

# CANADIAN Contract Record

*A Weekly Journal of 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, Purchasers of Municipal Debentures and Leading Contractors in All Lines Throughout Canada

VOL. 15.

TORONTO, MONTREAL AND WINNIPEG, NOVEMBER 9, 1904

No. 39

## THE CANADIAN CONTRACT RECORD

PUBLISHED EVERY WEDNESDAY

As an Intermediate Edition of the Canadian Architect and Builder.

Subscription Price, \$2 per annum, payable in advance.

## THE C. H. MORTIMER PUBLISHING COMPANY

of Toronto, Limited,  
CONFEDERATION LIFE BUILDING, TORONTO.  
Telephone Main 2564.

Branch Offices:  
36 Alliance Building, Montreal.  
Telephone Main 2299.

310 McIntyre Block, Winnipeg.  
21 Great St. Helen's, London, England.

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## Tenders for Debentures.

Sealed tenders will be received by the undersigned up to 4 o'clock p. m., on the 14TH DAY OF NOVEMBER, 1904, for the purchase of the following separate series of debentures of the Town of Walkerton, viz:

1. 18 Debentures aggregating \$3386.84 repayable in annual instalments of principal and interest at 4 per cent., for a period of 15 years. These are issued for the extension of the water works system.

2. Local improvement debentures amounting to \$2313.34 payable in 20 years with interest yearly at 4 per cent. These debentures will be available to the purchaser after 2nd January, 1905.

The highest or any tender not necessarily accepted.

D. MCKECHNIE,  
Acting Town Clerk.

Walkerton, October 25, 1904.

## CONTRACTS OPEN

AMHERST, N. S. — Senator Black proposes extending his stone block.

MACLEOD, N.W.T.—A proposition is under way for a system of waterworks.

FORT ERIE, ONT.—W. V. Carey intends next spring to erect a new block on Niagara street.

ST. MARY'S, ONT.—L. Reesor has bought a lot on King street on which he will build a residence.

LIMOILLOU, QUE.—The Quebec & Lake St. John Railway Co. have decided to build a new station here.

WILKESPORT, ONT.—The trustees of School Section No. 26 intend building a new school house.

WALKERVILLE, ONT.—The Public School Board have asked the Council for \$50,000 for the erection of new schools.

LISTOWEL, ONT.—W. E. Binning, architect, has been instructed to prepare plans for a new bridge at Bismark street.

ORILLIA, ONT.—A. E. Ardagh has purchased a lot opposite the residence

of J. R. Eaton and will likely build thereon.

MAXVILLE, ONT.—T. W. Dingwall has purchased property on which he purposes building a business block.

QU'APPELLE, N.W.T.—J. C. Starr will receive tenders up to 10th inst. for extension of the drainage system in this town.

AMHERSTBURG, ONT.—Alex. Barron has purchased the old Methodist church corner on which he will build next season.

CAMBORNE, B. C.—B. E. Drew is arranging to install an electric light plant here, utilizing an adjacent water power.

ST. ALEXIS, QUE.—The time for receiving tenders for construction of wharf here has been extended to November 15.

KINGSTON, ONT.—A. Davis & Sons, who are building a tannery here, intend to construct another large building next summer.

NAPANEE, ONT.—Local people are forming a company to build a canning factory. Dr. Vrooman and J. F. Chalmers are interested.

ACTON, ONT.—J. B. MacKenzie has purchased a lot at corner of Main and Church streets on which he intends building a double tenement.

ANNAPOLIS, N. S.—It is reported that a site has been purchased near Victoria Beach on which a large summer hotel will be built next spring.

NELSON, B. C.—The Hudson's Bay Co. have invited architects to submit plans for converting the second storey of their building into a suite of offices.

FREDERICTON, N. B.—The City Council have appointed a committee to report upon the cost of an electric plant for lighting the municipal buildings.

SARNIA, ONT.—It is reported that representatives of a number of electrical companies are making estimates for operating the Sarnia tunnel by electricity.

SLOCAN, B. C.—The Ontario-Slocan Lumber Co. have definitely decided to build a saw mill at this place, to be completed by next spring.

PHOENIX, B. C.—The Horseshoe Power Co., Limited, has been formed here to develop the power obtainable from the Kettle river above Canyon City.

TEESWATER, ONT.—Several bridges over the Teeswater river in Greenock Township will require to be replaced with iron structures in the near future.

FORT WILLIAM, ONT.—The promoters of the proposed rink have bought a site for the building and work will be commenced as soon as plans are decided upon.

TORONTO JUNCTION, ONT.—The town will furnish a free site on which to build a public library, towards which Andrew Carnegie has promised \$15,000.

FREDERICTON, N.B.—C. H. LaBellois, Commissioner of Public Works, will receive tenders up to November 28th for building Tootleton wharf on Bellisle river, King's county.

BUXTON, ONT.—J. W. Shackleton, C. E., has reported to Raleigh township council that a steel bridge with concrete abutments over the Waddick drain will cost \$900.

