

No. 671,876.

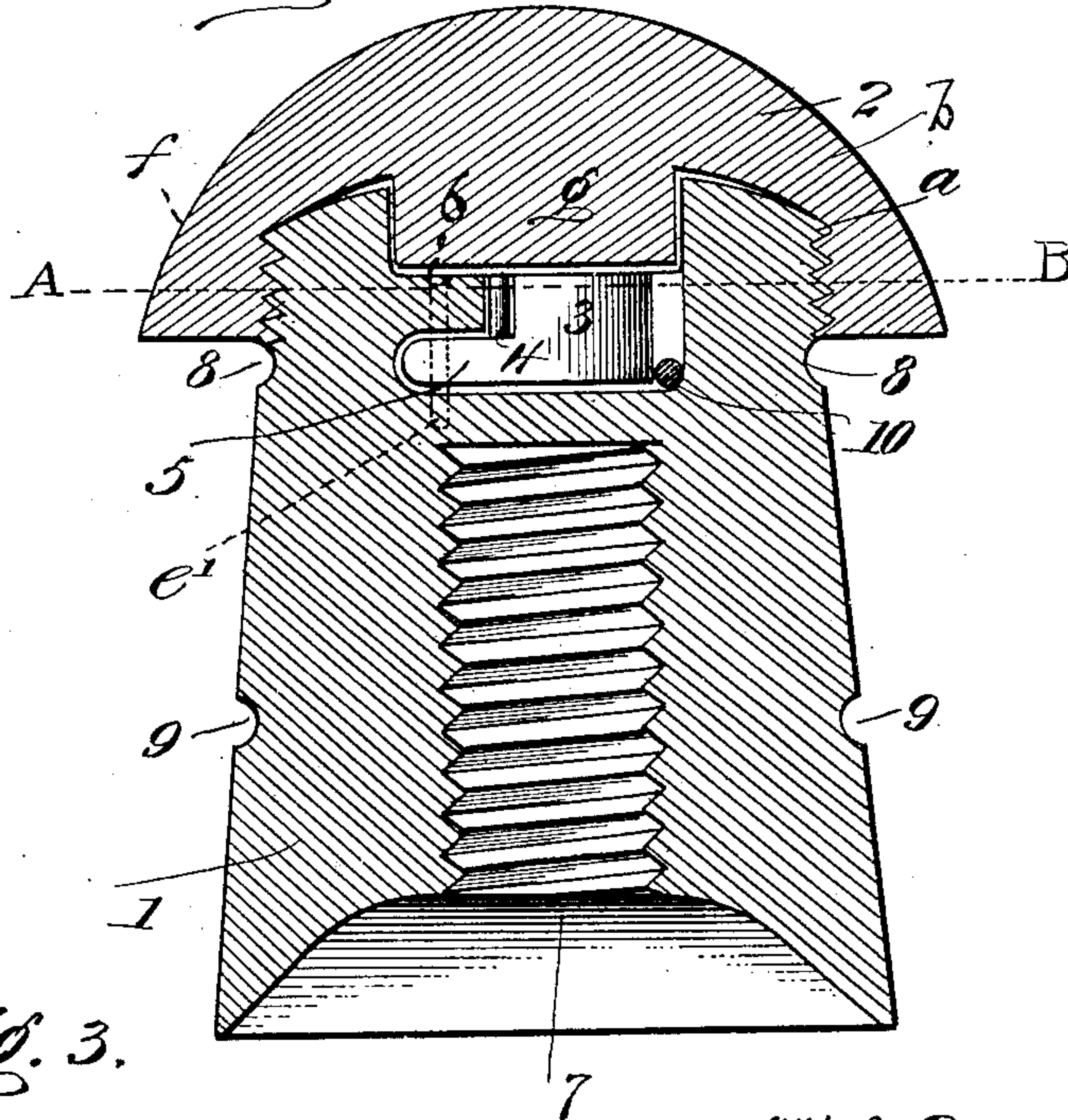
Patented Apr. 9, 1901.

