

J. S. STEWART.
ELECTRIC LAMP SOCKET.
APPLICATION FILED OCT. 13, 1909.

984,245.

Patented Feb. 14, 1911.

Fig. 1.

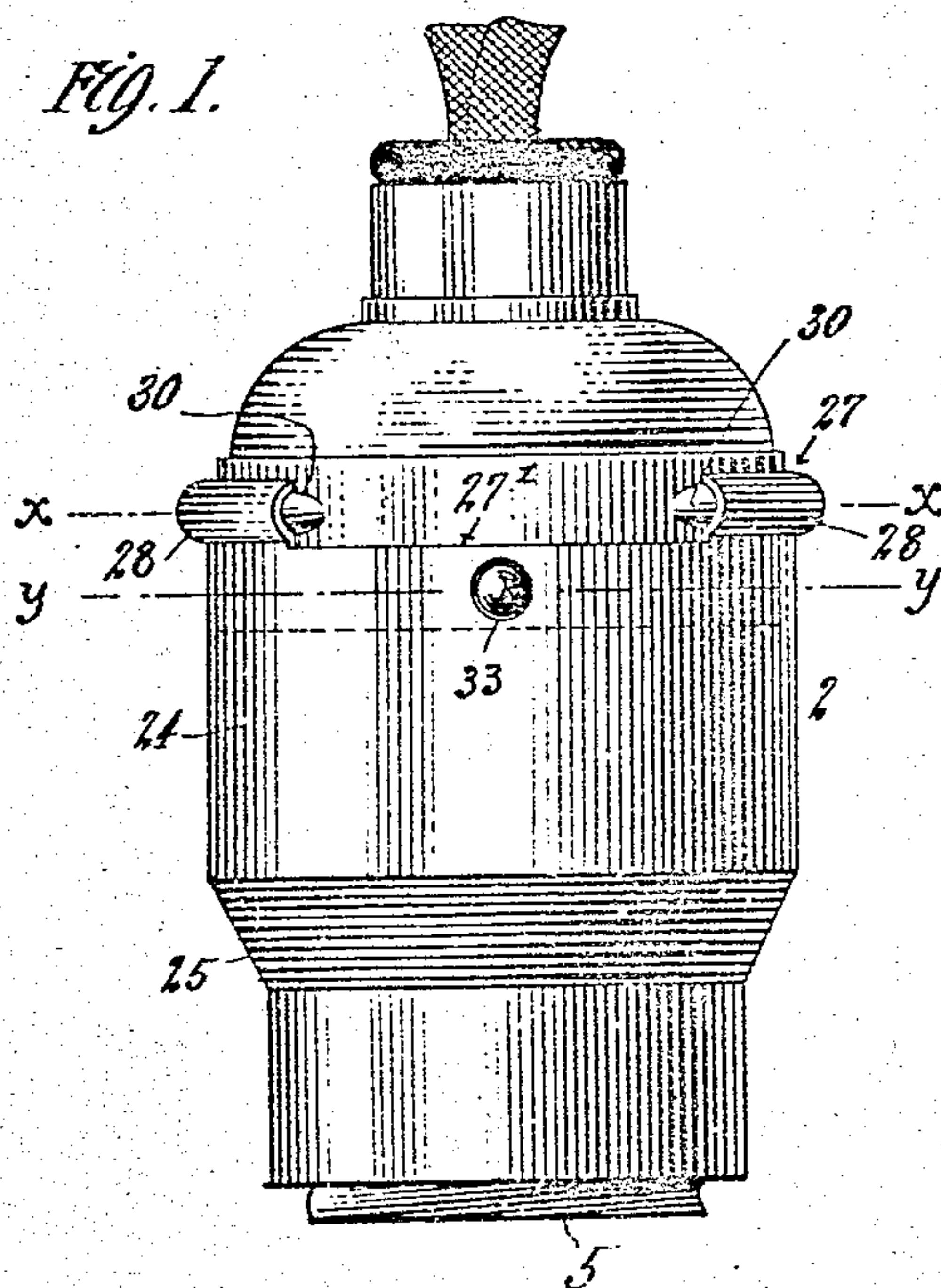


Fig. 2.

