

(No Model.)

A. SWAN.
INCANDESCENT LAMP FITTING.

No. 573,929.

Patented Dec. 29, 1896.

Fig. 1.

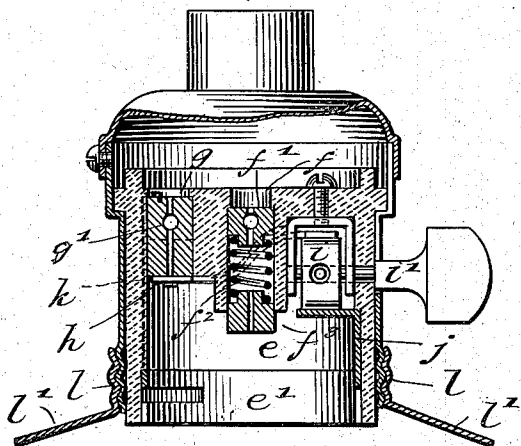


Fig. 2.

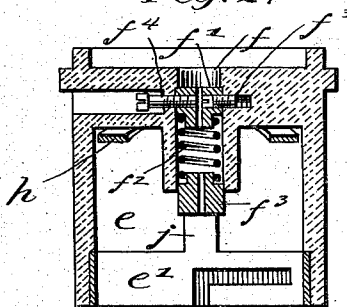


Fig. 3.

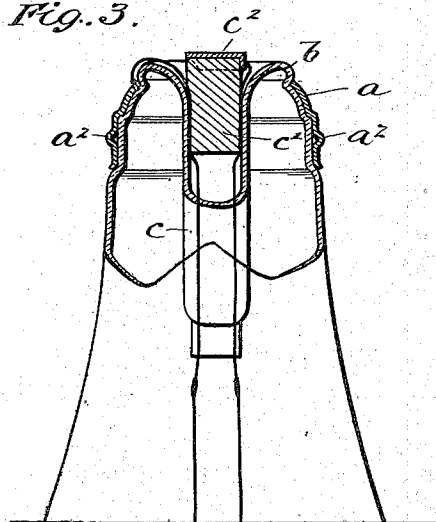


Fig. 4.

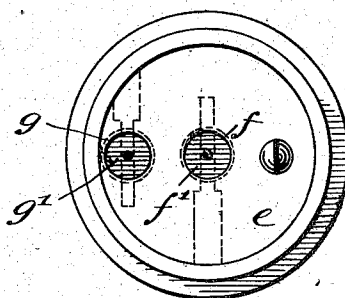
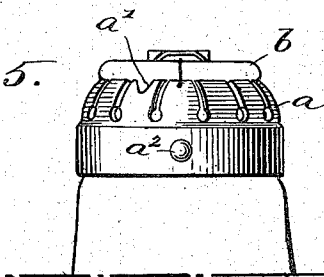


Fig. 5.



WITNESSES:

Frank S. Ober
H. Bailey

INVENTOR

Alfred Swan

BY

Wm. R. Rumbaugh
ATTORNEY

UNITED STATES PATENT OFFICE.

ALFRED SWAN, OF NEW YORK, N. Y.

INCANDESCENT-LAMP FITTING.

SPECIFICATION forming part of Letters Patent No. 573,929, dated December 29, 1896.

Application filed March 28, 1896. Serial No. 585,219. (No model.)

To all whom it may concern:

Be it known that I, ALFRED SWAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Incandescent-Lamp Fittings, of which the following is a full, clear, and exact description.

This invention relates to electric incandescent lamps and sockets, the object being to simplify to the greatest extent the devices and construction necessary to connect and disconnect the lamp with its socket. By this invention no "base," in the ordinary sense of the term, is attached to the lamp, but in lieu thereof the lamp has a simple and inexpensive mount attached to it, this mount providing the respective electrodes and also a means whereby the lamp is coupled or connected with its socket. This mount is applied without the use of cement, and is so simple that it adds but very little to the cost of the lamp. The socket is correspondingly simple and possesses several features of advantage.

In the accompanying drawings, Figure 1 is a section of the socket provided with a key and having an extra metallic shell. Fig. 2 is a section of the socket, taken at right angles to Fig. 1 and without the metallic shell. Fig. 3 is a plan of the socket. Fig. 4 is a section of the neck of a lamp, and Fig. 5 is a side elevation of the same.

