

LIFE INSURANCE MATTERS

An Article Intended to Give an Idea of the Subject

THE MORTALITY TABLES

Premium, Reserve and Endowment Policies Explained—Few Understand System—One American Company has Four and a Half Times as much as France.

In the United States to-day there is in force nearly \$15,000,000 worth of life insurance. This vast sum is nearly twice as great as the total of life insurance in force in England, Germany, France and Russia.

Scientific life insurance is based upon the knowledge that there is a natural law governing the mortality of the race by which may be determined the average lifetime of a large number of persons at a given age. True, it cannot be predicted in what year any particular individual will die, but it may be determined with approximate accuracy how many persons out of a given number will die at any specified age.

If the mortality records of any community are studied and the various ages noted at which the several deaths have occurred, it will be found that the yearly mortality is governed by a law which is practically invariable. Suppose, for example, that such an observation covers a period of time sufficient to include the history of 100,000 lives. Of these a certain number will be found dying at age 20, a larger number at age 30, and so on at the various ages, the extreme limit of life reached by any one being in the neighborhood of 100 years.

As a result of systematic study of mortality records, life insurance companies have incorporated the results of their computations into what are called mortality tables. These tables reveal at a glance the inexorable workings of the natural law governing the mortality of the race. They show how many in any large number of persons born will live to age 30, how many to age 40 and how many to any other age. They also show the number that will die at each age and the average lifetime remaining to those still alive.

In the simplest form of life insurance a number of persons combine to create a common fund to be drawn upon in providing for the families of deceased members of the organization. This organization is called a natural life insurance company, and a contract is made by the company with each member, fixing the amount to be paid in the event of his death to some member of his family, who is called the beneficiary.

One of the most popular forms of insurance to-day is endowment insurance. It has been devised for the person who may wish to make some provision for his own future as well as for the future of his descendants. An endowment policy is one which is payable to the insured himself if he lives through a specified number of years or to a stated age, or payable to his beneficiary in the event of his death before the specified period. There is a twenty-year endowment, a thirty-year endowment and so on.

At age 35 each of the 81,822 members of a company takes out a ten-year pure endowment policy of \$1,000. During the next ten years the 7,849 members who die will receive nothing. At the end of that period the 74,173 survivors will be paid a total of \$74,173,000. Find the present worth of this sum and proceed as in computing the net single and net annual premiums for ordinary life.

The net single premium for such an endowment policy is \$642.65. This amount in ten years at 3 1/2 per cent. compound interest will amount to only \$906.52 instead of the face value of the policy, \$1,000. This difference is made up by the premiums forfeited by the members who die during the term and who get nothing. Here comes in what is known as forfeiture in life insurance.

To obtain the net single premium of the more popular form of endowment, known as ten and twenty year endowment, suppose that each of the 11,822 members of the company, besides carrying pure endowment policies also carry term insurance of like amount covering the same period of ten years. Then each of the 7,849 persons who die during the ten years will receive \$1,000 and thus by combining the premium of a policy the net single premium of a regular endowment is obtained.

There are innumerable other forms of policies, but these are representative and suffice to show how the premiums of all policies result from computations based upon the mortality table and the expenses incident to the running of a life insurance company.

The reserve in life insurance is simply the insurance fund or mortality fund of the company, from which all death claims are paid. The reserve is made up of the net annual premiums and the money these premiums will earn at 3 1/2 per cent. compound interest. Neither net premiums nor the interest thereon can be devoted under the law to any other use than to the payment of death claims. Anthony J. Henson.

STATE IN THE FROG BUSINESS.

Pennsylvania Shipped 800,000 From One of Its Hatcheries.

The largest lot of frogs ever grown in captivity in Pennsylvania were distributed from the Pleasant Mount hatchery, in Wayne County. Fish Commissioner Meehan decided last year to add frog culture to the service rendered by the fish commission, and a few were raised at the Corry and the Erie hatcheries and distributed. The experiment was successful, and frog raising, it was decided, should also be tried at the new Pleasant Mount station. There the frog crop was entirely successful, and the 800,000 were raised and sent out.

The process of raising young frogs is exceedingly interesting. When four or five days old they are ready to ship and are from 1 1/2 to 2 inches long. When twelve days old they are worth 2 cents apiece for bass bait, so there is money in raising frogs if one knows how, since it is possible to grow 2,000,000 of them to the acre.

The frogs are shipped in cans of four hundred each, packed simply in wet moss. The raising of frogs is easier than the raising of poultry. A frog a week old planted now will be fit for the table next year, and in two years will be a "monster."

Two kinds of frogs, the greenheads and the western, were raised at the hatchery, but the greenhead is preferred by epicures. The market price of edible frogs is from \$1.50 to \$3 a dozen.—Republican-Advance.



