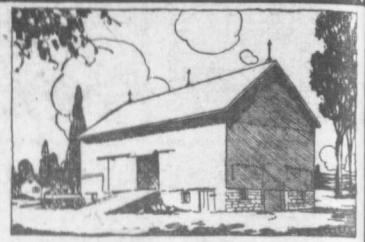
Fire Loss from Lightning

$400,000 a year could be saved if Ontario's barns were all rodded

AS a comprehensive conclusion from Ontario Department of Agriculture investigations we have found that, if all the buildings in rural Ontario were rodded more than 95% of the annual damage to buildings by lightning would be prevented.

The method by which this conclusion was arrived at was as follows: In 1912, eighteen insurance companies in Ontario kept special records for us; from their reports we learned that out of every 7,000 unrodded buildings insured by them, 37 were struck by lightning, while in every 7,000 rodded ones only two were struck by lightning. The rods prevented damage in 35 cases out of an expectancy of 37, showing an efficiency of 94.7%. Since that we have determined the efficiency for the years 1913, 1914 and 1915. The results for the four years are as follows:

Year.	Efficiency of Rods.
1912	94.7
1913	92.0
1914	99.8
1915	99.9
Average for four years	97.2



1. Barn protected against lightning.

2. Rodding a silo. Note the cable hanging down side.

To apply these figures: The report of the Superintendent of Insurance shows that in 1912 the insurance paid on losses caused by lightning was $268,282. No doubt the actual loss exceeded the insurance by perhaps one-third or one-half. If so, the actual loss was $350,000 or over. Ninety-four per cent. of this equals $331,450, which represents the saving that would have been effected that year if all the buildings had been rodded.

$400,000 Annual Fire Losses

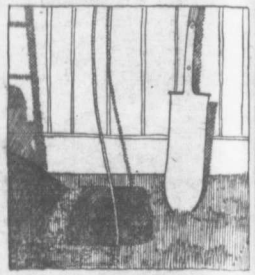
In 1913 the insurance paid on lightning losses to buildings was $305,104, which means a total loss of $400,000 or more. Ninety-two per cent. of this shows a saving of $368,000 if the buildings had been rodded.

Similar computations might be made for the other years, if the lightning losses were at hand. Investigations along similar lines in Iowa have shown an efficiency of 98.7% for rods in that State, based on the report of 55 mutual companies each year for eight years.

In Michigan the efficiency of lightning rods has been shown to be from 98% to 99%. In this State many companies keep their rodded and unrodded risks in two separate classes, and assess each for its own losses. The reports of eight of these companies for the years 1913, 1914 and 1915 show that

In unrodded class the average assessment per $1,000 risk	$3 15
In rodded class, the average assessment per $1,000 risk	2 28

The only possible cause for the difference is the rods on the buildings.



3. Making a grounding. The same cable as hanging down silo, sunk 8 feet in ground by drill. The square hole is only a foot deep, just enough to pour in a pail of water to soften the ground for the drill.

Rods Even Better Than Insurance

These few facts, which are all matters of record in published reports, establish beyond question the conclusion first given, that if all buildings in rural Ontario were rodded, 95% of the annual lightning damage to buildings would be eliminated.

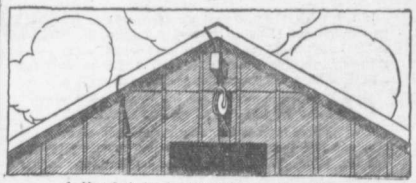
For the individual, lightning rods are a better investment than insurance. When they save a building, the farmer's only loss is the interest on the price of his rods. Under insurance, in case of fire, he loses at least one-third the value of his buildings, together with his premiums.

Kind of Rods

Copper rods are the most durable and, therefore, the best, although any metal will do the work, as long as in proper condition. But iron rusts off at the ground, and aluminum also corrodes under certain conditions. A rod composed of two metals, one wrapped around the other, is especially objectionable.

How to Rod

All rods should be grounded 8 ft. deep. From the ground the cable should run up the corner of the building, over the eave, up the edge of the roof to the peak, along the peak, down to the opposite eave and into the ground at the corner diagonally opposite the first. Points should be placed every 20 or 25 feet along the peak, also on chimneys, dormers, etc. On more complicated buildings more groundings should be made, and all parts of the system connected together. All metallic parts of the structure should be connected to the rods. Silos should be rodded.



4. Hay fork track connected to main cable.

Fuller directions for rodding, also a treatment of the entire subject of lightning rods, will be found in Bulletin 220. It will be sent free on application.

If there is any special information you would like to have on the subject of lightning rods, or if you have any questions you would like answered, kindly send us full particulars and we will send you a prompt reply. Address the office of the Commissioner of Agriculture, Parliament Buildings, Toronto.

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