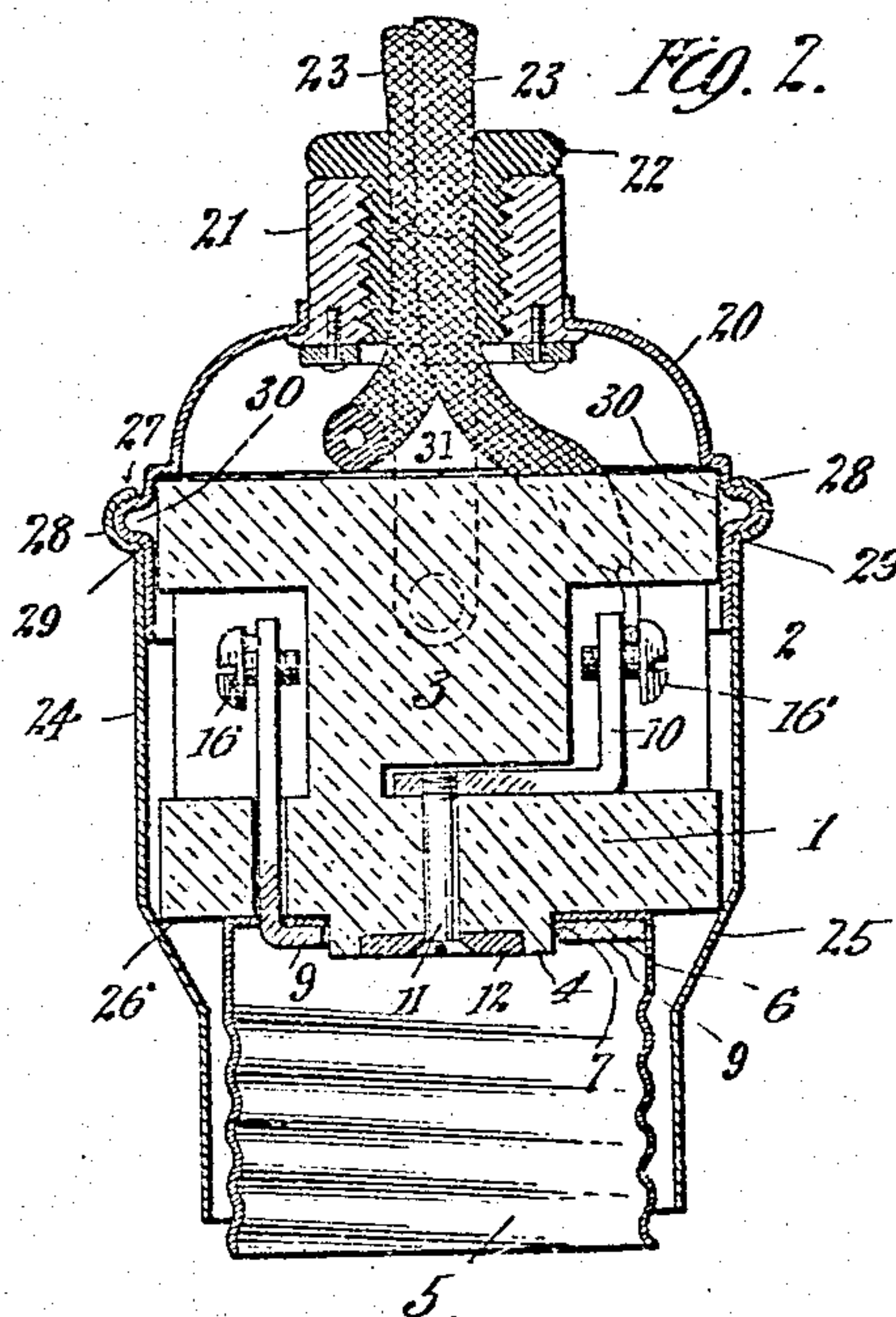


Fig. 3.

