

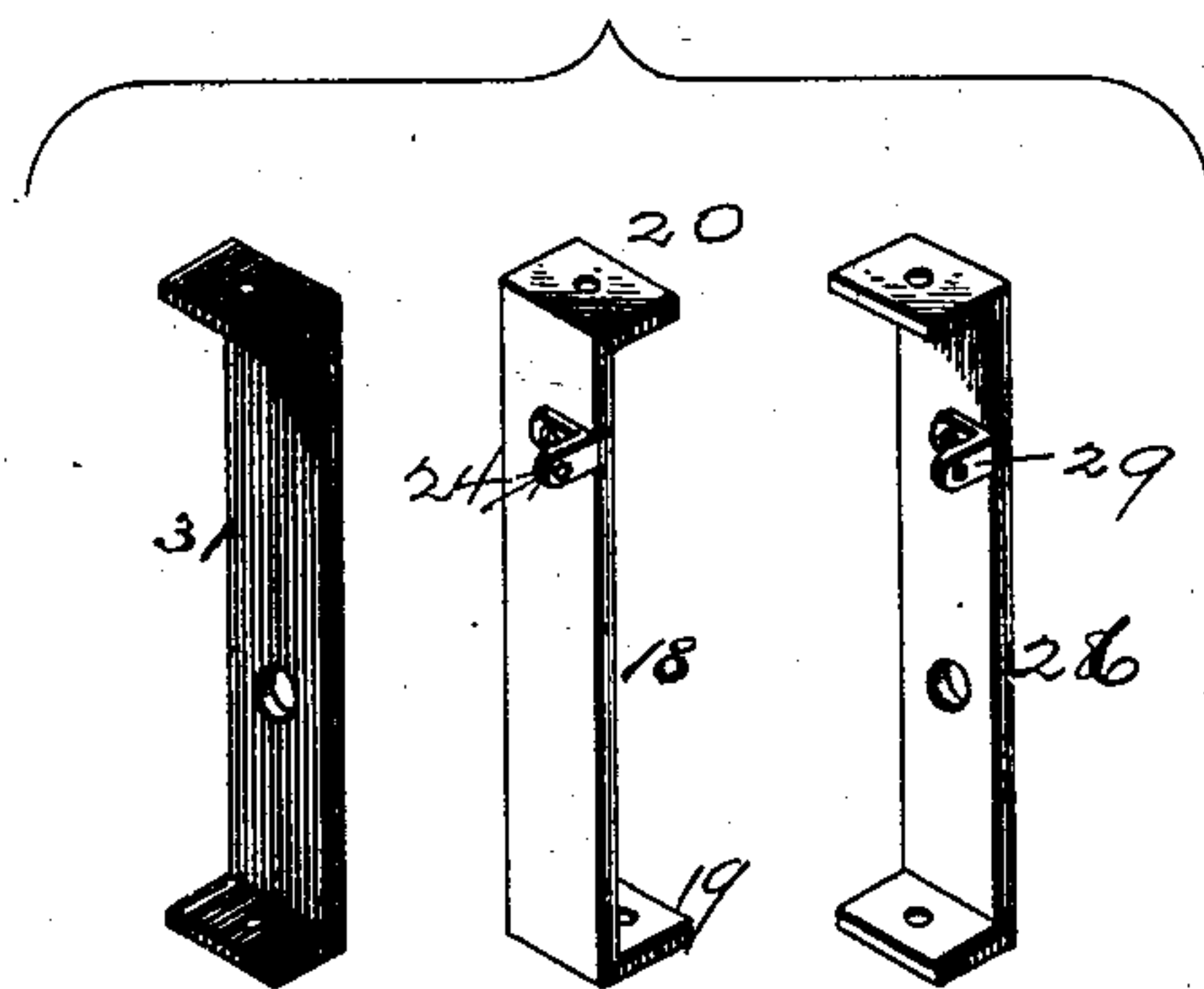
