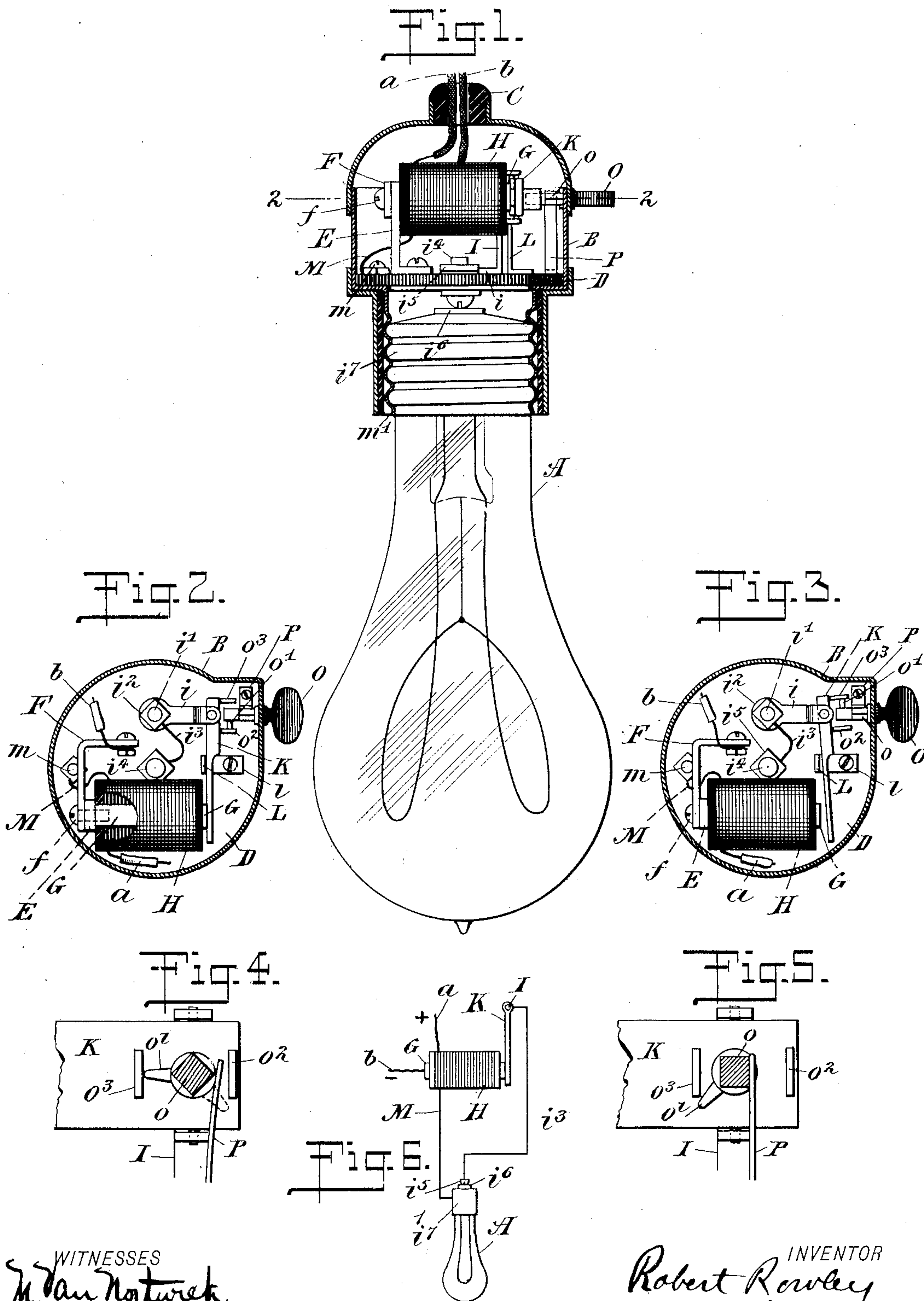


No. 860,153.

PATENTED JULY 16, 1907.

R. ROWLEY.
LAMP SOCKET.

APPLICATION FILED APR. 13, 1906.