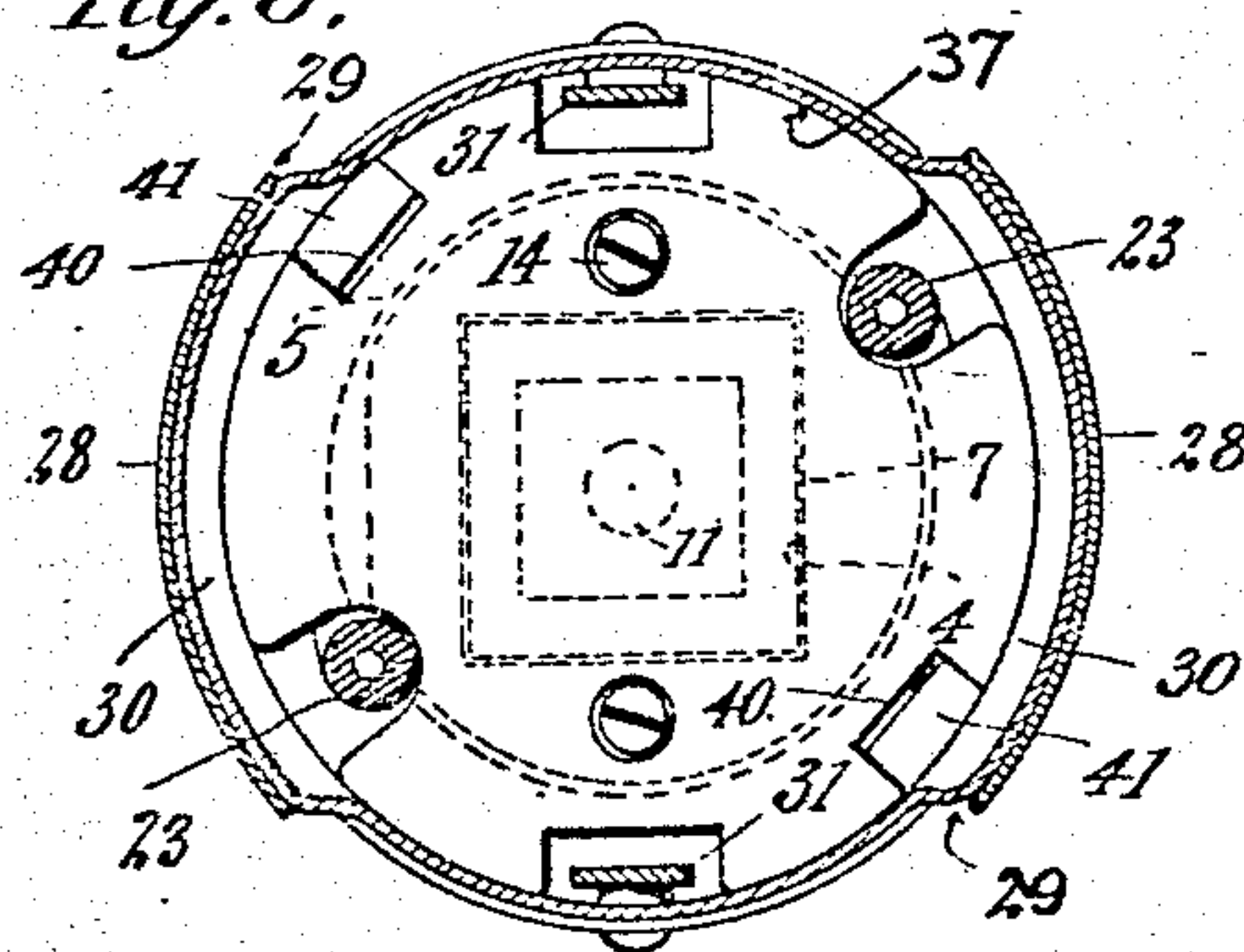


Fig. 4.