W. P. BEARDSLEY.  
SELF LOCKING INSULATOR.

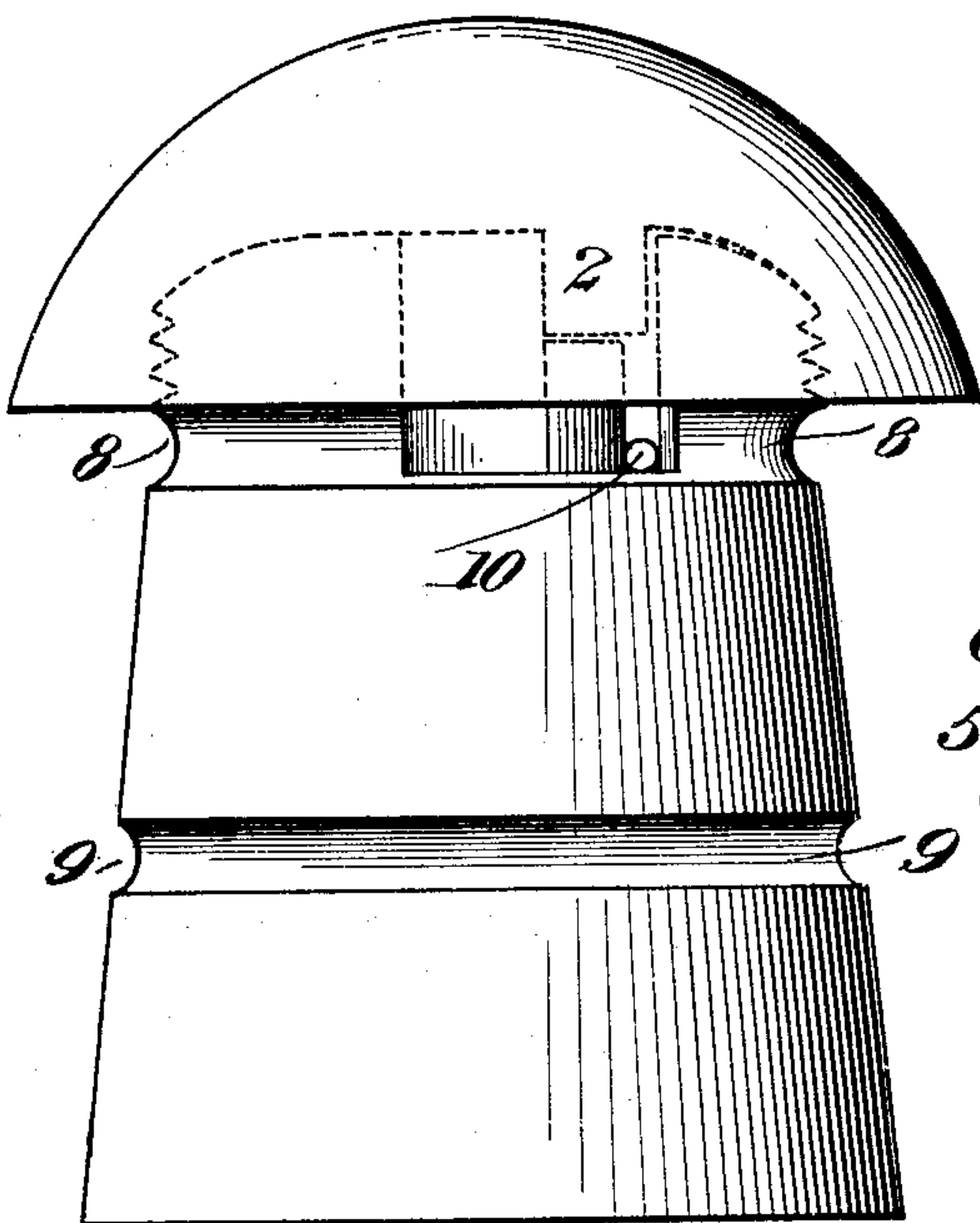
(Application filed Mar. 19, 1900.)

(No Model.)

