

No. 698,218.

Patented Apr. 22, 1902.

M. NORDEN.  
ELECTRIC LAMP SOCKET.

(Application filed Jan. 18, 1902.)

(No Model.)

Fig. 1.

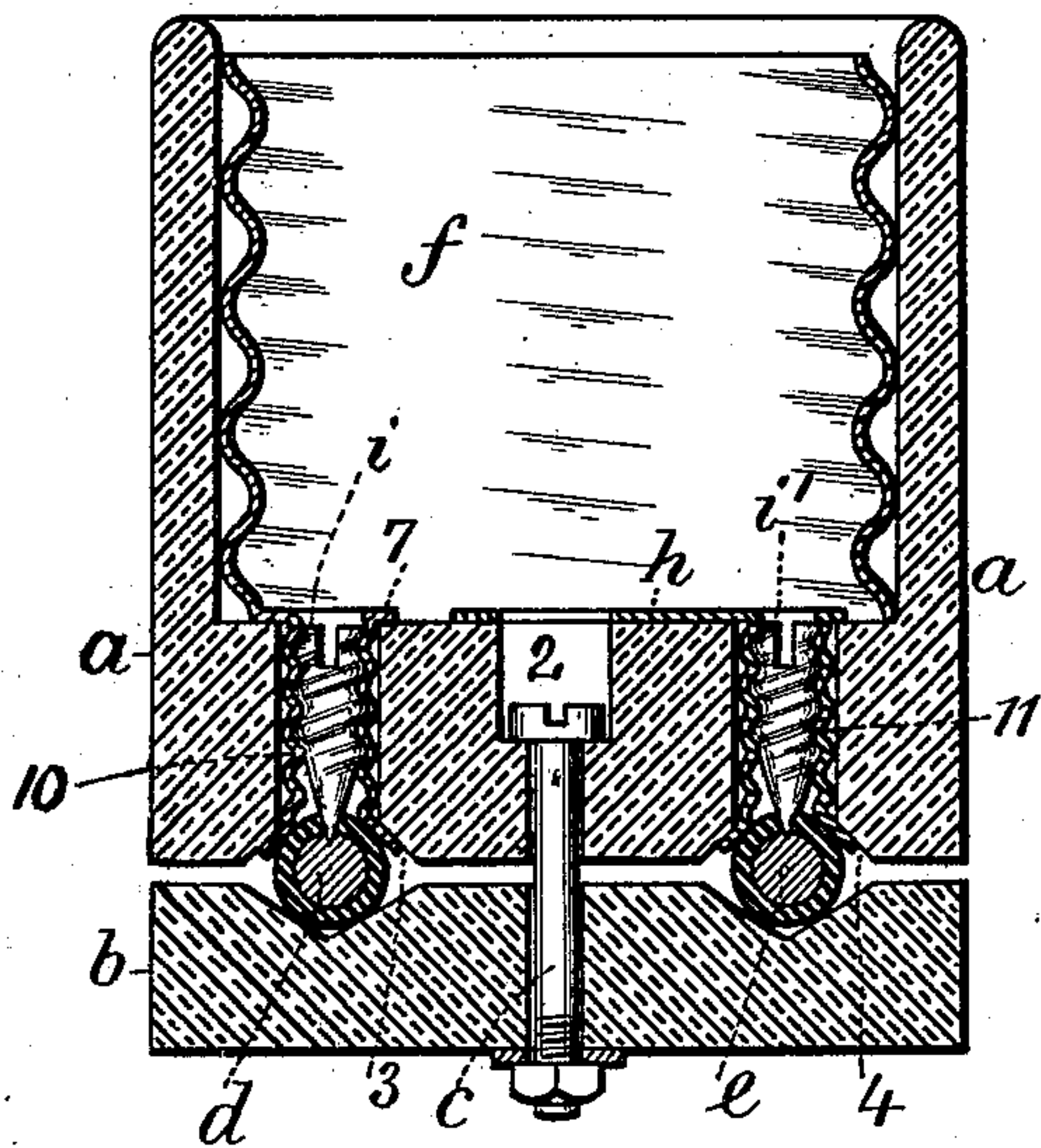


Fig. 3.

