NEW METHOD OF PROTECTING BUILDINGS FROM LIGHTNING.

SPARE THE ROD AND SPOIL THE HOUSE!

Lightning Destroys. Shall it be Your House or a Pound of Copper?

PROTECTION FROM LIGHTNING.

What is the Problem?

In seeking a means of protection from lightning-discharges, we have in view the two objects, namely, the prevention of damage to buildings, and the protection of the persons in the presence of injury to life. In order to destroy a building in whole or in part, it must be used; that is, the objects must be destroyed, and the energy in the body of a human being is a great deal more than it is in a building.

The problem of the electrical energy is, in its nature, not necessary for us to understand the principle of the protection from lightning. That is the case in which the electricity is not necessarily present in a building.

Why Have the Old Rods Failed?

When lightning-rods were first proposed, the science of energetics was entirely undeveloped; that is, in the middle of the last century, when it was too early to recognize the fact that the different forms of energy—heat, electricity, mechanical power, etc.—were convertible into each other, and that both could be produced in the early part of this century. There were, however, some facts known in regard to electricity a hundred and forty years ago; and among these were the converting potentials of points for an electrostatic spark, and the conducting of metals in the form of their salts.

Lightning-rods were therefore introduced with the object of using the electricity existing in the lightning-discharge could be converted into the objects, which would result in the loss of life and property.

A Typical Case of the Action of a Small Conductor.

Franklin. In a letter to Collinson read before the London Royal Society, Dec. 18, 1750, (describing the partial destruction by lightning of a church-tower), the following is stated: "The bell was fixed in an iron hammer to strike the hour, and from the tail of the hammer a wire went down through a small hole in the floor that the bell stood upon, and through a second hole in like manner, then horizontally under and near the plastered ceiling of the building, so that nothing could be sawed above the bell. The lightning passed between the hammer and the wire in the above-mentioned wire, the wire being cut out of the building.

No part of the aforementioned wire, small or large, was used in striking the hammer, and about one foot was fastened to the roof and the hammer, could be found, except about two inches that hung to the roof and the hammer, and the rest being exploded, and its particles dissipated in smoke and air, as gunpowder is by common fire, and had only left a black sandy mass on the plastering, three or four inches broad, dark in the middle, and faint towards the edges, all along the ceiling, under which wires we would pass the ceiling, and a few inches broad, dark in the middle, and faint towards the edges, all along the ceiling.

One hundred feet of the Bolles Patent Lightning Discharger (made under patents of N. C. Deschamps, for students) will be mailed, postage free, at any address, on receipt of five dollars (500).