No. 676,280. Patented June 11, 1901.

E. SCHULZ.

ELECTRIC SWITCH.

(No Model.) (Application filed Nov. 20, 1900.)

Fig. 2.

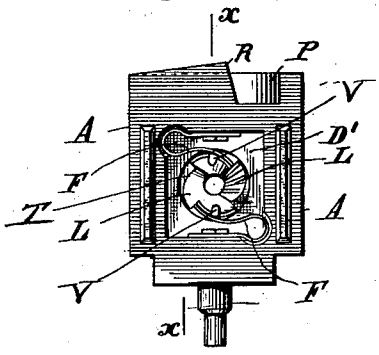


Fig. 4.

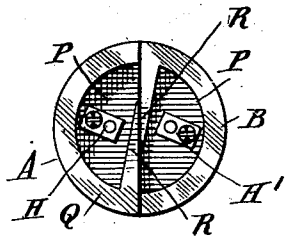


Fig. 3.

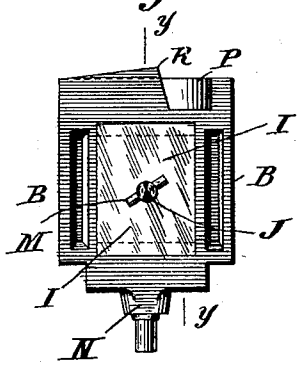


Fig. 1.

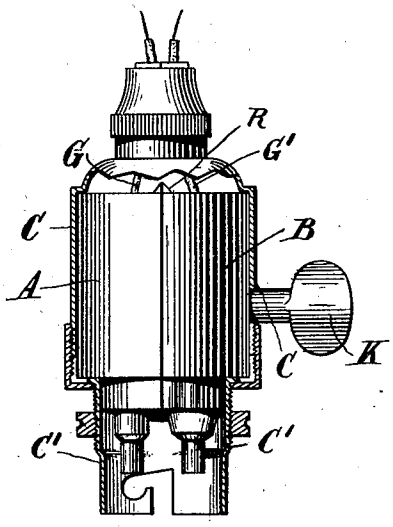


Fig. 5.

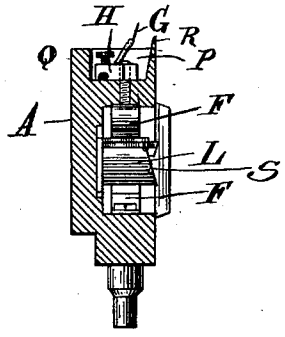
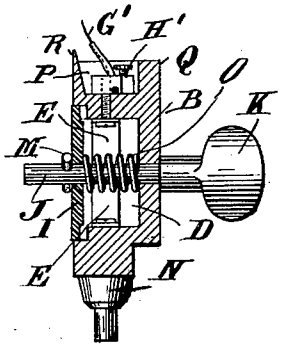


Fig. 6.



Witnesses

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UNITED STATES PATENT OFFICE.

EDUARD SCHULZ, OF BARMEN, GERMANY.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 676,280, dated June 11, 1901.

Application filed November 20, 1900. Serial No. 37,153. (No model.)

To all whom it may concern:

Be it known that I, EDUARD SCHULZ, a subject of the Emperor of Germany, residing at 110 Klingchollstrasse, Barmen, Germany, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

This invention relates to a switch for electric lamps, and has for its object to provide means to prevent the accidental connection or contact of the circuit connections with absolute certainty; and to this end the invention consists in the features and in the construction, combination, and arrangement of parts hereinafter described, and particularly pointed out in the claims following the description, reference being had to the accompanying drawings, forming a part of this specification, wherein—

Figure 1 is a view, partially in side elevation and partially in section, of a lamp-socket provided with my improved switch. Figs. 2 and 3 are detail views of the insulating-blocks, showing the metallic conducting-strips and springs. Fig. 4 is a top plan view of the two half-blocks assembled together; and Figs. 5 and 6 are longitudinal sections of the two half-blocks, respectively taken on the lines *x x* and *y y* of Figs. 2 and 3.

In carrying my invention into effect I construct an insulating cylindrical block and divide the same longitudinally and centrally into two parts, respectively indicated by the reference-letters A and B, said parts when fitted together forming a cylinder which is inclosed by a tubular holder C. Each of the parts A and B is provided with a recess D or D′, one of the recesses containing the conducting-strip or line-contact E for one terminal of the lamp, the other being in electrical connection with a contact F F, the terminals of the line-wires G G′ being connected to said contacts by connections H H′ in any suitable construction.

