

the City Hall is liable to destruction by fire at any time.

6. The bye-law regulating interior electrical installation passed in 1901, is not enforced and the Committee is advised by an eminent expert that most of the interior installations of this city are defective and a source of danger.

7. Nothing has been done to have the law regulating the storage of explosives carried into effect.

8. A by-law has been introduced providing that all wires be placed underground. The city has been divided into 5 sections and the wires in Section No. 1 have been ordered to be removed next year and other sections each succeeding year.

9. The city's building by-law is not enforced and complaints are made by members of the Board of Trade that their rates of insurance have been raised on account of wooden or other unsafe buildings being erected alongside their premises. The Committee is advised that the staff of city officials, whose duty it is to see the above by-laws enforced, is totally inadequate for a city the size of Montreal.

10. The recommendation of the Board and of the Fire Underwriters' Association for the installation of a high pressure water system have not been acted upon, the city authorities not approving of it. Your Committee would, however, call attention to the fact, that a number of the leading cities in the United States and Canada have adopted this system, and that Toronto, Winnipeg and St. John, N.B., are now spending large sums of money on its installation.

After the above statements the report goes on to point out that the Committee has failed in its efforts to induce the Canadian Underwriters' Association to reduce the rates of insurance until improvements such as those outlined have been made, the Association's last utterances to the Board being as follows:

"The companies are reluctantly compelled to announce that no material reduction in existing rates can be expected until some of the more important improvements have been completed and have been so effectively handled by those in charge of the fire brigade as to result in a decided and maintained decrease in the long continued heavy losses by fire in the congested district."

The Committee closes its most valuable report by recommending that it be printed, with a full report of the council's action in connection with the matter of fire insurance rates and the protective fire service of the city and a copy sent to every member of the Board prior to the meeting to be called, so they may have an opportunity of deciding upon further action towards obtaining the desired reduction in rates.

The council expressed much satisfaction with the work and the report of the Committee and decided to have the report printed and distributed as was recommended. The members of the Council highly appreciated and commended the zealous work done in this connection by Mr. F. H. Mathewson, chairman of the Committee.

THE FALLACY OF AVERAGES, IN REGARD TO FRATERNAL SOCIETIES, ETC.

The very common method of securing the general average of a number of individual averages seems sound enough when viewed superficially.

A recent incident has shown that it may delude even those whose very business ought to make them familiar with the correct way of getting at the common or general average of a number of others. Take an illustration. Suppose for a series of 5 years the premiums and losses of a company are as follows and the average of these years is worked out by a very common method:

Year	Premiums, \$	Losses, \$	Loss ratio, per cent.
1	55,400	27,478	49.60
2	56,800	33,341	58.70
3	61,600	40,942	66.40
4	64,500	48,439	75.10
5	62,100	68,129	109.70
Total of ratios.....			359.50
Divide by 5 as the number of years....			71.90

According to this plan the general average loss ratio of those 5 years is 71.90 per cent. This, however, is quite erroneous, though plausible. The correct plan is to ascertain the total premiums in the years under notice and the total losses, then divide the total losses by the total premiums, and the result is the general average loss ratio of those years. In above case the aggregate premiums amount to \$300,400 and the losses \$218,289, the correct general average in this case being 72.66 per cent. instead of 71.90. This is quite elementary, but there are many who seem to have forgotten what arithmetic they learnt at school.

We recently saw a person of good education, conducting an argument in regard to the proper deduction to be drawn from the respective averages of the figures for two series of years. These figures showed that, for one series of 5 years the general average was a certain percentage, and the general average of the other series of 4 years was another percentage. He declared that, to get the average for the two tables combined, it was only requisite to add the two general averages together and divide the total by two, because the total was made up of the sum of two tables! How this worked out may be seen by an example:

Table No. 1.	Table No. 2.
\$	\$
40,000	12,000
60,000	26,000
70,000	10,000
30,000	5,000
20,000	
\$220,000	\$53,000
Average of 5 years { 44,000	Average of 4 years { 13,250

According to the plan under notice, if these two averages are combined and then divided by two, the product will be \$28,625. But, if the sum of the