

(No Model.)

E. THOMSON & E. W. RICE, Jr.
HOLDER FOR INCANDESCENT LAMPS.

No. 344,692.

Patented June 29, 1886.

Fig. 1,

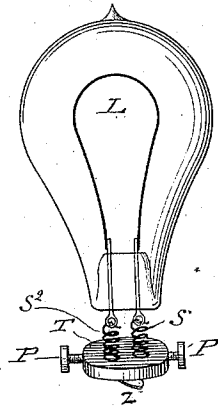


Fig. 2,

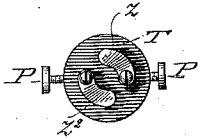


Fig. 3,

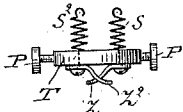


Fig. 4,

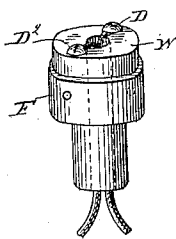


Fig. 5,

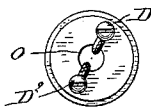


Fig. 6,

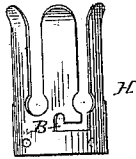


Fig. 7,

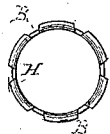


Fig. 8,

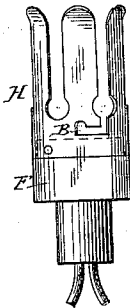


Fig. 9,

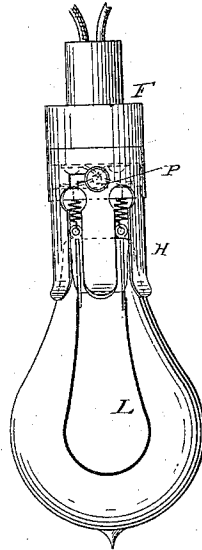
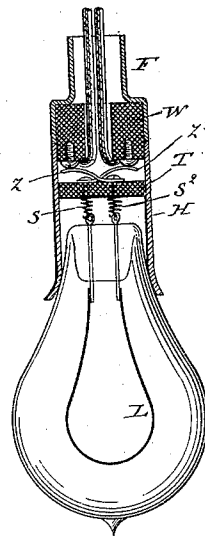


Fig. 10,



Witnesses:
Adolphus S Goodrich
Chas. Dooney

Inventors:
Elihu Thomson
E. W. Rice, Jr.,
By their Attorney: H. C. Townsend

UNITED STATES PATENT OFFICE.

ELIHU THOMSON AND E. WILBUR RICE, JR., OF LYNN, MASSACHUSETTS.

HOLDER FOR INCANDESCENT LAMPS.

SPECIFICATION forming part of Letters Patent No. 344,692, dated June 29, 1886.

Application filed April 6, 1885. Serial No. 161,399. (No model.)

To all whom it may concern:

Be it known that we, ELIHU THOMSON and E. WILBUR RICE, Jr., citizens of the United States, and residents of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Holders for Incandescent Lamps, of which the following is a specification.

Our invention relates to the construction of sockets or holders for incandescent electric lamps. Its object is to decrease the cost of the device, and at the same time to secure efficiency and ease of manipulation.

Our invention consists in the improved details of construction and combinations of parts, that will be described in connection with the accompanying drawings, and will be afterward specified in the claims.

In a holder constructed in accordance with our invention there are three principal parts. First, the fixed or permanent wire terminals carried by the portion screwed or otherwise secured to the bracket-suspending tube or other supports of the electrolier; second, the slotted socket guide or receptacle for the neck of the lamp, said guide or socket being secured to the first when in use; and, third, the spring bearing tablet or block of insulating material, constructed to be hooked or attached to the lamp-terminals through springs before connection to the socket, and provided with lateral pins or studs for engaging in a notched slot of the socket or guide, the parts being so combined that the neck of the lamp shall be held to its socket by the tension of the springs connecting the lamp proper with the spring bearing-tablet, as will be herein-after described.

Figure 1 is a perspective of the lamp and spring bearing-tablet attached to one another. Fig. 2 is a bottom view of the tablet. Fig. 3 is an edge view of the same. Fig. 4 is a perspective view of the part carrying the fixed wire terminals. Fig. 5 is a plan view of the same. Fig. 6 is an elevation of the socket or receptacle for the neck of the lamp, detached. Fig. 7 is a plan of the same. Fig. 8 is an elevation of the socket in place. Fig. 9 is a side view of the complete holder with an

incandescent lamp in place therein. Fig. 10 is a vertical section of the holder.

As an accessory to our invention, the incandescent lamp with which the holder is to be used is finished with small wire loops, hooks, or eyes upon the outer ends of the lamp entering wires.

Referring to Fig. 1, T indicates a small plate or tablet of insulating material, preferably circular, and carrying two small coiled springs, S S', finished at their ends with eyes or hooks adapted to be hooked to the lamp-terminals. Each of said springs is in separate connection with one of two small plates or plate-springs, Z Z', secured to the under side of the block or piece T. Lateral pins or buttons P P are inserted firmly into the sides of the block or plate T, as shown.