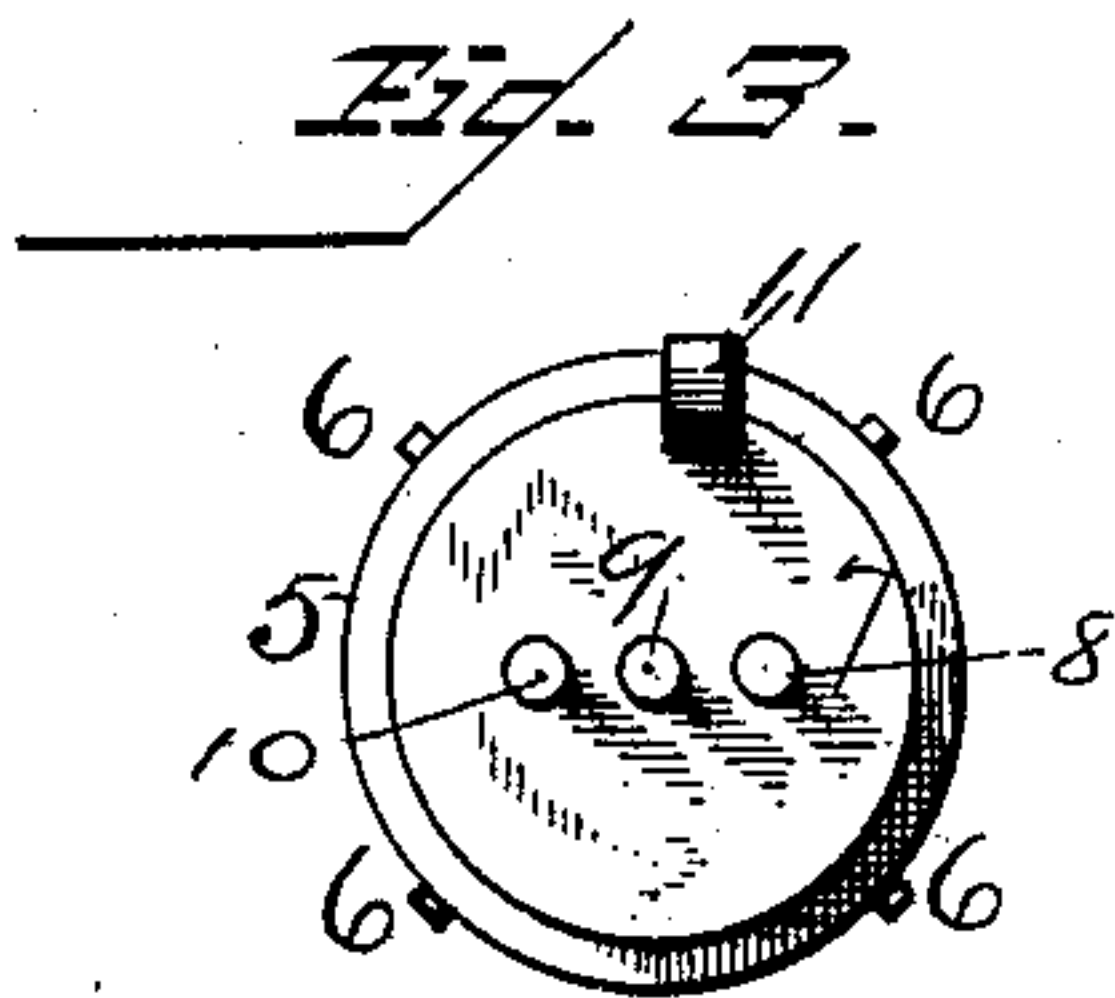
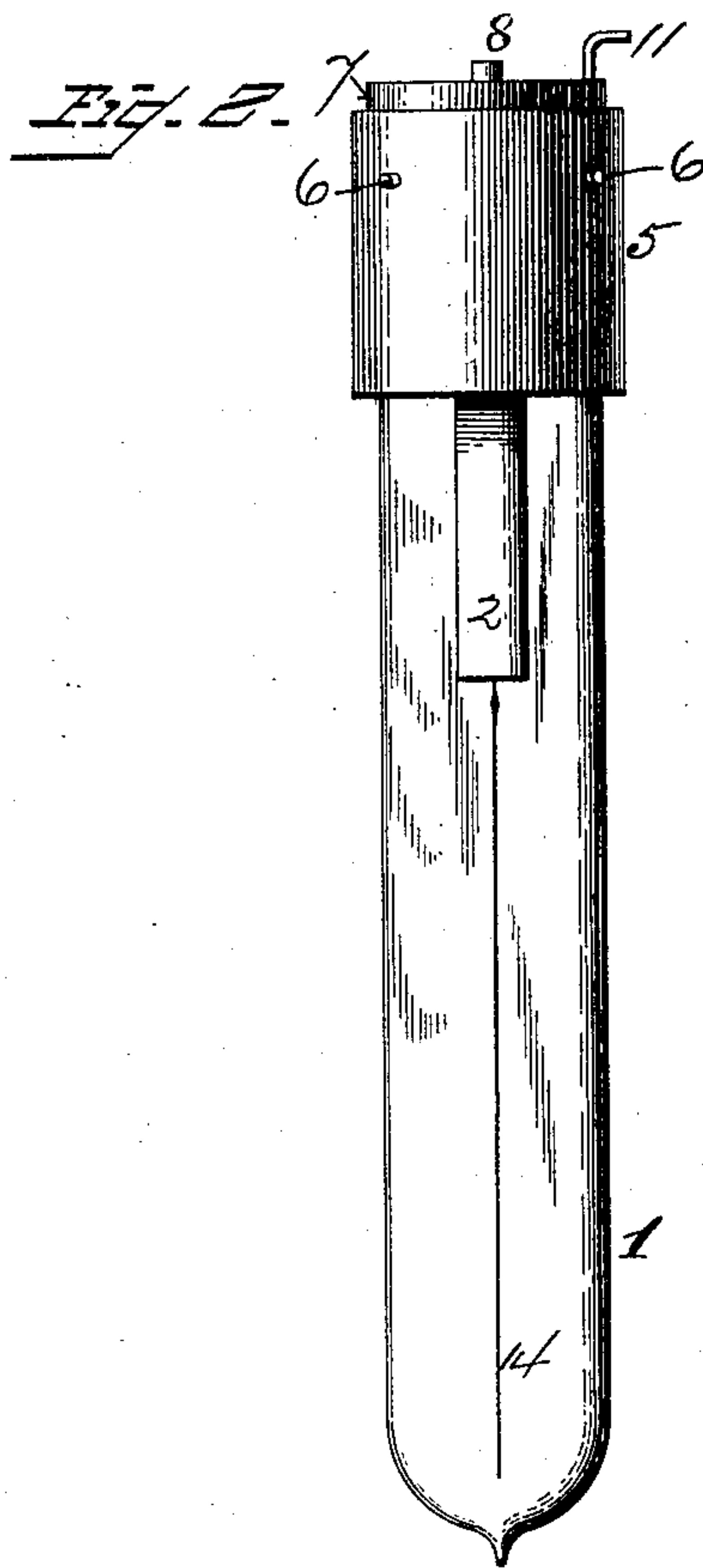
