

ST. HYACINTHE, QUE.—Contracts will be awarded this week for a new hotel to be erected here, to cost \$50,000.

SOREL, QUE.—A deputation of residents will interview the Minister of Public Works at Ottawa at an early date asking financial assistance towards the construction of an iron bridge across the Richelieu river at this place, estimated to cost \$250,000. The Government will be asked to make a grant of \$50,000. The erection of a new station by the Montreal and Sorel Railway Company may also be included in the undertaking.

PORT DOVER, ONT.—Col. Tisdale, M. P., recently had an interview with the Minister of Public Works at Ottawa regarding the commencement of the work of dredging the harbor at this place in connection with the railway ferry across Lake Erie. The work is not likely to be commenced this year, but it is stated that next spring the necessary docks and harbor works, as well as the dredging, will be prosecuted with the utmost dispatch.

LONDON, ONT.—The City Engineer has granted the following building permits: John Agar, residence on the old St. Paul's cemetery grounds, Dundas street east, cost \$3,000. H. C. McBride, architect, J. B. Brincombe, two-story brick residence on Waterloo street, between Oxford and St. James, cost \$1,500; John Coote, office on the south side of York street, west of Richmond, cost \$1,200; Rev. Mr. Guillemet, brick office and residence, west side Wellington st., between Oxford and Sydenham.

WINNIPEG, MAN.—The Sons of England contemplate the erection of a hall in this city.—The Dominion Gas and Electric Company, which has recently been incorporated, has made a proposition to the City Council for the erection of gas works, to be equipped with a modern plant. Mr. McKenzie, president of the Winnipeg Electric Street Railway Company, is one of the promoters.—Tenders will shortly be asked by the City Council for the construction of a number of catch basins, estimated to cost \$3,500.—A block pavement will be constructed on Notre Dame avenue, from Charlotte to Ellen streets, at a cost of \$4,500.—A local architect is preparing plans for converting the old Wesley Hall gymnasium into a theatre building, with all modern improvements.

MONTREAL, QUE.—Messrs. Brown, Dolan, Jackson and McCormack have been appointed a committee to select plans, location, etc., for the Catholic Young Men's Institute hall. Their report will be presented at a meeting to be held during this month.—Messrs. Perrault & Lesage, architects, are calling for tenders for all trades required in the erection of two stores and dwellings on Notre Dame street west for Mr. B. Charbonneau.—The Grand Trunk Railway will build, on the block bounded by Mountain st., St. James st., Aqueduc st. and the railroad tracks, a large brick building 100x25 ft., for express accommodation.—A petition signed by steamship owners and underwriters has been forwarded to the Governor-General asking for the construction of dry docks at the harbor in this city.—Messrs. Perrault, Mesnard & Venne, architects, are calling for tenders for a wrought iron grille for the entrance to the Banque du Peuple building.

TORONTO, ONT.—Dr. McCully, Yonge street, wants tenders for putting a hot air furnace in house, corner St. Clair ave. and Yonge street. A petition was last week presented to the Property Committee asking that improvements be made to St. Lawrence market, at a cost of \$4,000. The City Council will be asked to provide the funds.—It is reported that a syndicate is being formed for the purpose of erecting a summer hotel in the vicinity of Toronto, to be fitted up with all modern improvements.—Messrs. Jones, Mackenzie & Leonard, on behalf of a client, have written to the Property Committee requesting terms for the lease of 200 feet of land on the Esplanade, presumably for a building site. A petition has been received by the Mayor asking the city to construct an aquatic course on the Island

by connecting Long Pond with Blockhouse Bay and dredging a channel 600 feet wide and three quarters of a mile in length.—An American syndicate is said to be considering the erection of a mammoth pulp and paper mill at the Kakabeka Falls, on the Kamistiquia river, which flows into Lake Superior, the cost being estimated at about one million dollars. Among the gentlemen interested are: E. V. Douglass, F. Douglass and D. F. Lewis, of Philadelphia; F. J. Clerque, of Bangor, Maine, and A. P. Bollein and John Bogart of New York. Messrs. Lewis & Bogart recently visited the proposed location, and are reported as being favorably impressed.—Building permits have been granted as follows: Benj. Kent, 3 story bk. store and office building, 144 Yonge st., cost \$15,000; Jos. Harrington, alterations to 344 George st., cost \$2,000; trustees B. M. E. church, bk. church, w. side Chestnut st., nr. Agnes st., cost \$6,000.

FIRES.