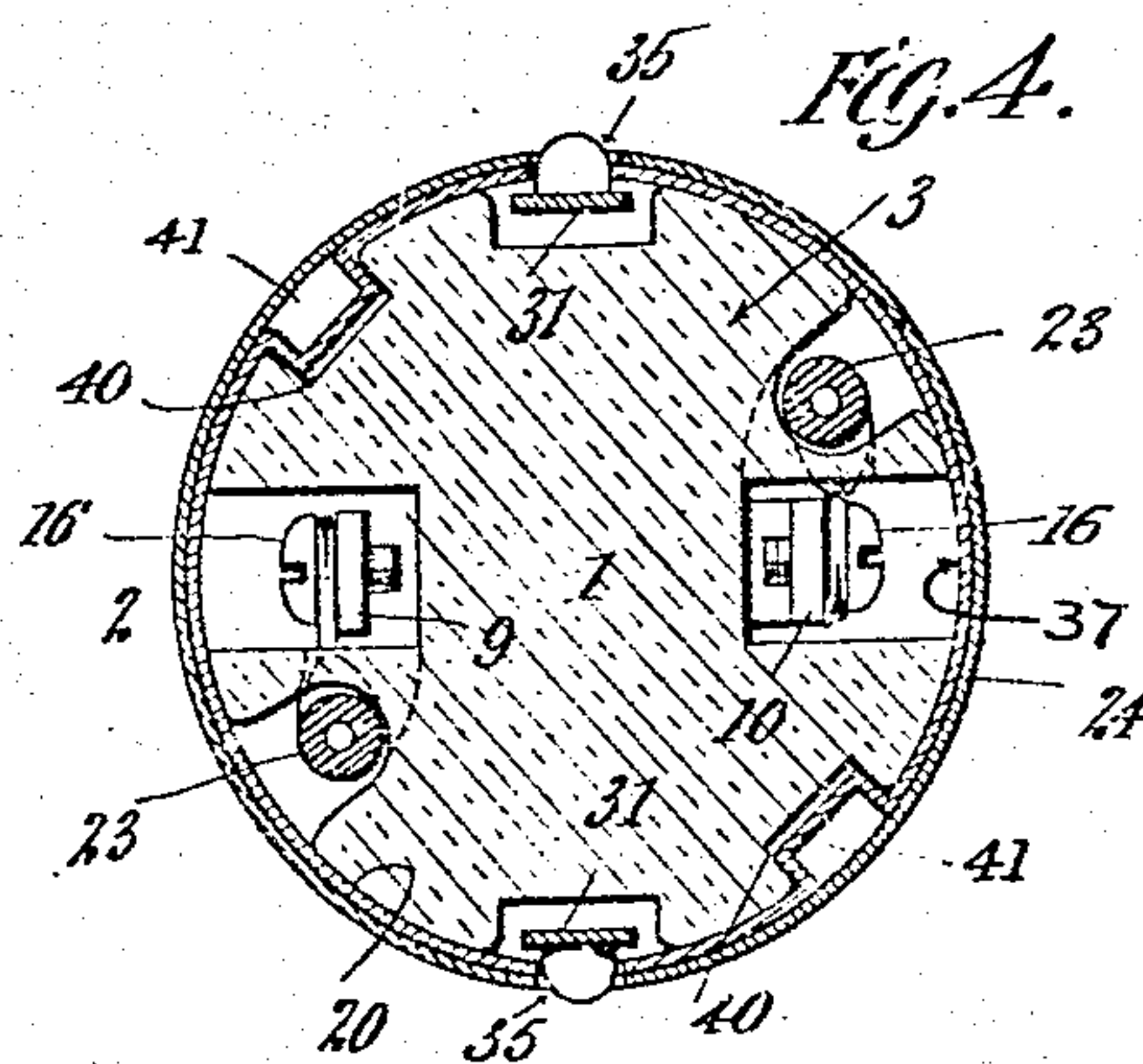


Fig. 6.