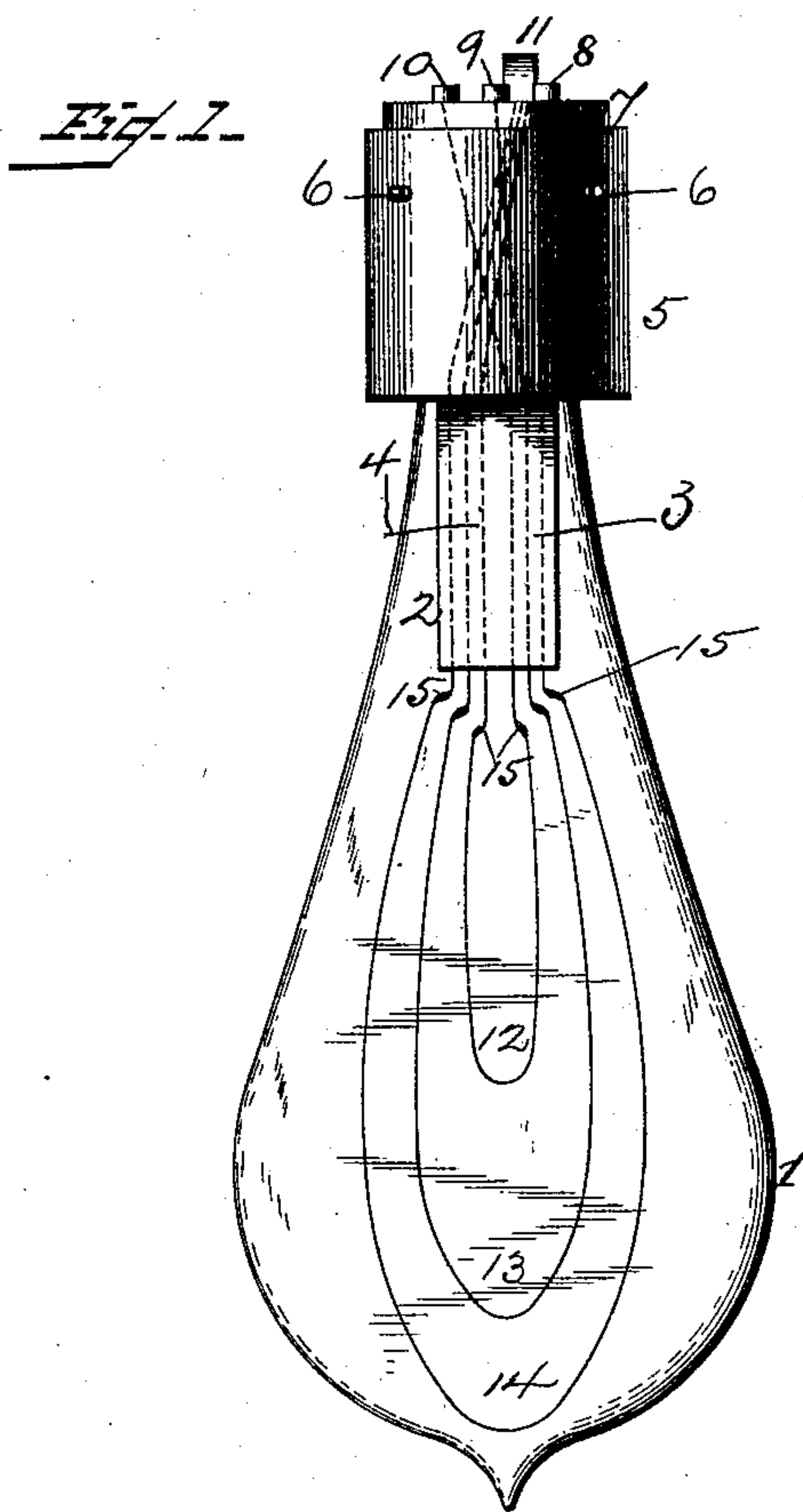
(No Model.)

