

missioner, Claremont, Ont., until the 19th inst., at noon. Measurements, plans, and specifications, are to be prepared by the tenderers.

**SAULT STE. MARIE, ONT.**—The Ontario and Sault Ste. Marie Water, Light and Power Company ask tenders until the 21st inst., for the construction of a water power canal at Sault Ste. Marie.

**BROCKVILLE, ONT.**—A movement is on foot for the erection of a monument to the memory of the late John Page, chief engineer of canals.—Tenders are wanted for a supply of school furniture by the Public School Board.

**GUELPH, ONT.**—It is understood that the Building Committee of St. James' church have decided to build on the lot on the south corner of Paisley and Glasgow streets, and that negotiations are about completed for its purchase.

**LONDON, ONT.**—The city council has decided to call at once for tenders for several extensive pieces of block paving.—Mr. Fred Henry, architect, will receive tenders until the 16th inst., for the various works required in the erection of a factory building.

**SARNIA, ONT.**—At a public meeting held to consider the advisability of erecting a public hospital, a committee was appointed to solicit subscriptions and obtain general information of the expenses and other details with reference to the working of hospitals in different cities and towns.

**OTTAWA, ONT.**—The city council will submit to a vote of the ratepayers the proposal of a Toronto syndicate to construct and operate an electric street railway.—It is proposed to extend the Canadian Pacific Railway three miles down the river to the lumber piling grounds.—The proposed new edifice for the congregation of Grace Church will be erected on the corner of Elgin and Somerset street in stone. It will have entrance lobby across the front and corner tower and porch; nave 77 x 46 feet; transepts, 20' x 8' capable of being extended; chancel, 26' 6 in. x 22' 6 in. Choir room with organ loft over, opening into nave and chancel by arches; minister's vestry with vault; two furnace rooms in basement. The tower is 90 feet high. Design Gothic. It is proposed to spend \$12,000 at present; a school and parsonage will be built hereafter. Mr. H. James, formerly of Toronto, has been employed as the architect. Plans will be ready in a few days for tendering on.

**MONTREAL, QUE.**—The council has been asked to grant a site on the mountain for a new observatory.—The promoters of the elevated railway propose that it shall start at Lachine, run, via the upper Lachine road, to St. Henri, into St. James street, thence along St. James to Little Craig, along Craig either to Notre Dame at the jail or leave Craig at the East End and run over the houses in order to tap St. Catherine street, continuing along that as extended, into Maisonneuve.—The Board of Trade has appointed the following Committee to advertise for plans for the new building, arrange finances, etc.: Messrs. R. Archer, chairman; H. Montagu Allan, J. A. Cantlie, E. B. Greenshields, C. P. Hunt, E. Judge and R. Reford.—The estate F. X. Beaudry is about to erect a large building for stores and offices at the corner of St. Lawrence and St. Catherine streets. Messrs. Roy & Gauthier are the architects.—At a meeting of the congregation of Erskine Church it was decided to hold the land comprising the proposed site for a new church for the period of three months, when a full congregational meeting will be held to decide whether or not the enterprise shall be entered upon.

**TORONTO, ONT.**—A sufficiently signed petition has been sent to the Works Committee for the construction of a granolithic sidewalk 24 ft. wide, on the east side of Spadina Avenue, immediately north of Queen st.—The municipality of North Toronto intends to construct a water works system capable of supplying the needs of the town. It is proposed to construct a reservoir on the high lands near the town and pump the supply of water from a creek which has its source at springs east of Yonge st.—Plans have been completed by the architects of the Militia Department, Ottawa, for the proposed new drill shed.—A sub-committee of the Public School Board has been instructed to select a site for a new school in St. Mark's ward.—Mr. B. B. Osler, Q. C., has given notice that on Sept. 9 next he will in convocation move a resolution that the new law school building should be of a moderately ornamental character, with this accommodation. One hall with seats for 200, two lecture-rooms with seats for 100 each, a library, a students' reading room, cloak rooms, closets, four lecturers' rooms, principal's room and ante-room, two examiners' rooms. The heating to be independent of Osgoode Hall. The architect to submit plans next term, and the expenditure on building to be about \$50,000.—The completion of the Garrison Creek sewer from College to Bloor street, which has been delayed for three years owing to difficulty about the right of way, will probably soon be proceeded with.—The City Engineer recommends a new sewer on Davenport road at an estimated cost of \$10,500; a stone flag sidewalk on Yonge street between Queen and College streets at an estimated cost of \$15,070; the widening by six feet of the granolithic sidewalk on the west side of Spadina ave., between Nassau and Oxford streets; the construction by day labor of a scoria pavement in the King St. subway and the space between the street car tracks 3,000 feet easterly from Dufferin street at an estimated cost of \$48,982; the remainder of the roadway and the slopes of the subway to be paved with tamarack blocks on a concrete foundation at an estimated cost of \$8,880; and a stone flag sidewalk to be laid on both sides of the subway.—The following building permits have been issued: J. K. Kerr, alterations to Montreal House, King St. west, cost \$2,800; Sig. Francisca

Glionna, 2-storey and attic bk. dwelling, 118 Edward St., cost \$3,000; A. Willis, pair 2-storey and attic bk. dwellings, west side Jarvis St., south of Carleton St., cost \$8,000.—A sub-committee has been appointed by the city council to select a site for a new fire hall to replace the one on Brock Ave.—A new iron fence is to replace the wooden one surrounding the Normal School grounds, and a new conservatory is to be built.—A sub-committee of the city council appointed to consider the advisability of erecting a garbage crematory, has reported in favor of the immediate construction of a crematory capable of consuming one-third of the garbage.

