

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 — OCTOBER 24, 1906 — WINNIPEG, VANCOUVER

No. 34

THE CANADIAN CONTRACT RECORD

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TO OUR READERS.

We wish to make the **CONTRACT RECORD** of the greatest possible value to subscribers, and to that end we ask their co-operation. Each subscriber is requested to consider himself a correspondent of the paper and to send us intelligence regarding proposed works of construction and contracts awarded in his vicinity.

We cannot hope to learn, through our regular channels of information, of all work contemplated throughout this vast Dominion, but by the co-operation of our readers we may more nearly approach the maximum efficiency in the service given.

Correspondence sent to our head office at Toronto or to our branches at Montreal, Winnipeg or Vancouver, will receive due attention and be much appreciated.

TO CONTRACTORS

Separate or bulk tenders addressed to the undersigned (and marked "Tenders") will be received up to 11 o'clock noon 12TH NOVEMBER, 1906, for the several trades work required in the erection and completion of a Collegiate Institute Building in the town of Picton, Ontario. Plans and specifications may be seen at the office of William Newlands, Esq., architect, Kingston, and at the office of the Secretary of High School Board, Picton. Lowest or any tender not necessarily accepted.
T. BOG,
Secretary.
Picton, October 17, 1906.

PARTNERSHIP

and excellent opportunity offered young Engineer and Surveyor to join another with wide experience and large connections in best part of Ontario province. Moderate capital needed. Address, 'Radius,' CONTRACT RECORD, Toronto.

Auction Sale of Dredge

The undersigned will offer for sale at their rooms, No. 69 St. James Street, Montreal, on **SATURDAY 3rd NOVEMBER, 1906,** at 11 o'clock a. m.

Dipper Dredge No. 3 belonging to the Harbour Commissioners of Montreal as she now lies damaged in the Commissioners Ship Yard alongside the Mackay Pier, in the Harbour of Montreal.

The dredge may be examined upon application at the Harbour Commissioners' office, No. 57 Common Street.

MARCOTTE BROS.,
Auctioneers.

TOWN OF PRESTON WATER WORKS PUMPING MACHINERY

Tenders will be received by the undersigned up to 6 p. m., **MONDAY, NOVEMBER 5TH NEXT,** for the supply of Pumping Machinery for the Preston Water Works. Specifications may be obtained at the office of Davis & Johnston, Engineers, Berlin and Galt. The lowest tender not necessarily accepted.
C. R. HANNING,
Towns Clerk.

TOWN OF FORT FRANCES PROVINCE OF ONTARIO

TENDERS FOR WATER WORKS AND ELECTRIC LIGHTING

Contract "H"—The supply F. O. B. cars Fort Frances of a 1,000 gallon Underwriter Fire Pump.

Contract "I"—The supply, erection and building in of one 16' x 72" Return Tubular Boiler.

Contract "J"—The supply and erection of a 75 K. W., A. C. Generator with engine direct connected, also all materials and labor necessary for the construction of the Electric Light Distribution System.

Sealed tenders will be received by the Town Clerk, until 8 p. m. on **THURSDAY, NOVEMBER 15TH, 1906.**

Plans and specifications may be seen and forms of tender obtained at the office of the Town Clerk, or at the head office of the Chief Engineer.

J. C. BARR, Esq., Mayor.
W. H. ELLIOTT, Esq., Town Clerk.
JOHN GALT, C. E. & M. E.,
Chief Engineer, Toronto.

Proposals For Bridge Superstructure

Sealed proposals addressed to Alderman J. C. Latimer, Chairman, Committee on Works, for erection of steel superstructure for Highway Bridge over the Red River at Redwood avenue, Winnipeg, will be received at the office of the undersigned up to 2.30 p. m. on

TUESDAY, NOVEMBER 20, 1906.

Plans, specifications and forms of proposal may be obtained at the office of Col. H. N. Rutan, City Engineer, Winnipeg, Canada.

Each bid must be accompanied by an accepted cheque or draft payable to the order of the City Treasurer, or cash deposit for a sum equal to 5 per cent. of the total amount of the bid, which will be subject to forfeiture in case of failure on the part of the contractor to enter into a written contract with approved sureties if called upon to do so.

The City reserves the right to reject any or all tenders or to accept any bid, which appears advantageous to the City of Winnipeg.

C. J. BROWN,
City Clerk.

City Clerk's Office, Winnipeg, September 12th, 1906.

CONTRACTS OPEN.

WEST LORNE, ONT.—Tenders are being asked for erection of a rink here. Plans with W. Doyle architect.

WIARTON, ONT.—Siemon Bros. intend erecting another factory building in connection with their works here.

GRAYSON, SASK.—The Evangelical Association have purchased four lots on which a new church will be erected.

VIRDEN, MAN.—The C. N. R. have purchased a site on Nelson street for a new station. Plans are being prepared.

AHUNTSIC, QUE.—Tenders will be received by the Mayor up to October 25th for purchase of \$60,000 five per cent. bonds.

QU'APPELLE, SASK.—The Roman Catholic congregation are considering the erection of a new church building here.

MATHER, MAN.—A by-law will be voted on November 15th to raise \$3,000 debentures for the completion of school house.

SARNIA, ONT.—J. R. Mann, Dayton, Ohio, has secured options on a site on the lake for a proposed summer hotel.

ELGIN, MAN.—W. McGraw is interested in the erection of a new opera house for which plans have been prepared.

PORT HOPE, ONT.—The erection of a new hospital building cost about \$4,000 is being considered. Dr. Forest is interested.

ST. JEROME, QUE.—E. Marchand will receive tenders up to November 2nd

for the purchase of 50 debentures of \$2,330 each.

DOMINION, N.S.—Engineer O'Dell of the coal Co. will estimate on the cost of bringing water supply for the town from Glace Bay.

GUELPH, ONT.—The City Council have authorized the construction of cement sidewalks on Queen, Palmer and Stuart streets.

SYDNEY MINES, N. S.—D. McDonald will receive tenders up to October 26th for purchase of \$11,000 sewerage debentures.

KAMLOOPS, B. C.—J. J. Carment city clerk, has taken tenders for construction of septic tank and excavation of sewer trenches.

REGINA, ALTA.—It is proposed to raise \$100,000 for the proposed new Y.M.C.A. building and subscriptions are now being received.