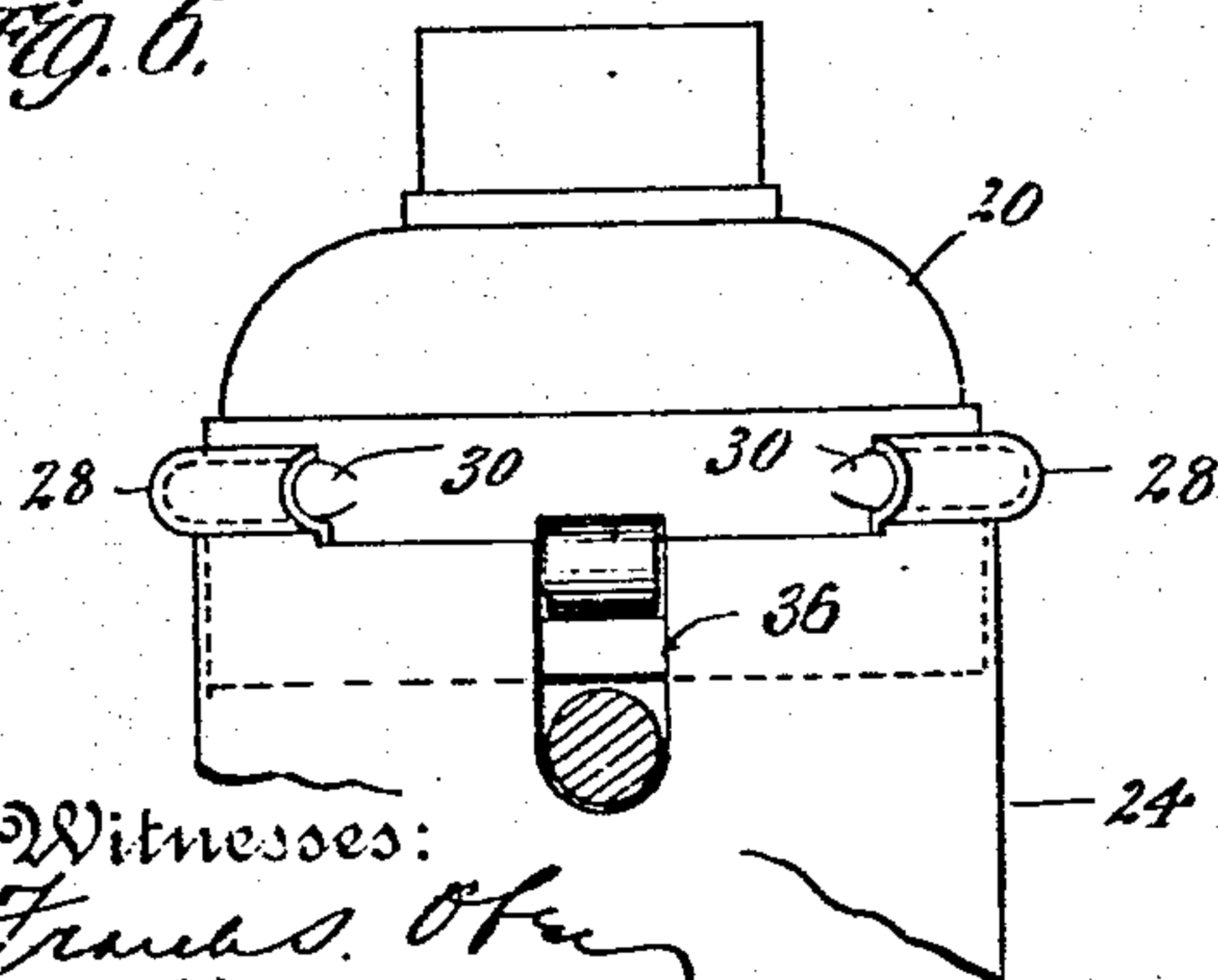
