

N. Pilote, Main street, Mrs. Wallace, Mrs. Scott and B. Taylor, College street, and Grand Central Hotel stables. The loss is about \$100,000.

CONTRACTS AWARDED.

HALIFAX, N. S.—H. S. Rhind has given a contract to T. J. Keating to erect a residence on Fenwick street.

ST. JOHN, N. B.—Scott, Lawton & Love have been awarded the contract for interior alterations to the Parisian millinery store.

HUNTSVILLE, ONT.—The contract for constructing the proposed water works system has been awarded to Edward Farquhar, of Toronto.

HAMILTON, ONT.—The contract for the construction of a bridge over the Trent Valley canal at Auburn has been awarded by the Dominion government to the Hamilton Bridge Co., of this city.

WINDSOR, ONT.—The trustees of Bruce avenue Baptist church have let a contract to Hardcastle & Wood to enlarge and remodel their church. The cost of the alterations is estimated at \$4,000.

OTTAWA, ONT.—F. G. Johnson & Co. are reported to have received the contract for five large residences for Dr. Rogers, to be erected at the corner of Elgin and Copper streets. They will have steam heating and improved plumbing.

QUEBEC, QUE.—The contract for the construction of the foundation for the kiosk at the park has been let to Frs. Parent. Chas. Vezina's tender for the heating of the Parent park kiosk, at \$1,000, and Mr. Stephen's tender for the kiosk, at \$2,337, have been accepted by the City Council.

MONTREAL, QUE.—Building permits have been granted as follows: One house, three stories, on St. Marc street, for Anastasie Poissant—masonry, L. Gauthier; carpenter and joiner's work, G. Bail; architect, Jos. Sawyer. One house, two stories, 26 x 54 feet, on Magdalen street, for Joseph Walton—contractor, Isaac Collins.—S. Frappier, architect, has let contracts as follows for a house on Hutchison street, Montreal Annex, for P. Brouillette: Masonry, Oumet & Labelle; carpenter and joiner's work, Soucisse & Brouillette; plastering, Stanislas Rochon, jr.—Perrault & Lesage have let the contract for alterations and reparations of a house on McGill street, for Mde. C. Daubre, of Paris, France, to L. Beaudry.—J. Arthur Cooke, architect, has let contracts as below for eight houses on Columbia avenue, Westmount, for W. F. Borland: Masonry, G. Charette; carpenter and joiner's work, R. Neville, jr.; brick work, St. Aubin & Prudhomme; steel work, Dominion Bridge Co.; plumbing, H. Creed & Son; plastering, Campbell & Gilden; painting, J. Lefebvre; painting, J. E. Blackwell; other trades not let. Same architect has let contracts for six houses on Western avenue, Westmount, for W. F. Borland, as follows: Masonry, J. Quinlan; carpenter and joiner's work, M. Desantels; brick work, Gauthier Bros.; steel work, Dominion Bridge Co.; plumbing, H. Creed & Son; plastering, H. Contant; painting, H. O'Brien; other trades not let. Mr. Cooke has also let contracts as follows for two houses on Lansdowne and Sherbrooke streets for Messrs. Bacon & Scott: Masonry, Egan & Stuart; brick, Gauthier Bros.; carpenter and joiner's work, Bacon & Scott; steel work, Dominion Bridge Co.; plumbing, H. Horton; plastering, Knott & Gardiner; roofing, Campbell & Gilday; other trades not let.

TORONTO, ONT.—The Toronto Fence & Ornamental Iron Works Co. have been awarded the contract by the Board of Control for the iron fence at the Queen's Park, at 68-cents and 78 cents per foot.—

At the last meeting of the Board of Control it was recommended that the contract for widening the Queen street subway be awarded to W. S. Grant & Co., for the whole work at \$63,375, or \$59,335 for all excepting the south-west corner, and that in the event of their refusal to accept the conditions, the tender of C. S. Boon at \$63,300 and \$60,560 respectively, be accepted.—The contract for two additional direct electric elevators for the store of the Robert Simpson Co., Ltd., has been given to the Fensom Elevator Works. This makes six Fensom elevators in use in this building.

