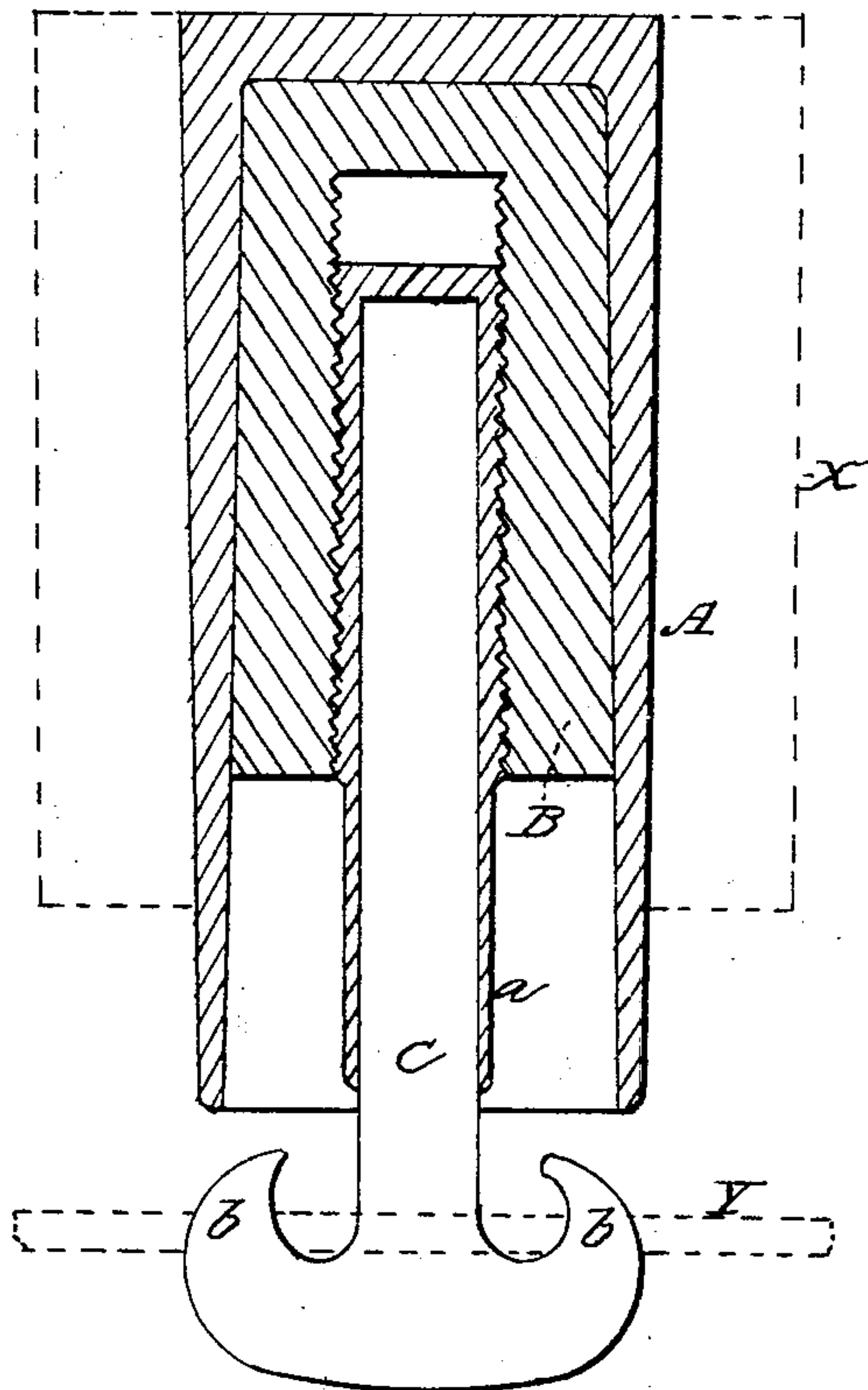


D. BROOKS.  
Insulating