2 Sheets—Sheet 1.

L. H. LEBER.
ELECTRIC LAMP.

No. 376,323.

Patented Jan. 10, 1888.



Witnesses

Wm. J. Spaulding

C. L. Gook

Inventor

Luther H. Leber,

By his Attorney

Chas. Gook

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

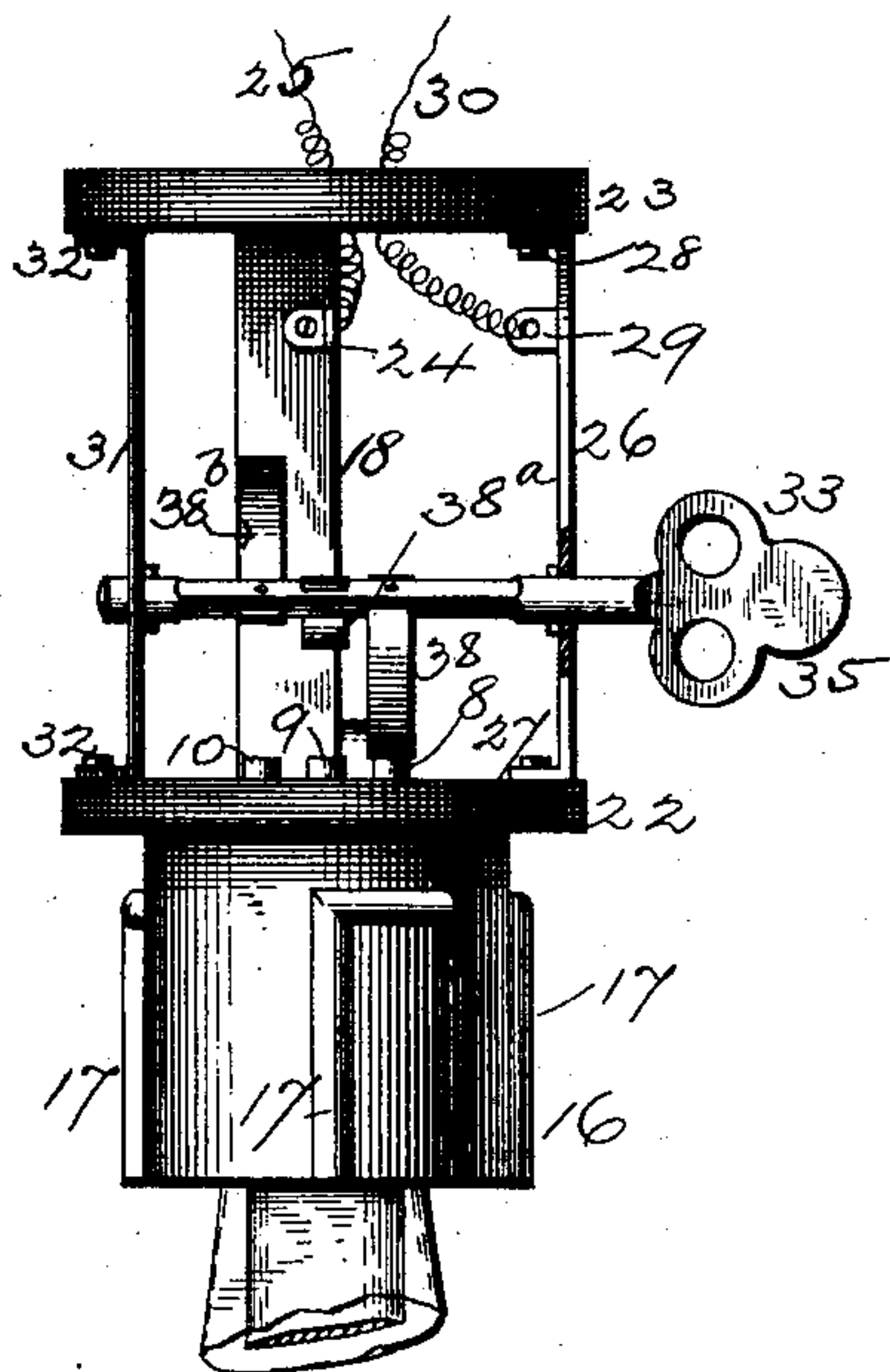


Fig. 5.

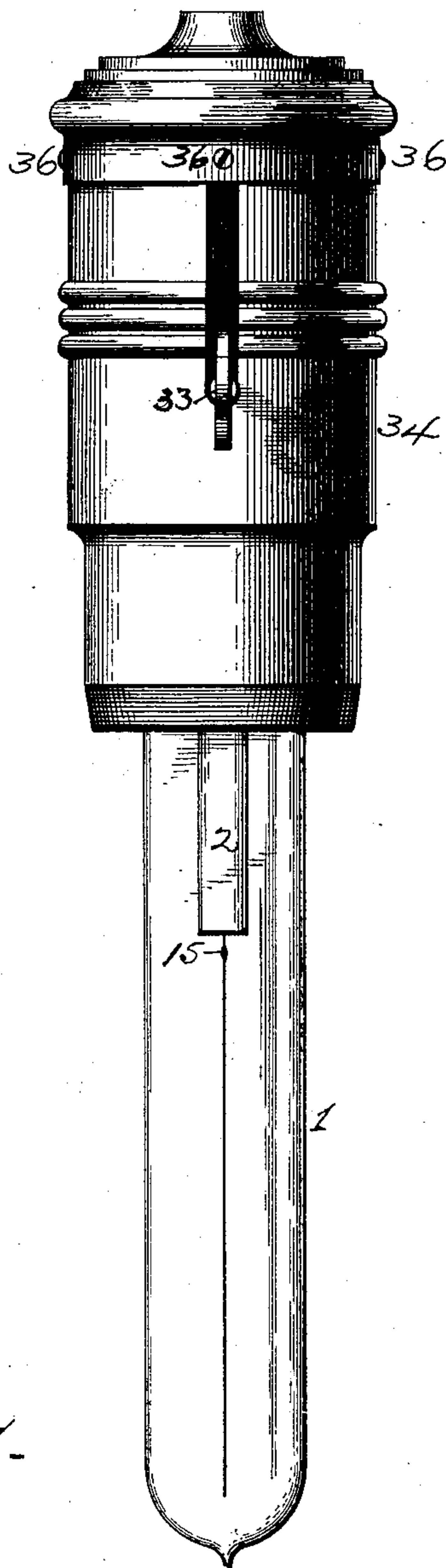


Fig. 5.

