

building according to plans which had already been prepared.—The Local Board of Health has decided to recommend to Council the erection of a crematory in the west end, at a cost of \$15,000.—Building permits have been granted as follows: Wm. Murray, 34 Wright ave., four det. 4 story and attic bk. dwellings, 163-69 Close ave., cost \$12,800; C. H. Hubbard, 2 story and attic bk. dwelling, 69 Grosvenor st., cost \$6,500; S. Sanderson & Co., s. w. cor. Bloor and Dundas sts., 2 story and attic and basement bk. hotel, cost \$6,000; J. J. Graham, 306 Dovercourt road, pair s. d. 2 story and attic bk. dwellings, e. side Huron st., 175 feet south of Dupont st., cost \$16,000.

**FIRES.**

The new steam grist mill at Harrietsville, Ont., which was erected three months ago, was destroyed by fire on Saturday morning last. The mill was owned by Messrs. Hatton & Jenkins. The loss will be between \$8,000 and \$9,000; insurance \$3,000.—The Toronto Canoe Company's boathouse on Esplanade street, Toronto, part of which was occupied as a box factory by R. G. Elgie, was almost completely destroyed by fire on Monday evening last. The building was owned by Messrs. T. G. and R. G. Elgie, who estimate their loss at \$18,000; insurance \$14,000. The loss on machinery and plant of the box factory is \$8,000.—The factory of the Ontario Box Company on Main street east, Hamilton, was entirely destroyed by fire on Tuesday last. The loss will be between \$10,000 and \$15,000, which is covered by insurance.—The public school building at Oak Hills, Ont., was destroyed by fire on Thursday last. The loss is \$1,400, partly covered by insurance. A house belonging to Mr. Leon Chatner, at Aylmer, Que., was totally destroyed by fire on the 21st inst. The building was valued at \$1,400.—The woollen mills at Thurso, Que., owned by Messrs. J. and G. Black, were burned to the ground on the 21st inst. Loss \$10,000, partly covered by insurance.

**CONTRACTS AWARDED.**

LONDON, ONT.—The contract for painting the new addition to the Collegiate Institute has been awarded to Mr. A. H. Cook, at the price of \$375.  
TORONTO, ONT.—In the issue of the RECORD for December 3rd, the tender of the Standard Drain Pipe Company for 12 inch and 15 inch sewer pipe was given as 22 cents. The price for 15 inch pipe should have been quoted at 32 cents  
OTTAWA, ONT.—The Department of Public Works has awarded the following contracts: For

steam superheating apparatus at Lawlor's Island, Halifax harbor, Messrs. Carrer, Laine & Co., of Quebec, are successful tenderers. The disinfecter will be a fac simile of the one just erected at Grosse Isle; Messrs. McGuire & Bird, of Toronto, have been awarded the contract for supplying the steam heating apparatus for the public building at Orillia.—The Department of Railways and Canals has awarded the contract for the super structure of the new bridge over the Lachine canal at Wellington street, Montreal, to the Dominion Bridge Company. The contract price is in the vicinity of \$35,000.

PEMBROKE, ONT.—The following are the tenders received by the Town Council for the construction of a system of waterworks, intake pipe and pumping well—A. McNaughton, Ottawa, \$26,917; G. A. Dana, Brantford, \$6,977; engine house, boiler house, chimney, foundations, etc.—R. Lester, Ottawa, \$7,500; pumping machinery, boilers, etc.—W. Hamilton, Peterboro', \$4,200 and \$540 extra for large boiler; Waterous Co., Brantford, \$3,950 with \$440 extra for large boiler; John Inglis, Toronto, \$4,250 with \$460 for large boiler; furnishing and laying of distribution pipe—A. McNaughton, Ottawa, \$10,217; W. Murray & Co., Pembroke, \$24,900; G. A. Dana, Brantford, \$25,977; Perry & Co., Ottawa, \$28,840; water tower, valves and connections—John Inglis, Toronto, \$7,400; W. Hamilton & Co., Peterboro', \$7,500. The following are the tenders for the entire work: W. Murray & Co. \$44,920; J. H. Armstrong, Toronto, \$44,937; Garson, Purser & Co., St. Catharines 47,850; J. G. Dana, Brantford, \$51,777; F. E. Fortin, Pembroke, \$54,750; J. Bourke, Hull, \$57,250; John Inglis, Toronto, \$62,770; J. G. Brigham, Ottawa, \$66,727.

**PERSONAL.**

Mr. H. B. Salvin, a successful contractor on the Panama canal, is a brother of Dr. Salvin, of Orillia.

Mr. H. N. Smith late Treasurer of the Hynes Terra Cotta Co., Toronto, has been appointed agent for the American Soapstone Finish Co., of Chester Depot, Vermont.

**BUSINESS DIFFICULTIES.**

Messrs. Frost & Wood, of Montreal, who have been extensively engaged in building operations in that city, have called

their creditors together. A committee has been appointed by the creditors to look into the condition of the estate. It is said that if an extension is granted a surplus of \$100,000 could be realized.