BRAMPTON, ONT.—The Copeland Chatterton Co., of Toronto, have purchased the Purcell property, near the G. T. R. station, as a site for their proposed factory in this town.

UXBRIDGE, ONT.—The Uxbridge Piano Co. have made a proposition to build a large stone factory in Brooke. They ask for a free site, exemption from taxation and a loan of \$10,000.

CALGARY, N. W. T.—The City Council have offered E. M. Moyer & Co. exemption from taxation for seven years on condition that they establish a factory for the manufacture of school furniture.

BRANTFORD, ONT.—The Brantford Electric & Operating Co. are seeking a ten-year renewal of their lighting contract with the city and offer to install the alternating enclosed arc system.

ST. JOHN, N. B.—Father Donovan, of the Church of the Assumption, has announced that it is proposed to erect a new edifice, of brick with stone trimmings, to cost between \$30,000 and \$40,000.

CHARLOTTETOWN, P. E. I.—The Dominion Government are asking for tenders up to November 18 for the reconstruction and extension of wharf at Grand River, Prince County. Plans at the office of J. B. Hegan, this city.

STURGEON POINT, ONT.—Dr. Ryerson, of Toronto, J. D. Flavell, of Lindsay, and others, have formed a company to build a modern summer hotel at Sturgeon Point. In addition to the hotel a number of cottages will be erected.

ST. JOHN'S, NEWFOUNDLAND.—The construction of a gravitation water supply system by day labor, under John Ryan, City Engineer, is making good progress. John Galt, C.E., of Toronto, is the designing and consulting engineer.

RAT PORTAGE, ONT.—The Bertram Engine Works Co., of Toronto, are asking for tenders up to 15th inst. for carpenter and joiner work of a 95-foot steel tug to be built at Keewatin, Ont. Plans at the office of the Rainy River Navigation Co. in this town.

WELLAND, ONT.—The R. McKie Buggy Co., of Plattsville, Ont., are ne-

gotiating to establish a factory here.—The Barcolo Bed Manufacturing Co., of Buffalo, are considering the acquisition of the Frost factory building for the purpose of establishing a branch.

GLACE BAY, N.S.—The town council have passed a resolution to issue \$60,000 of debentures for permanent street improvements, an additional \$40,000 to be issued at a later date. The construction of a bridge across the Caledonia brook has also been authorized.

VICTORIA, B. C.—The Victoria Lumber & Manufacturing Co. intend making improvements to the Tsolum and Courtenay rivers for logging purposes. Pearson & Jewell will make improvements to Little Sand and McBayne creeks, East Kootenay, for similar purposes.

EMERSON, MAN.—John Galt, C.E., of Toronto, has examined the Rosseau River, twenty miles from here, and has reported favorably on it as a source for economical development of water power in combination with long distance electrical transmission.

PETERBORO, ONT.—The Peterboro Radiator & Boiler Co. has been formed here to manufacture the Sturgeon heater, invented by R. G. Sturgeon.—The Council have passed a by-law authorizing the issue of \$10,000 of debentures for purchase of a site for new armories.

PALMERSTON, ONT.—The system of sewerage is expected to be completed by the end of this month by the contractor, John Maguire, of Toronto, from plans of John Galt, C.E., of Toronto. Mr. Galt has also given the town approximate estimates for waterworks, which it is expected will be built next season.

MCPHERSON'S COVE, P. E. I.—Tenders are invited by the Department of Public Works, Ottawa, until Friday, November 18, for the construction of a wharf at this place. Plans at the office of H. B. Hegan, resident engineer, Charlottetown, and at the office of the Postmaster at Launching Place.

BURK'S FALLS, ONT.—The waterworks system, which is by natural gravitation from a small lake 3 miles from town, has been tested and found highly satisfactory. Four or five good 1-8 streams can be thrown easily 100 feet high. The work was designed by John Galt, C.E., of Toronto, and built by Mr. Conroy, contractor, of Peterboro.

HAMILTON, ONT.—The American Horseshoe Co., of Easton, Pa., have purchased 7 acres of land, known as the Holton property, near the smelting works, for the purpose of establishing a Canadian branch. They propose erecting a building 300 feet long.—Wm. Woolsey will build a residence on William street, between Barton and Birge street, at a cost of \$1,200.

EAST TORONTO, ONT.—Construction of waterworks and electric lighting is well under way. The machinery is now all let and it is expected that everything will be completed and in operation early next season. John Galt, C.E., is the supervising engineer.—The Toronto-York Railway Co. will build car barns on corner of Water street and Kingston road.

LONDON, ONT.—Herbert Matthews, architect, is preparing plans for a residence for E. Jeffrey, of this city.—A special committee has reported to the Board of Health on the question of providing a proper garbage system for the city.—It is stated that the Southwestern Traction Co. have decided to build their power house just west of Chelsea Green.—Steps will be taken at once to construct a brick pavement on King street, between Wellington and Ridout streets.

