No. 676,069. Patented June 11, 1901.

L. LOBENTHAL.

INCANDESCENT ELECTRIC LAMP.

(Application filed Apr. 1, 1901.)

(No Model.)

Fig. 1.

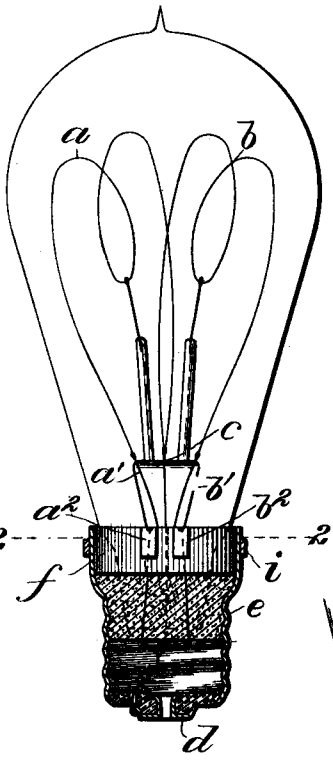


Fig. 2.

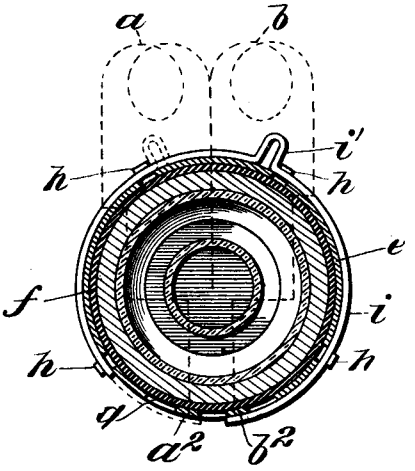
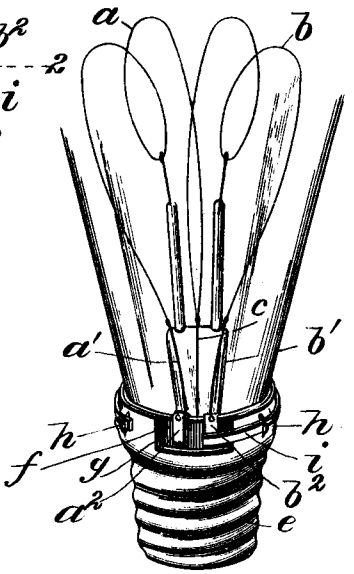


Fig. 3.



Levi Lobenthal, Inventor.

Witnesses

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UNITED STATES PATENT OFFICE.

LEVI LOBENTHAL, OF NEW YORK, N. Y., ASSIGNOR OF ELEVEN-TWENTIETHS TO THOMAS E. McIVER, OF SAME PLACE, AND JOHN McCULLOUGH, OF NEWARK, NEW JERSEY.

INCANDESCENT ELECTRIC LAMP.

SPECIFICATION forming part of Letters Patent No. 676,069, dated June 11, 1901.

Application filed April 1, 1901. Serial No. 53,897. (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 at will either of the filaments of a double-filament incandescent lamp may be thrown into circuit, and thus rendered luminous, without necessitating the removal of the lamp from the socket, and whereby a lamp having the capabilities above specified is adapted to be used in an 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 simultaneously throwing into circuit one of the two filaments of the lamp and for throwing the other filament out of circuit, 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 letters of reference, Figure 1 is a side elevation, partly in section, of a lamp having my invention applied thereto. Fig. 2 is a section on line 2 2 of Fig. 1, having a diagrammatic representation of the circuits. Fig. 3 is a perspective view of a base of a lamp having this invention applied thereto.

