No. 638,036. Patented Nov. 28, 1899.

H. P. WHITE.

ELECTRIC SWITCH.

(Application filed Mar. 7, 1899.)

(No Model.)

Fig. 1.

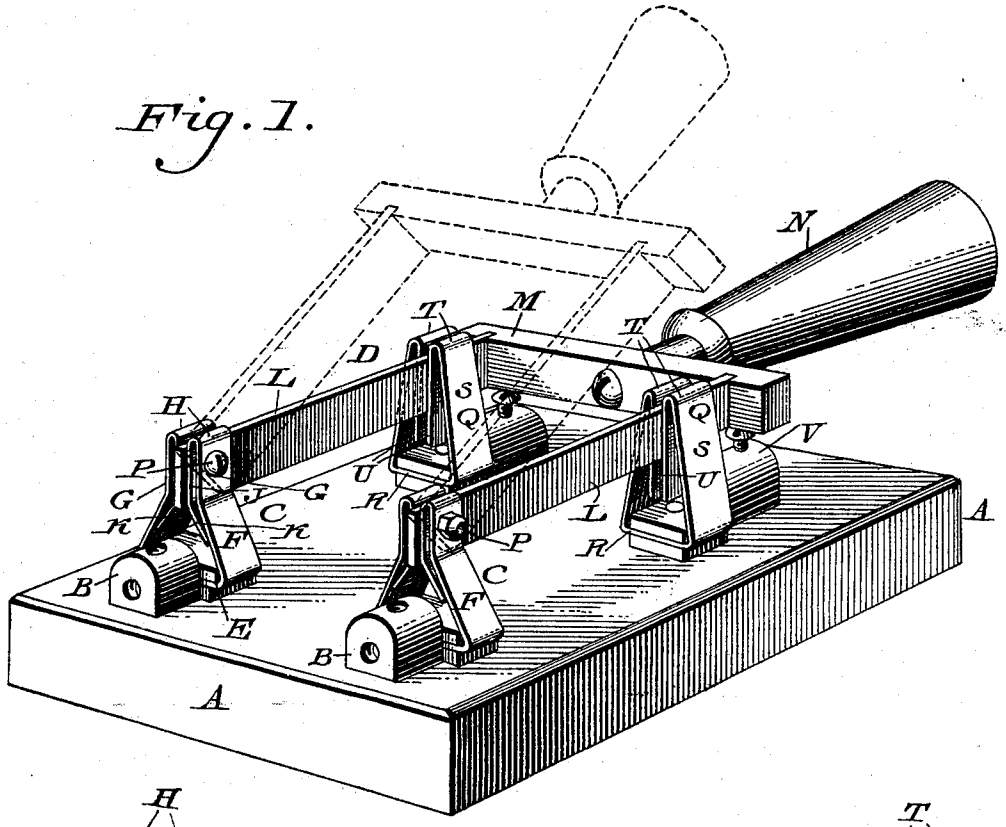


Fig. 2.

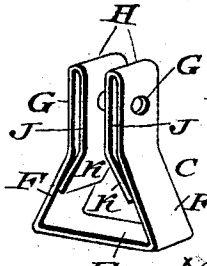


Fig. 3.

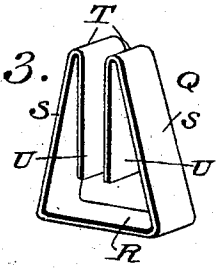


Fig. 4.

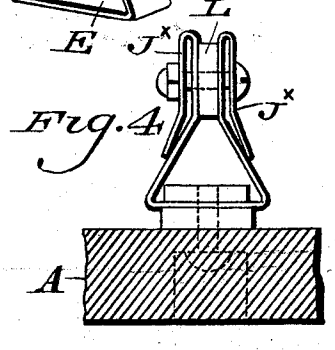


Fig. 5.

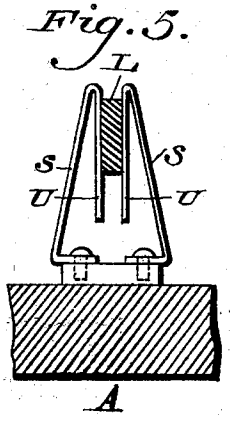
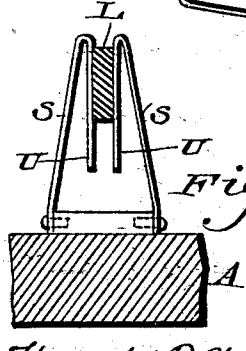


Fig. 6.



Witnesses

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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 638,036, dated November 28, 1899.

Application filed March 7, 1899. Serial No. 708,077. (No model.)

To all whom it may concern:

Be it known that I, HERBERT P. WHITE, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Electric Switches, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to an improved construction of electric switch whereby I provide a novel and efficient means for forming a contact between the movable member of the switch and the stationary terminal or terminals on which it is mounted, whereby all wear of these coacting parts caused by opening and closing the switch may be taken up.