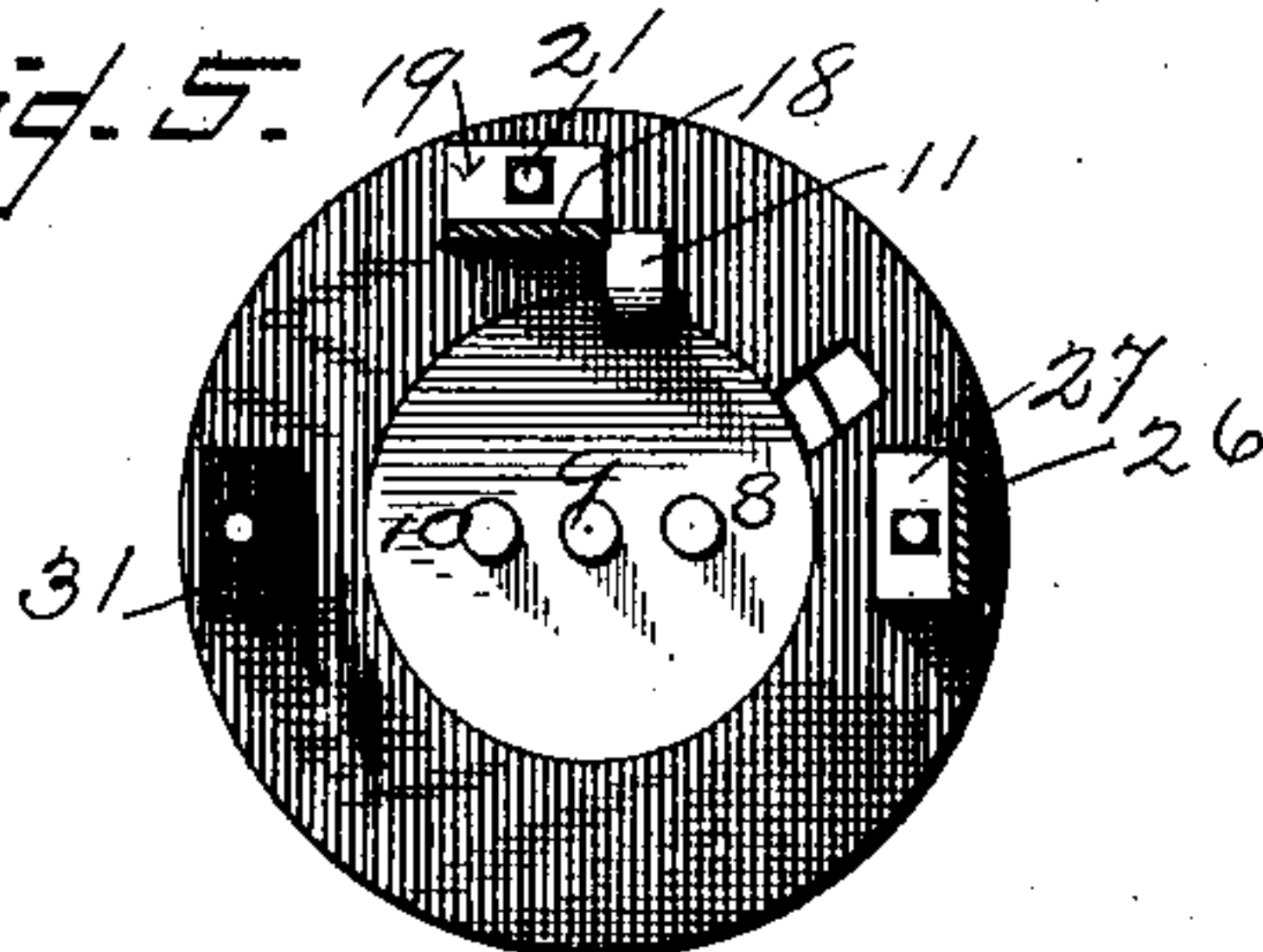


Fig. 6.

