

the corner of Princess and Jenima streets.—J. W. Cockburn, Chairman Committee on Works, will receive tenders until noon on Thursday, the 13th inst., for the construction of sewers on Catherine, Macbray, Austin and Carey streets, also for the supply of a quantity of six-inch sewer pipe.

MONTREAL, QUE.—Tenders are invited by the City Clerk until Monday next for the supply of 5,000 feet of fire hose, with patent coupling complete.—Mr. Justice Pagnuelo, of this city, has purchased three acres of land at Outremont on which he intends to erect a handsome residence.—The Health Committee has recommended the construction of sewers on Montcalm street, Champlain street, Christopher street, Mount Royal avenue, Visitation street, Dorchester street, between St. Denis st. and Beaver Hall, Citawa, College, Plessis and St. Charles Borromeo streets. The matter has been referred to the Road Committee for a report.—Mr. A. J. Corriveau has made a proposition to the Council of Cote des Neiges to build an electric street railway through the municipality.—The ratepayers of St. Henri have carried a by-law granting eight acres of land to Wm. Clendenning & Son, of this city, as an inducement to establish their works at that place. The firm state that operations will be commenced at once.—At a recent meeting of the Road Committee, it was decided to report in favor of proceeding with the *Bernie* street subway at once, and to prepare an estimate of the cost of paving Common street, between Black's Ridge and Jacques Cartier Square. A Gendron, architect, is preparing plans for stores and dwellings for estate of F. J. Durand, to be erected on Bleury street.—J. H. Macduff, architect, is preparing plans for a block of stores and dwellings, for Mr. B. Decarie, to be erected on the corner of Notre Dame and Borget streets. They are to be built of brick and stone and will be three stories.

TORONTO, ONT.—The Royal Dominion Mills, corner of Bay and Esplanade streets, are to be enlarged.—The management of the Toronto Technical School have decided to purchase \$300 worth of electrical apparatus.—A meeting of the shareholders of the Toronto and Scarborough Electric Railway Company was held recently, at which it was decided to proceed with the construction of the road at once, and if possible to give communication with the city to the residents of East Toronto and Little York this fall.—The Massey-Harris Company contemplate enlarging their works in this city.—F. W. Story, Islington, wants tenders for putting in about eight thousand tile, digging drain and refilling.—Tenders are asked until to-day for plumbing of twelve houses on Pacific avenue, south of King street.—Mr. H. A. Massey, of the Massey Harris Company, has purchased a lot on the corner of Victoria and Shuter streets on which he intends to erect a large building. Work will be commenced in the spring.—The corner stone of the new church of St. John the Evangelist, corner of Stewart and Portland streets, will be laid this afternoon. Rev. A. Williams is the rector of this church.—The following building permits have been granted: Green & Green, bk. stable and add. to Russell House, cost \$1,000; F. H. Herbert, Toronto Arcade, add. 74 & 76 Hazleton ave., cost \$2,000; Eden Smith, 14 King st. w., alterations and add. to Old People's Home, John street, cost \$2,500.—The Chairman of the Parks and Gardens Committee will receive tenders until Monday next for the erection of buildings and digging of a well on the new Rifle Range near Fort Credit. Plans at office of Mr. M. Hall, architect, No. 9 Victoria street.

FIRES.

The foundry of George Tait, rear 14 Defoe street, Toronto, was damaged by fire last week to the extent of \$3,500.—The Collins Hotel at Lambton owned by Mrs. Rafe Hodgins, of London and leased by Len Hall, was burned to the ground on Monday last. The loss on the building is placed at \$2,500, which is partially covered by insurance.—The monastery of Petit Clairvaux at Tracadie, N. S., was totally consumed by fire on Tuesday last. The loss is estimated at \$100,000, on which there was no insurance.—Grace Church, Ottawa, was destroyed by fire to the extent of \$10,000 during the past week.

CONTRACTS AWARDED.

PETERBORO, ONT.—The contract for the excavation and laying of a sewer from the General Electric Works to the river has been awarded to John Farley, of Toronto.

BRANTFORD, ONT.—Messrs. J. G. Pocach and Wm. Hancock, of Hamilton, have been awarded the contract for the masonry work of the Toronto, Hamilton, and Buffalo Railway bridge at this city.

ALLANDALE, ONT.—Mr. R. E. Fletcher has the contract for the erection of St. George's Church. It was designed by Messrs. Holgate & Lennox and when finished will cost \$3,125.