BIDS.

QUEBEC, QUE.—The following tenders were received for the construction of the St. Charles bridge: For the masonry, piers, etc., ready to receive the iron or steel superstructure—Bilodeau, \$9,753; A. Lortie, \$9,257; Peters, \$10,987; A. Rosseau, \$9,100. For the iron or steel superstructure alone—Dominion Bridge Company, \$11,800; Carrier, Laine & Co., \$10,650; Rosseau, \$6,100; for the entire work completed, Carrier, Laine & Co., \$30,550; Rosseau, \$15,200.

BUILDING CISTERNS.

To build a cistern that will give entire satisfaction will require more care and expense than is usually given. But the returns will justify the extra care and expense involved.

The excavation or pit should be made $2\frac{1}{2}$ feet wider than the diameter of the cistern when finished, and one foot deeper. A good size for ordinary homes is 8 x 14 feet in depth, with the floors slightly hollowed and the sides contracted or narrow near the bottom—somewhat like a jug or egg shaped.

After bringing the bottom or floor of the pit to the proper shape, it should be well rammed, to fill up any cavities or soft places in the earth bottom. Then spread a heavy coat of cement mortar, and continue it a foot or two above on each side all round. When the mortar begins to set, pave the bottom with a course of bricks set on edge, well cemented between joints.

The walls of the cistern are started on this floor, beginning with a course of skew-backs to bring the bottom course level all round. On this course start your wall, with sufficient space to allow an 8 inch wall of brick work all round and far enough away from the side of the pit to permit the brick work to receive a good heavy coat of cement mortar on the

outside of the wall and connected with floor all round at the bottom.

An outside coat of cement is of more importance than that on the inside, as its office is to keep all surface water from penetrating.

As fast as the wall is carried up, the space back of the brick work should be carefully filled with damp clay, well rammed down in shallow layers. The walls are to be carried up and again drawn in at the top or narrowed gradually.

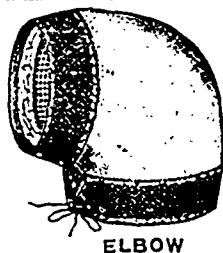
Three feet below the surface an arch is sprung over the top, and a neck or opening left to receive the curb. The inside is then plastered with a coat of cement mortar, well trowelled down. The cement should be the best quality of Portland or Rosendale mixed in the proportion of one bushel of cement and two of clean sharp sand, mixed dry and tempered for use as needed. When the walls are all plastered, make a wash with cement and water about the consistency of whitewash, then take a half worn broom and brush the walls with the prepared cement wash, to smooth them down. When the wall has set, go over it again and it will close up the holes and make it practically waterproof.

Every cistern should be provided with a filter, built in the same manner as the cistern, except as to size and thickness of side walls. It need not be over 6 or 7 feet in depth and 4 feet in diameter, and distant from the cistern proper 6 or 8 feet. It should be lined with a 4-inch brick wall, cemented in the same manner as cistern, and provided with a 4 or 5-inch sewer pipe connection leading from the bottom of the filter to the cistern. A few brickbats or coarse gravel can be arranged around the opening to prevent the filtering material from washing into the pipe.

Fill in the bottom with 18 inches of coarse gravel and graded down to fine gravel on top; over this put two feet of coarse charcoal and graded to fine coal on top and well settled and levelled down; over the top of the coal spread a double thickness of burlap sacking and put in close to the walls of the filter; then fill up with a foot of clean washed sand, which is the filter proper.

The top must be arranged to allow it to be examined occasionally and all silt or sediment scraped off of the top and fresh sand added, or a layer of salmon brick

(Concluded on Page 4.)



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