

large, well-lighted four-story building, 120x60 feet, was erected adjoining the north wing of the High School. Work began in the new building January 4, 1886, with a force of three instructors and an enrolment of 110 students, ranging in age from 13 to 20 years, of whom 35 are girls.

Two rooms are fitted up for wood-work. The first contains twelve double work-benches, with full sets of tools, grind-stone, etc., for the accommodation of three classes of 24 students each per day. The second contains the same equipments as the first, and in addition, one Rogers jig saw and 24 improved wood-turning lathes. Next September, a blacksmith shop, containing 20 forges, anvils, sets of tools, etc., with exhaust and pressure fans run by steam, will be ready for work, also foundry with small cupola for melting iron, and casting. In the following year, a fully equipped machine shop will follow. A tailoring department for the instruction of girls in the art of cutting and fitting garments, plain sewing, etc., will also be opened.

The course of instruction, as at present contemplated, covers four years, and the school time of the student is about equally divided between manual and mental exercises. Each pupil has three recitations per day, one hour of drawing and two hours of laboratory practice. The object of this school is general education. It aims to develop the whole boy, not a part of him. No special trades will be taught, but the use of tools and the properties of materials, the mechanical powers, &c.

ARE LIFE PREMIUMS TOO HIGH?

Not so often now as formerly do we hear of co-operative associations promising to furnish their members with life insurance for from \$6 to \$10 per thousand dollars, at all ages alike. But many persons have the idea that the average man can be insured throughout life at an annual cost of from \$10 to \$20 per \$1,000 without the insuring association possessing any income from interest, or any reserve fund to fall back upon in the old age of the insurant. And the feeling is quite general among the patrons of assessment insurance, that the premiums found in the rate-books of old line companies are much higher than necessary.

On several occasions we have presented the experience of regular life insurance companies which have existed long enough to have attained to experience which is of some value, as to premiums received being now insufficient to meet the current death losses. In England a great many carefully-conducted companies are now paying out, each and every year, very much larger sums than they are receiving from premiums. In a number of cases the reserves are being annually drawn upon to meet the yearly deficit, and yet those companies are pushing on successfully in insuring new lives—a thing they could not do if they had not, many years ago, accumulated an adequate reserve for their older policies now falling in.

We need not, however, go so far away as the Old Country to find proof that the ordinary premiums are none too high to

provide for current death claims when new members cease to come in rapidly, and old ones have grown older. Several life insurance companies formerly doing a considerable business in Canada have ceased, at one time or another since 1878, to solicit new risks, and the consequence is that though their membership and insurance carried, are decreasing, their death losses are growing heavier and heavier as the years go by. Take the first year of the last decade, 1876, and we find that eleven companies received in that year premiums amounting to \$388,456; and their death losses were then only \$209,910; shewing a gain to the funds of \$178,546.

But coming down to the last year of the decade, namely 1885, we find the figures nearly reversed. The premium receipts were over a third less, and the losses nearly a half greater, as follows:—

Premiums received by 11 companies..\$201,588
Losses incurred in 1885..... 296,581

Shewing a loss on the year of....\$ 94,943
To say nothing of the necessary expenses of conducting the business. Nor is there anything accidental or exceptional about this. As people grow older they naturally die faster, and all who were members of the eleven companies in January, 1876, and are still on the books, are now ten years older than then. Dividing the decade into a first five years and a second five years, we find the following to be the receipts and claims of the following companies during each period, as found in the blue-books issued from Ottawa:—

FIRST FIVE YEARS.

| Name of Company. | Premiums. | Losses. |
|--------------------------|-------------|-----------|
| Briton Medical..... | \$180,030 | \$121,357 |
| Edinburgh Life..... | 108,905 | 48,016 |
| Life Ass'n, Scotland.... | 558,830 | 313,382 |
| Mutual, of Hamilton.. | 194,460 | 49,661 |
| North British..... | 139,208 | 110,687 |
| Queen, of Liverpool.... | 54,570 | 31,562 |
| Reliance Mutual..... | 128,965 | 42,683 |
| Scot. Amicable..... | 100,162 | 73,965 |
| Scot. Provident..... | 25,665 | 6,813 |
| Scot. Provincial..... | 152,402 | 123,183 |
| | \$1,643,197 | \$927,310 |

