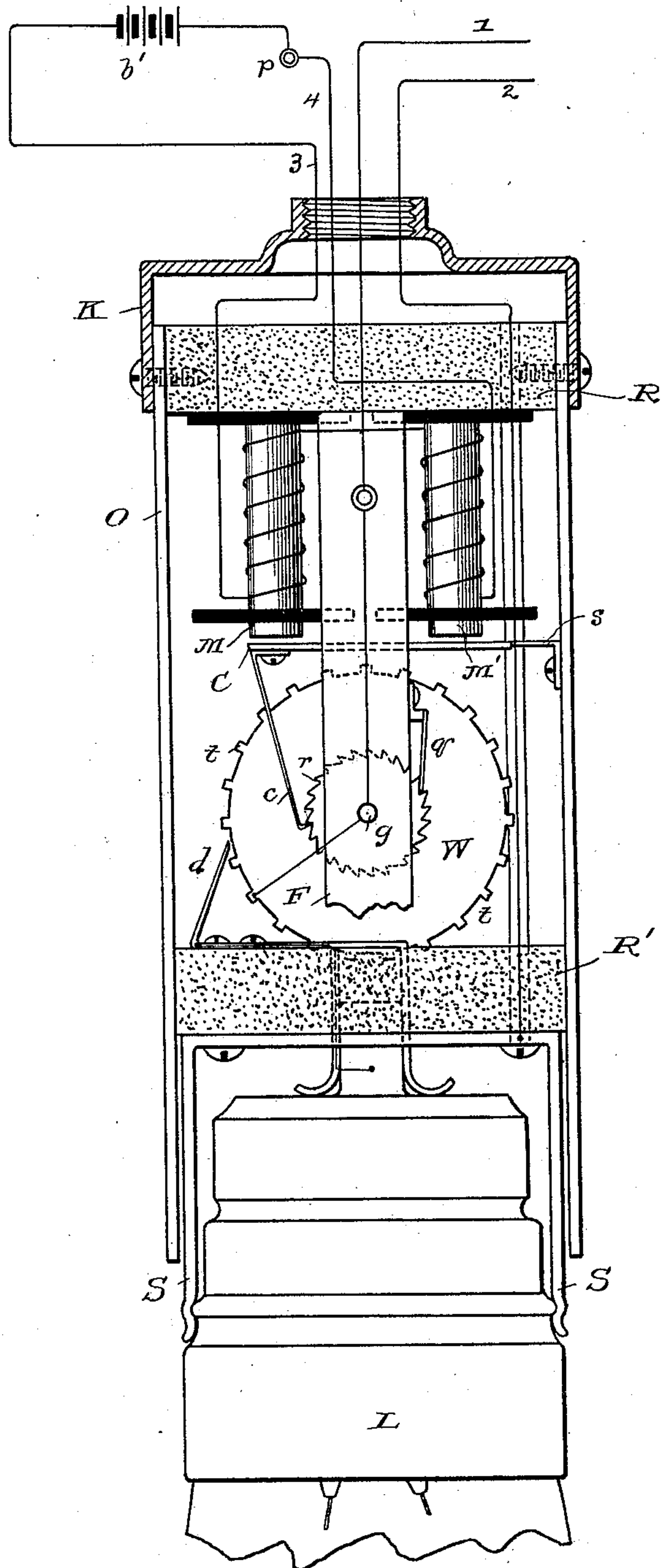


(No Model.)

G. E. PAINTER.  
ELECTRIC LAMP SOCKET SWITCH.

No. 466,510.

Patented Jan. 5, 1892.



Witnesses

H. A. Lamb

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# UNITED STATES PATENT OFFICE.

GWYNNE E. PAINTER, OF BALTIMORE, MARYLAND, ASSIGNOR OF ONE-HALF  
TO JAMES F. MORRISON, OF SAME PLACE.

## ELECTRIC-LAMP-SOCKET SWITCH.

SPECIFICATION forming part of Letters Patent No. 466,510, dated January 5, 1892.

Original application filed March 17, 1891, Serial No. 385,399. Divided and this application filed July 24, 1891. Serial No. 400,618. (No model.)

*To all whom it may concern:*

Be it known that I, GWYNNE E. PAINTER, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Electric-Lamp-Socket Switches, of which the following is a description, reference being had to the accompanying drawing, and to the letters and figures of reference marked thereon.

This application is a division of an application filed by me March 17, 1891, Serial No. 385,399.

My invention is an improvement in incandescent-electric-lamp-socket switches and refers particularly to such switches when operated electrically and by a separate circuit independent of the main supply-circuit of the lamp.

