

an acknowledged defect in our system of fire protection? Tenders have been sought and received for additional pumping power. These tenders have been submitted to experts, to report upon the relative merits, taking efficiency and cost into consideration, of the various machines and appliances tendered for. If the City Council intended to be governed by the report so made, why is the matter so long delayed, why is not the report of the experts acted upon? Can it be possible that there is some cause for the delay not yet explained? We notice that one of the firms tendering has written a letter to one of the daily papers complaining of the usage they received in connection with their tender. We sincerely trust there will be no more dilly-dallying with the matter. The best appliances should be obtained, and if these can be got from a Canadian firm, with a warranty that all that is predicated of their efficiency will be realized, by all means let such firm have the preference. The item of duty of itself is no inconsiderable item. A number of the stokers in the water department had, very improperly, been allowed a holiday on the same day, a culpable act for which the engineer, Mr. Venables, ought to be held to strict account. It is proper to say that Mr. Venables denies the charge that has been made against him and says the reservoir was full.

Another circumstance incident to the late fire is not without its lesson. Five or six young women, employed in the Central Telephone Office, situate in the south part of the top story of the *Mail*, building were in imminent peril of losing their lives at this fire. One of them with determined resolution leaped over a chasm of 80 feet depth on to the top of an adjoining building. The others were prevented from following the example by the courage and coolness of some gentlemen who assisted them to descend by means of a ladder from their perilous position on the ledge of the roof to which they had gained access through a window. All such high buildings as that of the *Mail* should be provided with fire escapes, and the City Council should lose no time in compelling the owners of such buildings to provide means of escape in the case of fire. We understand that Mr. Neilson, the manager of the Telephone Company—aware of the difficulty of escaping from the office of the company in such a circumstance—has frequently pressed on the proprietors of the *Mail* building the necessity of an immediate attention to this matter.

MIXED MUTUAL AND CASH SYSTEM COMPANIES.

As stated in a previous number, this class of Companies of which there are six doing business in this Province, are permitted to issue policies on the cash system in the same way as if they were stock companies. This permission is given on condition that the amount of premiums taken on the "cash system" shall not exceed in amount, in any year, the premium note income for the same period. This limitation is necessary, in the interest of the public, and should be scrupulously observed by these companies if they desire this privilege to be continued to them. No cash capital, paid

up in whole or in part, not even a subscribed capital is required of them. Besides a reserve fund and some real estate possessed by these companies, the surplus of the premium notes given by those that insure on the Mutual plan over and above what is required to pay the losses and expenses of these companies, forms an additional security to policy holders, as well as the money deposited with the Ontario Government. The following items of information taken from an abstract report of the Ontario Inspector of Insurance, will prove of interest to the public, more especially to those who are insured in these companies:

Name of Company.	Mortgages, Bonds, Debentures or other securities.	Unassessed premium notes.	All other assets.	Total assets.	Total Liabilities.	Amount paid for losses.	General Expense Account.	Borrowed money.	Number of policies in force.	Amount at risk.	Average amount per policy.
Gore District	\$ 21,000	\$ 96,853	\$ 54,989	\$152,842	\$ 28,071	\$ 35,199	\$ 7,556		\$ 6,108	\$ 5,877,656	\$ 962
Hand-in hand	35,293	5,916	8,259	*49,468	9,025	13,346	1,936		1,079	1,999,274	1,853
Ontario	2,016	11,080	6,591	19,687	10,660	7,760	3,569		5,792	3,003,243	520
Perth County	9,000	20,623	7,141	45,281	4,151	6,840	2,070		3,224	3,244,570	1,006
Victoria	4,278	3,671	2,508	40,564	23,597	3,292	3,290	14,881	4,286	3,970,952	926
Waterloo	35,082	30,107	14,566	164,686	35,498	3,908	1,735	1,286	10,220	9,973,907	976

\* The Hand-in-hand has besides the above, a subscribed guarantee capital of \$80,000. It will be noticed that the Victoria Mutual, of Hamilton is the only mixed Mutual and Cash System Company that had to borrow any money. This company should adopt the Simons system of daily assessments, and thus obviate the necessity of borrowing money. The six companies given above insure no less than \$28,105,601 worth of property, and have an income of \$202,142.69. Income and deposit are as under:

	Prem. in note income.	Cash premium income.	Cash dep. with Gov'n't
Gore district	\$26,926	\$29,975	\$ 6,520
Hand-in-hand	6,964	15,323	10,000
Ontario	6,514	4,230	2,000
Perth County	4,795	2,243	2,000
Victoria	9,444	669	4,000
Waterloo	33,825	39,374	14,385

MANUFACTURERS' NOTES

An element of waste in the running of cut-off engines is thus referred to the *Locomotive*. "Many manufacturers who buy engines of larger size than they need when they get them, with a view of increasing the capacity of their works at some future time, carry the highest allowable pressure on their boilers, in consequence of which, the underloaded engine cuts off a very early portion of the stroke. We often find new engines running under a boiler pressure of from 50 to 80 pounds, and cutting off at from one-tenth to one-twelfth of the stroke. This is radically wrong, and is a very wasteful method running. Such high rates of expansion are incompatible with any measure of economy in a simple engine. With compound engine a higher ratio of expansion is admissible. In such cases as we cited, the true course is to carry a lower steam pressure and expand the steam less in the cylinder. The reason for this is that when expansion is carried beyond a certain moderate limit, the condensation in the cylinder is so excessive, that it causes a far greater loss of economy than is gained by the further expansion."

The American Treasury Department has delivered the following, among other Tariff decisions during the past week. In a letter to the Burlington Collector of Customs it is decided by Assistant Secretary French, that irregular sized sawed pine lumber, heretofore classified as sash stock, dutiable at 20 per cent. *ad valorem* under decisions Nos. 2,045 and 4,741, not cut to dimension sizes, but cut into such irregular sized rectangular forms as may be most profitable, and being produced from slabs when the log is nearly sawed out: Held to be dutiable at \$2. per 1,000 feet, board measure, and not to be covered by the decisions cited. And in reply to the San Francisco Collector the same official gives the ruling that Telegraph Cable, composed of different sizes of steel wire, with a heart of hemp, and all united together: Held to be dutiable as an entirety, under paragraph 182, at the highest rate due on any of the steel wire of which it is made, and 2 cents per pound additional, under the provision for steel wire rope and wire strand.

During a recent thunder storm which raged with great force at Greenville, R. I., lightning ran by the telephone wire to the Windsor Mill. The *Electrical Review* says there is no telephone in the mill, and the wire is disconnected just outside the building. The fluid was led by the wire to the corner of the mule and weaving rooms, and entered the building under the jet. It followed the water-pipe and set the sprinklers going, and at the same time fired the stock in the mules. By this singular provision of an active extinguishing agent at the moment the fire started, serious loss was prevented, as the fire was soon drowned out.

TO CORRESPONDENTS.

X.; WROXTER.—Writes us follows: "Kindly say in your next issue if you consider the Wellington Insurance Co., head office Guelph, to be a good reliable Company. To me their rates seem rather low; have they of late years been obliged to make any calls on their assessment notes (other than the cash premium paid at time of insurance.)"