

(No Model.)

L. McCARTHY.  
ELECTRIC INSULATOR.

No. 411,749.

Patented Sept. 24, 1889.

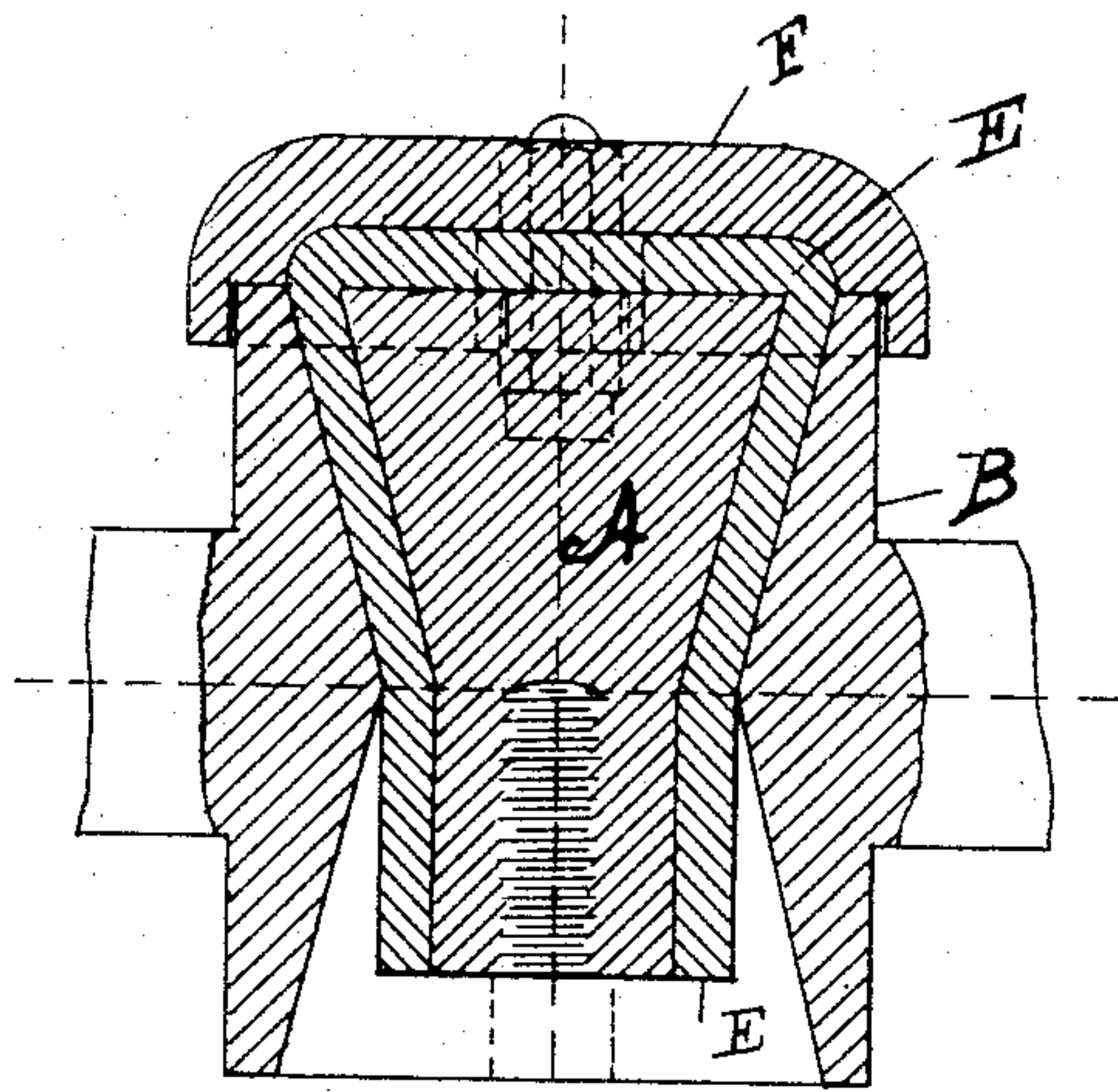


FIG. 2.

