

No. 702,660.

Patented June 17, 1902.

F. M. LOCKE.
PROCESS OF MAKING INSULATORS.

(Application filed Mar. 12, 1902.)

(No Model.)

Fig. 1.

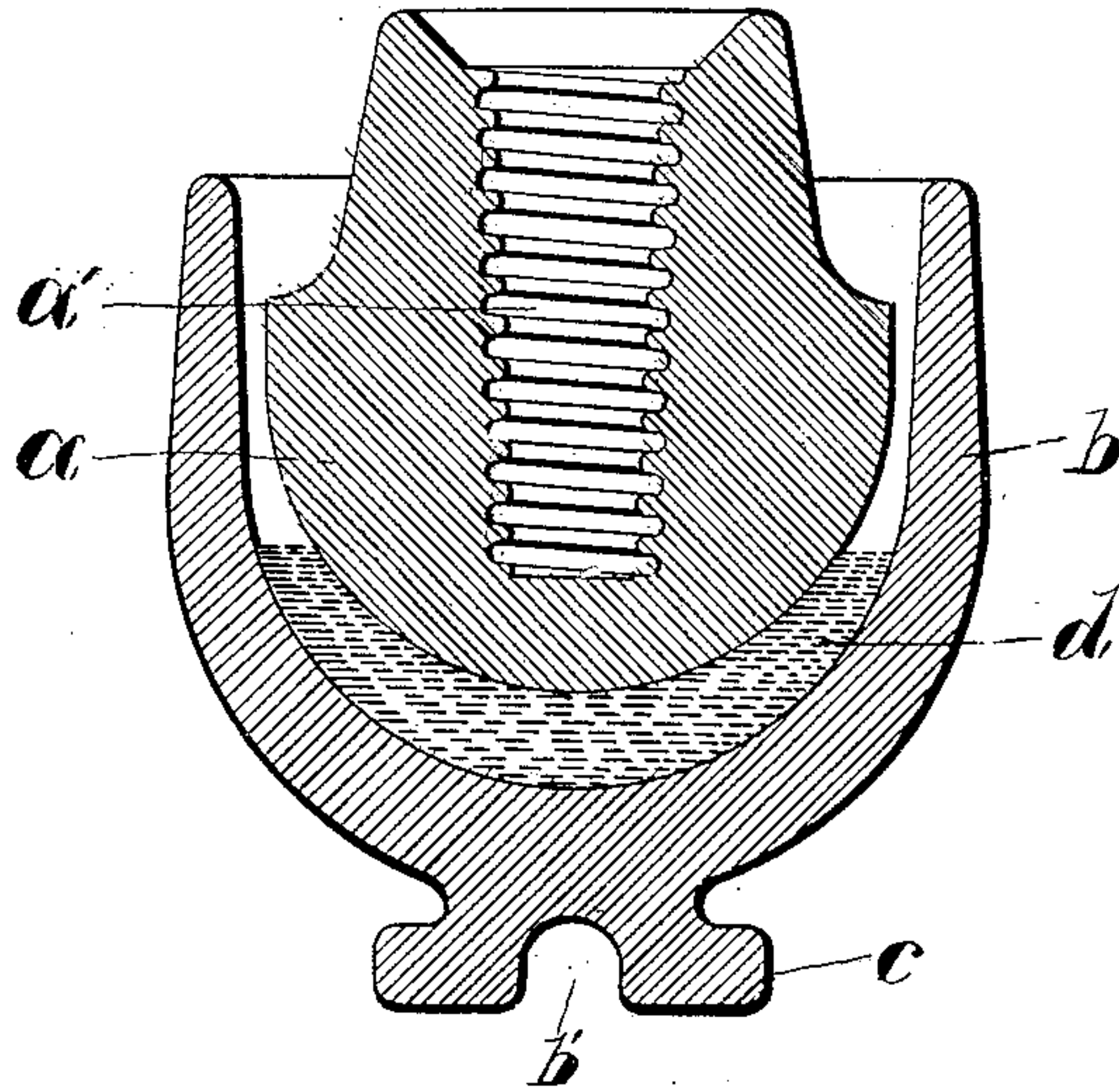
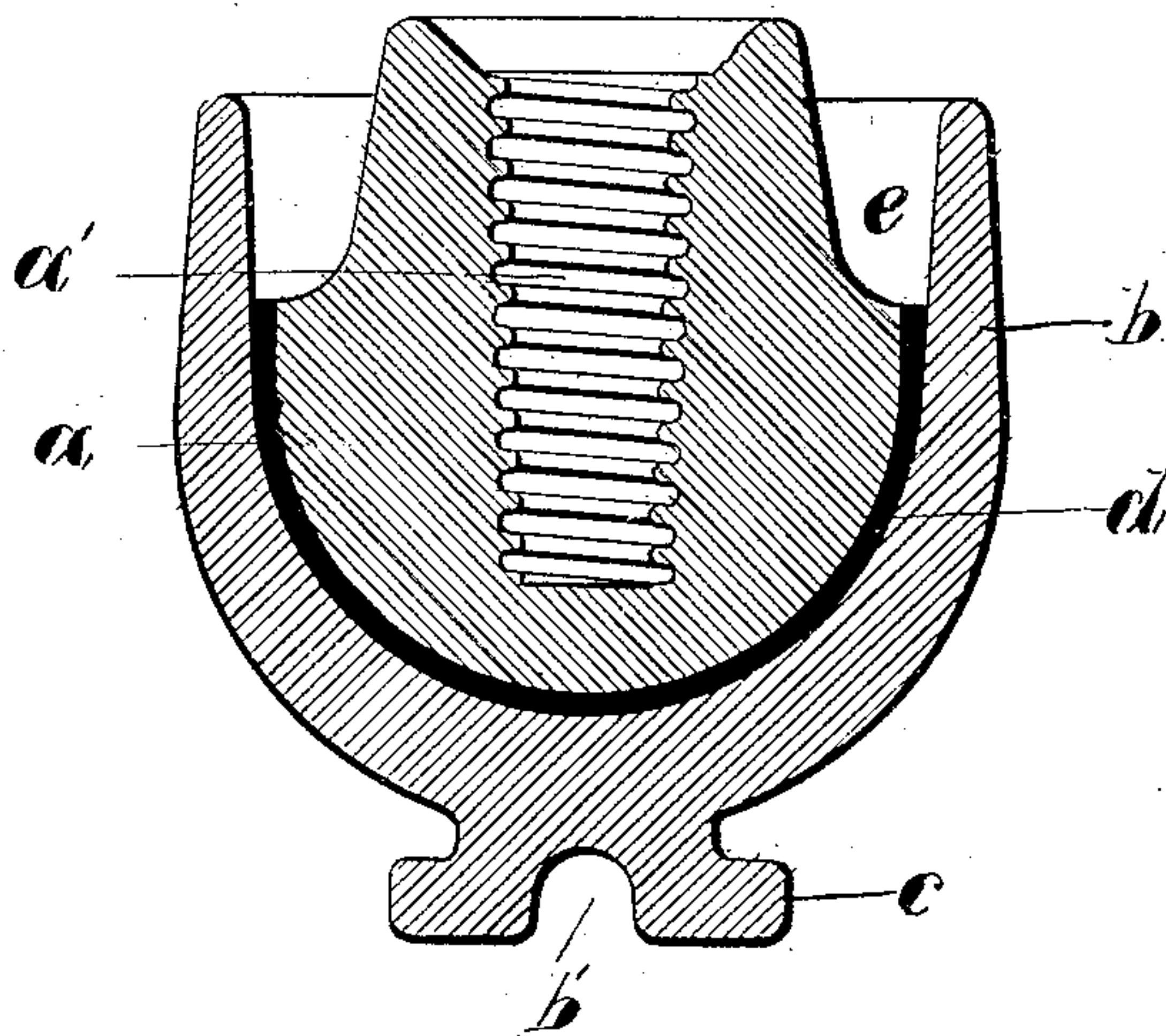


Fig. 2.