ST. BONIFACE, MAN.—Hooper & Walker, architects, Winnipeg, have taken tenders for erection of a brick and stone school on Norwood street.

NOTRE DAME DE GRACE, QUE.—The Town Council have decided to purchase a site on Sherbrooke street for town hall, fire station, etc.

BARRIE, ONT.—At a recent meeting of the Town Council application was made for a twenty-five year franchise for a street railway, heat and power.

LETHBRIDGE, ALTA.—C. B. Bowman will receive tenders up October 29th for installing heating and ventilating system in the Westminster school.

ATWOOD, ONT.—T. G. Ratcliffe will receive tenders up to November 3rd for construction of the Partridge drain improvement in Elma township.

WALKERVILLE, ONT.—A committee from the Board of Trade will petition the Government for a new building for postal and custom service, etc.

PETERBORO' ONT.—W. G. Morrow will receive tenders up to October 25th for addition to north ward school. Plans with Belcher & Heathcote, architects.

CRANBROOK, B. C.—Plans have been prepared for a new industrial school to be entered at the St. Eugene Catholic mission, near the town, cost between \$30,000 and \$40,000.

BRANDON, MAN.—McDougall & Ireland, contractors, whose tender for erecting the Collegiate Institute building had been accepted, have been allowed to withdraw their tender.

ALVINSTON, ONT.—Two by-laws will be voted on to loan \$6,000 towards establishing a basket and nail keg factory and \$3,000 towards the enlargement of E. Warner's woolen mill.

KINGSVILLE, ONT.—The Windsor, Essex and Lake Shore Electric Railway Co. have taken tenders for erection of a power house here. John Piggott & Sons, Windsor, architects.

PICTON, ONT.—T. Bog, secretary H. S. Board, will receive tenders up to November 12th for erection of Collegiate Institute building. Plans with William Newlands, architect, Kingston.

SASKATOON, SASK.—Darling & Pearson, architects, Winnipeg, have completed plans for the Bank of Commerce building, Gothic design, pressed brick and Roman stone, cost \$60,000.

HALIFAX, N.S.—The estimated cost of the proposed freestone extension to the county court house is \$20,000.—It is announced that a new round house and workshop for the I. C. R. will be erected here.

ST. CHARLES DE BELLE-CHASSE, QUE.—Tenders have been called by the Intercolonial Railway for construction of a new steel superstructure

for the bridge over the Boyer river. It is expected that the masonry will have to be repaired likewise.

CHATHAM, N. B.—C. H. La Billois, Department of Public Works, Fredericton, will receive tenders up to November 5th for construction of Cain's Point bridge. Plans at the Department and with Robt. Murray, M. P. P.

VICTORIA, B. C.—Hooper & Watkins, architects, have taken tenders for erection of a five story brick and stone warehouse for P.ther & Leiser.—The by-law to provide for a loan for improvements if the waterworks system has been defeated.—The Oak Bay Council are considering an extensive sewerage system in the district.

LONDON, ONT.—The McClary Manufacturing Co., have decided to erect a five-story warehouse 100 by 125 feet.—The estimated cost of adding Komoka springs to the water supply for the city is \$372,500.—A new brick parsonage for the First Methodist Church is to be erected on Dufferin avenue, opposite the Collegiate Institute.

HAMILTON, ONT.—S. H. Kent, city clerk, has taken tenders for construction of sewers in Arthur street, Poplar and Fairleigh avenues.—Tenders will be received by James Dickson, care of Nesbitt, Gauld & Dickson, for purchase and removal of buildings on site of new Central Presbyterian church, corner Hannah and Caroline streets.

QUEBEC, QUE.—The Dominion Government have decided to subsidize extensive docks and railway terminals here in connection with the new bridge and the Grand Trunk Pacific Railway. These new docks will be four miles long. Building permits have been issued as follows: M. Emond, building, Crown street, cost \$3,000; E. Nadeau, building St. Genevieve street, cost \$3,000.

OTTAWA, ONT.—A petition from the ratepayers has been presented to the Minister of Railways and Canals, requesting a new bridge over the canal at Main street.—The Ladies of Christ Church Cathedral are preparing to raise funds to renew the interior finishings of a cathedral.—The Dominion Government will erect a lighthouse at the entrance to Prince Rupert, B. C., the G. T. P. R. terminal.

SASKATOON, SASK.—By-laws have been carried to spend \$30,000 on the establishment of a hospital and \$8,000 to secure sites for city hall and fire hall.—Minnesota capitalists have purchased a site, opposite new municipal power house, for a brewery on which work of construction will soon begin. The City Council have granted a 15 year taxation exemption to an American syndicate to establish a flour mill here.

BRANTFORD, ONT.—A separate home for nurses will be erected in connection with the J. H. Stratford hospital, cost \$10,000.—The Plymouth Brethren will erect a new church on Darling street, cost \$1,400.—Building permits have been issued to the Adams Wagon Works for erection of a brick addition to wheel house, cost \$1250, and for brick addition to blacksmith shop, cost \$2,500.

VANCOUVER, B. C.—Grant & Henderson, architects, have taken tenders for erection of a stone and brick building on Pender street for W. Walsh.—E. H. Heaps & Co. have decided to rebuild their saw mill on the site of the one recently burned.—It is understood that a local syndicate will establish a system of docks on Burrard Inlet.—Building permits have been issued as follows: A. Berjonst, dwelling, McGill drive, \$1000; H. Williamson, dwelling Fifteenth avenue, \$1200; J. Wakefield, frame dwelling, Eleventh avenue, \$2,000; H. C. and L.

Elliott, frame dwelling, Burrard street, \$2,500.

TORONTO JUNCTION, ONT.—Dr. Gilmour will build two brick residences, corner Keele and Annette streets.—Prof. Smythe will erect a business block on Dundas street.—Building permits have been issued as follows: W. A. Snider, 2-story frame dwelling Weston road, \$1,000; Jas. Greig, 2-story brick livey, Keele street south, \$2,600; G. A. Waddell, 2-story frame dwelling Weston road, \$1,000; B. Abbott, 2-story brick cased dwelling, Fiske avenue, \$2,000; P. McNulty, 2-story and attic, brick dwelling Annette street west, \$2,700; W. J. Jones, 2-story frame dwelling Weston road, \$1,800; F. P. and A. G. Laughton, two 2-story brick clad dwellings, Uxbridge avenue, \$3,000.

