pacific Railway: Dominion Bridge Co., Montreal, Que., contractors.—The Board of Control have awarded the following tenders: Supply of cast iron water pipe: Macfarlane, Strang & Company, successful tenderers at \$30,731.40; supply of hydrants: Camden Iron Works, Camden, N. J., successful tenderers at \$195; supply of valves, Chapman Barge Company, successful tenderers at \$2,793.34; construction of sewer, Cathedral avenue: Dobson & Jackson, Winnipeg, successful tenderers at \$1580.50; construction of sewer, Henry Avenue, Dobson & Jackson, Winnipeg, successful tenderers at \$1765.50.—The Fire, Water and Light Committee have recommended the acceptance of the James Robertson Company, tender for supply of lead pipe.

CONTRACTS AWARDED.

ARK, ONT.—\$40,000 4½ per cent. debentures awarded to A. E. Jarvis & Co. Toronto.

WATERLOO, ONT.—\$18,000 4½ per cent. debentures awarded to the Bank of Montreal at par.

NEW WESTMINSTER, B. C.—\$20,000 5 per cent. sewer debentures awarded to the Bank of Montreal at par.

EDMONTON, ALTA.—Supply of telephone wires and cables and fire alarm wires and cables: Wire & Cable Co., Montreal, successful tenderers.

ARCOLA SASK.—Supply and erection of a 75,000 gallon water tank on a 50 foot tower for waterworks system for

A. & E. LOIGNON, C. E.
 17 Place D'Armes Hill, MONTREAL
REINFORCED CONCRETE CONSTRUCTIONS
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 203 Board of Trade Bldg., MONTREAL

FIRES.

Station of Cumberland Railway & Coal Co., Parrsboro, N. S., extensively damaged.—Temperance Hall, Richibucto, N.S. totally destroyed.—Sash and door factory of R. B. Bissett, loss \$12,000.—Premises of J. A. Lee and H. Gordon, New Westminster, B. C., extensively damaged.—Trebilcock Hall, London Ont., loss \$2,500.—Building corner Fort and St. Catharine streets, Montreal, owned by H. Ward & Company, loss \$7,000.—Planing mill of Wilson Building & Contracting Company, St. Catharines, loss \$20,000.—Royal and Alberta Hotels, Stettin, Alta., totally destroyed.—Baker Building, Kenora, Ont., totally destroyed.—Warehouse of Taylor & Mulveney, Hamilton, Ont., considerably damaged.—Premises of

Capital Publishing Co. and Garner & Jamieson, Saskatoon, Sask., totally destroyed.

CALENDARS RECEIVED.

Mussens, Limited, railway, mining and contractors' supplies, Montreal, have issued a calendar of their usual design, in which the figures stand out prominently.

O'Brien, Fowler & Company, railway contractors, La Tuque, Que., have registered. The principals are M. J. O'Brien and Z. J. Fowler.

Mr. Alexander, formerly engineer with the Hamilton Bridge Co., Hamilton, Ont., has accepted the position of Concrete Engineer with The General Fireproofing Co., Youngstown, Ohio.

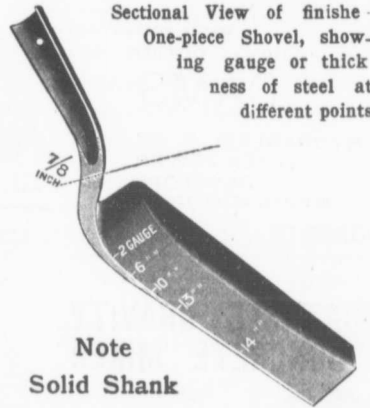
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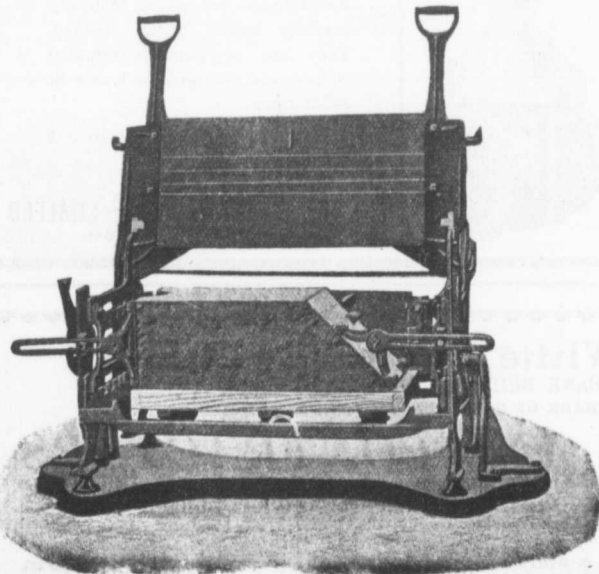
Sectional View of finished One-piece Shovel, showing gauge or thickness of steel at different points

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LEADITE PIPE JOINTS IN ATLANTIC CITY.

