

R. A. SCHOENBERG.
ELECTRIC LIGHT SOCKET.
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943,273.

Patented Dec. 14, 1909.

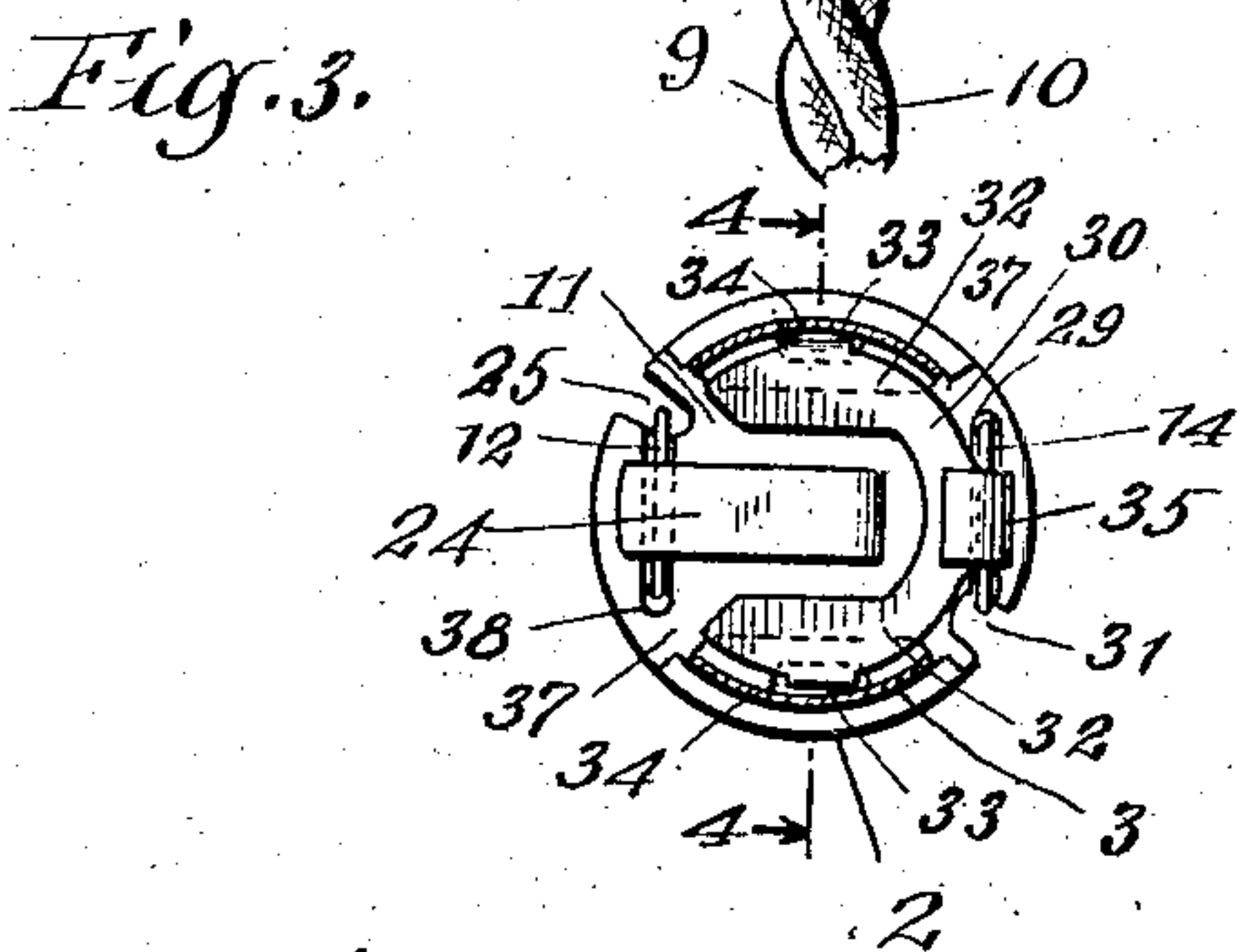
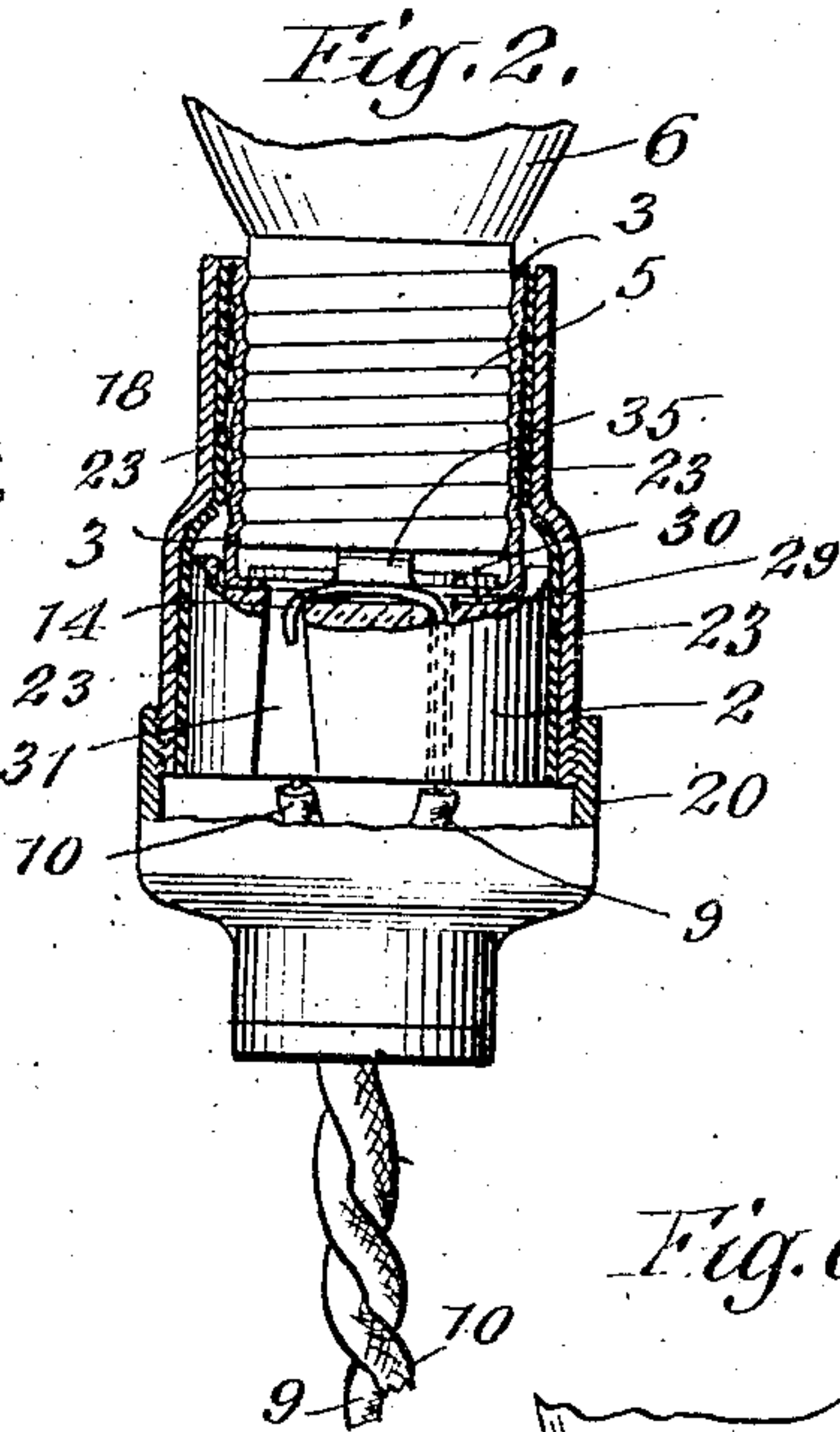
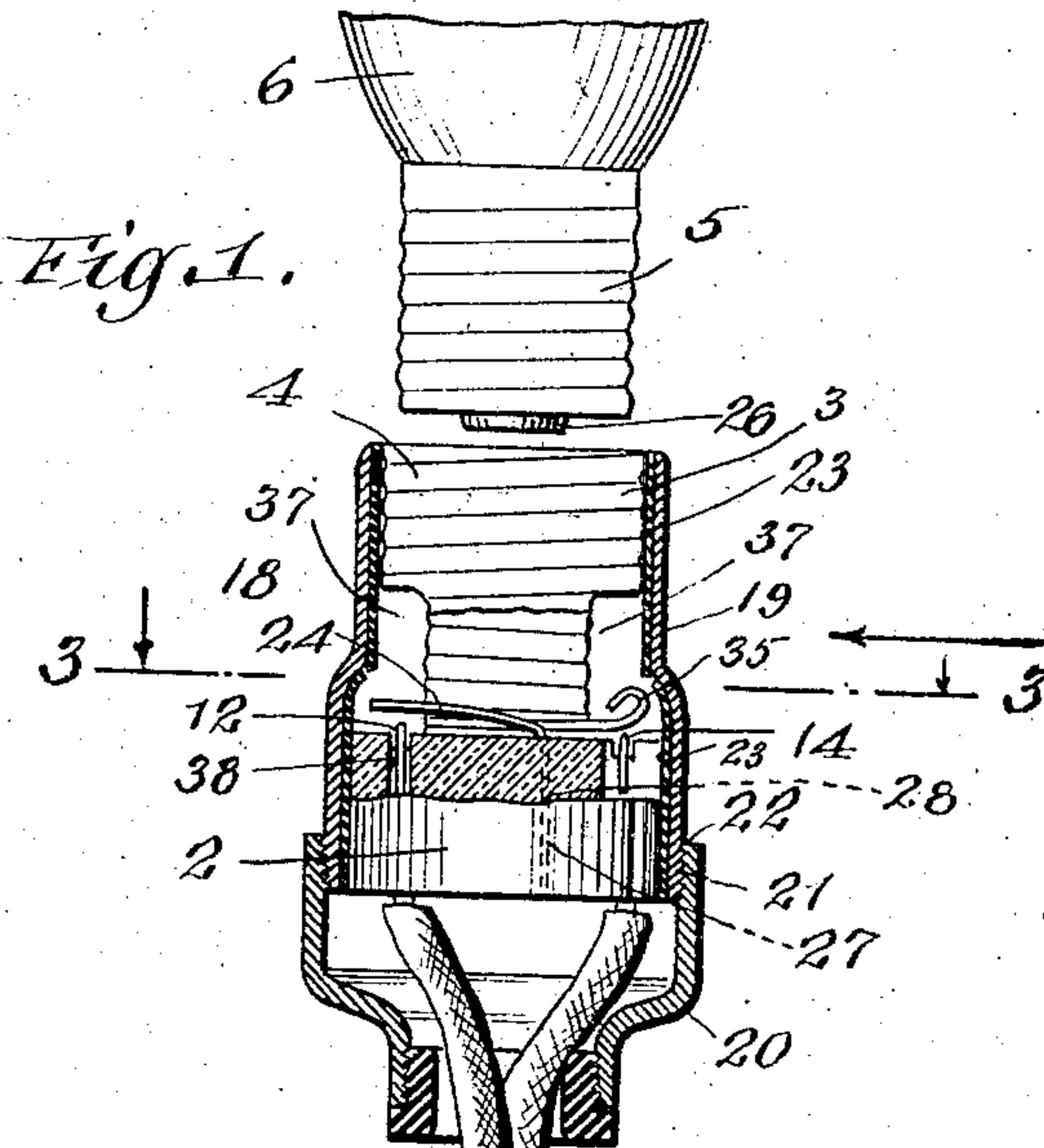


