

No. 750,198.

PATENTED JAN. 19, 1904.

O. E. KENNEY.

SOCKET FOR INCANDESCENT LAMPS.

APPLICATION FILED JUNE 16, 1902.

NO MODEL.

Fig. 1.

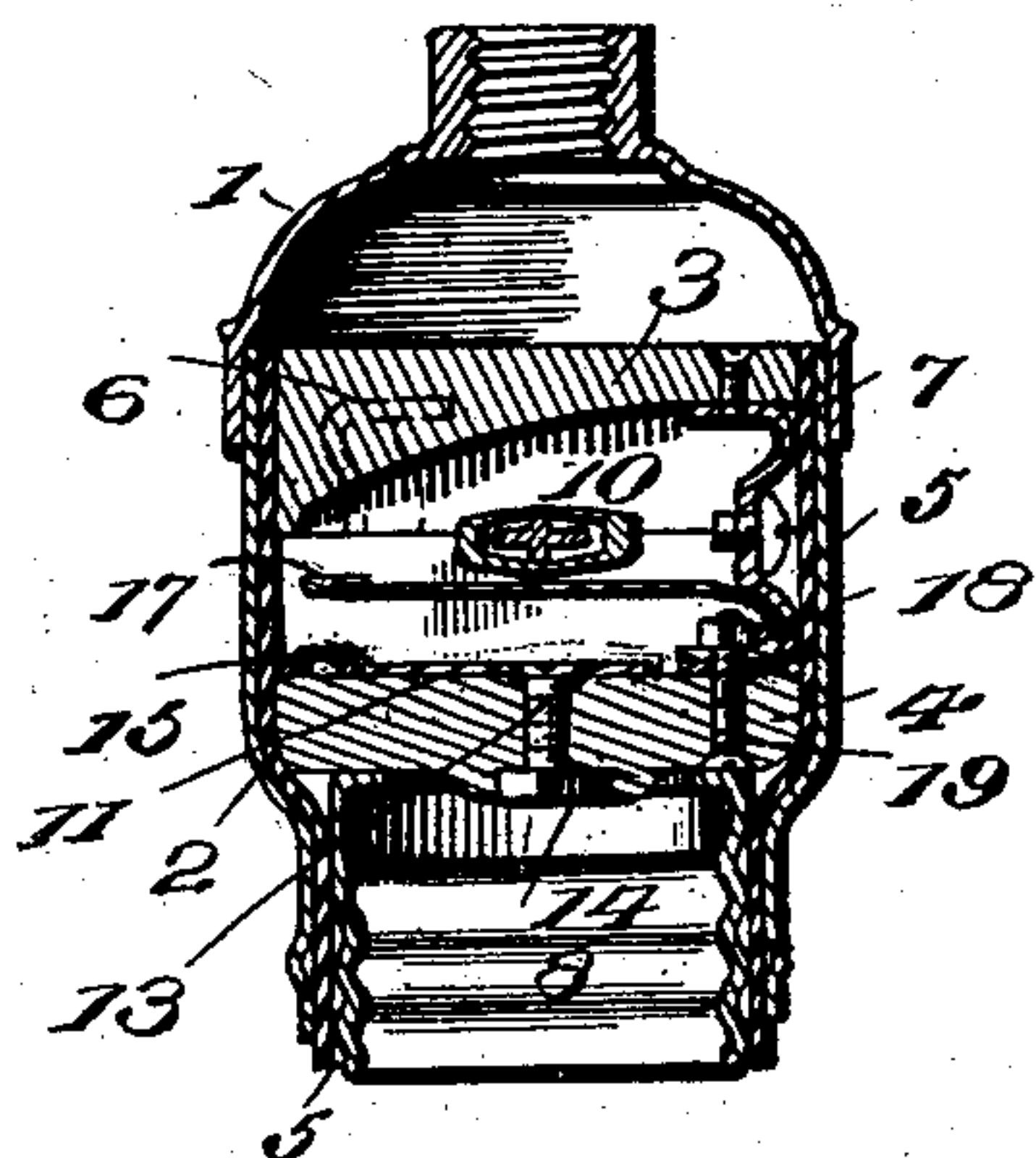


Fig. 2.