WITNESSES
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LAMP-SOCKET.

No. 860,153.

Specification of Letters Patent.

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Application filed April 13, 1906. Serial No. 311,474.

To all whom it may concern:

Be it known that I, ROBERT ROWLEY, a citizen of the United States, and a resident of New York, borough of Manhattan, in the county of New York and State of New York, have made and invented certain new and useful Improvements in Lamp-Sockets, of which the following is a specification.

My invention relates to an improvement in lamp sockets, and more particularly to means preferably contained within the same for making and breaking the circuit through the lamp.

In large public buildings, hotels and office buildings, it frequently happens that the occupants of rooms will neglect to turn out the electric lights when leaving, the lamps being many times allowed to burn during the entire night, and frequently during the day when the light from such is not at all required. When a large number of lamps are thus allowed to burn, it results in a material loss or waste of current, and consequently a waste of coal required to generate the same. To avoid this loss, it has heretofore been the custom for an inspector, or other employee of the building to visit the rooms at predetermined times, and turn off the lamps found burning.

The object of my invention is to provide means whereby a switch, located at some convenient place in the building, (hereinafter referred to as the circuit switch), may be opened and immediately closed, the circuit through such lamps as are provided with my improvements, being thereby broken, and remain so until again completed by turning on the button or key of each individual lamp. Such lamps as are not provided with my improved means, will of course, be turned on when the circuit switch is closed.

With these and other ends in view, my invention comprises an electro magnet in series with the lamp, the armature of which is so arranged that when in contact with the core of said magnet, the circuit through the lamp will be completed, and when contact between said armature and core is broken by the opening of the circuit switch, the circuit through the lamp will be broken, and so remain until again completed by turning the lamp switch.

The invention further comprises certain novel features of construction and combinations of parts, as will be hereinafter fully described and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view partly in elevation, and partly in section, of a lamp and socket, the latter being constructed in accordance with my invention. Fig. 2 is a sectional view on the line 2-2 of Fig. 1, showing the armature in contact with the core of the magnet, thus completing the circuit through the lamp. Fig. 3 is a similar view showing the contact broken between the armature and the core of the magnet, and the circuit through the lamp

broken. Figs. 4 and 5 are detail views showing the lamp switch in its different positions. Fig. 6 is a diagrammatic view.

Referring to the drawings, A represents an electric lamp of ordinary construction adapted to be screwed into the socket B, through the insulated top C of which, pass the wires or electric conductors *a*, *b*, leading to a circuit switch (not shown), located at some convenient place in the building. In the socket B is located the disk or plate D, to which is screwed or otherwise secured the metal post E, provided at its upper end with the bent plate F, a screw *f* passing through said plate and arm into the metal core G of an electro magnet H.

To the insulating disk D is secured the post I, provided with the base plate *i* through which passes the screw *i*¹ having threaded thereon the nut *i*², a wire or electric conductor *i*³ connecting said base plate *i* with the screw *i*⁴, the latter passing through the insulating plate and provided with a head *i*⁵, wherewith to contact with the central pole *i*⁶ of the lamp A in the usual manner.

To the post I is hinged or pivoted one end of the armature K, the opposite end of the latter being adapted to contact with one end of the core G of the magnet H, but normally held out of contact therewith by means of the vertical spring L, the lower bent end *l* of which is screwed or otherwise secured to the insulating disk D. As the tension of the spring L is very weak, a slight push on the pivoted armature K will force the free end thereof in contact with the end of the core G, the armature remaining in such contact so long as the magnet is excited by the current passing around the same. When, however, the circuit is broken and the magnet passive, the tension of the spring L will force the armature out of contact with the core G, as illustrated in Fig. 3.

One end M of the wire or coil surrounding the magnet H, is electrically connected with the screw *m*, which passing through the insulating disk D, electrically contacts with the socket *m*¹, which latter in turn contacts with the other pole *i*⁷ of the lamp A when said lamp is screwed into the socket in the usual manner. The other end *a* of the coil passes out through the top of the socket B and leads to the circuit switch as before described, the wire or conductor *b* being electrically connected with the bent plate F, as illustrated in Fig. 2.