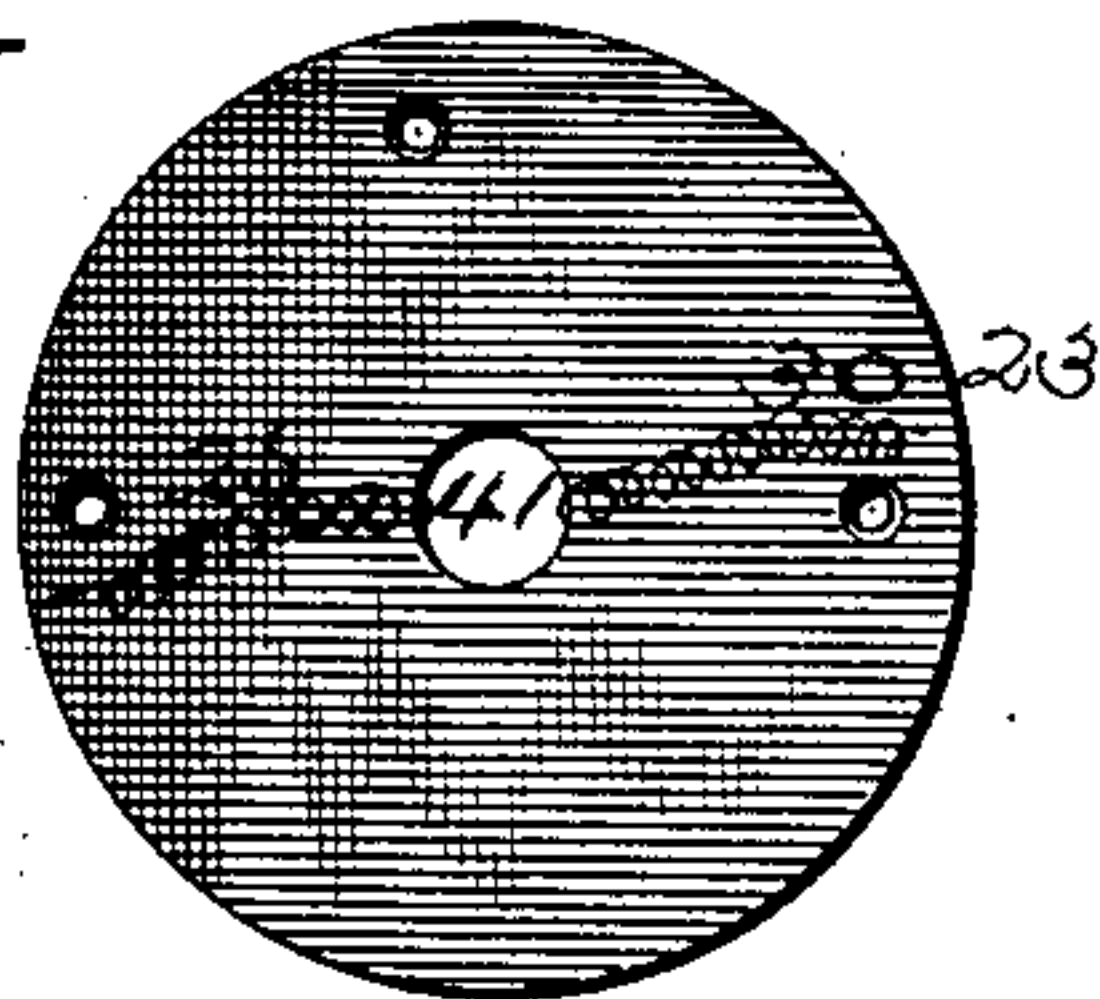
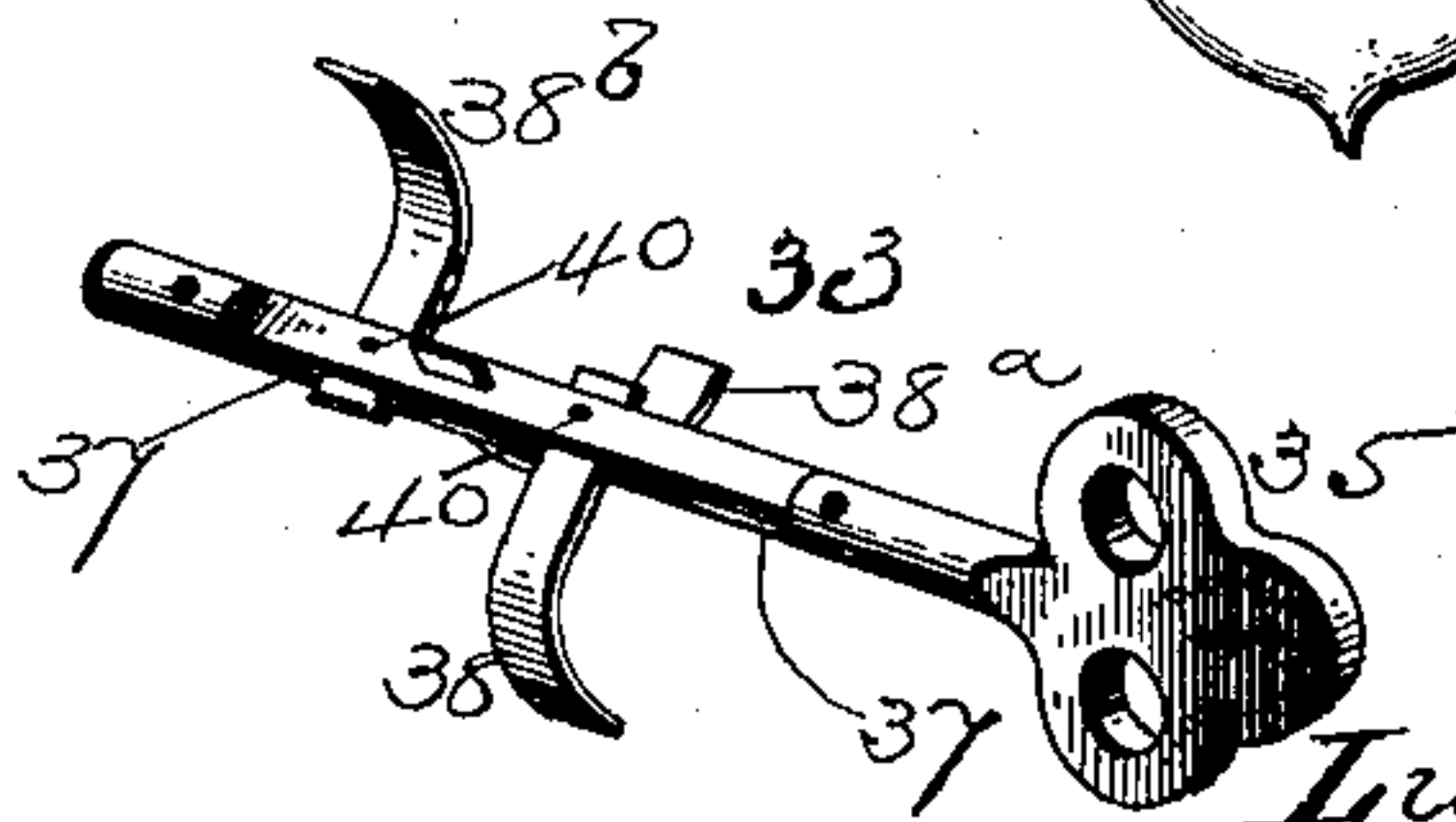