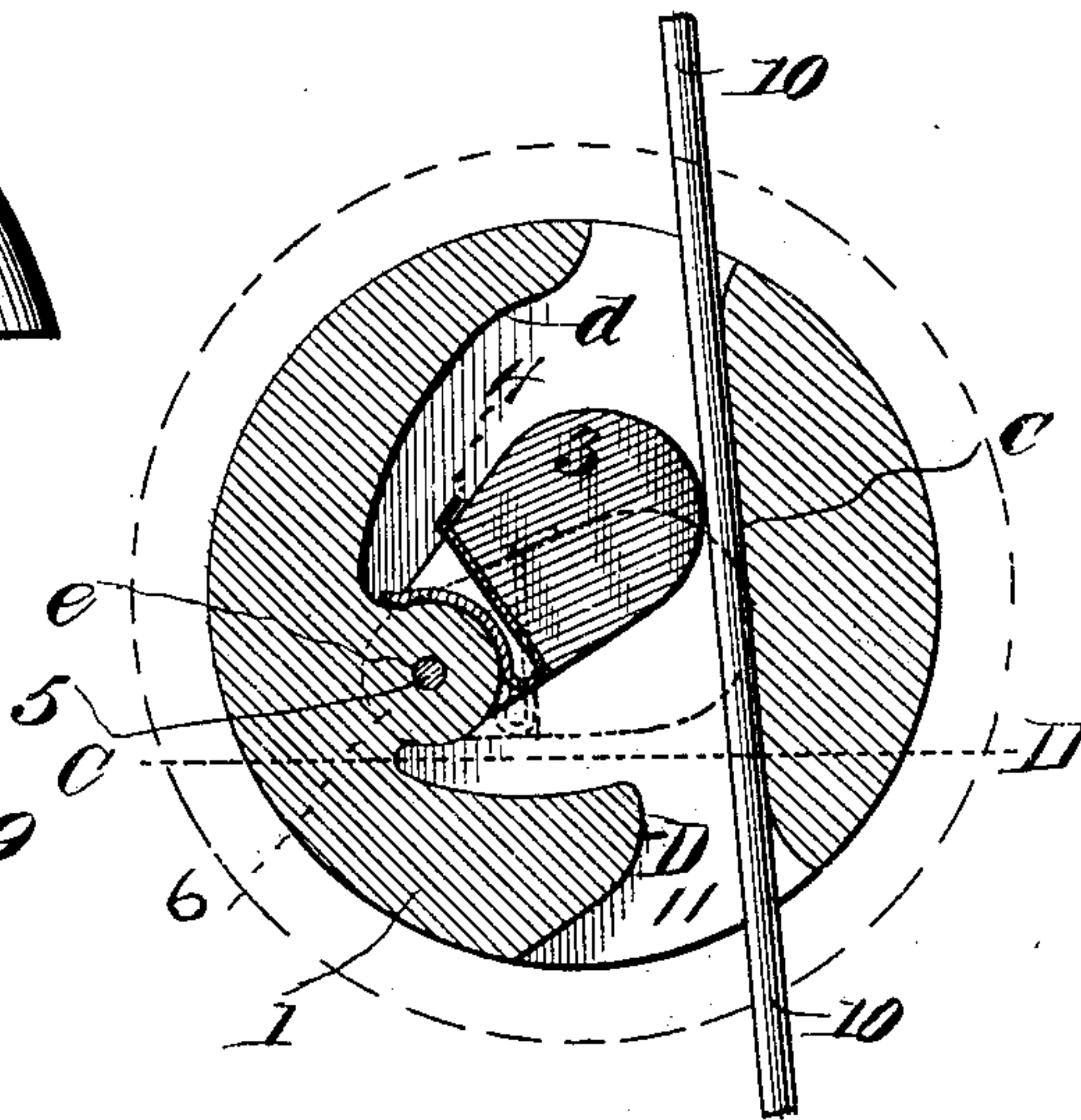
*Fig. 1.*



*Fig. 3.*



*Fig. 2.*



Witnesses  
*Emton S. Bell,*  
*E. Seavey.*

Inventor  
*William P. Beardsley,*  
By *J. D. Hicks,*  
Attorney



# UNITED STATES PATENT OFFICE

WILLARD P. BEARDSLEY, OF ALTOONA, PENNSYLVANIA.

## SELF-LOCKING INSULATOR.

SPECIFICATION forming part of Letters Patent No. 671,876, dated April 9, 1901.

Application filed March 19, 1900. Serial No. 9,297. (No model.)

*To all whom it may concern:*

Be it known that I, WILLARD P. BEARDSLEY, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented certain new and useful Improvements in Self-Locking Insulators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to improvements in insulators for telegraph and telephone wires, whereby the circuit-wire will be automatically locked in the insulator against sagging after having been stretched during the operation of stringing.

I have fully and clearly illustrated the invention in the accompanying drawings, wherein—

Figure 1 is a vertical section through the insulator and cap or cover, taken on the line C D of Fig. 2. Fig. 2 is a horizontal sectional view, taken on the line A B of Fig. 1, showing the internal locking mechanism in engagement with a wire and the extreme movement of the locking-pawl being shown in dotted lines. Fig. 3 is a view in elevation of the complete insulator.

Referring to the drawings, 1 designates the body or barrel of the insulator, made of any material suitable therefor and of such size or dimensions as may be desired. It is made circular in cross-section and tapers vertically and has its bottom dished out or countersunk, substantially as shown, in the center of which is formed a vertical screw-threaded socket 7, adapted to receive a threaded pin or stud of a pole or other support to which the insulator may be attached or connected.

