

was appointed to proceed with the erection of the building as soon as the balance of the money required was subscribed.

**MITCHELL, ONT.**—Messrs. Whyte & Son contemplate erecting an addition to their pork factory this spring, to cost between \$15,000 and \$20,000.

**ST. JOHNS, QUE.**—At a recent public meeting it was decided to recommend to council to offer Messrs. J. & A. Macdonald a bonus of \$25,000 to aid in rebuilding their works recently destroyed by fire.

**PAISLEY, ONT.**—Mr. S. McArton, Reeve of this town, will receive tenders until the 30th inst. for the erection of a one span iron or steel bridge over the Saugceen river, north of Paisley, also for the superstructure of the same.

**NIAGARA, ONT.**—The additional grant of \$16,000 for High School purposes was carried last week by a vote of the ratepayers. This will enable the Board to erect one of the finest Collegiate Institutes in the province on the six acres of land purchased in Wesley Park for that purpose.

**BERLIN, ONT.**—Plans are being prepared for a new Evangelical Association church, which will be built here as soon as the weather will permit. The Town Council have granted permission to the Berlin and Waterloo Street Railway Company to change their present system to that of the trolley.

**AMHERST, N. S.**—Upwards of \$12,000 has already been subscribed towards the fund for the building of the new Baptist church. The required amount is \$30,000, but it is understood that building operations will be commenced as soon as the amount reaches \$20,000. The plans have been prepared by Mr. J. C. Dumaresq, architect, Halifax.

**CORNWALL, ONT.**—Messrs. Davis & Sons, canal contractors, are making preparations to commence work on the Cornwall canal. They have commenced to cut ice at the swing bridge, so as to enable them to build the pier for the new bridge as soon as the canal is emptied of water on April 16.

**WINNIPEG, MAN.**—The Bank of Ottawa have purchased a site on Main street adjoining their present premises and will erect a substantial bank building at once. The Dominion Government will make another loan of one million dollars for public buildings. Capitalists are negotiating with the Manitoba Government for aid towards building another railroad between Winnipeg and Lake Superior. It is understood the Manitoba government is favorable to the scheme and will bonus the line in the province to the extent of \$450,000. The directors of the Manitoba & Southwestern and Duluth & Winnipeg roads have it is understood, joined forces with the new company.

**HAMILTON, ONT.**—Mr. Thomas Beasley, City Clerk will receive tenders until Wednesday, the 22nd inst., for supplying lead pipe, cast iron pipe, ordinary castings, stop cocks, 2½ inch rubber hose, service brasswork, hydrants, pig lead and tanks for street watering wagons. Mr. W. A. Edwards, architect, has called for tenders for the erection of a new Sunday school building for the First Methodist church. The Board of Education has decided to erect a new Collegiate Institute and have appointed a committee to select a site for the same. Mr. S. E. Leather will erect a large residence on the Ferris property at the head of Queen street. The Sunday school building in connection with Knox church will be enlarged this spring.

**LITTLE CURRENT, ONT.**—The engineers who have been out for the last six months surveying the final location of the Manitoulin and North Shore railway have just completed their work and are now engaged preparing the plans and profiles, as the company purposes to commence building early in the spring. The road runs from the town of Little Current on the Grand Manitoulin in a north-easterly direction to Nelson station, on the Sault branch of the C. P. R. a distance of 40 miles. Only one bridge of 450 feet is required to connect the island with the main land. This road has been bonused by both the Provincial and Dominion Governments to the extent of \$6,200 per mile for 30 miles, and it is

promised by both Governments that the remaining 10 miles will be subsidized, which is expected this session.

**LONDON, ONT.**—The Free Library Board are asking for tenders for a site on which to erect the proposed new library building. The work of putting a large addition to the Grigg house will be commenced shortly. The addition will be 40 x 50 feet, three stories high with basement and will provide eight additional sample rooms, and sixteen bedrooms. The cost will be about \$1,000. The city engineer has issued the following permits: J. K. H. Pope, brick residence on Queen street South, London, cost \$2,500; Thomas Cousins, frame residence, 133 Bathurst street cost \$1,000. A deputation from this city recently waited on the Dominion Government to urge the necessity of replacing the present drill shed in this city by a new building. The Minister promised to give the matter careful consideration. The Canadian General Electric Company have had plans prepared for the erection of their power house on the property bounded by Thames street, Bathurst street, the river and the Grand Trunk Tracks. It will be 85 by 135 feet, and will have from 1,000 to 1,200 horse power boilers and engines, with the necessary dynamos.

