

(No Model.)

C. SPROAT & E. N. TARR.  
INSULATOR FOR ELECTRIC OR OTHER WIRES.

No. 544,778.

Patented Aug. 20, 1895.

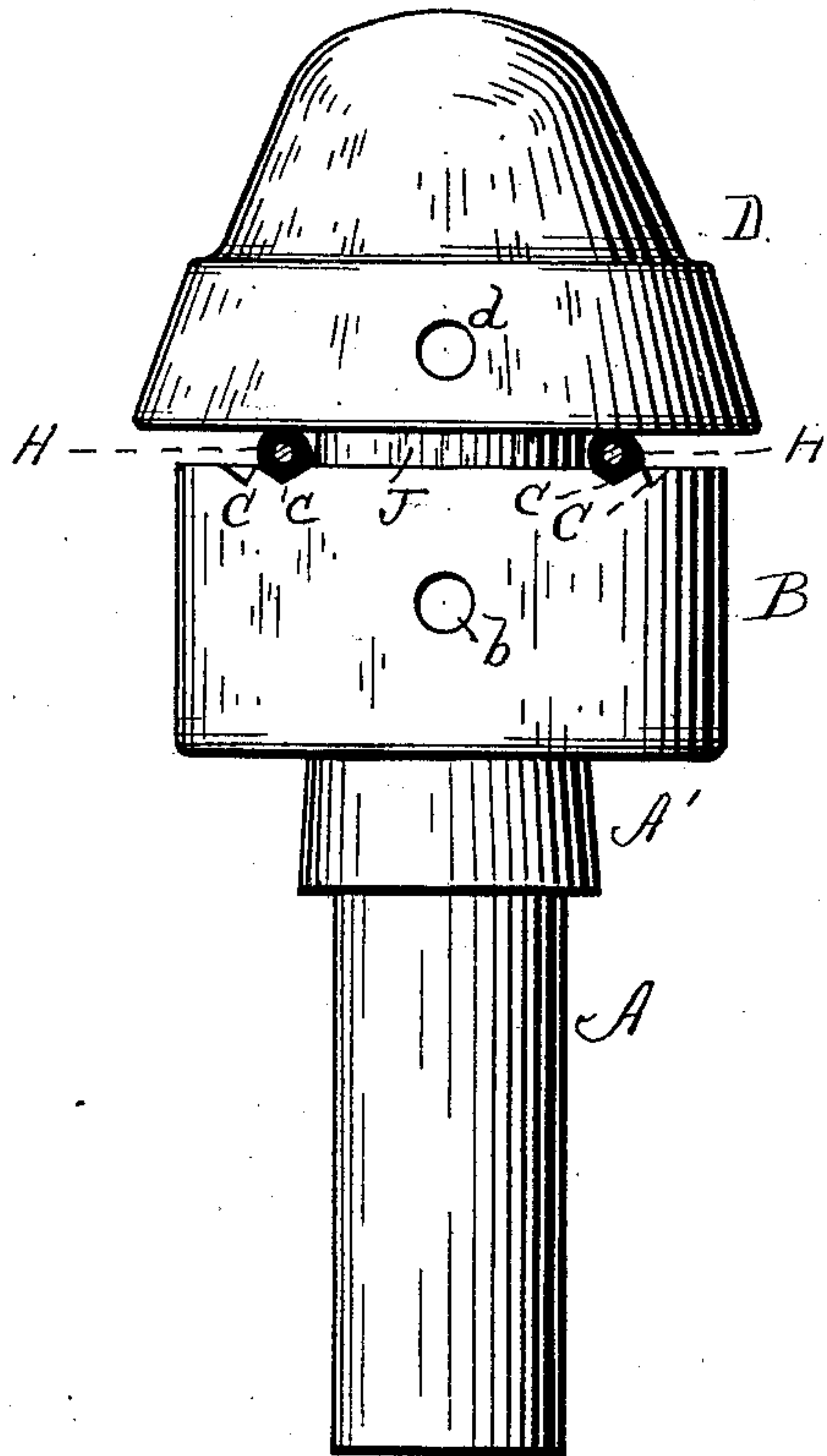


Fig. 1.