STRATFORD, ONT.—It is believed that a further enlargement of the Grand Trunk shops, in addition to the work now under way, will be found necessary in the near future.—The report of Willis Chipman, C.E., of Toronto, on waterworks extension, gives the following summary of cost: Ten wells and connections, \$5,000; sedimentation basins and grounds, \$13,000; filtration plant, \$20,000; pumping engine and buildings, \$20,000; boiler plant, \$5,000; meters, \$15,000; distribution system, 6 miles, \$30,000.—Surveyors are about to commence work on the proposed C.P.R. line from Stratford to Conestoga.

OTTAWA, ONT.—The residents of O'Connor street are in favor of the construction of a bitulithic pavement on that street.—The following building permits were granted last week: James E. Wilson, brick dwelling, north side Lisgar street, cost \$2,800; J. G. York, brick veneer dwelling, south side Florence street, cost \$2,600; John D. Robertson, brick dwelling, south side Fourth ave., cost \$1,600; George Tomlinson, brick dwelling, north side McLeod street, cost \$2,400; John E. Wilson, brick veneer dwelling, south side Lisgar street, cost \$4,200.—The Laurentian Club, incorporated a few months ago, have purchased the Langevin property, corner Slater and Elgin streets, and intend erecting an addition to the building.

VANCOUVER, B. C.—Frank L. Ballard, mattress manufacturer, 222 Hastings street east, has purchased a lot on east side of Westminster ave., between Powell and Cordova streets, and will next spring build a brick block thereon.—H. W. Smithson has purchased a lot at the corner of Westminster and Seventh aves., Mount Pleasant, on which it is his intention to erect next spring a building to contain two stores on the lower floor and flats on the upper stories.—The Edison Display Co. have secured options on a number of sites with the intention of building a modern theatre to cost upwards of \$70,000. Work will be started as soon as pending negotiations for a site have been concluded.—MacKenzie Bros. have purchased the steamer Venture and intend remodeling it.—The proposed extension of the street car line on Cordova street west will necessitate the reconstruction of 30,000 feet of pavement, at an estimated cost of \$15,000.—The Great Northern Railway Co. are about to build a line of railway from Liverpool, opposite New Westminster, down to Ladner, a distance of 12 miles.

MONTREAL, QUE.—The plans of F. Todd, landscape architect, have been accepted by the Parks & Ferries Committee for a look-out on the mountain. The structure will cost about \$19,000.—H. C. Stone, architect, has prepared plans for a six-storey warehouse, 120 ft. by 100 ft., also two-storey annex 112 by 68 ft., to be erected on Craig street for Lewis Bros., hardware merchants, 30 St. Sulpice street. The warehouse will be built of Montreal limestone, and will contain three freight and one passenger elevators and general offices of the company.—The following building permits have been granted: F. Alexander, one two-storey house, St. Hubert street, cost \$1,500; N. Depatie, one two-storey house, Christopher Columbus street, cost \$1,500; P. Ouintal, one three-storey house, Panet street, cost \$3,000; N. Pageau, two pair two-storey houses and one store, St. Catharine street, cost \$24,000 (C. Bernier, architect); Charles Meredith, one one-storey house, Pine ave., cost \$35,000 (E. & W. S. Maxwell, architects); Desnayers & Varin, alterations to house and factory, Alylion and Duquette streets, cost \$1,000.

WINNIPEG, MAN.—The city councils of Winnipeg and St. Boniface will

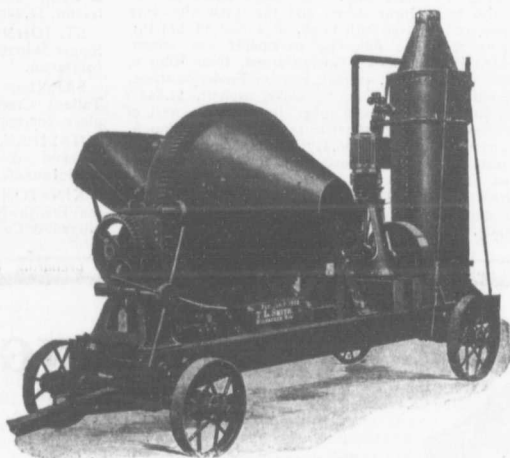
join in the erection of a bridge across the river.—The Dominion Government purpose making alterations to the customs house in this city and the present post office building will be utilized for custom purposes when the new post office is completed.—The council propose to undertake the construction of the following works:—Asphalt pavements, Henry avenue, from Main street to Isabel street, cost \$18,726; Dunsmuir street, from River avenue to Mayfair avenue, cost \$1,862; Harkness street, from River avenue to Mayfair avenue, cost \$2,470; Lendrum street, from Portage avenue to Preston street, cost \$6,195; St. James place, cost \$1,520; Kate street, from Notre Dame ave., to McDermott ave., cost \$4,690; Shore street, from Portage ave. to Broadway, cost \$4,025; sewer on Agnes street, from Sargent ave. to Wellington ave., and on Wellington ave., from Victor to Maryland street, cost \$4,100; sewer on Boyd ave., from Aikins street to Andrew street, and on Power street, from College ave. to Boyd ave., cost \$3,312; granolithic sidewalk on Wellington crescent and Bridge street, from Stradbrook place to Maryland bridge, cost \$9,487, and on a number of other streets. For some of the above works the City Clerk is taking tenders this week.—Lewis, Frieson & Potter, 392 Main street, want tenders for grading and sidewalks on three streets on the McIntosh and Bredin subdivisions, on the Bird's Hill road.—C. J. Brown, City Clerk, invites tenders up to Friday, 11th inst., for the supply of from 5,000 to 15,000 barrels of cement. Specifications at the office of the City Engineer.—W. H. Stone is calling for tenders for electric wiring of Free Press building.—S. F. & W. A. Peters have under construction a house on Croydon ave. for J. C. Chambers, cost about \$4,000.—J. H. G. Russell is preparing plans for the Ashdowa Co.'s new building.

