

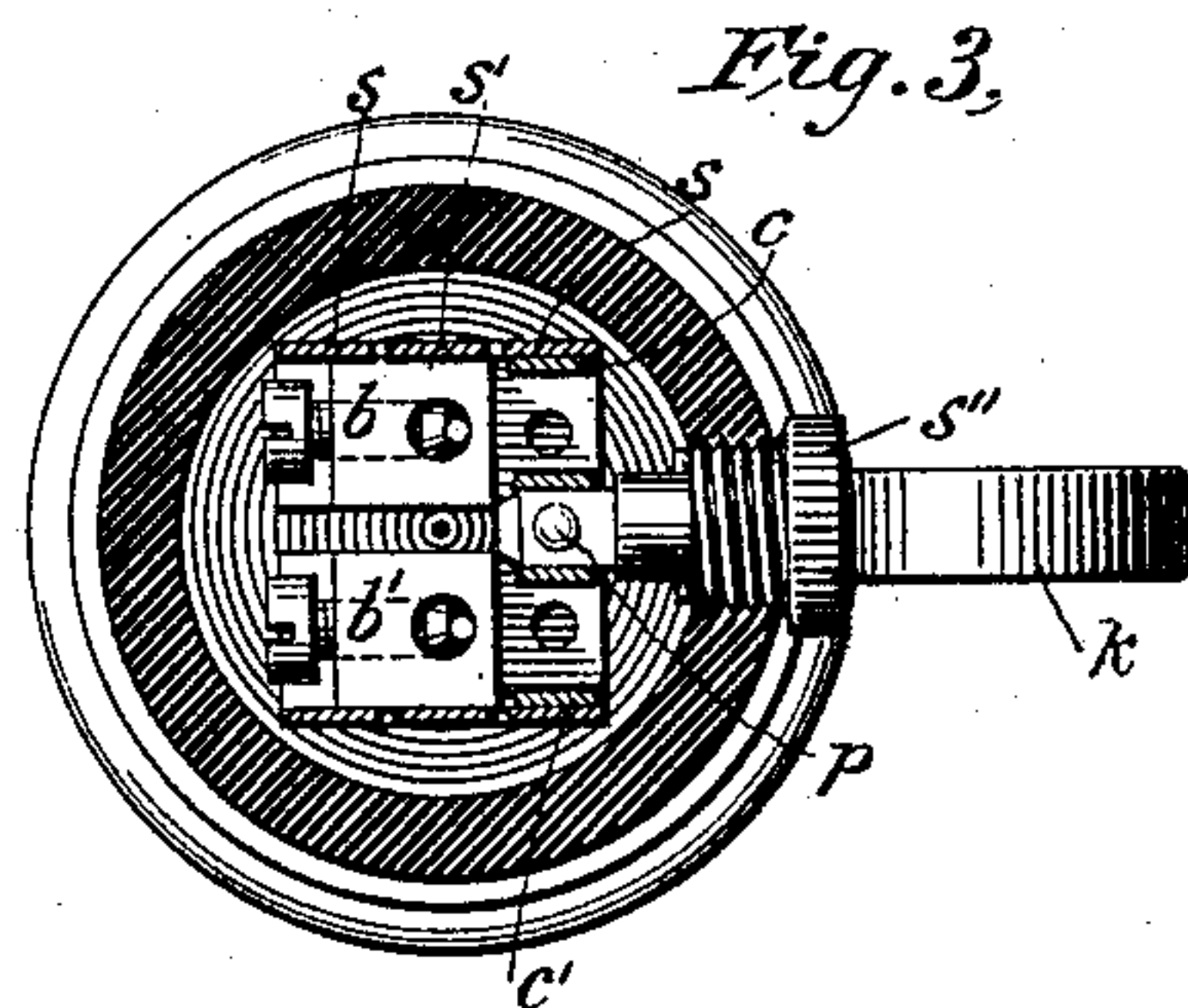