Fig. 4.

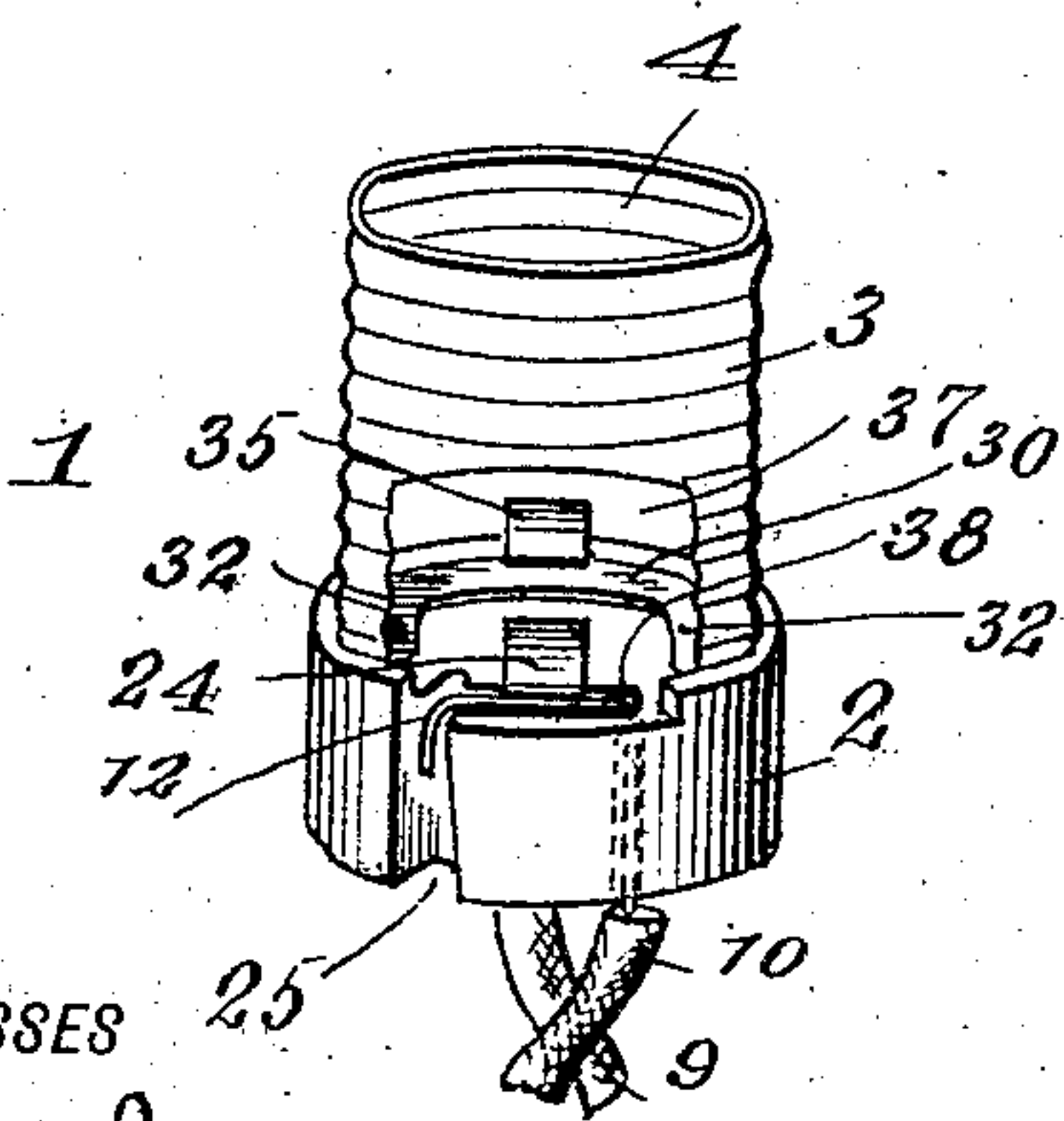


Fig. 5.