WITNESSES:

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FRED M. LOCKE, OF VICTOR, NEW YORK.

PROCESS OF MAKING INSULATORS.

SPECIFICATION forming part of Letters Patent No. 702,660, dated June 17, 1902.

Application filed March 12, 1902. Serial No. 97,872. (No specimens.)

To all whom it may concern:

Be it known that I, FRED M. LOCKE, of Victor, in the county of Ontario, in the State of New York, have invented new and useful Improvements in Processes of Making Insulators, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in the art or process of manufacturing insulators from porcelain, earthenware, glass, or similar materials and the articles manufactured by such process.

My object is to produce by the process hereinafter set forth an insulator of porcelain, earthenware, or similar material which is constructed of shells or cup or bowl shaped pieces fused together, so as to form as near as possible a homogeneous mass.

To that end my invention consists in the several new and novel steps comprising my process, which are hereinafter set forth, and the article thus manufactured, as fully described in the specification following, and as clearly set forth in the claim hereto annexed, reference being made to the drawings, forming a part thereof, in which—

Figure 1 shows a vertical section of the parts forming the insulator, with glaze between the parts for the purpose of fusing them together. Fig. 2 is a view of the completed insulator after the parts have been fused together.

The inner part or shell *s a* is formed substantially as shown in the drawings, being provided with a recess *a'*, suitably threaded, or may be made plain for the reception of the pin which supports the insulator in a position reverse from that shown in the drawings.

b is the outer shell, which is cup-shaped, the inner surface of which conforms substantially to the outer surface of the inner shell, so that when the parts are fused together they will remain about equidistant from each other at substantially all points. The outer shell is provided with a wire-groove *b'* and lugs *c*, by which the conductor which rests in the groove *b'* is wired or secured to the outer shell.

While in the drawings I have shown but

two shells or cup-shaped pieces, yet I do not limit myself to an insulator constructed of two shells, as it will be evident that an insulator may be built up and contain as many shells as may be desired to stand any required voltage without breaking down.

My process is as follows: The parts *a* and *b* are formed separately and then are allowed to dry in the ordinary way of drying articles made from porcelain or similar material, either by biscuit-firing or allowing them to dry on the shelf in the factory. After they have thus become dry they are dipped in liquid glaze, the outer shell or shells being dipped or rather withdrawn from the liquid glaze bottom side upward, so that more or less of the liquid glaze *d* remains in the bottom of the shell. The parts are then fitted together, as shown at *l*, bottom side upward. These parts thus put together are packed together with other insulators similarly constructed in the saggar, and thus placed in the kiln for firing. It is a well-known fact that the glazing material fuses at a much lower temperature than the porcelain, and as the shells of porcelain begin to shrink and contract the inner shell begins to sink down into the lower shell and forces the glaze which has been left in the bottom of the shell upward, as shown in Fig. 1, until it takes the position as shown in Fig. 2, thereby cementing and fusing the separate shells of the insulator together, so as to form practically but a single piece.

By this process I do not claim to prevent the forming of air spaces or bubbles in the layer of glaze between the shells, nor do I think it is necessary to accomplish this result, for the reason that the air-spaces form quite as good a resistance as the glaze would, the only object being to weld the shells forming the insulator together, so that they will be mechanically strong.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The process herein described of constructing insulators formed of two or more shells of suitable insulating material consisting in forming it in two or more parts, dipping them in liquid glaze, the outer shells being dipped

bottom side upward and allowing a portion
of the liquid glaze to remain in the outer
shell or shells, nesting them together in this
position with their petticoats uppermost and
5 then firing them so as to fuse the parts to-
gether so as to form practically but a single
piece.

In witness whereof I have hereunto set my
hand this 7th day of March, 1902.

FRED M. LOCKE.

Witnesses:

M. W. BURKE,
W. C. DRYER.