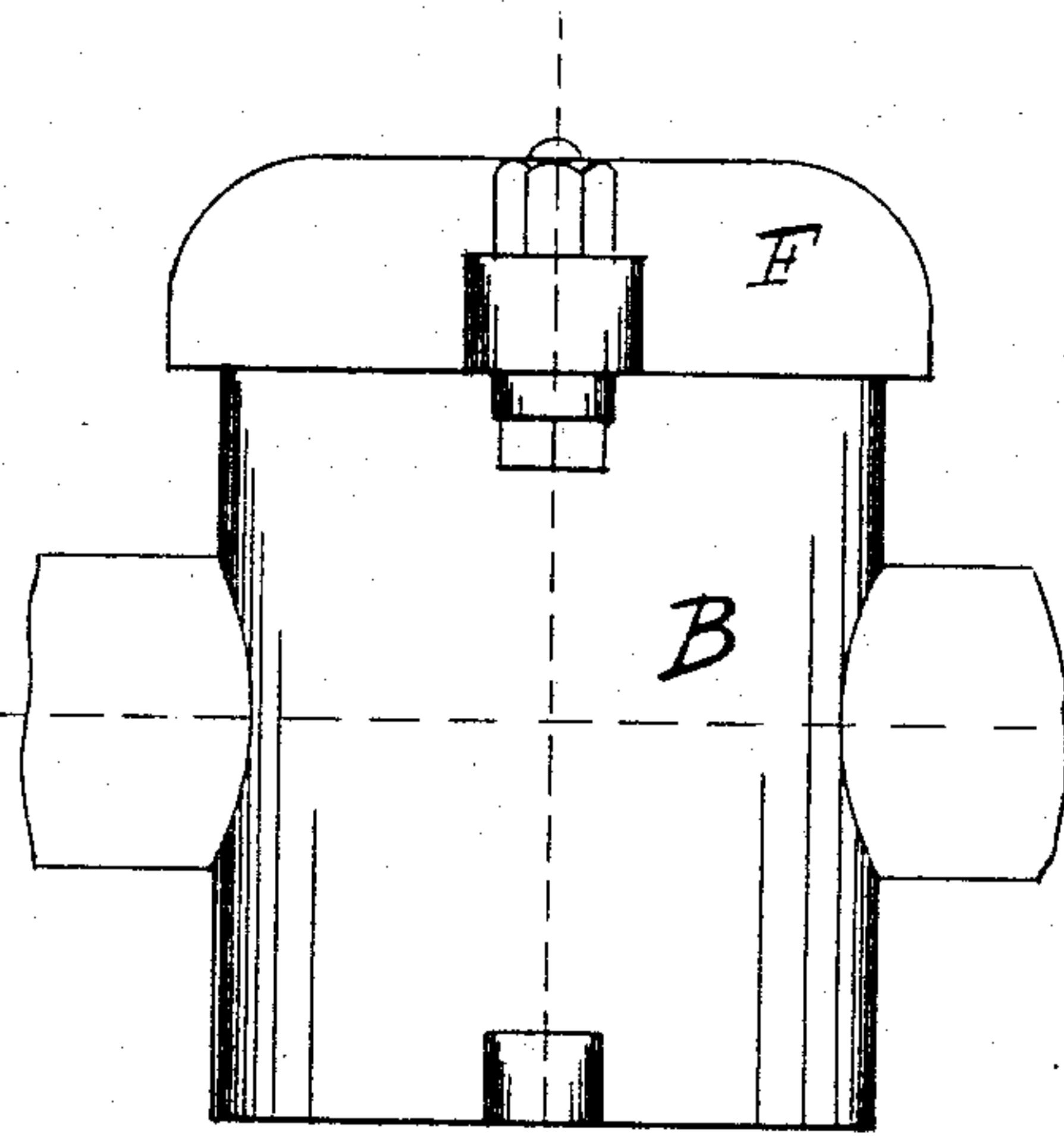


FIG. 1.