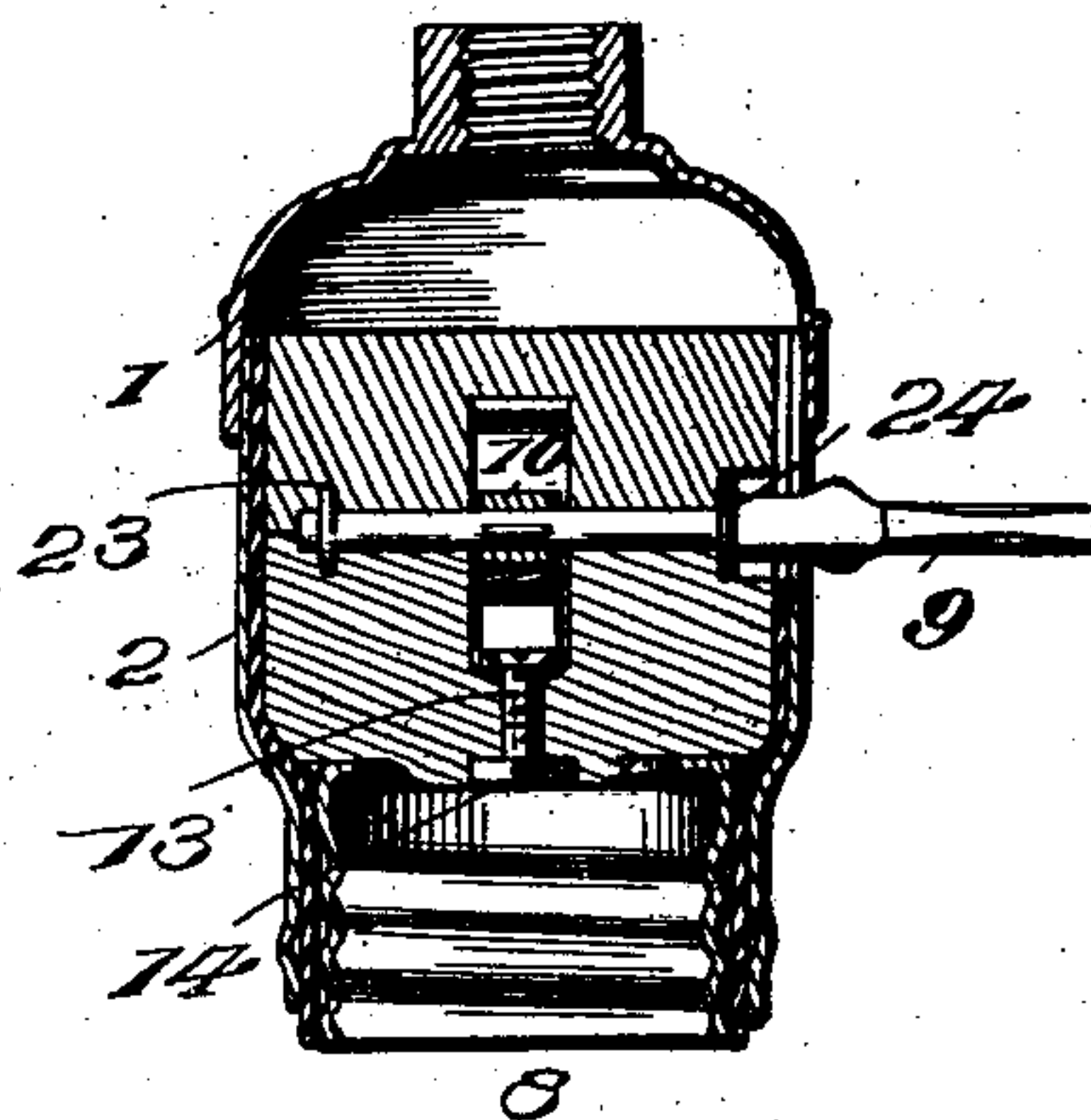


Fig. 3.