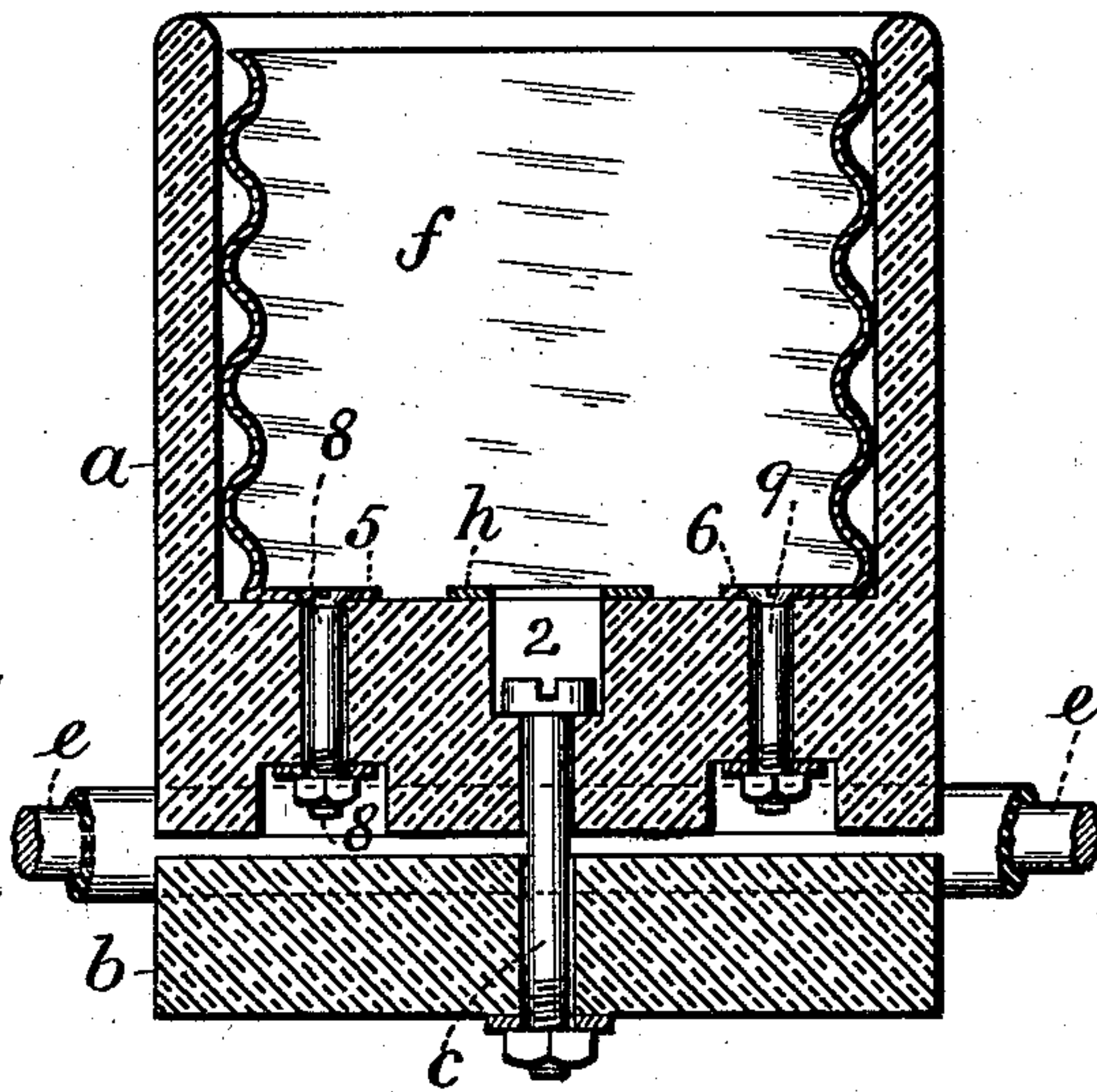


Fig. 2.

