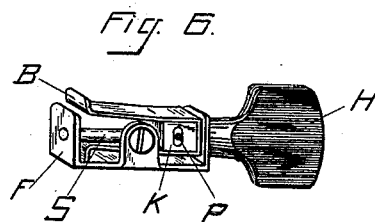
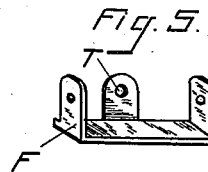
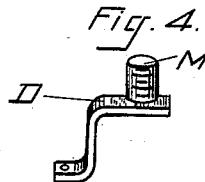
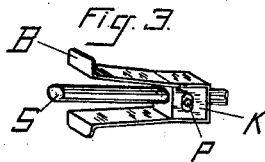
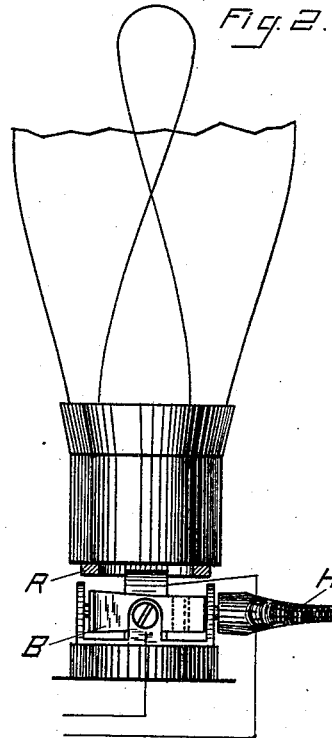
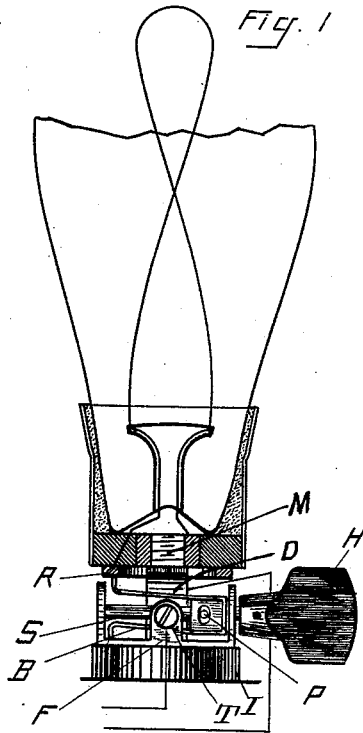


(No Model.)

M. J. WIGHTMAN.
INCANDESCENT LAMP SOCKET.

No. 420,370.

Patented Jan. 28, 1890.



Witnesses:

Thos. F. Bourne
Appl. & Co.

Inventor:

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UNITED STATES PATENT OFFICE.

MERLE J. WIGHTMAN, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE THOMSON-HOUSTON ELECTRIC COMPANY, OF CONNECTICUT.

INCANDESCENT-LAMP SOCKET.

SPECIFICATION forming part of Letters Patent No. 420,370, dated January 28, 1890.

Application filed October 9, 1889. Serial No. 326,487. (No model.)

To all whom it may concern:

Be it known that I, MERLE J. WIGHTMAN, a citizen of the United States, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Switches or Turn-Offs for Incandescent Electric Lamps, of which the following is a specification.

My invention relates to the construction of electric switches or turn-offs for incandescent electric lamps or other electrical apparatus.

The object of my invention is to attain simplicity and cheapness of manufacture, and, further, to provide a switch that shall have a snapping action when turned to "off" position, thus giving a quick break of the circuit.

The switch constructed in accordance with my invention has very few parts, is easily assembled, and is especially adapted for use as the switch for a socket or holder of an incandescent lamp.

This application of my invention is the one illustrated in the accompanying drawings, wherein—

Figure 1 shows a switch as applied to an incandescent lamp, the base of which is shown in section. In this figure the switch is shown in "on" or circuit-closing position in side elevation. Fig. 2 shows the switch in off position in side elevation. Figs. 3, 4, and 5 show in perspective certain details of the switch. Fig. 6 shows the mechanism of the switch assembled before attachment to a supporting-base.

In the figures, B indicates a piece of spring metal, which may be made of phosphor-bronze or any other material having considerable elasticity and being a good conductor of electricity. This spring is bent into a U-shaped form, as seen in Fig. 3, and the free ends are preferably bent, as therein indicated, at right angles to the legs of the U-shaped piece. These bent ends may extend outwardly or inwardly, according to the location of the electrode or electrodes with which they are designed to make contact.