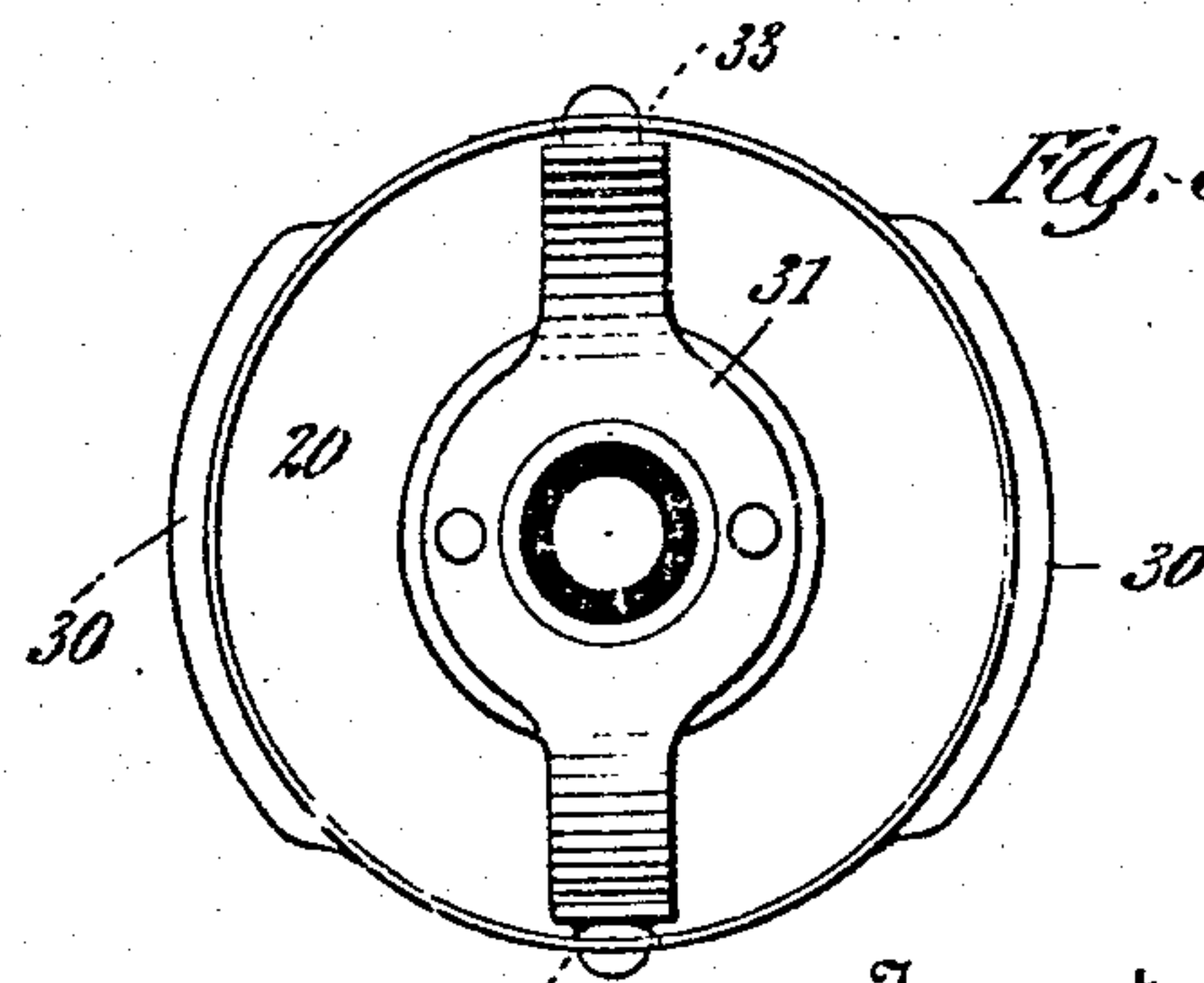