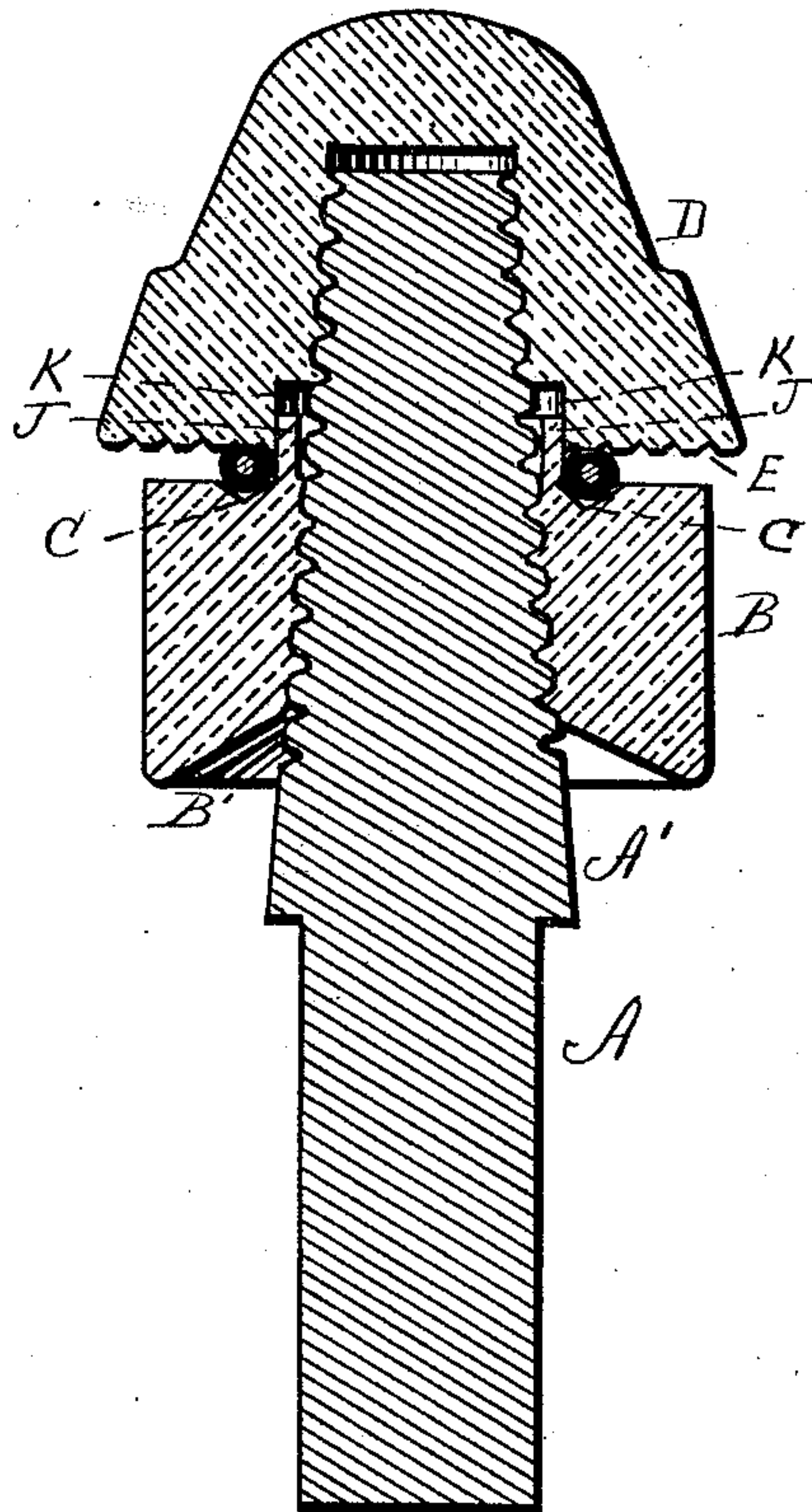


Fig. 2.