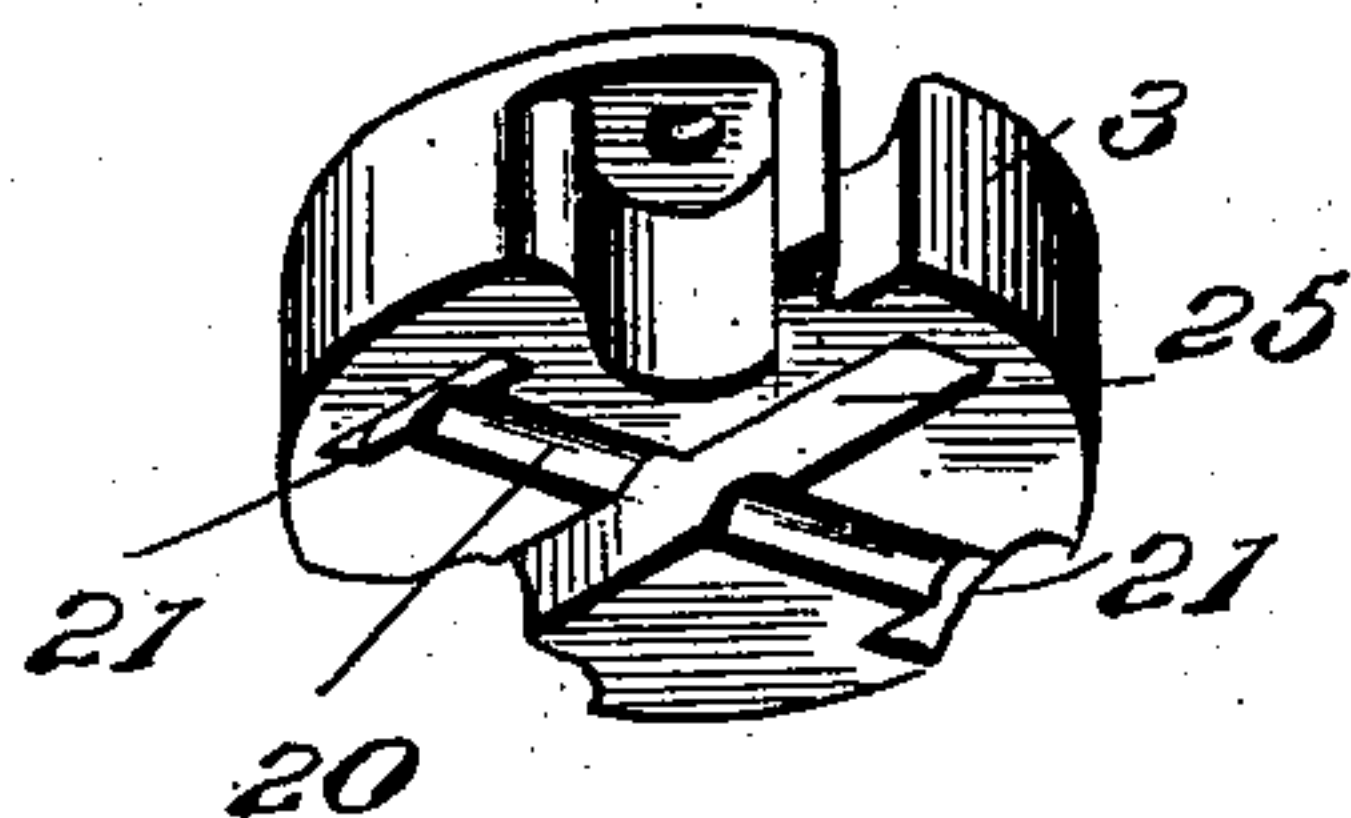


Fig. 4.

