(No Model.)

A. WISSLER.

ELECTRIC SWITCH.

No. 458,879. Patented Sept. 1, 1891.

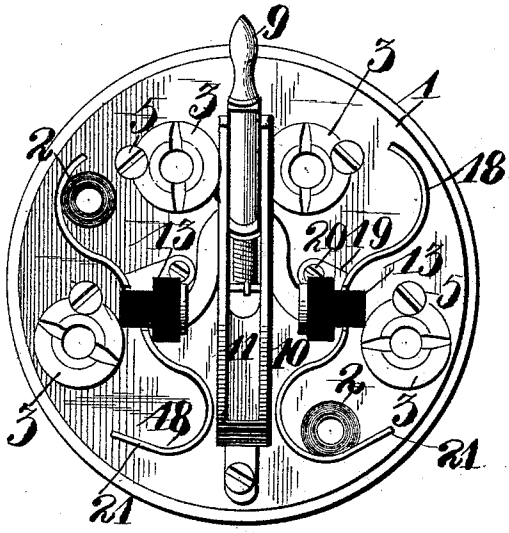


Fig. 1.

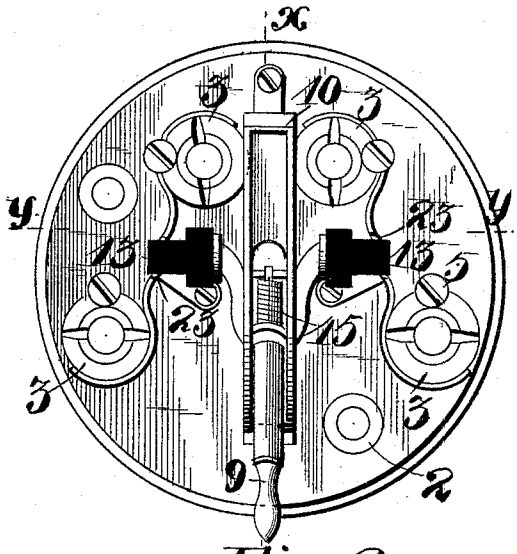


Fig. 2.

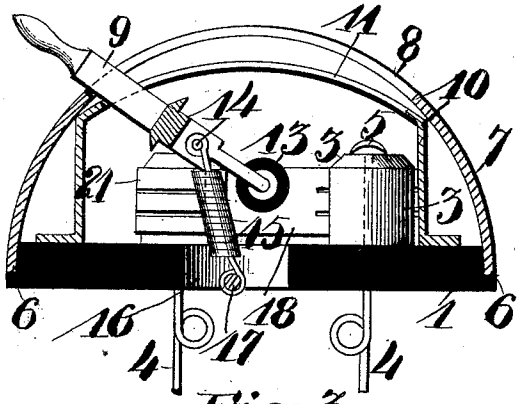


Fig. 3.

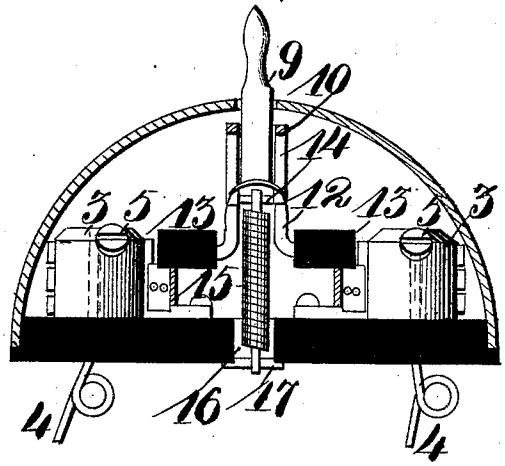


Fig. 4.

WITNESSES

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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 458,879, dated September 1, 1891.

Application filed June 22, 1891. Serial No. 397,104. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH WISSLER, of the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Electric Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in electric switches; and it consists in the novel arrangement and combination of parts, as will be more fully hereinafter described, and designated in the claims.

In the drawings, Figure 1 is a top plan view of my complete invention with the contact-plates removed from the binding-posts with the cap removed. Fig. 2 is a similar view with the contact-plates in contact with the binding-posts. Fig. 3 is a vertical section taken on the line *x x* of Fig. 2. Fig. 4 is a similar section taken on the line *y y* of Fig. 2.

The object of my invention is to so construct a switch that the circuit can be closed or opened instantaneously and also embody such a construction that the circuit is always completely closed or opened, as will more fully hereinafter appear from the specific description, which I will now proceed to set forth.

Referring to the drawings, 1 indicates a base of insulating material, the same being provided with holes 2, through which screws or nails may be inserted for securing the same to the wall or any other desired object.

It may be premised in this connection that my switch is more specifically denominated a "double-pole switch;" but the same principle of construction may be embodied in a "single-pole switch."

