

J. J. ROONEY.
 INCANDESCENT ELECTRIC LAMP.
 APPLICATION FILED JAN. 5, 1910.

1,011,890.

Patented Dec. 12, 1911.

Fig. 1.

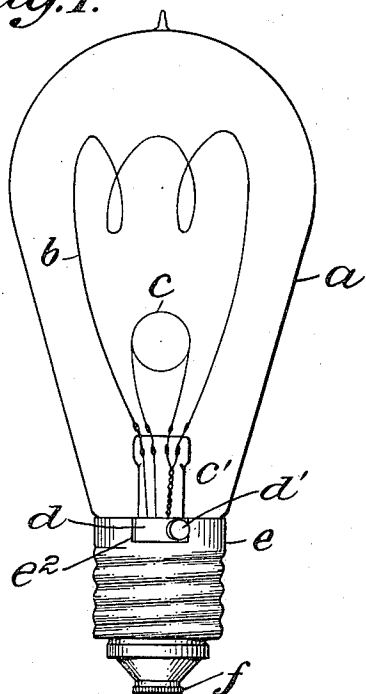


Fig. 2.

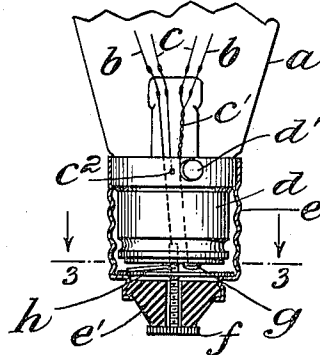


Fig. 3.

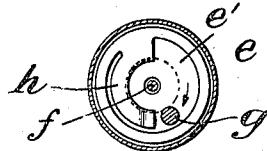


Fig. 4.

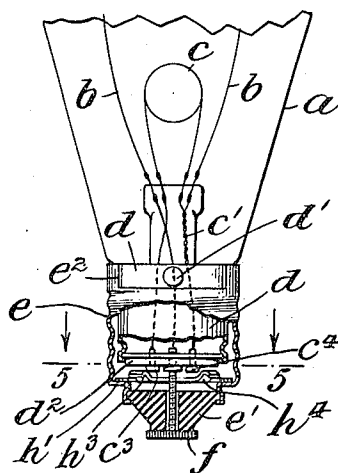


Fig. 5.

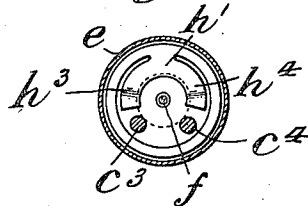


Fig. 6.

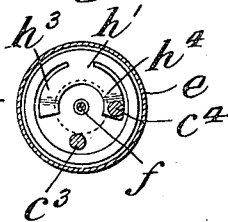
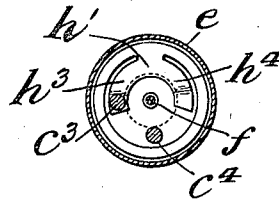


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN J. ROONEY, OF NEW YORK, N. Y.

INCANDESCENT ELECTRIC LAMP.

1,011,890.

Specification of Letters Patent.

Patented Dec. 12, 1911.

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To all whom it may concern:

Be it known that I, JOHN J. ROONEY, a citizen of the United States, residing at No. 59 St. John's Place, in the borough of Brooklyn of the city of New York, in the State of New York, have invented certain new and useful Improvements in Incandescent Electric Lamps, of which the following is a specification, reference being had to the accompanying drawing, forming a part hereof.

This invention relates to so-called "turn-down" incandescent electric lamps which have a plurality of filaments so connected and arranged that one or another may be made to glow and thereby secure illumination of different intensity.

The object of the invention is to provide means whereby the desired result can be produced by a partial rotation of the lamp bulb.

The invention will be more fully explained hereinafter with reference to the accompanying drawing in which—

Figure 1 is a view in elevation of an incandescent electric lamp which embodies the invention in which the turning of the bulb effects the change from strong light to dim light or vice versa, but does not extinguish the light altogether. Fig. 2 is a detail view of the same partly in section. Fig. 3 is a detail view in section on the plane indicated by the line 3—3 of Fig. 2, looking in the direction of the arrows. Fig. 4 is a view similar to Fig. 2, but showing a lamp in which the turning of the bulb effects also the extinguishing of the light. Figs. 5, 6 and 7 are detail views in section on the plane indicated by the line 5—5 of Fig. 4, looking in the direction of the arrows, the several views showing three different positions.

