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A WEEKLY JOURNAL OF
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EVERY THURSDAY

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. 8.

FEBRUARY 11, 1897

No. 2.

THE CANADIAN CONTRACT RECORD, PUBLISHED EVERY THURSDAY

As an Intermediate Edition of the "Canadian Architect and Builder."

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TENDERS FOR BRICK AND TILE SEWERS

Tenders will be received at the undersigned office up to 5 o'clock on

Thursday, the 18th February,
for the construction of 2,180 feet of 18 inch Tile Sewer on the Wabamunche Highway, and for 3,052 feet of Brick Sewer on King, Ridout and other streets.
The lowest or any tender not necessarily accepted.

A. O. GRAYDON, City Engineer,
London.
ALDERMAN E. PARNELL,
Chairman Board of Works,

NOTICE

Tenders will be received by the undersigned up to the 15th day of March, 1897, for Electric Lighting in the village of Exeter, county of Huron, Ontario. Specifications can be seen at the office of A. J. Rollins on and after the 12th February. The lowest or any tender not necessarily accepted.

By order of the Council,

M. EACRETT,

Exeter, Feb. 11th, 1897.

Clerk.

TENDERS

Tenders will be received by the architect, G. W. Gouinlock, 53 King Street East, Toronto, up to 12 o'clock, noon, on Saturday, the 20th February, for the lathing and plastering, copper and galvanized iron work required in the Temple Building, Toronto. Plans and specifications may be seen and all information obtained on and after Monday, the 14th February, at the office of the architect.

The lowest or any tender not necessarily accepted.

ORONHYATEKHA,
S.C.R., I.O.F.

CONTRACTS OPEN.

RUSSELLDALE, ONT.—Edward Cornish is preparing to build a new house.

ESSEX, ONT.—The Essex Council will raise \$14,000 by the issue of debentures.

DELTA, ONT.—Walter Beatty proposes rebuilding his store recently destroyed by fire.

PARDOVILLE, ONT.—T. L. Pardo, M. P. P., will erect a handsome residence here next spring.

GATINEAU POINT, ONT.—The village is considering the purchase of a steam fire engine.

MILVERTON, ONT.—The village will issue debentures for \$6,000 for paying the cost of a school house.

BROCKVILLE, ONT.—G. A. Allan, architect, will prepare plans for the reconstruction of the jail building.

HAVELOCK, ONT.—The village has asked the County Council for a special grant towards building a lock-up here.

AYLMER, QUE.—Alonzo Klock intends erecting five tenement houses on his property adjoining the residence of Chas. Devlin.

GRIMSBY, ONT.—The fruit growers of Burlington and Grimsby are considering the question of erecting a cold storage building.

HULL, QUE.—The sum of \$73,000 will probably be raised by the issue of debentures to pay off the debt on the court house and jail.

ANDERDON, ONT.—The Council of Anderdon will build a large bridge over the Canard river, on the 2nd concession of Anderdon.

FORT FRANCES, ONT.—Plans will be prepared for completing the locks here for the Dominion government. The cost is placed at from \$40,000 to \$50,000.

GALENA, B. C.—A company is seeking incorporation to construct a railway from the Upper Arrow Lake to the forks of the Lardeau creek, with branch lines,

PEMBROKE, ONT.—A by-law is being prepared to grant a bonus of \$20,000 to the Pembroke Southern Railway Company.—The C. P. R. will build a new station in the spring.

ST. JOHNS, QUE.—A bonus has been granted to the Rivington Cutlery Co., of Montreal, to establish a factory here. The sum of \$8,000 is to be expended on machinery.

HUNTSVILLE, ONT.—The Ontario government will be asked to sanction by-laws to issue debentures for \$20,000 for a waterworks system and \$5,000 for an electric light plant.

ARNPRIOR, ONT.—A motion to reconsider the by-law for putting in a system of sewerage was adopted by the council at its last meeting.—A. Reid will build a new residence this summer.

SHERBROOKE, QUE.—Three civil engineers have reported that the water supply mains are inadequate to furnish proper fire protection, and steps will likely be taken to increase the supply.