About the body of the insulator may be formed an annular groove or seat 9, intended for use in changing or transposing a wire, and adjacent to the top of the insulator, immediately under the cover or cap and substantially on a line with the floor of the wire seat, is formed another annular groove 8, which serves for the purpose of securing the "dead end" or termination of a wire around the insulator.

Adjacent to the top of the insulator are formed exterior screw-threads *a*, in which the

interior screw-threads of the cover or cap engage to hold the cap down on the insulator, as indicated in the drawings. The top end of the insulator is preferably made rounded or inclined, as at *b*.

In the top of the insulator is formed an irregularly-shaped passage or way 11, constituting a chamber or seat wherein the locking mechanism and the wire are disposed and arranged. One wall *c* of this chamber is straight and vertical, with rounded or chamfered ends, so that the vibrations of the wire will not abrade or chip off the ends of the wall. The opposite wall of the chamber is formed with a recess *d* to afford play for the locking-pawl if movement in that direction is desired or required, and at the proper point in this wall is formed a bearing-piece 6, placed at a suitable distance above the floor of the passage and so that the heel of the locking-pawl can be placed thereunder.

In the center of the bearing-piece 6 is a vertical aperture *e*, in alinement with pin-socket *e'*, extending into the floor of the passage. In the chamber or passage is placed the locking-pawl 3, arranged on the floor of the chamber and reaching to the line of the upper face of the bearing-piece 6, and which is pivotally secured in position by a pin 5, let through the bearing-piece, the heel of the pawl, and into the socket in the floor of the chamber, as indicated.

A spring 4 is arranged between the shoulder of the locking-pawl and the perimeter of the bearing-plate 6, so disposed that its free arm will exert a force on the pawl and always tend to throw it forward in the direction of the wall *c* and against the wire, as indicated in the drawings.

It will be perceived from the foregoing description, with reference to the drawings, that when a wire 10 is laid on the floor of the passage and moved lengthwise in the direction of the arrow the free end of the locking-pawl is no hindrance to the movement in that direction; but when the wire is stopped in its movements or stretched to the desired tension the tendency to return or backlash will, because of the frictional contact of the pawl, automatically bring that into action, so that it will forcibly impinge the wire and press it against the wall of the chamber and hold it firmly in



place and against the possibility of slipping back.

2 designates the cover or cap, made of any proper material and formed with a depending annular flange *f*, having internal screw-threads to engage with those on the insulator-body, and formed in the roof with a downward-projecting portion *g*, having a plane under surface, the projecting portion *g* being adapted to reach down into the chamber and set with the face of the projection closely adjacent to the upper surfaces of the bearing-piece and that of the locking-pawl, as indicated in Fig. 1 of the drawings.

It will be readily perceived that my invention possesses advantages not attendant with other forms of insulators, so far as I am aware. It dispenses with the use of tie-wires, lessens the resistance of the line by doing away with the tying-in wires, is self-locking and holds the wire tight and the line stretched and prevents sagging, does away with return to the pole after the wire is strung, prevents "choking" of the wire, and greatly lessens the labor of pulling up the wires at stated times, since one man can accomplish much more work of this kind than heretofore.

Having thus described my invention, what I claim is—

1. An insulator for telegraph and similar lines, comprising a body formed with a socket to secure it in position, and having external screw-threads at its top, and a chamber at its top, a spring-actuated locking-pawl pivotally supported in the chamber, and a cap or cover

having a depending flange provided with internal screw-threads, and a downward-extending projection to set over the pawl, substantially as described.

2. An insulator for telegraph and similar lines, comprising a body formed with a central screw-threaded socket, external screw-threads at its top, and a chamber in its top extending therethrough, a spring-actuated locking-pawl pivotally supported in the chamber, and a cover on the body, having a depending annular flange with internal screw-threads and chambered to fit the body with a downward-extending portion adapted to prevent displacement of the locking-pawl, substantially as described.

3. An insulator for telegraph and similar wires, comprising a body formed with a central vertical socket, external screw-threads at its top and a passage or chamber in its top having a straight and vertical wall and an irregular wall opposite thereto formed with a bearing-piece placed above the floor of the chamber, a locking-pawl framed with a heel to extend under the bearing-piece, a pin to pivotally connect the pawl to the bearing-piece, and a spring to move and maintain the pawl in a locking position, substantially as specified.

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

WILLARD P. BEARDSLEY.

Witnesses:

KATHARINE E. CREIGHTON,  
LYDIA C. WOLFF.