EDMONTON, ALTA.—E. Tessier, box 806, will receive tenders up to November 30th for purchase of \$35,000 St. Joachim Roman Catholic Separate school debentures.—The Edmonton Ice Co. will erect a new ice house on block 9 R. L. 20, cost \$2,100.—Plans for the new Parliament buildings will soon be prepared.—The Commissioners have reported on the cost of the municipal street railway at \$100,790.—Building permits have been issued as follows: Ida Ball, dwelling, Kinistino avenue, \$2,000; Queen's Avenue Presbyterian church, manse, McDougall street, \$4,000; E. E. Cole, dwelling, Eighth street, \$2,000.

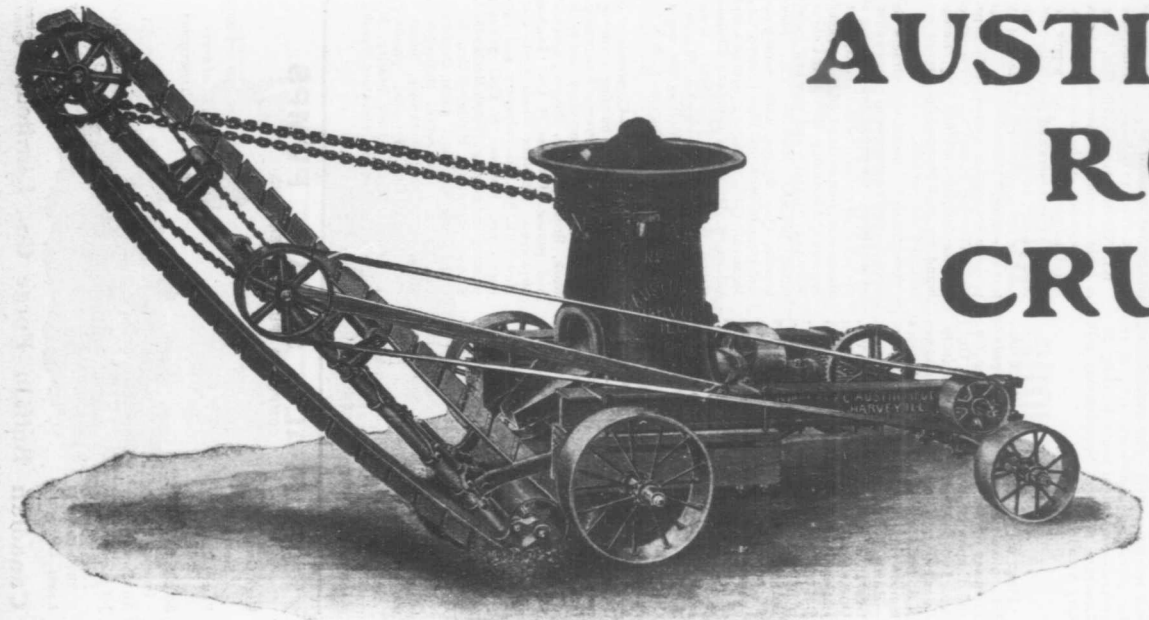
MONTREAL, QUE.—L. O. David, City Clerk, will receive tenders up to October 26th for repairs to the Town Halls of Ste. Cunegonde and St. Henri. Plans with L. R. Montbrind, architect.—Building permits have been issued as follows: Ald. James Robinson, six stores corner St. Catherine and McKay streets, cost \$16,000; Sir Thomas Shaughnessy, extension to residence, 1149 Dorchester, cost \$8,000; Meldrum Bros. stables, Wellington street, cost \$6,000; The Canadian Pacific Railway Co., building, Osborne street, cost \$38,000; Montreal Rolling Mills, factory, Notre Dame street, cost \$25,000; Southam Company, printing office, St. Alexander street, cost \$35,000; Ex-Ald. Valliers, sixteen tenement houses, Marquette street, cost \$9,000.

WINNIPEG, MAN.—It is understood that the T. Eaton Co., intend building an addition to their store on the site of the Strevell terrace, Donald street.—An agreement has been reached between the City Council and the C. N. R. by which the latter are to build a subway at Pembina street.—The Civic Bridge Committee have passed a resolution recommending the securing of legislation to provide for a bridge at McDermot avenue.—Jewett & Tuthill, architects, have prepared plans for a new church for the Nena street Baptist congregation to be erected, corner Bannantyne avenue and Emily street, cost \$30,000.—The Committee on Works have this week taken tenders for construction of asphalt pavement on Notre Dame and Corydon avenues and Preston street, also macadam pavement and a number of granolithic walks, sewer in Dominion street from Portage avenue to Assiniboine.—The City Council gives notice of its intention to construct sewers on Vincent, Quels and Newman streets and Alfred, Catherine and Stewart avenues.

TORONTO, ONT.—The Metropolitan Bank have purchased a site on East Queen street on which to erect a building.—A new building for the Department of Domestic Science in connection with the University is to be erected, corner avenue Road and Bloor street by Mrs. Massey-Treble, cost \$100,000.—It has been decided to have plans prepared for a new Horticultural building to be erected on the site of the Transportation building

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recently burned. G. W. Gouinlock, architect.—The tenders for the new Normal School buildings at Stratford, Peterboro and North Bay have been opened by Hon. Dr. Reaume, but as the figures were considered too high new tenders will be called for.—Caer Howell hotel on University avenue is to be replaced by a new four or five story apartment house hotel. Plans are being prepared by H. Simpson, architect.—The United Zinc Co., of Boston, will establish a branch of their factory on Adelaide street, west of York.—The Minerva Mfg. Co. desire to purchase the old site of the Bathurst street school on which they propose to erect a factory building to cost \$40,000, and a block of stores on College street, cost \$60,000.—The Chief of Police has made application to the Management of the Exhibition for a new Police building on the grounds.—The Board of Control will receive tenders up to November 6th for purchase and removal of the buildings from Nos. 142 to 156 Adelaide street west.—Plans for the new fire hall building on Adelaide street west have been prepared and are awaiting the approval of the Board of Control.—Tenders are invited for roofing, galvanized iron work, plastering and plumbing for a dwelling. Plans at 413 Brock ave.