The mount for the base of the lamp consists of a collar *a* of thin sheet spring-brass, having one edge turned inward and slit, as indicated in Fig. 5, to form spring-teeth. The glass neck of the lamp is formed with a bead or other projection *b*, over which the brass collar is sprung, the spring-teeth of the collar seating themselves under the bead and holding it in place. To prevent rotary slipping of the collar, it has a notch *a'* to engage with a slight projection formed in the glass. At two or more points of the cylindrical portion of the collar small teats or projections *a²* are provided, for a purpose which will hereinafter appear. The stem *c* of the lamp, through which the leading-in wires loosely pass, will be closed at its upper end with a cork or plug *c'*, having a flat outer surface covered by a cap *c²* of thin metal. It is preferred to make this plug of ordinary cork, but wood or other

insulating material may be used. This plug serves the double function of separating the leading-in wires and sustaining the center contact. The two wires of the lamp are confined between the plug and the glass walls of the stem and on opposite sides of the plug and lead, respectively, to the cap *c²* and to the collar *a*, to which they are soldered. A portion of the side of the cap is removed, as indicated in Fig. 5, to prevent a contact therewith of the wire leading to the collar.

The socket adapted for this lamp consists of a cup *e*, constructed of porcelain and having a ring *e'* located internally around its lower edge. This ring is formed with angular slots adapted to engage with the teats *a³* on the collar of the lamp to form an ordinary bayonet-joint. In the center of the socket a passage *f* is provided, in which is fitted first a metallic block *f'*, centrally perforated to receive one of the circuit-wires. Then a metallic spring *f²* is inserted, and this is covered by a plunger *f³*. The face of this plunger makes contact with the cap *c²* when the lamp is connected to the socket.

The block *f'* is held in place by means of a screw *f³*, passing through a transverse opening in the socket and in the plug itself, and the circuit-wire is afterward held in the block by passing a second screw *f⁴* through the same opening and binding it against the wire. By the side of the central perforation a second perforation *g* is formed, also containing a metallic block *g'* and perforated to receive the other circuit-wire. To the inner face of the plug is attached an annular spring *h*, surrounding the central contact and passing above the circuit-closing block *i*, carried upon the key-shaft *i'*. Immediately below the block an angular projection *j* from the ring *e'* is located, with which the block is adapted to engage to electrically connect the contact-ring *h* with the ring *e'*. For the keyless socket this annular projection *j*, and of course the block and key, also the ring *h*, are dispensed with and a permanent wire (indicated in the dotted lines *k*) will connect the ring *e'* with the plug *g*. If desired, the exterior of the porcelain shell may have coarse screw-threads formed in it for the purpose of engaging with a similarly-threaded collar *l*, to which the arms *l'* of the shade-carrier are attached. As

shown in the drawings, however, these threads are formed in a metallic shell covering the socket and with which the shade-carrier engages. By this mode of attachment the shade-carrier is conveniently adjusted and removed and its elevation may be somewhat changed at will.

Among the advantages of my invention may be mentioned the non-liability of lamps to loosen and drop out. Both lamp and intermediary device being independently locked, a firm and close contact is always maintained and arcing is impossible. A lamp projecting horizontally may at any time be reversed to rectify the position of a filament that may have sagged downward. It admits of a socket of short length. It is inexpensive. The lamp being relieved of the weight of the base, there is less risk of breakage in transit.

Having thus described my invention, I claim—

1. The combination with the neck of an incandescent lamp provided with a bead of glass at or near the end thereof, of a metallic collar placed thereon entirely behind said bead of glass, said collar forming one of the lamp-terminals, substantially as described.

2. The combination with the neck of an incandescent lamp provided with an annular

bead, of a metallic collar having inwardly-turned spring-teeth adapted to spring over the bead and rest directly and entirely behind it to hold the collar on the neck of the lamp.

3. The combination with the neck of an incandescent lamp, of a metallic collar placed thereon behind a bead of glass formed on the lamp-neck and a cork or plug closing the end of the lamp-stem and provided with a metallic cap, the leading-in wires of the lamp being separated by the cork and connected respectively with the cap and collar, substantially as described.

4. In an incandescent lamp having its neck surrounded by a metallic collar and provided with a center contact-piece in combination with a cup-shaped socket of insulating material provided internally with a center contact and with a narrow metallic ring placed near the edge of the cup, the ring having an extension *j* reaching into the socket for the purpose set forth.

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

ALFRED SWAN.

Witnesses:

WM. A. ROSENBAUM,
H. BAILEY.