(No Model.)

M. J. WIGHTMAN & H. LEMP.

INCANDESCENT LAMP FIXTURE.

No. 363,568. Patented May 24, 1887.

Fig. 1.

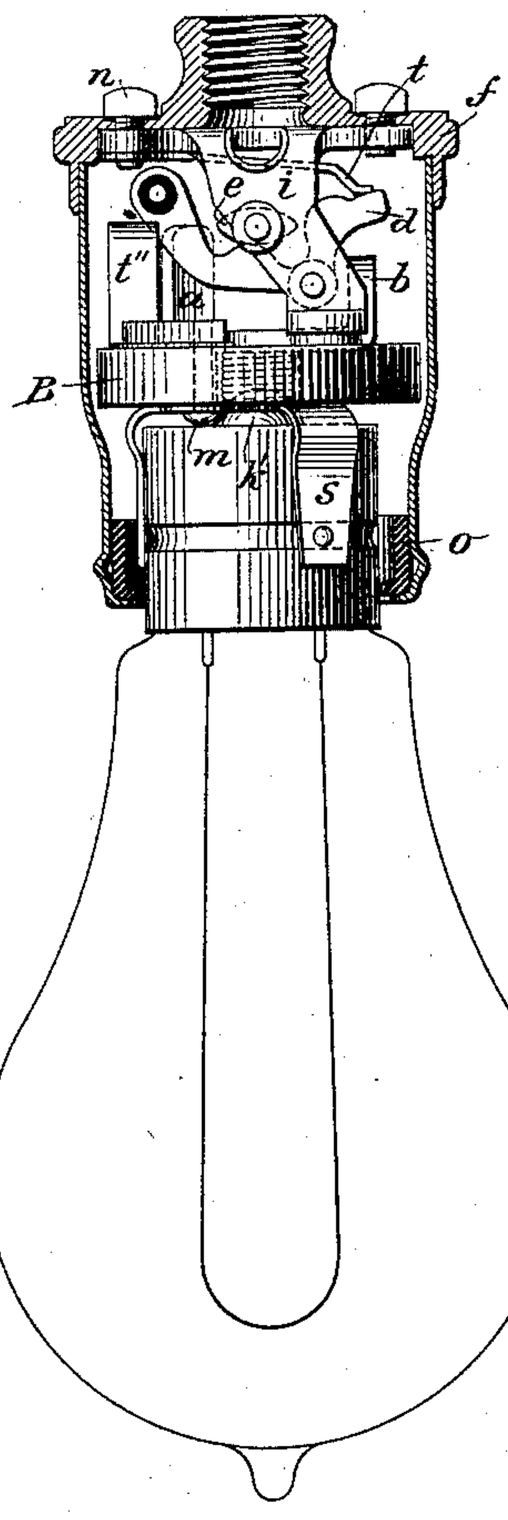


Fig. 2.