—Building permits have been issued as follows: C. A. Scott, pair 2 story brick dwellings, Simpson avenue, cost \$4,500; Dr. S. and M. D. Lavine, four 2 story and attic brick dwellings, William street, cost \$10,000; St. Cyprians church, 1 story brick church, corner Manning and Follis avenues, cost \$15,000; Thos. J. Burns, 2 story brick dwelling, Beach avenue, near Lindsay, cost \$2,500; Dr. Addison, 2½ story brick dwelling, Broadview avenue, near Victor, cost \$4,000; Merchant's Bank, 2 story brick bank, corner Queen street and O'Hara avenue, cost \$6,000; M. Becker, four two story brick dwellings, corner Berkeley and Front streets, cost \$4,500; Chas. Watson, brick additions to dwelling, 134-136 Augusta avenue, cost \$4,000; Toronto Railway Co., 1 story brick and steel substation and storage shed, corner Dovercourt road and Harrison street, cost \$10,000; St. Mark's Church, 1 story brick Sunday school, 197-205 Cowan avenue, cost \$4,000; Toronto Plate Glass Co., 1 story brick factory, Don river, near Elliott street, cost \$16,000; P. Moylett, 2½ story brick dwelling, Springhurst avenue, cost \$5,500; Thos. Trelevan, pair 2 story and attic brick dwellings, Vermont avenue, cost \$5,000; Wm. E. Weale, pair 2½ story brick dwellings, 380-382 St. Clarens avenue, cost \$6,000; S. C. Howey, 2 story and attic brick dwelling, 84 Denison avenue, cost \$3,000; Agnew Bros., 2 story rough cast dwelling, Clinton street, near Bloor, cost \$3,000; R. B. Burkell, 2 pair 2½ story brick dwellings, 213-219 Shaw street, cost \$10,000; E. P. Atkinson, 2 pair 2 story brick dwellings, 82-86 Crawford street, cost \$8,000; E. E. Rutherford, 2 pair 2½ story brick dwellings, Grace street, cost \$8,800; Fred Fisher, 2 story roughcast dwelling, West avenue, cost \$2,000; W. E. Mitchell, 2 story and attic brick dwelling, Wolfrey avenue, near Broadview, cost \$4,500; Thos. Whaley, 2 story and attic brick dwelling, Beatty avenue, cost \$2,400; E. Smith, 2 story brick dwelling, Lynd avenue, cost \$2,000; J. Lancaster, 2 story roughcast dwelling, brick front, Millicent street, cost \$4,500; George Young, 2 story brick dwelling, Pearson avenue, cost \$2,600; J. E. McLury, 2½ story brick dwelling, Poplar Plains road, cost \$6,000; C. W. Chadwick, three 2 story brick dwellings, 80 Dunn avenue, cost \$7,500; Brayton & Delworth, pair 2½ story brick dwellings, 33 and 35 Howland avenue, cost \$9,000; A. George, 2 story and attic brick dwelling, Crawford street, near

Arthur, cost \$3,500; Bank of Toronto, 2 story brick bank, corner Elm and Elizabeth streets, cost \$20,000; F. K. Thompson, 4 story brick dwelling, Jarvis street, near Gerrard, cost \$3,500; R. McCauley, 2 pair 2 story and attic brick dwellings, Macpherson avenue, near Molson street, cost \$10,000; John Ewing, pair 2 story brick dwellings, Moutray street, cost \$4,600; Mrs. E. Tilley, 2½ story brick stores and dwellings, corner Augusta and Oxford streets, cost \$9,000; N.H. Brady, 2 story brick dwelling, Galley avenue, cost \$6,400; Kidney & McKelvie pair 2½ story brick dwellings, Walmer road, near Castle avenue, cost \$6,000; A. Reeves, 2 story and attic brick dwelling, Rusholme road, cost \$3,000; Walter Marks, 4 pair 2½ story brick and stone dwellings, Concord avenue, near Hepburne street, cost \$20,000; Mrs. E. Tolhurst, 2 story brick dwelling, Fern avenue, cost \$3,000; Macpherson Trustees, 2 story and attic brick dwelling, 45 Chestnut Park road, cost \$5,500; Wm. Radcliffe, 2 story and attic brick and stone dwelling, Farnham avenue, cost \$4,500.—The Board of Control will receive tenders up to October 30th for galvanized iron work, etc., in recovering the roof of south building, St. Lawrence market. Specifications with City Architect.

FIRES.

Plant of the Edmonton Brick Co., Edmonton, Alta., badly damaged.—Premises of the Garlock Packing Co., and Empire Soap Co., Hamilton, Ont., loss \$2,000.—Twenty dwellings at St. Charles, Que., loss \$25,000.—Buildings of A. Budaoin, A. Lessard and Dugal's lumber yard, Quebec, damage \$10,000.—Edward Couture's store, corner St. George and Cote du Passage, Levis, Que., totally destroyed.—Electric light station, jail, court house, Episcopal and Baptist churches and 50 residences, Summerside, P. E. I., loss \$200,000.—Barns of John Newcomb, Goderich, loss \$3,000.—Plant of the Brantford Starch Works, damage \$30,000.—Moulding shop of I. E. Shaniz & Co., Berlin, Ont., loss \$2,000.—Transportation building, grand stand etc., on the Exhibition grounds, Toronto, loss \$100,000.—Buildings of Clark Bros. & Hughes, undertakers, Winnipeg, loss \$10,000.—Stores of O. Carignan & Fils, 26 Des Forges street, Three Rivers, Que., loss \$6,000.—Evaporator of Collier Bros., Napanee, Ont., loss \$4,000.—Store, postoffice and several dwellings at Aldrich, Ont., loss \$50,000.

CONTRACTS AWARDED.

CARNDUFF, MAN.—Erection of Anglican church and rectory: J. H. Timms, contractor, Melita.
MELFORT, SASK.—Erection of new hospital building: Sidney Smart, contractor, cost about \$4,000.
SASKATOON, SASK.—Erection of main building for brewery: Willoughby & Covert, Contractors, cost \$50,000.

WELLAND, ONT.—Erection of new buildings for the Canada Forge Co.: Welland Construction Co., contractors.