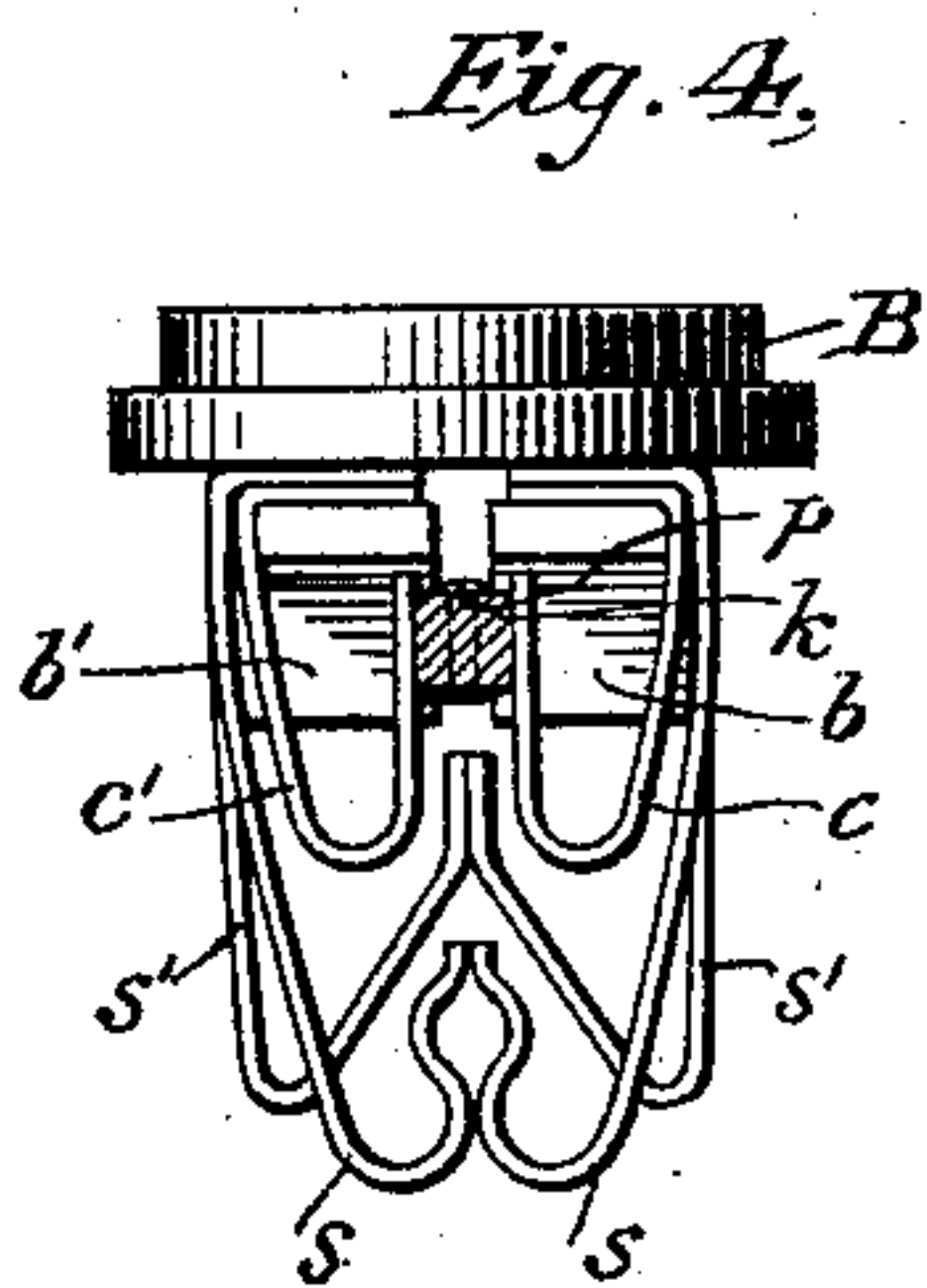
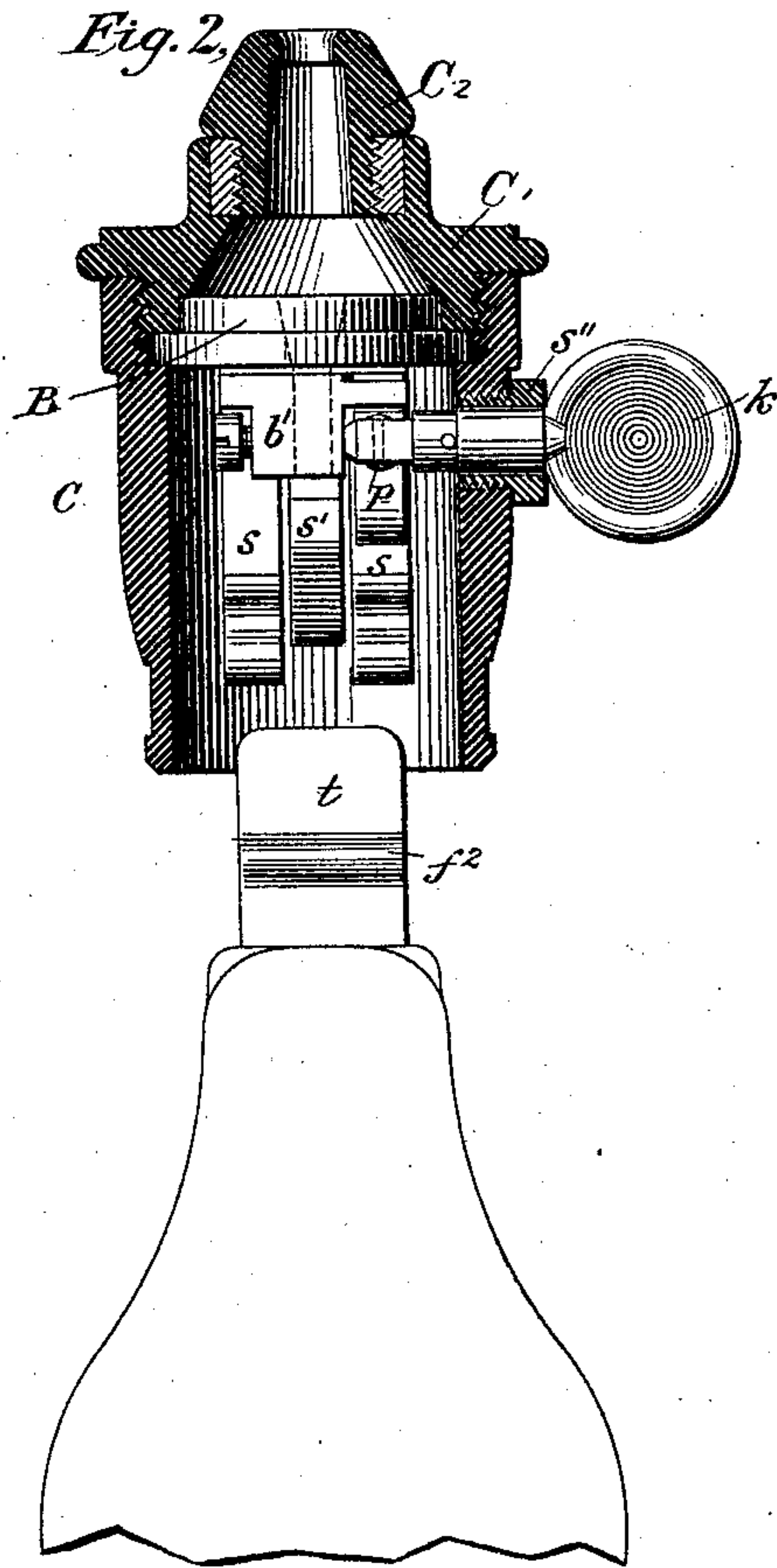