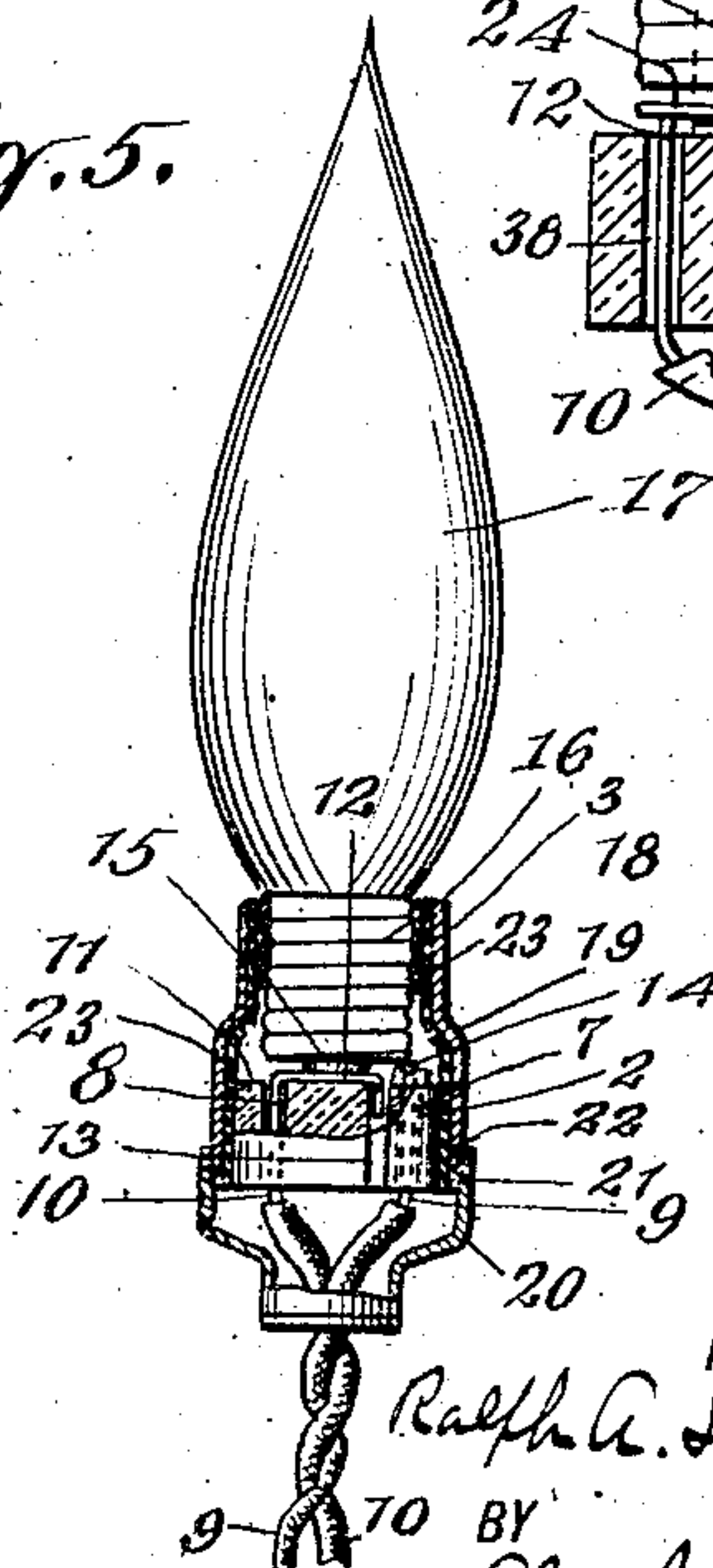