NEPIGON, ONT.—Construction of C. N. R. branch from this place to the G. T. P. R.: James Connee, M. P., contractor.

VANCOUVER, B. C.—Erection of new building for Canadian Bank of Commerce: Kelly Bros. and Mitchell, Winnipeg, contractors.

PORT ARTHUR, ONT.—The Vigers, Shear Lumber Co. have secured the contract for supplying nearly half a million ties for the Canadian Pacific Railway.

BRANTFORD, ONT.—Grading of Hamilton road from this city to Cainsville: Geo. Take, contractor, at 70 cents per yard including gravel and spreading.

NEW WESTMINSTER, B. C.—Construction of G. N. R. line from this city to Blaine, about 50 miles: Ironsides, Rannie & Campbell and the B. C. General Contract Co., Vancouver.

DRYDEN, ONT.—A. Phillips & Co., have secured a sub-contract for the construction of fifteen miles of the transcontinental railroad in J. D. McArthur's contract, about 18 miles north of this place.

WINNIPEG, MAN.—The Fire, Water & Light Committee have recommended the acceptance of the following tenders: Allis-Chalmers-Bullock, for supply of two air compressors and motors for wells Nos. 5 and 6, and \$3,800; Canada Rubber Co., for supply of 5,000 feet of 3½ inch fire hose, Unique brand, for high pressure fire service system, at \$1.30 per foot; Winnipeg Rubber Co., for supply of 500 feet of 3½ inch fire hose, Eureka brand, for high pressure fire service system, at \$1.65 per foot.

MOOSOMIN, SASK.—Contracts for the water works system have been awarded as follows: Construction and laying of the storm sewer and water mains, T. H. Masterman, Indian Head, \$8,085; gasoline engines and installing, Burridge & Cooper, Winnipeg, \$4,515; stand pipe and installation, Jencks Machine Co., Sherbrooke, Que., \$5,550; water main pipes and specials, Montreal Pipe Foundry Co., Montreal, Que., \$4,645.75; hydrants and valves, R. D. Wood Co., 400 Chesnut street, Philadelphia, Pa., \$972; sewer pipe, Macomb Sewer Pipe Co., Macomb, Illinois, \$3,554.25; consulting and engineer in charge Willis Chipman, C. & S. E., Toronto.

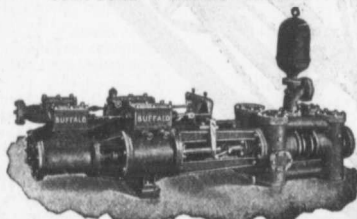
TORONTO, ONT.—Construction of new reference library building, corner St. George and College streets: Excavating, Page & Co., \$3,500; masonry and brickwork, Brown & Love, \$68,720; concrete and paving, Gardner & Co., \$24,820; terra cotta, Excelsior Terra Cotta Co., New York, \$12,540; carpentry and joining, Chas. Rodgers & Co., \$12,350; painting and glazing, Joseph McCausland, \$5,990; plastering, Hoidge & Co., \$32,958; roofing and sheet metal, Ormsby & Co., \$3,210; steel work, McGregor & McIntyre, \$8,884; stackwork, Sneed & Co., Jersey City, \$31,400; plumbing, J. E. Gray, \$2,464; steam heating, McGuire & Co., \$15,600; elevators, Turnbull & Co., \$14,750.

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BIDS.

The following two tenders were received by the Board of Control for the laying of the mains for the high pressure fire system: 20 inch flange pipe, 4,340 ft., No. 1, \$4.13; No. 2, \$3.21; 20 inch spigot pipe, 2,220 ft., No. 1, \$3.11; No. 2, \$1.85; 12 inch spigot pipe, 23,856 ft., No. 1, \$1.49; No. 2, \$1.65; 8 inch spigot pipe, 14,964 ft., No. 1, \$1.15; No. 2, \$1.30; 8 inch flange pipe, 100 ft., No. 1, \$2.58; No. 2, \$2.44; 8 inch hydrant connection, 2,840 ft., No. 1, \$1.55; No. 2, \$1.15; placing hydrants, 1,000 yards, No. 1, \$6; No. 2, \$1; brick masonry, 220 yards, No. 1, \$12.50; No. 2, \$1; extra excavation, 3,700 yards, No. 1, \$1.20; No. 2, 50 cents; iron for hands, No. 1, 7 cents; No. 2, 6 cents; cutting 12 inch, 1,000 ft., No. 1, \$2; No.

2, 1 cent; cutting 6 inch, 500 ft., No. 1, \$1; No. 2, 1 cent; cutting 4 inch, 100 ft., No. 1, 90 cents; No. 2, 1 cent. The total amount of tender number two is \$85,000, and the other in the neighborhood of \$100,000.

Mr. W. M. Macphail has resigned his position as roadway engineer to become president and manager of the Western Bitulithic and Contracting Company, with headquarters in Winnipeg.

Mr. H. J. Purcer, of Ottawa, died at his home in that city on October 15th. He was a resident of Winnipeg in its early days, when

he engaged in the contracting business as a member of the firm of Garson & Purcer. Of late years he has carried on the business in Ottawa under the firm name of H. J. Purcer & Sons.

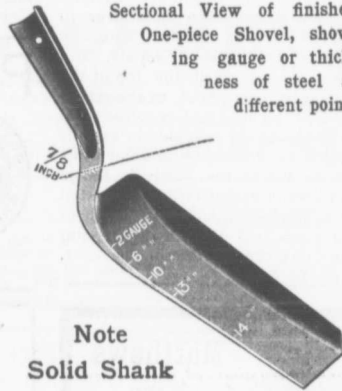
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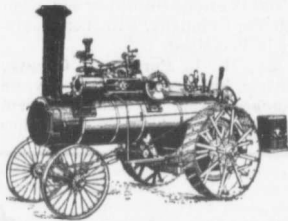
The partnership of Miller & Finch, painters, Vernon, B. C., has been dissolved.

The business of Alexandre S. Ross, builder, etc., Montreal, has been registered under the name of A. Sinclair Ross & Co.