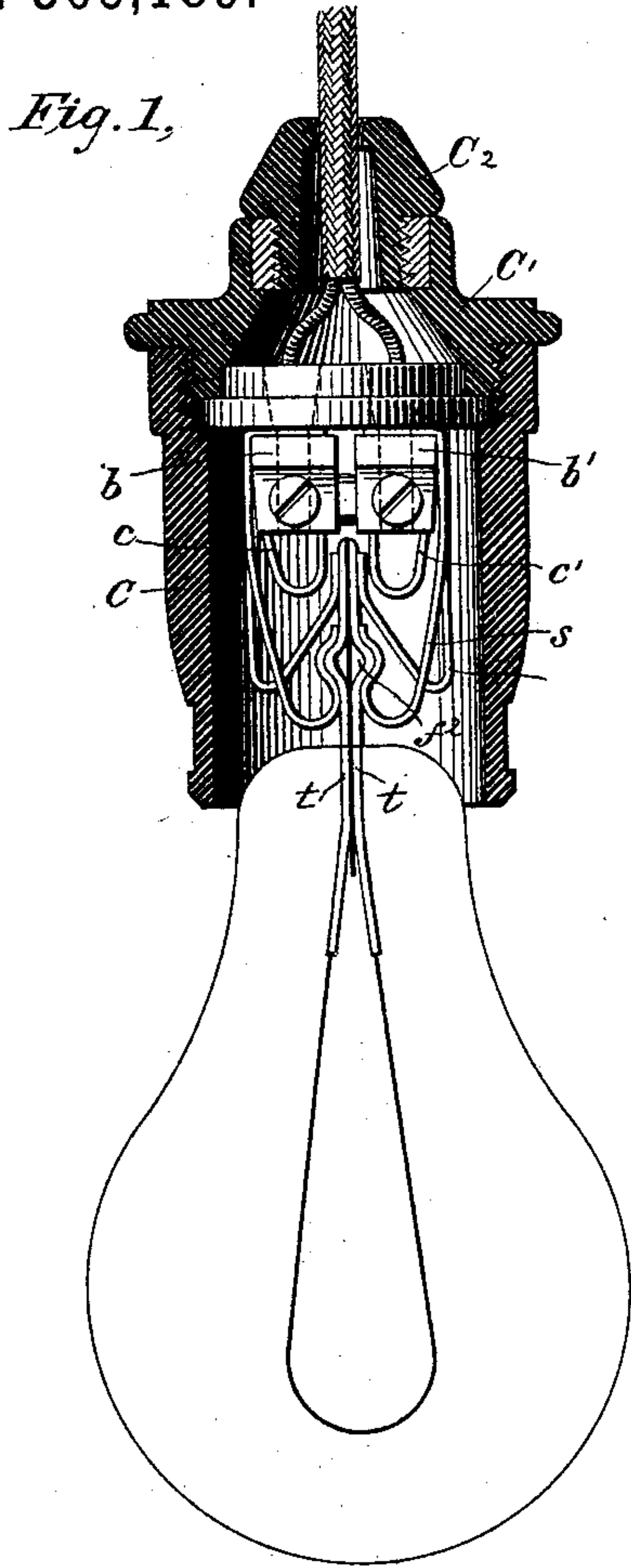
(No Model.)