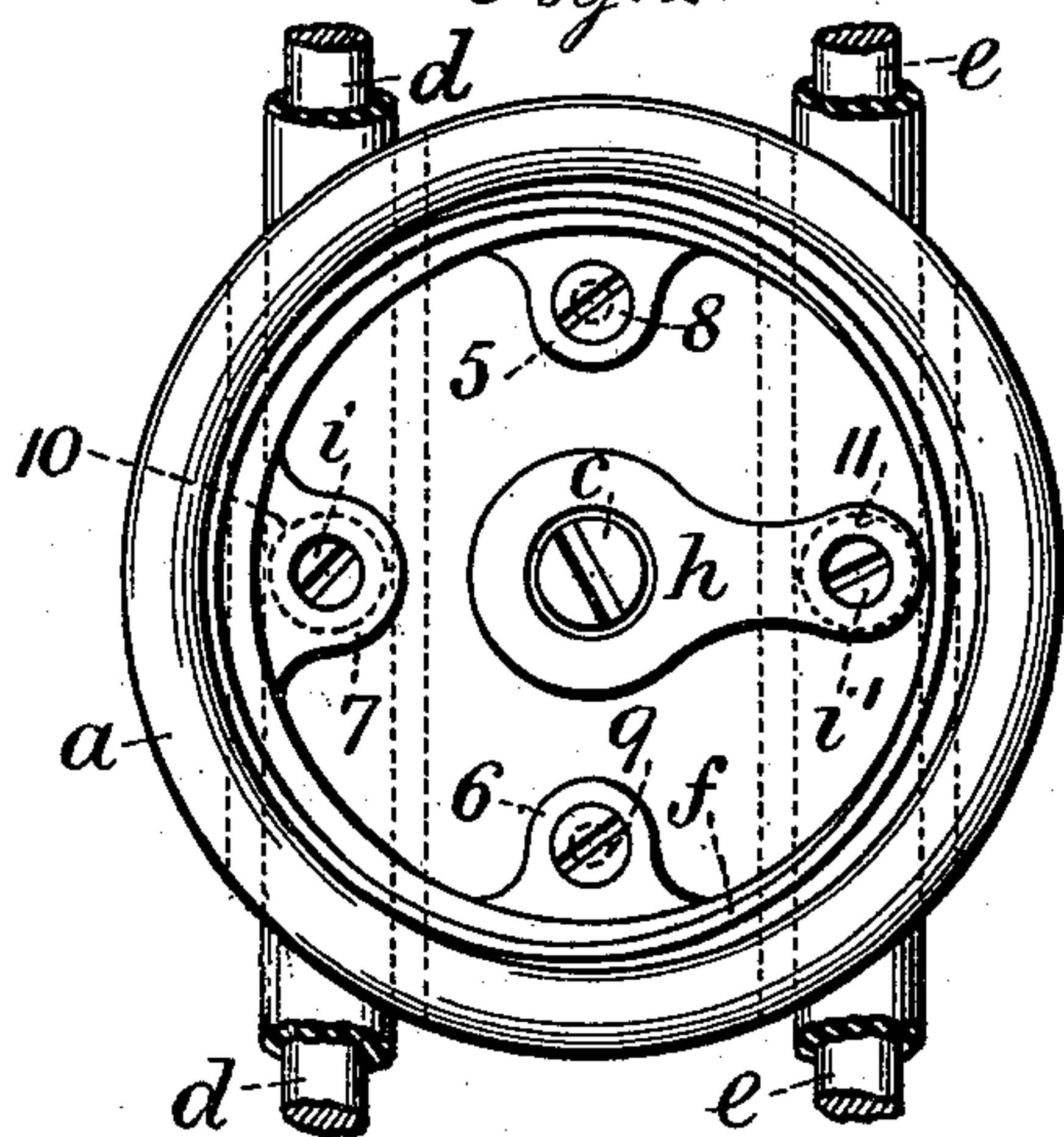