It also consists in a novel manner of constructing the pivotal connection of the movable member to its support, by means of which a positive contact is always insured and the switch is rendered more positive and effective in its action under all conditions.

It further consists of novel details of construction, all as will be hereinafter fully set forth, and particularly pointed out in the claims.

Figure 1 represents a perspective view of an electric switch embodying my invention. Fig. 2 represents a perspective view of one of the clips or contact devices to which the movable member of the switch is pivoted. Fig. 3 represents a perspective view of one of the clips or contact devices, showing the resilient inturned depending jaws with which the blades of the movable member are adapted to contact. Fig. 4 represents a modified construction of the clip or contact device, to which the movable member is pivoted. Figs. 5 and 6 represent modified forms of the resilient jaws and manner of supporting them.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the bed or base of the switch, which may be of any suitable non-conducting material, and B designates binding-posts, to which the conductor may be secured in any suitable manner.

C designates the hinge members or contact devices, in which the movable member D is pivotally mounted, said contact devices consisting of a base E, having upwardly-converging sides F and upward extensions G, which latter are deflected downwardly at H, whereby the return members J are formed, the latter having their ends K diverging, as will be understood from Figs. 1 and 2. The movable member D is composed of the blades L, which are joined to the bar M, of insulating material, the handle N, also of insulating material, being suitably secured to said bar. The blades L are pivotally mounted within the members J by means of the pins, screws, or bolts P or other similar fastening devices. It will be apparent that by the employment of the hinge members the lower terminal of each of the members K impinges against the adjacent surface of the converging side F, thereby forming a stop or abutment, which prevents the members between which each blade L is held from springing to any great extent out of parallel when the fastening devices common to the hinge members and blades are tightened, whereby substantially parallel contact-faces for each of the blades L are always provided, as is evident.

Q designates another set of clips or contact devices with which the blades L are adapted to contact when desired, said clips consisting of the base portion R, having the converging sides S, which are bent at T and afterward deflected downwardly toward the base R, as indicated at U, wherefrom it will be seen that a plurality of resilient jaws are formed, having their cheeks substantially parallel under all conditions to the blades L. The clips Q are attached to the base A in any suitable manner, so that electrical communication can be had to the binding-post V.

In Fig. 4 I have shown another embodiment of the principle of my invention in which the downwardly-deflected members J are turned outwardly and then downwardly instead of inwardly, as seen in Fig. 2, said members being indicated at $J^{\times}$ in Fig. 4. I prefer, however, in practice to employ the construction seen in Fig. 2, since the same presents a more symmetrical appearance by reason of the return members J being located within the members F and G.

The construction seen in Figs. 5 and 6 may also be employed as equivalents for the clips seen in Figs. 1 and 3 without departing from the spirit of my invention, it being seen that the members S and U always have the same

function, the only difference being the manner of securing the same in position at their lower portions.

It will be seen from the foregoing that by employing clips or contact devices constructed as described, the sides of which are formed of a single piece of material folded so as to make a return bend toward its base, thereby producing a plurality of resilient contact-points, contacting cheeks are formed which will always remain substantially parallel to the blade of the switch, so that a good contact is always assured upon said blades under all conditions when the parts are in proximity to each other, it being further apparent that the jaws formed by the members readily adapt themselves to blades L of different thicknesses, since said blades can readily enter the same, and the contact becomes better and more satisfactory the longer the switch is used.

It will of course be evident that slight changes may be made in the manner of producing or fastening the clips or contact devices in position without departing from the spirit of my invention, and I therefore reserve to myself the right to make all such changes as may come within the spirit of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an electric switch, a hinge member consisting of a base, upwardly-converging walls extending therefrom and meeting substantially parallel upwardly-extending walls, said walls being deflected and continued in substantially parallel direction downwardly and provided with diverging members at their lower portion which are adapted to impinge against the adjacent converging walls.

2. In an electric switch, a movable member provided with blades in combination with hinge members, the latter consisting of a base, upwardly-converging walls F, upwardly-extending walls G, the latter being deflected at H so as to form depending substantially parallel members and terminating in diverging members which are adapted to contact with the adjacent converging walls and fastening devices passing through said hinge members and the blade held therebetween.

3. In an electric switch, a hinge member, a movable member having a blade pivoted in said hinge member, the latter consisting of upwardly-converging walls, upwardly-extending walls forming a continuation thereof, said walls being deflected and continued downwardly in substantially a parallel direction, the lower terminals being diverging and adapted to contact with the adjacent walls, fastening devices common to said blade and hinge member and other contact devices suitably supported and adapted to be engaged by said blades.

4. An electric switch consisting of a suitable bed having hinges secured thereto, each of said hinges consisting of a base having upwardly-extending walls, said walls being continued in a substantially parallel direction and then folded and turned downwardly toward said bed and a movable member provided with blades pivoted to said hinges in combination with a clip having its sides formed of material folded so as to make a return bend toward its base, whereby resilient internal jaws are formed, the contacting cheeks thereof being substantially parallel to the blade of said switch.

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