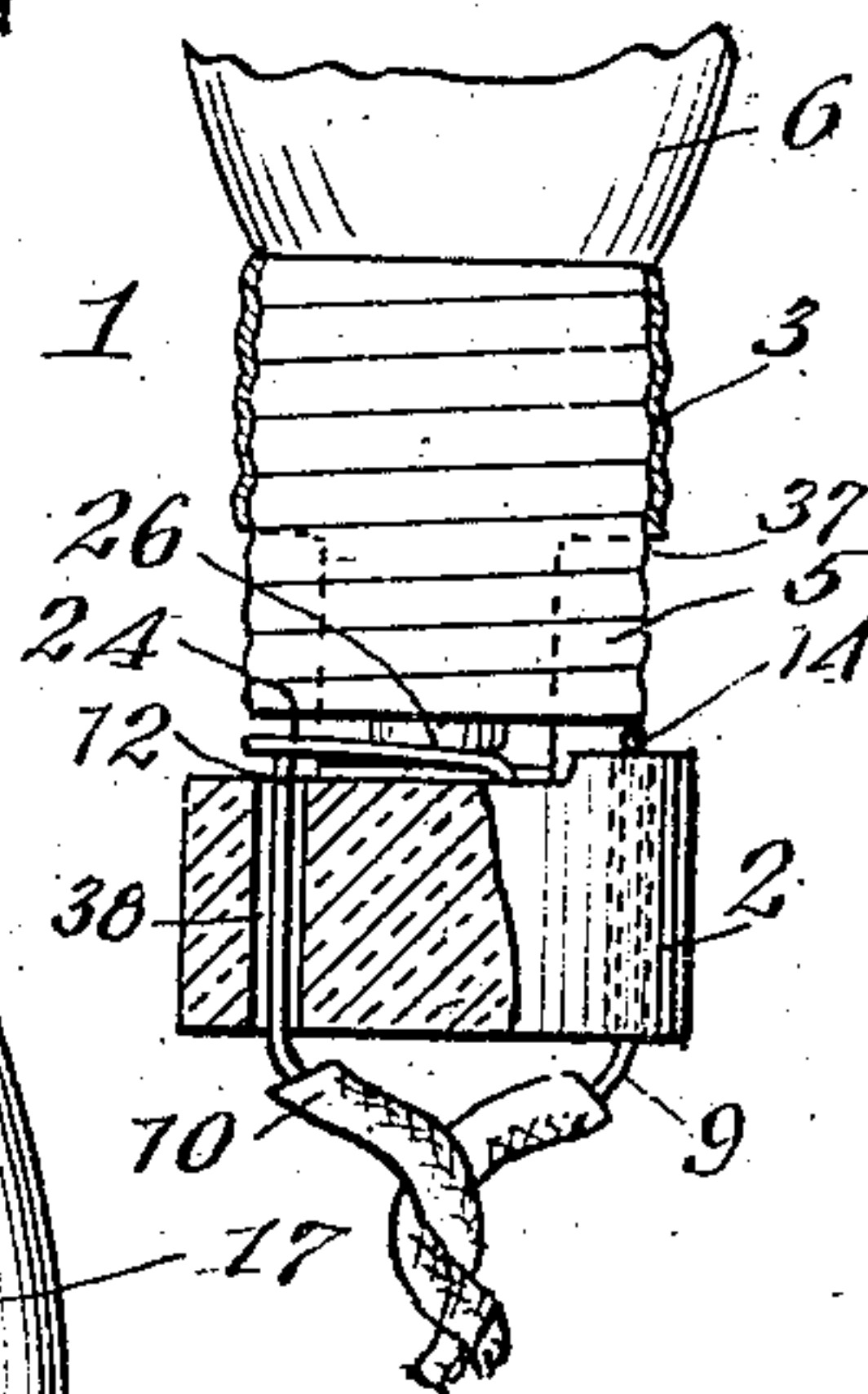


