

this place, where it will rest on a float and piles. A front will be added to the structure, the plans for which have been prepared by A. R. Denison, architect.—Edward Boisseau & Co., wholesale clothiers, 18 Front street east, have leased the vacant property on the south-west corner of Yonge and Temperance streets, formerly occupied by the John Eaton store, and will erect thereon a modern building, 70 x 150 feet, combining factory, wholesale and retail store. Building operations are expected to commence very shortly.—The Board of Works will shortly invite tenders for laying water mains in Parkdale.—The city have decided to erect a building in High Park for refreshment purposes, to cost \$3,000.—According to a report presented to the Property Committee by the architect, the sum of \$91,525 will be required to complete the new City Hall. This sum includes the following: To complete tower, \$5,600; to complete main entrance steps, \$1,000; tuck-pointing, \$3,875; carving, \$3,000; vault, \$1,000; concreting, \$3,300; rearranging and additional partitions, counters, etc., \$7,500; thirty vaults fitted up in wood, \$3,000; furniture, \$25,000, including mantels, grates and hearths, \$4,800; blinds, \$2,500; fire protection, \$1,600; prisoners' cages, \$5,500; treasurer's portable cash vault, \$2,000; to complete clock system, \$5,000.—Building permits have been granted as follows: Jessop & Sons, 13 Richmond street west, two storey brick warehouse, 80 Bay street, cost \$8,900; W. H. Hunter, 60 Close avenue, two pair semi-detached brick dwellings, north side Dundas street, opposite Sorauren avenue, cost \$3,200; Mrs. Nuttall, 188 Adelaide street west, two storey brick house, cost \$1,400.

FIRES.

The Ontario Rollings Mills at Hamilton, Ont., were burned to the ground on Sunday last. The building was owned by the Grand Trunk Railway Co., and was valued at \$5,000. The loss on machinery is between \$20,000 and \$25,000.—A. W. Vermilyea & Son's boot and shoe store at Belleville, Ont., was seriously damaged by fire recently. The building was owned by James Vair, of Cobourg.—A building at Vankleek Hill, Ont., known as the Iron Store and occupied by John Northcott, was burned on the 14th inst.; insurance on building, \$1,700.

CONTRACTS AWARDED.

LONDON, ONT.—The contract of building the Napier bridge has been let to Henry Gough, at the price of \$1,075.

DUBLIN, ONT.—Jos. Krauskopf has let the contract for the erection of a brick residence to Davis & Eiserman, of Mitchell.

MONTREAL, QUE.—L. Z. Gauthier, architect, has let the contract for a church at St. Victor d'Alfred to L. J. Fauteux, of St. Benoit.

EMYVALE, P. E. I.—The contract for the exterior work of the new R. C. church has been let to D. C. McDonald, of this place, whose tender was \$4,300.

STRATHALLAN, ONT.—The East Zorra Council have accepted the following tenders for a new bridge: Stone abutments, Thos. Callan, of Innerkip, \$960; steel superstructure, Strasford Bridge and Iron Co., \$590.

CALGARY, N.W.T.—Lossen & McGilvray, of this place, are reported to have

received a contract for all the bridge work of the Crow's Nest Pass railway, from Crow's Nest Lake to Moyle Lake, a distance of 200 miles.

MAISONNEUVE, QUE.—J. Alcide Chausse, architect, of Montreal, has awarded to Hamel & Bleau the contract for the erection of two three-storey factories, 50 by 100 ft., one for Jos. Larin, and the other for M. Daniel & Company.

ST. JOHN, N. B.—R. Maxwell has been awarded the contract for the residence to be built by C. H. Peters. Sub-contracts have been let as follows:—carpentry, J. Drury; painting, J. H. Pullen; copper work, James McDade. The architect is H. H. Mott.