BUCKINGHAM, QUE.—The settlement of St. Malachi has grown to such an extent as to require a larger church, and the priest is taking steps to secure the erection of a brick and stone structure.

TRAIL, B. C.—It is said that there will be constructed two bridges across Columbia river, one at Robson to connect with Columbia and Kootenay, and the second at Trail to connect with electric railway to Sayward.

HARRINGTON, ONT.—Tenders are asked by R. G. Murray, Fairview P. O., until the 18th inst. for erecting a brick manse in this village. Plans may be seen at the office of R. Banks Barber, architect, Stratford.

CHATHAM, ONT.—C. R. Oldershaw, architect, has prepared plans for an office building for the proprietors of one of the newspapers, to cost about \$4,000, and for a stable to cost \$3,500. The work will be proceeded with in the spring.

BRANDON, MAN.—The City Council is now calling for tenders for a bridge across the Assiniboine river on 1st street, to be Howe truss, wood, 3 spans, each 80 feet, from plans prepared by W. H. Shillinglaw, City Engineer.—A sewer to the General hospital will be built this spring, 3,600 feet in length.

FREDERICTON, N. B.—The New Brunswick Telephone Company will construct a telephone line from Fredericton to Woodstock this summer.—There is a probability of a biscuit factory being erected by H. B. Spragg.—Hale & Murchie intend building a new chimney for the purpose of burning refuse, wood and sawdust from their mill.

ROSSLAND, B. C.—A large Montreal syndicate have almost completed arrangements for the immediate installation of a cable car system, and it is supposed the work of construction will commence during the present month. The plant will

be located at the corner of Thompson avenue and Spokane street.

REVELSTOKE, B. C.—The new C. P. R. hotel here is to be enlarged at an early date.

RIDGETOWN, ONT.—There has been \$15,000 subscribed towards rebuilding the Diamond mills here.

KASLO, B. C.—The Sisters of Charity offer to erect a \$40,000 hospital provided the town gives them a free site and \$3,000 in cash.

ST. CATHARINES, ONT.—The Welland Power and Supply Canal Co. are seeking an extension of time for the commencement of their work.

RICHMOND HILL, ONT.—A meeting of ratepayers was held on Monday last to consider the selection of a site for the new High school building. No decision was reached.

NELSON, B. C.—The Consumers Water Co. are issuing debentures for \$50,000 for the purpose of extending the water system by means of a direct supply from the Cottonwood-Smith creek.

CHATHAM, N. B.—A new town hall is to be built here during the coming summer, the building to be of brick. Prospects are good for the erection of a new brick block here in the spring.

WINDSOR, ONT.—The South Essex Electric Railway Company are applying to the Ontario legislature for power to build an electric road from Windsor to Sandwich, thence to Amherstburg, Kingsville and Leamington.

PORT ARTHUR, ONT.—Application will be made to the Ontario government for an act empowering E. S. Jenison to improve the water privilege at the Ecarte Rapids and Kakabeka Falls by erecting a dam and other improvements, and to transmit electrical energy.

RAT PORTAGE, ONT.—The Hillard House is to be remodelled, at a cost of \$20,000. The Queen's Hotel is also to have a couple of stories added to it, at a cost of \$10,000.—Plans for the building of a large addition to the Central Hotel are being prepared by Barber & Barber, architects.—Tenders are being asked for additions to the Cloughhead block.

WOODSTOCK, ONT.—The Ontario government will be requested to grant financial assistance to the Tilsonburg, Lake Erie and Pacific railway, for the proposed extension from Tilsonburg to Woodstock or Ingersoll, the construction of a steam ferry boat line across the lakes to connect with one or more of the great ports in the United States, and the construction of such works at Port Burwell as will make it a Canadian harbor and port of consequence and importance.

PORTAGE LA PRAIRIE, MAN.—The congregation of Knox church have purchased a site for their new building, which will be erected this summer.—The Town Council have secured the services of the hydraulic engineer, Mr. J. T. Fanning, of Minneapolis, to examine into the details of the river damming and slough flooding project here.—Plans are desired from architects for a Presbyterian church, to cost \$12,000, exclusive of seating and heating; brick, with stone foundation, Sunday school room in basement. A premium of \$100 is offered for the accepted design, which must be received prior to the 24th inst.