Gov. George B. Carter of Hawaii.

New Sugar for Diabetics.

A patent has recently been taken out in England for the commercial manufacture of laevulose, or fruit sugar. This substance has hitherto been so expensive (\$1.50 a pound) as to preclude its general use. The inventor of the new process claims that he can furnish laevulose at a price which will enable it to compete with glucose.

Laevulose is of special importance because it can be taken by persons suffering from diabetes, who cannot eat cane sugar or ordinary starchy foods. It is further claimed that the inulin, a starchy substance from which the laevulose is made, is free from the deleterious effects of ordinary starch when taken by diabetics. Chicory roots and dahlia tubers are, it seems, very rich in inulin, and it is from these sources that the inulin is obtained for the manufacture of laevulose. These plants can be cultivated cheaply on a large scale. A portion of the inulin will be used for the manufacture of a bread for diabetic patients. The plants can be found in most of the States.

Education in Japan.

The number of public schools in Japan is at present 27,138, in which 5,084,099 children are taught by 108,360 teachers; 93.23 per cent. of all the children of school age went to these schools. In 1873 29 per cent. of school age children went to the public schools; in 1883 51 per cent. and in 1893 59 per cent. A rapid increase in attendance is noted after the Chinese war. The percentage of attendance of boys compared with that of girls was 40 to 15 in 1873; the difference now is only 7 per cent. The attendance at the various commercial and industrial schools was as follows: In 1901, 36,000; in 1902, 95,000—i. e., only 2,000 less than the number of intermediate schools. The university for women held its commencement exercises recently, 85 graduates receiving the so-called academy diploma and 132 the university diploma. Of those receiving the university diploma, 75 had studied housekeeping, 45 national literature, and 14 belonged to the "English" family. This university was founded for the purpose of educating women to be good wives and mothers.—Frankfurter Zeitung.

Criers at the Paris Halles.

The position of crier at the Paris Halles, or Central Markets, is one which, in view of recent revelations in a case before the law courts, ought not to be despised. The men who cry Gatinas fowls for sale earn \$20 a month; those who sell Brittany fowls get \$10 a month, and those who dispose of ducks only receive \$10 per month. Rabbits bring the crier only a pittance, for \$6 a month is all he gets. Not everybody can be a crier, for unless you have sound vocal chords and a passable voice you will not be engaged. It also requires a man with a strong constitution, for the crier is at work from 6 o'clock in the morning till 8 in the evening, and on an average he should sell 2,000 fowls per hour.—London Globe.

FRANCE AND EGYPT.

Almost as Many French as English in Egypt.

In view of the new Anglo-French agreement, it may not be out of place to note the extent of French interests in the valley of the Nile. These are enumerated in the Paris Temps, by M. Villiers, who maintains that, until now, France has preserved all her privileges, those she holds from the capitulations as well as those secured by the conventions of 1876 and 1879, viz., personal liberty, inviolability of domicile, exemption from taxation except custom dues, house tax, and the municipal tax at Alexandria, and a special jurisdiction. As to the more recent interests of the French they are, says M. Villiers, guaranteed by the Caisse de la Dette, and the agreement which created the mixed tribunals. There are in Egypt, according to the census of 1897, no fewer than 14,155 French subjects, as against 19,500 English, of whom 7,000 are soldiers and 6,500 Maltese speaking Italian. Of the 2,340,000,000 francs of the Egyptian Dette, 1,580,000,000 francs are held by Frenchmen. The majority of the shareholders and bondholders of the Credit Foncier Egyptian are French. The trade of France with Egypt amounts to between 60,000,000 and 70,000,000 francs. There are 108 French commercial establishments, and the landed property belonging to Frenchmen amounts in value to about 53,000,000 francs. Three-fifths of the directors of the Suez canal are French. French missionaries have 15,000 pupils speaking French in their schools. The French law school at Cairo, the French hospitals, and the French clubs continue to exist, while the French department for the study of Egyptian antiquities, upholds, says M. Villiers, "the traditions of our science in the road opened up for it by Bonaparte in 1798."

Chinese Worship of Stone Animals.

Francis H. Nichols in his journey through the Chinese province of Shensi saw a temple where stone animals were worshipped. He says: "In rows of heavily barred brick cages are stone images of animals. They are all life-size and are remarkably well executed. Among them are elephants, tigers, and monkeys, whose sculptors must have secured their models a long distance from Shensi, where the originals are not found. The stone animals stand for the Buddhist idea of reincarnation. They are worshipped as sacred and are supposed, in a vague way to be endowed with life. It is to prevent them from escaping and running away from their worshippers that the cages have wooden bars in front of them. Between the two temples was a pond where fish were fished, or set at liberty. In its workings the system of fonging animals has very much the effect of a humane society on the western side of the world. On the theory that any of the brute creation may be the dwelling place of the soul of a former human being, lame and sick animals become the care of the priests; in some of the larger temples special provision is made for caring for the sick cats and dogs. To fong an animal of any kind is considered an act of supreme virtue. To obtain good luck a pious Chinaman will sometimes purchase a live fish and have a priest fong it. This is done by placing it in the pond reserved for the purpose near the temple."