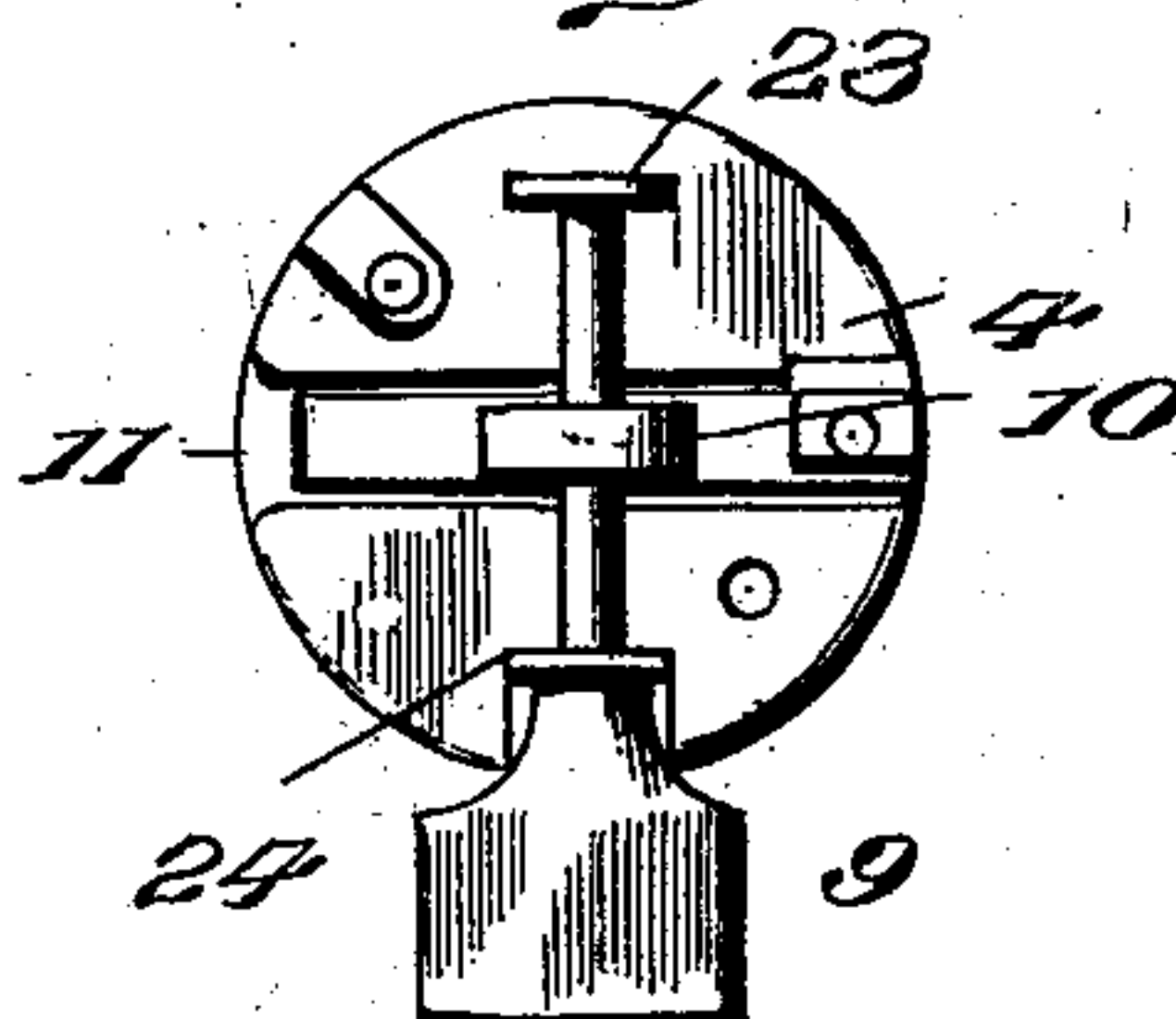


Fig. 5.

