(No Model.) 2 Sheets—Sheet 1.

J. B. L. BARTLETT.

APPARATUS FOR PROTECTING BUILDINGS FROM LIGHTNING.

No. 494,286. Patented Mar. 28, 1893.

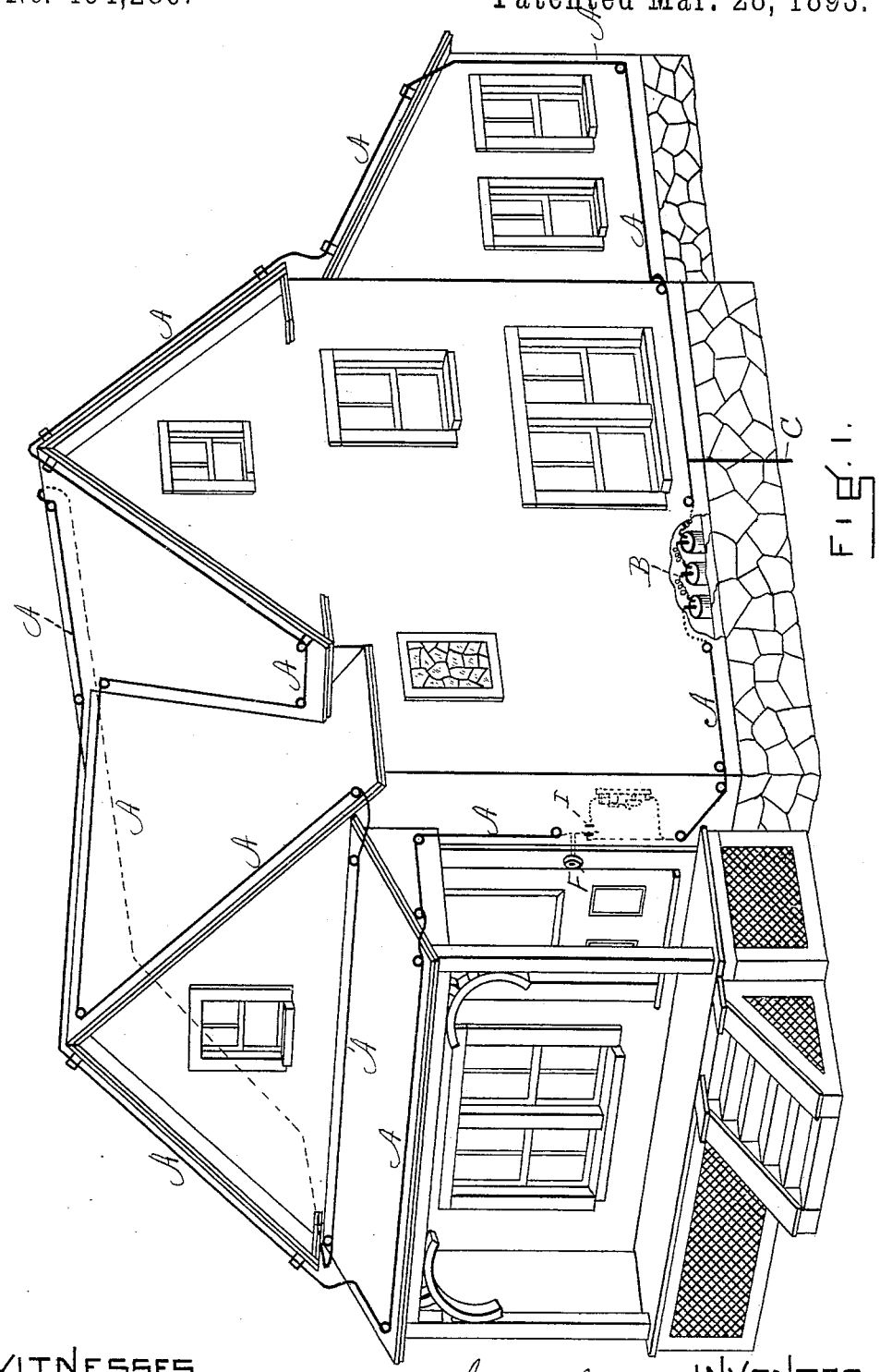

FIG. 1.

