

(No Model.)

G. E. PAINTER.
ELECTRIC LAMP SOCKET SWITCH.

No. 477,146.

Patented June 14, 1892.

Fig. 1.

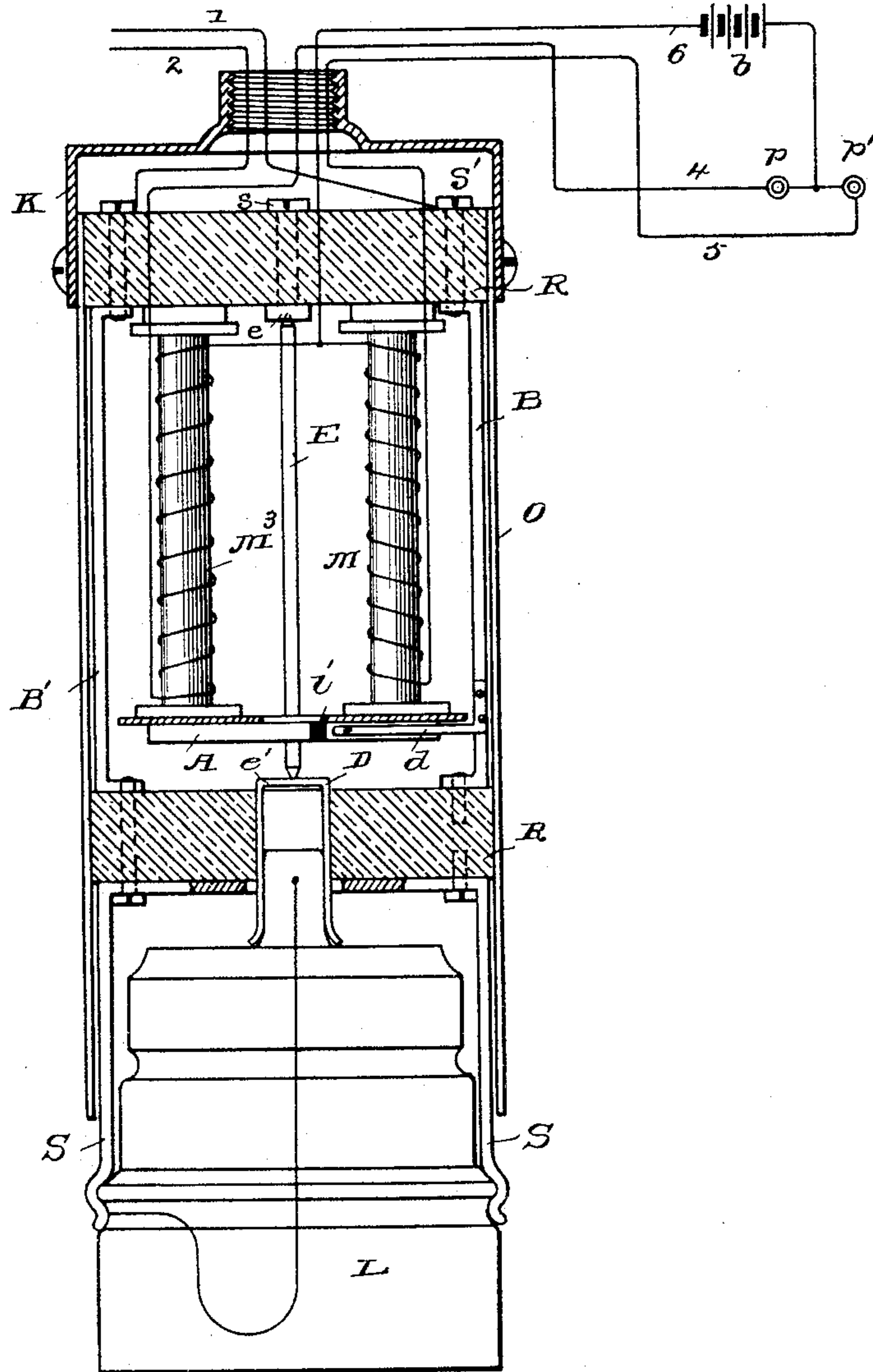
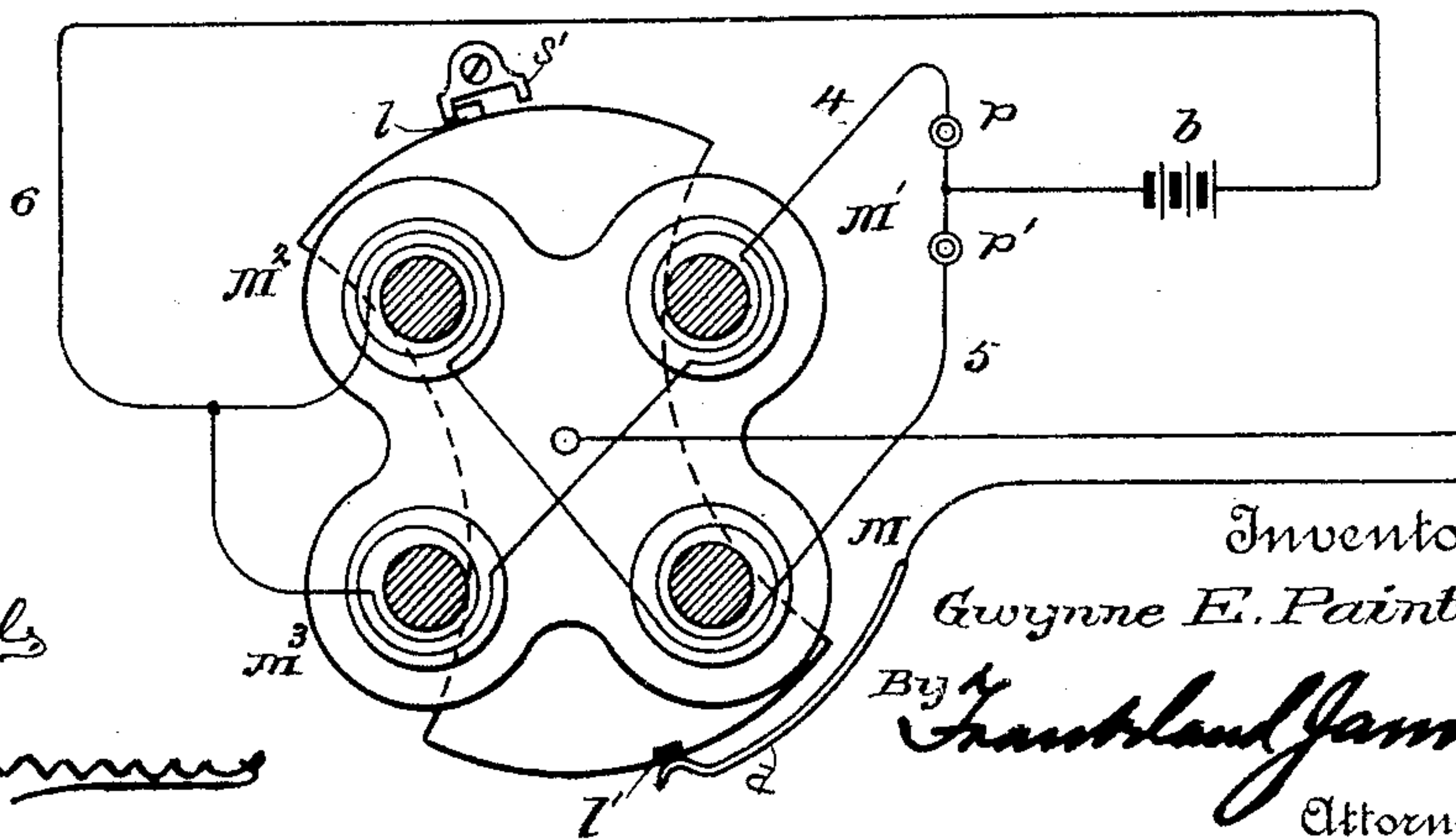


Fig. 2.



