(No Model.)

E. WESTON.

HOLDER FOR INCANDESCENT LAMPS.

No. 298,142. Patented May 6, 1884.

Fig. 1.

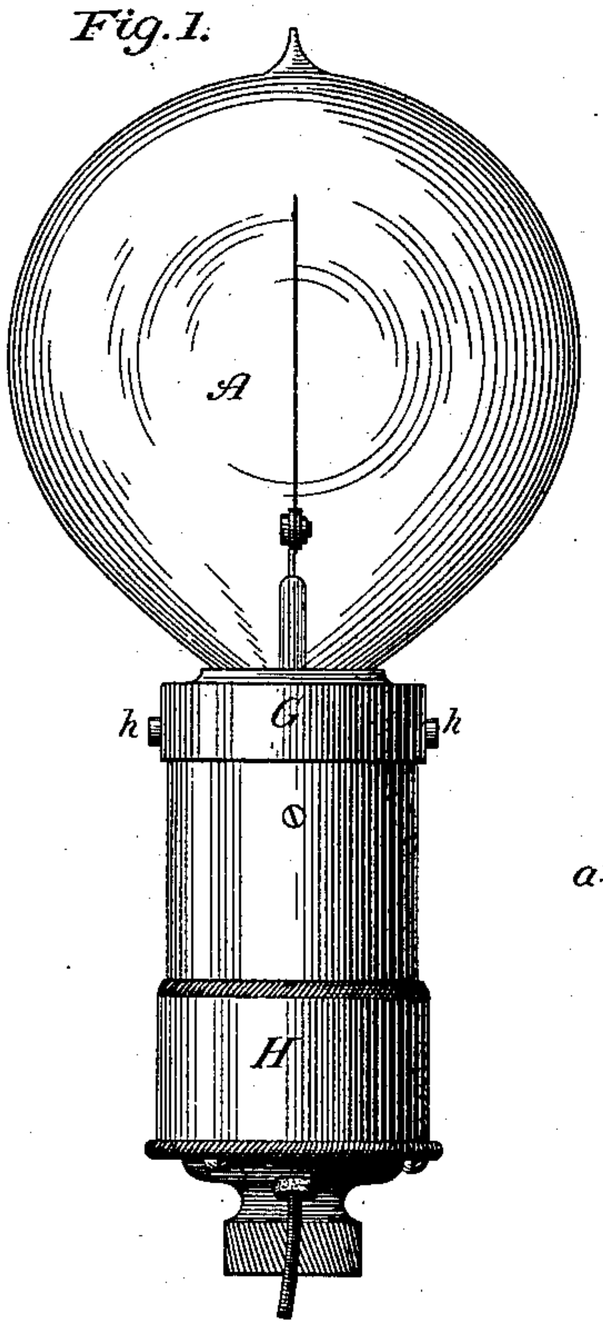


Fig. 2.