London, New York, Berlin.

"I agree," writes a correspondent, "that your contributor was justified in saying in yesterday's Chronicle that there is nothing majestic about Berlin. On the other hand, it is certainly handsome and imposing. It is the only modern city I know of that has managed to escape looking artificial. The labor of building Greater Berlin has been most dexterously hidden. There is very little of the deadly uniformity, the Euclidian lines the precise precision one notices in New York. Berlin is something considerably better than a mere chessboard of brick and stone and mortar. The streets have a curved and enticing spaciousness; they are shaded with avenues of trees, faultlessly asphalted and clean with a cleanliness surpassing that of Paris. The architecture is rather too florid for English tastes; but for all that decidedly effective, and a drive from Unter der Linden to Charlottenburg will take one past a finer succession of houses than either London or New York can show. And even the official architecture, in spite of the Kaiser's directing patronage, has its points. There are no statues in the Siegesallee quite so unforgivable as those in Central Park and the streets of London."—London Chronicle.

Man Lives in a Glass House.

Monopah, Nev., enjoys the unique distinction of numbering among its inhabitants a man who lives in a glass house. In consequence of the scarcity and high prices of building material, William F. Peck, a miner, constructed of empty bottles a house 16 feet by 20 feet, with ceiling 8 feet high, containing two rooms. The inside walls are plastered with mortar.

Polygamous Monarchs.

No less than six foreign monarchs with whom the United States and other great Christian powers maintain diplomatic relations, accrediting ministers plenipotentiary to their courts, practice polygamy. They are the Moslem Sultan of Turkey and Shah of Persia, the Buddhist King of Siam, the Shintoist Mikado, the Confucian Emperor of China and the Emperor of Corea.

TEN MILE ARTIFICIAL LAKE.

One of the Results of the Government's Great Irrigation Plans.

When the National Irrigation Congress met in Portland it heard a report on the irrigation work carried on at Belle Fourche, S. D. There are larger undertakings upon which parts of the \$25,000,000 appropriated by Congress are being spent, but at no place are the possibilities for reclaiming land greater. In the tract segregated for irrigation there are 465,000 acres, on both sides of the Belle Fourche River.

The project has under way the construction of two immense dams. The first will be more than 400 feet in length and will serve to divert the waters of the Belle Fourche River, Grow, Owl, Indian Horse, and Willow creeks into a canal leading to the main reservoir. This canal will be six and a half miles long, forty feet wide at the bottom and fifty-eight feet wide at the waterline. The dam to hold back the water in the main reservoir will be between 4,000 and 5,000 feet in length, 125 feet high, 500 feet thick at the base and 100 feet wide on top. The total cost will be \$3,000,000.

This obstruction will impound a lake ten miles long and three miles wide at its broadest point. The country which will surround this artificial lake is most picturesque, being among the foothills of the famous Black Hills.

Writes Flywheel Insurance.

Only one company issues flywheel insurance because only one man can write it. He is monarch of all his inspectors survey; his right there is none to dispute. Two years ago he was a professor in a small engineering college with some theories and figures of his own about flywheels.

His success is largely due to his own formula, for flywheel insurance is almost pure mathematics. When a wheel is revolved at a high enough speed the centrifugal force exceeds the centripetal and the wheel flies apart. Solid cast iron explodes when the speed at the rim is, roughly, three miles a minute. A thick rim explodes just as easily as a thin one of the same material. Wood explodes at a greater speed, jointed iron at a less.

The underwriter allows a rim speed of a mile a minute, one third the explosion rate, as a safe limit for solid iron wheels. This permits a two foot pulley wheel sixteen revolutions a second, while it keeps a sixteen foot flywheel down to two. A jointed wheel is allowed still less. The underwriter has only to name the number of revolutions he authorizes, and to proportion his premium to the size of the wheel. The larger the wheel, of course, the more destructive its explosion.—Leslie's Magazine.



M. Bathner.

Norway's statesman and soldier, urged that no concessions be made to Sweden. He is the Government's auditor.

Tailor's Life Saving Coat.

A London tailor has invented a new life saving coat and gaiters, with which it is possible for a person clothed therein to maintain an upright position when immersed in the water, even if not possessing any knowledge of swimming.