GUELPH, ONT.—Mr. J. E. Lewitt has let contracts as follows for erection of a two-story brick house, store and knitting factory on the corner of Nottingham and Devonshire streets: brick and stone work Taylor Bros., carpentry, Tait & Graham, plastering, J. J. Mahoney.

OTTAWA, ONT.—The City Council have accepted the following tenders for sewers: Wm. Kilt, Church street sewer, \$4.75 for earth and \$29.90 for rock per 100 lineal feet. P. Burns, St. Patrick street sewer, \$6 for earth and \$42 for rock. John Sullivan, Sussex street sewer, \$3 for earth and \$30 for rock.

LONDON, ONT.—The Board of Managers of the First Presbyterian Church have awarded contracts as follows for the erection of their new edifice: carpenter work, Wm. Tytler; brick and stone work, Mr. Martin, plastering, Gould & Stratford gas fitting, Smith Bros.; slating and galvanized iron, Douglas & Plunkett, Toronto, painting, R. Lewis. The total cost will be \$15,000.

TORONTO, ONT.—The Toronto and Niagara Navigation Company has closed a contract with the Hamilton Bridge Company for a steel steamer for passenger traffic between Toronto and Lewiston. The vessel will be 311 feet over all and 68 feet beam. Her capacity will be 2,400 people, and the cost will approximate \$250,000. It is said that she will be the largest boat ever built in Canada.

MONTREAL, QUE.—The Road Committee have awarded contracts for the paving of Amherst street. The asphalt work has been given to Jas. Cochran, at \$3.87 per sq. yard, and the block stone for the hill to F. D. Lawrence, at \$2.30 per sq. yard.—A. Gendron, architect, has awarded contracts as follows for two houses on Seymour avenue for Mr. Peter Gillespie: plumbing, heating and roofing, Brodeur & Lesard; plastering, St. Denis & Dubé; painting and glazing, O. Manihon; also for the painting and glazing of four houses on Mountain street for George Bishop to Pointe & Arcand.—D. R. Brown, architect, has awarded the following contracts for school house for Methodist church, Atwater avenue—brickwork, Thos. Malhot, carpenter work, John Morrison; plastering, Thos. Phillips; roofing, G. W. Reed; plumbing, Garth & Co.; painting, A. McAfee; for store on St. Hepr st. for Morgan Estate—brickwork, W. H. Boone, carpenter work, J. E. Mooney & Co., plastering, John Morrison & Son; roofing, Montreal Roofing Co.; painting, A. McAfee; plumbing, W. M. Briggs.—R. Findlay, architect, has let the following contracts: masonry and brickwork of a residence at Cote St. Antoine for Geo. Coniel, to Mr. Lewis, builder, masonry work of residence at Norwood, Back River, for J. Corbett, to Pecard & Mesnard, masonry of residence at St. Anne de Bellevue for Jas. Morgan.—A. C. Hutchison, architect, has awarded contracts as follows for a residence for Mr. Jas. Rodgers: masonry, Geo. Morrison & Co.; brick work, Wm. Travers; carpenter work, M. Tolarie; plastering, G. A. Cook; plumbing, W. M. Biggs; painting, Theo. Delage, roofing, Campbell & Co. The house to have a red sandstone front, and the ground floor to be finished in white wood.

Hamilton Smith, jr., in addressing the Iron and Steel Institute of Great Britain, recently remarked, "So far as rust is concerned, in my extensive experiments, I have only seen one notable instance where an asphaltum coat, properly applied, did not protect iron, and that was with a pipe over which a stream of water highly charged with sulphate of iron passed.

PRESERVING STONE.

The following formulas for metallic cements are given in *La Revue Pratique des Travaux Publics*: Oxide of zinc dissolved in a solution of the chloride has for a long time been used as a paint, and it serves as a base for the following cements: (1) Oxide of zinc, 20 kilogs.; pulverized Lorraine cement stone, 20 kilogs.; sandstone, 10 kilogs. This cement must be tempered by a liquid composed of hydrochloric acid, 22° Beaumé, 10 liters; water, 5 liters; zinc, 3 kilogs.; ammonium chloride, 0.5 kilog. (2) A cheaper cement can be obtained by mixing oxide of zinc, 10 kilogs.; pulverized Lorraine cement stone, 20 kilogs.; sandstone, 5 kilogs., and yellow ochre, 0.4 kilog. This cement is tempered with the solution just given, diluted with 5 liters of water.

