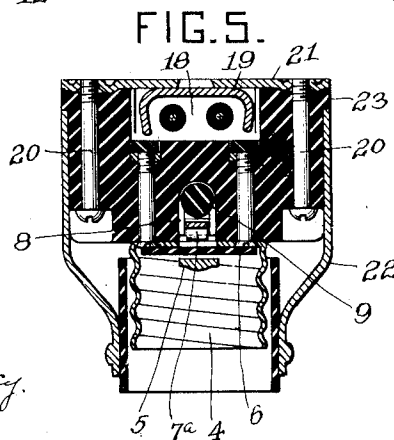
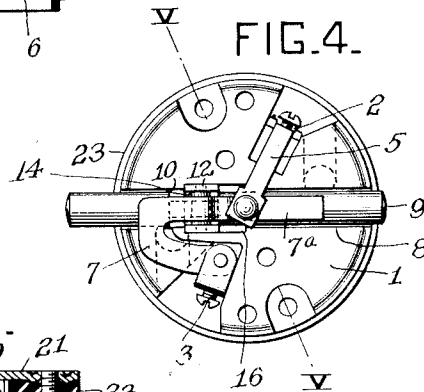
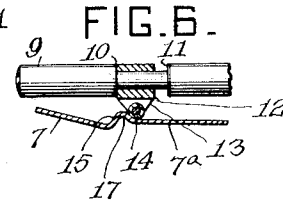
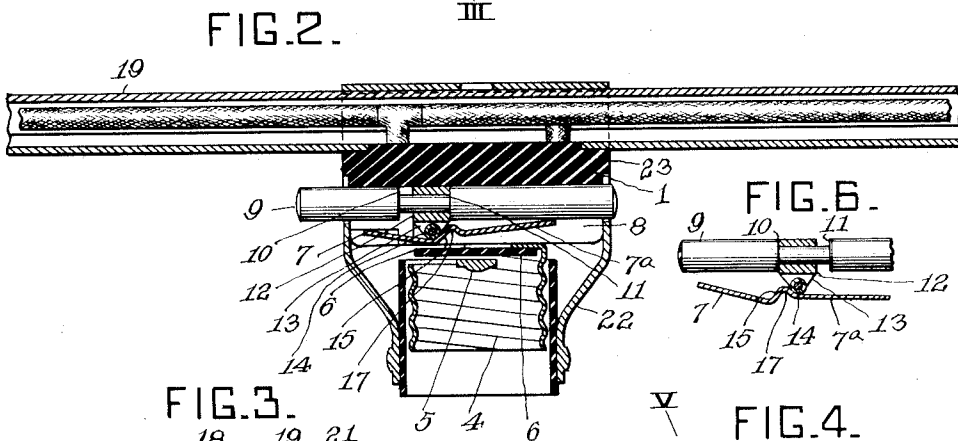
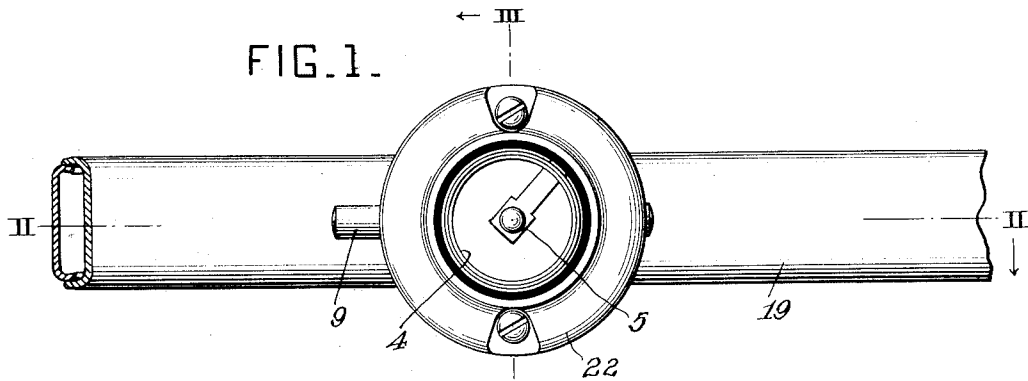


H. R. GILSON.
ELECTRICAL SWITCH.
APPLICATION FILED APR. 1, 1912.

1,064,318.

Patented June 10, 1913.



WITNESSES:

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ELECTRICAL SWITCH.

1,064,318.

Specification of Letters Patent.

Patented June 10, 1913.

Application filed April 1, 1912. Serial No. 687,828.

To all whom it may concern:

Be it known that I, HENRY R. GILSON, residing at Beaver, in the county of Beaver and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Electrical Switches, of which improvements the following is a specification.

It is the object of the invention to provide an electrical switch, which shall be simple in construction and efficient in operation; and by means of which arcing of the current when the circuit is broken will be effectively prevented.

In the accompanying drawings the invention is illustrated in its preferred form, and as embodied in a lamp-socket.

