

## BURGLARY INSURANCE STATISTICS.

BY

FRED S. GARRISON.

Burglary Insurance in various forms has been written in the United States for approximately twenty years. During the year 1894 there was only one burglary insurance company operating in this country, and that company insured banks only. The volume of premiums for that year amounted to \$48,360 and the losses to \$5,930. Prior to 1894 a few local burglary insurance companies had started writing this line of insurance in one form or another, but they were either short-lived or glad to drop the new venture and take up other lines which were more profitable. A year or two later other companies entered the field; one of them devoting most of its efforts to insuring residences and the other to insuring stores and mercantile establishments. Several other companies entered the field during the next few years and began writing all lines of the burglary insurance business, insuring residences, stores and mercantile establishments, office safes, bank safes and vaults, and messengers and paymasters against loss by robbery or hold-up. During the year 1914 the total net burglary insurance premiums written by all companies in the United States amounted to \$4,225,594 and the losses paid aggregated \$1,625,697.

The rates at which the business has been written were never based on actuarial data, because until recently, only a very few of the companies have kept the business segregated so as to show the experience under the various forms of policies issued. This condition has made it difficult to conduct the business properly, but practically all of the companies now realize the necessity of basing rates for the various coverages on actual statistics.

The companies formed an Association called the Burglary Insurance Underwriters Association, which has been in existence about ten years. It was reorganized in March, 1912. Early in 1911 the Association established a statistical bureau for the purpose of combining the experience of all the companies so that rates could be based on the actual exposure under each of the various forms of

burglary, theft and robbery insurance. Nineteen companies were members of the Association at that time and each agreed to furnish the bureau monthly, or at regular intervals, with the necessary information set forth on large sheets that were provided for the purpose. These sheets called for the various classifications of residence business only, no attempt having been made at that time to collect the experience on the other burglary lines, such as mercantile open stock, mercantile safe, messenger and paymaster robbery and bank burglary. The companies were not requested to furnish the amount of premiums written, but merely the number of policies issued, segregated according to the amounts of insurance, because the rates for residence business are based on a graduated scale. The object was to determine the number of policies exposed to loss under each amount of insurance, expressed in even thousands and to reduce the number so issued to an annual basis. The columns on the sheets were arranged so as to show the total amount of insurance under the various denominations of residence policies issued, beginning with \$1,000 and there was also one classification for all policies of less than \$1,000. The sheets were also arranged so that the figures could be shown by years of business.

The net number of policies exposed for one year divided into the paid and outstanding losses thereunder, gave the loss cost per policy per year. The loss cost so obtained, multiplied by the factor  $2\frac{1}{2}$  indicated the proper rate to be charged, assuming that 40 per cent. should be the maximum loss ratio to premiums.

In addition to showing the loss cost per policy per year valuable information was obtained as to the size of residence policy under which the largest number of losses occurred and the total amount of losses, under each policy classified by sizes. It was found that the largest number of losses occurred under policies issued for \$1,000, as would naturally be expected, because a large majority of residence policies are issued for that amount. The information as furnished on these sheets was also divided so as to show the experience on detached houses, elevator apartments, flats, hotels, stables and garages separately and was still further divided to show the experience under each classification and denomination of residence policy, arranged by states and also by the larger cities.

The experience was furnished the bureau in this manner for three years, but some companies found it difficult to report the correct

figures on canceled policies that were not canceled from date of issue. The system required that an annual policy canceled at the end of six months be treated as one-half a policy in force for one year; but it was found that some companies were reporting such canceled policies as a whole policy canceled, instead of a half policy canceled. It was considered unwise to have the premiums reported because of the possibility of a rate war, which would make the experience based on premiums valueless for rate making purposes. Another reason was that changes in rates were occasionally made and it would have been impossible to have determined what rates had been charged on the business reported in bulk to the bureau.