In order to separate the two recesses before referred to, I cover one of the said recesses by a plate of insulating material I, which is provided with a central aperture for the passage therethrough of the switch-bar J, which passes transversely through each of the semicylindrical blocks referred to. On the said switch-bar is rigidly fastened a knob or button K, by means of which the switch-bar may be turned or rotated, and coiled about said switch-bar between the bottom of the recess D and the insulating-cover I is a spring O, which operates at one end against the plate of insulating material I. A pin M is passed transversely through the switch-bar on the opposite side of the insulating-plate, and said plate is held in contact with the pin by the spring O. The insulating-plate I is adapted to move toward and from its seat in the block B, as most clearly indicated in Fig. 6 of the drawings. Rotatably arranged in the recess D′ is a ratchet-wheel L, provided with a series of eccentric faces T and upon its inner side with a series of cams or ratchets S, with which latter the pin M is in engagement.

Either one or both of the semicircular blocks is provided at its lower end with a reduced continuation N, surrounding the terminal point, by means of which the usual S-piece generally employed in lamp-socket holders is dispensed with.

Each of the semicylindrical blocks is formed on its upper end with a recess P, in which are disposed the pole ends H H′, to which the circuit-wires are attached. These recesses are formed by the outer rim Q and a wall R, which is longer than the radius of the semicylindrical block. When the two semicylindrical blocks are removed, the division or partition between the two is formed by the two walls or flanges R, the flange R of one of the blocks forming the partition on one side and the flange R of the other block forming the partition on the other side, whereby two recesses or cells are constituted which separate and protect the ends of the circuit-wires G G′ and prevent their coming in contact with one another. The two semicylindrical blocks are inclosed by a tubular casing C and a cap-piece C′, which are arranged to separate the lamp and shade-holder in the usual manner.

The operation of the device will be readily understood from the foregoing description. The spring O forces the insulating-plate I away from its seat. The insulating-plate I forces the pin M against the face of the ratchet-wheel L, and said pin therefore engages the ratchets or cams S. Then by turn-

ing the knob or button the ratchet-wheel is also turned and brings the contacts V into engagement with the spring-contacts F, thus completing the circuit through the lamp. If the ratchet-wheel be given another partial rotation, it will be manifest that the contacts V will be thrown out of engagement with the spring-contacts F, and the circuit will thus be broken and the lamp put out of operation. It will also be obvious that if the knob or button be turned backward—or, in other words, if it is turned in a direction opposite to the direction in which the hands of a clock move—the pin M will ride idly over the ratchets or cams S, and thus fail to communicate any rotative movement to the ratchet-wheel.

Having now described my invention, what I claim is—

1. An electric switch comprising an insulating-block formed with two semicylindrical sections arranged side by side, each section being provided with a recess, an insulating-plate arranged between the adjacent faces of the sections, contact making and breaking mechanism located within said recesses, and recesses formed in the upper ends of said semicylindrical blocks, substantially as described and for the purpose specified.

2. An electric switch comprising two semicylindrical blocks arranged face to face and recessed in their adjacent faces, an insulating-plate arranged between said adjacent faces, a switch-bar arranged transversely in the blocks, and a contact maker and breaker located in one of said recesses and arranged to be operated by said switch-bar, substantially as described.

3. An electric switch comprising two semicylindrical blocks arranged face to face and inclosed by a surrounding casing, said blocks being recessed upon their adjoining faces, a switch-bar disposed transversely in said blocks and movable endwise therein, a circuit making and breaking wheel rotatably disposed in one of said recesses and adapted when turned in one direction to complete the circuit through the line-wires, and means carried by said switch-bar arranged to turn said circuit-maker when said switch-bar is turned in one direction and to have no effect on said circuit maker and breaker when turned in the opposite direction, substantially as described.

4. An electric switch comprising two semicylindrical blocks arranged face to face and surrounded by an inclosing casing, said blocks being recessed upon their adjacent faces, an insulating-partition between the recessed faces of said blocks, a transverse switch-bar rotatably arranged in said blocks, a ratchet-wheel disposed in one of said recesses and provided on its periphery with circuit making and breaking faces adapted to engage the terminals of the line-wires, a transverse pin carried by the switch-bar and adapted to engage ratchets formed on the face of said circuit maker and breaker, and a spring for forcing said pin into contact with said ratchets, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDUARD SCHULZ.

Witnesses:
F. A. RITTERSHAUS,
OTTO KÖNIG.