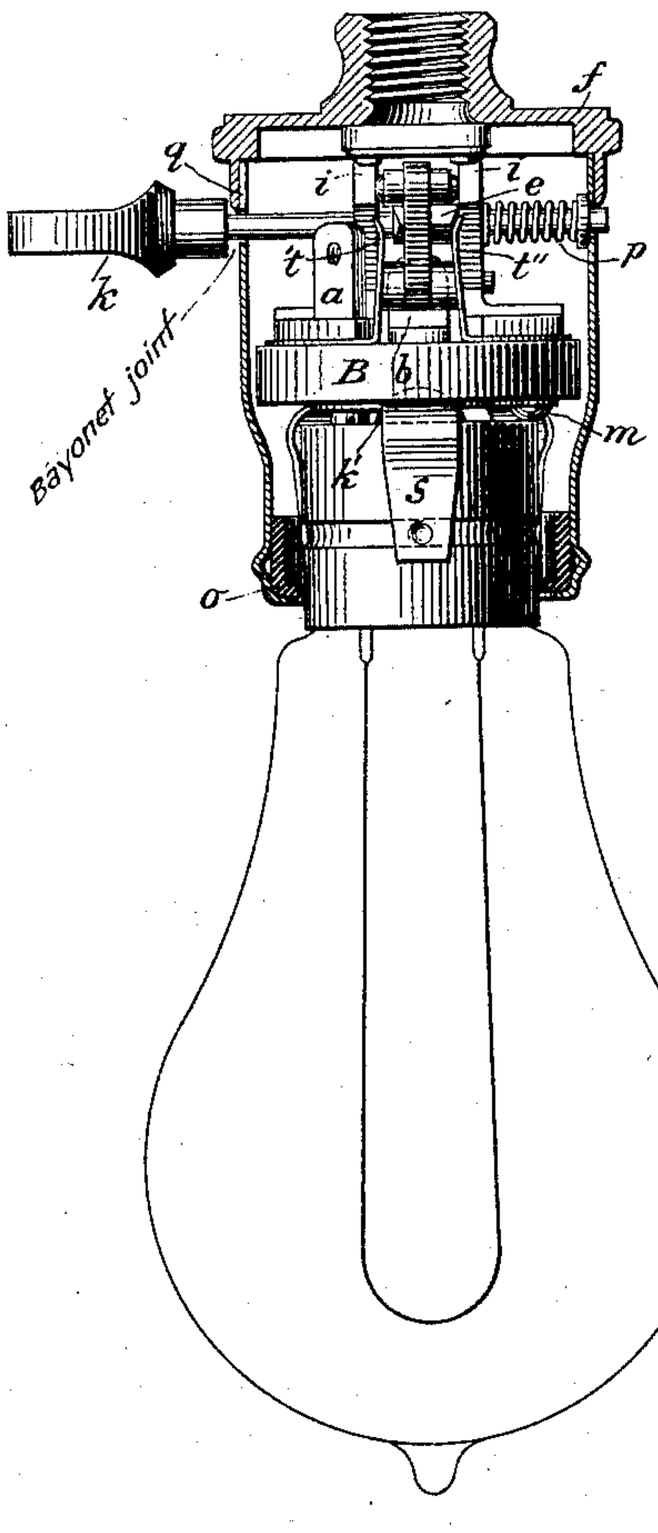


Fig. 3.

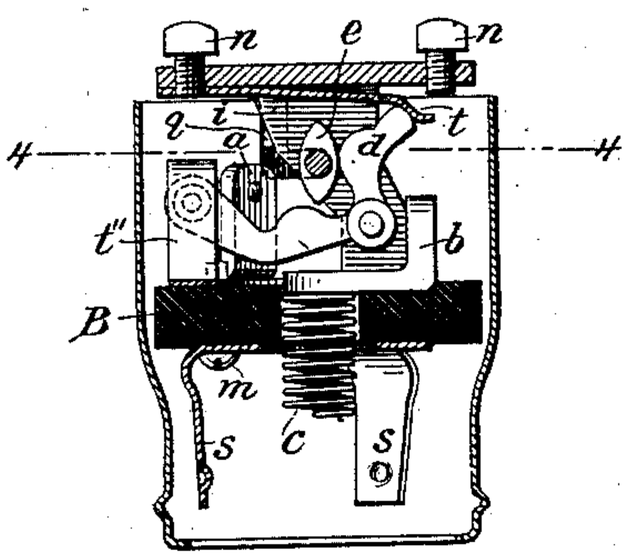
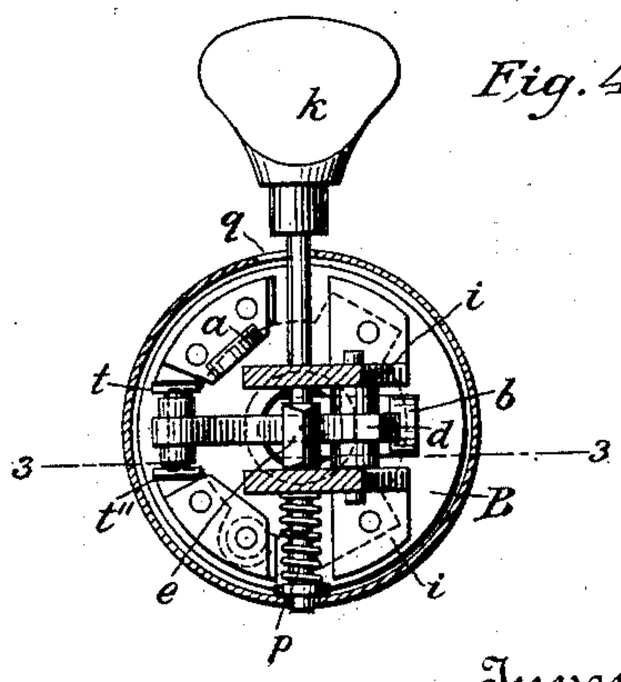


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

MERLE J. WIGHTMAN AND HERMANN LEMP, OF HARTFORD, CONNECTICUT.

INCANDESCENT-LAMP FIXTURE.

