

cost \$947.—A building permit has been granted to Godfrey Hamley for three two storey brick and rough cast dwellings on Lewis street, cost \$2,700.

### FIRES.

Review Printing Co.'s plant at Windsor, Ont., damaged to extent of \$3,500.—Saw mill of H. F. Eaton & Sons at Milltown, N.B., totally destroyed; loss \$8,000, partially covered by insurance.—Building at Smith's Falls, Ont., owned by John Williscraft.—Stave and heading mill of Geo. McAllister at Bloomingdale, Ont., loss \$5,000.—Dwelling at Rothesay, N.B., owned by Fred Seeley.—Skating rink at Rat Portage, Ont., loss \$1,500.—Saw mill of P. Barnhill at Pleasant Point, near St. John, N.B., insurance \$20,000.—Richardson's cheese factory, one mile east of Gananoque, Ont., totally destroyed; loss \$3,000, insured.

### CONTRACTS AWARDED.

MIDLAND, ONT.—Residence for J. Rowe: D. A. Patchell, contractor.

BERLIN, ONT.—Two-story brick house for Peter Hymen: Adam Denges, contractor.

ST. ANDREWS, N.B.—Residence for Donald McMaster: Robert Stevenson, contractor.

KAMLOOPS, B.C.—The contract for post-office and custom house building has been let to Robert McKay.

ROBSON, B.C.—The new bridge about to be built by the C.P.R. at this place will consist of two spans of 200 feet each.

MONTREAL, QUE.—J. & B. Grier and the Shearer & Brown Co. are supplying the piles required in connection with the Connors elevator.

SUMMERSIDE, P. E. I.—Rogers & Rogers have been awarded the contract for heating with hot water the brick store of Sinclair & Stewart. A Dunsy boiler and a Hamilton radiator will be used.

BRANTFORD, ONT.—Havil & Whitham have secured the contract for building the proposed Isolation hospital; Chas. Taylor for plumbing and heating, and the Lyon Electric Company for electric lighting.

HAMILTON, ONT.—A. W. Peene, architect, has accepted the following tenders for a two-story brick dwelling at foot of Sherman ave. for the Hamilton Steel Company: Brickwork, Wm. Lane; carpenter work, Peter Paterson; painting, S. Easter.

SAULT STE MARIE, ONT.—Blast furnaces, smelting works and a steel rail mill are to be erected here. There will be two buildings, 600 feet each in length, and one of 1,000 feet. Contracts have been let as follows: Excavation, Peter Nelson; stone work, Talbot & Co.; carpenter work, Mr. Drayer.

### BIDS.

PORT HOPE, ONT.—The following tenders were received by the town council for purchase of \$20,000 of debentures for the extension of the waterworks system: G. A. Stimson & Co., Toronto, \$18,866; The Central Canada Loan & Savings Co., Toronto, \$19,251; H. O'Hara & Co., Toronto, \$19,700.

MONTREAL, QUE.—For the supply of two electric pumps for the high level reservoir, tenders were received by the city council as follows. The Dean Stamp Pump Co., Holyoke, Mass., \$19,900; Babcock & Wilcox, four tenders, ranging from \$29,900 to \$37,400, Caledonian Iron Works, half a dozen tenders, ranging from \$37,394 to \$43,788; P. H. & F. M. Roots, of Indiana, tenders varying from \$32,087 to \$37,172.

### COMPETITION FOR PLANS.

Last year the corporation of the town of Levis, Province of Quebec, advertised for competitive plans to be submitted by civil engineers for the best system of water works and sewage for the town of Levis. Recently the judgment has been given in an elaborate report which indicates a careful and conscientious study of the different plans submitted. The judges were Charles Baillarge, ex-engineer of the city of Quebec; Chas. E. Gauvin, C. E., Quebec, and Jeremiah Gallagher, C. E., Director of Water Works, City of Quebec, who have awarded the first prize, \$1,000, to Robert Surtees, C.E., Ottawa, and the second prize of \$500 to Messrs. Berlinguet & Lemay, civil engineers, Quebec.