Mr. Kenneth Allen, in his annual report as Engineer and Superintendent of the Atlantic City. N. J., Waterworks, states that use of leadite in place of lead for making pipé joints has been tried, so far with satisfactory results. This, which is understood to be composed of iron filings, sulphur, slag, and

salt in certain proportions, costs twice as much per pound as lead, but as it weighs but one-sixth as much the cost per joint is but one-third that of lead. In addition to this no caulking of the joint is required, which effects a further saving. This material is now used by the Water and Filtration Bureaus of Philadelphia, and the Water Departments of Buffalo and Troy, N. Y., and if as serviceable as it appears to be, will effect a considerable economy in street work.

C. J. FENSOM, B. A. Sc.

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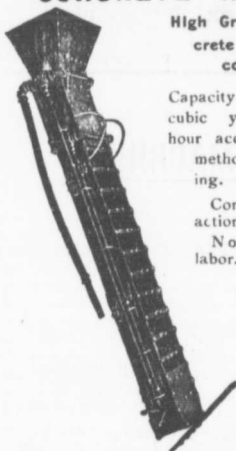
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Capacity 10 to 60 cubic yards per hour according to method of feeding.

Continuous in action.
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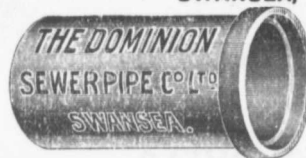
Other Mixers for Hand, Steam, Gasoline or Electric Power, in many sizes.

E. F. Dartnell
Montreal

Phone No.: PARKDALE 1809. Post Office and Telegraph Address: SWANS

THE DOMINION SEWER PIPE CO., LIMITED

SWANSEA, TORONTO, ONT.



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SEWER PIPES

Price Lists and Discounts on Application — In Sizes from 4 inches to 24 inches



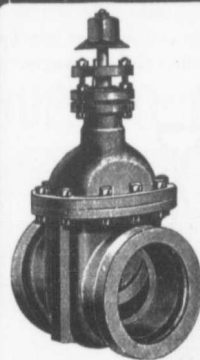
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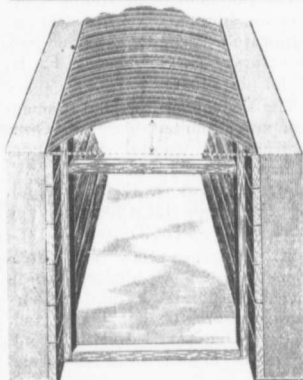
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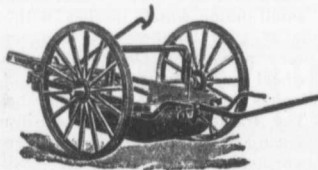
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ANNUAL MEETING OF ENGINEERS CLUB OF TORONTO.

The eighth annual meeting of the Engineers' Club of Toronto took place on Thursday, January 10th, when about 60 members were present. The chair was taken by the President, Mr. F. L. Somerville.

After the reports of the Executive and other committees were received and adopted, several important recommendations were made, one of which was that larger club rooms be secured. The incoming Executive were instructed to report on the advisability of issuing a directory containing the names of the members, the particular branch of engineering which they practise and other information concerning the Club.

Before accepting nominations for officers President Somerville advised the members to be careful in their selections, as the progress of the Club during the coming year would depend largely on the officers.

From the selection made the success of the club during 1907 would seem to be assured. Those elected were: President, C. B. Smith, First Vice-President, J. G. Sing; Second Vice-President, A. B. Barry; Secretary, Willis Chipman; Treasurer, John S. Fielding; Chairman of Rooms Committee, C. M. Caniff; Chairman of Library Committee, A. B. Macallum; Chairman of Papers Committee, R. G. Black; Auditors, W. E. Douglas and W. H. Patton.

The President then made a short address congratulating the Club on its success during the past year and also the engineering profession as a body on the many important undertakings which had been successfully carried out. He expressed his sincere regret that the Ontario Government had found it necessary engage an American engineer to superintend the Hydro-Electric Power Commission and believed that competent men could have been found in Canada. In closing he thanked the other officers for their valuable assistance and support and wished the Club every success in the future.

Dr. Galbraith then moved that a vote of thanks be tendered to the retiring president and Executive for the able manner in which they had directed the affairs of the Club. This motion was carried unanimously.

Refreshments were then served and the Engineers Club of Toronto entered on its eighth year with every indication of continued prosperity.

The death occurred on January 3rd, at Toronto, of Mr. Hanley, a well known contractor of Port Arthur, Ont. Deceased has been a resident of Port Arthur, for only three years, having previously resided at Belleville, where he was very much respected.

NEW COMPANIES.

Prince Rupert's Timber & Lumber Company, Limited, Ottawa, Ont., incorporated, capital \$450,000. Incorporators, E. H. Moore, W. Anderson, G. H. Rochester, W. W. Dwyer, all of Ottawa and others.