The base of insulating material 1 is provided with four holes or apertures, in which binding-posts 3 may be inserted and secured in any suitable and mechanical manner, and in said binding-posts 3 the circuit-wires 4 may be secured by means of a series of smaller screws 5; or, if desired and convenient, other means for fastening the circuit-wires 4 to the binding-posts 3 may be employed. Said base of insulating material 1 is provided with a peripheral recess 6 for the reception of a rounded cap 7. Said rounded cap 7 fits in said recess and is provided with an elongated slot 8, in which the switch-lever 9 may move whenever the same is operated.

Secured to the insulating-base 1 in any suitable and mechanical manner, preferably, however, as illustrated in the drawings, is a **U**-shaped guiding-bar 10, of the construction as illustrated in Fig. 3. Said **U**-shaped guiding-bar 10 is provided in its arched portion with an elongated slot 11, in which the switch-lever 9 may move when operated. It may be perceived from this construction that the switch-lever 9 is permitted to move in an arc, the extent of said movement being regulated by the length of elongated slot 11. The lever 9 is provided with right-angular prongs 12, said prongs being fulcrumed and pivotally secured in plugs of insulating material 13. The prongs 12 are united and form a continuous piece, and the continuous piece thus formed has a horizontal portion 14, to which horizontal portion one end of a spiral spring 15 is secured in any suitable and mechanical manner. The other end of said spiral spring 15 passes through a perforation 16, formed in the insulating-base 1 and is held in said position by means of a pin 17, which passes through an eye formed in the end of the spiral spring 15. Said pin, as can be readily perceived, prevents the spiral spring 15 from being pulled upwardly out of its proper location in perforation 16.

It may be premised in this connection that the perforation 16 is elongated, thereby permitting the spiral spring 15 to move laterally therein whenever the switch-lever 9 is operated.

18 indicates **S**-shaped contact-plates, the same being provided with perforated ears 19, through which screws 20 pass, thereby pivotally securing said **S**-shaped contact-plates to the insulating base-plate 1. Said **S**-shaped contact-plates are provided with slitted and rounded terminal portions 21, which fit and lap over the binding-posts 3, thereby increasing the contact-surface between said binding-posts and said contact-plates 18. Said **S**-shaped contact-plates 18 are susceptible of a rocking motion on their fixed centers or screws 20, and whenever said plates are caused to rock in one direction they are brought in contact with the binding-posts 3,

whereby the circuit is closed, and when they are caused to rock or move in an opposite direction they are removed instantaneously from said binding-posts 3, thereby opening the circuit. Said S-shaped contact-plates 18 are provided with recesses 23, in which the insulating-plugs 13 loosely fit.

It may be observed from the construction as hereinbefore set forth that when the switch-lever 9 goes to the left, as illustrated in Fig. 3, the right-angular prongs 12 move in a horizontal direction to the right, thereby actuating and rocking the S-shaped contact-plates 18. Of course when said switch-lever 9 moves toward the right the right-angular prongs 12 will move toward the left in a horizontal direction and actuate and rock the contact-plates 18 in an opposite direction. It may be also perceived that the insulating-plugs 13 remain almost stationary until the switch-lever 9 occupies a position at an angle relative to a vertical line. Whenever it assumes this position, the elasticity of spring 15 will lower the switch-lever rapidly, and consequently move the insulating-plugs 13 rapidly in a horizontal direction and bring the contact-plates 18 instantaneously in contact with or remove said plates instantaneously from the binding-posts 3, thereby preventing any sparking between the binding-posts and contact-plates, as the connection between said binding-posts and contact-plates is instantly made or broken.

Having fully described my invention, what I claim is—

1. An electric switch having an insulated base 1, provided with a peripheral recess 6, a cap 7, provided with an elongated slot 8, adapted to fit in said recess, binding-posts 3, secured to said insulating-base 1, S-shaped contact-plates 18, pivotally secured to said insulating-base, a U-shaped guide 10, provided with an elongated slot 11, secured to the same, a switch-lever 9, provided with prongs 12, the same carrying insulating-plugs 13, mounted in said contact-plates 18, and a spring 15, secured to said prongs and said insulating-base 1 for actuating said lever, substantially as set forth.

2. An electric switch having an insulated base 1, provided with a peripheral recess 6, a cap 7, provided with an elongated slot 8, adapted to fit in said recess, binding-posts 3, secured to said insulating-base 1, S-shaped contact-plates provided with perforated ears 19 and recesses 23, pivotally secured to said base, a U-shaped guide 10, provided with an elongated slot 11, secured to the same, a switch-lever 9, provided with prongs 12, the same carrying insulating-plugs 13, the same adapted to loosely fit in recesses 23, and a spring 15, secured to said prongs and said insulating-base or to said lever for actuating said lever, substantially as set forth.

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

ADOLPH WISSLER.

Witnesses:
ED. E. LONGAN,
ALFRED A. EICKS.