Fig. 6.



WITNESSES

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ELECTRIC-LIGHT SOCKET.

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To all whom it may concern:

Be it known that I, RALPH A. SCHOENBERG, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric-Light Sockets, of which the following is a specification, taken in connection with the accompanying drawing, which forms a part of the same.

This invention relates to electric light sockets and more particularly to a socket to which the feed wires may be connected without the aid of binding screws or other similar connections and one which is adapted for lamps of any candle power from the smallest to the highest.

In the accompanying drawing showing illustrative embodiments of this invention and in which the same numerals refer to similar parts in the several figures, Figure 1 is a longitudinal vertical section through the electric light socket and its casing, a portion of the lamp to cooperate with the socket and a portion of the base being shown in side elevation. Fig. 2 is a longitudinal vertical section through the socket and casing, the view being taken at right angles to that shown in Fig. 1, the base and a portion of the lamp and casing being shown in side elevation. Fig. 3 is a transverse horizontal section on line 3-3 of Fig. 1. Fig. 4 is a perspective view of the lamp socket. Fig. 5 is a longitudinal vertical section through the simplest form of my electric light socket, the cooperating lamp being shown in position and parts of the figure being in side elevation. Fig. 6 is a detail sectional view of a modification.

In the illustrative embodiments of this invention shown in the drawing, 1 is an electric light socket preferably formed of a base 2 and a member 3 secured to the base in any suitable manner. In practice I preferably make the base of any insulating material such as porcelain, or other material, and preferably form the member 3 cylindrical with cut away portions 37, 37, and press, stamp or otherwise form in it female screw threads 4 for the reception of the complementary male screw threads 5 upon the lamp 6 which is adapted to be held in the electric

light socket. It is, of course, to be understood that my invention is not to be limited to the particular cylindrical and screw threaded member 3, for this member 3 may be given any shape or contour to cooperate with any complementary locking surface or surfaces carried by the lamp to be held. The cylinder and screw threads shown are merely illustrative locking means.

In the simplest form of my invention I provide the base 2, Fig. 5, with perforations or apertures 7 and 8, for the reception of the ends of the wires 9 and 10 respectively. In my invention it is merely necessary for the operator to remove the insulation from the ends of the wires 9 and 10 and then press the bared ends through their respective holes or apertures 7 and 8, the bared portion being of sufficient length to pass through the base 2 and be bent across its upper face 11. In the form shown in Fig. 5, the end 12 of the wire 10, after passing through the hole 8 in the base 2 is caused to take a position substantially at right angles to the main portion of the wire 10, the extreme end being preferably, though not necessarily, bent down into a side groove 13 in the base 2. The end 14 of the wire 9, after being threaded through the hole 7 is also bent across the face 11 of the base 2, these two ends 12 and 14 being so arranged as to permit direct contact with the center contact 15 and the side contact 16 respectively of the miniature lamp 17 which is merely shown for purposes of illustration, for it is to be distinctly understood that my electric light socket is adapted to be used with lamps of any candle power from the smallest to the highest.

