

(No Model.)

A. METZGER.
ELECTRIC SWITCH.

No. 537,538.

Patented Apr. 16, 1895.

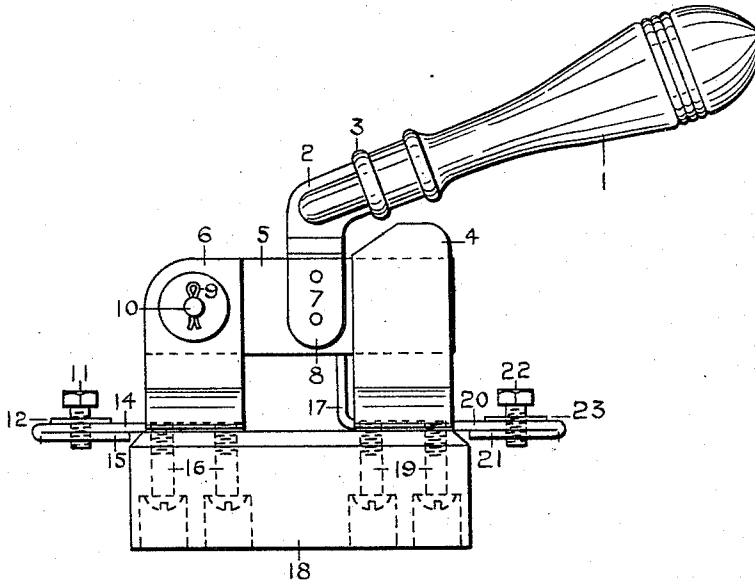


Fig. 1.

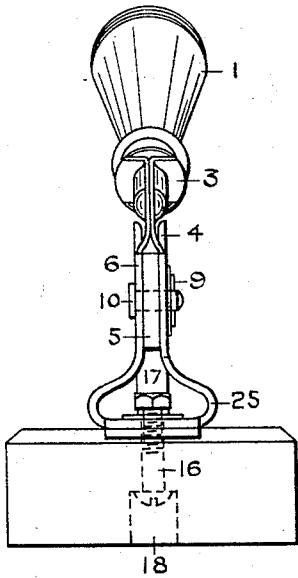


Fig. 3.

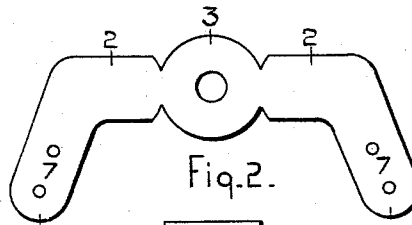


Fig. 2.

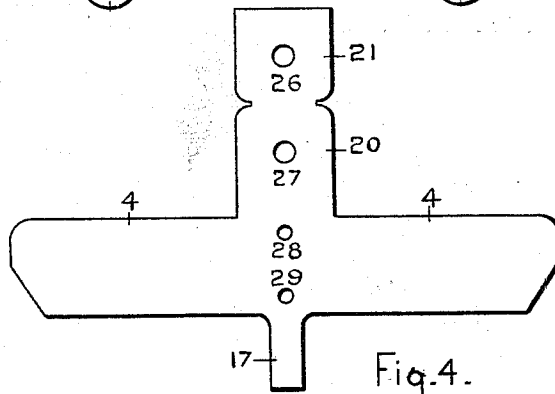


Fig. 4.

WITNESSES:

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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 537,538, dated April 16, 1895.

Application filed October 5, 1892. Serial No. 447,916. (No model.)

To all whom it may concern:

Be it known that I, AMANDUS METZGER, a citizen of the United States, residing at Schenectady, in the county of Schenectady, in the State of New York, have invented a new and useful Switch for Electrical Currents, of which the following is a specification.

This invention relates to switches for making and breaking electrical circuits, in which a contact blade is pivoted in one set of clips and is adapted to engage with a second set of clips in the path of the blade.

The object of my invention is to provide a switch which shall be strong and at the same time simple to construct and made of the fewest possible number of parts.

The invention consists of an electrical switch of this character, constructed as hereinafter set forth and claimed.

In the accompanying drawings, Figure 1 is a side view of the switch. Fig. 2 is a plan view of a blank employed in forming the switch. Fig. 3 is an end view of the switch looking toward the right in Fig. 1; and Fig. 4 is a plan view of a blank forming one of the circuit terminals used in the switch.

In the construction of this invention each circuit terminal is formed from a sheet metal blank made in one piece. The construction of the right hand clip in Fig. 1 will first be described.

