

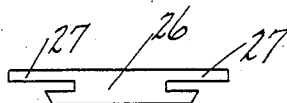
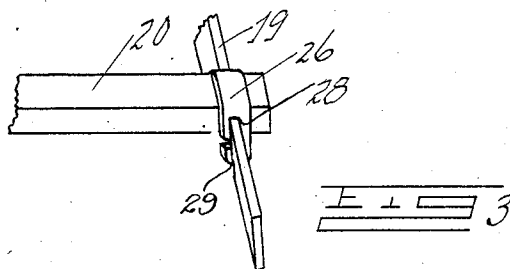
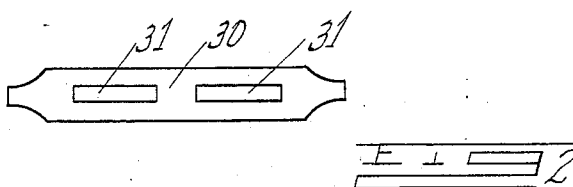
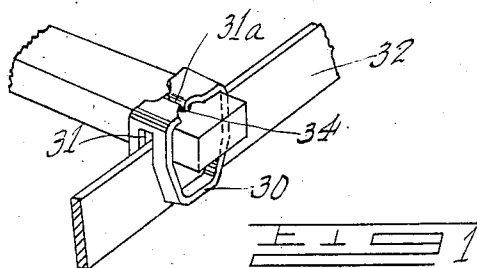
May 10, 1932.

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1,857,487

SWITCH BLADE DEVICE

Original Filed March 24, 1921



INVENTOR.

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SWITCH BLADE DEVICE

Original application filed March 24, 1921, Serial No. 455,027. Patent No. 1,675,435, dated July 3, 1928.
Divided and this application filed July 2, 1928. Serial No. 289,943.

My invention relates to devices for fastening switch blades, such as are usually formed of copper strip or bar, to fiber, such as is used to carry the copper parts into and out of switch contact.

This application is a division of my co-pending application Serial No. 455,027, filed March 24, 1921, now Patent Number 1,675,435, issued July 3, 1928.

It is my object to provide a simple and effective means for securing copper blades to the fiber bars in electrical switches, which will not call for the perforating of the fiber with holes, thus weakening it, and which in addition assures a true right angle position of the blade with relation to the copper. In addition my improvement assures that the blade will never get out of its true angle, and this is very important in switch manufacture because if the blades get somewhat out of line they will not enter truly into the contacts of the switch and wear will be set up and improper contact made.

I accomplish my objects by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings:—

Figure 1 is a perspective view of one of the types of my invention.

Figure 2 is a plan view of the attaching clip used in this type of my design.

Figure 3 is a perspective view of another type of my invention.

Figure 4 is a plan view of the attaching clip used in this second type.

I do not desire because of showing but two types of my invention to limit myself to them alone.

I have not illustrated a complete electrical switch because my invention is applicable to all types of switches of the familiar type having fiber bar elements on which the blade or blades of the switch are secured for the purpose of moving them to a position of contact and position out of contact with acting terminals in electric circuits.

My invention relates to the mode of securing the fiber to the copper blade, and I provide

vide one of two preferred forms dependent upon the size and weight of the parts.

For a small switch the plate or attaching clip 26 is stamped out having bifurcated tongued ends 27, 27, one tongue on each end being longer than the other.

The fiber piece 20 is notched or slotted across the bottom, as at 28, to receive the blade 19, say of copper, and the plate or attaching piece 26 is set over the free side of the fiber and bent over the blade, straddling it, with the bifurcated ends. The long tongue at each end is then bent over at 29 to engage a small notch formed for this purpose in the blade. This notch is better shown in Figure 1 with regard to the other embodiment of the invention.

The entire operation of mounting the blade to the fiber can be done in a press with great rapidity, as compared to the labor of securing the parts together by screws. In addition screws will come loose, and the tapping of screw holes in fiber is a weakening of it, so that a tendency to break is developed. Furthermore the arrangement is such as permits of no twisting of the blade, and assures that the operation of the fiber element will not develop improper contact of the blades with the sockets or forks of the terminals for which they are designed.

For the larger work where it is desirable that heavier construction be employed, I provide a plate 30 as an attaching clip, which plate has slots 31, 31, therein, through which the switch blade 32 is passed. The fiber is grooved as before to seat the blade, and has a hole 34 in its upper side deeper than the notch in the first instance.

The attaching piece is first bent and slipped over the blade, the blade and fiber piece placed in the press, and the ends of the attaching piece formed smoothly over the top of the fiber bar, with the tongues 31a, at the ends of the attaching piece, bent down into the hole 34.

It will be observed that this example of my invention is heavier and stronger than the first, which is called for when the parts are heavier and greater force is to be anticipated in the manipulation thereof.

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

1. In an electrical switch, the combination
5 with a bar of non-conductive material slotted transversely to receive the switch blade, and means for securing the blade to the bar comprising a metallic clip having portions to engage over the bar and the blade, and to engage two opposed faces of the blade on either
10 side of the bar, and having portions to be turned over beneath the blade.

2. In an electrical switch, the combination
with a bar of non-conductive material, of a
15 blade of conductive material and a clip adapted to straddle the bar and the blade on both sides of the bar, and to engage beneath the blade at separate points by being bent thereunder and hold the blade against the
20 bar.

3. In an electrical switch, the combination
with a bar of non-conductive material, of a
blade of conductor material and a clip adapted to straddle the bar and the blade on both
25 sides of the bar, and to engage and hold the blade against the bar, said bar being slotted to provide a seat for the edge of the blade, and said clip having turned over portions whereby the engagement of the several parts
30 is established and held.

4. In an electrical switch, the combination
with a bar of non-conductive material, of a
blade of conductor material and a clip to
35 secure the blade to the bar, said blade being notched to engage the clip in planes at right angles to the bar, and the bar notched to seat the blade and retain it against movement in planes parallel to the bar, said clip having portions to engage the bar by being bent over
40 the same and to straddle the blade on both sides of the bar, and a portion to engage the notched portion of the blade.

5. A clip for securing a switch blade to a
switch bar, comprising a metallic plate
45 formed with interspaced slots to receive the blade when the clip is bent to a U shape, a portion intermediate said slots to engage beneath the blade, and portions to be bent over above the bar when the bar lies between the
50 legs of the U.

6. In an electrical switch the combination
with a bar of non-conductive material
grooved transversely, a blade engaged in said
55 groove, and having a notch on the under side, and a clip for holding said bar and blade in engagement, said clip comprising a metallic plate formed with interspaced slots to receive the blade when the clip is bent to a
60 U shape, a portion intermediate said slots to engage in said notch in said blade, and portions bent over above said bar when the bar lies between the legs of the U, whereby the clamping of the metal of the clip holds the several parts together.

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