Fig. 5.



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UNITED STATES PATENT OFFICE.

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ELECTRIC-LAMP SOCKET.

984,245.

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Application filed October 13, 1909. Serial No. 522,404.

To all whom it may concern:

Be it known that I, JAMES S. STEWART, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Electric-Lamp Sockets, of which the following is a full, clear, and exact description.

My invention relates to lamp sockets of either the key or keyless type, and which are adapted to be suspended from an extension flexible cord or conductor, or used with a fixture or bracket.

One of the principal objects of the invention is to provide a socket of stronger construction than those hitherto available both against damage by the tools and manipulation and harsh treatment to which sockets are frequently subjected in being assembled and connected in place for use, and also against downward pulling strains due to the weight of the shade and lamp and the turning strain incident to screwing and unscrewing a lamp base into the socket.

A second object of the invention is to provide a lamp socket which is simpler and easier to construct than those hitherto used, and particularly easier to assemble into operative relation or disassemble, when the circuit connections are being made, changed or inspected.

The third object of the invention is to provide very simple and cheap construction.

I employ a two part casing for my socket, in which the lower generally tubular part is made to telescope over and outside of, rather than within, the upper cup-shaped part. This construction forms a basis by which a variety of functions are obtained as will be later pointed out. Generally speaking, I provide a type of quarter turn coupling between the cup-shaped and the tubular parts of the casing and locking means adapted to secure the two parts in their final fixed position of engagement for use. As will later appear; I overcome the weaknesses of prior constructions and provide for perfectly locking the parts of both key and keyless sockets.

With the foregoing and various other objects in view, my invention consists in the features of construction and combination as hereinafter set forth and claimed.

In the drawings: Figure 1 is a side eleva-

tion of my improved socket; Fig. 2 is a vertical section thereof; Fig. 3 is a section through line $x-x$ of Fig. 1; Fig. 4 is a section through line $y-y$ of Fig. 1; Fig. 5 is a view looking into the cup-shaped portion of the socket and Fig. 6 is a partial side view of the socket.

Referring to the drawings in which like parts are designated by the same reference sign, 1 indicates broadly the base or body and 2 the housing or casing of a lamp socket, and which I have illustrated as of the keyless type in Figs. 1, 2, 3 and 4. The base or body 1 may be constructed in any desired manner, these details not being any part of the present invention, except as this body or block is provided and used generally or as a whole in the combination. I strongly prefer, however, to employ the construction of block or body 1 illustrated and comprising a generally cylindrical plug 3 of porcelain, with a square protuberance 4 at one end.

5 designates a threaded shell with a flanged end face 6 having a square opening 7 fitting over the square protuberance 4.

9 denotes a metallic disk resting against the end face 6 of the threaded shell and having a clip extending up on one side of the plug 3, and 10 indicates a separate clip on the other side of the plug and extending into the same.

11 is a screw passed through a washer 12 and constituting a center contact. This screw passes upward through the protuberance 4 into the clip 10. 14 indicates another screw passed downward through the porcelain plug into the disk 9 and serving to secure the latter together with the threaded shell in place.

The two clips 9 and 10 constitute the circuit terminals and may be provided with terminal screws 16.

The foregoing construction has manifold advantages, which however, constituting no direct part of the present invention, need not be particularly referred to in this case. This construction forms the subject of prior patents granted to me Nos. 873,104; 867,440, 872,029, and others.

20 denotes a metal cup forming the upper part of the casing 2. This cup has the usual tubular nipple 21 provided with an insulating button 22 through which the circuit wires 23 enter. The lower part has a flange fitting over the upper end of the body 3.

24 designates a cylindrical member of the housing, which has the usual inclined shoulder 25 fitting against a square shoulder 26 of the plug 3.

27 denotes an enlarged cylindrical rim of the member 24 which telescopes over the flange 37 of the upper part 20 of the housing.

I provide a means for locking the two housing sections together both against longitudinal displacement and against angular movement.

Two opposite quarters of the rim 27 are cut away as indicated at 27'. The intervening up-standing portions 28 are beaded to form an interior groove 29.

