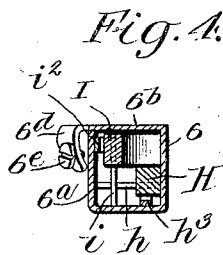
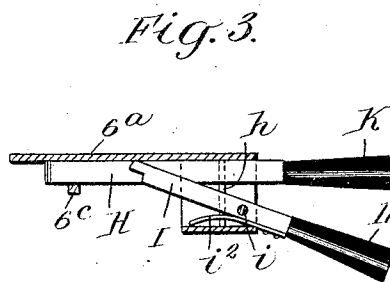
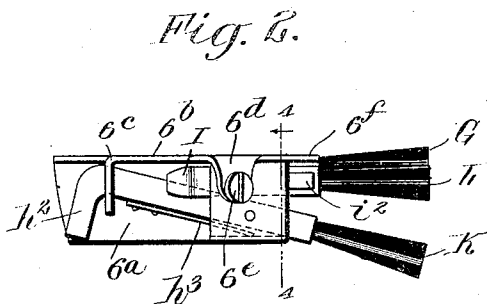
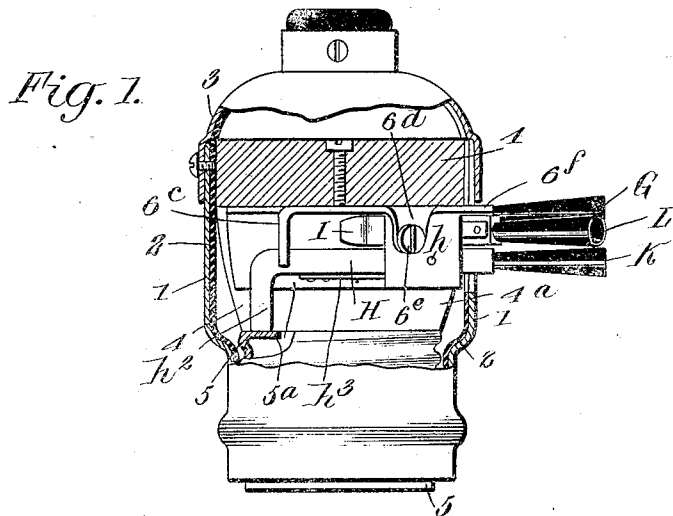


W. A. McDONALD.
 SWITCH FOR INCANDESCENT LAMP SOCKETS.
 APPLICATION FILED FEB. 26, 1909.

941,941.

Patented Nov. 30, 1909.



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WILL A. McDONALD, OF GRAMPIAN, PENNSYLVANIA.

SWITCH FOR INCANDESCENT-LAMP SOCKETS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILL A. McDONALD, a citizen of the United States, and a resident of Grampian, in the county of Clearfield and State of Pennsylvania, have made certain new and useful Improvements in Switches for Incandescent-Lamp Sockets, of which the following is a specification.

This invention relates to improvements in sockets for incandescent lamps, more particularly to means for turning off and on the current, and it consists in the constructions, combinations and arrangements hereinafter described and claimed.

In the ordinary form of incandescent sockets the current is turned on and off by means of a key. This requires the use of both hands, one to steady the lamp and the other to turn the key. Even then the lamp is turned in the direction of rotation and the strain comes upon the suspending cord. Moreover, in the ordinary form the key may turn hard owing to the stiffness of the spring controlling the same and it may turn past the point at which the current is permitted to enter the lamp so that the lamp will be extinguished and the operation will have to be gone through with again. Sometimes owing to the stiffness of the springs the rubber thumb piece will break off. In the ordinary form also if the controlling springs are broken, the socket is rendered useless since it costs more to have the spring repaired than to buy a new socket.

The main object of my invention is to provide a switch for an incandescent socket which may be easily operated, requiring a great deal less force to manipulate it than the ordinary key, and which can be operated by one hand without straining the suspending cord.

A further object of my invention is to provide a switch which can be operated as stated above and which positively effects the connection or the disconnection of the lighting current without the danger of movement beyond the proper place and thereby extinguishing the lamp again.

A further object of my invention is to provide a switching device, which, while controlled by springs, may nevertheless be operated without the springs, thus rendering the mechanism capable of use, where under similar circumstances the old form would be useless.

Other objects and advantages will appear

from the following specification and the novel features of the device will be particularly pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a side view of a socket partly in section embodying my invention. Fig. 2 is a detail side view showing the operating parts of the switch. Fig. 3 is a longitudinal sectional view at right angles to Fig. 2, and Fig. 4 is a sectional view along the line 4-4 of Fig. 2.

