No. 676,068. Patented June 11, 1901.

L. LOBENTHAL.

INCANDESCENT ELECTRIC LAMP.

(Application filed Oct. 11, 1900.)

(No Model.)

Fig. 1.

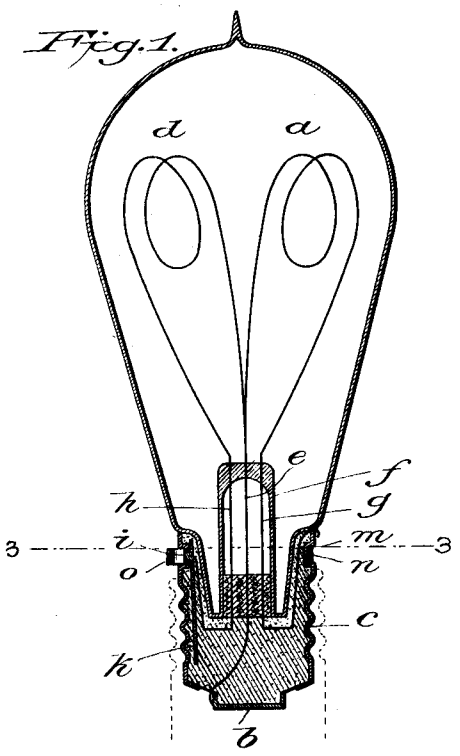


Fig. 2.

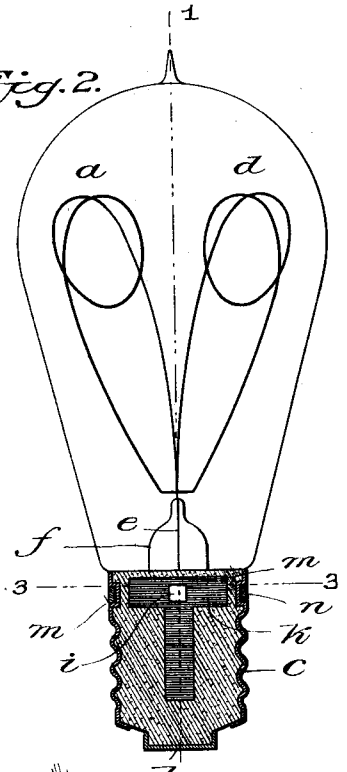


Fig. 3.

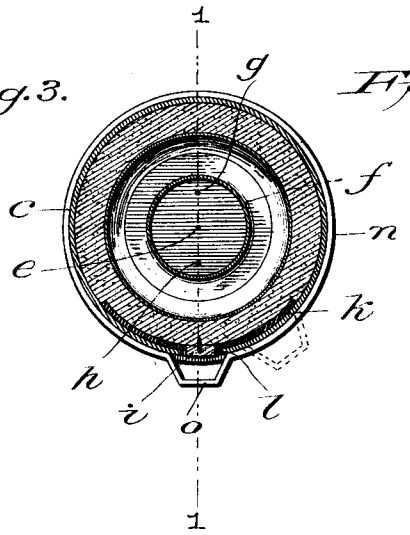
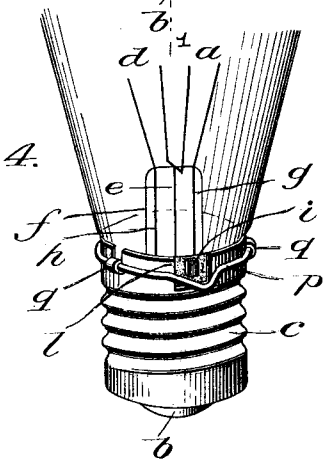


Fig. 4.



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INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 676,068, dated June 11, 1901

Application filed October 11, 1900. Serial No. 32,775. (No model.)

To all whom it may concern:

Be it known that I, LEVI LOBENTHAL, a citizen of the United States, residing in the borough of Manhattan, in the city, county, and State of New York, have invented certain new and useful Improvements in Incandescent Electric Lamps; and I do hereby declare the following to be a full, clear, and exact description of my invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to provide means whereby one or both of the filaments of a double-filament incandescent lamp may be thrown into circuit, and thus rendered luminous at will, without necessitating the removal of the lamp from the socket and whereby a lamp having the capabilities above specified is adapted to be used with the ordinary form of socket, thereby permitting the replacement of a single-filament lamp by my improved device without necessitating any change in the fixtures.

For these purposes my invention consists in a new and useful form of switch for throwing into and out of circuit one of the two filaments of the lamp; and it further consists in the construction, arrangement, and combination of the several parts of which it is composed, as will be hereinafter more fully described and claimed.

Referring to the accompanying drawings, in which corresponding parts are designated by corresponding marks of reference, Figure 1 is a vertical section taken on lines 1 1 of Figs. 2 and 3 and representing a lamp constructed in accordance with this invention. Fig. 2 is a side elevation, partly in section, thereof. Fig. 3 is a horizontal section on lines 3 3 of Figs. 1 and 2. Fig. 4 is a fragmental perspective view showing a slightly different form of switch.

