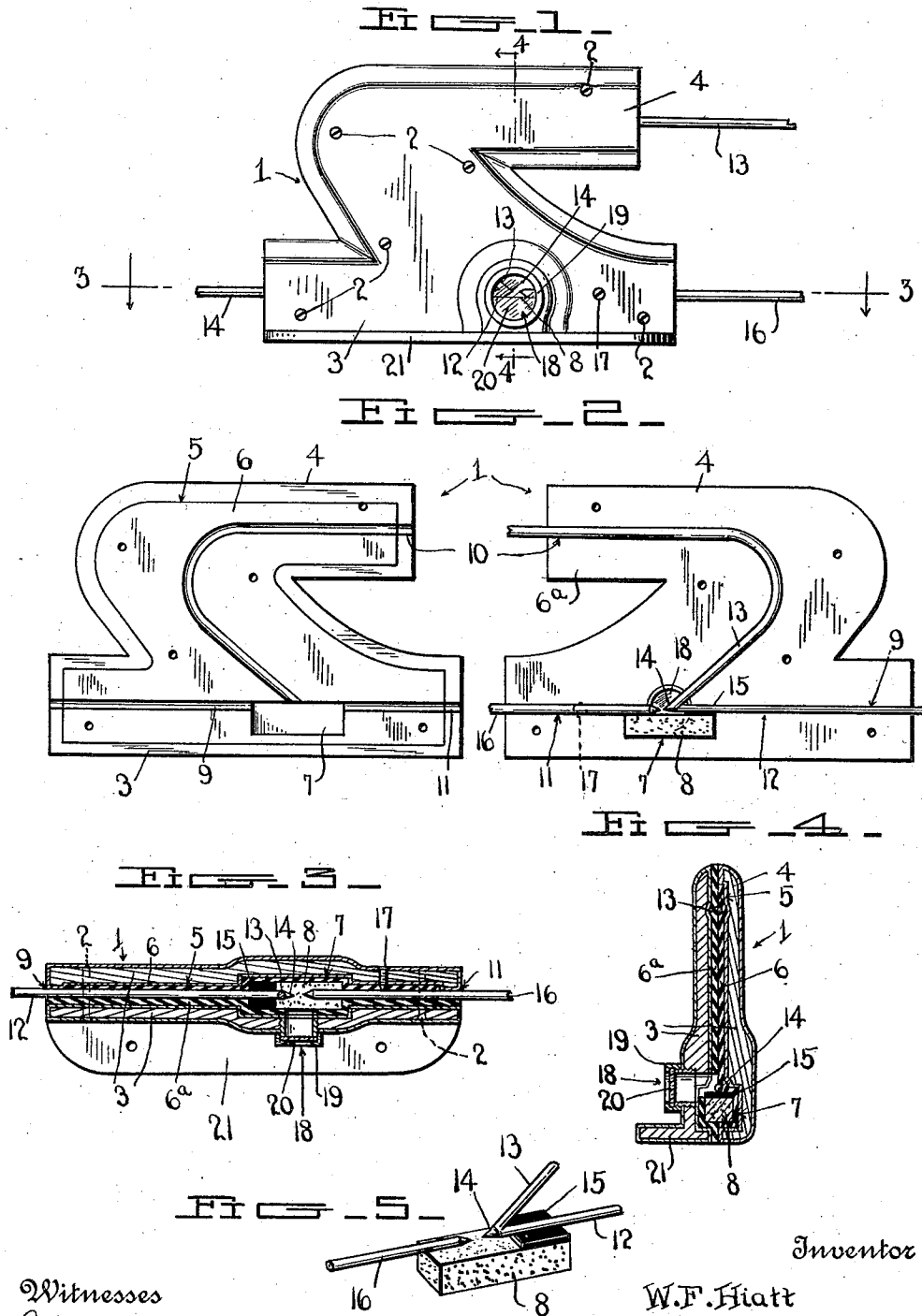


W. F. HIATT.
 LIGHTNING ARRESTER.
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1,014,876.

Patented Jan. 16, 1912.



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UNITED STATES PATENT OFFICE.

WILLIAM F. HIATT, OF PITTSBORO, INDIANA.

LIGHTNING-ARRESTER.

1,014,876.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM F. HIATT, a citizen of the United States, residing at Pittsboro, in the county of Hendricks and State of Indiana, have invented certain new and useful Improvements in Lightning-Arresters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to improvements in lightning arresters.

