

an iron bridge of one hundred and twenty-five feet span, across the English river here, has been let to the Rousseau Bridge Company, of Montreal, for \$2,500. This includes the supports at each end, which will be metal pillars filled with concrete.

WINNIPEG, MAN.—The contract for the excavating of the Westbourne ditch has been let by the local government to McKelvie & Watson. The number of yards of earth to be excavated is 32,000, and the contract price is about \$10,000.—The Department of Public Works has let the contract for the construction of the Springfield road to P. Holden & Co.

LONDON, ONT.—Three tenders for the building of the turntable pit were received by the London and Port Stanley Railway Board, and that of Martyn & Hammett, at \$749, was accepted. Ald. Garratt tendered at \$1,025, and Everett & Sing at \$1,031. Three tenders were also received for building a turntable, two from American companies and the other from the Dominion Bridge Company, of Montreal. The latter has been accepted.

ST. JOHN, N. B.—On Friday last the tenders for roofing the new warehouse at Sand Point with roofing felt and pitch were opened. The following were received: A. M. Rowan, per square foot, \$3 (accepted); G. S. Fisher & Co., \$3.50; Robert Magee, \$3.15; M. J. Thomas, \$3.20; George Young, \$3.95. Three tenders for supplying doors and windows for the warehouse were received, and that of Scott, Lawton & Love, at \$3.40 for doors and \$2.75 for windows, were accepted. The other tenderers were Haley Bros. & Co., at \$3.50 for doors, and A. Christie Wood Working Co., at \$4.

MONTREAL, QUE.—Contracts have been awarded as follows by W. E. Doran for three stores and three tenements on St. Uubaine street, for W. W. Halpin: masonry and brick work, Paquette Bros.; carpenter and joiner's work, E. Robert.—M. S. Trappier has taken tenders for a residence to be erected at Montreal Annex for Soucisse & Brouillette. The successful contractors are not yet known.—Building permits have been granted as follows: Two buildings, 47 x 65 feet, three stories, stone and brick, corner Sherbrooke and City Councillors street, for Fch. Dumont. Two houses, two stories, brick front, on Murray street, for Richard Kelly—contractors, masonry, Mike Furlong; carpenter and joiner's work, M. Dwyer; brickwork, M. Connors.]

LITTLE CURRENT, ONT.—The contract for the construction of the Manitoulin and North Shore railway has been let to W. B. Strang, jr., & Co., of New York and Philadelphia. The contract covers the entire work of the construction and equipment of 42 miles of standard gauge railway from Little Current, Ont., to a junction with the Canadian Pacific Railway. Some difficult engineering work will have to be done through the Whitefish gorge of the La Celeche mountains, and besides several large bridge structures on the line, a swing bridge is to be built over the navigation channel in the passage between the Manitoulin Island and the main shore. J. A. Macintyre, 56 Gluck Building, Niagara Falls, N. Y., is managing director for the company, in which several Toronto gentlemen are interested.

HAMILTON, ONT.—The Sewers Committee received tenders as follows for the sewage interception works: mason work, George F. Webb, \$4,889, (accepted); W. Hancock, \$5,165; George E. Mills, \$5,780. Carpenter work, Coleman Lumber Company, \$1,475, (accepted); Downie & Sons, \$1,790; James Gage, \$1,650; J. S. Hossack, \$1,949. Painting and glazing, John Goodfellow, \$223; P. Thompson, \$225; David Kemp, \$196; J. T. Corner, \$244; Metcalf & Zimmer-

man, \$212; A. M. McKenzie, \$187.50, (accepted); Boothman & Hutchison, \$249. Iron girders, Hamilton Bridge Company, \$220. Plumbing, Fairley & Stewart, \$164, (accepted). Slating and galvanized iron work, James Findlay, \$1093; J. Wallace & Son, \$1,069, (accepted). Thomas Irwin & Son, \$1,097; John E. Riddell, \$1,085. The contract for boilers was awarded to Beckett Engine Company at \$835, and that for machinery to A. J. Nic at \$2,760.

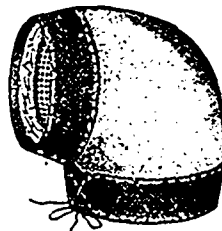
ERRATUM.

In the issue of the CONTRACT RECORD of October 1st, it was stated that the Silica Sand and Gravel Co.'s premises had been damaged by fire. This was an error, as the premises damaged were those of the Sicily Asphaltum Paving Company. We desire to express our regret that the error should have occurred.

ASPHALT LININGS FOR WATER WORKS RESERVOIRS.

In a paper on asphalt linings for water works reservoirs, which was presented at the recent convention of the American Water Works Association by J. L. Le Conte, of Oakland, there is a description of the method followed in repairing a small reservoir at Mill Valley, Cal., which is of particular interest at the present time, on account of the wide-spread belief that asphalt is destined to play an important part in water works construction before long. The Mill Valley reservoir is located on the flank of a rugged ravine, one-half of its base being on solid rock, and the remainder on made ground. The old lining of this basin consisted of twelve inches of concrete, faced with a one-inch coat of high grade asphalt sidewalk finish. The portion of this lining which rested on made ground settled and cracked badly. The cracks were repeatedly cleaned out and filled with new material of the same character, but without improving the basin, which was finally abandoned on account of the leakage from it. A new reservoir was built and put in service, allowing the old basin to be drawn down and examined thoroughly. The side slopes were nearly vertical, the larger cracks being in the corners, and at the foot of the walls. It was finally decided to make an attempt to put the basin in a serviceable condition by giving it a flexible lining of asphalt. Extra precautions had to be

taken to prevent the slipping of the lining on the steep slopes. The fissures and cracks were cleaned out and filled with a paste of nothing but Portland cement and water. V-shaped grooves were then cut in this cement and filled with a mastic composed of 20 per cent. of asphalt and 80 per cent. of sand, the top of the mastic being level with the surface of the old lining. The entire inner surface of the reservoir was then painted with liquid asphalt, which was intended to act as a binder or adherent, to make the succeeding materials adhere to the concrete. The four side walls were next covered with heavy burlap, such as is used in grain sacks, anchored to the top of the slopes and hauled down taut and pressed into the fresh asphalt. The lower end of the burlap was made to run out on the bottom of the basin about three feet. The bottom was then covered with two layers of asphalt mastic, each one inch thick, which were well rolled with hot iron rollers. The final step in the repairs was to coat the entire inner surface of the reservoir with a first-class hard finish of rock asphalt, heated to a temperature of 300 degrees and put on hot. When completed, this lining was entirely waterproof and did not creep under the hottest summer sun. The basin has been in uninterrupted use since September, 1894, and has shown no indications of leakage anywhere. The contract price for the entire work of repairing was 16 cents per square foot of inside facing. [Another work of somewhat similar nature was carried out at the Linda Vista reservoir, at Oakland, Cal., which is entirely an excavation in a sandy clay soil, interspersed with seams of gravel. This reservoir has a capacity of 5,000,000 gallons, and has side slopes of 1½ to 1. Here an asphalt lining was employed when the basin was first built. It was laid directly on the earth and consisted of a coating of asphalt mastic from 1.3 to 2 inches thick and an outside finish of hard rock asphalt as a sunproof coating. About two years after it was completed, during a period of hot weather when the water was low, the mastic lining showed some signs of creeping down the slopes. An outside layer of liquid asphalt and burlap, covered with a hard finish of rock asphalt, completed the repairs and stopped the creeping entirely. This work is now four years old.]



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