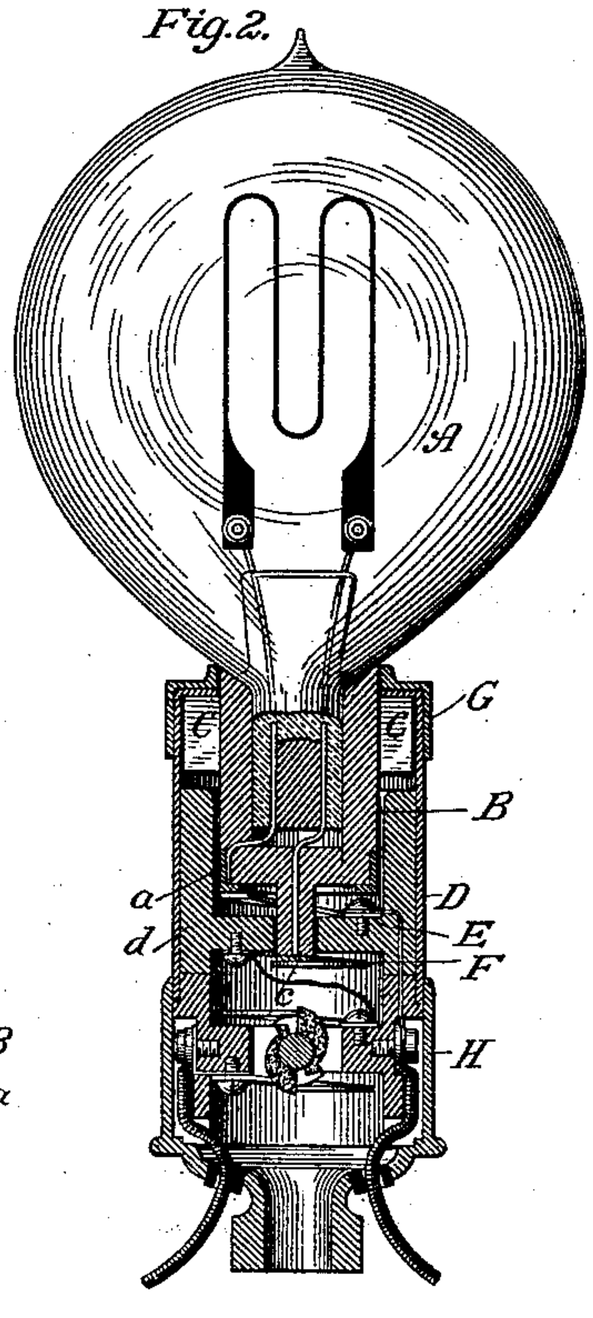


Fig. 3.

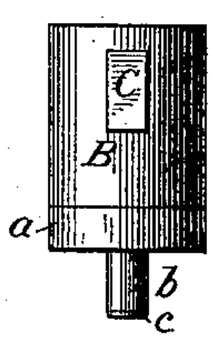


Fig. 4.

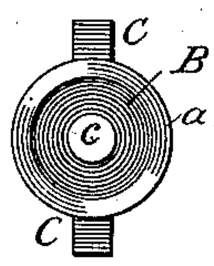


Fig. 5.

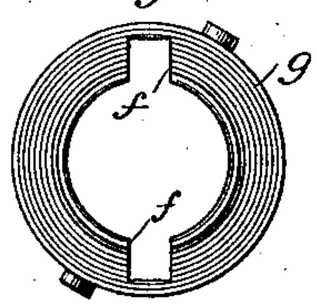


Fig. 6.

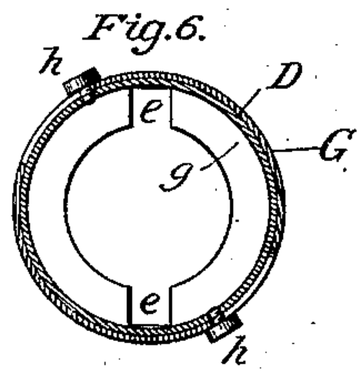


Fig. 7.

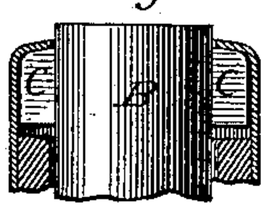


Fig. 8.

Fig. 9.

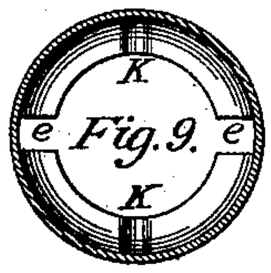


Fig. 10.

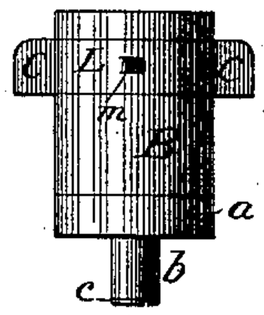


Fig. 11.