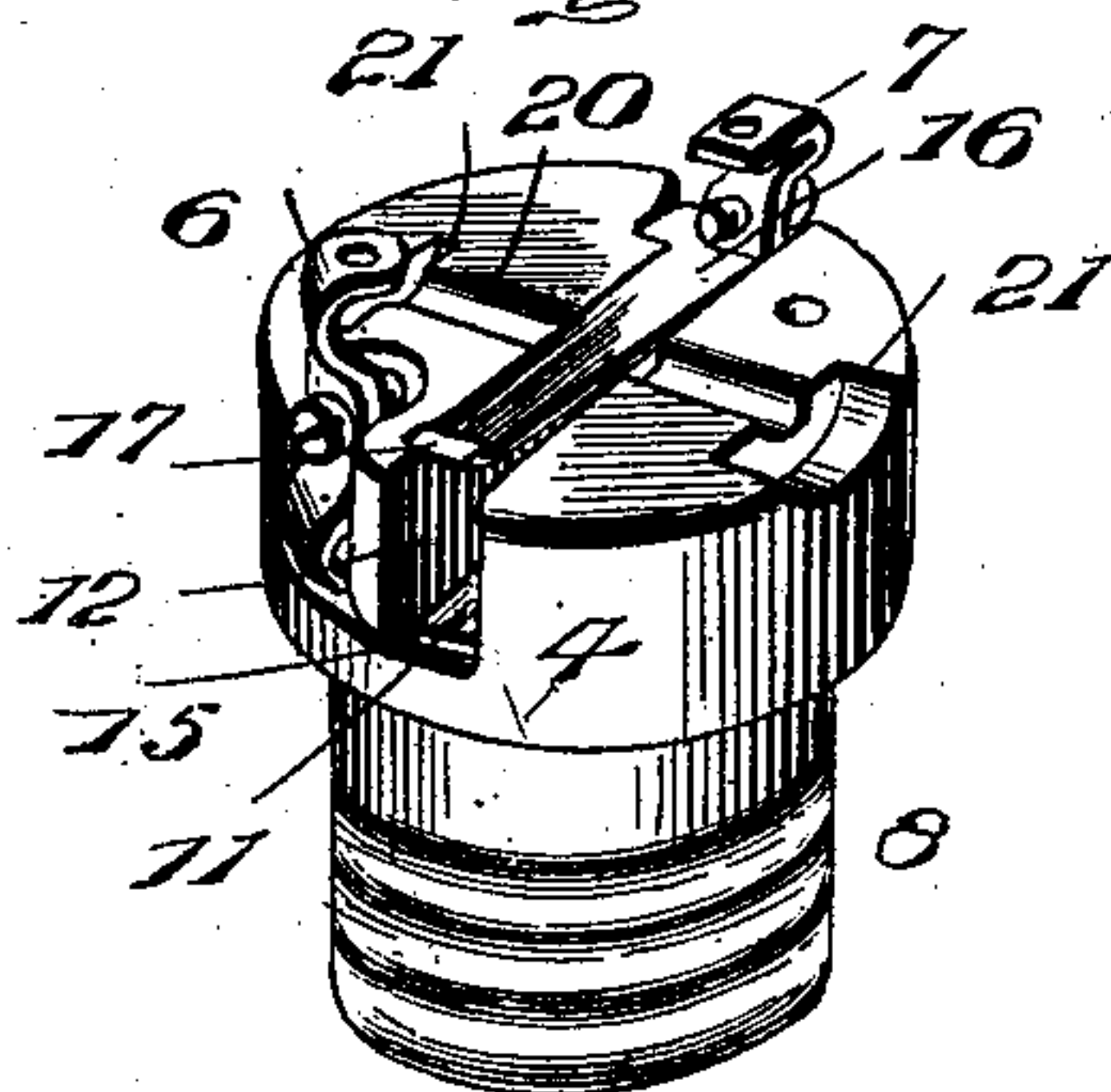
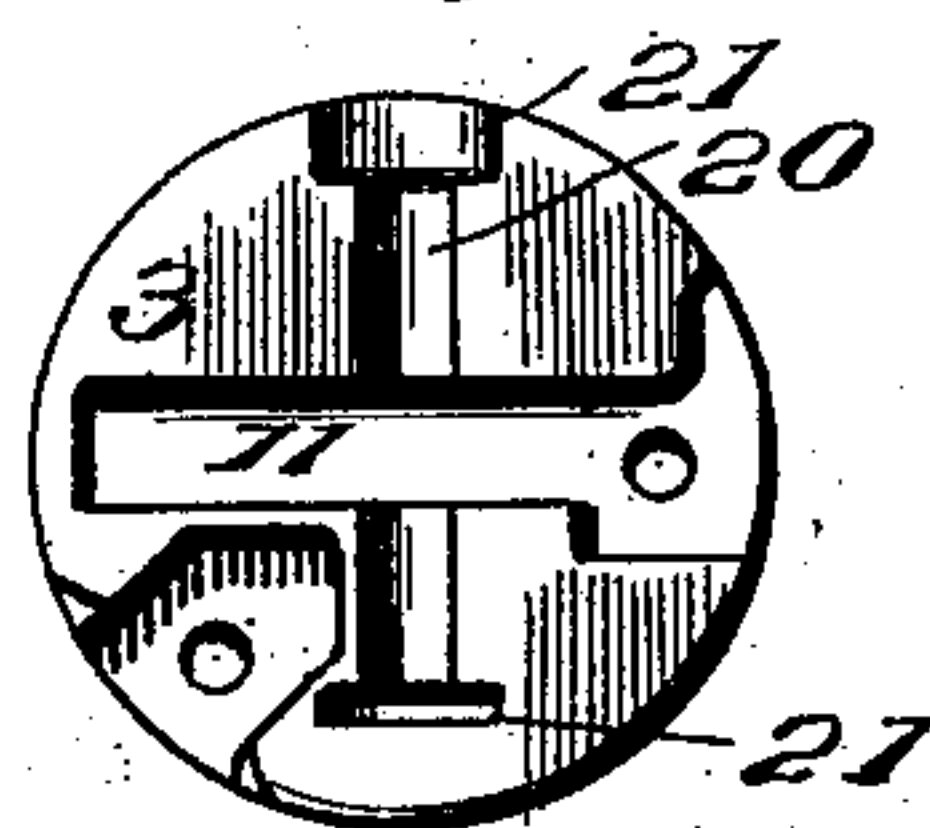


Fig. 6.