Montreal Exploration & Development Company, Limited, Montreal, Que., incorporated, capital \$50,000. Incorporators, C. Ralph, of Longueuil, Que., J. M. Mitchell, L. A. Derome, B. Berland, all of Montreal and others.

The Cobalt & Larder Lake Gold Mining Company, Limited, New Liskeard, Ont., incorporated, capital \$300,000. Directors, G. C. Legge, N. B. Strong, W. J. Egan and others.

The Buckle Silver & Cobalt Mining Company, Limited, Ottawa, Ont., incorporated, capital \$300,000. Directors, F. A. Heney, H. Hopp, E. L. Horwood, and others.

The Youngstown-Cobalt Silver Mining Company, Limited, Cobalt, Ont., incorporated, capital \$1,000,000. Directors, G. A. Baker, W. A. Sadler, and others.

The London-Cobalt Mining Corporation Limited, Toronto, Ont., incorporated, capital \$2,000,000. Directors, G. Stevenson, F. H. Potts, and others.

The Vancouver Portland Cement Company, Limited, Toronto, Ont., incorporated, capital \$1,500,000. Incorporators, J. S. Lovell, W. Bain, R. Gowans, E. W. McNeill, W. F. Ralph, H. Chambers and C. H. Black, all of Toronto.

St. Lawrence Saw and Steel Works Company, Limited, Sorel, Que., incorporated, capital \$40,000. Incorporators, C. D. Pontbriand, J. Pontbriand, H. M. Pontbriand, F. D. Pontbriand, all of Sorel, and others.

The Canadian Boomer and Boschert Press Company, Limited, Montreal, Que., incorporated, capital \$20,000. Incorporators, A. E. G. Madley, L. de K. Stephens, W. S. Johnson, F. Callahan and J. A. Walker, all of Montreal.

MISTAKES IN ESTIMATING.

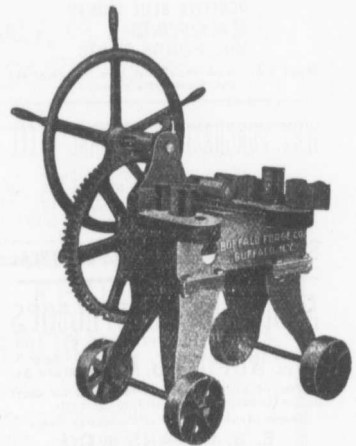
An interesting report appears in the statement of a committee in a city in Alberta where differences had arisen between the contractors for a sewer job and the city officials. The committee found that the relations between the contractors and the city officials became strained, which resulted in matters in themselves easily adjustable, being magnified into serious differences. Some of the city officials were tactless in their work, and the contractors labored under difficulties which shortened their tempers and made them less apt to accept in proper spirit the criticisms, objections and directions of the

officials. Finally the committee found that the contractors had taken the work at too low a figure and recommended that they be relieved from the contract, as they had requested.

The same situation develops more often than many people think, where inexperienced contractors under-estimate the difficulties of a job, and find when they get into it that they are likely to lose. Irritations ensue between the inspectors and the contractors, and sometimes unnecessary hardships are imposed by the inspectors, in a laudable endeavor to protect the city from having a job which might be poorly done.

A NEW TIRE UPSETTER.

The tire upsetter shown in the accompanying illustration is a new machine recently put on the market by the Canadian Buffalo Forge Co., Limited, Montreal, Que., to meet the demand for a machine for very heavy work. It is simple, substantial and compact. The grips are self-adjusting, and are shod with the best forged steel. This machine is provided with a hand-wheel in-



stead of levers. This wheel turns a small pinion which meshes with a large gear, making the machine very powerful. One man on the wheel can easily upset a tire 7 x 1 1/4 inches or an axle 3 1/2 x 3 1/2 inches. The frame is of heavy cast-iron. The machine is mounted on cast-iron wheels, so that it can be easily shifted about the shop. This tire upsetter weighs complete about 900 pounds.

The British Canadian Engineering Co. has been declared insolvent, and a winding-up order has been granted. E. R. C. Clarkson is interim liquidator.

Mr. C. B. Smith has been retained by the City Council to look after the interests of the city of Toronto in connection with the entrances of the different railways by way of Kew and Balmy Beaches.

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CEMENT WALKS*

By W. H. SHILLINGLAW, C. E., Brandon.

The general prosperity and growth of the cities and towns of the West has developed a desire for such permanent improvements as will not only add to the appearance of our communities but also to the comfort, convenience and health of the inhabitants.

This is evidenced by the expenditures undertaken for the construction of sewers, water works, walks, etc., by our municipalities, all of which are of the most permanent character.

One of the necessities of our municipal life is the providing of proper walks for the use of pedestrians, and the old expensive wooden walk is giving way to the more permanent cement walk even in our smaller towns and villages where the people but a few short years ago were content, by force of circumstances, to walk on anything.