The total amount of insurance under all policies exposed for one year, grouped together regardless of the size of policy, and divided into the loss would have furnished the pure premium per thousand dollars of insurance per year; but such a result would have been of no value for rate making purposes under the present conditions, because such a total could not be divided into the various denominations of policies issued. In other words, under the present system of rating it is necessary to determine the pure premium under thousand dollar policies separately, two thousand dollar policies separately, and so on.

The system used would have furnished accurate results if all the companies had furnished accurate figures; but an investigation of the methods used by the various companies indicated that the information furnished by some of them was not reliable. The Association therefore decided that a new method should be devised and a committee was appointed early in 1914 for this purpose. The committee worked on the problem for nearly a year, the greatest difficulty encountered being that of devising a system which would not only furnish accurate results, but which would be satisfactory to all companies. Those companies which wrote both liability and burglary insurance could furnish the figures through their actuarial departments; but several companies wrote burglary and no liability insurance. A system was finally recommended by the committee and adopted by the Association which can be used by all companies and which will furnish accurate results.

The new system requires each company to send the Bureau either a punched or written card for each policy issued and canceled. This card is called an "exposure card." Provision is also made

for the companies having actuarial departments to report their experience in tabulated form if they so desire. The committee believed that the companies having no actuarial departments would be much more likely to correctly fill in the items on the individual cards, than they would be to furnish the data in complete tabulated form. The original plan called for two "exposure cards," one for policies issued and the other for policies canceled. The two cards have now been combined in one. The items of information on this card are as follows: Company number, year of business, month and year charged, form of policy, endorsements, policy or other identifying number, amount of insurance, class of risk, territory, state, city, premium written, term in months, premium canceled or unearned premium, and unexpired number of months. A card is provided for losses. This card shows the same data as the "exposure card" except the written and canceled premiums, the policy term and policy number. The extra items are the claim number, amount of loss, cause of loss, condition of premises (whether occupied or vacant), kind of property lost, ownership, and month and year loss occurred. The three year business will be kept separate from the one year business so that the experience may be obtained on an earned basis. The loss cost per policy per year under this system may be obtained by dividing the losses by the total number of months of exposure under each class of risk and denomination of policy and by multiplying the resulting quotient by twelve.

The quotient obtained by dividing the total number of months of exposure into the amount of loss on each class of property and multiplying the quotient by twelve, will furnish the loss cost per policy per year, on each of the various kinds of property, so that the rate can be determined on jewelry, silverware, clothing, money, and miscellaneous articles separately.

The losses are further segregated as to cause so that it will be possible to determine whether burglars who actually break into houses steal more jewelry, silverware, clothing and similar property than domestic servants or sneak thieves. It will also be possible to determine the number and amount of losses occurring in vacant houses as distinguished from those which are occupied; and the data will again be segregated as to the kind of property stolen, and so forth. The same is true of losses occurring during fire and while mechanics or workmen are on the premises. The information will

BURGLARY INSURANCE STATISTICS.

BURGLARY INSURANCE UNDERWRITERS ASSOCIATION  
 Exposure (White), Cancelled (Cherry)

Co.No.	Year of Business		Policy Charged	Policy Form	Endorse	Policy Number	Amount of Risk	Class	Territory	State	City	Written Premium	Term in Mos.	Unearned Prem.	Unexpired Term in Months
	12	22													
0 0	0	0	10	20	0	0	0	0	0	0	0	0	0	0	0
1 1	1	1	11	11	1	1	1	1	1	1	1	1	1	1	1
2 2	2	2	12	22	2	2	2	2	2	2	2	2	2	2	2
3 3	3	3	13	33	3	3	3	3	3	3	3	3	3	3	3
4 4	4	4	14	44	4	4	4	4	4	4	4	4	4	4	4
5 5	5	5	15	55	5	5	5	5	5	5	5	5	5	5	5
6 6	6	6	16	66	6	6	6	6	6	6	6	6	6	6	6
7 7	7	7	17	77	7	7	7	7	7	7	7	7	7	7	7
8 8	8	8	18	88	8	8	8	8	8	8	8	8	8	8	8
9 9	9	9	19	99	9	9	9	9	9	9	9	9	9	9	9

13673

BURGLARY INSURANCE STATISTICS.