S is a spindle, upon which the spring is mounted at the part connecting the legs, said spindle being adapted to turn on its own axis, which lies in a line extending between the

legs of the U or parallel to the spring which said spindle supports.

To secure rigidity at the point of connection between the spring and spindle, I prefer to employ a supporting-block K, to which the spring is attached in any desired manner and through which the spindle passes. This block K is preferably of metal, and the U-shaped piece is secured to it by soldering. A lost motion between the spring and spindle is provided by drilling a hole through the block K and by providing a pin P, which is fixed to the spindle and extends into the hole or slot thus provided. The hole or slot in which the pin connecting the spindle and spring moves is of such size that a considerable lost motion is permitted between the spindle and block.

F is a plate of metal made with three upturned arms, as indicated, in two of which the spindle is mounted, while the third serves as one of the binding-posts or connecting-points of one of the wires or connections leading to the switch. The free ends of the spring in the present construction lie within these upturned arms, as shown, so that they may (one or both) make contact with the plate itself. The plate is made, preferably, by punching out of a single piece of metal and by turning up the projecting ends or portions to form the arms. The plate F is mounted on any suitable base or support—such as a block I—of insulating material when the switch is to be applied to an incandescent lamp.

One of the connections to the lamp is made on a standard D, which supports the screw M, forming the electrode or terminal of the socket, with which a central screw-threaded electrode of the lamp-base engages in a well-known manner.

R indicates a ring or plate of metal secured to the base of the lamp and connected to the other terminal of the incandescent conductor. The plate R is the electrode, with which the free ends of the spring B may engage. When both ends of the spring are engaged, respectively, with the plate R and with the plate F, a direct connection is formed from the wire connected to base T to the plate R and one terminal of the incandescent conductor, the circuit being completed to the other leading

wire through the screw M and standard D in well-known manner.

The operation is as follows: Upon turning the handle H the arms of the U-shaped piece make contact, respectively, with the ring or electrode R and with the plate F, thus forming a direct connection between them. When the handle is turned to throw off the lamp, a torsional strain or twist is impressed upon the spring B, and when this strain is sufficient to break contact at R or F the circuit is opened by a quick snapping action, the piece B being free to move forward to the contact-breaking position independently of the handle H by reason of the lost motion provided between the spindle S and the piece B.

While I have shown my invention as applied to a case where the switch breaks circuit at two points by means of the two free ends of the spring, it is obvious that one of the arms of the U-shaped piece might be dispensed with, the connection being in such case through the post T, plate F, and the bearings for the spindle to the spring, and thence to the contact or electrode, as R, upon which said spring may be brought to bear by turning the spindle. I prefer, however, to employ a U-shaped spring, as indicated, as the connection is more certain and is independent of the bearings of the spindle.

What I claim as my invention is—

1. In an electric switch, a U-shaped spring-metal electrode and a supporting-spindle connected therewith through parts having a lost motion, as and for the purpose described.

2. In an electric switch, the combination, with a fixed electrode having a flat contact-surface, of a spring-electrode having a bent end, and a supporting-spindle for said spring turning on an axis substantially parallel to

said spring and connected therewith through parts having a lost motion.

3. In an electric switch, the combination, with fixed electrodes, of a U-spring, a supporting-block to which said spring is attached, a spindle passing between the legs of the U, and a pin on the spindle lying in a hole in said block.

4. In an electric switch, the combination of a U-shaped spring made in a single piece with bent ends, a supporting-spindle therefor passing between the legs of the U, and a plate having bent-up arms, in which said spindle is mounted.

5. The combination of the U-spring having bent ends, the supporting-spindle passing between the legs of the U and connected at the joining part of the legs by a pin and slot having lost motion, and a supporting-plate having three upturned arms, one of which forms a binding-post, while the two others form bearings for said spindle.

6. The combination of the U-shaped spring, the supporting-spindle therefor mounted on the lamp socket or support and passing between the legs of the U-spring, a supporting metal plate for the spindle adapted to be engaged by one of the free ends of the U-shaped spring when turned by the spindle, and the lamp mounted on the socket or support and having an electrode on its base adapted to be simultaneously engaged by the other free end of said U-shaped spring.

Signed at Lynn, in the county of Essex and State of Massachusetts, this 4th day of October, A. D. 1889.

MERLE J. WIGHTMAN.

Witnesses:

H. BERGHOLTZ,

GUST. HELLEBUCK.