H. LEMP & M. J. WIGHTMAN.

INCANDESCENT LAMP SOCKET AND CUT-OUT.

No. 365,189.

Patented June 21, 1887.



Witnesses
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UNITED STATES PATENT OFFICE.

HERMANN LEMP AND MERLE J. WIGHTMAN, OF HARTFORD, CONNECTICUT.

INCANDESCENT-LAMP SOCKET AND CUT-OUT.

SPECIFICATION forming part of Letters Patent No. 365,189, dated June 21, 1887.

Application filed August 27, 1886. Serial No. 211,993. (No model.)

To all whom it may concern:

Be it known that we, HERMANN LEMP and MERLE J. WIGHTMAN, citizens of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Fixtures for Incandescent Electric Lighting, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings.

Our invention relates to the socket-piece containing the circuit-controlling mechanism, and relates more particularly to the key mechanism and means for securing the key in position in the socket-piece, and is designed as an improvement on the means shown and described in a pending application of even date herewith.

The object of the invention is to secure a simpler means for affixing the key to the socket-piece and in co-operative position with the circuit-controlling mechanism; and it consists in a circuit-controlling key having a screw-threaded sleeve loosely surrounding the neck of the shank of the key, which screw-threaded sleeve is adapted to be screwed into the socket-piece to fasten the key in position in the socket-piece, and which key is provided with means for preventing its withdrawal from the sleeve and has a quadrangular end of insulating material with a conducting-pin extending therethrough, the quadrangular end being embraced by two circuit-terminal springs, whereby the current through the lamp is governed in whichever direction the key is turned. These circuit-terminals are supported by an insulated base-plate which carries the lamp-supporting and circuit-controlling springs and is sustained upon a ledge within the socket-piece.

In the accompanying drawings, forming part of this specification, in which the same letters of reference are used to indicate the same parts throughout the various figures, Figure 1 represents an end elevation of our invention, showing the socket-piece in section. Fig. 2 is an elevation of our fixture at right angles to the plane of Fig. 1, also showing the socket-piece in section. Fig. 3 is a bottom view of Fig. 2, looking from below, showing

the socket-piece and springs for supporting the lamp and controlling the circuit in cross-section; and Fig. 4 is an elevation of the circular base-plate carrying the lamp supporting and circuit-making springs, and also the electric terminals governed by the key, which is represented in section.

C represents the cylindrical socket-piece, which is provided with screw-caps C' and C'', through the latter of which the leading-in wires pass and extend to binding-screws upon blocks b b', which are secured to a circular base-plate, B, of insulating material, which rests upon a ledge around the interior of the socket-piece. Depending from this base-plate are also springs s s and s' s', of the shape, length, and size shown in the drawings. There are two sets of springs s s and one set of springs s'. The former are expanded near their turned-in ends into a bulbous expansion, which is adapted to receive a bulb formed in the flat metallic terminals t t of the lamp, which terminals are insulated from each other by a plate of mica or other insulating material, as shown in Fig. 1. The operation and function of these springs are the same as that referred to in the pending application above spoken of, and are, briefly, as follows: Normally the springs are together, as is shown in Fig. 4, and complete the circuit from the binding-post blocks, with which they are in metallic connection. When the lamp is introduced, the terminals t t first separate the springs s s, but the lamp does not burn until the terminals are inserted far enough to break the short circuit between the springs s'. To secure the lamp in position, the terminals t t are inserted farther, so as to permit the expansion in the springs s s to engage the bulb b'.