### CONTRACTS AWARDED.

**WINNIPEG, MAN.**—Mr. Strivel, of this city, has secured the contract for the construction of 100 miles on the Calgary and Edmonton railway.

**MANITOU, MAN.**—Messrs. Wood & Co., Winnipeg, have been awarded the contract for the construction of the Hudson Bay Company's new store here.

**OWEN SOUND, ONT.**—The Owen Sound Stone Quarrying and Construction Co. have secured the contracts for the stonework for three bridges at Toronto, and for the stonework on the Credit Forks bridge.

**EAST TORONTO, ONT.**—Twenty tenders have been received by the Council for the Queen street and Pmc avenue improvement works. Messrs. Abbs & McKee were awarded the former contract and Michael Callahan the latter.

**ARNPRIOR, ONT.**—The contract for the erection of St. Andrew's church has been awarded to Mr. R. N. Willoughby, of Carleton Place, for \$12,980. Mr. Willoughby has sub-let the contract for cut stone to Messrs. Watson & Danlin, and for the woodwork to Messrs. McCreary & Whyte.

**LONDON, ONT.**—Tenders for the new steam boiler for the water works department were received from E. Leonard & Son, \$595; Stevens & Burns, \$775; John Abell, Toronto, \$528; Osborne-Worswick Co., Hamilton, \$585; R. Whitelaw, Woodstock, \$515. The contract was given to Leonard & Sons.

The Waterous Engine Works Co., of Brantford, Ont., are the successful tenderers for the six large boilers required by the Public Works Department of Ontario for London, three for Toronto and four for Orillia. The boilers weigh in the vicinity of eight to nine tons each, and are all locomotive boilers of new design.

**TORONTO, ONT.**—The tender of Wm. Stollery, amounting to \$2,100, has been accepted for alterations to the residence of the engineer at the high level pumping station.—City contracts have been awarded as follows: Sewers, J. H. McKnight, Fraser avenue, \$3,297; Pardee avenue, \$1,825; Brock avenue, \$2,075; Jefferson avenue, \$6,399. Wm. Catlin, Garrison creek sewer, \$29,645. A. J. Brown, Liberty street, \$3,927. Cedar block pavements, James McBean, Birch avenue, \$5,275; Roxborough street \$8,750. James Rogers, Thomson street, \$1,233. A. S. Knowlton, Barton avenue, \$794; Rush lane, \$865; Elmsley place, \$1,175.

### WIRE ROPE.

A wire rope manufacturing company gives the following hints: There are two kinds of wire rope manufactured. Ropes with nineteen wires to the strand are more pliable, and are generally used as hoisting ropes. Those with twelve or seven wires to the strand are stiffer and best adapted to guys, ferries, rigging and transmission purposes. Wire ropes are made of six strands, laid upon a centre of hemp or wire, the former being more pliable, and wearing better over small pulleys and drums.

Wire rope is as pliable as new hemp rope of the same strength. The greater the diameter of sheaves, pulleys and drums, the longer the rope will last.

For safe working load allow one-fifth to one-seventh of ultimate strength, according to speed and vibration. Speed increases the wear.

Wire rope must not be coiled or uncoiled like hemp rope. When not on a reel, roll upon the ground like a wheel, to prevent kinking.

To preserve wire rope, cover it thoroughly with raw linseed oil, mixed with vegetable tar, boil well, and saturate the rope with the mixture hot.

Galvanized wire rope should never be used for running rope. One day's use will wear off the coating of zinc, and the rope will soon begin to rust.

Too much care cannot be taken with the pulleys, sheaves and drums over which ropes are run. The grooves should be lined with well-seasoned blocks of hardwood set on end, rubber, leather, or some soft metal. Thus the life of the rope will be greatly lengthened, and greater adhesion secured than when the rope is operated over smooth and hard surfaces.

Iron ropes, operated under proper conditions, will give perfect satisfaction when the work to be done is not too heavy. Steel ropes should be substituted for iron when lightness is required, or when a greater strength becomes necessary. The object in substituting steel for iron is to decrease the wear rather than reduce the size of the rope. In ordering, the purpose for which the rope is to be used should be stated, also what kind of centre is desired, whether hemp or wire, and advice will be given.