As the construction of such walks entails a certain amount of red tape as well as cement, stone and labor, it has been thought well to begin with the red tape.

The necessary legal procedure to be taken in constructing sidewalks under the local improvement system is as follows:

1. The Council may pass a General Local Improvement By-law "for ascertaining the property to be effected by local improvements and for fixing assessments, and to name or appoint such officer or officers of the town or city who shall perform such duties." R.S.M., C. 116 s. 579 to 584.

2. Sidewalks may be laid on petition from the owners of real property to be benefited, representing one-half in number of the owners, and such owners representing at least one-half of the assessed value of the real property. R.S.M., C. 116 s. 585.

3. Such work may be undertaken by the Council, subject to the owners of real property petitioning against the work within 30 days after publication of notice of the Council's intention to undertake such work. The owners petitioning against such work must represent three-fifths of the assessed value of the real property affected. R.S.M., C. 116 s. 586.

In the event of such petition against the work, such work cannot be undertaken by the Council within two years. R.S.M., C. 116, s. 587.

4. There shall be right of appeal from any such assessment to the County Court judge. R.S.M., C. 116, s. 591.

5. Local Improvement debentures may be issued on the credit of

the city or town. R.S.M., C. 116 s. 613.

Such Local Improvement debentures may be issued on the security of special assessments therefor, but such debentures form no part of the general debt of any such municipality. R.S.M., C. 116, s. 614.

The city or town shall be liable to holders of local improvement debentures for their full amount. R.S.M., C. 116, s. 615.

Council may consolidate by-laws for issue of local improvement debentures. By-law should contain clause that debentures are subject to consolidation. R.S.M., C. 116, s. 616.

In cases where the property pays some portion of the cost, and the municipality the balance, separate series of debentures may be issued, or all the debentures for the work may be issued in one series. R.S.M., C. 116, s. 617.

Assent of ratepayers to special assessment by-laws not required, but such by-law shall recite:

A. The amount of debt such by-law is intended to create.

B. The amount required to be raised annually to pay debt and interest.

C. Value of whole real property rateable under the by-law.

D. The annual special rate on the dollar per foot front, etc., for paying interest and creating a yearly sinking fund for paying principal of the debt. R.S.M., C. 116, s. 618.

There are some further details in connection with the legal procedure not quoted above as contained in the Municipal Act, R.S.M., C. 116, s. 579 to 824 inclusive.

Location and Width of Walks.—The location of walks on business streets is necessarily next to the property line and the width will depend on the traffic, but should be not less than 8 to 10 feet. Where streets are likely to develop into business premises the walk should be laid next to the kerb line, this will permit of making the walk the necessary width for the future without destroying the work already done.

On residence streets there is the choice between laying the walk next to the property line or next to the kerb line.

Where tree planting is indulged in, and it should be encouraged in every town, they are usually planted about 9 feet from the property line. The first method is to lay the walk say 2 feet from the property line. This permits of a 5 ft. walk between the property and tree line and gives the benefit and dirt of unpaved streets.

The second method has its ad-

fit of any shade from the trees and keeps the walk freer from the vocates, and in some respect has advantages over the first, but the principal reason appears to be that it keeps traffic further from private property and practically adds so much more land to such property. There is some reason for doing this when lawns and grounds are properly kept. A kerb from 18 to 24 in. deep should be provided for such walks. The width of walks on residence streets should not be less than 5 feet wide and this is a good width. All such walks should be laid a uniform width and continued out to the kerb line, that is, to the roadway, and crossings should be laid across unpaved streets in line with the walk. This is seldom done but should be where the streets are not paved.

METHOD OF PAYMENT.

Permanent walks are invariably laid under the local improvement system, and the cost of the work raised by debentures and as a partial or entire charge against the property benefited.

The terms of such debentures vary from 10 to 20 years, and there is a tendency to make this term too long.

The proportion of the cost to be borne by the property varies and no satisfactory system has yet been worked out. Some of the systems adopted are:—

1. The property to bear the whole cost.

2. The property to bear some fixed portion of the cost, as one-half, two-thirds, or three-quarters, and the municipality the balance.

3. The property to bear the cost of the actual frontage and the municipality the cost of the intersections, crossings, etc.

No satisfactory explanation can be given for any of the above methods, except that the Local Improvement system is the easiest way for the Municipality to raise the necessary funds and shift the burden from the general taxpayer to the individual, a very desirable object from some points of view.

FIXING GRADES, PLANTS, ETC.