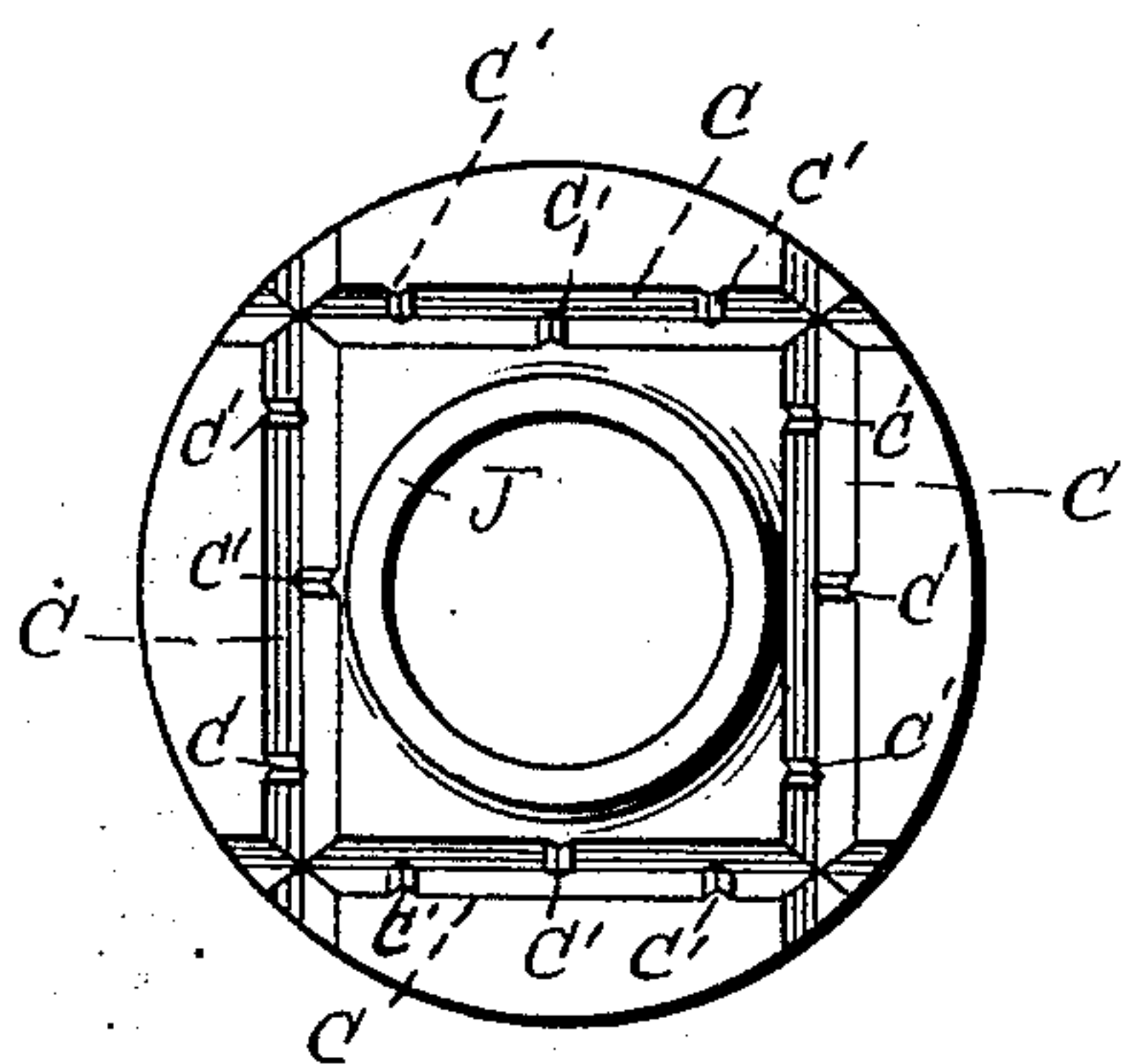


Fig. 3.