TORONTO, ONT.—Geo. W. Gounilock, architect, has been instructed by the National Life Assurance Company to prepare plans and specifications for remodelling the Trust and Loan building at south-east corner of Toronto and Adelaide streets, including a two-story addition, at an estimated cost of \$35,000. The same architect is preparing plans for a residence to be built on Roxborough street to cost \$7,500, and for extensive additions to the American Watch Case Warehouse, King street, west, including the installation of a sprinkler equipment.—The aggregate value of buildings for which permits were issued in the month of October was \$602,531, as against \$437,810 in October, 1903. The total for the year to October 31 was \$5,166,020, an increase of \$1,410,763 as compared with the corresponding period last year.—The Central Press Agency have purchased the building of the Wrought Iron Range Co. on Pearl street, and will make extensive alterations thereto.—The trustees of the University of Toronto have selected the corner of Hoskin ave. and Queen's Park as the site for the new Household Science building to be erected by Mrs. Massey Treble. The new building, as planned, will cost about \$80,000 and will likely be erected early next spring.—The Bertram Engine Works Co., of this city, want tenders by November 15 on carpenter and joiner work for a 95-foot steel tug to be constructed at Keewatin, Ont.—The time for receiving tenders for the extension of the breakwater at Toronto Island has been extended to Thursday of this week.—The Royal Canadian Yacht Club have been given a renewal of their lease for 21 years, and will now proceed to erect a club house to replace the one burned last summer.—A committee appointed by the Directors of the Industrial Exhibition



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Association to report upon improvements, has recommended that new buildings costing \$300,000 be erected, as follows: Live stock arena, \$95,000; agricultural machinery hall, \$75,000; agricultural industries, \$55,000; machinery hall, \$15,000; poultry building, \$10,000; police station and hospital, \$10,000; press building, \$5,000; transportation building, \$10,000; stables and cattle pens, \$15,000; lavatories, \$10,000. A by-law may be submitted to the rate-payers to provide the necessary funds for the work.—The City Engineer recommends that a bridge with a span of 45 feet, and a roadway 10 feet wide, be constructed of reinforced concrete across the lagoon to Turner's Baths, at a cost of \$7,000.—The Toronto and York Radial Railway Co. has been formed, to acquire the suburban electric railways adjacent to Toronto. Wm. Mackenzie is president, and W. M. Moore general manager. The company contemplate carrying out a number of extensions and improvements, including extensions to Oakville, Jackson's Point and Unionville. Adequate station accommodation is to be provided at the C.P.R. crossing, head of Yonge street, and stations will also be erected at Richmond Hill, Aurora and Newmarket.—The City Engineer has reported upon the question of increased fire protection. He recommends the construction of a high pressure station on Harbor square, just west of Bay street, to be 100 x 72 feet, of brick, with travelling cranes, asphalt roof and concrete floor, the pumping plant to be installed to consist of 5 gas-driven engines. The water supply will be obtained from the Bay, and the discharge from the pumps will be made through a 20-inch main, ex-

tending from the pumping station along Lake street to Bay street, and up Bay street to Queen street. The laterals running east and west will consist of 12-inch mains, extending from Simcoe to Jarvis street. There will be 120 hydrants.—The City Council propose to construct the following works: Macadam roadway on Chestnut park drive, cost \$4,000; asphalt pavement on Bernard ave., from Spadina ave. to Walmer road, cost \$1,583; Albany ave., from Wells street to city limits, cost \$8,615; Gildersleeve ave., from Sumach street to east end, cost \$2,096; Mowat ave., from 524 feet south of King street to 176 feet further south, cost \$1,199; Harrison street, from Lakeview ave. to Dovercourt road, cost \$2,648; brick pavement on Fraser ave., cost \$3,371, and on Phipps street, cost \$1,906; also a number of concrete sidewalks.—The City Engineer has recommended that the track allowance on Queen street, between Woodbine ave. and the east city limits, be paved with vitrified paving blocks on concrete foundation, at a cost of \$15,690, and that the street car tracks be extended on Dovercourt road, from Bloor street to Van Horne street, and the track allowance paved with brick, at a cost of \$14,191. The following pavements are recommended: George street, from King to Duke, asphalt, \$3,570; Frederick street, from King to Duke, asphalt, \$2,851; Dundonald street, from 12 feet west of Yonge street to 13 feet east of Church, asphalt, \$6,477; Roxborough, from Avenue road 633 ft. east, \$5,688; Bleecker street, from Wellesley to Howard, \$9,027; Bank street, from Dufferin to Sheridan ave., \$2,504; Dovercourt road, from Bloor street to city

