

to build a railway and highway bridge across the Restigouche river, from Campbellton to Mission City.

LONDON, ONT.—McBride & Jones, architects, are asking for tenders until the 11th inst. for the erection of a brick cottage in East London.—The Western Fair by-law, granting the sum of \$25,000 to the directors for improvements, has been carried.

HARRISTON, ONT.—The building committee of the Harriston Lodge I. O. O. F. have instructed Geo. Gray, architect, to prepare plans for a two storey brick block, with stone basement, to have stores on the ground floor, and lodge rooms on the second floor.

NEW WESTMINSTER, B. C.—The City Council has again taken up the question of constructing a bridge over the Fraser river. The Provincial Government has made a grant of \$126,000, and the Dominion Government will be asked to grant 100,000. D. Robson is city clerk.

ARNPRIOR, ONT.—A public meeting to discuss the question of waterworks was held last week, at which the opinion seemed to prevail that the scheme could not be carried out at present.—Mr. Beatty, C. E., of Ottawa, last week surveyed the site for the new post-office to be built here. The information secured is for the use of the architects in preparing plans.

TORONTO, ONT. The Property Committee have recommended that new buildings be erected and repairs made to the Yonge street wharf at a cost of \$8,600.—Acting engineer Rust has recommended the construction of a 24 foot asphalt pavement with stone kerbs on Berkeley street, from the north side of Gerrard street to the south side of Carlton street, at a cost of \$5,630.

HAMILTON, ONT.—The city engineer states that the extension of the west end sewer on Robinson street to James street, and the completion of the Wood street sewer between John and James streets, are works of great necessity, and should be proceeded with as soon as possible. He also considers it necessary to make repairs to the inverts of the brick sewers on James and Catharine streets.

ALEXANDRIA, ONT.—The new Dominion reformatory will be proceeded with at once. Tenders for the dome and one of the wings are advertised for, and will be let by contract. The dome will be between 80 and 100 feet square, and the wing 100 feet long and two stories high. There are to be five wings, each of 150 feet in length, and the cost of the one to be let immediately will be about \$150,000. The building is to accommodate over 1000 convicts.

HALIFAX, N. S.—A project is on foot to transfer Rhodes, Curry & Co.'s car works from Amherst to this city. A free site of twelve acres of land has been offered.—Re proposed immigration buildings in this city, Mr. C. E. W. Dodwell, engineer in charge, writes: The buildings will be of wood, two storied portion, 160 x 50 ft. on solid cribwork, one storied portion, 160 feet long x 14 to 42 feet wide, on creosoted piles; estimated cost \$30,000. Tenders close Jan. 15th.—The city invites tenders until the 13th February for the supply of 2,000 barrels of Portland cement. Address F. W. W. Doane, City Engineer.

OTTAWA, ONT.—W. H. Cuddie is excavating for a four-storey furniture storage building on Albert street. The contracts for the completion of 47 miles of the Ottawa, Arnprior and Parry Sound railway between the eastern and western portions of the line, will likely be let this month.—A movement has been started to establish a coffin manufactory here. The promoters are gentlemen from Niagara Falls and Carleton Place and a leading undertaker. Exemption from taxation

will be asked for, and if granted construction will be proceeded with. An expensive iron and woodworking plant will be required.

ST. THOMAS, ONT.—E. R. Cameron, of London, the electric railway projector, accompanied by Mr. T. H. Smallman, the well known London capitalist, went over the proposed route to be taken by the railway. It is understood that Mr. Smallman and other moneyed men will be induced to take hold of the scheme.—A by-law to issue debentures for \$3,000 to build a bridge at Palm street, forming a second link between the north and south sections of the city, was carried at the municipal elections.

FIRES.