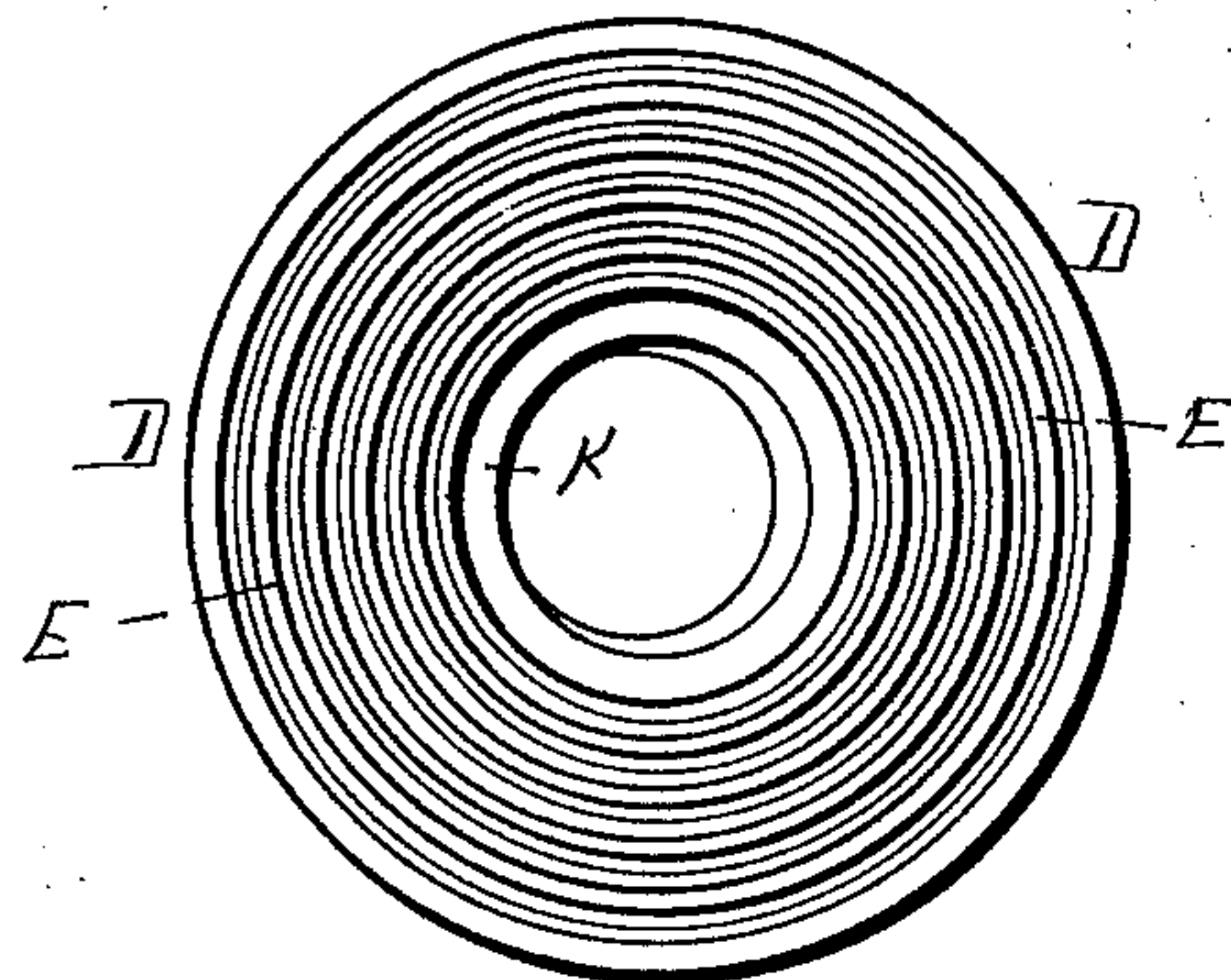


Fig. 4.

