THE LIFE INSURANCE QUESTION.

(Continued.)

The theory in question contradicts the first principle of life insurance, which is founded upon the consideration of large numbers of cases under the law of average. The company which has thousands of claims to pay during a generation to come, knows approximately how much it will have to pay each successive year; and can therefore compute the amount of funds it must hold at any time, or the necessary reserve, to meet its whole liabilities. But the moment one of these liabilities is singled out of the mass, and separately considered, the problem of reserve loses its meaning; it is utterly indeterminate.* The aggregate reserve is computed on the supposition that all members who have entered will remain until death, and will pay the full price of their insurance, most of which is still due from them in their annual premiums. If it is optional with each of them to withdraw at any time, this option is sure to be exercised in their own interests, not in those of the company. Some of the insured are continually becoming impaired in health, and learning that the contract they have made is largely profitable; that their insurance is likely to become payable while as yet very few premiums have been paid on it. These will not withdraw. There are others whose health remains vigorous, or improves; who are likely to live far beyond the period on which the price of their insurance was estimated; and to these the company must look to make good its losses on the earlier deaths. These are under a constant temptation to withdraw, and it is among these, as a rule, that the withdrawing members are found. But if the healthy lives abandon the company, and stop their payments, while the impaired lives remain, nothing is more certain than that the mortality of the company will soon increase beyond its estimates. The amount of this increase cannot be foreseen; it depends upon influences which are wholly beyond the control of the management or the scope of the theory. Thus in a period of general financial depression, when the disposition to economy

* " Under the law of average, theory recognizes a certain amount of this " the aggregate tabular reserve, " as corresponding to each policy ; but in practice, and in a business point of view, there is and can be no such thing as a reserve for a particular policy." To this remark, made in a recent ephemeral pamphlet, Mr. Elizur Wright excepts and says : " What puzzles me is, how this aggregate can be found, if there are no particular reserves or liabilities. Can Mr. Lewis find an aggregate by the summation of any number of zeros or unknown quantities ? " This question has been widely published as a reductio ad absurdum of my assertion. Were it proposed by a less authority, the proper answer would be to refer to the first chapter of an elementary work on probabilities. But lest any one should imagine that Mr. Wright is serious in his objection, it is proper to remark that the axiom or fundamental principle of the science of probabilities is, that indefinite and unknown particulars form definite and known aggregates; that the method of the science is to deal with these aggregates, without assuming or inferring anything in respect to the particulars; and that without this axiom and this method there could be no tables of mortality, and no such profession as that of actuary, to which Mr. Wright belongs.

and the necessity for it are strong and universal; the lapses of life policies are multiplied. When, through bad management or slander, the credit of an institution is weakened, every policyholder is eager to leave it, unless his health is such that he cannot be insured elsewhere. In extreme cases like this the rate of mortality among the "selected lives" of an insurance company has sometimes been literally multiplied in a very short time. The effect of lapses at the ordinary rate upon the vitality of companies in good credit has been carefully investigated by Mr. George King, of London, in an essay recently read before the Institute of Actuaries.* He shows that even in the British companies, where discontinuances are less frequent than with us, they affect the vitality most seriously; so that, although 'the lives at starting are a very select class,' they " not only lose this advantage, but degenerate till they are, on the average, worse than the general population. Did the public understand the circumstances," he adds, " they would cease to look upon liberal surrender values as an unmixed good. The loss falls in the end on the provident members of the community; for those who keep up their policies must pay for the damage done by those who surrender theirs." Mr. King's very moderate conclusion is much more than borne out by the impressive facts he has collected. Were a similar analysis made of the experience of certain American companies, in which the number and effect of discontinuances have been vastly increased by panic and distrust, the results would certainly be far more alarming. Yet it is scarcely necessary to add, that no company is safe unless it is ready to meet an extreme case. The principles of its conduct are not correct, unless its hold upon all its members is such that if every one of them who are healthy and long-lived should abandon it, they will leave enough money to take care of all its impaired lives.

From the beginning an effort was made, in adjusting the theory of the business to the practical system of annual premiums, to provide the necessary security of the company. That theory contemplates a contract made once for all, in view of all the contingencies of life, health, and death, in which a certain average risk is finally assumed by both parties. After time has elapsed, and the contingencies of health which are involved have been partly determined, to leave the completion of the contract to the option of either party is to destroy the basis of the system. Every one can see how absurd it would be to leave to the company the option of terminating the contract by refunding the premiums paid, since in every case of severe illness it could exercise the option, and thus defeat the purpose of the insurance. The absurdity is as real and essential, though not quite so obvious, in giving the option to the other party. Hence the contract was always so drawn, that a member, by failing to pay the annual premium when due, should lose all his interest in the policy. The entire insurance was mortgaged to the company as security for

* " On the Mortality amongst Assured Lives." By George King, of the Alliance Insurance Company, Fellow of the Institute of Actuaries, etc. Journal of the Institute of Actuaries, vol. xix., pp. 381-405.

the unpaid part of the price. This plan, however, while it gave less than a proper and necessary protection to the insurer during the early years of the policy, became gross injustice when applied to insurance of long standing. When property which is transferable, and has a value determinable in the open market, is subjected to a mortgage, the owner who is unable to redeem it can at least, if that value is largely in excess of his debt, compel a sale, the produce of which, after paying the debt, shall be his own. But the insurance on a particular life has no open market; and when it is mortgaged to the company for an annuity on the same life, it can not ordinarily be sold at any price, except to the mortgagee. In such cases the company is a monopoly purchaser, and can fix its own price, or even enforce an absolute forfeiture, however valuable the policy. Thus the customary rule, that a policy-holder may stop payment of annual premiums at any time, but must lose his insurance by doing so is grossly inequitable. It imposes precisely the same penalty in all cases, without regard to the value of the policy. For example : Let there be two policies in the same company for ten thousand dollars each in which the same annual premium of $198.90 is due to-day, each having been issued on the life of a man aged twenty-five, the one five years ago, the other thirty-five years ago. Each policy mortgages the whole insurance to the company to secure the annuity of $193.90 : but the one policy-holder is thirty years of age; his annuity is worth by tables $3,638, while the insurance of ten thousand dollars on his life is worth to the company, by the same tables, only $2,965. The security is therefore inadequate; and if such men as these stop payment and their policies lapse, the company is actually a loser to the average amount of $673. But the other policy holder is now sixty years of age; the value to the company of the annuity on his life is only $2118, while the value of his insurance, mortgaged to it, is $5,905. If such policies as these lapse, therefore, the company makes a clear average profit of $3,787, for which it renders no equivalent.

— Mr. E. A. Saxby has not been in our employ since the 11th inst.

— Referring to refined petroleum oil on the London market, Messrs. S. C. Joyce & Co., under date of the 2nd inst., remark that the market has taken an upward movement, about equal to ¾d spot, and ¼d for last four months' delivery, the American quotations having, both for crude and refined, steadily risen, affecting relatively Continental and home prices until spot oil reached 11¼d, and last four 1s 0¼d. Some uncertainty and excitement in America seems to have resulted in a slight fall, not materially altering prices here, for little has been done, no doubt attributable, in a great measure, to the general unbelief in the rise early in the week. The market closes firm— Spot, 11d to 11¼d ; September-December, 1s. Canadian oil is still held off the market.

— The appeal of the Hon. Attorney-General Angers, on behalf of the Provincial Government, from the judgment of the Hon. Mr. Justice Torrance, declaring the Insurance License