In Fig. 2 the small plate-springs Z Z' are shown in plan, and edge view in Fig. 3.

In Fig. 4, F indicates the block or support constructed to be screwed or otherwise attached to the service or bracket pipe, or otherwise supported as a fixture. It carries the leading-wires, which are brought out to the face of an insulating disk or washer, W, through a central hole in the latter, and secured to said disk by screws D D', Figs. 4 and 5. The disk or block W is attached firmly to F, and carried thereby.

The socket or receptacle for the lamp-neck consists of a hollow sleeve or thin slotted metal tube, and is shown at H, Fig. 6. The sides of said sleeve are provided with slots, as seen at B, which is similar to a bayonet-joint, and has expansions or notches at the end of its lateral portions. The slots at B B are arranged to receive and permit locking of the pins P P by a slight partial rotation, so as to hold the piece T in place when the lamp is inserted. In this locking action the small plate-springs Z Z' materially assist by forcing the pins P into the notch at the extremity of the slot B.

The springs S S' also conduce to the firm holding of the pins in the notches, as they are made so short as to be put under some tension in the act of drawing the pins downward to place, after the neck of the lamp impinges against the sides of the socket H. We may

depend altogether upon the springs $S S^2$ for the above purpose. The socket H is slipped over the part of the disk W projecting from F , as shown in Fig. 4, and laterally pinned to it, as seen in Fig. 8. Care should be taken to so locate the small slots $B B$ that when the disk T is in place the springs $Z Z^2$ will bear, respectively, upon the heads of the screws $D D^2$, Fig. 4.

In using the devices the lamp is hooked to the springs $S S^2$ of disk T , and by means of the pins $P P$ the disk T is taken between the finger and thumb and inserted into H and drawn, with the lamp still attached, down into it until the pins $P P$ can be made to enter into the right-angle slot or slots $B B$, as in Fig. 9.

It is to be understood that the disk T is always hooked to the lamp, as in Fig. 1, before any attempt to insert it into the holder H is made.

When the parts are constructed and used as described, no difficulty will be found in rapid and easy removal of the lamp and attached spring bearing-piece T from the holder, or its insertion therein. The connections for current are of course made or broken, as the case may be, on insertion or removal.

The simplicity of the construction will be seen from an inspection of a section, Fig. 10, where the disk or plate T is shown in edge view. The greatest ease and accessibility are secured, and the outside parts are completely insulated from the circuit. Moreover, the device is very inexpensive to construct. When the fixtures are out of use, though connected to lines, a plain cap is put over F and W , Fig. 4, instead of the sleeve H ; or H itself may remain as an efficient protection to the wire terminals $D D^2$.

We are aware that it has heretofore been proposed to make a socket for an electric lamp in which the lamp shall be secured in place in the socket by a bayonet-joint catch connected with a block rigidly secured to the lamp-neck, and to apply spring-pressure to prevent detachment of the parts of the bayonet-joint catch.

Our present invention relates to a novel combination of devices, whereby spring action may be utilized to prevent the accidental removal of the lamp from its socket; and it consists, essentially, in the interposition of the springs between the lamp proper and the tablet or block carrying the pins or other part of the bayonet-joint catch, the socket being so arranged that the neck proper of the lamp shall rest in it, and shall be held therein firmly, but

not rigidly, by the tension of the springs connecting said lamp with the tablet when the latter is in position to be engaged and locked in place.

What we claim as our invention is—

1. The combination, with the cup F , of the block W , of insulating material, the metallic sleeve and socket H , secured to the block, and constituting the fixed socket for the neck of the lamp, a detachable intermediate tablet or block having lateral studs or pins, and connecting plates or devices at top and bottom, for making connection, respectively, with the lamp and with wire terminals carried by block W , and spring-connections between said tablet and the lamp proper, as and for the purpose described.

2. The combination, substantially as described, of the tablet or block carrying contact plates or springs for making connection to the fixed wire terminals, a fixed base-plate or support, to which said tablet may be attached or detached at pleasure, a fixed socket, guide, or receptacle for the lamp, and a connecting spring or springs, $S S^2$, uniting the tablet with the conductors of the lamp, and operating to hold the lamp firmly to the fixed socket or receptacle by their spring action when the tablet is locked to the fixed base or support, as described.

3. The combination of the base F , the socket H , in which the lamp-neck rests, and which is secured to said base, the tablet or block provided with the locking-pins, and the springs $S S^2$, connecting the tablet to the lamp by a hook, as set forth, whereby the lamp is held firmly to the fixed base and socket by the springs when the pins are engaged, but may be detached from the socket and base by disengaging the tablet.

4. The combination of the tablet carrying contact springs or studs and pins $P P$, the springs connecting said tablet with the lamp, and the socket H , rising from the part having the bayonet-joint slot, and to a point where it can receive and hold the lamp against the action of the springs when the tablet is locked to its seat.

Signed at Lynn, in the county of Essex and State of Massachusetts, this 31st day of March, A. D. 1885.

ELIHU THOMSON.
E. WILBUR RICE, JR.

Witnesses:

A. L. ROHRER,
W. D. BALLOU.