

ties, a number of mortality tables have been constructed. These tables differ a little from each other; yet, for working purposes, they show a close and substantial agreement; and have enabled actuaries to form premium rates, as the cost of giving insurance to persons of different ages. By the tables of mortality it is seen that at the different ages the death rates vary, gradually increasing with increasing age. The premium must be so adjusted, for each age, that the contributions of every member shall be sufficient to meet death losses and provide for endowments, if there be any. This law is beyond the control of human agency. It is quite true that the death rate on persons newly admitted into a company or society, ought to be somewhat below the rates fixed in the mortality tables. This is the benefit of careful selection. But when a company becomes old and large, the proportion of new members is not so important in this respect as when it was younger, as they bear a smaller ratio to those already in than was the case in the early years of the company or society. Thus, when the company, or society, becomes old and large, the benefit from "new blood" is but slight.

Another law that must not be overlooked is that of interest. This is a question of great importance. In a company, with judicious premium rates, and estimating upon 4 per cent., at the outside, $4\frac{1}{2}$ per cent., on all reserves, the affairs may be regarded as satisfactory, unless some unforeseen loss is experienced in the investments. But when the premium rates are inadequate, and the accumulated reserves a long way below what they ought to be, there is a heavy annual loss on interest account. Take for example a society with a reserve of \$1,000,000, whereas the reserve ought to be \$2,000,000; and, computing at 4 per cent., the annual loss would be \$40,000, in addition to the annual loss due to insufficient premiums. It does not need

much thought to see where such a state of things is bound to land the company, or society. Already, the shore is strewn with the wrecks of organizations in whose methods the above error of too low a premium rate had found a place. But some societies make the desperate attempt of carrying on a large insurance business, without reserve of any kind; and, consequently, without earnings from interest.

Some societies contend that a reserve is not needed. Its head men coolly say that a reserve is just that much money taken out of the members pockets more than was required to meet maturing losses. If anything could be proof of profound ignorance of the problems of life insurance, surely such contentions afford it. Taking a wide view of the field of societies carrying on fraternal work in Great Britain and the United States, it is found that the death rate ultimately reaches at least 12 per thousand. In many cases it has been much higher. When a society is old enough to contain members from the age of 18 years to 99 years, then the full swing of mortality will be experienced. In 1,000,000 members in American societies it has reached 12.42 per 1,000. In the Ancient Order of Foresters, Britain, it has become 12.14 per 1,000. In the Manchester Unity of Oddfellows, the death rate has attained 12.63 per 1,000. In a large mass of membership for other British friendly societies, it has been up to 12.57 per 1,000. Here, then, is abundant proof as to what the death rate must become in friendly societies that have existed for many years. This death rate means that \$12 to \$13 is required annually from each member to meet death losses. When to this the working expenses and lodge dues are added, there is a yearly cost of at least \$16 to \$18. New societies in the meantime have sprung up. The mortality in them is lower, because the members are more recently select-