If the pervasive English sparrow has reached Michigan a new indictment can properly be laid against the little pest, while another is brought against the contractor who erected the waterworks stand-pipe at Three Oaks, in that State, for not having closed the top of the pipe with the cover, or netting, called for by the specification. Alarmed by an outbreak of typhoid-fever in the town, the authorities naturally investigated the water-supply, and when they reached the top of the stand-pipe discovered, as the report reads, "the dead bodies of several thousand young sparrows in various stages of decomposition covering the surface of the water." Large numbers of parent birds had nested on a ledge surrounding the inside of the pipe, and then, as the young ones chanced to die in the nest,

simply scratched the bodies overboard into the town's drinking-water; and the supply of avian cadavers was kept up by the fall of fledglings, whose pinions were too weak to carry them across the gulf, and the victims of the perpetual

domestic and tribal feuds. The twenty-one persons now struggling with typhoid-fever in this little town, that numbers only a thousand inhabitants, have very good ground for suing the forgetful contractor for damages.



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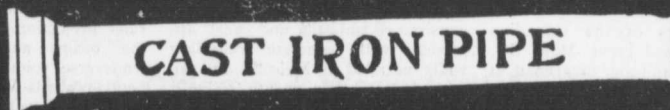
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SEWER CONSTRUCTION IN TORONTO.

The following table from the annual report of the City Engineer, shows the length in feet of sewers constructed during the year 1905:

6-inch tile pipe	1,364 lin. ft.
12-inch tile pipe	13,288 "
15-inch tile pipe in concrete..	7,852 "
18-inch tile pipe in concrete..	500 "
2 ft. x 3 ft. brick.....	2,018 "
4-ft. steel pipe.....	298 "
Total.....	25,320 "

There are in the city 245.11 miles of sewers and 71 automatic flush tanks.

During the year there were; 121 new manholes built; 106 manholes

flexure, tension and shear. The small depths of the arch crowns is noteworthy, especially in consideration of the fact that the tracks are carried over them in ballasted troughs.

The railroad tracks occupy the full width of Point Douglass Ave. and were raised 5 ft. above their former grade in order to secure a maximum clearance of 14 ft. over the two electric car tracks on Main St., and to allow the latter to remain above water level when they were depressed 11 ft. 11 in., thus permitting the subway to be built with a total length of 646 ft. 8 in. with approach grades of 1:20. The width of the structure is 100 ft. over

electric street railway is flanked by two 23-ft. 3-in. similar spans over the driveways and two 11-ft 10½ in. full-centred spans over the sidewalks. The large spans are false ellipses made with seven centres each, and are relieved in elevation by triangular panels 1½ in. deep over spandrels which serve also to define the extrados.

The curves of the intrados are described with radii of 2 ft. 2 in., 3 ft. 11 in., 10 ft. 10 in. and 27 ft., the rise being 5 ft.

The tops of the columns or piers are integral with transverse beams 34 in. deep parallel to the railroad tracks and reinforced by trusses made with rails embedded in the



BREAK IN SEWER, ROBERT STREET, TORONTO.

repaired; 641 new gullies built; 90 gullies repaired; 63 miles of sewers flushed and cleaned.

AN EIGHT-TRACK REINFORCED-CONCRETE VIADUCT.

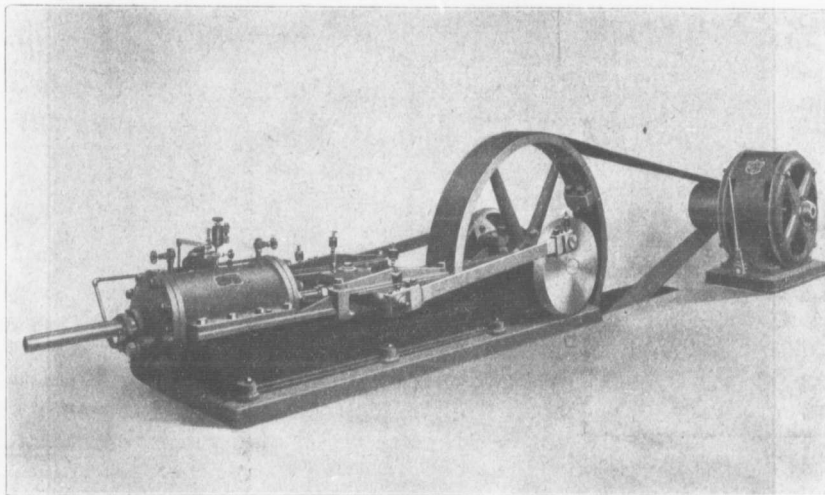
Eight tracts of the Canadian Pacific Railroad cross Main St., Winnipeg, Manitoba, overhead at an angle of 86 deg. 4 min. on a reinforced-concrete structure, which is of interest both on account of the special design of the concrete groined arches in it and from the character of the reinforcement, which consisted of scrap rails bolted and trussed together to resist stress in

all, exclusive of the stairways, and it only receives about ¾ of the original street, a strip 32 ft wide being maintained at the original grade east of the subway on both sides of the railroad tracks, but not being carried across them. The structure consists of an east and west approach, with concrete retaining walls parallel to Main St. and an arched centre portion, 140 ft. long, which forms a continuous bridge floor, supported by four rows of 11 columns and abutments each.

The principal arches have their axes parallel with Main St. and are arranged in 5 spans. A 23-ft. 3-in. centre span over the double-track

concrete near the upper and lower surfaces of the arches and latticed together. The beams are connected and the ballast is carried by concrete slabs 18 in. thick at the centre whence they are pitched both ways for drainage, and are reinforced by rails projecting at both ends into the beams and by longitudinal transverse round rods, the latter bent upwards at the ends and continuous across the main beams on the centre lines of each to intersect the corresponding rods from adjacent panels. The under sides of the slabs and beams have concave surfaces forming the soffits of the groined arches.