Telegraph Wires.

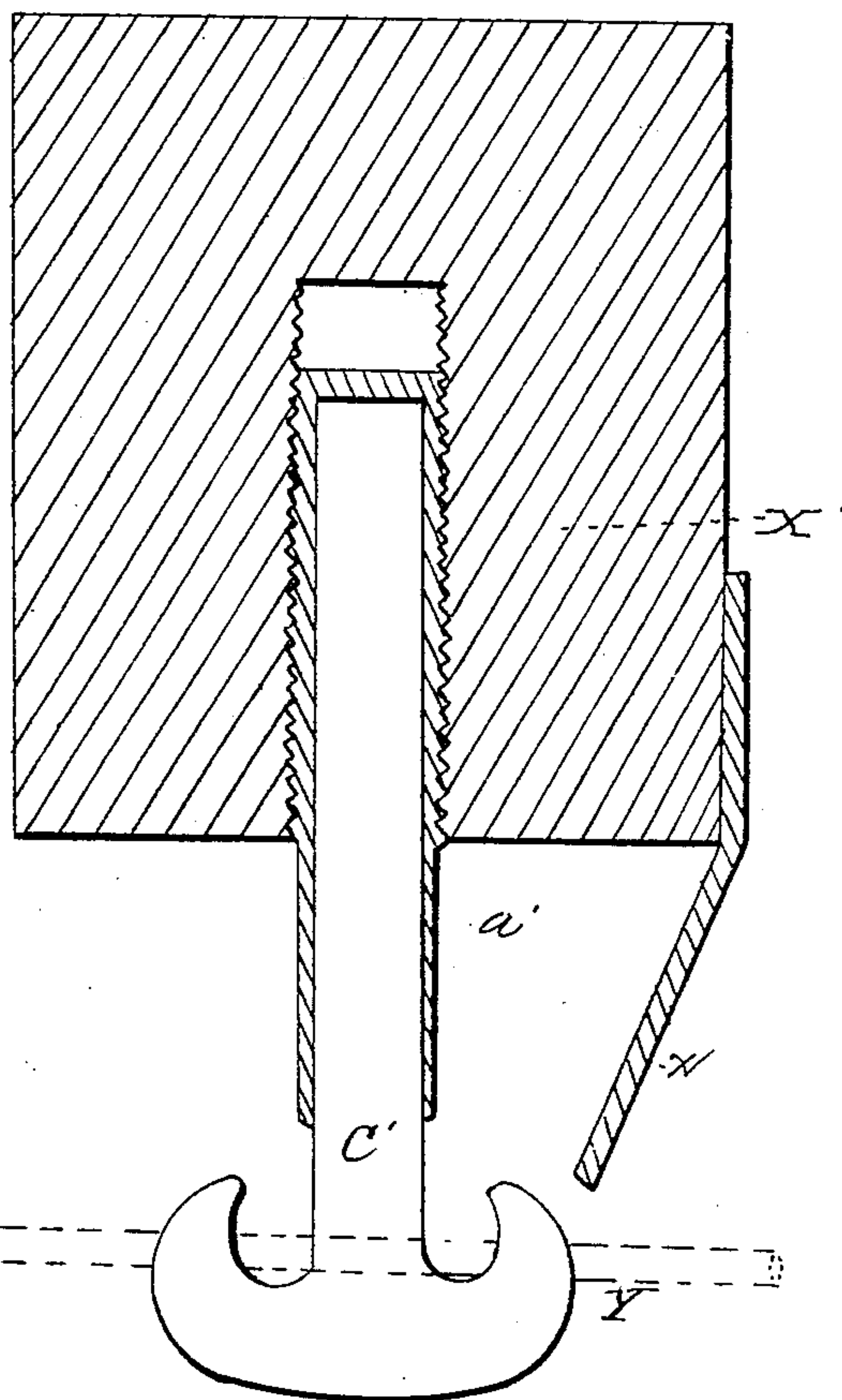
No. 63,206.