30 denote elongated ribs or beads embossed or formed on the outer surface of the rim 37 of the upper housing part 20. These beads should be located some distance up from the lower edge on the upper housing part rather than directly at the edge.

With the foregoing construction the lower housing part may be slipped over the upper housing part so that the beads may be passed down into the cut away parts 27' of the lower housing part. If then the two parts are given a relative angular movement of about a quarter turn, each bead will be received in a corresponding groove 29, thereby locking the two parts against any longitudinal relative movement.

31 denotes a bail or U-shaped spring clip riveted or fixed within the upper housing part 20, so that its two free extremities extend downward on diametrically opposite sides. At their lower ends these extremities are embossed or bent outwardly and then inwardly so as to present a rounding contour at the points where they bear toward the interior wall of the upper housing part with their spring pressure. At these points however the upper housing part is perforated with holes 33 through which the protuberances of the spring clips project. 35 designate corresponding holes or openings within the lower housing part and these latter holes are so located that when the lower housing part has been pressed over the upper housing part and engaged by a quarter turn movement in the manner already described, the holes will come into registry with the protuberances of the spring clips, and these will then snap outward until they are projected through the now aligned openings of the upper and lower housings. The protuberances thus become a lock against the angular movement that is required to release the bead and groove connection and prevents the relative turning of the upper and lower parts of the shell when a lamp is screwed into the socket. To prevent the turning of the block or body 3 when the lamp is screwed in, said body is provided with grooves 40 into which embossings 41 on the flange 37 of part 20 fit. This result

might also be accomplished by utilizing the grooves in the block occupied by the ends of the spring clips 31. Thus it will be seen that no part of a keyless socket can rotate when the lamp is inserted if the protuberances are in the aligned holes of the two parts of the casing. In key sockets no extra means are required to prevent the porcelain body from turning inside of the casing because the key which is carried by the body projects through a slot 36 (Fig. 6) in the casing and prevents the relative turning of these parts. This slot can also be used to receive the embossed end of the spring clip 31 and thus partially close the objectionable orifice which would otherwise appear. In order to disengage the parts, it is merely necessary to press the fingers on the projected protuberances of the spring clip 31 which are accessible for this purpose through aligned holes of the upper and lower housing parts, and then give the two housing parts a quarter turn with respect to each other, after which they are freely separable.

It will be evident without necessity for detail recapitulation, that the advantages mentioned in the preliminary part of the description are attained by the foregoing embodiment of the invention.

What I claim, is:—

1. A lamp socket comprising a base or body, upper and lower metallic housing parts, the lower housing part telescoping over the upper housing part, a tongue and groove engagement between said parts for locking them against relative longitudinal movement, and a U-shaped spring clip having protuberances at its extremities cooperating with said parts to lock them against relative angular movement.

2. A lamp socket comprising a base or body, upper and lower metallic housing parts, the lower housing part telescoping with the upper housing part, one of said housing parts having cut away and intermediate up-standing portions with interior equatorial grooves, and the other of said housing parts having beads adapted to enter said grooves, and means for locking said upper and lower housing parts against angular movement.

3. A lamp socket comprising a base or body, upper and lower metallic housing parts, the lower housing part telescoping with the upper housing part, one of said housing parts having cut away and intermediate up-standing portions with interior equatorial grooves, and the other of said housing parts having beads adapted to enter said grooves, and a spring for locking said upper and lower housing parts against relative angular movement.

4. A lamp socket comprising a cup-shaped upper housing part having fixed thereto an interior spring clip with a rounded pro-

tubulance, said part having an opening into which said protuberance projects, a lower housing part having an equatorial groove and tongue engagement with the upper
5 housing part and telescoping over the latter, and having an opening adapted to register with said protuberance.

5. A lamp socket comprising a base or body having a key, upper and lower metallic
10 parts, the lower metallic part telescoping over the upper metallic part, said lower

housing part having a slot into which said key is received and said upper housing part having a protuberance extending into said slot to impart an ornamental appearance to
15 the structure.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

JAMES S. STEWART.

Witnesses:

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