

depth; that the Don river be diverted across McNamee's cut into the deep water, and a dam constructed across the river; and that a trunk sewer be constructed from Bathurst street, along the line of Front street, east of the Don.—The directors of the Industrial Exhibition Association state that \$50,000 is required for improvements, including the enlargement of the main building and the erection of a new implement hall.—The trustees of the proposed Citizens' Sanitorium and Hospital for Consumptives will ask the city council to submit, at the forthcoming municipal elections, a by-law providing the sum of \$20,000 for the purpose of building a suitable hospital.—The city council has given notice of its intention to construct a twelve-inch tile pipe sewer on Amelia street, at a cost of \$346, also the following roadways: 24-foot brick pavement on Crawford street, from Arthur street to the northern terminus of Crawford street, cost \$8,653; 24-foot brick pavement on Division street, from Spadina ave. to Huron street, cost \$2,307; 21-foot macadam roadway on First ave., from Broadview to Logan ave., cost \$8,598; 21-foot gravel roadway on Colahie street, from Beaconsfield ave. to Gladstone ave., cost \$624; 33-foot macadam roadway on Wilton ave., from Yonge to Jarvis street, cost \$4,977.

FIRES.

Recent fires included the following Stevens Manufacturing Company's building at London, Ont., partially destroyed, loss \$8,000, covered by insurance.—Grant's hall at Ottawa, Ont., a building used for theatrical and commercial purposes, damaged to the extent of \$10,000.—Mr. Buckner's planing mill at Orrville, Ont., totally destroyed; loss \$2,000, no insurance.—Residence of Charles James at Peterboro', Ont., totally destroyed.—Residence of E. G. Christie at Waterford, Ont.; loss \$1,500.—Tighe's evaporating works at Chatham, Ont., including three dry kilns; damage, \$6,000.—Ward's fanning mill, shop and sheds, at Catarqui, Que.—Dwelling of R. Bentress at Bobcaygeon, Ont.—Brick residence of John Cooney, at Peterboro', Ont.; insurance, \$1,300.

CONTRACTS AWARDED.

BROCKVILLE, ONT.—The lumber for the new skating rink will be supplied by Peter McLaren.

SOMBRA, ONT.—James Green has been awarded the contract of building a residence for L. V. Burnham.

ST. JOHNS, QUE.—The contract for a hot water system of heating for the barracks here has been let to E. Morel.

PERTH, ONT.—John Dittick has secured the contract of installing a hot water system in the residence of John A. McLaren.

FREDERICTON, N. B.—W. J. McCormick has let the contract for the erection of a new residence on Charlotte street to Harry Clark.

VANCOUVER, B. C.—The tender of Mowat & McKeen, for the construction of sewers in the west end, has been accepted by the city council.

CHATHAM, N. B.—The Dominion Pulp Co. have closed a contract with E. Leonard & Sons, of London, Ont., for a large digester for their pulp mill.

ST. JOHN, N. B.—Mr. Gilliland, of Rothesay, has secured the contract of building a station for the Intercolonial Railway.—James McDade has been awarded the contract for the galvanized iron work on the Charles S. Phillip's block and the J. & A. McMillan building.

OWEN SOUND, ONT.—Five tenders were received for an electric fire alarm system, from Parker & Co., Owen Sound; Rodgers Electric Co., Toronto; George

Scott, Oshawa; Alex. Anderson, Toronto, and the Bell Telephone Co. The tender of Alex. Anderson, at \$1,225, has been recommended for acceptance.

WATERLOO, ONT.—The lumber for the Waterloo Mfg. Co.'s new warehouse is being supplied by the Snider Lumber Co., of Gravenhurst.—The J. B. Snider Co. last week shipped a car load of office desks to Liverpool. They have also received a contract for church furniture for an Episcopal church at Cape Town, South Africa.

NEW WESTMINSTER, B. C.—The contract for the new Trapp block, corner Columbia and Lorne street, is understood to have been awarded. It will be a brick structure, two storeys high.—The contract for the new market building has been let to James Layfield, at the price of \$3,000. The iron roofing will be supplied by T. J. Trapp.—Coughlin & Co., of Victoria, are the successful contractors for the construction of the new building in this city for the Bank of British Columbia.