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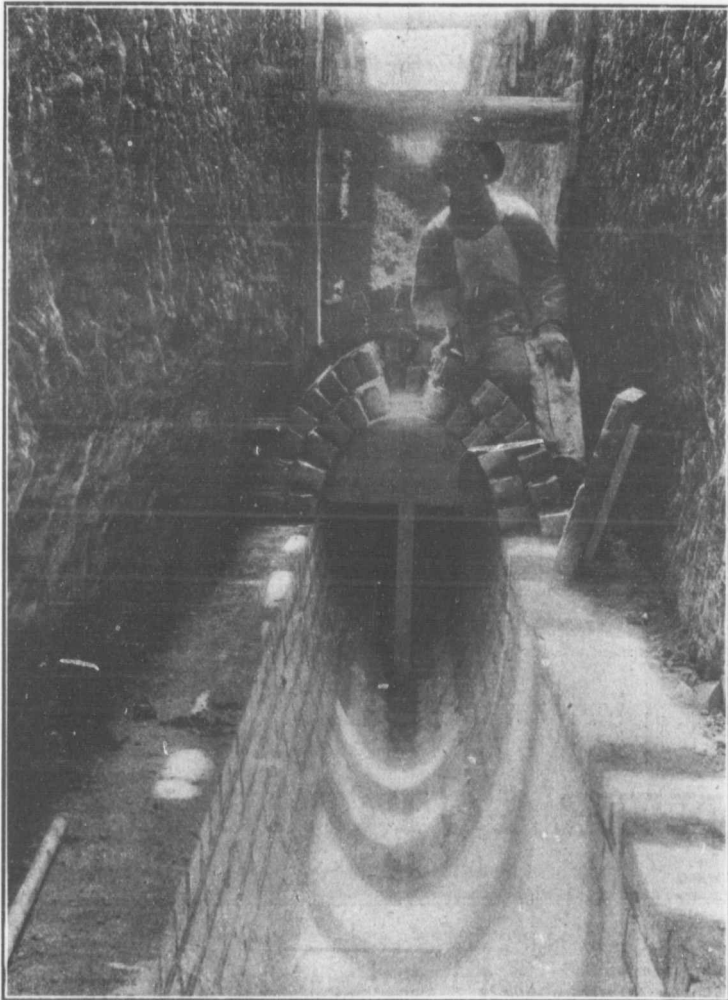
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TORONTO : McKinnon Bldg.
NELSON : Josephine St.
VANCOUVER : 416 Seymour St.

Between the tracks are two 15 ft. platforms and one 9 ft. platform, each built with top and bottom slabs with an air space between, and pierced with skylights made removable so as to provide for the distribution of snow on the roadway below if necessary. The upper platform slabs are reinforced with expanded metal and are 6 in. thick for a 15 ft. platform and 4 in. thick for a 9 ft. platform. The lower

integral with expanded bases battered about 1:1 on both sides to widths of from 6 to 10 ft. at the bases where they unite with the continuous concrete longitudinal footings $7\frac{1}{2}$ and $8\frac{1}{2}$ ft. wide and 2 ft. deep. The footings are carried to a total depth of 5 ft. below the roadway and extend 12 in. below the top on their triple rows of piles. They are reinforced by single longitudinal lines of rails on the centres

continuous from the tops of the footings to the centres of the spans, where they are bent over the bottom chords of the trusses reinforcing the main beams. All of the corners of the columns are rounded to a radius of 2 in., and the angles at their intersection with the bases are covered by fillets joining protective mouldings, resembling the tops of buried wheel guards at pavement level.



AVENUE ROAD SEWER—INVERT AND CROWN.

slabs are 3 in. thick at the arch soffit, and are not reinforced. The piers or columns are vertical on the transverse faces and battered on the longitudinal faces, forming solid rectangular cross-sections from 18 by 36 in. to 21 by 36 in. at the springing line, except four piers 8 ft. wide with chambers 3 ft. wide filled with 1:4:7 concrete and four other special piers 5 ft. wide without chambers.

The column shafts are made

of the piles and by an upper tier of three or four transverse rails at every pier. Each column is reinforced by two vertical rails extending from above the springing line down nearly to the top of the footing and by six vertical $\frac{3}{4}$ in. rods, one in each corner and one in the middle of each long face, tied together with horizontal wires about 3 ft. apart. The upper ends of these rods are bent parallel to the intrados of the arch and are con-

The reinforcement trusses are made continuous across the full width of the bridge. They are 30 in. deep over all, with top and bottom chords formed with single rails spliced with pairs of ordinary angle bar track splices. The heads of the rails are turned in opposite directions and their flanges in the same vertical plane, are connected by $2 \times 5-16$ in. lattice bars riveted on. The beams and trusses terminate in counterforts of the retaining walls,

