

(No Model.)

C. A. B. HALVORSON.  
BUSHING FOR INCANDESCENT LAMP SOCKETS.

No. 491,682.

Patented Feb. 14, 1893.

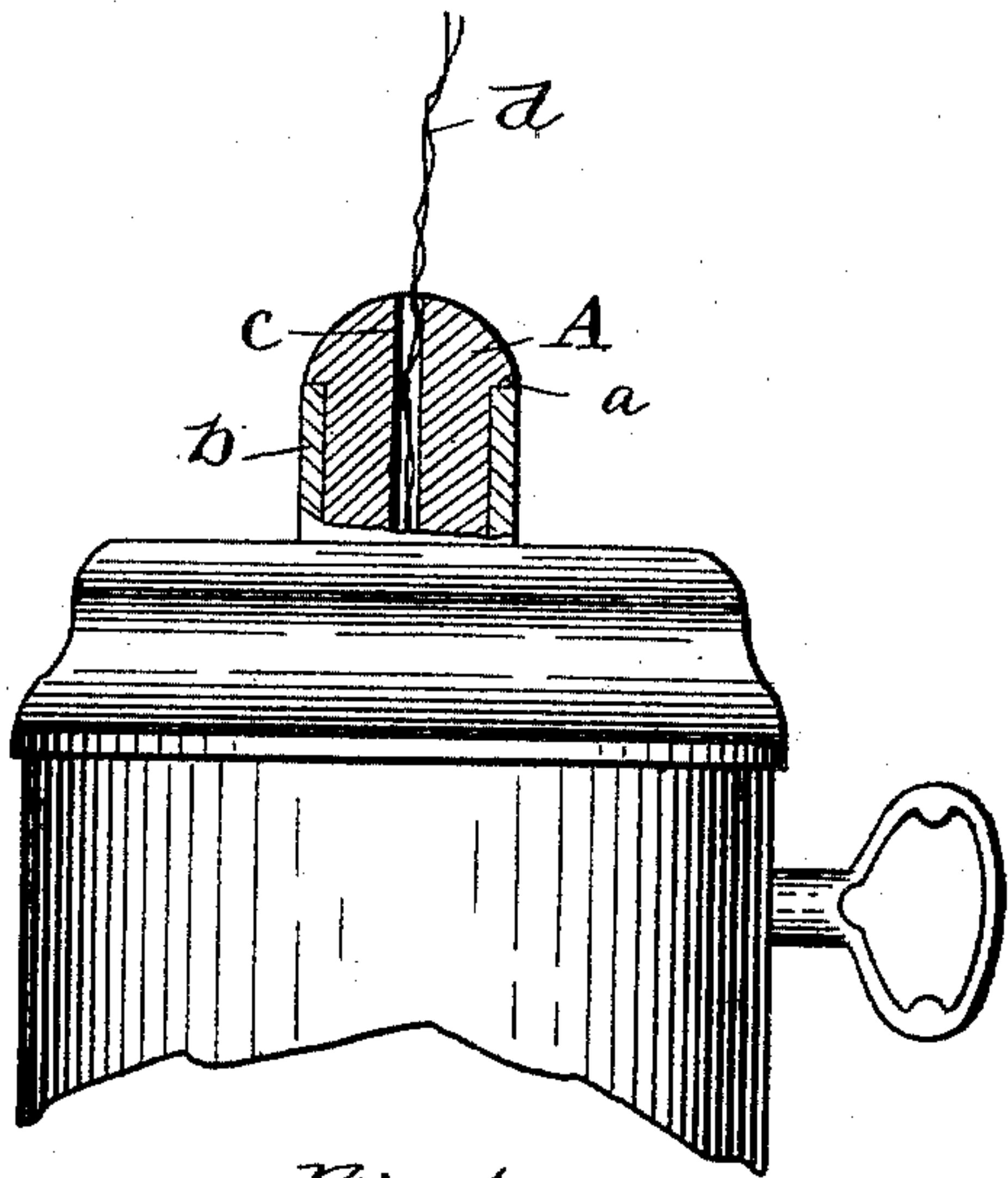


Fig. 1.

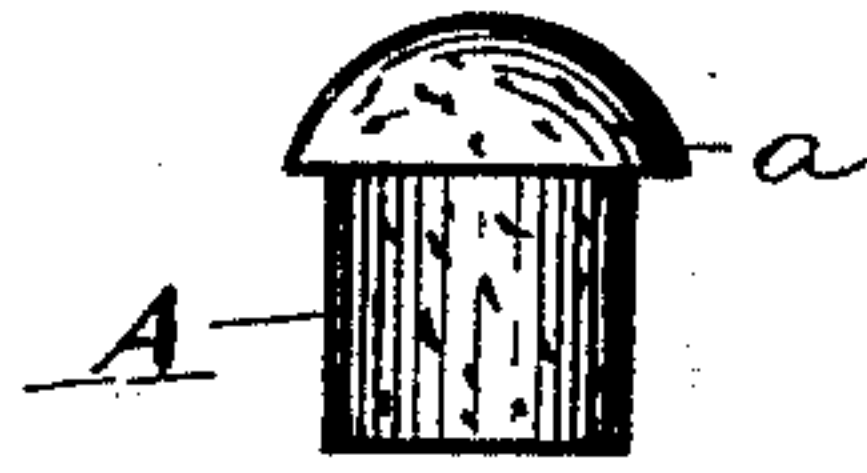


Fig. 2.