**OTTAWA, ONT.**—We learn that ex-Ald Hutchison purposes erecting a very handsome residence this spring on the two lots at the corner of Concession and Queen streets. Messrs. Arnold & Calderon are preparing plans for a new residence for Mr. J. W. McKee, which is to be erected this summer at the corner of Elgin and Lisgar streets. Ex-Mayor McDougall purposes putting up several houses, costing about \$2,500 each, on the property known as block 29, west side of Cumberland street, adjoining the college grounds and in rear of the Waller property. Ald. Corry has purchased the Blackburn property at the corner of Rideau and Sussex streets, and will probably build thereon. Mr. Billings, assistant architect of the Department of Public Works, has gone to Grosse Isle to take in hand at once the alterations and improvements which are to be made in the buildings in connection with the quarantine station there. A deputation from Chatham and vicinity recently waited on the Minister of Public Works and asked for an appropriation to dredge out about ten acres of the harbor of Rondeau, so as to form for Lake Erie a harbor of refuge for distressed vessels. The building committee of the Y. W. C. A. have secured the lot on the south east corner of Maria and Metcalfe streets on which to erect their proposed new building. Mr. David Ranges, owner of the Grand Palace Hotel lately destroyed by fire, contemplates rebuilding at an early date.

**TORONTO, ONT.**—A conference was held last week between the Commissioner of Public Works for Ontario and a deputation from the City Council regarding the improvement of the Queen's Park. Some improvements were decided upon, and in all probability a fence similar to the one around the Horticultural Gardens will be erected. Messrs. Dick and Wickson, architects, have prepared plans for alterations and additions to warehouses at Nos. 9 and 11 Church street for Mr. John Leckie. At the Etobicoke Township Council meeting held last week, the Reeve was instructed to ascertain the cost of placing an iron or steel bridge over the Mimico river on the Lake Shore road. The Board of Works has decided to extend the Simcoe street sewer to the new windmill line, at a cost of \$2,850. A sub-committee has been appointed by the Property Committee to select a suitable site for the proposed new fire hall, to be located west of Bay street and south of Queen street, and which will take the place of the present Bay street structure. Mr. Timothy Eaton proposes to erect a woodenware factory on a strip of land which he has purchased on Westmoreland avenue. The Separate School Board, at a meeting held on Tuesday last, decided to erect a small school east of the Don, between Gerrard and Queen streets. Building permits have been granted as follows: Geo. Sheard 3 story bk. store and dwelling, n. e. cor. Yonge and McGill sts., cost \$4,500; J. K. Kerr, 3 story bk. additions to stores, 184 to 188 King st. w., cost \$5,000; Methodist Book Room, additions to building on Temperance st., cost \$5,500. Work has commenced on pulling down the buildings at the south-west corner of Agnes and

Yonge streets prior to the building of a block of stores. Mr. H. Harris is the architect.

**MONTREAL, QUE.**—Building operations will be commenced shortly on the erection of the O'Brien Memorial hall at Point St. Charles. The Harbor Commissioners will invite tenders until Tuesday, the 21st inst., for the supplying of 4,000 tamarac, or hemlock, railway ties, about 6,000 tons of steam coal, and the usual supply of iron, spikes, bolts, oil and stores required during 1893. The tenders to be addressed to the Secretary, Alexander Robertson. The Superintendent of Waterworks has recommended the purchase of a new pumping engine, of 10,000,000 gallons capacity, also three new boilers of the Heaney type, at a cost of \$70,000. The waterworks Committee has decided to report to council in favor of granting the sum required for the purchase of the same. The Superintendent has also recommended the purchase of 3000 tons of waterpipe and 300 tons of castings. Mr. St. George City Surveyor has completed the plans for a tunnel under Brock street from Craig street to the rivetment wharf. It will be 550 feet long 30 feet broad, to be paved with stone, lit with electricity and will cost about \$165,000. The Town Council of St. Lambert are considering the question of improving the roads and erecting a town hall. The Secretary of the province of Quebec board of health has written to the civic authorities urging the necessity for erecting at once a suitable hospital for the treatment of contagious disease. The promoters of the new gas company will apply to Parliament for incorporation shortly. Immediately after obtaining the same, the company will commence the erection of works. The Merchants' Electric and General Service Co. contemplate erecting a new building for their electric plant. Messrs. Resther, Resther & Vanier have been appointed architects for the new police station in Hochelaga ward, and Mr. E. Mann for the station in St. Lawrence ward. The Superintendent of Waterworks has asked the Committee for \$5,000 to drain the Lower Lachine road, \$1,260 for new bridges, and \$6,900 for a new angle wall at the entrance to the aqueduct. Mr. J. Haynes, architect, is preparing plans for Champlain school, to be built on the corner of St. Hubert and Mignonne streets for the Catholic School Commissioners. The cost will be about \$50,000. A. Gendron, architect, is preparing plans for two houses to be erected on Wood Ave. Cote St. Antoine, with red sandstone front, for Mr. Jas. Douglas; also for four houses to be erected on Seymour Ave. for Mr. Peter Gillespie, solid brick with stone front. J. A. P. Bulman, architect, is preparing plans for six houses and alterations in flats, St. Catharine street east; four villas, Cote St. Antoine; private hospital 60 x 130, a house on St. Denis street to cost \$6,000.