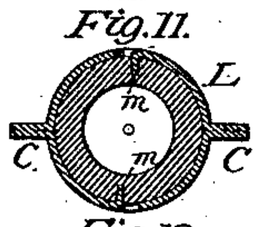
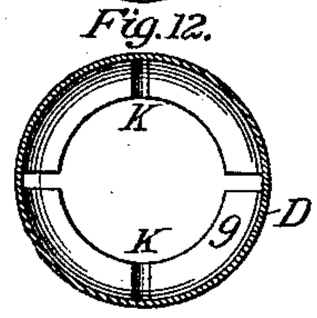


Fig. 12.



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UNITED STATES PATENT OFFICE.

EDWARD WESTON, OF NEWARK, NEW JERSEY, ASSIGNOR TO THE UNITED STATES ELECTRIC LIGHTING COMPANY, OF NEW YORK, N. Y.

HOLDER FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 298,142, dated May 6, 1884.

Application filed October 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, EDWARD WESTON, a subject of the Queen of Great Britain, and a resident of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Holders for Incandescent Lamps, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same, and in which—

Figure 1 is a view in elevation of an incandescent lamp and a holder constructed in accordance with my invention. Fig. 2 is a central vertical section of the holder and the base of the lamp, the remainder of the lamp being shown in elevation. Fig. 3 is an elevation, and Fig. 4 a view of the under side of an attachment to be used with the lamp. Fig. 5 is a plan view of a cap forming part of the holder; Fig. 6, a part section and interior view of a portion of the holder. Fig. 7 is an elevation and part section of a modified arrangement of the holder. Fig. 8 is a section of a portion of the holder, taken at right angles to that exhibited in Fig. 7. Fig. 9 is a part section and interior view of the same. Fig. 10 is a modification of Fig. 3; Fig. 11, a horizontal section of the same. Fig. 12 is a modified form of the part shown in Figs. 6 and 9.

Similar letters of reference indicate corresponding parts in all the figures.

The objects of this invention are to secure and maintain good contact between the lamp and socket or holder terminals, at the same time permitting the lamp to be turned in its holder in either direction, to prevent the lamp from displacement and from being injured by the attempts of unskilled persons to remove it from the holder in ways which would injure the mechanical or circuit connections. To accomplish these objects I provide a socket or holder with contact points or terminals in such position as to register and press against the lamp-terminals when the latter is in place, and I construct the lamp and holder in such manner that this contact may be preserved and the lamp held in place by locking devices that permit it to be turned in its seat in either direction.

In illustrating my invention I have made use of a simple and practicable combination, in which the neck of the lamp is provided with ears or lugs, and the holder is formed with an interior flange, cut away at two points. Other ways of carrying out the invention are, however, made the subject of another application of even date herewith.

I apply to the neck of an ordinary incandescent lamp, A, a cylindrical cup or base of insulating material, B, having a projection, *b*, on the bottom or end. The material for this may be rubber, vulcanite, or the like, and the manner of its application may be greatly varied. Around the lower edge of the part B, I attach a metal rim, *a*, to which one of the conductors of the lamp is secured. The other conductor is led through the base B and soldered to a plate, *c*, secured to the end of the projection *b*. Ears or lugs C C are formed on or secured to the sides of the insulating-base B.

The holder consists of the following parts: A shell or box, D, of sheet metal, with an insulating-lining, *d*, to which are secured, in proper position to encounter and press upon the terminal plates of the lamp-base, contact-springs E F, which form the terminals of conductors carried into the box D. The specific construction and arrangement of these terminals are immaterial. I prefer, however, to use a cup of vulcanite or other insulator with a perforation in the bottom, through which the projection *b* extends when the lamp is in place. In this cup I secure a bent spring contact-plate, E, and on the under side of the cup a similar spring-plate, F, in such positions that they will bear respectively upon the rim *a* and the plate *c* when the lamp is in place. The rim *g* of the shell D is flanged inward and cut away at two points, *e e*. These constitute the essential portions of the holder. I may use in addition to them a locking device consisting of a cap, G, with an opening of slightly greater diameter than the base B, and having notches or cut-away portions at the points *f f*. The cap G is secured to the casing or shell D by screws *h h*, passing through slots in the cup and entering the sides of the shell. In conjunction with the shell D, I may use a

base or holder, as H, containing a circuit-breaker. A useful form of the latter is shown in illustration of its application.