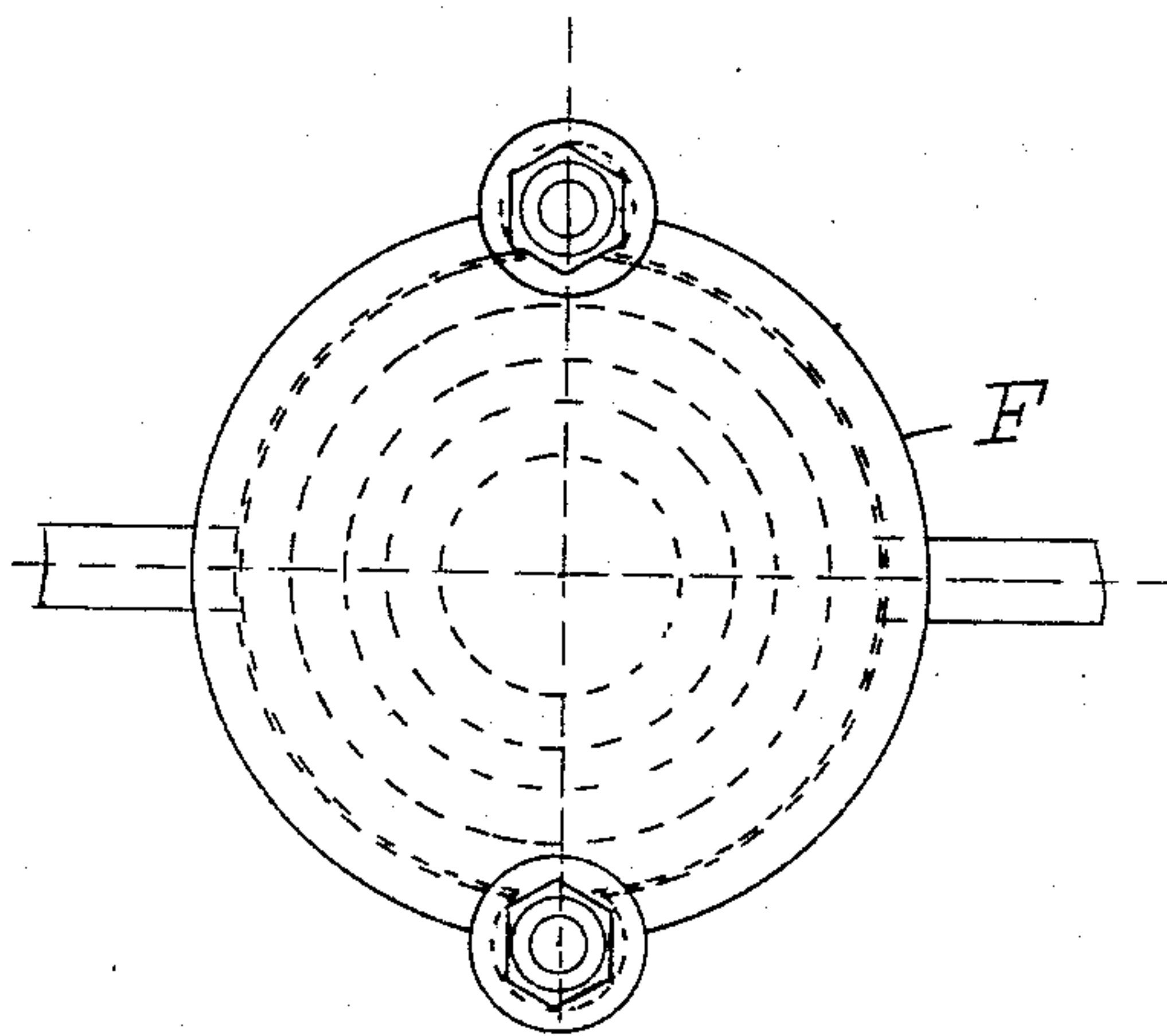


FIG. 3.

WITNESSES:

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INVENTOR

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# UNITED STATES PATENT OFFICE.

LOUIS MCCARTHY, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE GOULD & WATSON COMPANY, OF MASSACHUSETTS, AND CHARLES TENNANT LEE, OF BOSTON, MASSACHUSETTS.

## ELECTRIC INSULATOR.

SPECIFICATION forming part of Letters Patent No. 411,749, dated September 24, 1889.