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

LUTHER H. LEBER, OF YORK, PENNSYLVANIA, ASSIGNOR TO JACOB G. LEBER, OF SAME PLACE.

ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 376,323, dated January 10, 1888.

Application filed August 4, 1887. Serial No. 246,127. (No model.)

To all whom it may concern:

Be it known that I, LUTHER H. LEBER, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Electric 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 ap-
10 pertains to make and use the same.

My invention relates to that class of electric lamps known as "incandescents," in which the light is produced by the incandescence of one or more wires or filaments in a vacuum
15 flask or globe.

My improvements, briefly stated, comprise a series of incandescing wires, differing in length and extent of curvature and of unequal resistance, arranged within the globe, the re-
20 spective ends of said wires being connected by carbon couplings to the lower ends of conducting-wires passing through a solid glass portion depending within the neck of the globe, the upper ends of said conducting-wires
25 crossing in different planes and attached one half to independent posts or pieces of brass and the other half to a single curved strip of brass extending vertically above the top of the plaster filling of the lamp-neck-inclosing ring,
30 which latter has outwardly-extending pins on its sides which engage bayonet-joints in the lamp-socket, a lamp-socket adapted to receive the plaster-filled ring surrounding the neck of the globe, and having bayonet-joints in its sides
35 to receive the securing-pins on said ring and permit of the lamp being turned around into locked position, and the curved metal strip thereon thereby brought into contact with a current-conveying strip. To the top of the
40 lamp-socket is secured a ring or disk of insulating material, which serves as a support for the contact-strip with which the curved metal strip on the lamp engages, an insulated and inert strip, which serves as a bearing in which
45 a switch-key turns, and another current-conveying strip, with which the switch-key is in contact, the upper ends of said strips being connected to a disk of insulating material having a central orifice, through which pass the
50 wires connecting the battery (not shown) and

the current-conveying strips, and a switch-key having a series of eccentrically-arranged strips thereon, equal in number to the number of incandescing wires in the lamp, and which, as the key is turned, engage the posts connected
55 with and place either of said incandescing wires in contact, as it may be desired to regulate the brilliancy and size of the light, the main object of my invention being to afford a ready, effective, and simple means for regulat-
60 ing the intensity of the light in individual lamps.

In the accompanying drawings, Figure 1 represents a front elevation of a lamp constructed according to my invention. Fig. 2
65 represents a side elevation thereof. Fig. 3 represents a top plan view of the top of Fig. 1. Fig. 4 represents a front elevation of the lamp-socket in position on the lamp, the current-conveying and insulated strips and disks con-
70 nected thereto, the current-conveying wires, and the switch-key. Fig. 5 represents a plan view of the bottom disk. Fig. 6 represents a plan view of the top disk. Fig. 7 represents a perspective view of the switch-key. Fig. 8
75 shows detail perspective views of the strips attached to the lamp-socket. Fig. 9 represents a side elevation of a complete lamp.

1 represents the globe, which at its neck has an inner depending portion, 2, of solid glass,
80 through which the current-conducting wires 3 4 are passed, the glass forming the part 2 being pressed around the said wires, so as to secure them in position therein.

5 represents a metal ring, having locking-
85 pins 6 projecting from its sides.

7 represents a plaster filling, by which the neck of the globe 1 and the ring 5 are cemented together.

8 9 10 represent posts or pieces of brass, se-
90 cured within the plaster filling and projecting above the same, and to which the upper ends of the conducting-wires 3 are connected, while 11 represents a curved strip of brass, also se-
95 cured within the plaster, with which the upper ends of the conducting-wires 4 are connected.

12 13 14 represent the incandescing wires, which, as represented, are of curved form and of unequal length and degree of curvature
100

and consequently of different degrees of resistance, so that the intensity and brilliancy of the light emanating from any single lamp may be varied, as desired.