In a lamp constructed in accordance with my invention two lamp-filaments are employed, through one, a, of which so long as it be intact the current passes whenever the lamp is in service, this being the primary filament, and having its opposite terminals connected with the cap or plate b on the base of the lamp and the metallic threaded collar c, surrounding the same, the collar being adapted to be received by the usual socket. The circuit through the other or auxiliary filament d is made when double illumination is desired or when the primary filament is broken, the auxiliary filament having its one terminal connected with the plate or cap b either directly or through the same leading-in wire e as is connected with the primary filament and having its circuit completed in parallel arc to the auxiliary filament by means which specifically form the subject-matter of this application and which will be hereinafter described and claimed.

In the embodiment of my invention shown a single leading-in wire e passes upwardly through the center of the leading-in tube f and is attached to the corresponding terminal of the two filaments a and d. As before stated, the opposite terminal of the primary filament a is connected in any suitable manner—such, for instance, as by the leading-in wire g—with the threaded collar c, while the corresponding terminal of the auxiliary filament d is connected with a leading-in wire h, which passes downwardly through the leading-in tube and is bent upwardly along the outside thereof and connected with an insulated contact-plate i.

The plate i is carried by a T-shaped sheet k, of insulating material, such as indurated fiber, the vertical arm of which extends downwardly outside of the upcoming end of the wire h, whereby contact between the said wire and the threaded collar is prevented. The horizontal members of the plate k surround to a greater or less extent the base of the lamp, being held in place by the surrounding upper edge of the collar c, which is vertically slotted, as at l, the contact-plate i being located in the slot thus formed. The threads upon the collar terminate some distance below the upper edge thereof.

In Figs. 1 to 3 an annular groove m is formed in the collar, near the upper edge thereof, the said groove intercepting the vertical slot l and being in the same horizontal plane as the contact-plate i. Within the groove m is contained a rotating band-ring n, having a swell o, which also serves as a handle, on one side thereof, so that when the said swell is located above the contact-plate i, as is indicated in

Fig. 3, it will be out of contact therewith and the circuit through the auxiliary filament *d* will be broken. If, however, the ring be rotated, as is indicated in dotted lines in Fig. 3, the circuit will be completed from the base-plate *b*, filament *d*, plate *i*, and ring *n* to the collar *c*, as well as through the auxiliary filament *a*, thus throwing both filaments in circuit in parallel arc with each other.

In Fig. 4 I have shown a slightly different form of switching mechanism, in which the band-ring *n* is replaced by the wire ring *p*, held in guides *q*, formed by bending projecting ears from the top of the collar. It will be obvious, however, that the operation of the form of my invention last described is in all respects similar to that of the form illustrated in Figs. 1, 2, and 3.

It will be seen that a properly-proportioned lamp constructed in accordance with this invention may be used in connection with the usual form of socket and key, that if the ring is in the position shown in Fig. 3 the closing of the circuit by the key of the socket will bring into action the primary filament, and that as the ring is above the upper edge of the socket, as indicated in dotted lines in Fig. 1, it may be rotated to bring the auxiliary filament into action or cut it out without the removal of the lamp from the socket.

Having thus described my invention, what I claim is—

1. In a double-filament incandescent electric lamp, the combination of a slotted collar surrounding the base of the lamp, a contact-plate located in the slot in the collar and connected with a terminal of one of the filaments of the lamp, and a rotating ring mounted upon the said collar and adapted to make contact with the said plate, substantially as described.

2. In an incandescent electric lamp, the combination with a bulb, of a primary and an auxiliary filament, a base-plate connected to the corresponding terminals of both of the said filaments, a slotted collar surrounding the base of the bulb, a contact-plate located in the slot in the collar and connected with the opposite terminal of the auxiliary filament and a rotating ring surrounding the collar and adapted according to its position to make contact between the said contact-plate and collar or to break the said contact, substantially as described.

3. In an incandescent electric lamp, the combination with a bulb, of a primary and an auxiliary filament, a plate connected to the corresponding terminals of both of the said filaments, a slotted collar surrounding the base of the bulb and connected with the opposite terminal of the primary filament, a contact-piece located in the slot of the collar and connected to the opposite terminal of the auxiliary filament, an annular groove in the collar, and a rotating ring having a swelled portion, mounted within the groove in the collar and adapted to make or break contact between the collar and the contact-plate, substantially as described.

4. In an incandescent electric lamp, the combination with a bulb, of a primary and auxiliary filament a base-plate connected to the corresponding terminals of both of the said filaments, a slotted collar surrounding the base of the bulb and connected with the opposite terminal of the primary filament, an insulating-sheet located between the collar and bulb, and held in place thereby, a contact-plate mounted upon the said sheet and located in the slot of the collar, a leading-in wire connected to the said contact-plate and the terminal of the auxiliary filament and passing beneath the insulating-sheet, an annular groove in the collar, and a rotating ring having a swelled portion, mounted within the groove in the collar and adapted to make or break contact between the collar and contact-piece, substantially as described.

In testimony whereof I have hereunto set my hand this 6th day of October, 1900.

LEVI LOBENTHAL.

Witnesses:
EDWARD G. GIBSON,
HENRY LOBENTHAL.