Figure 1 is a plan view of the socket connected to a section of conduit; Fig. 2 is a sectional elevation on the line II—II of Fig. 1; Fig. 3 is a cross-sectional view on the line III—III of Fig. 1; Fig. 4 is a plan view of the switch with the cap and shell of the socket removed; Fig. 5 is a cross-sectional view of the socket on the line V—V of Fig. 4; and Fig. 6 is a detail view showing the key-shaft in the opposite position to that shown in Fig. 2.

The insulating block 1 of the socket is provided with the terminals 2 and 3, and the conducting shell 4 is secured to the face of the block in the usual or any suitable manner. The terminal 2 is provided with the usual conducting strip 5 extending within the shell in position to make contact with one terminal of the lamp, and insulated from the shell as by the mica disk 6. The other terminal 3 is provided with the conducting resilient strip 7 adapted to make and break contact with the base of the shell 4, the shell, as is usual, being adapted to make contact with the other terminal of the lamp when the latter is in place. For making and breaking contact with the shell, the strip 7 is preferably bent to form a spring-arm 7^a arranged in the slot 8 in the block 1 adjacent to the outer face of the base of the shell. On the opposite side of the spring-arm in the slot is mounted a longitudinally slidable key-shaft or bar 9, the said shaft being held within the slot by the spring-arm. The body of this shaft is reduced in thickness, forming opposite shoulders 10 and 11 and between

shaft a sliding dog 12 having a range of movement between the shoulders independently of the shaft. The dog 12 is provided with an extension 13, which may have a roller 14 as shown, in position to bear against the spring arm 7^a. The spring-arm 7^a is bent or offset as shown, forming an incline 15 behind which the end of the dog rests when the spring-arm is out of contact with the shell. The sides of the dog may be extended laterally beyond the lines of the shaft and move in a limited enlarged portion 16 of the slot 8, thus limiting the range of longitudinal movement of the shaft. The spring-arm 7^a may have a slight depression 17 adjacent to the incline 15, whereby the spring-arm will be caused to bind upon the ridge 13 of the dog 12 when the circuit is closed as presently to be described.

Figs. 2 and 3 of the drawing show the circuit open, the spring-arm 7^a being out of contact with the shell 4, and the ridge 13 of dog 12 resting behind the incline 15 on the spring-arm. In order to close the circuit between the spring-arm and shell, the key-shaft 9 is pushed to the right, and the shoulder 10 forces the dog 12 to the right also, thus causing its ridge 13 to force the spring-arm into contact with the shell, the edge of the ridge then preferably resting in the small depression 17 as shown in Fig. 6. In order to break the circuit the key-shaft is pushed to the left, and as soon as the shoulder 11 has forced the edge of the ridge 13 of the dog 12 over the edge of the incline 15, the spring-arm will automatically snap the dog 12 to the left independently of the movement of the key-shaft, thus quickly and sharply breaking the circuit, and effectively preventing arcing. The constructor will of course proportion the parts so as to allow sufficient separation of the spring-arm from the shell.

In the base of the block 1 is formed a slot 18 of proper shape to receive the conduit 19. The block may be clamped to the conduit by means of screws 20 extending through the block and engaging a suitable plate 21 on the opposite side of the conduit. The socket may be incased within a metallic cap 22, and in order to insulate the cap from the conduit the block 1 may be provided with a bead 23 interposed between the edge of the cap and the surface of the block.

While the invention is herein illustrated and described as embodied in a lamp-socket, it will of course be understood that it may be applied to the making and breaking of contact between any suitable switch-member or circuit-controller and any member of an electrical circuit.

I claim as my invention:

1. The combination with a fixed member of an electrical circuit, of a movable circuit-controller having a bent away from said fixed member, and a movable key-member provided with an independently movable dog adapted when the key-member is moved in one direction to force said circuit-controller into contact with said fixed member, and when the key-member is moved in the opposite direction to yield to said circuit-controller and permit the latter to automatically break the circuit.

2. The combination with a fixed member of an electrical circuit, of a spring-arm circuit-controller arranged adjacent to said fixed member, and a longitudinally movable key-shaft provided with a dog effective when the key-shaft is moved in one direction to force said circuit-controller into contact with the said fixed member, and when the key-shaft is moved in the opposite direction to yield to said circuit-controller and

permit the latter to automatically break the circuit.

3. The combination with a fixed member of an electrical circuit, of a movable spring-arm circuit-controller arranged adjacent to said fixed member and in one position completing a circuit therethrough, and a longitudinally movable key-shaft provided with a dog effective when the key-shaft is moved in one direction to force said circuit-controller into one position with relation to said fixed member, and when the key shaft is moved in the opposite direction to yield to said circuit-controller and permit the latter to automatically move to its opposite position with relation to said fixed member.

4. The combination with a fixed member of an electrical circuit, of a longitudinally movable key-shaft having a dog movably mounted thereon, and a resilient contact-arm arranged between the key-shaft and fixed member and in parallel relation with the key-shaft, and provided with an incline in operative relation with said dog.

In testimony whereof I have hereunto set my hand.

HENRY R. GILSON.

Witnesses:

HARRY G. OSBURN,
FRANCIS J. TOMASSON.