

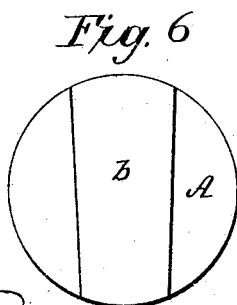
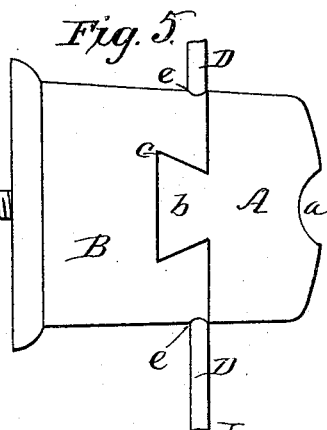
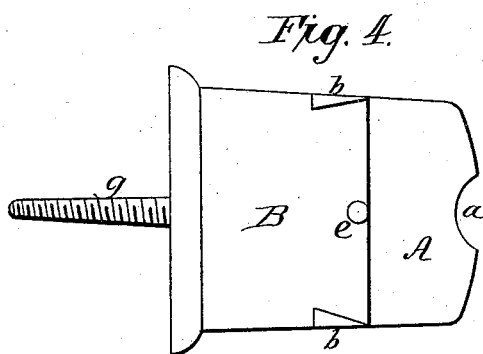
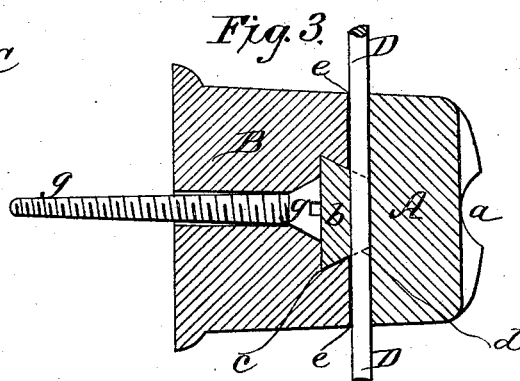
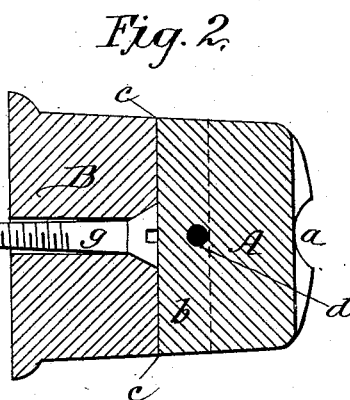
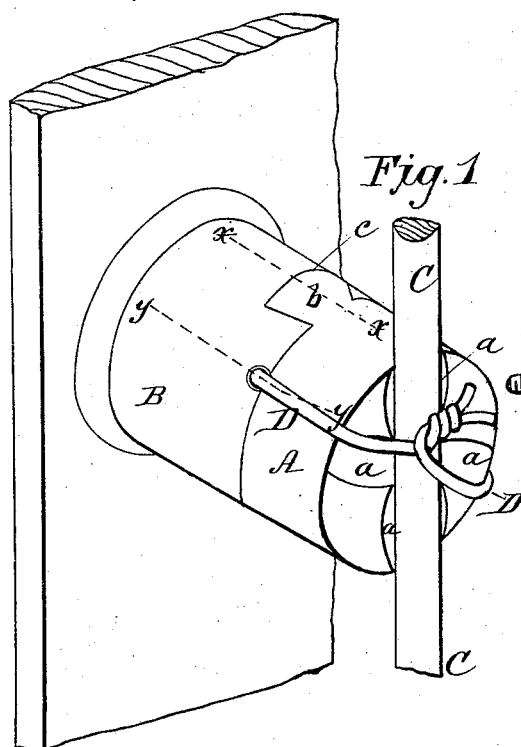
(No Model.)

J. A. RUTH.

## INSULATOR FOR LIGHTNING RODS.

No. 305,020.

Patented Sept. 9, 1884.



Attest  
Jmz J. Panner  
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Inventor  
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C. H. Slicer

# UNITED STATES PATENT OFFICE.

JOHN ANTHONY RUTH, OF BALTIMORE, MARYLAND.

## INSULATOR FOR LIGHTNING-RODS.

SPECIFICATION forming part of Letters Patent No. 305,020, dated September 9, 1884.

Application filed April 14, 1884. (No model.)

