

ance. Works on these will probably be commenced in the spring.—The City Engineer has prepared a report on the construction of a trunk sewer, which will probably be presented at a meeting of the Works Committee of the City Council to be held next week. He estimates the cost of carrying out the scheme at \$1,000,000.—A meeting of prominent citizens was held a few days ago to discuss the proposition made by Mr. H. A. Massey to erect a fine music hall to cost \$100,000, and a committee was appointed to devise a scheme to secure its erection.—The following building permits have been granted: C. J. Holman, 131 Bloor st. w., det. 2 story and attic bk. dwelling, Lowther ave. opposite Admiral Rd., cost, \$8,000; Mrs. E. Shingler, s. e. cor. Lansdowne ave. and Manon st., cost \$3,000; Wm. Murray, 34 Wright ave., four det. 2 story and attic bk. dwellings, 163-9 Close ave, cost \$12,500, C. H. Hubbard, 2 story and attic bk. dwelling, 69 Grosvenor st., cost \$6,500.

FIRES.

The Catholic Presbytery at St. Andre, Que., was destroyed by fire Monday of last week. The loss is about \$7,000.—The James Hall at Toronto Junction was damaged by fire on Saturday last to the extent of \$2,000.—Rudd's carriage factory at Dresden was burned on Friday of last week. Loss \$4,000, insurance \$11,400.—Mickle, Dymet & Sons saw and shingle mill was burned to the ground at Barrie, Ont., on Saturday last. The mill was erected five years ago, and cost \$25,888.—A four-story building on Pearl street, Toronto, owned by Mr. George Proctor, proprietor of the Bay Tree Hotel, was entirely gutted by fire on Wednesday last. The loss on the building is estimated at \$10,000, the insurance being \$4,000.—A brick house on Queen street, London, owned by Phillip McKenzie, was destroyed by fire on Tuesday last. Loss \$1,200; insurance, \$650.

CONTRACTS AWARDED.

PEMBROKE, ONT.—The Town Council has awarded the contract for the construction of a system of waterworks to Messrs. T. & W. Murray, of this town. The contract price is \$45,300.

NIAGARA FALLS, ONT.—Messrs. Wm. Kennedy & Sons of Owen Sound, have been awarded the contract for the turbine wheels to run the dynamos for the electric railway now under construction.

OTTAWA, ONT.—The Public Works Department have awarded contracts for the erection of public buildings at Lunenburg, N. S., and Chatham, N. B., to the Oxford Furniture Company and Joseph Ireen, respectively. The buildings will cost about \$25,000 each.

PUBLICATIONS.

One of the most attractive and best arranged catalogues that have come under our notice of late is that just issued by the Toronto Steel Clad Bath and Metal Co.

It is well known that heat is often the means of facilitating the operations which in nature under ordinary temperatures take much longer periods. In a paper read before the American Society of Engineers on the use of hot or boiling tests for Portland cement for producing changes in its volume, the following reference was made to the work in the Dock Department of New York. It is well understood that any changes in cement must finally produce disintegration, and hot or steam tests were suggested. The method of hot testing now practiced by the Docks Department, New York, is as follows: Six pats

or cakes of pure cement and water, about one-half inch thick and three inches in diameter, are moulded on thin glass plates; No. 1 is at once put in a steam bath with a temperature of 195° to 200° Fahrenheit; No. 2 is put in as soon as it is set hard enough to bear the one pound wire; No. 3 is put in after twice the time for No. 2; No. 4 is put in at the end of twenty-four hours; No. 5 is put in fresh water at 60° Fahrenheit; No. 6 is kept in moist air at 60° Fahrenheit. The first four are each kept in the steam bath for three hours, and then immersed in water of 2000° Fahrenheit temperature for twenty-one hours, after which time they must show no swelling, cracks or distortion, and must adhere to the glass plates, but the latter requirement is not insisted upon. In another test for checking or cracking, a cake of neat cement is moulded on glass, and is made two inches or three inches in diameter, one-half inch thick in the middle and with very thin edges. After being allowed to set for three hours in moist air at 2000° Fahrenheit, it is kept in boiling water for twenty four to forty-eight hours, at the end of which time it must adhere to the glass and show no cracks or distortion.