For soft stone a cement is made of: Oxide of zinc, 10 kilogs.; Lorraine cement stone, 30 kilogs.; sandstone, 10 kilogs., and yellow ochre, 0.3 kilog.; or the following formula may be used: Zinc white, 5 kilogs.; plaster, 10 kilogs.; Lorraine cement stone, 10 kilogs.; and yellow ochre, 0.5 kilog. If an extremely strong cement is desired it can be prepared of oxide of zinc, 10 kilogs.; pulverized quartz, 15 kilogs. For the three last mentioned cements the liquid given above is used, only 10 liters of water are added instead of 5 liters.

These cements can be applied with a brush as a paint. Colors give good results, the coating adheres perfectly to the stone and gives it the appearance of a newly cut surface, and at the same time forms a protecting cover against the inclemency of the weather. The stone should be well cleaned before applying the paint, and if necessary two or more coats can be given.

Copperplating sheet-zinc for building purposes has recently, it is said, been tried with considerable success, the process being especially recommended where mechanical wear takes place. The zinc combines very well with the copper. The galvanic method of copperplating is advantageously used, but the zinc may also be coated with copper by ordinary means. In the first place the sheet-zinc is cleaned with soda from any adhering dirt and grease, and is also purified by a weak acid-bath from the covering of zinc-oxide. There are then dissolved in twenty-four parts of water one part of cupric-oxide carbonate (refined verdigris), and twelve parts of tartar, the mixture being heated to boiling point, after which three or four parts of Spanish white are added. The Spanish white is here decomposed, and is precipitated as lime-tartrate. The dark-blue liquid is poured off and filtered, and can be used either as a bath for a sheet-zinc or for the production of a copperplating paste. The first application is the more recommendatory, as the fluid forces its way into the corners and angles of the zinc articles, and is uniformly distributed all over. It is to be desired to coat an immovable zinc object with copper, the article after being cleaned, is painted with the copper solution and chalk compound, and after drying brushed. The very simple operation would likewise prove of value for architectural purposes, namely, where it is desired to remedy the generally displeasing effect of zinc adornments.—*Metalarbeiter*.

MUNICIPAL DEPARTMENT.

LEGAL DECISIONS AFFECTING MUNICIPALITIES.

MCDOWALL VS. TOWN OF PALMERSTON.—Judgment on application by Thomas McDowall to set aside an award made between him and the corporation of the Town of Palmerston in respect of the compensation for certain land, formerly used as a cemetery, and expropriated by the corporation under an act of the Legislature of Ontario. The chancellor holds that the act is *intra vires*, and that the arbitrators proceeded on a right principle in estimating the value of the appellant's interest in the land. Motion dismissed with costs.

HOWARTH V. TOWNSHIP OF SOUTH WOLD AND MCGUGAN.—Action for damages for negligence causing an accident and injury to the plaintiff. The jury found that the placing and leaving of a hammer on the highway was the cause of the accident. The learned judge holds that the damage was by reason of default of the corporation to keep the highway in repair and therefore that the action not having been brought within three months after the damage had been sustained, the municipality cannot be compelled to pay the sum assessed by the jury. Judgment for the plaintiff against the defendant McGugan for \$600 and costs and for the defendant the corporation dismissing the action with costs.

MCDUGALL V. VILLAGE OF FENELON FALLS.—Judgment on appeal by the defendants from the judgment of the judge of the County Court of the County of Victoria, dismissing a motion by the defendants to set aside a verdict for the plaintiff in an action for damages for the illegal seizure of a buggy for taxes. Hugh McDougall was the person assessed for the taxes, and the buggy seized was the property of his wife, the plaintiff. The judge below held that the corporation had ratified the act of their collector in seizing the buggy for taxes. The court failed to distinguish this case from *McSorley v. City of St. John*, a decision of the Canadian Supreme Court, and held that the defendants were responsible for the act of their collector. Appeal dismissed with costs.

CEMENT CONCRETE TESTS.

A large number of experiments have been made by the engineers of the Melbourne Metropolitan Board of Works as to the desirability of bluestone toppings and screenings being substituted for sand for making Portland cement concrete or mortar for the main outfall sewer. The results show that the substitution is advantageous; that samples or briquettes made with Beaconsfield sand and cement, and bluestone toppings and cement, in the same proportion—viz, 2 to 1 of cement—show that the strain required to break the briquettes was much greater with the latter material than with sand. As to the crushing strength of the concrete, this being the chief requirement for sewers, the experiments made showed conclusively that from ratios of 1 to 8 to 1 to 15 the mortar made with bluestone toppings was much stronger than that made with sand. Other series of tests prove the same superiority of bluestone toppings in