A PRACTICAL APPLICATION OF GLASS BRICKS.

Some few years ago Dr. Van Heyden, of Japan, experimented with hollow glass blocks, or bricks, of which he had a small house built; but this proved a failure, partly because the windows and doors were similar to those in ordinary buildings, and the glass bricks contained enclosed air, and partly because various requisites of a healthy dwelling were not provided. A primary essential of a house is light, but, generally speaking, light of a sufficient amount is accompanied in hot climates by a superfluous degree of warmth. Dr. Van Heyden used in the construction of his novel dwelling house hollow boxes made of glass, which could be filled with a solution of alum, and made both air and water tight. These boxes were made a little over a yard broad, and about 24 in. high, by fixing glass panes, one-third of an inch thick, in an iron frame, and then screwing them together. The interstices between the rows of boxes were filled with felt, covered with thin boards; the flat roof permitted a similar arrangement. Dr. Van Heyden thinks that, for different reasons, the glass boxes might be of larger dimensions, the panes with which they are formed being proportionately thicker, in order the better to stand the pressure of the fluid contained in them. The boxes successfully resisted the influence of heat and cold, as well as shocks of earthquake.

It will be seen that a house built in this fashion, without doors or windows, is practically a large hollow box. The panes being of rough plate glass, persons outside cannot see into the interior, though light is freely admitted on every side; while people in the house can readily look out upon external objects by substituting polished glass for the rough panes at suitable positions, so as to form windows. As regards ordinary doors, they were not requisite, as Dr. Van Heyden made the entrances by a staircase and lift leading from a room sunk below the house. This room is lighted through four glass boxes let into the corners of the floor of the sunlit apartment situated above it. This floor is made of a double set of planks, with a thick layer of sawdust interposed be-

tween the two sets of planks, the upper set is painted and varnished to form the floor of the living room, while the lower, whitewashed, is a suitable ceiling for the sunken room. At night the rooms are illuminated by electric lamps, which give off heat and do not vitiate the air as gas would do.

Dr. Van Heyden does not forget to take into consideration that in winter the solution in the glass boxes might freeze, even in Japan, and that it would be certain to do so if such a house were built in a colder country. To provide against this contingency the whole building is surrounded by a covering of common window-glass set in wooden frames, the house is thus enveloped in air, which is a bad conductor of heat; while the air space can be readily warmed if necessary. Ventilation is arranged for in a simple manner by carrying the iron pillars somewhat higher than the walls of the rooms, leaving a space corresponding with what is usually called the moulding. This free space opens into a groove covered with ordinary window glass, and running round part of the building; from it a tube conveys the air away from the house. One advantage derived from living in such a dwelling is of no small importance in hot climates during summer—namely, perfect freedom from mosquitoes and other tormenting insects, which easily obtain an entrance into an ordinary house through the doorways and windows. Dr. Van Heyden is not so blind an enthusiast as to expect his example to be universally followed, but he has, at any rate, the satisfaction and credit of directing the attention, not only of the Japanese, but of the inhabitants of other countries, to the feasibility of using other materials in house construction than those commonly employed.

IMITATION BLACK MARBLE.

A black marble of similar character to that exported from Belgium—the latter product being simply prepared slate—may be produced in the following manner: The slate suitable for such purpose is first well and smoothly polished with a sandstone, so that no visible impression is made on it with a chisel—this being rough—after which it is polished finely with artificial pumice stone, and finally finished with extremely light natural pumice stone, the surface now presenting a velvet-like, soft appearance. After being allowed to dry, and the surface being thoroughly heated, the finely polished surface is impregnated with a mixture, heated, of oil and fine lampblack. This is allowed to remain twelve hours; and, according to whether the slate used is more or less gray, the process is repeated until the gray appearance is lost. Polishing thoroughly with emery on a linen rag follows, and the finishing polish is with tin ashes, to which is added some lampblack. A finish being made thus, wax dissolved in turpentine, with some lampblack, is spread on the polished plate, warmed again, which after a while is rubbed off vigorously with a clean linen rag. Treated thus, the slate has a deep black appearance like black marble, the polish being just as durable as the latter.