Depending from the aforesaid circular base-plate B of insulating material are additional circuit-terminal springs, c c', which are also in metallic connection with the binding-screw blocks b b', and also in contact with the springs s s and s'. The binding-screw blocks and springs are secured to the base B by screws which pass through the base and whose heads are countersunk on the top of the plate. The same screws that hold the binding-screw blocks in place also serve to secure the springs s s, s', and c and c' in place.

The key k is made of insulating material

and of the form shown in the drawings. It has a metallic pin, *p*, passing through the end, which is made quadrangular in shape. This pin passes through from one side to the opposite side of the key and co-operates with the circuit-terminal springs *c'*, which tightly embrace it, but permit it to be rotated in either direction, the circuit between these circuit terminals being established or broken, depending upon whether they rest upon the pin or upon the intervening insulating sides of the key. The neck of the shank of the key is surrounded by a screw-threaded sleeve, *s*², which fits in a hole in the side of the socket-piece and has a milled head upon its outer end, adapting it to be readily screwed into the socket-piece. The key rotates freely in this sleeve, which is kept in place on the key by means of a transverse pin which permits the key to rotate, but prevents its withdrawal from the sleeve.

To unship the parts, the key and milled head of the sleeve are grasped by the fingers and turned so as to unscrew the sleeve. The key may be rotated at the same time and the whole removed from the socket. The screw-caps *C'* and *C*² may then be removed, and the insulating base carrying the lamp-supporting and circuit-completing springs may be taken out of the socket. To put the parts together, the operation is merely reversed. In this instance the circuit-terminal springs *c c'* are made to register with the hole in the side of the casing. The end of the key is then inserted between said circuit-terminals and the key and sleeve rotated so as to screw the sleeve in place.

It will thus be seen that the means described permit the parts to be readily unshipped, while at the same time the devices are simple and are inexpensive to manufacture. The socket-piece, its caps, the insulating base, key, and its sleeve are designed to be made of molded insulating material which is fire-proof, but of course may be made of any other material. This fire-proof insulating material, which can be readily molded in any shape, is known in the trade as "bonsilate."

Having now fully set forth our invention, we desire to have it known that we do not wish to limit ourselves to the exact construction shown, as details may be varied without departing from the spirit of our invention,

and we reserve the right, should we see fit, to make any changes in practice that fall within the scope of what we now desire to claim and secure by Letters Patent.

We claim—

1. The combination, in an incandescent-lamp socket, of a rotary key, a screw-threaded sleeve loosely mounted thereupon for fastening the key to the socket, means for securing the two together, and contact-springs, forming the terminals of an electric circuit, embracing the shank of said key when introduced in the socket.

2. The combination of the binding-screw blocks *b* and *b'*, bearing the lamp-supporting and contact springs *s s'*, of the form described, additional terminal springs, *c c'*, as shown, depending from the same side of an insulating disk, forming a base-plate, and a circuit-controlling key co-operating with the latter, as and for the purpose set forth.

3. The combination of the binding-screw blocks, as *b b'*, bearing the supporting and contact springs *s s'* for the lamp and mounted upon a flat base plate supported within the lamp-socket, terminal springs, as *c c'*, extending from the same side of said base-plate, and an angular rotary key of insulating material and having a conducting-pin there-through embraced by said terminal springs, as and for the purpose set forth.

4. The combination of the binding-screw blocks, as *b b'*, bearing the supporting and contact springs for the lamp and mounted upon a base-plate supported within the lamp-socket, terminal springs, as *c c'*, extending from said base-plate, an angular rotary key of insulating material, having a conducting-pin therethrough embraced by said terminal springs, and a screw-threaded sleeve having means for fastening it to the key, loosely surrounding the neck of the key-shank for securing it to the socket-piece, as and for the purpose set forth.

In testimony whereof we have hereunto set our hands and seals, this 9th day of August, 1886, in the presence of two subscribing witnesses.

HERMANN LEMP. [L. S.]

MERLE J. WIGHTMAN. [L. S.]

Witnesses:

WM. E. SHEPARD,

OLOF OFFRELL.