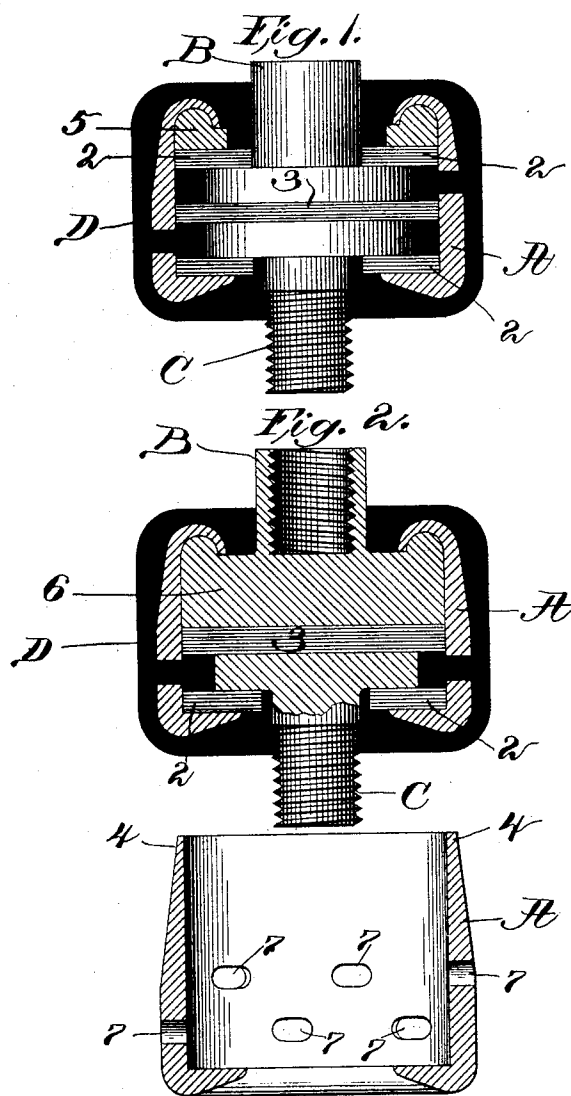


(No Model.)

L. McCARTHY.
INSULATOR.

No. 531,423.

Patented Dec. 25, 1894.



Witnesses.

Arthur Randall
Robert Wallace

Fig. 3.

Inventor.

Louis McCarthy
by Macleod Calver & Randall,
his attorneys

UNITED STATES PATENT OFFICE.

LOUIS MCCARTHY, OF BOSTON, MASSACHUSETTS.

INSULATOR.

SPECIFICATION forming part of Letters Patent No. 531,423, dated December 25, 1894.

Application filed November 19, 1894. Serial No. 529,248. (No model.)

To all whom it may concern:

Be it known that I, LOUIS MCCARTHY, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Insulators, of which the following is a specification, reference being had therein to the accompanying drawings.

In the manufacture of insulators for electrical purposes it has hitherto been common to insert the metal connections within a case, the proximate ends of said connections being insulated from each other by the interposition of sheets or layers of mica or similar insulating material, and one or both of said connections being insulated from said case in the same manner. Such a construction is shown in Letters Patent No. 449,943, dated April 7, 1891, granted to me. Headed connections are commonly used in insulators constructed as above described and the work of filling the spaces between the edges of the heads of the connections and the adjacent portions of the case or bell is expensive and difficult, especially if sheets of mica be employed as the insulating material. This has led to the construction of such insulators in which said space was not filled except with air, but after trial it was found that the air was not a sufficient insulation and the construction in which the spaces were employed, as set forth, was considered inefficient and undesirable. To provide among other things for the filling of these spaces which surround the heads of the metallic connections, I devised the construction shown in Letters Patent No. 518,373, dated April 17, 1894, in which I employ a covering of insulating material for the heads of the bolts or connections which is molded thereon prior to the insertion of the connections within the case, and which is shaped to fill the spaces around the heads of the connections which are not filled by the mica. This method of filling the said spaces is relatively expensive.

My present invention has for its object to provide a durable and efficient insulator in which the said spaces around the heads or inner ends of the metal connections shall be filled with insulating material and which shall be of relatively inexpensive construction.

I have shown my invention, as embodied in

an insulator of well known construction, in the accompanying drawings, in which—

Figure 1 is a vertical central section of the said insulator. Fig. 2 is a similar view of a slightly modified form of insulator. Fig. 3 is a view in vertical section of the case of the insulator detached.

My invention is simple and will be readily understood from the following description. The case of the insulator is shown at A and the metallic connections at B and C respectively. These connections are each provided with a series of sheets of mica 2, cut in the form of washers which are strung on the shanks of the connections and placed adjacent the heads thereof. A series of sheets of mica 3 cut to fit the interior of the case A is placed between the heads of the connections B and C when the same are placed within the case. The sheets 3 serve to insulate the connections from each other and the sheets or washers 2 serve to insulate the connections from the proximate inwardly turned or projecting ends of the case. After the connections and their mica insulation are in place within the shell or case, the parts are secured together under pressure to thoroughly compress and solidify the mica by turning the end 4 of the case inwardly over a ribbed ring 5, or, in the form shown Fig. 2, over the ribbed top or edge of the cap or follower 6. The construction thus far described is well known.

The shell or case A is provided opposite the edges or sides of the heads of the connections with a series of holes or perforations 7 which extend around the said case and which are of sufficient size and sufficient in number to permit a plastic mass of insulating composition to flow or be forced through the same to fill the space around the head of the bolt or connection within the said case. It is desirable to entirely or partially cover the insulator exteriorly with a jacket or covering of insulating composition D which is applied in a plastic condition and is molded to shape thereon.

In my insulator herein described the mass of material of which the jacket D is formed when applied and subjected to the molding pressure, flows through the holes or perforations 7 and fills the spaces around the heads of the bolts or connections, thus completely filling and sealing all openings and joints

within the case. The jacket seals and protects all exterior joints and as the jacket and the material which passes through the perforations 7 are integral the jacket is securely
5 held in place, is considerably strengthened and a very durable and strong insulator of high efficiency is produced.

It will be obvious that the shape of the case or shell A is not important and may be varied in accordance with the use to which the
10 insulator is to be applied. It may, for example, be bell-shaped and provided with a skirt if desired. In like manner the precise character and arrangement of the parts within
15 the bell or case A may be varied without departing from my invention.

What I claim is—

An insulator comprising a case having holes or perforations therethrough, one or more connections within said case, insulating material adjacent said connection or connections
20 substantially as set forth, and a mass of insulating composition applied exteriorly to the said case, interiorly thereof around the said, connection or connections and extend-
25 ing through the said holes or perforations aforesaid, all substantially as described.

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

LOUIS MCCARTHY.

Witnesses:

WM. A. MACLEOD,
R. WALLACE.