SPECIFICATION forming part of Letters Patent No. 363,568, dated May 24, 1887.

Application filed August 19, 1886. Serial No. 211,318. (No model.)

To all whom it may concern:

Be it known that we, MERLE J. WIGHTMAN and HERMANN LEMP, citizens of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented a new and useful Improvement in Incandescent Electric-Lamp Fixtures, of which the following is a specification.

The object of the invention is to construct an incandescent-lamp fixture which is compact in form and in which the key for controlling the circuit of the lamp will operate to establish or disrupt the circuit between two terminals when the key is turned in either direction, and also to secure an incandescent-lamp fixture which is easily put together, consists but of few parts, and permits the lamp to be readily inserted in the fixture and easily removed therefrom.

The invention consists in certain details of construction, which will be hereinafter described, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, in which the same letters of reference indicate the same parts, Figure 1 represents a side elevation of our fixture; Fig. 2, an elevation at right angles to the plane of Fig. 1, looking from the left-hand side of this figure. Fig. 3 represents a sectional view on the line 3 3 of Fig. 4, and Fig. 4 a cross-section on the line 4 4 of Fig. 3.

In the drawings, B is a circular base-plate of insulating material within a metallic casing adapted to house all the parts of our invention. Upon this circular base is mounted a frame, *i i*, which carries at its top or horizontal portion nuts or screws *n n*, which are adapted to pass through slots in a cap-piece, *f*, which covers the top of the casing. This cap-piece is screw-threaded, in order to permit it to be attached to any object or for receiving another cap-piece, which tightly embraces the leading-in wires. By rotating the nuts *n* the cap-piece is secured to the frame *i i*.

Passing through the frame *i i* is a key, *k*, carrying a cam, *e*, between the uprights of the frame, and adapted to act upon a right-angled lever, *d*, having cam-surfaces, and a spring, *t*, bearing upon the end of this lever to hold it in its raised or lowered position. (Shown in Figs. 1 and 3, respectively.) This right-angled lever is journaled in the uprights of the frame *i i* below the key, as shown, and carries at its farther end a metallic pin insulated from the lever for establishing and disrupting the circuit between the terminals t' t^2. One of these terminals is in an electrical connection with a block, *a*, connected directly with a leading-in wire, which is inserted through a hole therein. The other spring, t^2, is in electrical connection with a metal piece upon the lower side of the base B, having depending springs *s*, for embracing the neck of the lamp. The connection between the spring t^2 and the springs *s* is made through a screw, *m*, which passes through the insulating-base.

The lamp is provided with a circular metallic neck, which is in connection with one of the lamp-terminals, and has a groove around the neck adapted to engage with bosses or raised metal portions on the springs *s* for securing the lamp in position, and at the same time establishing its circuit. The other terminal of the lamp is connected with a knob, *k'*, (shown in Figs. 1 and 2, in part, by dotted lines,) extending from the bottom of the lamp, and adapted to make connection with a spiral spring, *c*, passing through a cavity in the insulating-base B, and secured to a metallic piece, *b*, to which the other leading-in wire is secured.

The lower end of the casing is turned in so as to embrace the neck of the lamp, and has a ring, *o*, of insulating material, which is also turned up at its edge for insulating the casing from the lamp.

The key *k* above described has a spiral spring upon it between the frame *i* and a collar near the end of the key, and is free to slide within the journals provided by the frame *i*. This key registers with a hole and a right-angled slot in the casing, and is constructed to support the circular base, carrying the circuit-controlling mechanism, the frame, the cap-piece, and the lamp. To detach the parts the lamp is first removed by drawing it down, the bosses on the springs *s* riding out of the groove. The key is then pulled from the socket-piece, which allows its end to leave the hole in the casing, and is then rotated to the left. (See Fig. 4.) This causes the spindle of the key to register with the vertical part of the slot in the cas-

ing. The end of the key having left the hole in the casing, the circuit-controlling mechanism and other devices in the interior of the socket-piece, as well as the cap-piece, can then be readily withdrawn from the socket-piece. The cap-piece may be removed independently of this by turning the nuts *n n* so as to register with the slots in the cap-piece.

