

as a life assurance company puts apart a reserve for unexpired lives; so that the actual premiums collected annually, less the amount paid out by the company for losses and expenses, by no means represents the profit on the year's business, though there are many ignorant enough to assert this absurdity, and to argue that the reserves of a fire insurance company are so much money mulcted from the public. Yet we would ask, where would the policyholders of many of the companies have been after the conflagrations of Chicago and Boston but for those very reserves?

It is really astonishing to hear sometimes the utterly unreasonable exclamations indulged in against the enormous profits of fire insurance, no consideration being given to the amount of income or the immense interests involved. For instance, a large office is said to have cleared \$500,000 after the payment of losses and expenses, and providing for its reserve and an outcry is raised by some discontented insurer against what he calls excessive profits,—the result, he maintains, of equally excessive rates. Now, let us point out that if the premium income of that company is \$5,000,000 the above profit is only 10 per cent. thereof, which can hardly be called exorbitant; indeed, we are inclined to think, from our knowledge of the adjustment of fire losses, that were the aforesaid irate insurer, being, let us suppose, a wholesale merchant, obliged to make a claim for fire damage upon the very company he traduces, he would put down his own profits at double or more, for 20 per cent. to 25 per cent. is very commonly allowed upon merchants' sales, and recently we heard of a fire loss upon a drug stock where the sale profit was put down at 50 per cent. Yet we are not aware of any public condemnation of the profits of merchants.

We would remind insurers of the old saying respecting stones and glass houses, and further, if they will take the trouble to study the returns, so far as relates to fire insurance in Canada, they will find that with an average loss ratio of over 70 per cent. during the past twenty years, they have no ground whatever to inveigh against the heavy profits on fire insurance. Thoughtless people overlook the fact that fire insurance cannot be judged by the results of one, two, or even three years, as a disastrous twelve months may counterbalance the profits of several consecutively good years, and, further, that the reserve which they contribute is the security they seek, without which the name of insurance would be like their own complaints, "full of sound and fury signifying nothing."

NATURAL GAS AND THE FIRE HAZARD.

Since the development of natural gas in Canada, and its application of late quite extensively in some localities to lighting and heating purposes, the question of an additional fire hazard has naturally awakened inquiry among underwriters. That question has fortunately been carefully considered in the light of experience in several portions of the United States, where natural gas has for a considerable time been extensively used for manufacturing and for domestic

purposes. It has been found that its use does not involve a serious extra hazard if properly piped and regulated. The conditions of safety are such as may be easily met, and the various underwriters' associations where interested have so thoroughly investigated and effectually formulated regulations governing the use of this product, that we hear little complaint from any quarter. In Canada, however, until recently there has been little occasion to deal with this question, and now that in some quarters the occasion has arisen, the fire insurance companies will need to deal promptly with the subject. Regulation and supervision on the lines which experience has suggested elsewhere constitute the remedy for the elimination of this new hazard. In this connection we cannot do better than to present to our readers the rules adopted some months ago by the Buffalo Association of Fire Underwriters to meet the extensive use of natural gas in that city. Following are the regulations:—

In fitting up buildings for natural gas, heretofore, there has been much diversity in the manner of piping, size of pipe used, etc., etc. After examining into the subject, the Buffalo Association of Fire Underwriters in Erie County have approved of the following rules, which must be followed as nearly as possible in piping houses for natural gas, so as to give satisfaction and to make the use of the gas safe.

SIZE OF PIPES.

No main pipe from service or regulator to be less than $1\frac{1}{2}$ inches in diameter. When over 10 and under 20 fires are to be supplied, the main must not be less than 2 inches in diameter.

From 20 to 25 fires, $2\frac{1}{2}$ inch pipes.

" 25 " 30 " 3 " "

For boilers the pipes must be large enough to supply a sufficient quantity of gas at a pressure of *not over* 4 ounces.

Risers for not over 5 fires, $1\frac{1}{2}$ inches diameter.

" " " 10 " 2 " "

Laterals or risers for 1 fire, $\frac{1}{2}$ inch, not over 15 feet long.

" " 2 fires, $\frac{3}{4}$ " " 15 "

" " 3 " 1 " " 20 "

" " 4 or 5 fires, $1\frac{1}{2}$ inches, not over 20 feet long.

Never use less than $\frac{1}{2}$ inch pipe to any fire.

All main lines in cellars must be run to within 18 inches of cellar wall directly above where the service line enters the cellar, and drop down to within 3 feet of cellar floor or opposite where service line enters the building.

Air mixers must be used in all grates, stoves, ranges, heaters, etc., and the opening must not be larger than 3-16 inch, except for large ranges or heaters, where $\frac{1}{4}$ inch mixers may be used. Where large mixers are used they should have an adjusted shield over air ports, so that the amount of air supplied can be regulated according to the amount of gas being burned. Place the mixers so that no gas can blow back into the room. For boilers, where a large amount of steam is required, do not use air mixers, as they will not give satisfaction under a low gas pressure, when a great heat is required.

Never run the pipes between floors or partitions, or in any place that cannot easily be gotten at to examine the pipe and joints. No cement or any kind must be used to hide leaks of faulty work.

VALVES.

No stop-cocks or valves are allowed between floors or partitions, or in any place where they cannot readily be gotten at. Use stop-cocks with stops in preference to globe valves, as there is always danger of leakage at the stuffing box, and the valve itself often becomes detached from the stem and prevents the valve closing tightly.

When the pipes in a house are completed, the plumber must