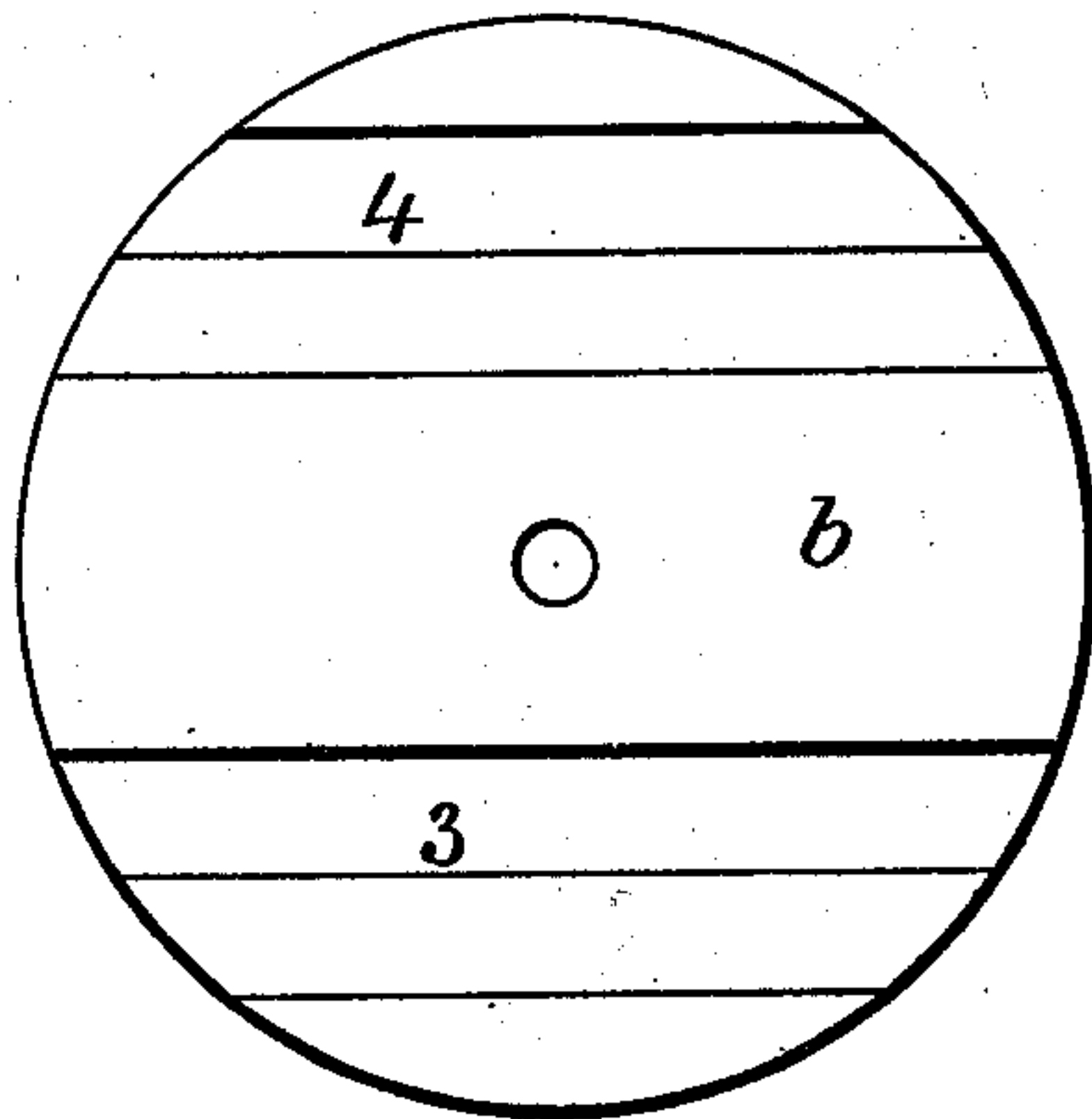