It will be readily seen from an inspection of Fig. 5 that by screwing the lamp 17 into the shell 3 attached to the base 2, its center contact 15 will directly contact with the bared end 12 of the wire 10, while its side contact 16 will directly contact with the bared end 14 of the wire 9, and in this manner complete an electrical circuit.

To conceal the electric light socket 1 and to give a more pleasing effect to the eye, I preferably inclose the base 2 and member 3 within a casing 18 formed of two hollow members 19 and 20 of different diameters and connected together by any suitable

means such as by female screw threads 21 upon the member 20 and male screw threads 22 upon the member 19. When this casing is used, I preferably insulate it from the electric light socket by any suitable means such as by rings 23 formed of fiber, rubber or any other suitable insulation.

While I, in some cases permit the center and side contacts carried by the lamp to contact directly with the bared wires as shown in Fig. 5, I may use connecting members between the bared ends of the wires and the contacts carried by the lamp. These members may be mounted in any suitable manner, but I preferably mount them upon the lamp socket locating them on the face 11 of the base 2. I show this arrangement in Figs. 1, 2, 3 and 4. In this form, the bared ends 12 of the wire 10 is threaded through a hole 38 in the base 2 and is made to pass beneath the intermediate connecting member 24. To prevent the wire 10 being readily pulled out or removed from the base 2, I preferably form the bared portion 12 of sufficient length to permit its extreme end, after passing beneath the member 24 to be bent again substantially at right angles to itself to be brought into a groove 25 on one side of the base 2. This member 24 may be of any electrical conducting material and may be mounted in any manner on the base 2 so that it will bridge the gap between the center contact 26 of the lamp 6 and the bared wire 12, Figs. 1 and 3. In practice, I preferably make this member 24 out of a strip of metal and press one end of it 27 into a longitudinal recess 28, formed in the base 2 as clearly shown in dotted lines in Fig. 1. The free end I bend substantially at right angles to the other portion 27 until it assumes substantially the position shown in Figs. 1 and 3, its extreme end lying over the bared end 12 of the wire 10 and preferably when in its inoperative position raised a slight distance from the wire, though this is not essential. In practice I have found good results are obtained by making the member 24 of spring metal though my invention is not limited to any particular material. The end 14 of the other wire 9 I thread through an opening 29 in the base 2 forming the bared end of sufficient length to pass beneath a portion of the intermediate connecting member 30. To more securely fasten the wire 9 to the base I preferably have its bared end of sufficient length to permit it to be again bent into a groove 31 in the base 2, similar to the groove 25. This intermediate connecting member 30, which is adapted to make contact between the bared end of the wire 14 and the side contact 5 of the lamp 6, may be given any shape or contour which will permit it to perform the desired function, though it is to be understood that in some cases it may be omitted as

shown in Fig. 6, where the side contact 5 of the lamp 6 is permitted to contact directly with the bared end of the wire 14. In this latter form the intermediate connecting member 24 is used as noted, but the intermediate connecting member 30 is omitted.

For purposes of illustration I have shown in Figs. 1, 2, 3 and 4 of the intermediate connecting member 30 in the form of a horse shoe, each side portion 32 being provided with a tooth 33 which is adapted to take into apertures 34, 34, in the base 2. On the toe of the horse shoe I mount a calk 35 which directly contacts with the side contact 5 of the lamp 6.

It is to be understood that my invention is not limited to this particular form of intermediate connecting member 30. In practice I preferably form this intermediate connecting member 30 out of thin sheet metal, the calk 35 being preferably integral with it and is preferably made by forming a wing upon the blank and bending it back upon itself to make the calk 35 as shown in Figs. 1, 2 and 3. This intermediate connecting member 30 is also preferably, though not essentially, formed of spring material. In this form of my invention I also preferably inclose the electric light socket within a casing 18 formed of two members 19 and 20 with their connecting screw threads 21 and 22, and insulated from the electric light socket proper by means of any insulation such as fiber or other suitable insulation 23.

Having thus described this invention in connection with the several illustrative embodiments thereof to the details of which I do not desire to be limited, what is claimed as new and what it is desired to secure by Letters Patent is set forth in the appended claims.

1. An electric light socket formed of a solid integral insulating base, locking means carried by the base to cooperate with the locking surfaces carried by the lamp, the base being provided with rigid fixed means to removably hold the bared ends of the feed wires.

2. The combination in an electric light socket of a solid integral insulating base provided with apertures and grooves extending into the socket and adjacent to the contacts carried by the lamp, detachable locking means connected to the base to cooperate with detachable locking surface carried by the removable lamp, the bared ends of the feed wires being adapted to be located and removably held in the apertures and grooves adjacent to the contact carried by the lamp.