Thibault & Brober's sash and door factory at Montmagny, Que., has been burned. Loss, \$6,000.—A large block at Montreal West, Que., containing the post office and several stores, was burned on December 31st.—The car sheds of the Oshawa Electric Railway Company were burned on the 2nd inst. Loss on buildings, owned by Wm. Thomas, \$2,000.—A large portion of the village of Drummondville, Que., is reported to have been wiped out by fire. Total loss, \$100,000; partially covered by insurance. The residence of E. Marshall, at Langton, Ont., was destroyed by fire on the 30th December. Insurance, \$400.—J. D. Williamson & Co.'s large dry goods house at London, Ont., was almost completely gutted by fire on Saturday last. The building was owned by the J. D. Williamson Estate, and was insured for \$9,000.—A building on Adelaide street west, Toronto, owned by D. M. Defoe, was badly damaged by fire last week.—The Royal Canadian Yacht Club's building at the foot of York street, was burned on Monday last. Loss, \$8,000; covered by insurance.—Sheriff Proctor's brick residence about one mile east of Brighton, Ont., has been burned. The storehouse and office of the Holland & Emery Lumber Co., at Wahnapiatae, Ont., were consumed by fire recently.—The residence of Thomas McKay, at West Prince Albert, Ont., has been burned.—John Tweed's hotel at Elmvale, Ont., was destroyed by fire on Monday last. Loss partially covered by insurance. He will rebuild at once.—The flour and carding mills of Louis Carle at St. Ursule, Que., were burned on January 4th. Loss, \$10,000; insurance, \$4,000.

CONTRACTS AWARDED.

WALLACEBURG, ONT.—The Town Council has disposed of \$16,000 of debentures to G. A. Stimson, of Toronto.

WINDSOR, ONT.—John Davis has secured a contract from the G. T. R. authorities to erect a building on Sandwich street, three stories high and 90 feet long.

MONTREAL, QUE.—It is announced that the Montreal Bridge Company have given the contract to a New York syndicate to construct a bridge over the St. Lawrence from Montreal to Longueuil, the cost of which, including the terminus, will be about \$6,000,000.

ST. JOHN, N. B.—J. H. Noble has been awarded the contract for the plumbing and heating apparatus of the new Manchester, Robertson & Allison building on Germain street, also for the plumbing and brass finishing work in the new Hotel Aberdeen office. The brass finishings are to be provided by T. McAvery & Sons.

W. Leek & Co. has succeeded Wm. Leak, plumber, Vancouver, B. C.

E. E. Gilbert & Son, contractors, Montreal, have dissolved partnership.

Joseph F. Lelanger, painter, Ottawa, is reported to have assigned for the benefit of his creditors.

NEW COMPANIES.

BRANTFORD ONT.—Bain Waggon Co., incorporated; capital \$25,000.

ST. CATHARINES, ONT.—Power Rope & Belting Co., incorporated; capital \$20,000.

THESSALON, ONT.—Algoma Copper Mining Co., applying for incorporation; capital, \$1,000; to engage in the business of mining, etc.

USEFUL HINTS.

Maple is not so light as generally supposed, weighing 46.87 pounds to the cubic foot, a little more than locust or hickory.

ENGINEERING CALCULATIONS.—In an article in the Practical Engineer for November 29th, A. H. Barker argues that many expensive mistakes in the drawing office would be avoided if engineers would bestow a little more thought on the method of their calculation. The habit of carrying calculations on paper to a greater degree of accuracy than is absolutely necessary is worse than useless to an engineer, both because it is a waste of time and because attention bestowed on the decimal places is apt to be withdrawn from the all important hundreds and thousands, not to mention the position of the decimal point. Thus, if an accident happen owing to a certain stress having been written 4563.52 instead of 45635.2, it is a very sorry satisfaction to reflect that all the figures were correct. It is in general true in engineering that if calculations are correct to 1 per cent. it is amply sufficient, because the actual conditions under which machines or structures are used in practice can rarely be estimated even to this degree of accuracy.

THE METROPOLITAN CONCRETE AND WIRE FLOOR.—Among the numerous flat and fireproof floors designed for use in modern buildings in order to allow of greater spans between the floor beams than would be practicable with brick jack arches, and to effect a lighter and cheaper construction than with such arches, the "Metropolitan" system is singled out for description and illustration in the Engineering News of November 14th. Across the floor beams are stretched small wire cables, like fence wires, each composed of two galvanized wires twisted together, the distance between these cables varying to the load for which the floor is designed. Round bars are then laid across the cables, parallel with the beams, and halfway between them, thus giving a uniform deflection to the cables. Forms, or centres, are then placed under the cables, and a composition consisting principally of plaster of Paris and wood chips (in proportions of 75 and 25% by weight) is poured on, the cables being thus embedded in the concrete mixture, which solidifies in a few minutes. The vertical part of the concrete, enclosing the floor beams, is supported by wire netting passed around the flanges of the beams.

The firm of J. Brunet & Son, contractors, Montreal, is dissolved. Mr. J. W. R. Brunet will do business under that name alone.