Fig. 4.



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# UNITED STATES PATENT OFFICE.

MORTIMER NORDEN, OF NEW YORK, N. Y., ASSIGNOR TO THE NORDEN-BITTNER ELECTRIC COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## ELECTRIC-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 698,218, dated April 22, 1902.

Application filed January 16, 1902. Serial No. 89,954. (No model.)

*To all whom it may concern:*

Be it known that I, MORTIMER NORDEN, a citizen of the United States, residing at the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Electric-Lamp Sockets, of which the following is a specification.

My invention relates to portable sockets for electric lamps, especially those employed for decorative purposes. In stringing lamps for decorative purposes it is desirable to be able to move and adjust the position of the lamps as required for producing an effect. Heretofore in stringing lamps for decorative purposes it has been usual to remove so much of the braided or insulating covering to the wires, or both, as was necessary in making metallic contact. The conductors were thus injured and substantially destroyed, except for present use; and the object of my invention is to produce a socket adapted to make metallic contact with the conducting-wires and without injuring the said wires or their covering, so that the conducting-wires are adapted for repeated use.

In carrying out my invention the lamp support or socket is advantageously of three essential parts, a cup of insulating material, a base of insulating material, and a screw-socket of metal. The opposing and adjacent faces of the cup and base are provided with parallel recesses, forming channels for the conductors. The device that holds these parts together also acts to clamp them to the conductors at any desired point, and I provide screw-sleeves of metal, the one connected to the screw-socket of metal and the other connected to a plate adapted for central contact with the electric lamp, and in these screw-sleeves I employ screws with pointed ends, said ends being sufficiently sharp to penetrate the braided or insulating covering of the electric conductors, or both, down to contact with the actual conducting-wires. When these screws are loosened and their points retracted from the conductors, the apertures left by the points of the screws are so small that the material is liable to expand and close the openings, or the openings may be readily closed by rubbing down the conductor with any desired instrument or even with the finger-nail.

Thus the conductors are not injured and are adapted for repeated use, and in stringing the sockets should one be wrongly placed it is a very simple matter to change the position thereof.

In the drawings, Figure 1 is a vertical section representing my improvement. Fig. 2 is plan of the same. Fig. 3 is a vertical section at right angles to the section Fig. 1, and Fig. 4 is a plan of the base.

*a* represents the cup, of porcelain or other suitable insulating material; *b*, the base, also of porcelain or other suitable insulating material. A central hole is made in the base for the stem of the bolt *c*, and a central hole 2 is made in the cup *a*, of varying sizes, not only for the stem of the bolt *c*, but for the head. The adjacent and opposing surfaces of this cup and base are provided with coinciding parallel recesses, forming channels for the conductors *d e*. These recesses are preferably of flattened V form and are of such size as to receive between them and engage the smallest conductor used for electric lighting purposes without the cup and base actually coming into contact. Larger sizes of conductors are received equally well and simply have the effect of increasing the distance between the cup and base.

The screw-socket of metal *f* is within the cup *a* and receives the base of the incandescent electric lamp, the said screw-socket making electrical contact with the periphery of the lamp-base. This screw-socket *f* is preferably made with lugs 5, 6, and 7 at the base and which are at right angles to the surface of the socket. It is necessary to mechanically secure the socket *f* to the cup *a* by devices other than those which form the electrical connection with the conductors, and for this purpose I employ screws or bolts 8 and 9 (shown especially in Fig. 3) and which pass through the lower portion of the cup *a* and through the lugs 5 and 6, the nuts of the bolts being in recesses in the under surface of the cup.