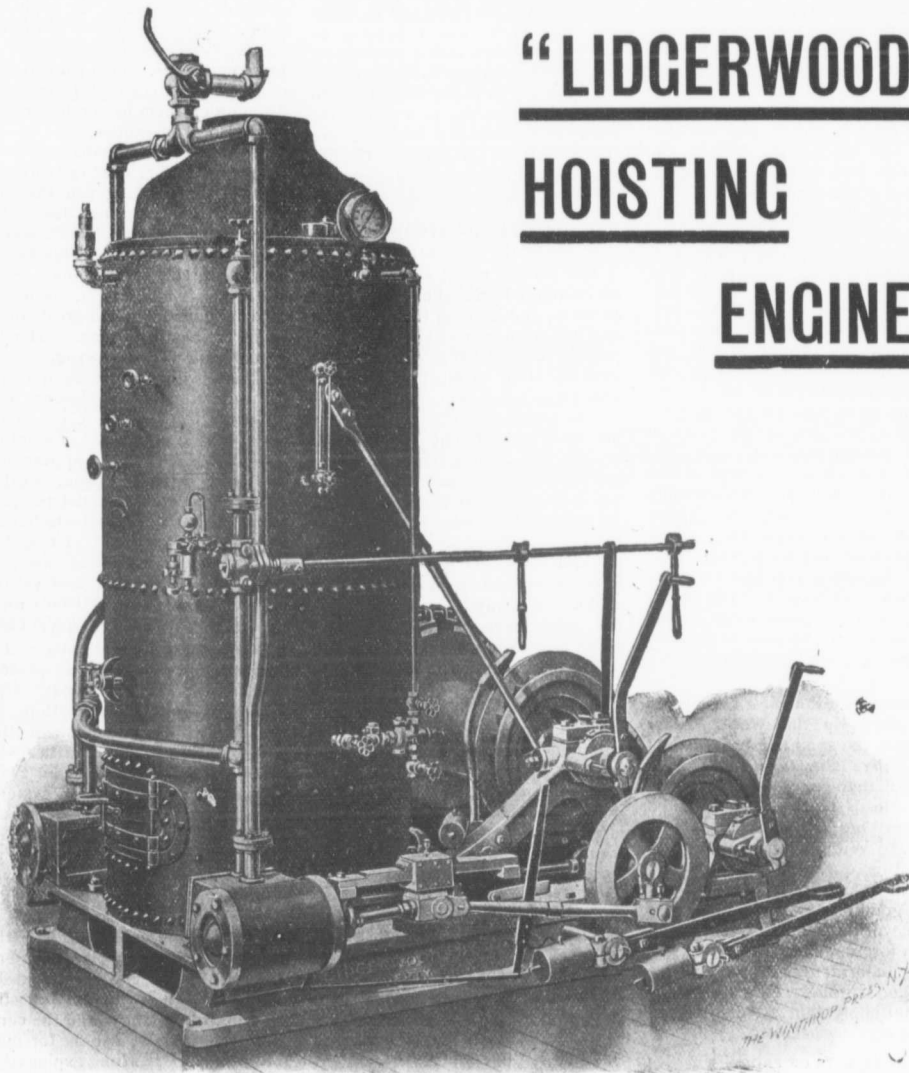
When it is proposed to lay permanent walks, proper plans of the streets on which the work is to be done should be prepared with the necessary profiles showing grades:—

1. That proper surface drainage may be provided for.

2. That property owners may know the proper grade for the erection of buildings.

These details are more important than generally appears and will certainly avoid trouble for someone

*Paper read at the Third Annual Convention of the Union of Manitoba Municipalities.



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in the future. There is no more unpleasant task in connection with this work than fixing grades and there is nothing will rouse the ire of some property owners quicker than laying a walk too low or too high with respect to his property, yet, it must be done, and the difficulty will be greatly enhanced in the future if a permanent walk is not laid at the proper grade.

There is also a legal difficulty in connection with altering a grade of a permanent walk which can only be avoided if fixed properly at first.

DETAILS OF THE WORK.

Materials.—Use only the best materials, you cannot be too particular upon this point. Use only Portland cement.

Some interested people will tell you that you can obtain "just as good" pavements with your local gravel and sand, no matter how dirty it is, as you can with anything else. Be sure that your gravel contains no dirt, shale, etc. Shale will break up any walk where it is used. If your gravel and sand are not clean, expend a little extra money and get good clean gravel and sand, or broken stone and crushed granite. Don't experiment.

Labor.—See that first class labor is employed in this work. Poor workmen can spoil the best materials. There is no work more easily scamped than concrete work.

This leads to the much debated question of Contract vs. Day Labor. Without attempting to settle this question, there is one point in favor of day labor; if you put a good reliable man in charge of the work, he has absolutely no reason for scamping it. The travelling contractor completes his work and is gone. Of course, this does not imply that all contractors are scamps.

EFFECTS OF FROST.

If your soil is wet be sure you remove sufficient to obtain a good foundation, or your walks will heave. Do not attempt to lay cement walks during frosty weather. It can be done but it is not worth the risk.

COMPARATIVE COST, etc.

The cost of cement walks will vary from 15 cents to 22 cents per square foot, depending on the thickness of walk and cost of materials and labor. Their life is twenty years and over, if properly laid.