15 represents strips of carbon, coupling the several incandescing wires and the current-conveying wires.

16 represents the lamp-socket, which is provided with bayonet-joints 17, to receive the locking-pins 6 on the ring 5. As the lamp is passed up into the socket 16, the pins 6 slide up the vertical portion of the bayonet-joints in the socket until they reach the horizontal portion thereof, whereupon the lamp is turned horizontally and the pins 6 slid along the horizontal portions of the joints 17, by which means the lamp is held in position in the lamp-socket. As the lamp is thus turned around, the curved brass strip 11 is brought into contact with a brass conducting-strip, 18, which is connected, by flanges 19 and 20 and bolts and nuts 21, respectively, to a disk, 22, of insulating material on the top of the lamp-socket, and to a top disk, 23, also of insulating material, an eared contact-plate, 24, to which one of the wires 25, in contact with the battery, (not shown,) is attached, being secured to said strip 18, as shown in Fig. 4.

26 represents an eared strip of brass bolted at 27 28, respectively, to the disks 22 23.

29 represents an eared contact-piece attached to the strip 26, and to which the other current-conducting wire, 30, from the battery is connected. 31 represents a similar eared strip, but of insulating material, connected to the disks 22 23 by bolts and nuts 32, said strip 31 serving as an insulated bearing for the end of the switch-key 33, which is passed through a suitable slot in the lamp-casing 34, as represented in Fig. 9, and through a hole in the conducting-strip 26, said hole being of equal circumference to the circumference of the key-barrel, in order that the current from said strip 26 may pass into the key. It is designed that the head or thumb-piece 35 of the key shall be of insulated material, or be insulated in any of the known ways, in order that it may be safely grasped when it is desired to operate the switch-key. The casing 34 is attached to the disk 23 by screws 36, or in any other suitable manner. The central portion of the barrel of the switch-key 33 is slotted or bifurcated, as at 37, within which are inserted curved fingers or strips 38 38^a 38^b of brass, which are arranged to project eccentrically therefrom and on opposite sides, as shown, said strips being removably secured within said slotted or bifurcated portion of the key by pins or screws 40.

41 represents a central opening in the disk 23, through which the wires 25 30 pass from the eared plates 24 29 to the battery.

Upon the lamp being placed in its socket and turned around therein into locking position the curved strip 11 is, as represented in Fig. 4, brought into contact with the current-

charged strip 18. Upon the switch-key being inserted the current from wire 30 passes through strip 26 into said key. In this condition the current from one pole is confined to the incandescing wires and the strip 18, while the current from the other pole is confined to the strip 26 and the switch-key 33, and in this condition the circuit is incomplete. Upon turning the key 33 to bring the curved strip 38 into contact with the post 8 the circuit will be completed and the largest and outer incandescing wire, 14, lighted. Should it be desired to decrease the light, the key is turned to bring the strip 38^a in contact with the post 9, whereupon the circuit will be transferred to the next smaller incandescing wire, 13, and when a still smaller light is required the key is turned to bring the strip 38^b in contact with the post 10, whereupon the current will be switched to the smallest incandescing wire, 12. It will thus be apparent that the intensity of the light furnished by any single individual lamp, or of a system, can by my invention be speedily and effectively adjusted at will. If desired, the key can be readily furnished with contact-strips, so as to place more than one incandescing wire in circuit.

Although I have shown a lamp as provided with three incandescing wires, it is manifest that the number and shape thereof may be varied at will without departing from my invention.

Having thus described my invention, what I claim is—

1. An incandescent lamp comprising a vacuum chamber or globe, a plurality of incandescing wires sealed therein, a series of posts equal in number to the incandescing wires and to each of which one end of said wires is attached, a curved metal strip to which the other ends of the several wires are attached, a lamp-socket adapted to receive and hold said globe, insulated disks supported on said lamp-socket, current-conveying strips interposed between and secured to said disks, and having suitable connection with the current-transmitting wires, an insulated strip secured to and interposed between the insulated disks to constitute an insulated bearing for the switch-key, and a switch-key having a series of curved contact or current-switching fingers or strips to connect individually with the posts in contact with the incandescing wires and switch the current from one to the other thereof, substantially as and for the purpose set forth.

2. An incandescent lamp comprising a vacuum chamber or globe, a plurality of incandescing wires sealed therein, a series of posts equal in number to the incandescing wires and to each of which one end of said wires is attached, a curved metal strip to which the other ends of the several wires are attached, a ring connected to the globe, and having outwardly-projecting pins on its sides, a lamp-socket having bayonet-joints to receive

said pins and lock the lamp in position, insulated disks supported on said lamp-socket, current-conveying strips interposed between and secured to said disks, and having suitable
5 connection with the current-transmitting wires, an insulated strip secured to and interposed between the insulated disks to constitute an insulated bearing for the switch-key, and a
10 switch-key having a series of curved removable contact or current-switching fingers or strips arranged eccentrically on said key to

connect individually with posts in contact with the incandescing wires and switch the current from one to the other thereof, substantially as and for the purpose set forth.

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

LUTHER H. LEBER.

Witnesses:

CHAS. J. GOOCH,
M. DORIAN.