Patented March 26, 1867.

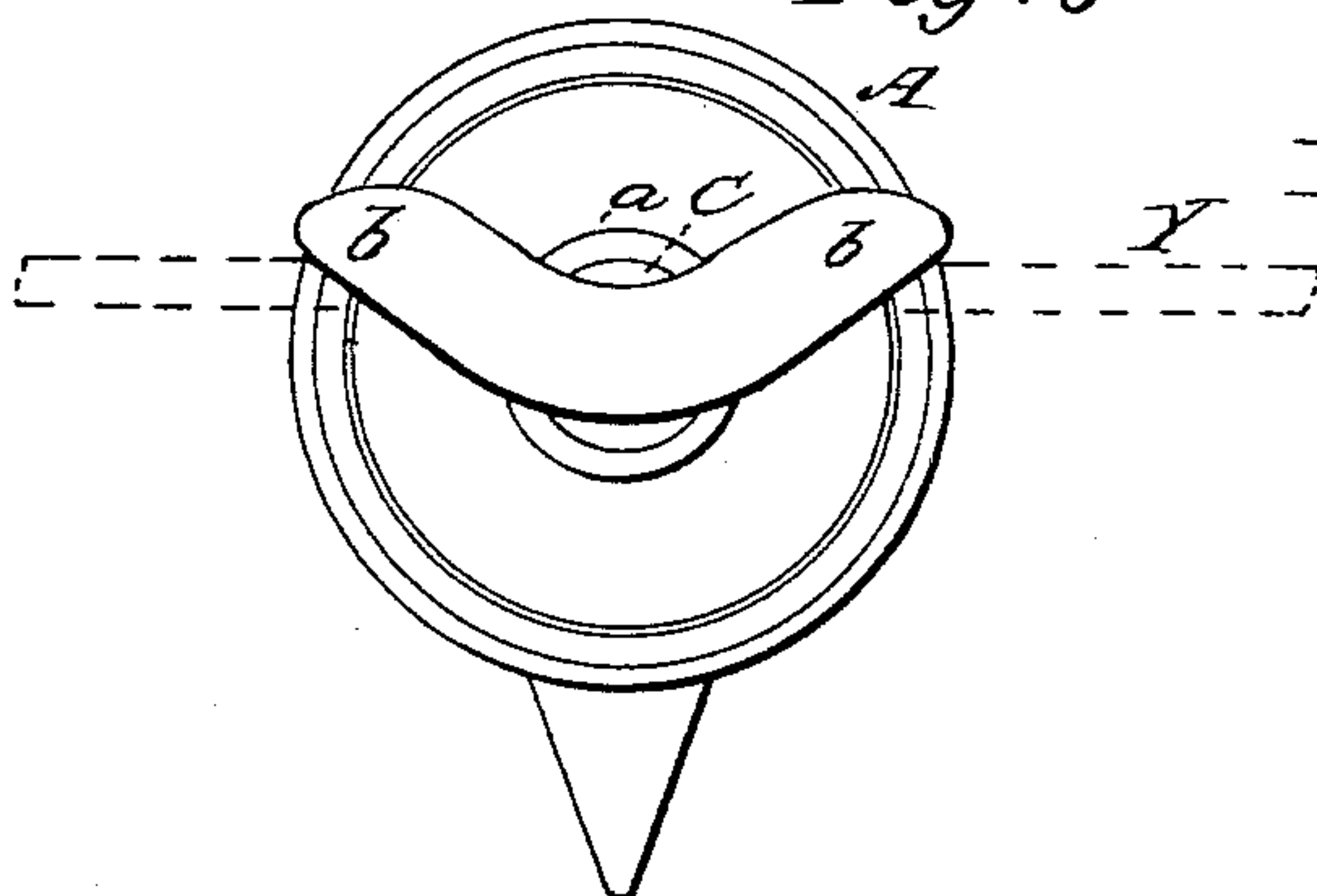
*Fig. 1*



*Fig. 2*



*Fig. 3*



*Witnesses:*

*Wm. Albert Steele*  
*S. R. Hossie Godwin*

*Inventor:*

*D. Brooks*  
*By his attorney*  
*H. Cowson*

# United States Patent Office.

DAVID BROOKS, OF PHILADELPHIA, PENNSYLVANIA.