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B. M. Williams

INVENTOR.
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Henry C. Williams

(No Model.) 2 Sheets—Sheet 2.

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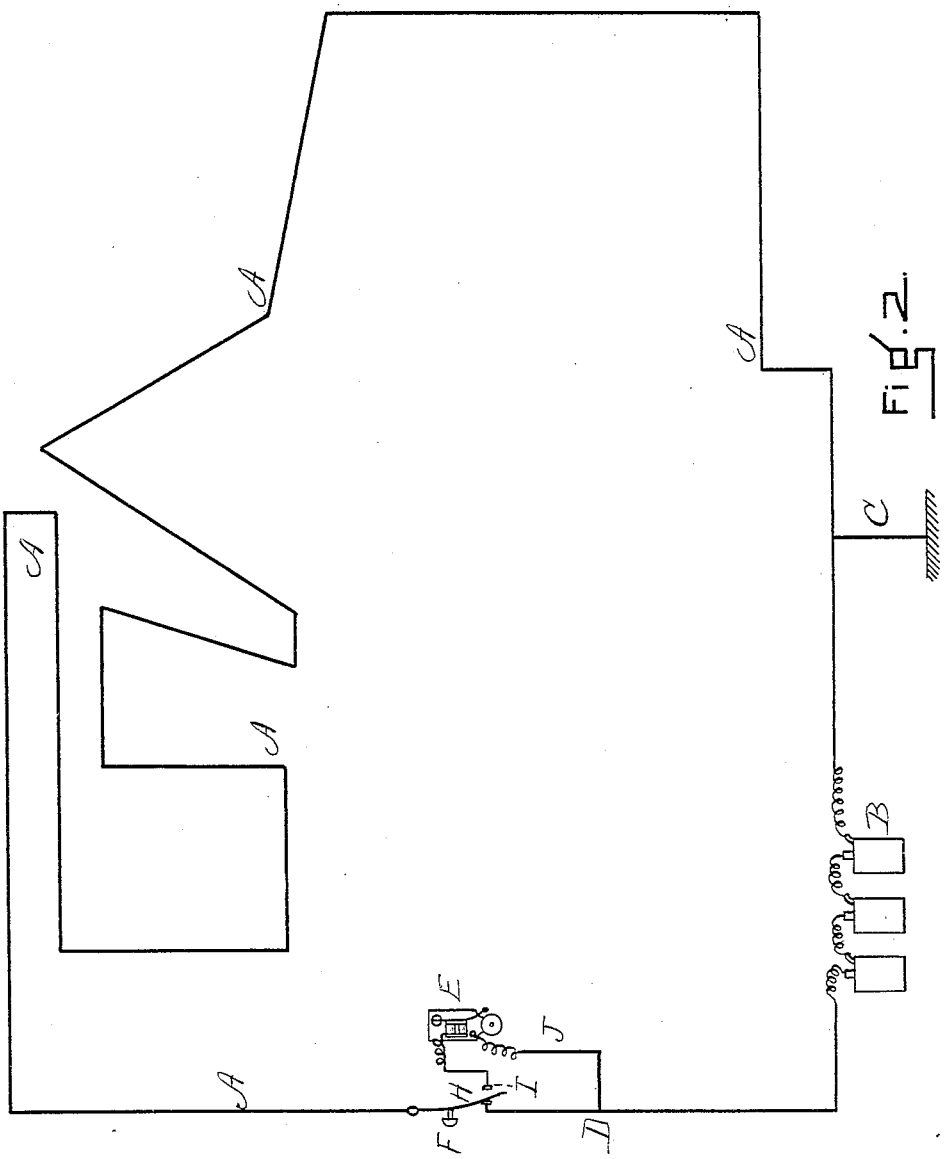

Fig. 2.