limits, asphalt, \$29,576; Gerrard street, from bridge to Broadview ave., bitulithic, \$6,443; Bismarck ave., from Park road to east end, bitulithic, \$3,216; Van Horne street, from Dovercourt to Bartlett ave., \$6,442. Sewers are recommended on Hallam street, from Ossington to Shaw, \$1,270; Roncesvalles, from Queen to Wright, from Wright ave. to Osborne, from Osborne to Constance, \$36,400.

#### FIRES.

Seed warehouse of Darch & Hunter, Dundas street, London, Ont., damaged to extent of \$10,000.—Salem cheese factory, owned by W. Latta and situated about three miles east of Colborne, Ont., totally destroyed.—Fire at Atwood, Ont., November 1, destroyed the Foresters' hall, Fullerton & Rose's offices, A. Morrison's implement store and R. M. Ballantyne's residence.—Asphalt plant owned by the city of Winnipeg, Man., partially destroyed, loss \$25,000.

#### CONTRACTS AWARDED.

WILKESPORT, ONT.—Construction of Pacific drain: Alex. Maitland, contractor, \$1,255.

ST. JOHNS, QUE.—Wharf for the Singer Manufacturing Co.: Mr. Trahan, contractor.

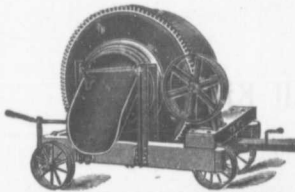
SARNIA, ONT.—Steel bridge over Taiford Creek: James Turnbull, this place, contractor, \$905.

HALIFAX, N.S.—Reconstruction of Pickford & Black's stone building: J. McInnes & Son, contractors.

KINSTON, ONT.—Metal ceiling in the British North American Bank: J. Nugent & Co., successful tenderers.



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**WIARTON, ONT.**—Hot water heating system in residence of Robert Young: J. W. Falls & Son, contractors.

**COLCHESTER SOUTH, ONT.**—Dolson Creek improvement work: Yens Olsen, contractor; contract price over \$10,000.

**RIDGEWAY, ONT.**—Summer cottage at Crystal Beach for Homer & Daubert, of Buffalo: Hanna Bros., contractors.

**EDMONTON, N.W.T.**—The Dominion Securities Corporation, Toronto, has purchased \$150,000 of Edmonton 4½ per cent. debentures.

**BUXTON, ONT.**—Construction of bridge over Government drain No. 2: Jenks & Dresser, of Port Huron, Mich., successful tenderers, \$1,223.

**MINUDIE, N.S.**—The contract for grading the Minudie Railway from River Hebert to this place has been awarded to W. Sutherland, of King's County.

**WINNIPEG, MAN.**—J. H. G. Russell, architect, has awarded contracts for the McClary block as follows: Masonry, Hindson & Davidson; carpentry, C. McBean. The contract for alterations in Dufferin block has been given to the Imperial Building & Plumbing Co.

**WINNIPEG, MAN.**—The City Council have decided to purchase both fire engines from the Waterous Engine Works Co., of Brantford, Ont.—The tender of R. D. Wood & Co. has been accepted for the supply of cast iron pipe and specials, as follows: 4-in., 6-in., 8-in., 10-in., 12-in. and 14-in. pipe, \$36.40 per ton; 18-in. pipe, \$40.50 per ton; specials, \$83 per ton, and specials with faced flanges, \$82 per ton, f.o.b. Winnipeg.—Dobson & Jackson are the successful tenderers for sewer on McGee street, at \$1,663, and on Beverley street and Sargent ave., at \$3,024.50.—The tender of H. M. Howell for purchase of \$100,000 of debentures has been accepted.

**CYLINDER FOUNDATIONS FOR HARBOR PIERS.**

Foundation cylinders for a 900-foot extension of the harbor pier at Folkestone, England, were sunk under uncommonly difficult circumstances. The cylinders in the outer row—that nearest the sea—are of steel, 11 feet in external diameter, built up in segments 5 feet deep, with inside flanges for connecting them together. The metal is 9-16 inch thick, and the cutting edge was stiffened by diaphragm plates in the usual way.