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UNITED STATES PATENT OFFICE.

OWEN E. KENNEY, OF TOLEDO, OHIO, ASSIGNOR TO YOST-MILLER COMPANY, A CORPORATION OF OHIO.

SOCKET FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 750,198, dated January 19, 1904.

Application filed June 16, 1902. Serial No. 111,952. (No model.)

To all whom it may concern:

Be it known that I, OWEN E. KENNEY, a citizen of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have
5 invented certain new and useful Improvements in Sockets for Incandescent Lamps; 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
10 appertains to make and use the same.

My invention relates to certain new and useful improvements in sockets for incandescent lamps.

It has for its object simplicity and economy
15 in manufacture, durability in use, and adaptability to cleanse itself from any corrosion which may occur.

My invention is particularly applicable to that class of sockets shown and described in
20 Letters Patent No. 698,394, granted Laurens P. Dixon, assignor to Yost-Miller Company, of Toledo, Ohio, and in which is employed what is called a "knife-switch," which is normally out of contact with the "contact-piece"
25 and is brought into electrical contact therewith through the medium of a cam-block on a rotatable key; as fully described in said Letters Patent.

In the construction referred to the knife-switch is held in its normal position by means
30 of an independent spring, which also serves the function of holding the rear pivoted end of the switch in contact with its bearing-plate.

My improved construction is designed to
35 dispense with the independent spring referred to and to secure the necessary spring movement by means of the peculiar construction and arrangement of the vibratory switch and at the same time to secure such rubbing ac-
40 tion of the free end of the switch against the contact-plate as to render these parts self-cleansing, as heretofore stated.

With these ends in view my invention consists in the construction and arrangement of
45 parts, as will be hereinafter shown and fully described.

In order that those skilled in the art to which my invention appertains may know how to

make my improved lamp-socket and fully understand its operation and advantages, I will
50 proceed to describe the same, referring by numerals to the accompanying drawings, in which—

Figure 1 is a central vertical section taken at right angles to or transverse of the operating-key. Fig. 2 is a similar section taken at right angles to that shown in Fig. 1. Fig. 3 is a perspective view and showing the under side of the upper portion of the barrel or casing in which the switch mechanism is mounted.
55 Fig. 4 is a plan view of the top surface of the lower portion of the barrel and with the knife-switch and operating-key in position. Fig. 5 is a perspective view of the same with the key removed and showing the conducting-plates
60 which are utilized for connecting the two portions of the barrel together and also showing a screw-threaded sheet-metal shell secured to the under side of the block and designed to receive the screw-threaded end of the lamp, and
65 Fig. 6 is a plan view of the under side of the top section of the barrel with all other parts removed.

Similar reference-numerals indicate like parts in the several figures of the drawings.
75

1 is the cap, and 2 the lower portion, of the ordinary sheet-metal shell which is designed to contain and support the insulator-barrel and switch mechanism. These two portions of the shell are secured together in any suitable manner. Within the shell is located the switch containing and supporting barrel, composed of an upper section 3 and a lower section 4 of suitable insulating material, and interposed between this barrel and the outer casing of the sheet metal is arranged a shell of insulating material 5. The two sections 3 and 4 of the switch-barrel are secured in proper fixed relation to one another by conducting-plates 6 and 7. To the under side of the lower
80 section 4 is secured by screws or in any other manner the sheet-metal screw-threaded shell 8, which is adapted to receive the threaded stem of the lamp.

9 is the key, and 10 the cam or block, of
85 the same, all of the construction and arrange-

ment substantially such as shown and described in the Letters Patent hereinbefore referred to.

I will now describe the details of construction constituting the subject of my present invention.

11 is a contact-plate located in the diametric recess or channel 12 and secured in position by a centrally-located screw 13 and a nut 14, the latter adapted to form contact with the lamp. The outer radial end of this contact-plate 11 is formed with a short step or raised platform 15 (see Fig. 1) for the purpose presently explained.