**STRENGTH OF TIMBER.**

A correspondent of the *Manufacturer and Builder*, asks: 1. Can you give me the comparative figures of the strength of timber of various kinds of wood used in building? How will these compare with cast iron? 2 Does the strength of wood follow in the order of hardness—that is, are the strongest woods the hardest?

*Answer.* 1. The following figures give the transverse strength of several of the commonly used kinds of timber and of cast iron. The test piece in each case is supposed to be a bar one inch in cross-section and one foot long between supports:

Materials.	Breaking weight in pounds.	Weight carried with safety.
Hickory (seasoned) . . . . .	270	90
White oak . . . . .	240	80
Ash (seasoned) . . . . .	175	55
Chestnut (seasoned) . . . . .	172	54
Yellow pine (seasoned) . . . . .	150	50
White pine (seasoned) . . . . .	135	45
Cast iron . . . . .	5,781	1,927

2. Generally speaking, yes, as the following enumeration will exhibit. If hickory be taken as 100, then we will have pignut making 96; white oak, 84; white ash, 87; dogwood, 75; scrub oak, 73; white hazel, 72; apple, 70; red oak, 69; white beech, 65; black walnut, 65; black birch, 62; yellow and black oak, 60; hard maple, 56; white elm, 58; red cedar, 56; cherry, 55; yellow pine, 54; chestnut, 52; yellow poplar, 51; butternut and white beech, 43; and white pine, 35.

In view of the constant liability of any locality to the occurrence of wind storms of destructive violence and unknown force, very tall buildings should be assumed to be subject to a wind pressure of 40 pounds per square foot of exterior wall surface and be braced to resist this with iron or steel rods or stiff braces strained not over one-third their ultimate strength.

**MUNICIPAL DEPARTMENT.**

**HOT WATER FOR A SOU.**

The little metal columns bearing the inscription "Eau Chaude" will soon become a distinctive feature in the streets of Paris. Eighty are in course of construction, although one is actually working. Judging from the numbers who avail themselves of it, the useful little edifices will be a popular innovation. A sou placed in the slot yields a supply of eight litres, an ordinary pailful of hot water, and the accommodation is not dear at a half-penny. The exterior envelope of the structure consists of two skins of sheet iron, the space between them being filled with powdered charcoal to hinder the dissipation of heat. The apparatus contains, however, neither fire nor water, at least in a state of permanence. Both come through tubes communicating directly with the water and gas mains, so there is no danger of the fountain drying up. The water is heated almost instantaneously by means of an ingenious contrivance. Over a star-shaped gas burner is coiled a quantity of fine copper tubing, no less than 107 metres in length. The fall of the coin and the pressure of a button act upon a lever which opens the valves connected with the mains. The gas escapes from the burner, and is lit by contact with a perpetual lamp, the water rushes through the multiple circulations of the serpentine tubing, and, owing to excessive conductivity of the copper, it is sufficiently heated by the time it has traversed them. The passage of eight litres takes about a minute, at the end of which the valves close automatically, the gas ceases to burn, the water to flow, and the apparatus reposes until the introduction of another five centime piece awakens it to renewed activity. An uninterrupted succession of clients would naturally cause the water to acquire a higher temperature, through the accumulated heat of the tubing; but the minimum is sufficient for all ordinary domestic purposes. Hot water fountains will be established at all the cab stands, and it is to be hoped that the opportunity thus afforded to the cabmen will tend to render the announcement *voiture chauffee* less delusive than it has often proved to be hitherto.

The Stratford Water Supply Company offer to sell out to the city for \$100,000.

A successful test was made on the 10th inst., of a new Northey pumping engine for the water works at Fredericton, N. B.

The ratepayers of Peterboro', Ont., will vote on a by-law on the 2nd of January to purchase the waterworks. Mr. Alan Macdougall, C. E., of Toronto, has prepared an estimate of the probable cost.

The Ontario government is creating a new branch in connection with the department of agriculture for the purpose of collecting additional municipal statistics. Mr. G. P. Graham of Morrisburg, has accepted charge of this branch.

To purify the town water supply of Hamburg, the local authorities propose to erect machinery for the heating of the water in pipes to the boiling point before allowing the water to pass along the distributing mains for consumption by the people. Both typhoid and cholera bacilli are killed before even this temperature is attained, and by the adoption of this method it is expected that the risks of either disease would be reduced to a minimum.

R. McDOWALL.  
A. M. C. E.  
ONTARIO LAND SURVEYOR  
GRADUATE IN  
CIVIL ENGINEERING.  
Ontario School of Practical Science  
Engineer for the Town of  
Owen Sound

*Owen Sound, November 28<sup>th</sup> 1892*

*C. H. Mortimer Esq.*

*The Canadian Contract Record*

*Dear Sir*

*In reply to your letter of the 25<sup>th</sup> inst. I have much pleasure in stating that the Board of Works of this town recently advertised in the Canadian Contract Record and also in two Toronto dailies for tenders for a pipe sewer. The only outside tender received (among which was the successful one) came from the advertisement in the Record and I am certain that by reason of inviting tenders from outside contractors, the town effected a large saving in the cost of the work.*

*Yours truly  
R. McDowall  
Town Engineer*