ST. JOHN, N. B.—A bill has been presented to the Maine legislature offering any railroad company \$25,000 subsidy to build a bridge for travel and railroad purposes over the St. John river at Fort Kent, on Maine side of the river, connecting with Clair on New Brunswick side.—The municipality of Windsor, N. S., has asked Mr. H. H. Mott, architect, of this city, to furnish plans for a new brick school house of large size, to be erected

during the coming summer.—Judge Ritchie's house, which was gutted by fire about two months ago, will be rebuilt this spring, at a cost of about \$3,500.

HALIFAX, N. S.—Cragg Bros. & Co. have purchased the property at the corner of Barrington and George streets, and have in contemplation the erection thereon at an early date of a large marble-front building. The plans have not yet been completed.—The City Engineer has presented a report on the improvement of the streets.—The Dominion Eastern Railway Company has been incorporated.—The Acadia Pulp and Paper Mills Company has been incorporated, with a capital stock of \$550,000. Among those interested are Hon. Alfred G. Jones and B. F. Pearson, of this city.—It is reported that plans for the construction of a new barracks have been completed.

LONDON, ONT.—The Free Press is urging the erection of a Normal school in this city.—J. K. McDermid, secretary of the Building Committee, will receive tenders until the 16th inst. for the erection of a Baptist church in South London, from the plans of Messrs. Burke & Horwood, architects, Toronto.—The Board of Education will consider the question of erecting a new kindergarten school.—Ed. Howie will build a story and a half brick veneer residence on Queen's avenue.—Tenders are asked by the City Engineer until Thursday, the 25th inst., for from 100 to 500 cords of stone for breaking in the stone crusher.

QUEBEC, QUE.—The interior of the sacristy of the Basilica is to be reconstructed under the supervision of Mr. G. E. Tanguay, architect, who is preparing the plans.—The re-building of the Quebec Exchange building is in contemplation by the Board of Trade of this city. A committee of the board will value the property and ascertain the cost of the changes proposed.—Berlinguet & Lemay, architects, will prepare plans for a church to be built in Prince Edward Island, situated a little distance from Charlottetown.—Jos. P. Ouellet is preparing plans for the reconstruction of the Roberval Convent. Work is to commence as soon as plans are completed, about the first of March.

PETERBORO, ONT.—The County Council has recommended that several townships join together in the purchase of a stone crusher.—At the last meeting of the County Council the warden was instructed to award the contract for repairing Hope's bridge, in the township of Otonabee. The County Engineer was also instructed to prepare plans and invite tenders for both a wooden and iron bridge, with stone pier and abutments, to replace the one known as Preston's bridge. The Bridge Committee recommended that no action be taken with respect to building a new bridge over the river Ouse, in the township of Asphodel, in lieu of the present steel bridge, except on terms stated in minutes of special standing committee on roads and bridges.

WINNIPEG, MAN.—The Lake of the Woods Milling Company will erect an elevator adjoining their warehouse in this city.—The Committee on Works has recommended that pavements be constructed on the following streets: Cedar block pavement on Logan avenue, cost \$4,000; asphalt pavement on Princess street, cost \$62,000, cedar block pavement on Main street, from Portage avenue to Graham avenue, cost \$6,700; on Main street, south from Main street bridge to River avenue; River avenue, from Main street, south to Osborne street, and Osborne street, from River avenue to the Osborne street bridge, macadam with stone curb, cost \$27,000; macadam pavements on Notre Dame avenue, cost \$13,216; William avenue, cost \$14,439; Donald street, cost \$11,363; Nena street, cost \$10,726; Dunsmuir street, cost \$1,120;

Mayfair avenue, cost \$5,336; Dufferin avenue, cost \$10,217; Selkirk avenue, cost \$10,554; Salter street, cost \$3,943; Lilly street, cost \$4,000; Henry avenue, cost \$1,900; Maple street, cost \$2,100; Euclid street, cost \$11,200; Gomez street, cost \$1,000.