16 is the knife-switch, composed of a single piece of conductive spring metal, its free vibrative end being preferably returned upon itself, as shown at 17, to stiffen it at said locality and to produce a smooth finish. The opposite end of the switch 16 is somewhat wider than the blade or vibrative portion and is returned in a plane below that of the blade, as clearly shown at Fig. 1, and adapted to be seated and lie within the lower bent portion of the conducting-plate 7, to which it is secured by a nut 18 and the screw 19, which is employed to connect the plate 7 with the lower section 4 of the switch-containing barrel. The wall of the recess or channel 12 is formed at one end with a shoulder or transverse recess, as clearly seen at Fig. 5, to adapt it to the widened portion of the knife-switch 16, and this relation between the parts prevents the knife-switch from any lateral movement within the recess or channel 12, and hence its vertical vibrative movement is always properly related to the location of the step or platform 15 of the contact-plate 11.

If thought desirable, the returned end of the switch may be formed with a female thread adapted to receive the screw 19, and in such case the nut 18 may be dispensed with.

From the construction and manner of securing the knife-switch 16 within the recess 12 of the section 4 it will be seen that it lies in substantial parallelism with the cam-block 10 of the key 9 and that when the latter is rotated so that the cam-block is brought in contact with the switch the latter will have its free end vibrated into contact with the step or platform 15 of the contact-plate 11 to close the circuit in the ordinary manner. The broader returned and fixed end of the switch constituting a yielding spring resistance to the vibrative movement of the switch returns it to its normal position and opens the circuit when the key is turned in the position indicated at Fig. 1 to cut the lamp out.

As the free end of the switch is brought into contact with the step or platform 15 of the contact-plate, the rear end of the switch being higher than the free end, the free end moves slightly in a forward or longitudinal direction coincident with its vibrative movement, and hence a rubbing action takes place

between the end of the switch and the step or platform of the contact-plate and operates to push away any corrosion which may have occurred as a result of breaking contact and as is well understood in the art.

The adjacent faces of the two sections 3 and 4 are formed with diametric channels to receive the stem or shaft of the operating-key 9 and with semicircular grooves 21 to receive the disk washers 23 and 24 on shaft of the key to provide against longitudinal movement of the same, and the lower face of the upper section 3 is formed with a diametric channel 25 to permit the free vibrative movement of the knife-switch 16.

With the construction and arrangement shown all of the separate and separable parts of my improved socket are readily and economically manufactured and expeditiously assembled, and as all parts are interchangeable my improved socket may be readily repaired when necessary.

While I have shown the contact-plate 11 of peculiar and preferable construction, it will be understood that this may be varied without detracting from the character and operation of the vibrative switch and that means different from that shown may be employed to produce the necessary vertical movement of said switch.

Having described the construction and operation of my improved socket, what I claim as new, and desire to secure by Letters Patent, is—

1. In a lamp-socket such as described, in combination with the switch-containing barrel composed of upper and lower sections of insulating material secured together by conductor-plates, having their ends curved and in parallelism with the insulator-sections and secured thereto by screws, a vibrative switch composed of a single piece of spring metal returned at one end to conform to the curve of the conductor-plate, and secured in fixed relation therewith by the screw employed to attach the conductor-plate to the insulator.

2. In a lamp-socket such as described, in combination with a spring vibrative switch rigidly connected at one end to one of the conducting-plates, a contact-plate arranged below the vibrative switch in fixed and rigid relation with the insulator-block, and provided at its outer or radial end with a raised step or platform, whereby a rubbing action may take place between the switch and contact-plate, substantially as and for the purposes set forth.

3. In a socket such as described the switch composed of a single piece of spring metal rigidly secured at one end to one of the conductor-plates, and having its free end returned upon itself to stiffen and finish said free end, substantially as set forth.

4. In a lamp-socket such as described, the vibrative switch composed of a single piece of spring metal rigidly secured to one of the con-

ductor-plates, and formed near its fixed end
with a lateral shoulder or projection, in com-
bination with the lower section of the switch-
barrel provided with a diametric recess or
5 channel having its side wall formed with a
shoulder, substantially as and for the purpose
set forth.

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

OWEN E. KENNEY.

Witnesses:

HARRY C. KEAN,
M. A. ELY.