The object of my invention is to provide a device whereby any individual lamp may be turned on or off from a distance, said distance being determined only by the length of the circuit through which the mechanism of the switch is energized. In accomplishing my object I employ small electro-magnets contained within the lamp-socket and a separate circuit to energize them. One advantage of a separate circuit is that the winding of the magnets is not complicated by the varying change of potential of ordinary lighting-circuits, as it would be were the magnets in shunt relation to the main circuit. Besides, it is expensive and impracticable to run the comparatively large and expensive conductors of lighting-circuits to all points where it would be convenient and desirable to have the controlling push-button or levers for operating the lights. An ordinary bell-wire or any small wire of low conductivity will be sufficient to carry the current required to energize the small electro-magnets necessary.

In the drawing I have shown upon an enlarged scale an incandescent-lamp socket, the shell O of which is made in the ordinary manner from spun brass or any other suitable material. It has the ordinary base K, fastened to the shell O, insulating-disks R R', and spring-jaws S S to hold the lamps L in posi-

tion. Upon the insulating-disk R are fixed the electro-magnets M M', which are in circuit with the battery b' through conductors 3 4. An open-circuit push-button is shown at p for operating said circuit. An armature C is mounted upon the barrel of the lamp-socket O by means of the spring s in such manner as to be normally out of contact with the magnets M M'. Upon the unsupported end of the armature C is fixed a spring-catch c, which engages a rack r upon the contact-wheel W, which is mounted upon a pivotal axis g upon a support F, secured to the disk R. The wheel W is prevented from backward rotation by a spring-pawl q. The said wheel is made of conducting material and is provided at its periphery with a series of teeth t t. Engaging these teeth is a spring-contact d, which alternately engages one of the teeth t and falls between two of them. This contact is fastened to the disk R' and conveys current to one side of the lamp-circuit. The lamp-circuit will be from conductor 1 to the axis of wheel W, to one of the teeth t, through contact d, through lamp L, to spring-jaws S, and back through conductor 2. It will be seen that by closing the magnet-circuit by means of the open-circuit push-button p the armature C will be attracted and the wheel W rotated one step by the catch c, thus bringing the contact d upon one of the teeth t and completing the electrical supply-circuit of the lamps. By rotating the wheel W one step farther the circuit will be broken and the lamp extinguished.

It will be understood that I do not confine myself to the exact details herein described, and that the device may be modified and changed in many minor details without departing from the scope of my invention.

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

1. A switch for electric lamps, comprising a stationary disk of insulating material fixed within the barrel of the lamp-socket, an electro magnet or magnets fixed to said disk, an armature attracted by the magnet or magnets, means carried by the armature for actuating



a rotatable conducting-disk, and a contact completing the lamp-circuit through the said conducting-disk.

2. A switch for electric lamps, comprising  
5 a stationary disk of insulating material located within the barrel of the lamp-socket, a second disk rotatably mounted within the barrel of the socket, said disk having projecting lugs upon its periphery, an electro magnet or magnets fixed to the stationary disk  
10 and an armature attracted thereby, means carried by the armature for rotating the movable disk, and a contact completing the lamp-circuit through the peripheral lugs of the  
15 said disk.

3. A switch for electric lamps, comprising a disk of insulating material mounted within the barrel of the lamp-socket, an electro magnet or magnets fixed upon said disk and energized by a circuit independent of the lamp-circuit, an armature attracted by the magnet or magnets, means carried by the armature for rotating the disk, and a contact completing the lamp-circuit through the disk and in  
25 accordance with the rotation thereof.

4. A switch for electric-lamp sockets, comprising a disk rotatably mounted therein, said disk having lugs around its periphery, an electro magnet or magnets mounted upon an  
30 insulating-disk fixed within the barrel of the socket and energized by a circuit independent of the lamp-circuit, an armature attracted by the magnet or magnets, said armature being spring-mounted upon the barrel of the

lamp-socket and normally held out of contact with the magnet or magnets by its spring-support, means carried by the armature for rotating the movable disk, and a contact completing the lamp-circuit through said disk in accordance with the rotation thereof. 35 40

5. The combination, in an electric lamp-socket switch, of a rotating disk, a rack-wheel thereon, an electro magnet or magnets, an armature attracted by said magnet or magnets, said armature being spring-supported at one end and having means at its opposite end for engaging the said rack-wheel, and a circuit independent of the main circuit energizing the said electro magnet or magnets. 45 50

6. The combination, in an electric-lamp-socket switch, of a rotating disk, a rack-wheel thereon, an electro magnet or magnets, an armature attracted by said magnet or magnets, said armature being spring-supported at one end and having a spring-catch at its opposite end for engaging the rack-wheel, a spring-pawl engaging the rack-wheel and thereby preventing a backward rotation of the disk, and a contact completing the lamp-circuit through the disk and in accordance with the  
60 rotation thereof.

In testimony whereof I affix my signature in presence of two witnesses.

GWYNNE E. PAINTER.

Witnesses:

M. HUNTINGTON,  
G. A. MULLEN.