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# UNITED STATES PATENT OFFICE.

CLINTON SPROAT AND EDWARD N. TARR, OF TAUNTON, MASSACHUSETTS.

## INSULATOR FOR ELECTRIC OR OTHER WIRES.

SPECIFICATION forming part of Letters Patent No. 544,778, dated August 20, 1895.

Application filed January 2, 1896. Serial No. 533,548. (No model.)

*To all whom it may concern:*

Be it known that we, CLINTON SPROAT and EDWARD N. TARR, citizens of the United States, residing at Taunton, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Insulators for Electric and other Wires, of which the following is a specification.

This invention relates to insulators for electric-light wires, power-wires, telegraph-wires, telephone-wires, &c.; and it consists in the novel construction and arrangement of parts hereinafter described, whereby the use of ties is done away with and the insulator rendered more perfect in construction.

The nature of the invention in detail is fully described below, and illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of our improved insulator applied to a pin and with wires laid in position therein. Fig. 2 is a central vertical section of the same. Fig. 3 is a plan view of the upper surface of the base. Fig. 4 is a plan view of the under side of the head or cup.

Similar letters of reference indicate corresponding parts.

A represents the pin, made of any suitable material, whose upper portion A' is screw-threaded.

B is the base, made of glass, porcelain, or other non-conducting material, internally screw-threaded to correspond with the pin and formed on its under side into the ordinary petticoat B'. The upper surface of the base is provided with grooves C, preferably made V-shaped in cross-section, two sets of two grooves each being usually provided, as shown in Fig. 3, thus furnishing accommodation for one or more wires. Each of these grooves is furnished with, say, three transverse ribs or projections C' of reverse V shape, one such projection extending upward from one side of a V-shaped groove from the upper edge to the bottom thereof, and two extending upward from the opposite side of the V-shaped groove and extending from the upper edge to the bottom thereof.

D is the head or cup internally screw-threaded to correspond with the thread on the pin A. The under surface of this head is formed into a series of concentric annular corrugations E.

H represents a couple of wires covered with insulation, although of course bare wires may be used.

J is a circular flange or partition extending up from the base B, next the central opening therein, into an annular chamber K, formed on the under side of the head D around the threaded opening for the reception of the pin.

In operation, the wires H are laid in the V-shaped grooves C after the base B has been screwed onto the pin by means of an ordinary spanner inserted in the opening b. The head or cup D is then screwed on by means of a spanner in the opening d and crowded down hard upon the wires H. The effect is to crowd the wires down into the grooves C, causing the V-shaped projections C' to embed themselves in the insulation on the under side of the wires. The upper sides of the wires have crowded down upon and into them the annular corrugations E. By this means the use of ties is absolutely unnecessary, as the grip, both of the projections C' and the corrugations E, is very great. It will readily be seen that by reason of the arrangement of the projections C' on opposite sides of the grooves a greater surface of the under side of the wire is gripped, while as the said V-shaped projections are set transversely with the grooves a comparatively broad hold is secured on the wire. Attention is called to the fact that the wires do not cross the corrugations E radially, but describe geometrical chords. By this means each corrugation has a very much longer contact than would be the case if the intersection were radial, and hence the frictional hold is very great. The circular partition J prevents any possible electrical connection between a wire which is uninsulated or from which the insulation is worn off and the pin, and hence prevents "grounding."

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In an insulator, the combination with the base B, of the cup or head D provided with a series of annular concentric corrugations E, and means whereby said head or cup may be pressed down upon a wire lying on said base, substantially as set forth.

2. In an insulator, the base B provided with

the straight grooves C, and the head or cup D provided with the concentric corrugations E, said straight grooves being adapted to receive the wires and extending across the concentric corrugations in the line or direction of a chord, substantially as described.

3. The herein described improved insulator, consisting essentially of the externally screw-threaded pin A A', the base B internally screw-threaded and provided on its upper

side with the grooves C, and the head or cup D internally screw-threaded and provided with the concentric corrugations E on its under side, substantially as described.

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