HAMILTON, ONT.—The following tenders for water works supplies have been accepted by the city:—Wood, Vallance & Co., lead pipe, pig lead and hose for street watering; Gartshore & Co., cast iron pipe and castings; Burrows, Stewart & Milne, iron stop-cock boxes; A. J. Nie, stop valves and hydrants; Chadwick Bros., cocks and nozzles; Gutta Percha Company, Toronto, hose.

TORONTO, ONT.—Contracts have been awarded by Mr. F. H. Herbert, architect, for alterations to store, 117 Yonge street, for the Cawthra estate, as follows:—Brickwork, R. Chalkley; carpenter work, Andrew Nelson; painting, F. E. Phillips; galvanized iron, Tucker & Dillon; roofing, John Reggin.—The contract for the mason and carpenter work in connection with the rebuilding of the factories, 36-40 Adelaide St. West, for Mr. C. H. Hubbard have been awarded by Mr. F. H. Herbert, architect, as follows: Brickwork, Richard Chalkey; carpenter work, Geo. Rathborne; iron work, The St. Lawrence Foundry Co. The balance of minor trades will be tendered for shortly by advertisement in the RECORD.

MARKET CONDITIONS.

The firmness of the cement market has been freely commented upon during the past week. Orders have been placed for more than the usual quantity, and as a result prices show a tendency to advance. Ontario buyers have placed orders in Montreal for 1000 barrel lots of English cement, for March delivery. This is an unusual occurrence at this season of the year, and shows that the available stock in the west is not considered equal to the demand.

Galvanized iron is moving freely at Montreal, and prices are quite firm. In pig iron there is a light movement. The destruction of the plant of the Ontario Rolling Mills at Hamilton will probably create more demand for American pig iron for a time. Notwithstanding that indications point to higher prices for iron pipe, there is considerable variation in

the prices asked by the different manufacturers.

At Toronto galvanized iron is moving actively at recent quotations. There is also a fair business doing in glass and paints and oils. The feeling is general that upon the opening of the building season there will be a considerable demand for supplies.

ALUMINIUM IN STRUCTURAL WORK.

In the use of aluminium for structural purposes the selection of the proper grade that should be used will depend largely upon the specific purpose to which it is desired to apply the metal, but, generally speaking, for purposes where aluminium is brought into tension, such as in sheets or in rolled shapes (as angles, beams, &c.), an ultimate tensile strength of from 32,000 lb. to 40,000 lb. per square inch may be reckoned upon, and a safety factor of four gives an allowable working strain of from 8,000 lb. to 10,000 lb. This, of course, is not for the pure metal, but for the stronger alloys.

The Illustrated Carpenter and Builder says that the ultimate tensile strength of pure metal in plates and shapes may be taken at from 24,000 lb. to 28,000 lb., and with the same safety factor of four it gives an allowable working strain of from 6,000 lb. to 7,000 lb. For the alloys of cast aluminium in tension, the ultimate strength may be taken at from 18,000 lb. to 28,000 lb. per square inch. Using a safety factor here of five, as aluminium castings are quite uniform and solid, a working strain is obtained of from 3,600 lb. to 5,600 lb. per square inch. It is difficult to give a value for the ultimate strength of pure cast aluminium in tension, for the reason that while the ordinary pure aluminium will average about 16,000 lb. per square inch, this can be increased very considerably by cold working, and in some cases to as much as 24,000 lb. per square inch. Assuming the average strength and using a safety factor of four gives an allowable working strain of from 32,000 lb. to 48,000 lb.

In comparison the alloys of aluminium in rolled plates and structural shapes, such as struts, columns, &c., have an ultimate tensile strength of from 26,000 lb. to 34,000 lb. per square inch, which, using a safety factor of four, gives an allowable working strain of from 6,500 lb. to 8,500 lb. per square inch. Pure aluminium sheets and structural shapes in compression have an ultimate tensile strength of from 20,000 lb. to 24,000 lb. per square inch, which, with a safety factor of four, gives an allowable working strain of from 5,000 lb. to 6,000 lb. per square inch.

(To be Continued)

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