SECOND FIVE YEARS.

| Name of Company. | Premiums. | Losses. |
|--------------------------|-------------|-------------|
| Briton Medical..... | \$133,613 | \$207,727 |
| Edinburgh Life..... | 83,491 | 73,275 |
| Life Ass'n, Scotland.... | 388,558 | 380,588 |
| Mutual, of Hamilton.. | 180,615 | 98,037 |
| North British..... | 120,489 | 115,549 |
| Queen, of Liverpool.... | 49,754 | 52,346 |
| Reliance Mutual..... | 77,944 | 60,963 |
| Scot. Amicable..... | 60,862 | 136,444 |
| Scot. Provident..... | 19,486 | 13,239 |
| Scot. Provincial..... | 127,192 | 187,964 |
| | \$1,241,954 | \$1,328,136 |

Glancing up and down these figures it will be seen that in every instance the death calls of the second five years were very much heavier than during the first five years. In several cases they are nearly double, notwithstanding that in all cases the income, and therefore the amount of insurance in force, has decreased. Looking at the footings we find the following results:—

| Periods. | Premiums. | Losses. |
|---|-------------|------------|
| First five years..... | \$1,643,197 | \$ 927,310 |
| Second five years..... | 1,241,954 | 1,328,136 |
| With \$401,243 less premiums, deaths increased by..... | | 400,826 |

—During May 2,000,000 lbs. of sugar were shipped from the Dartmouth refinery to points in Canada, outside of Nova Scotia. During the first eight days of the month of June, 1,000,000 pounds of sugar were shipped.

FIRE PROTECTION IN MONTREAL.

The mercantile community in Montreal were, as we stated a few weeks ago, alarmed by the report of Mr. Perry upon the condition of the fire brigade and the defective water pressure in the mains. Upon consideration of the circumstances the fire underwriters, too, were decidedly aroused. Conference was had between the Council of the Board of Trade and the Canadian Fire Underwriters' Association, and the result is that each of these bodies memorialized the Mayor and Aldermen at the meeting of the municipal council on Monday last.

The Council of the Board of Trade recommends a considerable addition to the force and a change in management. A large increase of the appliances, such as steam fire engines, hose, etc. The laying down of large new water mains on the lines projected by the water superintendent. The construction of temporary underground water tanks, and finally, that the force as remodelled be entirely free from unauthorized control, i. e., from any quarter other than its responsible heads.

A much longer and more elaborate paper was laid before the corporation of Montreal by the Fire Underwriters. They urge that although, as recommended by the City Engineer, larger mains were provided, the need of steam engines and cisterns would still exist. "We should have," says their memorial, "six reliable engines in the city proper; we have now only three, of which two have proved unreliable." Then after some suggestions as to the character and fitting of the engines, the paper goes on to say that fifteen tanks, holding 40,000 gallons or more each, are needed, a hydrant connected with each tank, for easy use in winter, should be provided. Ten thousand feet more hose are required, as well as better horses and more of them. Three things, tanks, engines and hose are, we are told "now particularly and absolutely required to save the city from the conflagration which, from its present position and with its present equipment, it is any day liable to." The memorial concludes in the following terms:

"Lastly, any improvement made will avail but little unless competent men are secured to command the brigade. The chief should be very much superior to the person now filling the position. A man should be at once secured capable of re-organizing the whole department and of maintaining it in a state of efficiency, and competent to command it intelligently and effectively in any emergency and under the most adverse circumstances."

In discussing these communications, Alderman Grenier did not see how all the suggestions were going to be carried out. If they have to be made," said he, "increased taxation will be necessary." The difficulty appears to be to get even sensible men like Ald. Grenier to see the necessity for such appliances. The Board of Trade communication deemed it true economy, however, to equip the fire brigade with the utmost liberality, seeing that it is on record that scarcely more than one-half the property of the city is insured, and seeing that an increase of insurance rates by even one-tenth would cost the community far more than doubling the present fire-brigade expenditure would. This last argument had some force for Ald. Fairbairn, and he seemed to favor the recommendations of the memorials. Ald. Villeneuve could see, however, in the remonstrances made, no more than a scheme on the part of the underwriters to raise their rates. Ald. Stevenson, who might have been expected to take a broad view of