It will be apparent from the construction of the parts shown and described that the key may be turned in either direction at will to make and break the circuit, for by reference to Fig. 1 it will be seen that when the cam *e* upon said key is turned to the right or to the left its action will be to throw the end bearing the contact-pin downward, and when this contact-pin is in its lowered position (see Fig. 3) the cam *e* will act upon the vertical portion of the lever upon the other side of the lever-arm in whichever direction it is turned. It will be observed, also, that the spring *t* acts upon the lever so as to snap it to its lowest or highest position after the cam has acted upon it to a certain extent, and that this action will take place no matter how slowly the cam is operated. This feature of having the key to operate the circuit-controlling mechanism in whichever direction it is turned is very desirable, for the reason that when such a key is made to turn in only one direction it is liable to be broken or injured by being turned in the wrong direction. It is also desirable in these electric-lamp fixtures to have the circuit instantaneously made and broken, so as to prevent sparking as much as possible. We only wish, however, in this case to claim these features in connection with devices herein, and when the circuit is established and broken between two contact-springs, as shown and described.

Having now described our invention, we desire to have it known that we do not limit ourselves to the exact construction shown, as the devices described may be varied without departing from the spirit of our invention, and we reserve the right in practice to make such variations ourselves; but

What we wish to claim and secure by Letters Patent is—

1. In an incandescent electric-lamp fixture, the combination of an axially-movable and rotary key, *k*, carrying the circuit-controlling mechanism and the lamp, and a casing, C, having a right-angled slot from its edge and a hole adapted to register with end of the key, whereby the key secures in position and supports said circuit-controlling mechanism and lamp in said casing.

2. In an incandescent electric-lamp fixture, a casing, a key, and means connected and co-operating therewith for supporting and holding in position the circuit-controlling mechanism within said casing by said key.

3. In an incandescent electric-lamp fixture, a casing, a key, means connected and co-operating therewith for supporting and holding in position the circuit-controlling mechanism within said casing by said key, and a cap for covering the top of said casing removably fastened to the frame carrying the circuit-controlling mechanism.

4. In an incandescent electric-lamp fixture, a key having an axial as well as a rotary movement, a cam upon its spindle, a contact-lever for establishing and disrupting the circuit acted upon by the cam, and a casing having a slot and hole therein for supporting the above parts and the lamp by means of said key.

5. In an incandescent electric-lamp fixture, the combination of a tubular casing, a key, circuit-controlling mechanism within said casing removably fastened to said casing by said key and mounted upon a base, contact-springs extending therefrom embracing the neck of the lamp connected with one of the lamp-terminals, and a cap covering the top of the casing carried by the frame-work bearing the key and circuit-controlling mechanism.

6. In an incandescent electric lamp, the combination of an insulating-base carrying upon one side circuit-controlling mechanism and on the other side depending springs, an incandescent lamp having a neck embraced and supported by the latter, a casing suitably sustained, and a key for the circuit-controlling mechanism, by which all of the above parts are secured to the casing.

7. In an incandescent electric lamp, the combination of an insulating-base carrying upon one side circuit-controlling mechanism and on the other side depending springs adapted to be connected with one of the line-terminals, an incandescent lamp having a metallic neck connected with one of the lamp-terminals embraced and supported by the latter and having a knob extending from the bottom connected with the other lamp-terminal, a metallic spring also mounted upon said base electrically connected with the other line-terminal for making contact with said knob, a casing suitably sustained, and a key for the circuit-controlling mechanism, by which all of the above parts are secured to the casing.

8. In an incandescent electric-lamp fixture, the combination of an insulating-base carrying upon one side circuit-controlling mechanism and a cap secured over the top of the same and on the other side depending springs, an incandescent lamp having a neck embraced and supported by the latter, a casing having a right-angled slot from the edge therein and a perforation, and a key having, in addition to its rotary motion, an axial movement adapted to register with said slot and perforation, by which the aforementioned parts are supported in the casing.

9. In an incandescent electric-lamp fixture, the combination of an insulating-base carrying upon one side circuit-controlling mechanism, a cap secured over the same and having on the other side depending springs adapted

to be connected with one of the line-terminals, an incandescent lamp having a metallic neck connected with one of the lamp-terminals embraced and supported by the latter and having a knob extending from the bottom connected with the other lamp-terminal, a metallic spring also mounted upon said base electrically connected with the other line-terminal for making contact with said knob, a casing having a right-angled slot from the edge therein and a perforation, and a key having, in addition to its rotary motion, an axial movement adapted to register with said slot and perforation, by which the above parts are supported in the casing.

In testimony whereof we have hereunto set our hands and seals, this 27th day of July, 1886, in the presence of the two subscribing witnesses.

MERLE J. WIGHTMAN. [L. S.]
HERMANN LEMP. [L. S.]

Witnesses:
WM. E. SHEPARD.
LOUIS M. SCHMIDT.