As will be seen by reference to the diagrammatic view, Fig. 6, the current will pass through the wire *a*, around the coil H, and through the opposite end M of said wire to the pole *i*⁷ of the lamp. As the opposite pole of the lamp *i*⁶ contacts with the screw *i*⁵, the current will pass through the same, through the wire *i*³, post I and armature K. When this armature K is in electrical contact with the core G of the magnet, the circuit will be completed through the same and through the wire or conductor *b* leading to the circuit switch.

When, however, this circuit switch is opened, the magnet H becomes passive, the spring L thereupon immediately forcing the armature K out of contact with the core G, as before described. The magnet H will now remain passive, even though the circuit switch be closed, until the armature K is again forced into contact with the core G, whereupon the magnet is immediately excited and the armature held in contact with said core until released therefrom by turning the lamp switch or by pulling the circuit switch.

In order to force the armature into contact with the core G, I provide the button or key O having a square shaft o provided with the pin or projection o^1 . When the button or switch O is turned, the pin o comes in contact with the projection o^2 formed on or secured to the armature K forcing the latter into contact with the core G. When the button or key is further turned, said pin or projection o^1 will strike the projection o^3 also formed on or secured to the armature K, but on the opposite side of its pivoted connection with the post I, thereby forcing said armature K out of contact with the core.

Against the squared shaft o of the key, bears the spring P, the lower end of which is secured to the insulating disk D, this arrangement resulting in holding the key in such positions that the pin or projection o^1 will not remain in contact with the pins or projections o^2, o^3 .

From the foregoing it will be understood that if the armature K is in contact with the core G and the circuit through the lamp thereby closed, said circuit will be immediately broken upon opening the circuit switch, and will remain broken after said circuit switch is closed. By turning the button or key O, the armature is forced into contact with the core G, the circuit through the lamp being again completed, it being therefore possible to turn off the lamp either by opening the circuit switch, or turning the button or key.

By thus rendering it possible to turn off the lamps provided with my improved means, by opening a circuit switch conveniently located in the building, it avoids the necessity of an inspection of each room by an employee, in order to determine whether any lights have been allowed to unnecessarily burn. If desired, one lamp of ordinary construction may be located in each room, so that upon opening and closing the cir-

cuit switch, one light may be allowed to burn for the sake of convenience to a person subsequently entering the room, or for convenience of a person who might be in the room at the time that the remaining lamps were turned off.

It will be understood, of course, that while I have described my improved means as being contained within the socket, such need not necessarily be the case, as the electro magnet with the coöperating armature may be located at any other convenient place in the electrolier. With those lamps, however, which I have had in use, I have found it preferable to locate my improved means within the socket, the external appearance of the latter remaining the same as those of the ordinary lamp.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. The combination with a lamp socket, of an electro magnet electrically connected with one pole of said socket, an armature electrically connected with the other pole of the socket, means independent of said armature for moving the same into and out of contact with the magnet, and means for moving said armature out of contact with the magnet when the latter is passive, substantially as described.

2. The combination with a lamp socket, of an electro magnet electrically connected with one pole of said socket, an armature electrically connected with the other pole of the socket, a key for moving said armature into and out of contact with the magnet, and means for moving said armature out of contact with the magnet when the circuit is broken, substantially as described.

3. The combination with a lamp socket, of an electro magnet electrically connected with one pole of said socket, an armature electrically connected with the other pole of the socket, a spring for holding said armature out of contact with said magnet when the latter is passive, and a key for moving said armature into and out of contact with said magnet, substantially as described.

4. The combination with a lamp socket, of an electro magnet located therein and connected with one pole thereof, of an armature pivoted within said socket, a spring adapted to hold said armature out of contact with said magnet when the latter is passive, and a key engaging with said armature and adapted to move the latter into and out of contact with said magnet, substantially as described.

Signed at New York, borough of Manhattan, in the county of New York, and State of New York, this 11th day of April, A. D. 1906.

ROBERT ROWLEY.

Witnesses:

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