MONTREAL, QUE.—A movement is on foot to improve the fire brigade by the addition of an electric fire engine, electric motor and pumps to be mounted on a car run on the street car rails, the power to be supplied from the trolley wires.—The Committee of Management of the Sailors Institute have secured the building at the corner of Commissioners street and Place Royale, known as the Montreal House, and will have the interior refitted for the requirements of the Institute. Upwards of \$25,000 will be expended thereon.—Mr. A. C. Hutchison, architect, has invited tenders for a residence to be erected on Dorchester street for Mr. Wm. Rutherford. Mr. Laforest, superintendent of the Water Department, estimates that the repairs to the reservoirs will cost upwards of \$150,000.

HAMILTON, ONT.—There is talk of building an electric road to Bartonville, over the King street road, connecting with the Hamilton street railway tracks.—The city solicitor has written to the Board of Works that the bridge over the Grand Trunk main line should be strengthened.—T. Beasley, city clerk, asks tenders until Tuesday, the 16th inst., for inch boards, plank, scantling, crossing timbers and cedar posts required during the year.—Mr. A. D. Stewart is advocating the erection of an addition to the hospital for the use of the nurses when not on duty.—The City Clerk asks tenders until the 15th inst for 1,460 bushels of lime and 16 tons of alumina.—E. B. Patterson has taken out a building permit for a two-storey brick dwelling on Hannah street, between Kent and Locke, for James Hull, to cost \$1,200.

OTTAWA, ONT.—The Department of Public Works invites tenders until the 19th inst. for the reconstruction of the breakwater at Goderich. Plans at above department and at office of H. A. Gray, Confederation Life Building, Toronto.—The Village Council is seeking information regarding fire protection.—The J. J. Fanning Company is seeking incorporation to deal in grocers' and druggists' supplies, etc., and to erect and operate mills.—The Ottawa East Public School Board will probably select a site at the next meeting of the Board.—A new bridge to replace the Maria street structure will likely be constructed this summer. Mr. J. R. Booth will be asked to contribute towards its cost.—The Building Committee of the Public School Board has recommended the following appropriations: For school site in Wellington ward, \$2,768; for school site in St. George's ward, \$4,475; for a new four room school in St. George's ward, \$14,375; for a new four-room addition to Archibald street school, \$13,000.—A petition is being circulated asking the council to pave Wellington street, between Bank and Bay streets, with scoria blocks or Massillon brick.

TORONTO, ONT.—Mr. Kivas Tully, C. E., has prepared plans of a scheme for connecting the island with the main land by means of a tunnel.—Tenders are asked by W. J. Douglas, town clerk of North Toronto, until 4 p. m. to-day (Thursday) for sinking a test well at the waterworks.—Geo. W. Gouinlock, architect, is taking tenders this week for lathing and plastering, copper and galvanized iron work required in the Temple building.—Among the applications for incorporation to be made at the next session of the Ontario legislature will be the following: Toronto Radial Railway Company, to purchase the franchise of the Toronto Belt Line Railway and to convert the road into an

electrical system, Ingersoll Radial Railway Company, to construct electric railways from Ingersoll to adjacent towns, Fort Erie Electric Railway Co., to increase capital stock of \$250,000, and to extend the line; Lanark County Electric Railway Co., to build an electric road from Perth to Lanark; Desbarats and Northern Railway Co., to operate a line in Algoma; Fort Frances and Pacific Railway Company, to construct a road in the Rainy River district.—The plans of the Goderich breakwater are on view at the office of H. A. Gray, Confederation Life Building.—The city of Toronto is seeking authority from the Ontario legislature to issue debentures for \$70,000 for improving the waterworks system by laying a six-foot conduit pipe from the shore crib near the lighthouse to the bell buoy south of the island; \$55,000 debentures for building an overhead traffic bridge on York street; \$200,000 debentures for completing the new court house and city hall buildings, and \$130,000 debentures for widening the Queen street subway.—The City Engineer has submitted a list of all the worn-out macadam roadways in the city, comprising 119 streets, having a total length of 168,184 feet, or 31.85 miles. A list of worn-out cedar block pavements comprising 168 streets, having a length of 201,541 feet, or 38.17 miles, has also been prepared.—A building permit for a new shop at 444-6 Yonge street, to cost \$1,800, has been issued to William Davies & Co.—Application will be made to the Ontario legislature for incorporation of the Mineral and Timber Electric Railway Company, to build a railway between Chelmsford and Sturgeon Falls, with extensions, and to supply electric energy for light, heat and power purposes.—The Court of Revision held a meeting on Tuesday last to confirm the assessments for the following works. Sewer on Gerrard street, from Yonge to Church streets, and on Adelaide street, from Bay to York streets; cedar block pavements on Carleton street, from Parliament to Sumach; Buchanan street, from Yonge to Teraulay streets; brick pavements on Leonard avenue, from Nassau street to Bellevue place, and Bellevue place to College; a concrete sidewalk on Bloor street, from Yonge to Jarvis street. An asphalt pavement is asked for on Shaw street, from King to Queen streets.