Application filed August 12, 1889. Serial No. 320,474. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS MCCARTHY, of Boston, county of Suffolk, State of Massachusetts, have invented certain new and useful  
5 Improvements in Electric Insulators, of which the following is a specification, reference being had to the drawings accompanying and forming a part hereof, in which—

Figure 1 is an elevation, Fig. 2 is a vertical  
10 cal section, and Fig. 3 is a plan view, of my improved device.

The supports for overhead wires for electric railways and the like require to be so constructed that the wire may be insulated,  
15 and for this purpose an insulating device is commonly inserted in the support, so that that portion of the support to which the wire is secured shall be wholly separated by an insulating material from the other portion of  
20 the support. In some cases the part of the support above or adjoining the insulating material is arched or yoke-shaped, and at some points in the line it is desirable that this arched support be placed arch upper-  
25 most—that is, so that the bend of the arch will be upwardly—and in other parts of the line it is desirable that the arch be reversed—that is, so as to bend downwardly. This renders it desirable that the part of the support below  
30 or on the line side of the insulation may be capable of being reversed with relation to the arch or frame which forms the other part of the support—that is, the part on the ground side of the insulation.

35 The object of my invention is the construction of a compact, efficient, and durable insulator, the parts of which on either side of the insulating material may be reversed with relation to each other; and it consists of the  
40 device shown and hereinafter more fully described, comprising a block having an enlarged end and beveled sides, and a collar or frame having an aperture adapted to receive said block and a layer of insulating material  
45 surrounding the same, said aperture being smallest midway of the thickness of the frame, and being constructed with beveled or flaring sides from this mid-point to the upper and under sides, and being provided with

a suitable cap to hold the block and insulating material in place in the aperture, all as hereinafter set forth.

I will describe my invention as illustrated in the accompanying drawings, designating like parts by like letters of reference.

55 A is a block having an enlarged top and beveled or flaring sides throughout a portion of its length, the remaining portion being parallel-sided. The precise angle or flare of the sides is not important so long as the top  
60 is enlarged, and it is not essential that any portion of the block be parallel-sided. To the lower end of this block is secured, in any suitable manner, the line end of the support. A threaded socket is provided into which this  
65 part of the support may be screwed, if desired.

B is the frame, which forms what I may term the other “member” of the insulating device, and which is provided with an aperture of the shape in cross-section shown in Fig. 2—  
70 that is, being smallest midway of its length and having flaring or beveled sides or walls above and below the middle portion, the bevels above and below being of the same or of substantially the same angle. The largest  
75 part of the block A is preferably slightly larger than the smallest diameter of the aperture, so that the block may only be inserted from above, and the downward strain thereon will be transmitted through the insulating  
80 layer adjoining the beveled sides to the beveled top of the aperture in the frame B. A layer or mass E of any insulating material or composition is placed between the block A and the frame B, and is preferably carried  
85 over the top of the block and fills the space between the top of the block and the cap F. The cap F is screwed or otherwise firmly secured to the frame, and serves to hold the block and insulating layer firmly in place  
90 and to resist any upward strain which might tend to raise the block A in its seat. It will be seen that both the under and upper sides of the frame B are the same, and in case it is desired to reverse the relative position of the  
95 block A and frame B, this may be done by removing the cap F, taking out the block and insulating layer, turning the frame B

over, again inserting the block and insulating layer, and screwing or securing the cap F onto that side of the frame. The layer E of insulating material is preferably a composition which may be molded onto, and thus practically form a part of, the block A. The flaring opening in the under side of the frame forms, as will be clear from Fig. 2, a skirt to protect the insulation from rain or moisture.

An insulator comprising a block with an enlarged end incased in an insulating layer and supported in a tapering or beveled aperture in the other member of the insulating device is not broadly new with me, and I do not claim the same; but

What I claim is—

An insulator comprising a block having an enlarged end and flaring or beveled sides, a frame or support having an aperture beveled or flaring at either end, whereby the frame may be reversed and the block inserted at either end of the aperture, a cap adapted to be secured to either side of the frame, and a layer of insulating material interposed between the block and the frame and cap, substantially as shown and described.

LOUIS MCCARTHY.

Witnesses:

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