Witnesses

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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. 477,146, dated June 14, 1892.

Original application filed March 17, 1891, Serial No. 385,399. Divided and this application filed July 24, 1891. Serial No. 400,619.
(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 drawings, 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 drawings, Figure 1 is a sectional elevation, partly in diagram, showing a form of lamp-socket embodying my invention. Fig. 2 is a diagram showing the circuits and connections of Fig. 1.

In Fig. 1 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 lamp L in position. Upon the disk R are mounted four electro-magnets M M' M² M³. Those diagonally opposite are connected in series in the exciting-circuits, thus forming two pairs of magnets. A shaft E is mounted in a bearing e in the disk R, and e' in the lamp-contact D. The bearing e is provided with an adjusting-screw s, by which wear of the shaft E is taken up and the shaft kept true. Upon the lower end of the shaft E is fixed a shield-shaped-disk armature A, which is so placed with respect to the magnets M M' M² M³ that they will, upon being energized, attract it in opposite directions. This arrangement is shown in Fig. 2, where the armature is attracted by the magnets M and M². As here seen, a stop s' is placed adjacent to one end of the armature upon which there is a lug l, which is engaged by said stop at the limit of the armature's throw in either direction. Upon the opposite end of the armature and inserted therein is an insulating-block l', and a spring-contact d is provided, which rests upon said block in one position of the armature and upon the armature itself in its other position.

The arrangement of the circuits which energize the electro-magnets is clearly seen in Fig. 2, where it will be seen that the circuits run from the battery b through a short conductor which divides, and circuit is then completed through either of the magnet-circuits by either of the push-buttons p p', conductors 4 or 5, and return-conductor 6.

The supply-circuit to the lamp L will be from source, through conductor 1, to binding-screw S', bar B, contact d, armature A, pivot E, and the clasp spring-contact D, through lamp to spring-jaws S S, through bar B, and to conductor 2.

While I have shown two pairs of electro-magnets, it will be obvious that a single pair would operate in exactly the same way by properly positioning the armature and reversing the direction of current in the electro-magnets.

Various other modifications might be made without departing from the spirit of the invention, and I do not therefore restrict myself to the exact details herein described.

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

1. The combination, with an electric-lamp socket, of two sets of electro-magnets mounted therein, each set excited by a circuit independent of the circuit of the lamp, an armature mounted upon a pivotal axis parallel to the magnets within the socket and oscillated by the said magnet, and a contact forming a terminal of the lamp-circuit making contact with the armature and controlling the said circuit in accordance with the operation thereof.

2. In an electric-lamp socket, the combination of a plurality of electro-magnets mounted upon an insulating-disk therein, an armature mounted upon a pivotal axis and oscillating in a horizontal plane with respect to the poles of the said magnets, a section of non-conducting material fixed to the armature, and a contact engaging the armature and the said section alternately, and thereby completing or breaking the main lamp-circuit.

3. In an electric-lamp socket, the combination of the shell, two insulated disks within said shell, a plurality of electro-magnets fixed to said disk, a shaft pivotally supported by both disks, an armature fixed to said shaft and oscillating in a plane horizontal to the poles of the magnets, a section of insulating material in the armature, and a contact alternately engaging the armature and the insulating-section, and thereby making and breaking the main lamp-circuit.

4. In an electric-lamp socket, the combination of a plurality of electro-magnets excited independently of the main lamp-circuit, an armature rotatably mounted under the influence of said magnets, said armature being constructed of conducting material, a section of insulating material in said armature, and a contact engaging the armature proper and the insulating-section therein alternately, and thereby completing or breaking the main lamp-circuit.

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

GWYNNE E. PAINTER.

Witnesses:

C. W. HUNTINGTON,
G. A. MULLEN.