NEW METHOD OF PROTECTING BUILDINGS FROM LIGHTNING.

Spare the Rod and Spoil the House! Lightening 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 to view two objects,—the lightning-building, and the individual or the other prevention of injury to life. In order to destroy an object in whole or in part, it should be done, that is, physically express it,—energy is required. Just before the lightning-discharge takes place, the electrical energy is concentrated on the object, to prevent entry of a column of air extending from the cloud to the earth in some form that makes it capable of imposing electricity on us. We will therefore assume an electrical energy. What this electrical energy it is, it is not necessary for us to become involved in that question, but, as far as I know, it is of no doubt, that many incidents can be found in the destruction of buildings. The problem that we have to deal with, that is, to prevent the formation of a wire to carry the electricity, or the destruction of the house in such a way as shall be least in the injury to property and life.

Why Have the Old Rods Failed?

When lightning-rods were first proposed, the science of energetics was entirely undeveloped; that is to say, in the middle of the last century scientific men had not come to recognize the fact that the different forms of energy—heat, electricity, mechanical power, etc.—were convertible into one another, and that each could produce just as much as of the other forms, and so on. The doctrine of the conservation and correlation of energy was first clearly worked out 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 attracting power of points for an electric spark, and the conducting power of metals. Lightning-rods were therefore introduced with the idea that all the electrical energy existing in the lightning-discharge could be converted away around the building which it was proposed to protect, and that the building would thus be saved.

The question as to dissipation of the energy involved was entirely ignored, and hence the building was left at the mercy of the thunderbolts. Lightning-rods constructed in accordance with Franklin’s principles have not furnished satisfactory protection. The reason for this is apparent when it is considered that the electrical energy existing in the atmosphere before the discharge, or more exactly, in the column of metal from the cloud to the earth, above referred to, is far too low in bulk to>Note: The text is partially cut off. The page seems to be discussing the effectiveness of lightning rods and their historical development, as well as the problem of protecting buildings and people from lightning strikes. The text mentions the development of lightning rods and their limitations, concluding with a discussion on the need for better protection systems. The text also includes notes on various historical figures and their contributions to the field of electricity and protection against lightning. The main focus is on the efficacy of existing protection methods and the need for improvements. The text is a mix of scientific discussion, historical context, and practical advice for those concerned with lightning protection. The page seems to be from a scientific journal or a technical publication, likely from the late 19th or early 20th century, given the style of the writing and the references to well-known figures in the field of electricity. The text is written in a formal, academic style, typical of scientific or technical literature. The page number at the top suggests it is from a larger document or book, possibly a collection of essays or a series of articles on related topics. The text is a valuable resource for those interested in the history and science of electricity, particularly in the context of lightning protection. The document is a reminder of the ongoing challenges in protecting against natural phenomena and the evolution of scientific thought in addressing these challenges. The text is a testament to the persistence of scientific inquiry and the gradual improvement of safety measures over time. The page is a snapshot of a larger body of work that continues to inform and inspire modern approaches to lightning protection and other areas of electrical engineering.