The cylinders were all lowered under pneumatic pressure to a depth of 22 feet below low-water line. The material pierced was very rough, being in part rock-

work apron tied in with old rails, and this obstructed from time to time the sinking of the cylinders. In addition to this, the site was exposed to the full force of the southwesterly gales, and special precautions had to be taken by binding the cylinders externally with heavy cross timbers, secured with strong wire ropes, until the cylinders had a good grip into the bed. For the sinking of the cylinders, a temporary inner airtight lining, 7 feet in diameter, was used, being securely bolted to the cutting edge of the permanent cylinder; the annular space between the inside wall of the one and the outer surface of the other was filled with shingle, with cast-iron kentledge on the top. After the cylinder had been sunk to its full depth, a seal of 4 to 1 concrete was made in the bottom, equal to the depth of the cutting edge (5 feet). Due time having elapsed to allow this seal to harden, the bolts connecting the inner tube to the cylinder were removed, and the air-pressure relieved, whereupon the inner tube was raised by the Goliath crane overhead, and the shingle allowed to fall in on the top of the seal, whence it was removed by a grab; and the cylinder was then filled with 6 to 1 concrete. An interesting precautionary measure was meanwhile taken, so that when the air pressure was withdrawn from

the interior, there would be no possibility of water leaking from outside, percolating under the cutting-edge and through the concrete seal, and finally destroying the cement. To obviate this, a hole 4 inches in diameter was made near the top of the permanent cylinder, and was connected by a pipe to the inside of the tube. While sinking operations were in progress, the inner end of this pipe was closed by a plate secured by tap screws. Immediately before the temporary air-cylinder was removed, and the pressure taken off, the screws were removed, enabling water to flow in from the top to counterbalance any flow by percolation under the seal, so that the water-pressure above and below was equalized. The extensive new works at Folkestone were recently fully described and illustrated in "Engineering," London.

C. E. Chantler, brick manufacturer, Penetanguishene, Ont., is advertising his business for sale.

**THE WEAK LINK!**

Contractors are particular that their cement is of a good quality and will stand the test. They use the best brick and stone to be had, but when it comes to mortar many think that any old SAND is good enough even if yellow with earth and loam. **Water Washed Sand** makes mortar 50 per cent. stronger and costs no more. Why not specify and use it?

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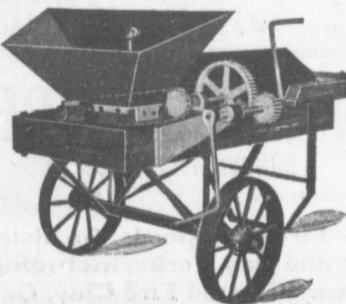
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Canadian Metal Company, Limited, incorporated at Victoria, B.C., capital \$1,000,000, to carry on a general mining business.

Northern Power & Lumber Company, Limited, Atlan, B. C., incorporated, capital \$50,000, to acquire the business of the Northern Lumber Company, of Atlan, and the British Columbia Power & Manufacturing Company, of same place.

Canadian Turbine, Propulsion Power & Light Company, Montreal, incorporated, capital \$500,000, to manufacture engines, motors, etc., and to acquire patents relating to the development and transmission of power. Promoters, Walter Rowbotham, engineer; N. P. Bryant, broker, of Montreal, and others.

Rainy River International Telephone Company, Rainy River, Ont., incorporated, capital \$250,000. Directors, D. Robertson, P. T. Roberts, J. A. Mathieu and others.

Welsh Tanning Company, Hastings, Ont., incorporated, capital \$200,000. Directors, J. Welsh, J. M. McGrail, T. H. Quigley.

**THE PRODUCTION OF ASBESTOS.**

So much asbestos is now being utilized for fire-proofing buildings that a summary of its production will prove of interest. Asbestos occurs in commerce in two distinct forms; one of these is an anhydrous silicate, known as amianthus, and consists of brittle fibrous hornblende, which is unaffected by acids, whereas the other form, known as chrysotile, or serpentine asbestos, is a hydrated compound which is attacked by acids, but is characterized by great elasticity of its fibres. The first form occurs principally in Italy and Austria, whilst the latter is found chiefly in Canada in the province of Quebec. Both minerals can be readily divided into fine fibres, which can be spun like cotton.

Canada produces the greater proportion of the world's supply of asbestos, the output for 1901 being 34,545 metric tons. The next country in order of production is Russia, with an output of 3,845 tons. In Canada asbestos is mostly obtained by quarrying, and the better varieties are picked out

by hand. The first class has fibres of over 1 1/4 in. in length, while in the second class the length varies from 1/4 to 1 1/4 in. The poorer qualities, known as "fibre" and "paper stock," are produced by mechanical dressing. The Danville Company pulverizes the waste asbestos, and, after the addition of a quantity of serpentine, the product is known as "asbestic"—a material which is now largely used for fire-proof buildings.

The production and value of the differ-

ent qualities of asbestos mined in Canada during 1901 was as follows:—

First crude, 2,083 tons, valued at \$180 to \$200 per ton.

