

D. W. Clark & Son, \$1.89 for the sheds, \$19 each for the ramps, \$45 each for the large tanks and \$35 for the small tanks; Charles Watters, \$1,790 for the complete work.

LONDON, ONT.—McBride & Faircombe, architects, have let contracts as follows for alterations to the Higgins' block: carpentry, Jones Bros., brickwork, Everett & Sing.

ROSSLAND, B. C.—The contract for the construction of the new railway from Trail to Robson has been awarded to a firm of Butte contractors. The price is said to be \$580,000.

HAMILTON, ONT.—Tenders were received as follows for the purchase of \$85,000 of sewage disposal debentures: City and District Bank, Montreal, 101; O'Hara & Company, Toronto, \$86,551.50; George A. Stimson, Toronto, \$86,105; Stuart Strathly, on behalf of the Traders' Bank, \$86,811.25, (accepted.)

HALIFAX, N. S.—Tenders for a city loan of \$22,000 at 4 per cent. were received as follows: H. O'Hara & Co., Toronto, \$22,215; G. A. Stimson & Co., Toronto, \$22,033; J. A. Meldrum, Toronto, \$22,112; J. C. Mackintosh, Halifax, \$22,661.11; Bank of B. N. A., \$22,757 (accepted.)

GUELPH, ONT.—Alterations will be made to the Bank of Commerce. The contractors are: Interior fittings, Burr Bros.; stonework, Dunbar & McCann; plasterer, J. J. Mahoney; carpentry, A. Bruce & Son.—Geo. R. Bruce, architect, has let to D. Keleher the contract for building a two-story brick house, 22 x 40 ft., on Cambridge street, for W. A. Reid.

QUEBEC, QUE.—The carpenter and joiner's work for the interior of Somerset church, Quebec, has been awarded to Messrs. Piquet & Godbout, of St. Hyacinthe, at the price of \$17,000.—The church of St. Malachie is to be altered and decorated. The work has been given to Blais & Gignace. D. Ouellet is the architect.—Thos Raymond, architect, has let the contract for the construction of a stone church at Montmorency Falls, to Joseph Couture, of Notre Dame of Levis. The church is to cost \$17,000, and be completed in two years.

TORONTO, ONT.—The Gurney Foundry Co. have been awarded the contract for heating the Bay street fire hall, at a cost of \$699 12.—Contracts for the material for the front street man were awarded by the Board of Control as follows: Gartshore & Company, 275 24-in. pipes, at \$44 each; Matthew Warnock, 3 valves, \$528; McQuillan & Company, 24 x 12 reducer, \$68; eight 12 x 24 double, \$60 each; and one 12 x 24, single, \$60.—The Polson Iron Works have been awarded the contract to manufacture for the new municipal buildings three patent Hume safety steam boilers of 150 horse power each and one of 250 horse power, also four horizontal multi-tubular boilers of 70 horse power each, making a total of 1,000 horse power. This firm also have the order for all the smoke connections and tank work in the building. We understand the price is in the neighborhood of \$10,000.

MONTREAL, QUE.—The Harbor Commissioners have awarded a contract for macadamizing stone of from 800 to 1200 toises to the Constructing & Paving Company.—The contract for the placing of the interlocking system of switches and signals at Junction Cut, on the Toronto, Hamilton & Buffalo Railway, has been awarded to the Canadian Switch & Spring Company of this city.—Theo. Daoust, architect, has awarded the following contracts: Two houses, three stories, Summer-Hill street, for Dame N. Deslauriers—masonry, Latreille Bros.; carpenter and joiner's work, W. Barit; roofing, plumb-

ing and heating, P. Lectere & Son; brick, Jos. Beland. Two houses, four stories, on Pure street, St. Henry, for L. Robert—masonry, Jos. Pladeau; carpenter and joiner's work, N. Mongeau; brick, Jos. Legault. Two houses, four stories, on Agnes street, St. Henry, forming four tenements, for Jos. Jacob—masonry, G. Guilbault; carpenter and joiner's work, Jos. Jacob; brick, Jos. Paquette. One house, three stories, forming three tenements, for D. Z. Bessette—masonry, G. Guilbault; brick, Jos. Paquette; plastering, S. Gamelin; painting and glazing, Nap. St. Charles; roofing and plumbing, Drapeau, Sauvignac & Co.

BUSINESS NOTES.

J. Desjardins & Co., plasterers, Montreal, are reported to have assigned.

Howard Leamy & Murphy, railway contractors, of Montreal, are said to be in financial difficulties.

L. Goulet & Co., of Montreal, Theo. Goulet and Chas. Lafond have formed a partnership.

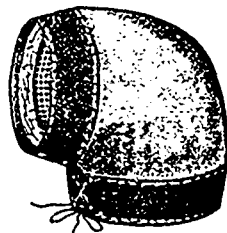
LAYING OUT LARGE CAST IRON PIPE.

There is a vast difference between running the service pipes to the building and the service pipes of a water works system through a street, says a writer in the Metal Worker. I recently had the opportunity of watching the work of laying some 20-inch cast iron pipes which were to be subjected to a pressure of 80 pounds to the square inch. The trenches for the pipe were dug about 5 feet deep, in order to have them below the frost line and to avoid any possibility of the water being frozen in a case of a prolonged cold spell. Where the joint was to be made between two sections of the pipe the trench was made both wider and deeper, in order to give the workmen a chance to work. Two heavy pieces of oak timber were laid across the trench at a distance apart slightly less than the length of the pipe. The pipe was then rolled on to these timbers over the trench. A derrick was then used in connection with a sling around the pipe to raise the pipe from the timbers, after which the timbers were removed and the pipe gradually lowered into the trench. If the sling was not placed so as to balance the pipe a workman would stand on the pipe so as to aid in balancing it and guide it into position. In order to get the spigot end of the pipe home into the hub, the sling was slipped along the pipe away from the joint, so

that when it was lifted it would have a tendency to swing the pipe into the joint. Under the hub end a large flat stone was placed to support the pipe, and was bedded just deep enough to secure the pitch desired in the line of pipe. While this portion of the work was being done another workman was attending to the melting of the lead in a furnace and to making a clay gasket. This gasket was made by using a stout rope bedded in the center of a body of potter's clay, this clay being used on account of its toughness and pliability. This gasket was made about 2½ inches in diameter.

After the pipe was inserted in the hub, the workman drove a chisel between the hub and the pipe on each side below the center, in order to adjust the pipe in the center of the hub, and after raising it to the desired position small pieces of lead were placed in the joint to hold the pipe. When this was done the bottom of the joint in some cases was caulked with oakum to prevent the lead running through into the pipe. In other cases the inside of the pipe was packed at the joint with potter's clay, which was made in rolls about 1¼ inches in diameter. After the pipe was ready to receive the clay gasket, one workman sat on top of the pipe and passed the lower end of the gasket carefully down to another workman, who reached under the pipe and carefully raised it up on the other side as it was lowered. The clay was then forced up against the hub and packed in tight, both round the pipe and against the hub, leaving a space on top of the pipe into which the lead could be poured. The pipes being 20 inches in diameter, the workmen found no difficulty in crawling into the pipe to place the clay packing on the inside, and also to watch to see if the lead burst through when it was poured into the joint from the outside. The lead having already been melted in the furnace, a sufficient quantity was poured into a small kettle and passed down to the workman in the trench, who had a hoop both in a bail of the lead pot and in an eye in the side of the pot so that he could guide the stream through the opening provided to receive the molten lead. When the joint was poured full and the workman on the inside had given notice that no breaks had occurred,

(Concluded on Page 4.)



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