

	1898.		1897.	
	Quantity.	Value.	Quantity.	Value.
Gold, placer—Ounces...	32,167	\$643,346	25,676	\$513,520
Gold, lode—Ounces...	110,061	2,201,217	106,141	2,122,820
Silver—Ounces	4,292,401	2,375,841	5,472,971	3,372,836
Copper—Pounds	7,271,678	874,781	5,325,180	266,258
Lead—Pounds	31,693,559	1,077,581	38,841,135	1,390,517
Coal—Tons of 2,240 lbs.	1,135,865	3,407,595	882,854	2,648,562
Coke—Tons of 2,240 lbs.	35,000	175,000	17,832	89,155
Other materials .....	.....	151,500	.....	151,600
		\$10,906,861		\$10,455,268

The output of metals and minerals for the year 1896, it may be remarked, was of the value of \$7,507,946, and every item, save perhaps coal, was smaller.

The improvement in price of copper, should it be maintained, will stimulate the bringing into the list of producers many new properties, so that a great increase of production may naturally be looked for next year, inasmuch as, according to an American authority, 16 cents per pound is likely to be the average price for copper during 1899.

It is agreeable to find that the character of the Report on the Mining Industries of British Columbia by the present mineralogist, Mr. W. F. Robertson, so well maintains the high standard set by his predecessor, Mr. Carlyle. And it is to the credit of the Ministry of Mines that the volume is so creditable both in respect of typography and illustration. It is a good plan to pursue, that of plentiful illustration, by reproducing photographs of scenes as well as of particular properties. Not only does it often illumine the text, but it stimulates the interest of those other than the miner and the scientist.

Lode mining in British Columbia is of comparatively recent growth, and but a small proportion of the known mines have had time to enter the lists as producers. The following table, giving the production of lode mines from 1887 to 1898, will show the vast strides which have been made:

Year.	Gold.	Silver.	Lead.	Copper.	Total value.
1887.....	.....	75,000	27,813	.....	\$ 26,547
1888.....	.....	75,000	24,813	.....	104,813
1889.....	.....	47,873	6,498	.....	54,371
1890.....	.....	73,948	.....	.....	73,948
1891.....	.....	4,000	.....	.....	4,000
1892.....	.....	66,935	33,064	.....	99,999
1893.....	23,404	195,000	78,996	.....	297,400
1894.....	125,014	470,219	169,875	16,234	781,342
1895.....	785,271	977,229	532,255	47,642	2,342,397
1896.....	1,244,180	2,100,689	721,384	190,926	4,257,179
1897.....	2,122,820	3,272,836	1,390,517	266,258	7,052,432
1898.....	2,201,217	2,375,841	1,077,581	874,781	6,529,420

PREMIUM RATES IN FRIENDLY SOCIETIES.

A plea for sufficient rates of premium in mutual life assurance was made by Mr. W. Williams of the Ancient Order of Foresters at the meeting, on April 27th, of the Canadian Fraternal Association. The author of the paper also essayed to prescribe what are sufficient rates. Let us follow his argument. If, he says, the insurance were intended for a few years only it would matter little whether the society were short-lived or not. But when the contracts made may run for forty or fifty years, or even more, and when aged and infirm people may be depending on them, it is essential that the society be financially able to carry out these contracts. The very uncertainty of the time of death prevents the adoption of the system of fire insurance premiums; that is to say, a level charge for old and young alike. Two hundred years ago many benefit societies were organized on this basis; but then, as now, the unequal pressure upon the younger members caused

them to withdraw. Repeated failures resulted, then and since, from the attempt to work on this erroneous basis.

What, then, is a proper method and what is a reasonable basis to adopt for mutual insurance of lives? "In no country, perhaps, is the mortality more favorable than in Canada. The experience of the Canada Life Company shows that among its insured there is a lower mortality than occurs in England or in the United States." And the experience of the Independent Order of Oddfellows is very similar, while that of the Ancient Order of Foresters is almost identical. Tables of mortality showing the experience of these are cited by Mr. Williams, also of the English Friendly societies, the National Fraternal bodies of the United States and the Institute of Actuaries of Great Britain. From a comparison of these the conclusion is reached that "to secure permanency in Canada, provision must be made to meet a death-rate at least equal to that of the Canada Life or the two societies named." And experience has shown that to increase the rate of premium with increasing age drives out the best blood; "the selection is against the society." A reserve fund must therefore be laid aside to meet the increasing losses as years come on. Such a fund the I. O. Oddfellows and the A.O.F., have for years been laying aside on a high basis. And this fund is invested at interest. The rate of interest derived from it assists to determine the amount of insurance premium to be charged annually; for a high rate of interest earned on reserve means a lower premium for the member.

Quoting the earning rate of the reserves of a dozen Canadian companies, from 3.69 to 5.87 per cent. per annum, Mr. Williams concludes that 3½ per cent. ought to be adopted as the basis of calculation in preparing all rates for mutual insurance. And he adduces tables of the rates charged and found necessary by English, American and Canadian life companies and fraternal societies. It is worth while to make a comparison of these rates, payable in advance to secure \$1,000 at death, in which, it must be remembered, "no provision is made for expenses of management or losses on investments. The whole premium must be held and used solely in paying death claims:"

Age.	Canadian Experience.	National Fraternal.	H.M. 4% Table.	American.
20.....	\$10 03	\$10 62	\$12 45	\$12 67
30.....	13 64	13 96	16 69	16 21
40.....	19 72	20 11	23 52	22 35
50.....	30 36	30 98	35 42	33 70
60.....	49 92	51 13	57 15	55 45

Anyone who will observe the differences in the above table between the amounts of yearly premium found necessary at ages 20 and 40, or at ages 30 and 50, and will note how closely all four of them correspond, will probably see that much of the fraternal business done in Canada and the States at a uniform rate of assessment for old and young is on a totally erroneous and insufficient basis. The argument from lapses is strongly put in this address: "A careful enquiry into the decreasing funds of the Covenant Mutual and the Mutual Reserve Fund," says Mr. Williams, "and the increasing lapse rate shows clearly that lapses are not a benefit, especially to societies conducted on the assessment plan." And the quoted comparison made by Dr. Ferguson is of interest, showing how impossible it is to increase the rates of a fraternal body where they have been insufficient, and not seriously affect, perhaps imperil the existence of the society. "Where rates are increased on old members, the dissatisfaction and discord thus created prevents new members from coming in. The impaired lives hold on with a drowning man's dying grip, while the healthy members leave in disgust." In view of