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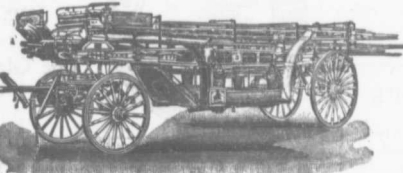
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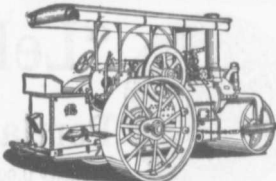
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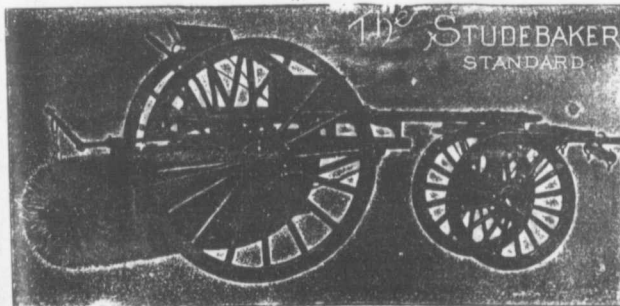
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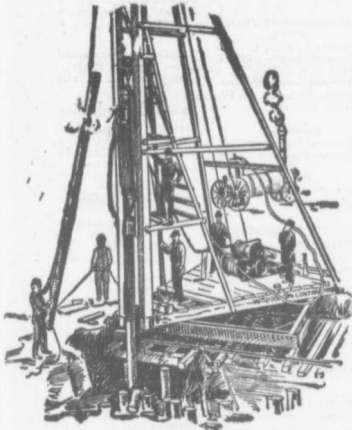
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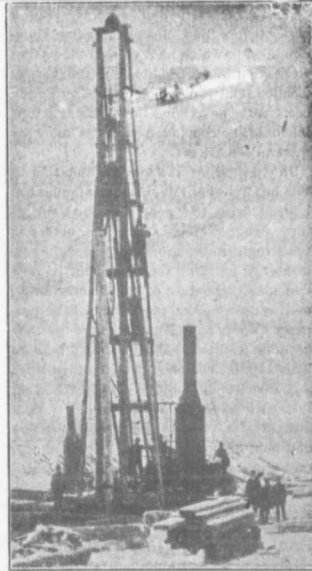
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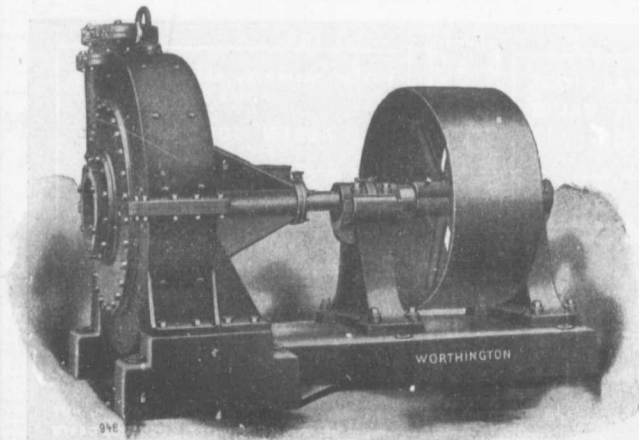
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## PAVING A CANADIAN CITY.

Mr. A. O. Graydon recently read a paper before the Union of Canadian Municipalities, in which he reviewed the paving work that has been done in the City of London, Ont., of which he is City Engineer. After describing the different materials used, he concluded with the following general remarks:

In considering the paving question of this or any other city, one must familiarize himself with the general conditions as they exist; by this I mean the nature of the street, its environment, its width, its levels for carrying the water off, its residents, or the nature of the business on it, etc., etc., also the capability of the property owners as to what frontage tax they are able to bear without being a burden. Then, again, you must consider the money available for keeping the pavements clean, for, as I have already informed you, it costs \$1,350 a year to keep three-quarters of a mile of asphalt clean. For instance, on a great many streets in this city which require to be paved in the near future the properties consist of wide frontages with comparatively inexpensive houses, and if costly pavements were put down it would practically be putting a mortgage on the properties; for instance, if a man has a frontage of 100 feet, and has a \$1,200 dwelling on it, and you construct a 27-ft. roadway at a cost of say \$2 a yard, means \$35 a year or a mortgage (by the way of frontage tax), of \$350. I use this illustration, as a great number of such cases (and many with greater frontages), exist throughout the city, as owing to its large

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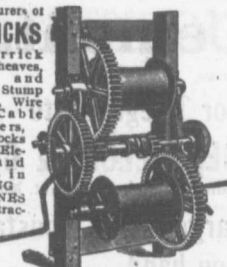
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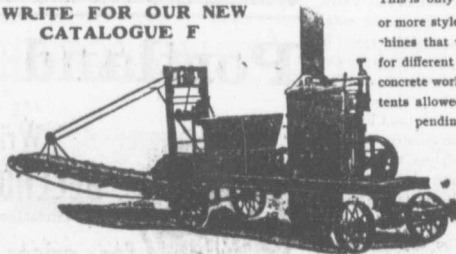
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area (4,478 acres), London is a city of wide frontages, and the population has not reached that stage which requires the utilization of all the frontage with revenue-producing buildings; more especially is this the case where the great majority of the mechanics and wage earners own their own homes, and where we have a large amount of available land not yet built on, although each day this is being quickly taken up and the city rapidly increasing in all directions. I desire here to say that I consider that much harm is done and the construction of many pavements defeated by too much zeal on the part of agents representing different classes of pavements and the property owners greatly confused and annoyed by the representation and requests made to them to sign petitions and contra petitions. I might instance that we have had in this city within the past two years at least three streets unpaved which without the action of such agents would now be paved, and to avoid and do away with this detriment to paving I think that the city council by a two-thirds vote should have the right to lay any class of pavement on any street on the recommendation of the City Engineer, and from this decision from the city council the property owners should have no appeal. I would urgently suggest that your association take steps to have an act passed in the Local Legislature to that effect, and I would also suggest that you use your influence to have an act passed in all the Provincial Legislatures compelling the use of wide tires.