Referring to Fig. 4 of the drawings, there is shown therein a sheet metal blank formed with the longitudinal portion 20 having a short projection 17 at one end, and an extension 21 at the other, and lateral projections 4, 4. The lateral projections 4, 4, are of such a size and shape as to form when bent up at a right angle to the longitudinal portion 20, the vertical arms or spring clips, with which the switch-blade comes in contact when moved into position between them. The longitudinal portion 20 is formed with the bolt or screw-holes 28, 29, by means of which it is secured to the insulating base 18. The circuit terminal is secured to the base 18 by means of screws 19, as indicated in dotted lines in Fig. 1, passing through the holes 28 and 29, and engaging with the longitudinal portion 20. When the switch arms or clips 4, 4, are secured, as just indicated, to the base 18, a portion of the longitudinal part 20 of the blank

shown in Fig. 4, will rest on the base 18, and a portion thereof will project beyond the latter, as indicated in Fig. 1. The extension 21 of the longitudinal portion 20 is bent over, so as to lie against the under side of 20, as shown in Fig. 1, and so as to bring into alignment, threaded screw-holes 26 and 27, in the parts 20 and 21, thereby affording a sufficient thread for the terminal clamping screw or bolt 22, which, with the washer 23, affords a means for attaching the circuit wire, lug thereof, or bus-bar. The projection 17 of the portion 20, heretofore referred to, is bent up vertically, as shown in Fig. 1, and extends upward to a height sufficient to serve as a stop for the switch blade when it is brought into contact with the vertical spring arms or terminal clips 4, 4. The left hand circuit terminal is constructed similarly to the right hand one just described, with the exception that there is no stop similar to stop 17. It is formed with the vertical arms or spring clips 6, the longitudinal base portion 14, the extension 15 bent over to lie against the under side of 14 similarly to the extension 21 referred to in Fig. 4, and provided with the binding screw 11, and washer 12, by means of which is attached the other end of the circuit wire, the lug thereof, or bus-bar.

5 indicates a switch blade which is hinged between the arms 6 by means of the pivot pin 10 and washer 9, and is provided with a suitable handle secured to the blade by means of arms 7, riveted thereto, formed from a sheet metal blank shown in Fig. 2, wherein the angular portions 2 and the circular portion 3, bent into shape, are secured to the end of the handle.

By means of the foregoing construction, it will be seen that an electrical switch is formed which is simple in construction and in which the parts are formed of the fewest number of pieces possible.

If desired, the switch may be constructed with two or more blades in parallel, in order to increase its carrying capacity. When two blades are used in parallel, the clips are bent up in practically the same shape as in the case of the single clips, with the exception that one form of blank is inserted within the other, so that there is a double set of clips in parallel between which the two blades can enter.

Having described my invention, so that any one skilled in the art to which it pertains could manufacture the same, what I claim, and wish to obtain by Letters Patent, is—

5 1. In an electrical switch, as herein described, a circuit terminal formed of one piece of sheet metal having vertical spring arms or clips, a horizontal extension projecting from the base, and a vertical projection integral
10 with the circuit terminal and forming a stop for the switch blade.

2. In an electrical switch, as herein described, the combination, with an insulating base, of circuit terminals or contacts secured
15 to the base, and each formed of a single piece of sheet metal having an extension folded upon itself and provided with aligned screw-threaded holes and projecting beyond the insulating base, one of said circuit terminals
20 having pivoted thereto a switch-blade, and the other formed with a vertical projection integral therewith and serving as a stop for the switch-blade when in contact with said circuit terminal.

25 3. A switch for electrical currents consisting of a terminal clip formed of a single piece of sheet metal having integral therewith a lug

or projection, said clip having pivoted or hinged therein a contact blade, said contact blade making electrical contact with another
30 similar clip in its path, the latter clip having integral therewith a projecting stop to limit the movement of said blade.

4. A switch for electrical currents consisting of terminal clips having terminal lugs integral therewith, formed of one piece of sheet metal and a blade making electrical contact
35 between said clips, said blade having thereon a handle carrier consisting of a sheet metal punching straddling said blade, as specified.

5. A switch for electrical currents, consisting of terminal clips having terminal lugs integral therewith formed of one piece of sheet metal and a blade making electrical contact
40 between said clips, said blade having thereon a handle carrier consisting of a sheet metal punching straddling said blade, and a stop formed integral with one of the clips whereby
45 travel of the blade is stopped.

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Witnesses:

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