#### FIRES.

The first Presbyterian church at Upper Stewiacke, Colechester county, N. S. was entirely destroyed by fire last week. The Windsor hotel at Wallaceburg, Ont., has been destroyed by fire. Loss, \$3,000, partly covered by insurance. Henry & Oldham's general store, Rychman's tailor shop, Cornwall's dry goods and grocery establishment, the Knights of Labor Hall, and C. Jeffries' boot and shoe store at Beamsville, Ont., were destroyed by fire last week. The insurances on the buildings are as follows: Henry & Oldham, \$7,000; George Beatty, \$2,000; C. Jeffries, \$1,500. The residence of Mr. John Pringle, at Owen Sound, Ont., has been recently destroyed by fire, insurance on building and contents, \$1,000. Fire at Vankleek Hill, Ont., on the 9th inst., destroyed John R. McLaurin's store, Peter McLaurin's store and M. Anderson's residence. The leather-splitting establishment of Mr. Clement, of St. Roch, Que., has been damaged by fire to the extent of \$10,000. Mr. Henry Cross' general store in Fenella Ont., was burned on Saturday morning last, together with contents and dwelling, including the postoffice and telephone office. Loss about \$3,000, insured for \$2,400.

#### CONTRACTS AWARDED.

**LONDON, ONT.**—Messrs. Tambling & Jones and Mr. James S. Loney have received the contracts for the additions to the Grigg house.

**NAPANEE, ONT.**—Mr. George Cliff has been awarded the contract for the erection of a resi-

dence for Mr. S. C. Warner, lawyer, of this place. The cost will be between \$6,000 and \$7,000.

**TORONTO, ONT.**—The successful tenderers for improvements to Ashbridge's bay are said to be Mr. F. B. McNamee, of Montreal, for section 1 and Messrs. Shields & Henderson for section 2.

**WINNIPEG, MAN.**—The contract for the erection of an Episcopal parsonage at Middlechurch for Rev. Jas. Page has been let to Messrs. J. & A. McKinnon, of this city. W. C. Hesteron, architect.

**VALLEYFIELD, QUE.**—The Cotton Company have awarded contracts as follows in connection with the construction of their works: stone work P. Lyall, Montreal, steel girders, Dominion Bridge Company, Montreal; roofing, Mr. Campbell, shafting, Mr. John McDougall.

**GUELPH, ONT.**—Mr. John H. Redwood has secured the contract for the stone and brick work for Mr. E. R. Boller's new residence also for the erection of a residence for Mr. George Peck on Glasgow street, and for a double dwelling for ex-Ald. Kerr on Northumberland street.

**HALIFAX, N. S.**—The Board of Works has accepted the tender of D. Y. Stewart & Co., of Glasgow, for the supply of cast-iron pipe. The figures are as follows: 3-inch and 1½-inch spigot and faucet pipe, \$31.50 per ton, and \$32.05 for the remainder of the pipe, specials, \$49.55 per ton for spigot and faucet joints, and \$56.10 for remainder of joints.

**MONTREAL, QUE.**—Theo. Daoust, architect, has awarded contracts as follows: for a house for Estate L. J. A. Comte, to be erected on St. Urban Street: Carpentry, Alph Comte; stonework, O. Frappier; brickwork, P. Brunet; plastering, St. Denis & Dube; roofing and plumbing, E. Chanteloup; painting, Mr. St. Charles. Mr. J. D. Baker has been awarded the contract to supply his plaster board for the Montreal Court House.

**OTTAWA, ONT.**—Messrs. E. L. Perkins & Son of the Spark street Foundry, have been awarded the contract for fitting up the Government dredge Hull about being completed by M. P. G. Watkins, the ship builder, with the extra machinery and fittings. The figures are in the vicinity of \$50,000. The contract for the western terminal section of the Ottawa, Arnprior, and Parry Sound railway, has been let to S. R. Poulin & Co. The contract is for the last 20 miles of the road, at the Parry Sound end of the line. The contract for the construction of some sixty miles west of Arnprior has yet to be let.

## MUNICIPAL DEPARTMENT.

### STRENGTH OF VITRIFIED SEWER PIPE.

That ordinary vitrified sewer pipe has an ultimate strength to withstand an internal pressure of 100 lbs. per square inch is a statement which will, perhaps, surprise many engineers. Professor M. A. Howe, in a paper in the *Engineering News*, reports experiments showing this to be the case, but proving the weak point of such pipe, so far as bursting pressure is concerned, is the joints. The ordinary joint fails at about one-fourth the pressure which the pipe itself will withstand, but by using improved joints the author believes that their strength may be made equal to that of the pipe. These facts are especially important in view of the use of vitrified pipe for water supply conduits. In nearly every one of the few cases where vitrified pipe has been so used, great pains have been taken to keep the pipe on the hydraulic grade line so that it should not be subject to internal pressure. The detours which this makes necessary, however, may often do much to neutralize the saving over cast-iron or steel conduits. If vitrified pipe can be safely used under moderate pressure, its cheapness, cleanliness, and freedom from corrosion and incrustation ought to bring it into extended use for water-works conduits. Of course it is to be remembered in using such pipe under pressure that while its strength is considerable its resistance is very small. Hence it should never be used where a water hammer can come upon it. A steady pressure it can