I think you might discuss the question whether all horses and vehicle owners be charged a yearly license by which a fund could be created for the purpose of supplementing the yearly appropriation made to No. 2 Committee for street repairs. The appropriation for 1904 for grading, graveling and repairing 133 miles of streets in this city, besides laying crossings and repairing plank sidewalks, is \$16,500, a sum quite insufficient for the work to be done.

We have a peculiar case on Dundas street between Wellington and Waterloo streets which, as stated, was paved with cedar blocks long since worn out. This street has shops on the north side and the sidewalk is laid directly along the street line; on the south side is a factory, and the rest of the buildings are private dwellings and the sidewalk is put out 33 ft. from the property having a boulevard. The property owners on the north side want the pavement extended to the sidewalk, and they want the owners on the south side to pay one-half of this extra width of pavement on the north side, which they refuse to do, and the result is a deadlock and a disgraceful pavement in nearly the heart of the city. The owners on the south side petitioned for a pavement on their side, but the City Solicitor said it could not be constructed, and the City Council is helpless to act and their attempts at mediation have thus far failed. Under these circumstances, what would you suggest?

**CEMENT WALKS.**—The city has about 100 miles of these walks already laid. They are constructed with 7 inches of coarse gravel well rammed for a founda-

tion, then 5 inches of base concrete made 7 to 1 and 1-inch surface  $\frac{1}{2}$  to 1. The cost this year is nine cents per square foot. They are paid for by debenture, one-half the cost of the property frontage is paid by the owners and the other half and the street intersections paid by the city, where there is a corner lot and a sidewalk on both sides the city pays one-third of the depth of the lot. Cement curbs and combined cement curbs and gutters are paid for in exactly the same manner as the sidewalks. The contract prices for 1904 are as follows:

	Per Lineal Foot.
6-in. cement curb.....	24½c.
6-in. curb, 15-in. gutter...	47½c.
6-in. curb, 18-in. gutter...	29½c.
6-in. curb, 24-in. gutter...	53½c.

The city pay the street intersections only, except where a corner lot has a pavement laid on both streets and in such case the city pay one-third of the depth of the lot. Owing to the great width of most of our streets (132 ft.) the cost to the city is about one-third the total cost.

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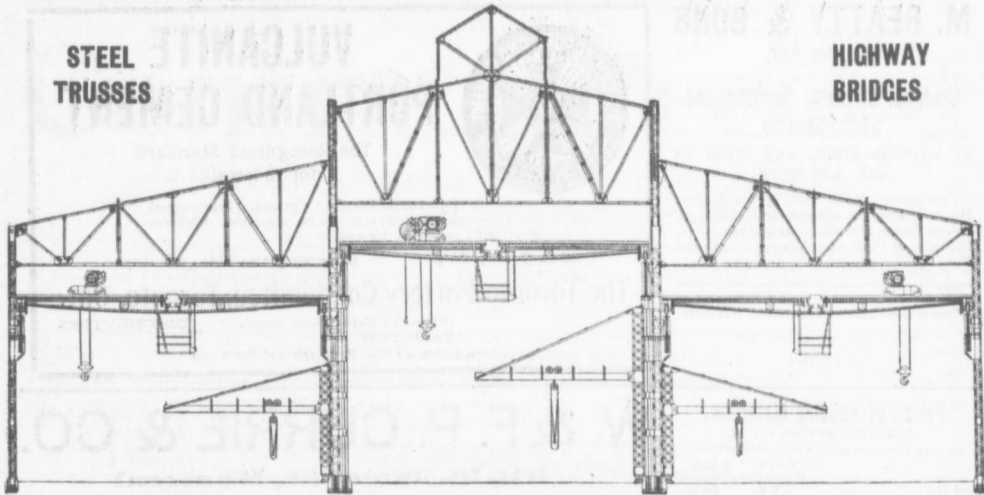


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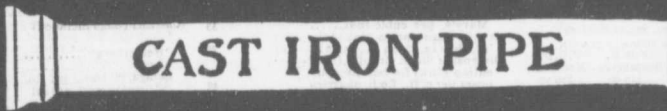
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| " 3           | 8 50                | 14 00           |
| Buff No. 1    | 15 00               | 20 00           |
| " 2           | 13 00               | 18 00           |
| Brown         | 20 00               | 25 50           |
| Roman Red     | 30 00               | 30 50           |
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(CORRECTED UP TO NOVEMBER 8TH)