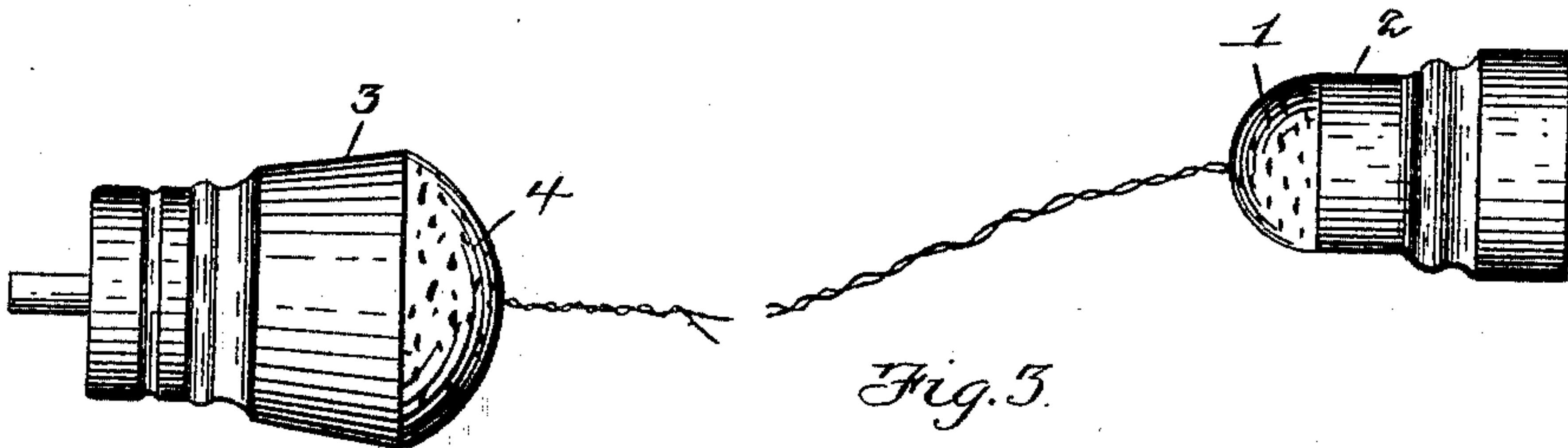


Fig. 3.