### *To all whom it may concern:*

Be it known that I, JOHN ANTHONY RUTH, a citizen of the United States, residing at Baltimore city, in the State of Maryland, have invented certain new and useful Improvements in Insulators for Lightning-Rods, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in insulators made of two sections or parts; and the objects of my improvements are to utilize the means by which the lightning-rod is secured, to also securely fasten its supporting insular sections together, and to provide for supporting the rod upon the end of an insular cap or insulator proper, whereby the latter is applied and secured in the operation of putting up the rod and securing it to the cap-section or insulator proper, rendering the insulator secure, effective, and durable.

My improvements consist, essentially, in the combination of an insulator composed of two interlocking sections having a diameter channel or hole passing through the interlocking parts, with the rod and the tie-wire bound to said interlocked sections and to said rod, to firmly and safely unite the parts. These objects I accomplish by the construction of device hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 represents in perspective a lightning-rod connected to a portion of the wall of a building by means of my improved insulator and connection; Fig. 2, a longitudinal section through the glass insulator proper, on the line *x x* of Fig. 1; Fig. 3, a section on the line *y y* of Fig. 1; Figs. 4 and 5, side elevations showing the dovetail connection of insulator with base-holder and the intervening opening for the connecting-wire, and Fig. 6 a detail.

The insulator proper, A, is preferably of glass; but other approved non-conducting material might be used. It is secured to a wall base-holder, B, of the same material, in a manner to be hereinafter described. Said insulator proper has also depressions *a a a a* crossing each other at right angles to seat the rod C, as shown. The connection of the insulator proper, A, is by a dovetail, *b*, formed therewith, and adapted to be slid in a dovetail socket, *c*, in

the base-holder B, of corresponding form, as shown. Centrally piercing and crossing this dovetail portion *b* of the insulator A from side to side is a hole or tubular channel, *d*, for the passage of the wire D, which fastens the lightning-rod C to the insulator; so, also, at right angles to the dovetail socket *c* in the base-holder B there are formed grooves or depressions *e* in the surfaces of the holder adjacent to the insulator, and which depressions, when insulator and holder are joined by the dovetail connection, are coincident with the opening *d* for the passage of the connecting-wire, as will appear from the description above with reference to the drawings. The base-holder B is fastened to the wall of the building by a screw or bolt, *g*, countersunk in the dovetail socket thereof, and passing longitudinally through a channel in said base-holder. By means of such construction of insulator proper and base-holder for same the escape of the electric current through exposed metallic insulator-connections is entirely avoided. The insulator proper, A, is locked to its holder by means of the taper of the dovetail connection, which is wedge-shaped in the direction of its length. The locking of the parts is also assumed by the wire connection with the rod, so that whether the dovetail wedge should be in vertical or horizontal position the insulator A is well secured to its holder B, as will be readily understood, because the wire D, which fastens the insulating device to the lightning-rod, entering through the hole or channel formed, as described, at the junction of the two parts of the insulator—viz., A and B—and passing through the dovetail connection, as above described, forms a perfect lock for the joined parts A and B of the insulator, independent of or without the aid of the wedge shape to the dovetail heretofore referred to.

I claim—

1. The combination of an insulator composed of two interlocking sections, having a diameter channel or hole passing through the interlocked parts of both, with the rod and a tie-wire bound to said interlocked sections and to said rod, substantially as described.

2. The combination, with the insulator proper, A, formed with a dovetail, *b*, which has

therein a transverse channel or opening, of a base-holder, B, formed with a dovetail socket, *c*, of a form corresponding to said dovetail *b*, and which has the grooves or depressions *c*, as described, the wall fastening-bolt *g*, as described, passing longitudinally through said holder B, the wire D, and the rod, substantially as and for the purpose described.

3. The insulator-cap A, formed with grooves on one end and a dovetail wedge-shaped projection on the other, having a transverse channel, *d*, in combination with a base-holder, B, formed with a recess or socket adapted to receive said dovetail wedge-shaped projection,

the socket forming sides having grooves *e* at right angles to said socket, and the rod tie-wire passed through the channel and grooves *d e*, whereby the insulator-sections and the rod are secured together and the wire-receiving channel of the cap and the grooves of the base-section placed in coincident relation to receive the fastening-wire.

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN ANTHONY RUTH.

Witnesses:

ERNST RUDOLPH,  
C. H. SLICER.