The lamp illustrated in Figs. 1, 2 and 3 comprises the usual bulb *a*, a main or strong light filament *b* and a secondary or dim light filament *c*, one end of each filament being connected to a corresponding terminal while the two filaments have a common electrical connection indicated by the twisted leading in wires at *c'*. The bulb *a* is seated in a base *d* which is supported by and has a limited movement of rotation in the shell *e* which is adapted for insertion in the usual socket. The inner shell or base *d* is in electrical contact with the outer shell *e* and is also electrically connected, as indicated

at *c'*, with one end of the secondary filament *c*, so that the outer shell *e* forms the terminal of the secondary filament *c* and is adapted to be brought into electrical connection with the supply wire through the socket as usual. The shell *e* also carries a central terminal *f*, which is adapted to make contact with the corresponding insulated terminal in the socket, as usual, and forms the terminal for the main filament *b*. As shown clearly in Fig. 2, the terminal *f* may consist of a screw which passes through the insulating block *e'*, carried by the outer shell *e*, and engages the base or inner shell *d*, thus serving to hold the base *d* in the shell *e*. A stud *d'* on the base or inner shell *d* enters a slot or notch *e'* in the edge of the shell *e* and limits the movement of rotation of the bulb and base with respect to the shell *e*. The common connection *c'* of the two filaments is carried to an eccentric contact *g* which projects from the end of the base *d* and is insulated therefrom. Secured in the shell *e*, in electrical connection therewith, is a spring contact arm *h*, into and out of contact with which the contact *g* may be moved by partial rotation of the bulb in one direction or the other. When the bulb is in the position represented in Figs. 1, 2 and 3, with the contact *g* out of contact with the spring arm *h*, the current which enters through the terminal *f* passes through the two filaments in series to the inner shell *d* and the outer shell *e*, but when the bulb is turned so as to place the contact *g* in contact with the contact arm *h*, then the current passes from the terminal *f* through the primary filament *b* direct to the shell *d* and the shell *e*, thus short circuiting the filament *c*. In the position first described the secondary filament *c* alone glows, while in the second position described the filament *b* alone glows. The relation of the filaments is such that a strong light is given by the filament *b* and a dim light by the filament *c*.

In the lamp shown in Figs. 1, 2 and 3, the usual socket key, not shown, is depended upon to cut off current altogether and extinguish the lamp, but in the lamp shown in Figs. 4, 5, 6 and 7 the complete cutting off of the current and the extinguishing of the lamp are also effected by the partial rotation of the bulb *a*. In this lamp, the main and secondary filaments *b* and *c* have a common connection *c'*, as described with reference to the lamp shown in Figs. 1, 2 and 3, and the

bulb is secured in a base or inner shell d which is in electrical contact with the outer shell e and is adapted for partial rotation therein, such rotation being limited by a stud d' in the slot or notch e^2 in the edge of the outer shell e . The terminal of the main filament b is likewise a screw f which passes through an insulating block e' carried by the shell e and engages the insulating block d^2 which forms the end of the shell or base d . In the block d^2 are mounted two contacts, one of which, c^3 , forms the terminal of the secondary filament c , while to the other contact c^4 is carried the common connection c' of the two filaments. Secured to the shell e and in electrical contact therewith is a contact plate h' having two spring contact arms h^3 and h^4 , the distance between the ends of the arms being such as to permit the two contacts c^3 and c^4 to stand between them when the bulb is in the middle position, as shown in Fig. 5. In this position the current is cut off entirely from the lamp. When, however, the lamp is turned from its middle position, represented in Figs. 4 and 5, to the right, as shown in Fig. 6, the circuit is completed from the terminal f through the main filament b , the common connection c' , the contact c^4 and the contact arm h^4 and shell e , short circuiting the secondary filament c and giving strong light. When, however, the bulb is turned from its middle position to the left, as indicated in Fig. 7, the circuit is completed from the terminal f through the filaments b and c in series, the contact c^3 and contact h^3 and h' , and shell e , thus placing the two filaments in series so that, through the relation of the two filaments, the secondary filament c alone glows, giving the dim light.

The embodiment of the invention illustrated in Figs. 1, 2 and 3 is designed for use with lamp sockets provided with the usual key and that shown in Figs. 4, 5, 6 and 7 is

designed for use with lamp sockets which may be constructed without the usual key. Obviously, the latter form might also be used with sockets provided with a key.

I claim as my invention:

1. In an incandescent electric lamp having two filaments in series with a common electrical connection, the combination of a lamp base, a shell in which said base has a limited movement of rotation, an insulating block in the end of said shell, a terminal screw passing loosely through said block and engaging the base to hold the base in the shell and to which one of said filaments is connected, an eccentric contact carried by said base and to which the common connection between the filaments is connected, an eccentric contact carried by said shell for co-operation with the last named contact, and means to complete the circuit from the second filament to the shell.

2. In an incandescent electric lamp having two filaments in series with a common electrical connection, the combination of a lamp base, a shell in which said base has a limited movement of rotation, an insulating block in the end of said shell, a terminal screw passing loosely through said block and engaging the base to hold the base in the shell and to which one of said filaments is connected, two eccentric contacts carried by said base and having connected thereto respectively the common connection between the filaments and the terminal of the second filament, and eccentric contacts carried by said shell for co-operation with the last named contacts respectively.

This specification signed and witnessed this 16th day of November A. D. 1909.

JOHN J. ROONEY.

Signed in the presence of—

ELLA J. KRUGER,
AMBROSE L. O'SHEA.