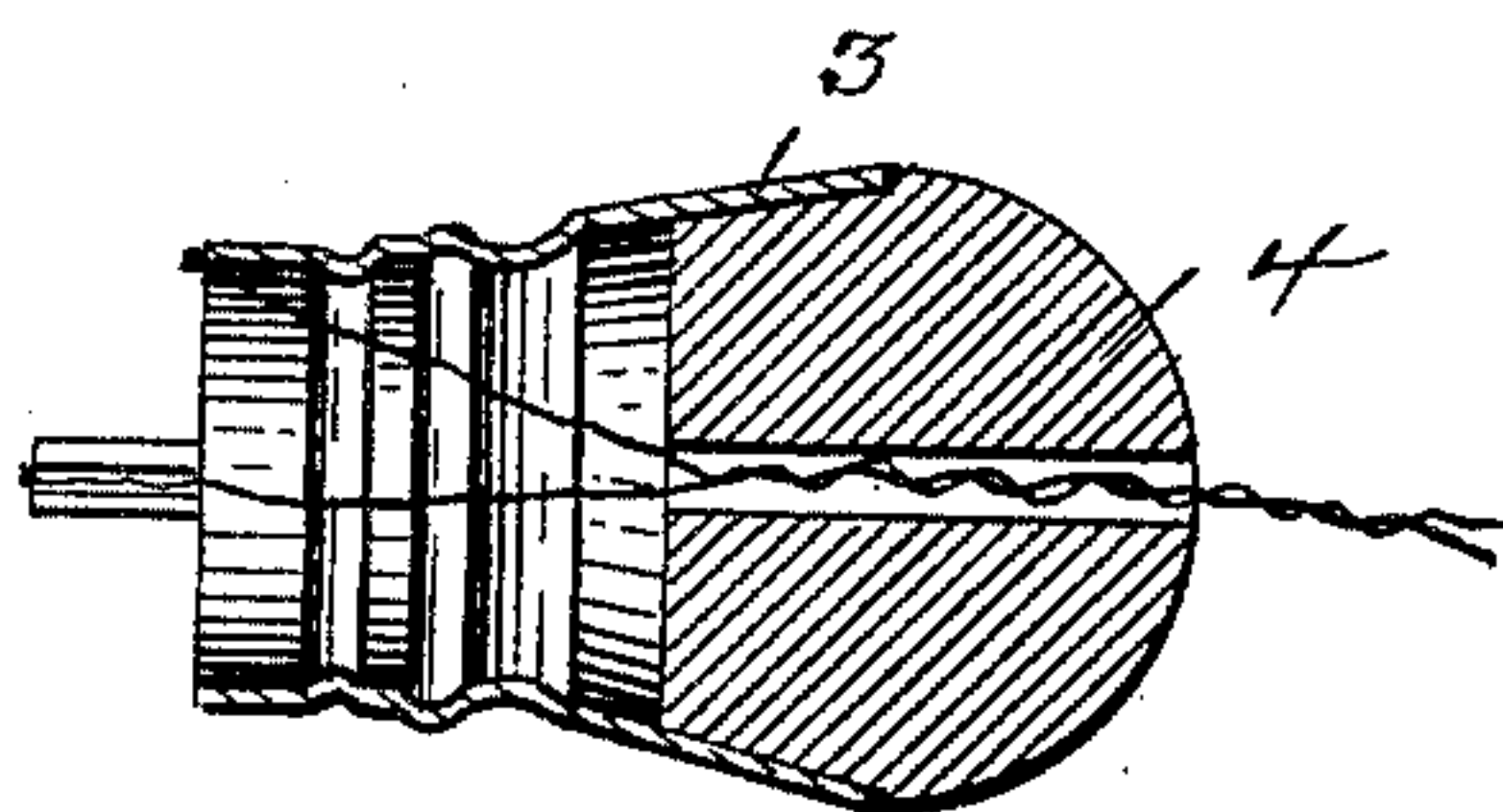


Fig. 4.

Witnesses:  
*James W. Wilson*  
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# UNITED STATES PATENT OFFICE.

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ROBERT B. LINCOLN, OF BOSTON, MASSACHUSETTS.

## BUSHING FOR INCANDESCENT-LAMP SOCKETS.

SPECIFICATION forming part of Letters Patent No. 491,682, dated February 14, 1893.

Application filed April 4, 1892. Serial No. 427,617. (No model.)

*To all whom it may concern:*

Be it known that I, CROMWELL A. B. HALVORSON, of Saugus, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Bushings for Incandescent-Lamp Sockets of Swinging or Pendent Lamps, of which the following is a specification.

My invention has reference to bushings for incandescent lamp sockets, or connecting plugs or fixtures; and has for its object to provide a bushing which will prevent the abrasion of the cords as they enter the socket or plug, and at the same time afford a suitable insulation for the said cords. In pendent electric lamps the socket in which the globe is held is provided usually with an outwardly projecting collar through which the cords or wires are carried to the inside of the socket. It is desirable that the wires should be insulated from this collar, as they pass therethrough, and for this purpose said collar usually has a hard rubber core centrally perforated to accommodate the cords and screw threaded to engage screw threads in the collar. At the point of entrance of the wire a sharp corner is offered and as the swinging of the lamp or fixture causes a continual rubbing of the same against said sharp corner, the insulation is soon worn off and the wire left uninsulated. The hard material of which these cores have heretofore been made prevents there being sufficient friction to retain them in place, thus necessitating screw threads or similar means for this purpose. With these faults in view, I have devised a core for said socket which shall be a perfect insulator, and at the same time offer no sharp corners to the insulation of the wires.

My invention consists of a piece of cork adapted to be inserted in the socket of a pendent electric lamp, or in the outer end of any connecting plug, and to fit closely therein and perforated to permit the passage of the cord, and having a sufficient portion of the cork extending beyond the socket or plug to insure that the wires or cords cannot come in contact with said socket or connection, and also to hold the cork from being pushed too far into the socket therefor.

In the accompanying drawings, I have shown two forms of application of my inven-

tion; Figure 1, being a central vertical section of a pendent lamp-socket; and Fig. 2, a detail of the piece of cork. Fig. 3, a view of two attachment plugs; and Fig. 4, a central section of one of said plugs.

Referring first to Figs. 1, and 2, A represents a piece of cork having shoulder or bulging portion *a* serving the double purpose of retaining the cork in place and keeping the wires from the ends of socket or collar *b*. Cork A has perforation *c* through which wires *d* are carried.

Figs. 3, and 4, show two connection plugs used where it is desired to make a connection from a lamp or other wall fixture, to a distant lamp, motor, or the like.

Cork 1 is inserted in plug 2 which may be inserted in any lamp fixture, and plug 3 is similarly provided with cork 4 and can be used to connect any device to which connection is to be made.

The advantages of cork in this connection are many. It is a perfect insulator and owing to its compressibility may be sprung into its holder or seat and will need no screws, screw threads or other devices to hold it in place, and its softness will offer no wearing surface to the insulation of the wire.

Having thus described the nature of my invention, and explained a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made, or all of the modes of its employment, I declare that what I claim is:

In electrical connection plugs or other connections, the combination of a sheet metal plug and an externally smooth cork core or bushing tightly fitting therein, and having a perforation for the passage of the connecting wires, said core or bushing having a bulging portion extended beyond said plug whereby contact of the wires with the end of the plug is prevented, and the bushing is held in place substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of April, A. D. 1892.

CROMWELL A. B. HALVORSON.

Witnesses:

C. F. BROWN,

A. D. HARRISON.