BURGLARY INSURANCE UNDERWRITERS ASSOCIATION

Co. No.	Year of Paid Business		Policy Form	Endorse	Claim Number	Amount of Risk	Class	Territory	State	City	Loss Paid	No. of Claims	Cause	Occupancy	Property	Ownership	Loss			
	11 Mo.	21 Yr.															11 Mo.	21 Yr.		
0 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1 1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3 3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
4 4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
5 5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
6 6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
7 7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
8 8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
9 9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

also show who owned the property. This is necessary because a separate rate is now charged for insurance on property belonging to the assured's guests, the policy itself covering only the property of all members of the assured's family who reside with him (with or without paying board or rent) and all other persons residing with him who do not pay board or rent, excluding domestic servants and other employees.

## EXAMPLE.

Amount of Policy \$1,000.	Number of Policies Exposed for 1 Year.	Number of Months of Actual Exposure.	Losses.	Loss Cost per Policy per Year.
1 policy for 12 months.....	1	12	\$ 0	
1 policy for 36 months.....	3	36	27	
1 policy for 6 months.....	$\frac{1}{2}$	6	0	
	4 $\frac{1}{2}$	54	\$27	\$6.00

The only lines of burglary insurance on which it is necessary to segregate the experience according to the amounts or denominations of policies, are residence and mercantile open stock. This is necessary on these two lines because they both have been written for several years, by all companies at a rate which is higher for the first thousand than for the second, and higher for the second thousand than for the third, and so on up to \$5,000. For the excess amounts above \$5,000 the rate per thousand is uniform. The reason for this graduated scale is due to the fact that it is a difficult matter to induce policyholders to carry policies for sufficiently large amounts, so that the company will receive the premium on the actual value of property exposed to loss. The rate for the excess amounts is lower than for the first \$5,000 of insurance for the purpose of encouraging the assured to carry more insurance. Burglars, as a rule, carry away only a portion of the goods insured, although a sufficient quantity of goods is frequently stolen to make it necessary to pay the total amount of insurance under the policy. The average loss under a residence policy is about \$150, but we would like to know what the average loss is under each denomination of policy. For example, if it should develop that the average loss under \$1,000 policies is higher than under \$5,000 policies, the rate for a \$1,000 policy should be greater than the rate for the first \$1,000 of insurance under a \$5,000 policy.

The segregation of the experience as to location by state, territory and city is important because it is well known that burglaries occur more frequently in some cities than in others. The highest residence rates are for risks located in Chicago, Ill., and San Francisco, Cal. It was found some years ago that the loss ratio on residence business in those cities was so high that it was impossible to make a fair profit on the business. The lowest residence rates prevail in the New England States, although they have been reduced only recently in those states, outside of Massachusetts, the Massachusetts rates having been heretofore the lowest rates in the country.

About a year ago the country was divided into several so-called territories, for the purpose of rating residence risks, some of the companies believing that the volume of such business in the smaller towns was not growing rapidly enough because the rate was too high. In view of the fact that burglars usually make their headquarters in large centers of population, it was decided to place the larger cities in the territory taking the higher rate, and the smaller cities in the territory taking the lower rate, with what may be called special territories for certain cities and sections. A suburban town, for example, within twenty miles of New York City, because of its proximity to that city, is an attractive field for burglars who make their headquarters there and ply their trade in the smaller towns, returning to New York without inconvenience or delay. These territories are as follows:

#### TERRITORY No. 1.

Cook County, Ill., and the counties of San Francisco, Alameda and Los Angeles, Cal.

#### TERRITORY No. 2.

Greater New York, Long Island, Rockland and Westchester counties, N. Y., the Townships of New Canaan, Norwalk, South Norwalk, Greenwich, Stamford and Darien, Conn., and the entire state of New Jersey.

