cool-headed insurance men and cautious farmers in mutual insurance companies, where the assessment is in direct proportion to the losses incurred. This is the protective value of lightning rods reduced to dollars and cents in insurance rates. Insurance men the world over cannot ignore the experience of the Michigan Companies. Farmers the world over should profit from the lessons taught by the Michigan farmers.

Being now assured that lightning rods are of high protective value, our next logical enquiry would be: "When is a building properly rodded?" Before one can appreciate some of the directions to be given for rodding a building he must have at least a limited knowledge of electricity and its laws, and this we shall now proceed to acquire, leaving directions for rodding to come later on page 24.

Discovery of Electricity.

If a small piece of cheap scribbling paper, after being warmed to dry it, be rubbed briskly upon the coat sleeve for a few moments and then placed against

Fig. 1.—Paper rubbed briskly on coat sleeve adheres to hand. Paper is electrified by friction.

Fig. 2.—Pith balls suspended by *silk* thread to be used in experiments.

the window pane, it adheres to the glass, or it will adhere to the hand. (Fig. 1.) Another piece not rubbed, does not adhere to glass or hand. Hence the rubbing has produced some new property in the paper. The first experiment of this kind was performed by Thales, an ancient Greek, in the year 640 B.C. While walking along the seashore he picked up a piece of amber. In order to burnish it he rubbed it briskly upon his garments, and in some way or other discovered that after the rubbing the amber had the property of attracting light substances, such as dry leaves, twigs and chaff to itself. The Greek word for *amber* is *electron,* and hence this new property first discovered in the amber has come to be known as *electricity.* The paper in being rubbed upon the coat sleeve is said to have become *electrified.* In the year 70 A.D. electricity is again mentioned in history, but no real progress was made until the year 1600 A.D. Then Dr. Gilbert, a famous English scientist, discovered that all substances when properly manipulated could be electrified by friction just as the amber was.