This invention is an improvement upon that described in another application filed by me in the United States Patent Office on the 11th day of October, 1900, and serially numbered 32,775. In the application above named I contemplated an arrangement whereby what is therein termed the "primary" filament could be used by itself or the primary and auxiliary filaments used together in multiple arc with each other, or in the case of the destruction of the primary filament the auxiliary filament could be used by itself; but in this my present invention I have two filaments either of which can at any time be brought into the circuit and rendered luminous, but both of which cannot be brought into the circuit at the same time. By this means either filament can be used by itself irrespective of the condition of the other filament, so that if one of the filaments be of greater candle-power than the other it will be possible by manipulation of the switching mechanism hereinafter described to throw into the circuit that filament having the desired candle-power. While I have therefore shown two filaments a and b of my improved lamp of similar construction it will be understood that if desired one filament may be of greater candle-power than the other, although this is not necessary, as by the use of two identical filaments the advantage is obtained of practically doubling the life of the lamp.

One end of each of the filaments a and b is connected with a leading-in wire c, connected with the cap or plate d on the base of the lamp, the opposite terminals of the filaments, which will hereinafter be termed the "outer" terminals, being connected with the leading-in wires a' and b', respectively.

The base of the lamp-bulb is surrounded with a collar e of the usual construction, except as hereinafter specified, the collar being adapted to be received in any appropriate form of socket. A washer f of insulating material, such as indurated fiber, is interposed between the neck of the collar and the lamp-bulb and carries thereon two contact-plates a^2 and b^2, adjacent to but insulated from each other, the said plates resting in a notch g in the top of the collar and the outer surface of the plates being flush with the surface of the neck of the collar. The leading-in wires a' and b' pass upwardly between the outer surface of the lamp-bulb and the washer f and are connected to the contact-plates a^2 and b^2, respectively.

The neck of the collar has ears h struck up thereon and adapted to receive a split ring i, provided with a handle portion i', the open-

ing in the split ring being substantially equal to the conjoint width of the contact-plates and the width of the insulating space between them, whereby as the ring is rotated in its guiding-ears either one of the contact-plates may be brought into electrical connection with the collar. The electrical connection of the ring with the contact-plate a^2 is shown in dotted lines in Fig. 2, whereas if the ring be in the position shown in full lines in that figure the connection will be with the contact-plate b^2. The exact width of the opening in the ring may be varied, but I prefer that it be of the width before given, as thereby it is rendered impossible to simultaneously throw the full current strength through both filaments in multiple (this being due to the resistance of the slight contact area in circuit at that time) or to entirely cut out both filaments at the same time by a movement of the ring.

In order to prevent the rotation of the ring to an extent to cause it to simultaneously and fully connect both contact-plates with the collar, the guide-ears h for the ring are so disposed as to serve as limit-stops for the handle portion of the ring, thus preventing the movement of the latter beyond the positions shown in Fig. 2.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an incandescent electric lamp, the combination with a bulb, of two filaments, a slotted collar surrounding the base of the bulb, two contact-plates located in the slots in the collar, insulated from each other and connected with the outer terminal of the filaments and a rotating ring mounted upon the said collar and adapted to make contact between either of the said plates and the collar, substantially as described.

2. In a double-filament incandescent electric lamp, the combination of a slotted collar surrounding the base of the lamp, a plurality of contact-plates located in the slots of the collar, insulated from each other and connected with the terminals of the filaments of the lamp, a rotating ring mounted upon the said collar and adapted to make contact between either of the said plates and the collar, and means for preventing the movement of the ring, substantially as described.

3. In an incandescent electric lamp, the combination with a globe of two filaments, a plate connected to the corresponding terminals of the said filaments, a slotted collar surrounding the base of the bulb, a plurality of contact-plates located in the slots of the collar adjacent to, but insulated from, each other, and connected to the terminals of the filaments, and a ring mounted on the collar and having an open portion, of a proper arc to bridge either of the said contact-plates, according to its position, substantially as described.

4. In a double-filament incandescent electric lamp, the combination with a globe of two filaments, a plate connected to the corresponding terminals of both of the said filaments, a slotted collar surrounding the base of the bulb, a plurality of contact-plates located in the slots of the collar adjacent to, but insulated from, each other, and connected to the terminals of the filaments, and a ring mounted on the collar having an open portion of a width substantially equal to the conjoint width of the contact-plates and the space between them, substantially as described.

In testimony whereof I have hereunto set my hand this 28th day of March, 1901.

LEVI LOBENTHAL.

Witnesses:
CHRISTOPHER A. MAY,
HENRY C. GOTTESMAN.