#### TERRITORY No. 3.

All cities having a population of 100,000 or more and not located in any other territory, also all counties containing cities of 100,000 population or more, not located in any other territory.



## TERRITORY No. 4.

All cities and towns of less than 100,000 population except those located in other territories.

## TERRITORY No. 5.

The New England States except that section of Connecticut located in Territory No. 2.

## TERRITORY No. 6.

Kansas City, Mo., and Kansas City, Kans., and the State of California except that part of it which is located in Territory No. 1.

The experience under mercantile open stock or store policies will be furnished in a similar manner, but there are a great many more classifications as to the kind of property insured. There is only one form of mercantile open stock burglary policy, and this policy is not issued for a period of more than one year, but there are over two hundred classifications for the various kinds of merchandise insured.

The same information will be furnished as respects mercantile safe burglary policies, except that only two divisions are made as to the kind of property insured; money taking one classification and jewelry and similar merchandise the other. The safes are divided into two classes, fire-proof and burglar-proof.

The bank burglary data will show the number and amount of losses caused by robbers or hold-up men, separated from the number and amount of losses caused by the blowing open of the safe or vault by burglars. The amount of insurance under each classification of safe or vault arranged by states, territories and towns classified by population, may be used as a divisor to obtain the loss cost per \$1,000 of insurance per year. The system as devised will also make it possible to determine the loss cost per policy per year, arranged not only according to the class of safe or vault and territorial division, but also according to the various denominations of policies issued. The last mentioned data is not essential for rate making purposes as the rates for bank burglary policies are flat and not based on a graduated scale, but the information will be interesting and may be needed some time.

It is important that the experience on bank burglary business be arranged by states, because of the well-known fact that such burg-

laries are of common occurrence in some of the Western States, particularly in the Northwest and Southwest, and of infrequent occurrence in other parts of the country. It is also a well-known fact that bank burglaries usually occur in the smaller towns; the rate for this form of insurance being discounted according to the population of the town, the smaller the town, the smaller the discount.

The messenger and paymaster robbery rates and also the office or store robbery rates have caused considerable discussion in the Bureau because some companies think they should be high and others that they should be low, but no company has any means of knowing what rates are proper. The losses under messenger and paymaster robbery policies are comparatively few, but they are usually large, often wiping out the entire policy. The statistical data that the Bureau is now compiling on these lines will be of considerable value in determining what the rate ought to be.

Some of the companies prefer to furnish the data to the Bureau at regular intervals, in tabulated form, which is desirable because it reduces the Bureau expense that must necessarily be incurred in having the data on the written cards transferred to the punched cards, and then having the punched cards assorted and tabulated. From January 1, 1915 to July 1, 1915, the Bureau received approximately 89,144 exposure cards, and 288 loss cards. At this rate the number of cards for one year will be between 175,000 and 200,000, which is close to the Committee's original estimate of 200,000 cards per annum.

While one year's experience will be valuable for rate-making and other purposes, three years' experience will, naturally, be still more valuable and the segregation of the data in the manner outlined will show not only the loss cost as a whole, but also the loss cost on the various classes of property under the various coverages and conditions provided in the policies. It has been claimed by some companies that the rate ought to be divided, charging a higher rate under residence policies on jewelry and silverware, and a lower rate for clothing, and a still lower rate for miscellaneous articles. If such a division of the rate is deemed practical we can determine from the statistical data now being furnished, what each rate should be. This information will also make it possible to determine which coverage under the policy may be broadened and which should be restricted.

The twenty-six companies in the Bureau have indicated a willingness to co-operate in this work which is evidenced by the fact that they all are sending the necessary data to the Bureau, either on the written or punched cards, or in tabulated form.

The Bureau has several times been requested by the public authorities to furnish specific information respecting the number of burglaries in certain cities, the kind and value of goods stolen, and similar information. This information can be furnished under the present system if it is deemed advisable to use it for such purposes.