

**THE NATIONAL LIFE'S STATEMENT.**

The National Life Assurance Company of Canada is again able to state in its annual report, that it has never lost a dollar of its invested funds, and that there are no arrears of interest or principal. Covering now a period of over eighteen years, this very fine record results from the Company's well-known policy of restricting its investments to Government and municipal bonds, and a few other securities of the highest class. Such a clean and unbroken showing must necessarily be a matter of great satisfaction to Mr. Albert J. Ralston, the National Life's first vice-president and managing director, under whose active direction the Company's policy has been developed and maintained. The very large purchases by the National Life, in recent years, of the highest-grade securities, issued at remarkably attractive rates, also suggest the future realisation of handsome results, as the credit of the leading borrowers gradually moves to a more normal basis after the war.

**THE YEAR'S FIGURES.**

The main effort of the National Life's management, last year, was devoted to the increase of the surplus to policyholders, an effort which, we understand, is to be continued during the coming year. New business was, therefore, deliberately restricted. "Policies issued and placed" last year totalled \$4,336,237, a decrease, for the reasons stated, of about \$1,200,000 in comparison with 1916. Business in force, a more vital factor, shows a satisfactory increase to \$22,686,816, a growth for the year of \$1,448,669. The Company's income showed correspondingly favorable development, reaching a total of \$942,428. Of this amount, premiums contributed \$761,034, and interest \$181,394.

Payments to policyholders were \$245,212, against \$232,483 in 1916. Death claims were rather heavier than in the preceding year (\$169,697 against \$117,204), doubtless as a result of war losses, and it is interesting to note, in this connection, that the total amount paid out by the National Life for war claims, since the beginning of the war, now amounts to \$93,727. Total assets have been increased to \$3,781,263, a gain of some \$460,000 over last year. Of these assets, \$2,775,821 are represented by Government and municipal bonds and debentures, \$364,824 by policy loans, \$230,000 by head office building, and \$172,376 by bank and other high-grade stocks.

After calculation of liabilities on a conservative basis, there is a surplus to policyholders, including paid-up capital, of \$350,014, against \$274,193 a year ago, an improvement of fully \$75,000. As already stated, the policy of the Company during the coming year will be directed towards the further enlargement of this surplus, an intention which evidences practically the desire of those in charge, to continue its administration upon a conservative basis in the interests of the policyholders.

The problem of murder prevention and control is a most serious and involved one, in the solution of which life insurance companies have a direct interest in view of the fact that the murder of insured persons is by no means a rare exception and that premature mortality losses on account of homicides constitute a measurable element of cost to the policyholders.—Frederick L. Hoffman.

**GRAIN-DUST EXPLOSIONS.**

At this time, when conservation of foodstuffs is a matter of primary consideration, it is important that the danger of explosion from grain-dust, when mixed in certain proportions with air, should be widely realised. A report lately issued by the United States Bureau of Mines contains much valuable data on this subject. The following causes have been assigned to many of the explosions in milling plants:—

- (1) Use of open lights, or naked flames, such as lamps, torches, gas jets, lanterns, candles, matches, etc.
- (2) Property fires.
- (3) Introduction of foreign material in grinding machines.
- (4) Electric sparks from motors, fuses, switches, lighting systems.
- (5) Static electricity produced by friction of pulleys and belts, grinding machines, etc.

A detailed discussion of the first two classes is not necessary; recognizing the explosive hazard of dust laden air, it is obvious that all the causes in (1) should be guarded against. Many violent explosions have occurred during mill fires, as the force from the fire produces sufficient concussion to jar accumulated dust into suspension.

A large number of explosions in more recent years have been traced to the introduction of foreign materials into grinding machines, particularly in grinding oat hulls and feeds. Particles of foreign material seem to pass the separating systems and, coming in contact with the grinding plates of the machines, produce sufficient sparks to cause an ignition of the dusts in the grinding machines and conveyor lines.

Explosions have been assigned to the ignition of the dust cloud by an electric arc, and by sparks from motors, blown fuses, switchboards, starting boxes, lighting systems, etc. A disastrous explosion in Liverpool, England, in 1911, was due to the ignition of dust stirred up by the breaking of a belt. The cause of the ignition was due to sparks from a blown fuse of a temporary switchboard.

The production of static electricity by friction of pulleys and belts has been assigned as the cause of recent dust explosions. Although experiments have not been conducted along this line to show that a dust cloud can be ignited in this manner, a recent experiment by the United States Bureau of Mines showed very clearly that sufficient static electricity could be produced by a very small pulley and shaft to readily ignite gas. A milling company in Texas, engaged in grinding cottonseed cake into meal, states that, after experiencing a series of explosions, the insulating of a certain grinding machine prevented any repetition of previous occurrences. The fact that explosions have been known to occur at times when the feed of grinding machines was cut off, seems to indicate that an unknown factor may be the responsible agent.

It is announced that Mr. R. A. C. Thomas, F.I.A., agency manager of the Phoenix Assurance Company of London, has been appointed joint secretary of the Union Marine Insurance Co., of which Mr. J. Sandeman Allen is general manager and secretary. Mr. Thomas will still continue to fill the position of agency manager of the Phoenix.