### PAINT FOR ROUGH CAST SURFACES.

Answering a correspondent on the above subject, "The Painters Magazine" says:

"If the walls have stood for some time, say at least one year, and first cost is no obstacle to its use, we would recommend a pure lead and linseed oil paint, white or tinted to suit, the first coat to be quite thin and oily, the second coat as stout as it is used for finish on woodwork. Should this be too expensive to suit your patron you might use either of the following: Take fine sand that has been washed and dried and mix the same with a similar quantity of Portland cement (best grade) in water to a fairly thick consistency, then add for a red tint enough Venetian red for a yellow tinge pale French ochre, for a greenish tint terra verte, for a gray tint lamp black, for a bluish tint ultramarine blue, and strain through an ordinary sieve to break up any lumps that may have formed. Finally thin the mixture down with water to the consistency of thin oil paint and apply cold with large wall brushes. The wash must be kept well stirred while being used. Should the color be too dark add some slaked lime or ordinary whiting, but be careful to use mineral colors only for tinting, because of the probable causticity of cement and lime.

If it is in any way convenient for you to apply a warm paint, we would suggest the following wash, which has been tried by the writer with excellent results: Take a 50 gallon barrel and place therein one-half bushel of builders' lime, fresh burnt, over which pour hot water, say about ten gallons, and cover tightly to keep in the steam, while slaking. Let stand covered over night, then strain the liquid through a fine sieve into another barrel and add seven pounds of common salt, previously dissolved in hot water. In the meantime cook three pounds of rice flour in hot water to a creamy paste and add this while hot, always stirring well. Five pounds of bolted whiting are also mixed with soft water to a thin paste and added to the liquid. Finally one pound of pale glue that has been soaked in water over night is boiled as usual in a water bath and thinned with boiling hot water to make five gallons of liquid glue, which is put in with the other. Stir well, and if the total does not amount to thirty gallons add enough hot water to

make that quantity. Let the barrel stand covered for several days more, when the wash is ready for use. The wash must be applied fairly warm, therefore it is necessary to have the pots from which the paint is used standing in hot water during the operation. Two coats of this wash will stand out white on any surface, and it may be tinted with mineral colors, as in the case of the cement wash. It is the most durable and economical coating for brick or rough cast walls that we know of, and has been in use for 100 years or more on light houses and other buildings in the United States.

### A SINKING BRIDGE PIER.

An unyielding foundation is generally considered a prime essential to the successful operation of a swing bridge; but in a paper which has recently appeared in the "Proceedings of the Institution of Civil Engineers of Great Britain," John A. Saner, engineer of the Weaver Navigation, at Norwich, England, describes a swing-bridge design which seems to overcome successfully the usual difficulties attendant upon a yielding foundation. In the district surrounding the town of Norwich, where the bridges described are located, the ground is undermined by salt-mine workings, and is subject to a gradual subsidence due to causes which Mr. Saner describes in his paper. At the locality of the bridge this subsidence has averaged for a long period about four and one-half inches each year. It is plainly evident that, under these conditions, a swing-bridge with the usual pivot pier-construction would endure a material decrease in its clear headway above the water-level after a few years, even if more serious troubles were not encountered. In the two swing-bridges at Norwich, Mr. Saner decided to meet the problem of subsidence by doing away entirely with a masonry pivot-pier and substituting in place of it to support the swing-span a circular steel pontoon floating in the water. To steady the bridge, or to keep the pontoon upon an even keel, if we may properly so term it, and to maintain the turning point or pivot of the span in a constant position, a circular roller-girder carried by screw-piles sunk at intervals around the pontoon-chamber is provided. As this girder will, of course, settle with the screw-piles as the ground subsides, the piles were provided at their tops with an arrangement by which their length is increased as the ground settles. The whole arrangement is a very simple one, and so far as the evidence now in hand goes seems to be a very successful one for the purpose intended. Instances will occur in the practice of many bridge-engineers where the conditions of securing a stable pivot-pier foundation are very onerous, and it will repay them to make a mental note for future use of the structure described.—Engineering News.

Contractors will confer a favor upon the publishers by mentioning the CONTRACT RECORD when submitting tenders for works advertised in this paper.