In using the device the base B, attached to a lamp, is inserted in the casing D, and turned until the lugs C C pass through the notches *e e*. The lamp is then turned to carry the lugs C C under the flanged rim *g*. If a cap, G, be used, it is turned, so that its notches *f f* register with the notches *e e*. After the lamp is in place, it is turned so as to cover the notches *e e*. When thus secured in place, the spring E will be in contact with the rim *a* and the spring F in contact with the plate *c*, as before explained.

When the cap G is dispensed with, the lamp may be prevented from turning and becoming detached from the holder by forming in the flanged rim of the latter depressions K K, as shown in Figs. 8 and 9. The lamp, when inserted in a holder thus formed, is turned until the lugs C C enter these depressions, where they will be held by the upward pressure of the contact-springs E F, the latter forming a spring-seat for the lamp.

The lugs C C, in lieu of being formed as part of the base B, may be secured thereto in any convenient manner. One plan of doing this is illustrated in Figs. 10 and 11, where L designates a metal collar provided with ears C C, that is slipped over the base B, and held in place by the points *m*.

It is obvious that, in lieu of forming or attaching the ears to the base B and using the same in conjunction with the flanged holder, the base B may contain vertical and horizontal grooves and the holder be provided with lugs to enter the grooves and hold the lamp in position. This construction is not illustrated in the present case, however, inasmuch as it is made the subject of another application. The objects in either case, it will be seen, are to allow the lamp to have a rotary movement in its holder without injury to the connections. This is extremely desirable on account of the liability to accidental breaking of the holders by persons attempting to remove the lamp by turning it. With the construction devised by me a spring-contact is always maintained while the lamp is in place, which a rotary movement of the lamp does not impair, unless the retaining-lugs be brought to register with the cut-away portions of the holder, in which event the force of the springs will lift the lamp out of the holder.

In describing my invention I have selected the best forms of which I am aware for the embodiment of the same. These may, however, be greatly varied in mechanical construction and design, the essential features being those indicated in the subjoined claims.

Features of novelty herein shown or described, but not claimed, form the subject of other applications.

What I claim is—

1. The combination, with an incandescent lamp and terminal plates secured to the same, of a holder or socket, means for locking or retaining the lamp therein, and spring-contacts in position to bear upon the terminals of the lamp, and arranged to exert a force tending to raise the lamp from the socket or holder, as set forth.

2. The combination, with an incandescent lamp and terminal plates secured to the same, of a holder or socket, spring-contacts therein, forming a seat for the lamp, and means, substantially as described, for locking or retaining the lamp in position against the springs and permitting it to be turned, as and for the purpose specified.

3. The combination, with an incandescent lamp having lugs or ears on the sides of its neck, of a socket or holder having a flanged rim with notches cut therein for admitting and retaining the neck of the lamp, and springs for forcing the lugs or ears against the flange when the lamp is in the holder, as set forth.

4. The combination, with an incandescent lamp having lugs or ears on the sides of its neck, of a socket or holder having a flanged rim with notches cut therein, and a perforated cap or cover with notches corresponding to those in the holder, these parts being constructed for use and operation in substantially the manner set forth.

5. The combination, with the lamp A and base B, having ears or lugs C, and contact-plates *a c*, of a holder or socket, D, having a flanged and notched rim, *g*, and the spring-terminals E F, secured within said holder in a manner to bear upon the plates *a b* on the lamp when the latter is in position, as and for the purpose specified.

In testimony whereof I have hereunto set my hand this 1st day of October, 1883.

EDWARD WESTON.

Witnesses:

HENRY A. BECKMEYER,

H. S. LOWE.