The coat resembles in appearance an ordinary pilot coat, but it is fitted with an air belt, which is inflated with air through a tube. The gaiters each weigh two pounds and are fitted with two brass wings or blades fastened to the back of the heel. As the wearer moves his feet in the water these wings open and shut, and not only propel the wearer along like oars but enable him to maintain an upright position from the waist upward in the water.

A practical demonstration of the utility of the invention was recently undertaken in the River Thames by the inventor and its efficiency and life saving qualities clearly shown, even when moving against the tide.—Scientific American.

Digging for Fish.

The natives of certain parts of India are in the habit every year, in the summer, of digging the dry river banks for fish, which they dig out by hundreds, just as they would potatoes. The lumps are broken open, and the fish, perhaps 8 or 10 inches long, will be found alive, and often frisky, as if just removed from its supposed native element, the water.

In Switzerland there is a law which forbids the sale of hats measuring more than eighteen inches in diameter, and artificial flowers and foreign feathers are also, in most cantons, heavily penalized.

CASTORIA advertisement featuring the signature of Dr. J. C. Ayer and text describing its benefits for various ailments.

List of Jurors for December Term. GRAND JURORS: Beishline, Lewis, Fishingereek, Bower, H. F., Oriareeek, Carl, Joseph, Catawissa twp., Casey, Wm. J., Bloomsburg, Capwell, Wm. S., Bloomsburg, Culp, W. A., Berwick, Edgar, John, Benton twp., Frazz, C. W., Berwick, Fritz, Ray, Jackson, Girtz, A. E., Pine, Hummer, George, Sugarloaf, Hirdeman, C. L., Benton Boro, Hughes, John, Locust, Hauch, C. B., Main, John, Wesley J., Main, Lemon, Theodore, Greenwood, Miller, S. A., Greenwood, Pensyl, Ray, Bloomsburg, Rhoads, Isaiah, Cleveland, Ruckle, John, Benton twp., Roberts, W. H., Catawissa twp., Runyon, C. W., Bloomsburg, Rice, Chas., Bloomsburg, Strauch, Elmer L., Jackson.

Want Shorter Hours. Railroad Employees Will Make a Concerted Move to Secure Them.

Preparations are under way for a concerted movement on the part of the big railroad brotherhoods to secure a reduction of the present working hours for railway employees all over the country. The movement already has been discussed in the grand councils of the order. It is said that it will assume definite form within the next two months. The grievance committee of many western roads will gather in Chicago in December at the same time the schedules govern wages and hours will expire on at least three western roads, the North-western, the Burlington and the St. Paul. According to plans now laid the opportunity will be seized to broach the proposed demands of the employees. The present hours of work on the railroads range from ten to fourteen, but in no case are they fixed. This is due to the nature of the employment. The brotherhoods, it is said, have no intention of appealing for a limited work day. They have planned to seek a general reduction which shall be proportionate in all branches of the railroad service.

Good Investment of One Dollar.

If you have had breath, constipation, pain in the small of the back, discolored skin, nervousness or dizziness, your only wise course is to take Dr. David Kennedy's Favorite Remedy, of Rondout, N. Y. It will cleanse the blood of all impurities, regulate the Kidneys and Liver, and thus restore a healthy glow to your cheeks again.

The Royal Month and the Royal Disease.

Sudden changes of weather are especially trying, and probably to none more so than to the scrofulous and consumptive. The progress of scrofula during a normal October is commonly great. We never think of scrofula—its buncies, cutaneous eruptions, and wasting of the bodily substance—without thinking of the great good many sufferers from it have derived from Hood's Sarsaparilla, whose radical and permanent cures of this one disease are enough to make it the most famous medicine in the world. There is probably not a city or town where Hood's Sarsaparilla has not proved its merit in more homes than one, in arresting and completely eradicating scrofula, which is almost as serious and as much to be feared as its near relative, consumption.

In some of the Swiss valleys the inhabitants are all afflicted with gottle or "thick neck." Instead of regarding this as a deformity they seem to think it a natural feature of physical development, and tourists passing through the valleys are sometimes greeted by the gottle inhabitants, because they are without this offensive swelling. Thus a form of disease may become so common that it is regarded as a natural and necessary condition of life. It is so, to a large extent, with what are called diseases of women. Every woman suffers more or less from irregularity, ulceration, debilitating drains, or female weakness, and this suffering is so common and so universal that many women accept it as a condition natural and necessary to their sex. Put it is a condition as unnatural as it is unnecessary. The use of Dr. Pierce's Favorite Prescription strengthens the delicate womanly organs and regulates the womanly functions, so that woman is practically delivered from the pain and misery which eat up ten years of her life—between the ages of fifteen and forty-five. "Favorite Prescription" makes weak women strong and sick women well.