Morrison's saw mill at Petit Roche Station, N. B., has been burned, at a loss of \$3,000.—The boot and shoe establishment of Haines & Lockett, at Belleville, Ont., was burned a few days ago. The building was owned by Mr. Haines, and was insured for \$5,000, which will cover the loss.—The residence of Mr. Barley, at Petrolia, Ont., has been destroyed by fire.—Fire at Kimmount, Ont., on Saturday last, destroyed J. Bowie's hotel, J. Kingsboro's hardware store, W. S. Scott's dry goods store, and J. Cameron's wagon shop. There was no insurance.—Craig's hat factory at Truro, N. S., was completely destroyed by fire on the 31st inst. The loss will be heavy, which is partially covered by an insurance of \$5,000.—A disastrous fire occurred at Point au Pic, Que., on Sunday last, destroying about \$80,000 worth of property. The following buildings were destroyed: The Central house owned by C. G. Tremblay, Warren's hotel; Mrs. Jos. Bouchard, cottage; Mr. Dubergers, three cottages; Theo. Fred Girard, two houses; David Desbiens, two houses; Francois Tolon, two houses; Wm. Tremblay, house; Louis Tremblay, house; Theodul Tremblay, house; Joseph Gagne, house; John Gagnon, house; Flavin Samson, two houses; Mr. Hamel, house, and the post office. The insurance is said to be small.—The carriage shop of G. Christmas & Son, at Walsingham Centre, Ont., was burned on Tuesday last. Loss, \$1,500; partially covered by insurance.

CONTRACTS AWARDED.

TILBURY EAST, ONT.—J. B. Pike has been awarded the Forbes dredging in Tilbury East, his tender being \$3,885.

GALT, ONT.—The following are the successful tenderers for Mr. Bernhardt's new hotel: Masonry, W. Edmonds; carpentering, W. Hallman; painting, A. C. Bruce; plastering, Verch & Booty; tinwork, Allan & McKenzie. The plumbing, heating and roofing will be awarded at a later date.

MONTREAL, QUE.—Mr. A. Gendron, architect, has awarded the contract for masonry of a villa residence at Notre Dame de Grace for Mr. A. Rastoul to F. Dufresne.—Messrs. Perrault & Lesage, architects, have awarded contracts as follows: Painting and glazing of three stores and dwellings on Notre Dame st. west, for E. Marcell, to Poirier & Arcande; the masonry and excavation of three cut stone front stores on Notre Dame st. west for J. Versailles, to Oumet & Labelle.

PROPORTIONS OF FLOORING BEAMS.

Authorities on the strength of timber are by no means agreed as to the proper ratio of breadth to depth of beams for flooring, the ratio differing for bridging joists, for binding joists and for girders. A writer in Indian Engineering, in a series of articles, has been discussing the subject mathematically, and gives several equations for the best spacings when the ratio of depth and breadth of beam is fixed. The least practicable amount of

material for stiffness is one of the data in regard to problems of this kind, though this element would necessarily vary for the respective purposes mentioned above. It is not necessary to enter into the formula given by the author, but the method of his investigation appears to be a just one. In India, he says, naked flooring is used for the support of flat roofs, which are covered with a thick layer of earth to keep out the heat. Here strength is the chief desideratum, and if, as is often the case, timber is scarce, and the roof must be built at the expense of as little feeling

as possible, the best value for R is  $\frac{1}{V_2}$ , since this is the ratio of breadth to heights which ensures the strongest beam from a round log. The author then works out the equations for spacing when the least material is used. The writer gives an example of a common arrangement in the East, the value of R being as shown above. "S, the breadth of the flooring, is 20ft.; A is 1 cwt. per square foot; P, three-

quarters of a ton per square inch. Then S<sup>2</sup> equals spacing of binding joists, equals 58ft., and S<sup>3</sup> (spacing of bridging joists) equals 26ft. The main beams should therefore be placed 6ft. apart, and the cross beams 2ft. 6in. Strips of wood  $\frac{1}{8}$ in. thick will serve the purpose of boards to support the deep layer of sand and dry earth. This form of roofing, common throughout India and the East, is a very efficient protection against the heat of the sun, though not durable." The problem of design for naked flooring is more intricate where the proportions of the members are predetermined than where stiffness and strength alone are made absolute. The writer says these latter qualities may be different for the different tiers of beams and joists; the main beams may also be made stiffer than the cross beams. For timber structures in the East, the economical distribution of timbers in floors and roofs is of moment to the architect and engineer, and any rules or formulae that can be used to effect a saving in timber or in the construction of floors are of value.

MUNICIPAL DEPARTMENT.

TABLES FOR CALCULATING SINKING FUNDS AND PRESENT VALUES.

Engineers and others connected with municipal work and various industrial enterprises often find it necessary to calculate payments to sinking funds which will provide a sum of money sufficient to pay off a bond issue or other debt at the end of a given period, or to determine the present value of certain annual charges. The accompanying tables were computed

by Mr. John W. Hill, M. Am. Soc. C. E., of Cincinnati, Ohio, for use in his engineering practice. Mr. Hill states that they are more convenient for his purpose than the tables used by insurance companies, and that he has checked them by such tables and independently, and found them to be correct.

Table I shows the annual sum at various rates of interest required to net \$1,000 in from 5 to 50 years, and Table II shows the present value at various rates of interest of an annual charge of \$1,000 for from 5 to 50 years, at five-year intervals and for 100 years.—Engineering News.

Table I and Table II: ANNUITY REQUIRED TO REDHEM \$1,000 IN FROM 1 TO 50 YEARS. Includes columns for Years to run, Rate of interest per cent, and values for various interest rates (2% to 6%).