

Ont., has been burned.—The Dixon house, with hall and stables, at Brucefield, Ont., owned by Wm. Dixon, were burned on Tuesday last. Loss partially covered by insurance.—A four-story building on Hollis street, Halifax, N. S., owned by the Queen's Hotel Company, was recently damaged by fire to the extent of \$5,000. Insurance, \$4,000.

CONTRACTS AWARDED.

KINGSTON, ONT.—It is probable that a local firm will secure the heating contract for the new Frontenac school.

CORNWALL, ONT.—The debentures recently offered for sale were purchased by R. Wilson Smith, of Montreal, at par.

HAWKESBURY, ONT.—A contract for a Roman Catholic church, to cost \$30,000, has been given to Mr. Fauteux, of Montreal.

HALIFAX, N. S.—The Board of Fire Commissioners will recommend the acceptance of the tender of M. E. Keefe for the erection of a new engine house. Contract price, \$7,000.

QUEBEC, QUE.—The judges have decided to recommend to the Champlain Monument Committee the acceptance of the design sent in by Messrs. Paul Chevre and Le Cardonell, French artists.

TORONTO, ONT.—The tender of Northey and Co., for a duplex compound condensing pumping engine for the Island water works system, has been recommended for acceptance. Contract price, \$2,260.

HUNTINGDON, QUE.—Tenders for the construction of two abutments, wing walls and approaches for the steel bridge across Trout River were received as follows: Joseph Tallon, \$1,090; John Elder, jr., \$1,232. The former has been accepted.

ST. CATHARINES, ONT.—The Welland Vale Manufacturing Co. propose to erect a bicycle factory about 66x106 feet in size, to cost about \$8,000. They have let the contract for mason work to S. Boyd, and for painting and glazing to Geo. Wilson.

QUEBEC, QUE.—The North Shore Turnpike Trust Company have awarded a contract for a bridge to replace that known as Scotts bridge, to B. Leclerc, of this city, and A. Rosseau, of Montreal. It is to be of iron, 170 feet long, and will cost \$8,000.

MONTREAL, QUE.—Arthur J. Cook, architect, has awarded contracts for a house at Westmount for Archibald McGowan as follows: Masonry and brickwork, A. Charette; plumbing and heating, J. Creed & Son; plastering, H. Contant; painting, H. O'Brien. Other contracts not let.

OTTAWA, ONT.—Joseph Bourque, of Hull, has been awarded the contract for building the wing of the new reformatory at Alexandria. Amount of tender, \$95,000. Messrs. Viau & Lachance were the next lowest tenderers, at \$117,000. The highest tender was \$180,000.—Tenders for annual supplies for the Board of Works have been awarded as follows: cedars, F. H. Cluff; plank, D. Storey; hardware, McDougal & Cuzler; sewer pipes, McKinley & Northwood.—Contracts for erecting a new store for Messrs. Orme & Sons have been let as follows: Masonry and brickwork, Holbrook & Sutherland; carpentry, T. Hodgson; plastering, Campbell & Sutherland; steam fitting, Butterworth & Co.—Tenders for erecting a new store for Mr. Stevens have been accepted as follows: Masonry and brick work, Holbrook & Sutherland; carpentry, T. Shaw; plastering, Campbell & Sutherland; steam fitting, McKinley & Northwood.

NEW COMPANIES.

MONTREAL, QUE.—Beaver Bag Company, seeking incorporation; capital, \$100,000. Applicants, Edward Kirk Greene, John Leckie, Charles Allen Smart, John Edgar and Eben McAdam.

VANKLEEK HILL, ONT.—Temiscamingue Lithographic Stone Mining Co; capital, \$100,000. Officers, Dr. R. P. Pattee, president; W. S. Mooney, vice-president; Donald McInnes, secretary-treasurer.

VANCOUVER B. C.—Union Logging Co., seeking incorporation; capital, \$15,000. Objects, general lumbering. Promoters, Daniel McIntyre and Fredk Daniel McIntyre, of Vancouver, and Geo. E. Atkinson, of the State of Washington. French Creek Gold Mining Co.; capital, \$200,000. Provincial trustees, D. M. Linnard, Rossland; W. G. Johnson and D. G. Marshall, Vancouver.

VICTORIA, B. C.—Anacortas Packing Co., granted incorporation; capital \$30,000. Promoters, R. V. Winch, Vancouver; J. H. Todd, Victoria; John H. Walker, Ilwaco, Wash.; Daniel Cook, Eburne; Arthur Ward, David Miller and C. F. Todd, Victoria.—Nest Egg Mining Co., applying for incorporation; capital \$500,000. Objects, general mining. Promoters, Pat Aloysius O'Farrell, of Spokane; A. B. Erskine and Geo. Alan Kirk, of Victoria.

SOME EXPERIMENTS WITH MORTARS.

We do not often write about mortars although bricks and mortar invariably go together, but in the face of the attention which has during the past few months been given to the subject by our foreign contemporaries, we must needs step aside to consider some rather illuminating experiments which have just been made.

Builders are a class of people whom we naturally have to conciliate. They are usually most worthy men, but possessed with various prejudices, whilst their commercialism is admirable, however inconvenient we may sometimes find it. Now, it is a common belief amongst builders, especially amongst brick layers and foremen, that it is much more advantageous to mix lime mortar some days before it is wanted, rather than to mix it immediately before the bricks have to be laid.

To test this popular superstition—if we may be forgiven the expression—samples of mortar have recently been taken on successive days from two separate heaps of larger size. Small cubes of bricks were molded from these samples, and set aside

for a definite period of weeks, and then broken, in order to estimate their tensile strength.

The following were the results:—

Sample.	Days in heap after mixing.	Days exposed to air as a small brick.	Average breaking stress in lbs. per sq. in.
Mortar No. 1	3	50	34.6
" "	4	48	38.6
" "	6	46	39.3
Mortar No. 2	4	48	38.0
" "	5	47	38.0
" "	6	46	41.2
" "	6	45	41.5

The amount of calcium silicate formed was found to be exceedingly small, even after very long intervals of time.

Another notion that is very common amongst those who have to deal with the building of bricks into brickwork is that sugar and blood are very good things to mix with the mortars especially with hydraulic mortars. Consequently, experiments were undertaken to test these views.

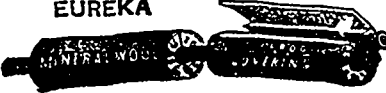
Hydraulic mortar tempered with sugar and water, at the rate of half a pound of sugar to the gallon, was found to be considerably stronger than the same mortar tempered with water alone. This was found to be true only if the mortar were allowed to harden exposed freely to the atmosphere. If the mortar were used for subsquares brickwork, no advantage was found to follow upon making the extra expenditure and taking the extra trouble with sugar.


The same mortar was also tempered with bullock's blood, diluted with one third of its volume of water. The mortar was then molded in a brick mold, and was found to set somewhat more quickly. It also showed a considerable increase in strength, both when exposed to the air as well as when laid under water.

Here are some experimental data.—

	lbs. per sq. in.
1. Tempered with water alone.....	63.00
2. " " sugar solution, and exposed to water during 38 days....	62.75
3. " " sugar solution, and exposed to air during 38 days.....	65.4
4. " " diluted blood, and exposed to water during 37 days.....	68.3
5. " " diluted blood, and exposed to air during 37 days.....	69.8

So it seems there is some truth in these old notions; and those who hold them will now be able to give scientific reasons for their faith.—British Clay Worker.

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