The cost of 2 inch plank walks is 7 cents to 10 cents per square foot and their life 7 years and over, depending on the length of time you are willing to keep them in repair and put up with the nuisance they create even when repaired. Wooden walks do not give a street the same up-to-date and permanent appearance as cement walks.

In answer to a question as to

who paid for corner frontages, Mr. Shillinglaw said that he regarded the local improvement system as one of expediency only; they started in Brandon with the idea of charging 2-3 to property and 1-3 to the city at large, but now the whole cost, cross sections and all, are charged to the property. Corner lots have to pay two frontages.

PAINTING BRIDGES.*

By H. T. BARKLEY.

The care of metal structures on all railroads is the source of great expense, and keeping them painted and free from rust is the most important item. Perhaps it would be useless, after so much discussion and experimenting, to say what is the best paint to use. There are on the market any number of brands of paint suitable for painting structural iron and steel, and I am convinced that the majority of all painters here who have had extensive experience in bridge painting and especially train sheds will agree that coal tar products and asphaltum in anything like a large per cent. have proved time and again to be a failure; and that you will agree that pure linseed oil as a medium has, by test, proved the best.

Paint is put on metal to keep it from rusting and many times a bridge or viaduct that looks fairly well from a train, will upon examination prove to be seriously damaged and weakened on the floor members by black rust. Sometimes from water, other times by smoke and brine, and it is not an uncommon thing to find eye beams and bracing eaten into a fourth of an inch. This black rust can be removed only by striking with a scaling hammer until the live iron shows up, scrapers, wire brushes or sand blast will remove light or "red rust," but the black rust on steel ties and bracing, such as we have had to contend with, can be removed only by the slow, expensive process of hammering and even at a low rate of pay for cleaners, make a job run to prices that will surprise us.

I have here a copy of a report of a bridge which we painted near Wall Lake, Iowa, last May, which cost as follows:

Material.....	\$ 37.26
Labor.....	132.82
Total.....	\$161.08

Our estimate was \$268 and the engineer's estimate to do the work on this 128 foot span was \$100, \$90 of which was used to remove the rust. Every one knows and admits that it is a useless waste of labor and material to put paint on over rust; you must first remove the rust so that it cannot "grow" under the coating of paint. So it

*Paper read before the Association of Maintenance of Way Master Painters.

was first necessary to spend \$90 to get rid of the rust, to apply the paint. This particular structure has steel eye beam ties and "Z" bar guard rails, which were a crust of black rust caused from brine dripping on them from refrigerators and also from smoke and gases from trains passing under, so in this case we went \$71 over the estimate just to stop the danger on the floor system, and could not touch the body or truss span, which was in fairly good condition. This bridge was built six and one-half years ago, when we painted it, and at any time it looked to be in good condition from passing trains. The inspector allowed us \$100, which any one with experience in bridge painting would have known was not sufficient. We could have easily put a shiny coat of paint on and made the bridge appear like new from a passing train, but that would not have protected the property, which would have to have a new floor system in just a few years; and which would have cost thousands of dollars, and yet the bridge is not painted, I only mention this bridge as a typical case.

The argument about saving the interest on the money, at present hard times, slack business, etc., would not amount to anything in the end. In my judgment, if this bridge had been cleaned with a wire brush and had a coat of paint every two years put on the floor system, when it was most needed, at an expense of \$20 or \$25 each time, it would have saved a quarter of an inch on the eye beams which was eaten up by rust, and also, one-half of the labor we spent to clean it. While this does not appear to be the best kind of logic from a painter's standpoint in the end he would be ahead. It would be saving the structure from danger and the company many dollars; also the foreman and his superiors a long explanation as to why they exceeded the estimate. There are hundreds of instances which come up each year, where, if a mechanic of experience had had the authority, he might have saved many dollars and endless amount of unpleasantness.

Our division is particularly fortunate in having a man at the head of the bridge and building department who has had thirty years of experience, and who, if he had his way, would take such cases in time, for he holds that a paint at the proper time and in the proper place would mean a great saving, and all of us, no doubt, know that paint is getting cheaper and labor higher; and I am convinced that if a coat of paint was applied every two or three years, when it is most needed, instead of waiting six or seven years, and then have to spend double what it is worth to remove the rust, and paint two coats, as is the custom now, that the structures would look better and last longer,

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and that the expense would be no greater and in many cases less.

The Northwestern company are now using the one-coat work on bridges and do not let them get so badly rusted and from everyone whom I have asked, find that is a paying investment and which I believe is the best where trains carry refrigerators.

So far as the rigging, tools and methods, every one has his own way of doing this, which he probably thinks is the best. Perhaps Mr. De Stabler, at the Cincinnati convention of last year, gave as good a description of tools and methods as anyone could wish for

DISSOLUTION OF SEWER PIPE TRUST.