FIRES.

The grist, saw and shingle mills of John Roddick at Lyndhurst, Ont., were destroyed by fire on Monday last. The loss is \$8,000, with no insurance.—Two wooden buildings at Wallaceburg, Ont., were burned last week. The loss is small.—John Handeraud's residence at Webbwood, Ont., was destroyed by fire last week. It will be rebuilt at once.—The residence of James Stevenson, at Blenheim, Ont., was burned on the 29th ultimo.—A Kirk & Co.'s store at St. Andrews, N. S., has been burned. Loss \$8,000; insurance \$4,000.—The Ottawa Hotel at Alexandria, Ont., was damaged by fire on the 8th inst. to the extent of \$1,000, covered by insurance.—The residence of John L. Harris, of Moncton, N. B., was damaged by fire recently to the extent of \$3,000.—A disastrous fire occurred at Newcastle, N. B., on the 8th inst., destroying ten buildings. The list is as follows: Mrs. Wheeler's house, store and barn; buildings owned by H. Phinney and Jas. Robinson, M. P.; the town lock-up; a store owned by Haley Phinney; the store and dwelling house owned by James Doyle; the saloon and restaurant owned by P. Regan; store owned by Jas. Doyle; office of Era Publishing Company, owned by Geo. Stables, and the large fire engine house.—The Lorne Hotel, Indiantown, St. John, N. B., was destroyed by fire last Friday.—The Soho

cheese factory at Drumbo, Ont., a new building equipped with improved machinery, was destroyed by fire on the 9th inst. Loss, \$6,000; partly covered by insurance.—Three buildings at Renfrew, Ont., owned by Joshua Murphy, were burned on Tuesday last.

CONTRACTS AWARDED.

WINNIPEG MAN.—The tender of Kelly Bros., for 1,000 cords of cedar blocks at \$9.45 a cord, has been accepted.

WINGHAM, ONT.—The contract for erecting the Bannockburn bridge has been awarded to the Central Bridge and Engineering Company, of Peterborough.

AMHERST, N. S.—Rhodes, Curry & Co. have secured the contract to build an addition to the Frecker house at Freshwater. The work will cost about \$5,000.

BELLEVILLE, ONT.—Finlay Houston, the contractor for Mr. Wood's block, has sub-let the stone, brick and lumber contracts. Work will commence about the first of April.

KINCARDINE, ONT.—The contract for piers, for which \$15,000 was voted last session, has been awarded by the Dominion Public Works Department to Bowman & Bowman.

FREDERICTON, N. B.—The City Council have decided to close a contract with the F. C. Austin Mfg. Co., of Chicago, for the purchase of a road plant, including crusher, engine, roller, road machine and plough.

OTTAWA, ONT.—The Department of Railways and Canals has awarded the contract for new bridges over the Rideau canal at Burritt's Rapids and Newboro to the Central Bridge and Engineering Co., of Peterboro.

HAMILTON, ONT.—Tenders for nails were received by the Board of Works as follows. P. Bertram, wire nails, \$2.25, cut nails, 2.09; Hamilton Hardware Co.,

\$2.92 and \$2.20, Carpenter & Ramsay, \$2.20 and \$2, Ontario Rolling Mills, wire nails, \$2.35.