The invention consists in the construction and arrangement of parts, as will be hereinafter described and particularly pointed out in the claim.

In the accompanying drawings: Figure 1 is a side view of my improved arrester; Fig. 2 is an inner side view of the two sections of the arrester opened or separated and showing the insulating material therein in section; Fig. 3 is a transverse sectional view on the line 3—3 of Fig. 1; Fig. 4 is a vertical cross sectional view on the line 4—4 of Fig. 1; Fig. 5 is a detail perspective view of the carbon arresting block and the inner ends of the line and ground wires.

Referring more particularly to the drawings, 1 denotes the casing of my improved lightning arrester, said casing being formed in two longitudinally disposed separable sections which are secured together in operative position by suitable fastening screws 2. The sections of the casing are preferably formed of metal and are covered and lined with porcelain which insulates and protects them from corrosion. The sections may be of any suitable shape but are here shown and each preferably consists of a base portion 3 having formed thereon upwardly projecting curved arms 4, the upper ends of which are disposed in substantially parallel relation with the base portion as shown. The inner surface of each of the sections of the casing is recessed as at 5 and in the recessed inner surface of one section is arranged a suitable insulating material 6. In the recessed inner surface of the opposite section is also arranged a suitable insulating material 6^a. The insulating material 6^a projects beyond the recessed portion of this section of the insulator and extends to the outer edges of the same thus forming an

insulation between the engaging portions of the two sections when brought together. In the insulation and adjacent the sections of the casing in the base of the latter are formed rectangular recesses 7 in which is disposed an arresting block 8 formed of carbon or other suitable material. In the inner surfaces of the opposite sections of the casing and in the insulation 6 and 6^a are formed line wire passages 9 and 10 and a ground wire passage 11. The sections 12 and 13 of the line wire which are disposed in the line wire passages 9 and 10 have their inner ends joined at a sharp angle and tapered to a point as shown at 14, said joined and pointed ends of the line wire sections being arranged on one end of the carbon block 8, said pointed end of the line wires being insulated from the block by an insulating plate 15 of mica or other suitable material.

Within the passage 11 is a ground wire 16, the inner end of which is pointed and engages the carbon block 8 adjacent to and a suitable distance from the pointed end of the line wire sections as shown. The ground wire is adapted to be adjusted in its passage 11 to bring the point thereof at the desired distance from the point of the line wire sections and when said ground wire is thus adjusted the same may be secured by a set screw 17 arranged in one side of the casing as shown. The pointed end of the ground wire is preferably covered with platinum which will not corrode or arc away, thus maintaining a sharp point for discharging purposes.

In one side of the casing opposite to the adjacent ends of the line and ground wires is formed a circular view opening 18 the wall of the outer end of which is threaded to receive a tubular closing cap 19 in which is arranged a disk 20 of mica or other transparent material, whereby the position of the adjacent pointed ends of the line wire sections and the ground wire may be observed thus providing means for readily ascertaining whether or not the parts are in position for the proper operation of the device. On the lower edge of one section of the casing is formed a laterally projecting attaching plate 21 by means of which the arrester may be secured to a suitable support.

It is well known that a charge of lightning on a conductor tends to move in

straight lines and will arc through a greater extent of atmospheric resistance in straight lines than it will in other directions. I utilize this tendency by arranging the line and ground wires over a carbon block, which is good conductor, and forming in the line wire a sharp bend and insulating said bend from the carbon block, the charge upon reaching the bend in the line wire, will jump to the adjacent end of the ground wire and will thereby be safely grounded. The porcelain covering and lining and the insulation of the sections of the casing will prevent the short circuiting of the current should the wires come into contact, with the casing at any point.

From the foregoing description taken in connection with the accompanying drawings, the construction and operation of the invention will be readily understood without requiring a more extended explanation.

Having thus described my invention, what I claim is:

In a lightning arrester, a casing provided with a chamber, a conductive block therein having on one end an insulating piece, a ground wire resting on the block, a line wire having a pointed bend resting on the insulating piece, the terminals of the ground wire being pointed and in juxtaposition to the pointed bend in the line wire, means to permit inspection of the gap between said points, and means for holding the ground wire in proper adjustment to said pointed bend.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM F. HIATT.

Witnesses:

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LOGAN S. HALFAKER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."