The Clayworker says that the agreement which has existed for three years between the sewer pipe manufacturers of the United States has been dissolved, and the plants will now be operated independent of any combine or agreement. This was brought about by a movement which had been set on foot in New York to investigate what was known as the "sewer pipe trust." The attorney for the manufacturers advised them that their "agree-

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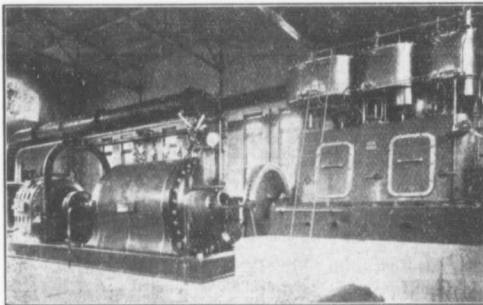


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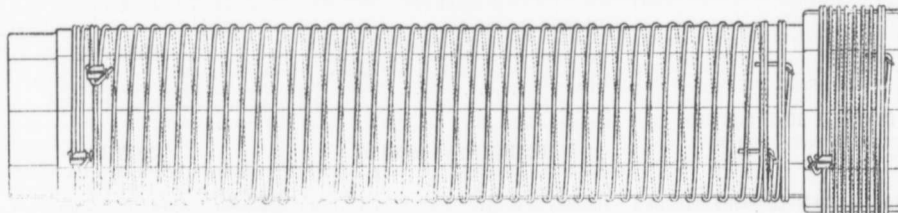
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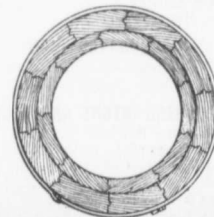
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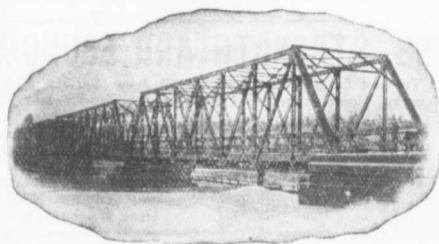
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ment" was illegal, and it was at once decided to discontinue the combine and abolish its headquarters at New York. A plan is now under consideration to organize one large corporation and purchase all of the independent and smaller factories, following plans upon which the United States Steel Company was organized.

Labrecque & Mercure, have dissolved partnership.

Mr. James Lindsay, City Treasurer, of Ottawa, Ont., died January 8th, from an affection of the heart. Deceased was a Scotchman, and had been in the service of the city for about 35 years.

A winding up order against the Thorne Plumbing Company has been granted the Gurney Foundry Company, Toronto.

Mr. J. A. Freezes has resigned the position of Town Clerk of Sussex, N.B. and Mr. A. B. Maggs will succeed him.

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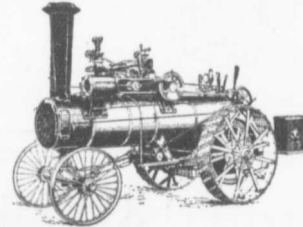
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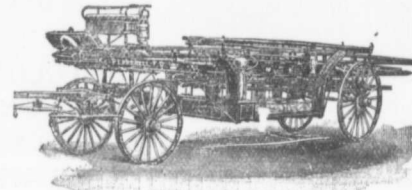
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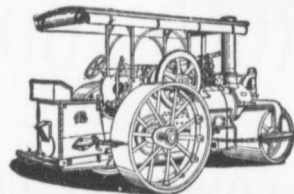


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NOTES.

The Toronto Plastering and Supply Company, Toronto, have assigned to Osler Wade.

In a recent issue of the CONTRACT RECORD, as the result of a typogra-

phical error, an incorrect statement appeared in reference to roadways and sidewalks in Winnipeg. The correct information is as follows: About 11 miles of asphalt pavements were laid in Winnipeg

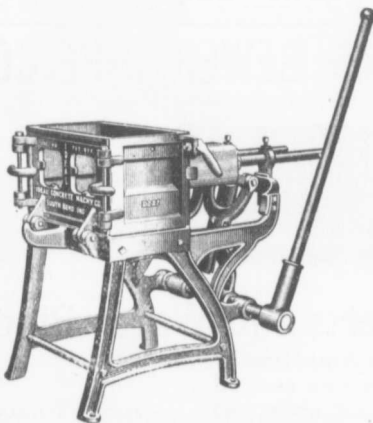
during 1906 as compared with five and a fifth miles the previous year and at present there are 13 1/2 miles on the order sheet. There are 315 miles of sidewalks, 49 miles being of artificial stone.

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					Initial	Final	Neat.					3 (Sand) to 1 (Cement)				
							1 dy.	7 d. s	28 d. s	3 mos	1 yr.	1 dy	7 d. s	28 d. s	3 mos	1 yr.
1903	20	O.K.	3.135	2.1	162	345	307	701	783	827	*	74	214	299	367	*
1904	44	O.K.	3.150	2.0	132	342	300	744	848	914	938	86	262	354	401	427

* Tests for 1 year were not completed when records closed. 1905 report not yet issued.