OXFORD, N. S.—A complete water system for this town will be put in during the coming summer, and the contract for all pipes and specials required has been awarded to the Londonderry Iron Co., Ltd., of Londonderry, N. S. Work will probably begin in April.

MONTREAL, QUE.—The contract for the stone, brick, roof and marble work of the new hotel and station of the C. P. R., to be erected at Dalhousie square, has been awarded to Messrs. Labelle & Payette. The contract for the interior work will probably be given out later.

KINGSTON, ONT.—Seven tenders were received for the supply of 1,000 feet of fire hose. The contract for 500 feet was given to A. Strachan, double ply, second grade, at 70 cents per foot, and that for the balance to the Gutta Percha and Rubber Co., of Toronto, at 75 cents per foot.

TORONTO, ONT.—Gurney heating apparatus has lately been placed in the new hotel building, corner Queen and Sherbourne streets, the Ontario Normal School, residence in Rosedale of Bert Thompson, and a residence in Rosedale owned by Mr. Haney. In the latter there were placed a pair of No. 8 Oxford hot water boilers. A Gurney Doric steam boiler has also been put in the Collegiate Institute on Harbord street.

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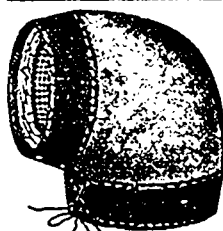
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MONTREAL WINNIPEG

FREIGHT ON GLASS.

Canadian importers of glass are protesting against the recent freight rates issued by the railways. A year ago the rate from points in Europe to the laid down points in Ontario was 27s. 6d. per ton for car lots or less. This year the rates are much higher. At some points west of Toronto car lots are quoted at 22s. 6d., from Montreal alone, while at points in Ontario north of Toronto as high as 37s. 6d. is demanded. To these figures are added the ocean rate to Montreal, which is now 12s. 6d., making the total rate about 50s. per ton.

The Grand Trunk Railway Company have just completed the building of a new derrick at Toronto for use on the road. It is constructed on a flat car 44 feet in length, and consists of two winches and two derricks, one at each end of the car. The derrick can be swung into any position required, and is intended to be used in replacing derailed engines or cars, enabling the operators to lift an ordinary engine out of a ditch and swing it onto the track. The derrick is constructed almost entirely of iron, and is the only one of the kind in use on the Grand Trunk system.

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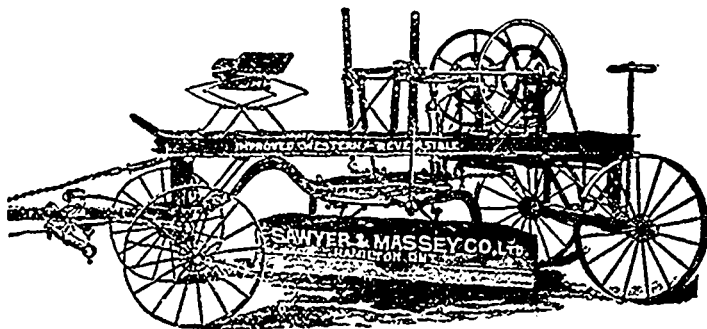


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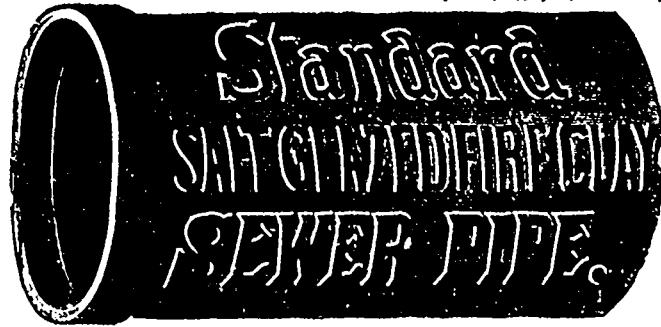
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MUNICIPAL DEPARTMENT

CLEANING SEWERS IN PARIS.