I employ a screw-sleeve 10, preferably formed integral with the lug 7 and socket *f*. This sleeve extends through a perforation in the lower portion of the cup *a*, and the outer end of this screw-sleeve is preferably flared



or bent outward into the recess 3. This performs a holding function for the screw-socket *f* similar to that performed by the screws 8 and 9 in connecting the screw-socket to the cup. I employ a metal plate *h* at the base of the cup and free from electrical connection with the screw-socket *f*. This metal plate is preferably formed integral with a screw-sleeve 11, which is similar in form to the screw-sleeve 10, and also passes through a perforation in the lower portion of the cup *a*. The screw-sleeve 11 is flared or bent outward into the recess 4, and the said metal plate *h* is perforated for the passage of the central bolt *c* and its head. This metal plate *h* forms the other electric contact centrally with the end of the incandescent electric lamp.

Screws *i i'*, formed alike and with sharp points, are passed into the screw-sleeves 10 and 11, and they are moved down in said sleeves by a suitable instrument. The points are forced through the braided or insulating covering of the conductors *d e* or through both coverings, where they are employed, the sharp points making contact metal to metal with the wires of said conductors, the metallic contact being sufficient to carry the electric current to the lamp. These small holes do not injure the electric conductors *d e*, as when the screws are removed in taking down the plant put up for decorative purposes there is an expanding feature of the covering adapted to wholly or partially close up the openings made by the points of the screws, or the covering may be rubbed down by any suitable instrument or by the finger-nail to completely close the same and restore the conductor to its original condition and usefulness in which said conductor is adapted to be used over and over again.

I claim as my invention—

1. The combination with a cup and base of insulating material, and means for receiving electric conductors between the same and a clamping device for holding the same thereto, of a screw-socket within the cup of insulating material, a central metal plate, metallic sleeves connected respectively to said parts and extending through perforations in the lower portion of the cup and pointed devices passing through said sleeves and adapted to penetrate the covering of the electric conductors to contact with the wires therein, substantially as set forth.

2. The combination with a cup and base of insulating material, and means for receiving electric conductors between the same and a clamping device for holding the same thereto,

of a screw-socket within the cup of insulating material, a central metal plate, metallic sleeves connected respectively to said parts and extending through perforations in the lower portion of the cup and pointed devices passing through said sleeves and adapted to penetrate the covering of the electric conductors to contact with the wires therein, and clamping screws or bolts at points through the lower portion of the cup intermediate to the aforesaid devices and by which the said screw-socket is firmly held to the cup of insulating material, substantially as set forth.

3. The combination with the cup and base of insulating material, and means for receiving electric conductors between the same and a clamping device for holding the same thereto, of a screw-socket *f* within the cup of insulating material and a screw-sleeve 10 connected therewith and passing through a perforation in the base of the cup, a central metal plate *h* and a screw-sleeve 11 connected therewith and also passing through a perforation in the base of the cup, and screws *i i'* with sharp points on their advancing ends movable through the screw-sleeves 10 and 11 and adapted to penetrate the insulating-covering of the conductors held between the cup and the base, the points making metallic and electrical contact with the wires of the conductors, substantially as set forth.

4. The combination with the cup and base of insulating material, and means for receiving electric conductors between the same and a clamping device for holding the same thereto, of a screw-socket *f* within the cup of insulating material and a screw-sleeve 10 connected therewith and passing through a perforation in the base of the cup, a central metal plate *h* and a screw-sleeve 11 connected therewith and also passing through a perforation in the base of the cup, and screws *i i'* with sharp points on their advancing ends movable through the screw-sleeves 10 and 11 and adapted to penetrate the insulating-covering of the conductors held between the cup and the base, the points making metallic and electrical contact with the wires of the conductors, the outer ends of the screw-sleeves 10 and 11 being spread or flared into the recesses receiving the conductors for the purpose of securely fastening the screw-sleeves to the lower portion of the cup, substantially as set forth.

Signed by me this 14th day of January, 1902.

MORTIMER NORDEN.

Witnesses:

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GEO. T. PINCKNEY.