In carrying out my invention I make use of an ordinary Edison socket, replacing the switch mechanism used therein by the switching device hereinafter described. In Fig. 1 I have shown such a socket with my invention applied thereto. It comprises an outer shell 1 having an insulating lining 2 and the usual cap 3. The insulating block 4 within the cap is secured to the threaded sleeve 5, into which the base of the lamp is screwed. Within the hollow part 4^a of the block 4, which is adapted to contain the switching mechanism of the ordinary type, I arrange the switching device shown in Fig. 1.

The switching device consists of a frame member 6 bent into rectangular form at one end, see Fig. 4, one of the sides 6^a being prolonged as shown in Fig. 2. The top portion 6^b, see Figs. 2 and 4, is provided with a downwardly turned arm 6^c near one end and a downwardly turned ear 6^d on its side, the latter constituting a binding member and being provided with a set screw 6^e.

One end of the frame 6 is prolonged as shown at 6^f in Figs. 1 and 2, and to this prolongation is attached the insulating handle G. Within the rectangular part are pivoted two levers H and I upon the pivot pins h and i, respectively. The form of the lever H is most clearly indicated in Figs. 1 and 2. It has a downwardly extending end h² which is adapted to form the contacting member for the completion of the electric circuit. This lever is guided between the downwardly extending arm 6^c and the side 6^a of the frame 6 as shown in Figs. 1 and 2. It is kept normally in an upper position shown in Fig. 2, by means of the leaf spring h³ on its under side.

The lever I, which is pivoted to move at right angles to the lever H, is also provided with a spring i², which tends to force it into the position shown in Fig. 3. The lever H

is provided with a handle K, while the lever I is provided with a handle L. From the foregoing description of the various parts of the device, the operation thereof may be readily understood.

As has been stated before, the completion of the current is due to the contact of the end h^2 of the lever H with the inwardly projecting flange 5^a of the threaded sleeve 5. In the position shown in Fig. 1 the handle K has been pressed toward the handle G, this being done by a pinching action, the handle G of course remaining stationary and acting as a stationary resisting means for drawing the handle K up to it. It will be seen from Fig. 2 that the lever I cannot be pressed forward by the spring as long as the lever H is in its upper position, but as soon as it is forced downwardly, the lever I, under the influence of its spring i^2 , is forced above the lever H, as shown in Fig. 1, thereby locking the latter in its shifted position, the levers H and I assuming the respective positions shown in Figs. 1 and 3. This results in the lighting of the lamp. It will be noted that in the shifting of these levers there is no twisting action but that equal force is applied in opposite directions to the handles G and K. There is no tendency therefore for the lamp to turn. Moreover, the force applied is relatively very small. Now when the handles G and L are brought together the lever H is forced upwardly by the spring h^3 , thereby breaking the circuit and extinguishing the lamp. In this case, as in the other, the handle G acts as the resisting member, the handle L being brought up to it by a pinching action exerted on both of these handles.

It will be seen that the manipulation of the light may be accomplished by means of one hand, that there is no danger of moving the parts beyond their operating positions, thereby extinguishing the lamp and that no strain is put upon the suspending cord by the twisting action as in the ordinary case.

I am aware that other forms of the device based upon the same general idea might be made, but I consider as my own all such modifications as fairly fall within the spirit and scope of the invention.

I claim—

1. A switch for incandescent lamp sockets, comprising a frame having a stationary handle and two movable handles, means for completing the electric circuit by forcing one of said movable handles toward said

stationary handle and for breaking the circuit by forcing the other of said movable handles toward the stationary handle, each of said movable handles being forced away from the stationary handle by the movement of the other handle.

2. A switch for incandescent sockets comprising a frame provided with a stationary handle and a pair of laterally movable handles, and means adapted for completing the electric circuit when one of said movable handles is forced toward the stationary handle by a pinching action and for breaking the circuit when the stationary handle and the other of said movable handles are forced together.

3. A switch for incandescent sockets comprising a stationary frame provided with a projecting handle, a pair of levers pivotally mounted in said frame at right angles to each other and provided with handles on their projecting ends, one of said levers constituting a contact member and arranged to be locked in its operative position by a movement of the other lever.

4. A switch for incandescent sockets, comprising a stationary frame member provided with an extending handle, a pair of levers pivoted within said frame, the pivotal axes of said levers being at right angles to each other, one of said levers having a bent end portion constituting a contact member, actuating springs for said levers, said springs being arranged to cause a movement of either of said levers into the path of the other lever when the latter is moved, thereby locking the same in its shifted position.

5. A switch for incandescent sockets, comprising a frame having a projecting handle and a downwardly projecting arm constituting a guide member, a lever pivoted within said frame and having a bent end adapted for movement between said arm and the main frame, a second lever pivoted within said frame at right angles to the first-named lever, each of said levers being actuated by springs, handles for said levers, the above parts being so arranged that when one of the lever handles is forced toward the stationary handle the other lever springs into the path and locks the first-named lever in its shifted position.

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Witnesses:

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