3. The combination in an electric light socket of a solid integral insulating base provided with apertures and grooves extending into proximity with the contacts

carried by the lamp for the reception of the bared ends of the feed wires, detachable locking means connected with the base to cooperate with detachable locking surfaces carried by the removable lamp, and bared and bent feed wires firmly and removably connected to the base.

4. The combination in an electric light socket of a solid integral insulating base provided with apertures and grooves for the reception of the bared ends of the feed wires, locking means connected with the base to detachably cooperate with removable locking surfaces carried by the removable lamp, and feed wires having their bared ends removably held in proximity to the contacts carried by the lamp.

5. The combination of an electric light socket formed of a solid integral insulating base, locking means connected with the base to detachably cooperate with removable locking surfaces carried by the removable lamp, the base being provided with apertures and grooves to removably secure the bared ends of the feed wires, and one or more intermediate connecting members adapted to connect the bared ends of the wires with the proper contact or contacts carried by the lamp.

6. The combination of an electric light socket having an integral base provided with locking grooves, locking surfaces carried by the integral base to detachably cooperate with similar removable surfaces carried by the lamp, bared feed wires removably secured to the base by bending their bared ends, and one or more intermediate connecting members connecting the bared ends of the feed wires with the proper contact or contacts carried by the lamp.

7. In an electric light socket, the combination of a base, locking surfaces carried by the base to cooperate with similar surfaces carried by the lamp, means to connect the feed wires to the base, and spring means actuated by the lamp to connect the respective feed wires with the proper contacts carried by the lamp.

8. In an electric light socket, the combination of a base provided with locking apertures and grooves for the reception of the bared ends of the feed wires, locking surfaces carried by the base to cooperate with similar removable locking surfaces carried by the removable lamp and spring plates to connect each of the respective feed wires with the proper contacts carried by the removable lamp.

9. In an electric light socket, the combination of a base, a screw threaded shell secured to the base, the base being provided with apertures for the reception of the bared ends of the feed wires, a substantially horse shoe shaped member to connect one

of the bared feed wires with its proper contact on the lamp, and a second intermediate connecting member to connect the other bared feed wire with the other contact on the lamp.

10. In an electric light socket, the combination of a base and a screw threaded shell secured to the base, the base being provided with apertures for the reception of the bared ends of the feed wires, and a substantially horse shoe shaped intermediate connecting member provided with a spring calk.

11. In an electric light socket, the combination of a base, locking surfaces carried by the base to cooperate with similar surfaces carried by the lamp, the base being provided with rigid locking openings for removably holding and removably fastening the ends of the feed wires, one or more connecting members carried by the base and adapted to connect one or more of the feed wires with the contacts carried by the lamp, said members being actuated by the lamp.

12. In an electric light socket, the combination of a base, locking surfaces carried by the base to cooperate with similar surfaces carried by the lamp, rigid locking openings for removably holding and removably securing the bared ends of the feed wires, one or two conducting members carried by the base and adapted to contact with one or both of the bared ends of the different feed wires, and with one or both of the contacts carried by the lamp, said conducting members being actuated by the lamp.

13. In an electric light socket, the combination of an integral base, locking surfaces carried by the base to cooperate with similar surfaces carried by the lamp, rigid locking openings for removably holding the bared ends of the feed wires, one or two spring plates carried by the base and adapted to contact with one or both of the bared ends of the different feed wires and with one or both of the contacts carried by the lamp, said spring plates being actuated by the lamp.

14. In an electric light socket, an integral base provided with locking apertures to removably secure the bared ends of the feed wires, one or more springs cooperating with the bared ends of the feed wires and adapted to contact with the same, and locking surfaces on the socket adapted to cooperate with similar locking surfaces on the lamp, permitting the lamp on being forced home in the socket to itself make the electrical connection with the bared ends of the feed wires through the spring or springs.

15. In an electric light socket, an integral base provided with locking apertures to removably secure the bared ends of the feed

wires, two springs cooperating with the
bared ends of the feed wires and adapted to
contact with the same, and locking surfaces
on the socket adapted to cooperate with
5 similar locking surfaces on the lamp, per-
mitting the lamp on being forced home in
the socket to itself make the electrical con-

nection with the bared ends of the feed wires
through the springs.

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Witnesses:

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