Octo/

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under man
the World
everywhere
THEIR
TO-DAY
The steel
but the
different
have those
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the earth
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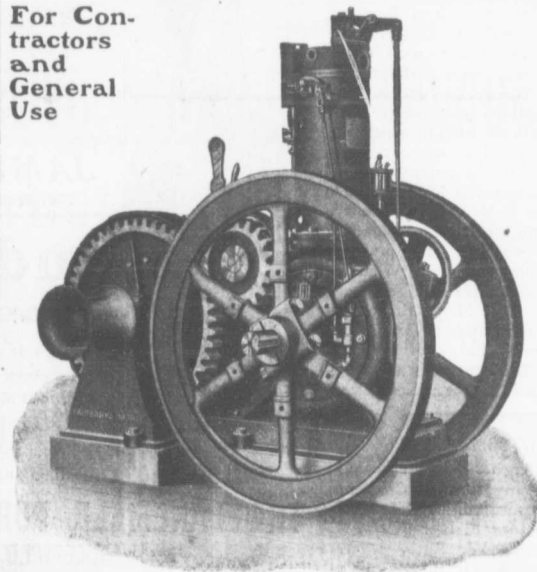
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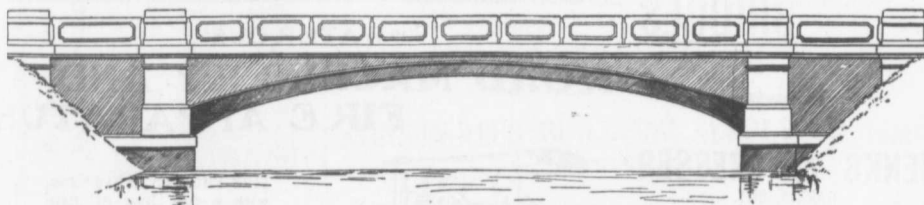
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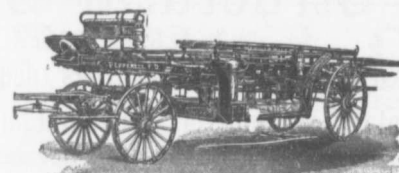
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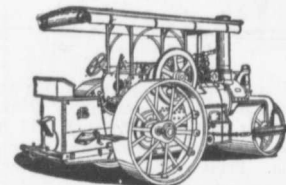
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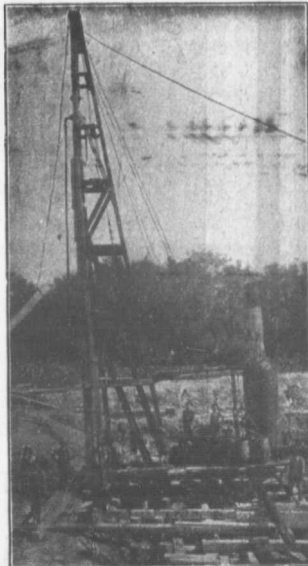
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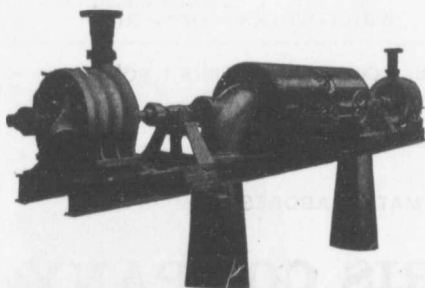
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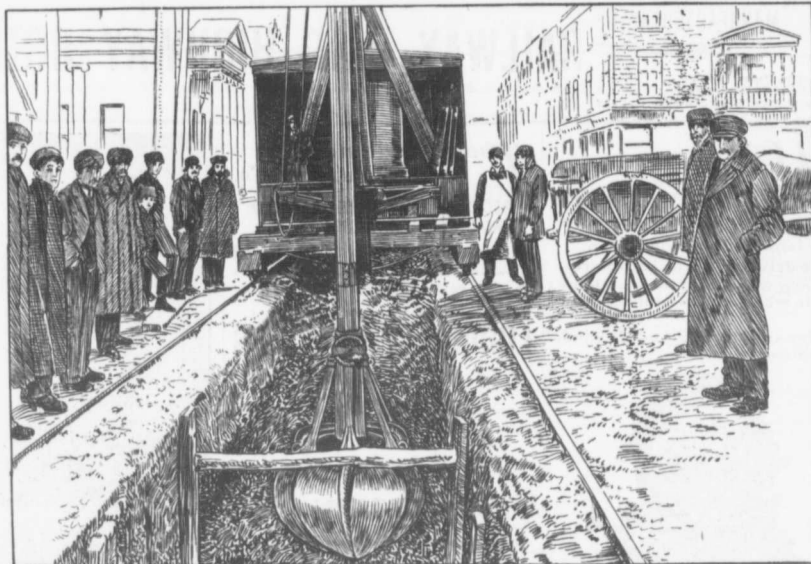
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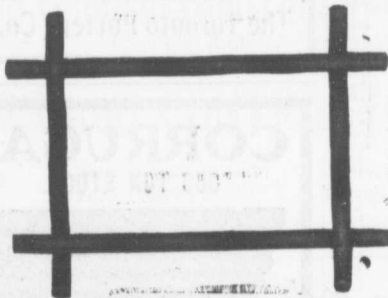
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" 2	11 50
" 3	10 00
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" 3	15 00
Brown	30 00
Roman Red	35 00
" Buff	43 00
" Brown	8 00
Hard Building	7 00
" Sewer	7 00
" Backing	7 00

Moulded and Ornamental from \$2.00 to \$5.00 per 100.
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Enamelled Bricks of all Colors	34c
Porous Terra Cotta Fireproofing of all Descriptions	34c
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Buff Peerless	18 00
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" No. 2	15 00
Moulded and Ornamental Brick from \$3 to \$10 C	30 00
Roman Red (Size 12 x 4 x 1 1/4 in.)	30 00
" Buff " " "	35 00
" Brown " " "	35 00
Vitrified Paving Brick No. 1	15 00
" " No. 2	8 00
Sewer	22 00
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1 inch Pine Dressing and better shorts	24.00 26.00
1 x 4, 6 and 8 Common	30.00 31.00
1 x 10 and 12 Common	21.00 24.00
1 inch mill run sidings	21.00 22.00
1 inch mill run	21.00 22.00
1 x 10 and 12 mill culls	17.00 18.00
1 inch dead cull sidings	12.00 13.00
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Hemlock, 1 x 4 to 8 inch	17.00 18.00
2 x 4 to 8 inch, 12 to 16 feet	18.00 22.00
2 x 4 to 10 inch, 18 feet	30.00 30.00
1 1/2 inch No. 1 4 ft. Pine Lath	4.75 5.00
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XXX 6 butts to 2 inch	3.25
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Basswood, Common and better, 1 to 1 1/2 inch	21.00 24.00
Basswood, 1 1/2 to 2 inch	24.00 26.00
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Elm, rock, mill run, 1 to 1 1/2 in.	23.00 25.00
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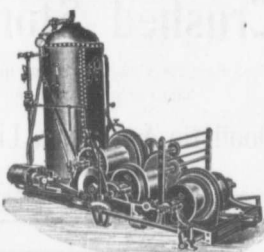
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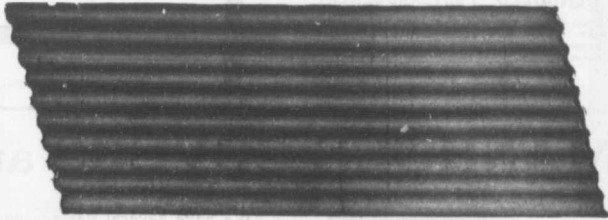
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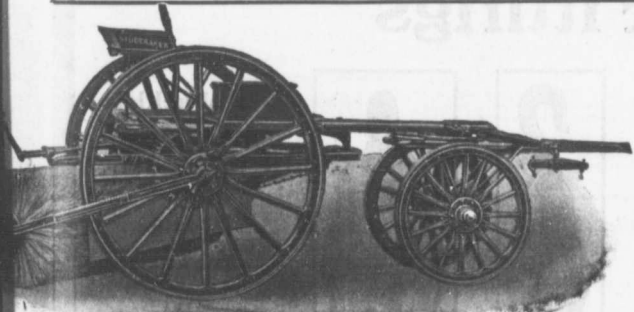
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