The main sewers of Paris are periodically cleaned by means of scrapers carried on boats or cars. These conveyances are also used for conveying visitors through the large sewers under the Rue de Rivoli and the Boulevards Sevastopol and Des Malesherbes. These exhibitions take place four times a year, in spring and autumn, and about 8,400 visitors are admitted yearly. Until 1894 these cars and boats were drawn by men, but the labor and expense were found to be so excessive that now the traction is done entirely by electric motors, taking current from accumulator batteries on the boats or cars. These main sewers are in section very similar to an ordinary tunnel; but in the floor is formed the rectangular channel for the sewage, while round the roof are fixed the water and compressed air mains, the telegraph and telephone wires, etc. The sewer under the Boulevard des Malesherbes is the largest. It is 18 feet 4½ inches wide, 10 feet high from floor to roof, and the sewage channel in the floor is 3 feet 5¼ inches deep and 9 feet 10 inches wide. Boats are used in this channel.

The other sewers are smaller, the channels in them being only 3 feet 11 inches wide and from 3 feet 11 inches to 5 feet 7 inches deep. In these cars are run, the flanged wheels of the cars running on the edges of the channel, which are protected by angle bars, and from the rails. The approximate weight of a train of five cars with 100 passengers on board is about 7 tons 12 hundredweight, and this travels at the rate of 3¼ miles per hour. The accumulator battery consists of 28 elements and weighs 14 hundredweight, and its capacity is 100 ampere hours, with a mean discharge of 25 amperes at 50 or 60 volts. The motor, which is series wound, develops 2 horse power and runs at 1,600 revolutions per minute, this speed being reduced to 80 by means of a pinion and wheel and chain gearing to the driving axle, the wheels being 15¾ inches in diameter on the tread.

The boats are towed by means of a chain sunk in the sewage channel, which is brought to the surface and passes round a pulley driven by means of a double reduction gear from the motor. The chain, by means of guide pulleys, makes three-quarters of a turn round the driving pulley, this pulley being a magnetic one, magnetized by means of two coils, one on each side of it, on the axle. Each passenger train consists of six boats, in the first of which are carried the accumulator battery and a towing apparatus, while in the last boat, which is a smaller one, there is another towing apparatus.

The battery consists of 60 elements, giving an output of 60 amperes for 2½ hours at from 98 to 125 volts. It is divided into two parts, which can be connected in series or parallel, as required. The motors run at 580 revolutions per minute, but this speed is reduced by means of the gearing, so that the boats travel at about 1½ miles per hour. The power required for this is from about 2 horse power to 5½ horse power, according as the boats are travelling with or against the current. The total length of the sewers open in this way to the public is about two miles, and they are lighted partly by lamps on the footpaths or by oil lamps on the boats.—Genie Civil.

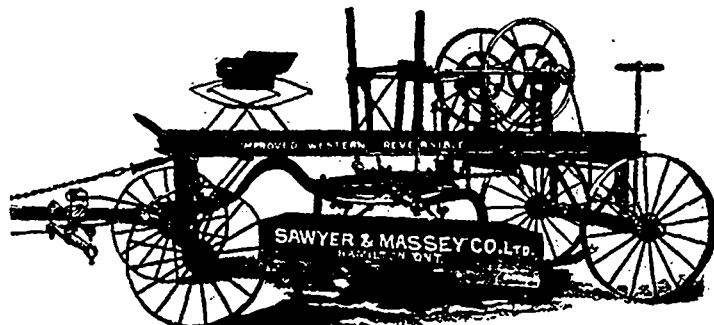
THE WESTERN REVERSIBLE STEEL ROAD MACHINE.

In keeping with the growing agitation in favor of securing the construction of a better class of roadways, manufacturers have lately placed upon the market various improved road-making machines admirably adapted to the requirements of municipalities. The Western reversible steel road machine which we illustrate herewith is manufactured by the Sawyer & Massey Company, Limited, of Hamilton, Ont., who claim for it many points of excellence, among which are the following:

The draft is direct, not nominal only, but positively and absolutely, for tongue

blade, enables the operator to always see his work ahead of and along the entire length of the scraper blade while at work; while the extensible axle entirely obviates any possibility of upsetting. The adjustments and changes are made by the operator from his place on the machine. The perfect proportions of the mechanism make all adjustments easy, which, combined with the erect, upright position of the operator for all classes of work, enables one man to operate the machine continuously without becoming tired. The great variety of angles and adjustments the scraper blade is capable of enables the machine to do the greatest variety of work necessary to be done, yet all is so simple in mechanical construction as to reduce to a minimum the probability of breakages, the first consideration having been to secure strength and durability. The axle can be extended quickly on either side, so that the wheel on delivering side of machine is no obstruction to the discharge of earth from the blade, and can be extended on both sides. It is the only direct draft machine having vertical adjustment of the blade. The various adjustments enable it to more easily and rapidly operate any kind of soil, insuring a lively movement of the earth, preventing banking and clogging incidental to other road machines, and aid in removing the draft. It will make a narrower and deeper ditch than any other road machine.

The above company also manufacture a full line of road machinery, including road scrapers, stone crushers, road rollers, plows, street sweepers, etc., and sell their machines on contract, providing that they shall be operated in the township buying them before settlement shall be required.



WESTERN REVERSIBLE STEEL ROAD MACHINE.

team as well as lead teams. The floating scraper blade cuts smoothly and evenly, and yet is not so rigid as to break machine or stop team when striking obstructions. It has no inclination to suck or dive, and while adjusted so as to relieve itself, if teams are pulling too hard, it can be easily held to its work by the operator. The wheels passing over the irregularities of the road, do not affect the evenness of the cut or the position of the scraper blade. The frame being of the best channel steel, it will adapt itself to the motion of the wheels in rough work, yet not affect the working parts of machine nor prevent the blade from reversing, the frame always springing back to its proper shape as soon as wheels are brought back to their normal position. The positive means of reversing scraper blade enables the machine to be reversed when in any position and while in operation. It has a circle within a circle, which is the strongest possible mechanical construction for the reversible feature. The height of the machine gives greatest possible elevation to the scraper

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LEGAL DECISIONS AFFECTING MUNICIPALITIES.

KINGSTON V. DRENNAN.—The judgment of the Supreme Court of Canada in *Kingston v. Drennan* rendered last week, is of interest in the cities and towns of Canada. Miss Drennan, who was a student at college, slipped on the pavement on the main street, fell and injured herself. It was shown that the merchants levelled the snow and ice opposite the stores down to the granite pavement, but nobody touched the crossings, so that as winter wore on the crossing came to be several inches higher than the sidewalk, and pedestrians were liable to make a swift descent from one to the other. This was how Miss Drennan's accident came about, and the Supreme Court says that the corporation is responsible for such a state of things. The slippery character of the granolithic pavement is bad enough in itself; to level the street crossings would cause inconvenience to vehicles; there is no reason why, in places where snow and ice accumulate on the street, the snow on the stone pavement should not be left alone after the loose top is shovelled or ploughed-off.

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CONDITION OF THE MARKET.

TORONTO: In another column reference will be found to the reduction which has been made by the Canadian nail manufacturers in the price of wire nails. The difference will amount to about 10 per cent. of the cost. As a result, probably, of the reduction, there has been an improvement in the demand. In cut nails business is quiet. In general the metal trade shows little activity. A fair trade is reported in window glass, and prices are held firmly. Cement, firebricks and paints and oils have not changed.

MONTREAL: The spring business has not yet commenced to move, and consequently builders' supplies are quiet. A change has been made in prices for pure white lead. The cement market is featureless, and stocks ample to meet all requirements until the fresh arrivals in the spring. There is some inquiry on import account for tin and Canada plate, and a few scattering orders have been placed for glass, paints and oils, cut and wire nails, etc.

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B. M.

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Toronto. Montreal.

BRICK-W M

Table with 4 columns: Description, Toronto \$, Montreal \$, and another Montreal \$ column. Includes items like 'Common Walling', 'Good Facing', 'Pressed Brick, Per M', 'Buff', 'Roman Red', etc.

SAND.

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STONE.

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PAINTS. (In oil, per lb.)

Table with 4 columns: Description, Toronto \$, Montreal \$, and another Montreal \$ column. Includes items like 'White lead, Can., per 100 lbs.', 'Red lead, Eng.', 'Yellow ochre', 'Green, chrome', etc.

Toronto. Montreal.

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