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UNITED STATES PATENT OFFICE.

JONATHAN B. L. BARTLETT, OF BOSTON, MASSACHUSETTS.

APPARATUS FOR PROTECTING BUILDINGS FROM LIGHTNING.

SPECIFICATION forming part of Letters Patent No. 494,286, dated March 28, 1893.

Application filed October 31, 1892. Serial No. 450,415. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN B. L. BARTLETT, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and Improved System or Apparatus for Protecting Buildings from Damage by Lightning, of which the following is a specification.

This improvement is intended to take the place of the ordinary lightning rod now in common use, and the nature of the invention is fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a view in perspective of a building provided with my apparatus, a small portion being broken out to better illustrate the invention. Fig. 2 is a diagrammatic view of the electrical wire employed in carrying out the invention.

The ordinary lightning rod consists of course of a vertical pointed rod placed at a high point on the roof, and connected with the earth by a metallic conductor. Such a lightning rod necessarily protects but a small area, however, the proportion of area protected, to the height of the rod being unsettled, but probably being a circular space whose radius is equal or less than equal to the height of the rod.

In this improvement, an electrical wire as A extends from a battery B and passes up to the roof of the building, and in all desired directions over and around said roof, special attention being paid to the edges and highest point thereof, and thence back to the battery, constituting the electrical circuit. In the drawings, the wire A is shown as extending from the battery first along the underpinning, thence up by the side of the front door to the roof of the piazza or porch, along the front of said roof; thence by one side to the top of the roof, along its highest points and back to the piazza or porch, up the roof on the other side, down onto the roof of the L, down to the underpinning and to the battery B completing the circuit as shown in the drawings. By this means all portions of the roof are or may be protected by the wire, the tendency being to dissipate electricity in very much the same manner that the electricity is dissipated by the multitude of wires in a large city. It being an accepted fact that lightning does much more damage in the country and in thinly populated districts, than in large cities, and it being believed that the reason for this fact is largely if not entirely due to the existence in cities of thousands of wires, such as telephone, telegraph and power wires, it is believed that wiring a building freely in some such manner as shown in the drawings, will have a much greater effect in affording protection against damage by lightning than the lightning rods now in use, even though the wire in my invention be not provided with vertical rods or points for attracting the electricity.

My invention, it is believed, tends rather to dissipate and distribute electricity in a charged atmosphere than to attract any single or particular bolt of lightning. And it is evident that such a dissipation or distribution of electricity is fraught with less danger to the dwelling than the attraction of the lightning bolt. In order, however, to provide for the latter contingency, whereby an excess of electricity would reach the wire, a metallic ground connection C is furnished which would carry off any excess of electricity.

It is desirable in this invention that there should always be a complete and unbroken circuit, and hence that it should be immediately known if the circuit should become broken by reason of the rupture of the wire at any point or from any other cause. Hence, I provide not only the battery B, but I connect the wire at D with an ordinary electric door-bell E, too common to need any detailed description.

The push-button F when pressed, pushes the switch H against the contact point I and brings the electric bell into a circuit which is completed by the wire J. Now if the wire A should become broken anywhere so that the circuit is incomplete, the bell E would not ring when the push button F was operated, and thus notice would be given of a defect in or accident to the system of wire. As long as the circuit is complete, however, the door-bell will ring whenever the push-button is pressed.

This system or arrangement may be ap-

plied to structures or buildings of any class with equally favorable results, the wires being of course, properly insulated.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

The system or apparatus herein described for protecting buildings from damage by lightning comprising a wire or wires in an electrical circuit strung externally upon the building, and an electric bell or alarm arranged to be included in the circuit by the operation of a switch as H, substantially as described.

JONATHAN B. L. BARTLETT.

Witnesses:
HENRY W. WILLIAMS,
J. M. HARTNETT.