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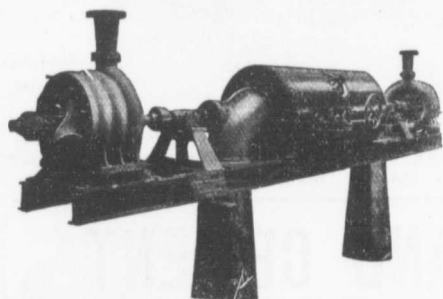
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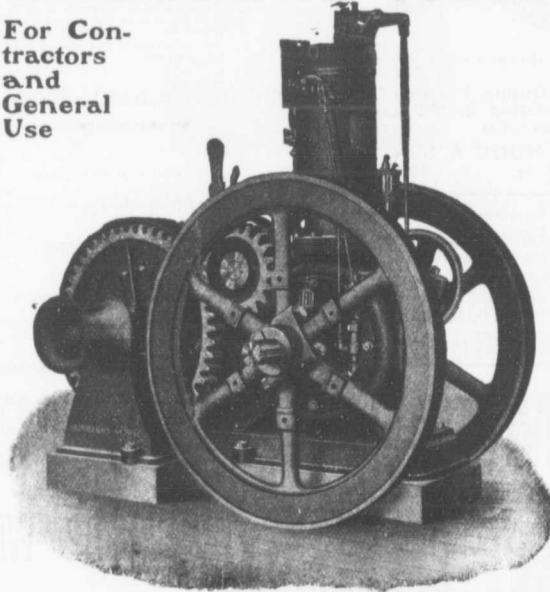
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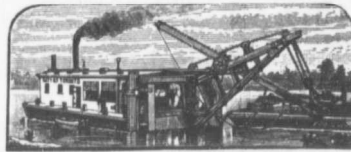
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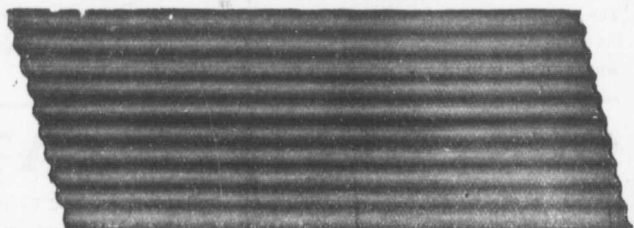
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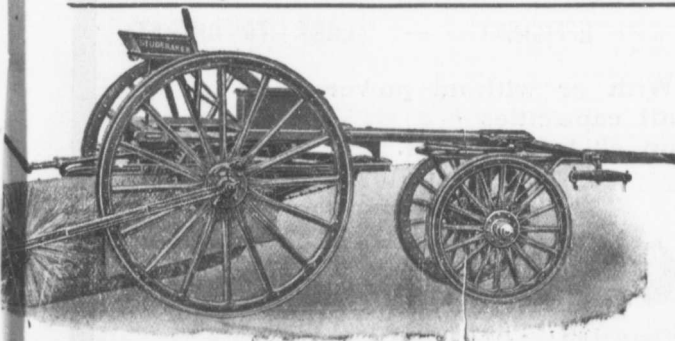
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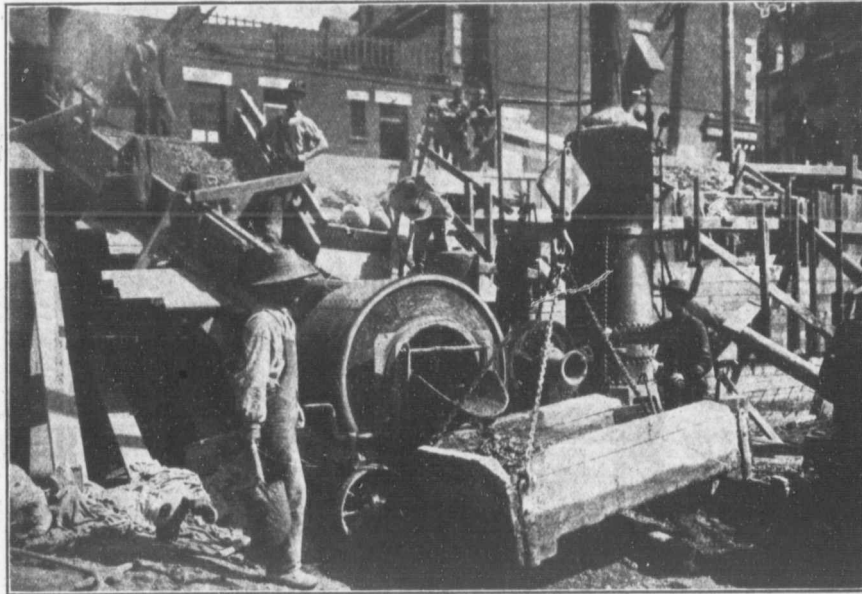
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