*Letters Patent No. 63,206, dated March 26, 1867.*

## IMPROVEMENT IN INSULATORS FOR TELEGRAPH WIRES.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, DAVID BROOKS, of Philadelphia, Pennsylvania, have invented an Improvement in Insulating Telegraph Wires; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon.

My invention relates to that class of insulators which are so constructed that an excessive charge of electricity thrown upon the wire will pass to an adjacent conductor without rupturing the material which insulates the wire-holder; and my invention consists of an arrangement of the parts of an insulator constructed in the manner fully described hereafter, whereby the above result is effected.

In order to enable others skilled in the art to apply my invention, I will now proceed to describe the manner of carrying it into effect, reference being had to the accompanying drawing, in which—

Figure 1 is a view illustrating one mode of carrying out my improvement in insulating telegraph wires.

Figure 2, a sectional view, showing an insulated holder heretofore used, and

Figure 3 an inverted plan view of fig. 1.

A, figs. 1 and 3, is a cylindrical metal case, which is secured firmly to an arm, X, attached to a telegraph pole or other suitable support. Within the case A is a block, B, of dry wood, glass, or other insulating material, in which is inserted a wire-holder, C, the latter being insulated by a coating, *a*, of hard rubber, gutta percha, or other suitable material. If desired, a screw may be cut on the outside of the insulating coating *a*, so that the holder may be secured in its place or detached with facility. At the lower end of the wire-holder are two curved arms or hooks *b b*, the ends of which are at such a distance from the lower edge of the case A that a wire, Y, may be passed between the two. A holder, consisting of a metal hook, C', (fig. 2,) with an insulated coating, *a'*, has heretofore been used, the insulated end of the holder being screwed directly into the arm X' of the pole or other support. It has been found that many of these holders gradually lose their insulating property and in a little while become worthless; as, when such holders are used, and when, by a stroke of lightning or from any other cause, the wire becomes surcharged with electricity, the latter will escape from the wire or holder to the nearest conductor by the shortest passage, which is generally through the insulating coating *a'* to the arm X', which, being wet, is a good conductor, the electricity in its passage through the coating perforating the latter, and the moisture passing into the said perforation and forming a conductor along which the weaker currents, afterwards thrown on to the wire, escape to the earth. This difficulty has been heretofore overcome by so arranging the insulated wire-holder in respect to an exterior conductor that an excessive current thrown on to the wire will pass from the holder to the conductor without penetrating the insulating material. My invention is intended merely to effect this object in an insulator of the construction above described, and illustrated in figs. 1 and 3 of the drawing, the difficulty being overcome by so adjusting the case A and the holder that the distance from any part of the latter through the insulating materials *a* and B to the nearest conductor is greater than the distance between the hooks *b b* and the case A. When, therefore, the wire is surcharged with electricity, there will be no inducement for the latter to penetrate the insulating coating *a* or wooden block B, as it can much more readily pass from the hooks *b* to the casing A.

I do not claim broadly the arrangement in an insulator of any description, of a conductor adjacent to a wire-holder for the purpose of conducting from the wire excessive charges of electricity, and thus preventing their passage through the insulating material; but I claim as my invention, and desire to secure by Letters Patent—

The metal casing A, insulating block B, and stem C, arranged and constructed as described, when the same are combined with arms or holders *b b*, so arranged that the distance between the holders and the case is less than that between the stem and case.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID BROOKS.

Witnesses:

CHARLES E. FOSTER,  
W. J. R. DELANY.