A liquid glue for joining wood to metals may be prepared, says M. Heez, by a mixture of 100 parts clear gelatine, 100 parts cabinet makers' glue, 25 parts alcohol, and two parts alum, the whole mixed with 200 parts of twenty per cent. acetic acid, and heated on a water bath for six hours. It possesses great resistive power

BUSINESS DIFFICULTIES.

Messrs. J. Bedford & Sons, builders and contractors, Toronto, are in financial difficulties. The liabilities are placed at \$9,000 and the assets \$14,000.

Messrs. H. R. Ives & Co., of Montreal, have found it necessary to make an assignment. The financial statement shows a nominal surplus of \$150,000 over liabilities.

MUNICIPAL DEPARTMENT.

ARTIFICIAL PAVING STONES.

M. Rast and S. Aufschlaeger prepare artificial paving stones of great hardness and elasticity, according to the following process. Best quality of porcelain cement, green furnace slag sand, pure quartz sand, pure basalt gravel and pure granite gravel, are reduced to as uniform a grain as possible, i. e., the coarser particles are removed. The separate constituents are then mixed, moistened and rammed in a mould. After being thoroughly compressed, the material in the moulds is brought under a press, and the stones are finished. When taken from the moulds, the stones are for a few days exposed to the air and then for a few days placed in water. After being taken from the water they are stored for two months in the air, when they are ready for paving.

WIDE TIRES DEMANDED.

At a recent meeting of the Chicago Council Alderman Mann introduced a resolution to widen the tires on traffic wagons. He says the streets in residence portions of the city are being destroyed by heavily loaded vehicles tired with iron as narrow as two inches. "I have seen many wagons loaded with from three to four tons of World's Fair material dragged through our streets by two and three teams," said the alderman. "Many of these wagons had wheels with two-inch tires and they cut right into the pavement."

THE CAMERA IN ROAD SURVEYING.

In our issue of July 2nd a description was given of the methods of using a photographic camera in topographical surveying. There is evidently an increasing use of the camera and it is accordingly of interest to learn that the Massachusetts State Highway Commission proposes to make use of it in gathering facts about the conditions of the common roads within the State. Under the auspices of the commission a photographic survey of the main highway from Boston to Worcester has been made and this work is now being continued to Springfield. The surveyor is Chas. L. Weeks, of Chelsea, Mass., a graduate of Dartmouth Scientific School and a special student of geology and surveying. Mr. Weeks has devoted especial attention to photography as an adjunct of surveying. He travels on a bicycle in making the survey, and whenever there is a change in the character of the road he takes a view, preferably a time exposure, taking at the same time measurements of the width of the road, the slope on each side from the crown to the edge of the travelled part, and the uniformity of the shape. He also bores into the ground so as to get a sample of the material of which the road is made. It is said by the Springfield Republican, from which these notes of the survey are taken, that very little of the road which has been photographed is such as a skilled engineer would approve. —Engineering Record.

*County Clerk's Office
Windsor, Ontario 23rd Nov-1892*

Dear Sir

*Replying to your enquiry
respecting the value of "The Contract Record"
as an advertising medium for Public Works
I have pleasure in stating that having used
by direction of the Council of this County
and some of their Committees "The Contract
Records" upon several occasions during the
past year. The results have uniformly been
satisfactory - that for less money than had
hitherto been paid for similar services we were
able to reach the parties to whom we desired
to speak and that in every instance tenders
were received and contracts made with "The
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*Respectfully Yours
James White
Collector*
*Chas. Mortimer Esq
Contract Record
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JW*