(No Model.)

H. B. SHALLENBERGER.

SWITCH FOR ELECTRIC CIRCUITS.

No. 589,865. Patented Sept. 14, 1897.

FIG. 1.

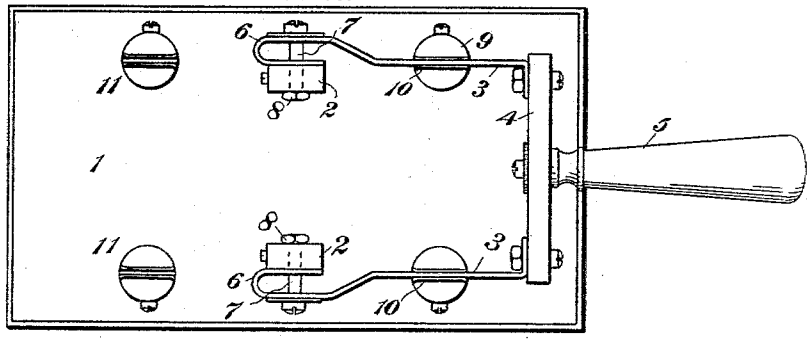


FIG. 2.

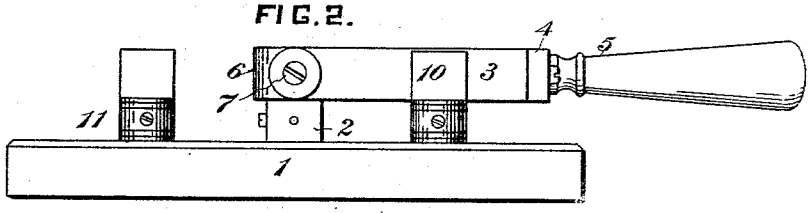


FIG. 3.

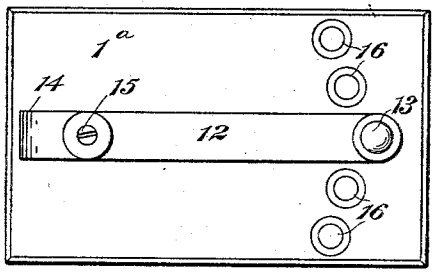
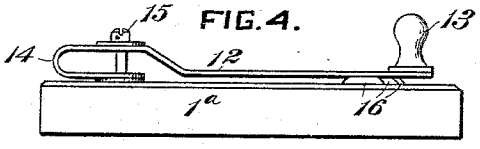


FIG. 4.



WITNESSES:

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SWITCH FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 589,865, dated September 14, 1897.

Application filed May 26, 1897. Serial No. 638,239. (No model.)

To all whom it may concern:

Be it known that I, HERBERT B. SHALLENBERGER, a citizen of the United States, residing in Rochester, in the county of Beaver and State of Pennsylvania, have invented a new and useful Improvement in Switches for Electric Circuits, of which the following is a specification.

My invention relates to switches for opening and closing electric circuits; and it has for its object to provide a device which shall be simple and inexpensive in construction and effective in operation.

A further object of my invention is to provide a novel and efficient means for varying the degree of pressure exerted between the movable member of the switch and the stationary terminal or terminals to which it is pivoted, whereby all wear of these parts caused by opening and closing the switch may be taken up.

In the accompanying drawings, Figure 1 is a plan view, and Fig. 2 a side elevation, of a double-throw double-pole jaw-switch constructed in accordance with my invention. Fig. 3 is a plan view, and Fig. 4 a side elevation, of another form of switch provided with my improvements.

Referring particularly to Figs. 1 and 2 of the drawings, 1 is a base which may be of any suitable non-conducting material, and 2 are posts of conducting material, each of which is provided with a binding-screw and constitutes one terminal of an electric circuit.

The movable member of the switch comprises a pair of blades 3, a bar 4, of insulating material, to which the outer ends of the blades are rigidly fastened, and a handle 5, of insulating material, rigidly attached to said bar.

Each of the blades 3 is formed of comparatively thin metel, preferably copper, bent backward upon itself at its inner end to form a bow-spring 6. As shown, the inner face of the inner portion of each bow-spring 6 rests against the outer side of the corresponding post 2; but it will be understood that the arrangement may be reversed or otherwise varied, if desired. A pivot-pin, preferably in the form of a screw or bolt 7, extends through alined openings in the two portions of the bow-spring and the corresponding post 2, and is provided on its inner end with a nut 8.

It will be readily understood that a close spring-contact is thus effected between the blades 3 and the corresponding posts 2 and that the pressure exerted between these parts may be varied at will by manipulating the nuts 8. This construction also enables me to take up any wear that may be caused by opening and closing the switch.

9 9 are stationary contact-terminals located at one side of the terminal posts 2 and provided with binding-screws and with spring-jaws 10 for the reception of the blades 3. 11 are terminals of like construction similarly located at the other side of the posts 2.

Referring now to Figs. 3 and 4 of the drawings, 1^a is a base of suitable insulating material, on which is mounted a switch-arm 12, similar to one of the blades 3, (shown in Figs. 1 and 2,) but provided with a laterally-projecting handle 13 and pivoted to move in a plane substantially parallel with the base-plate. The bow-spring end 14 is of substantially the same form as the corresponding parts 6 of the blades 3, and the pressure exerted by it may be varied in the same way by means of the screw or bolt 15.

The contact-arm 12 is so constructed and arranged as to be moved upon its pivot in a substantially horizontal plane onto any one of the stationary contact-buttons 16, as is usual in switches of this general type.

While I have shown and described certain specific details of construction, I desire it to be understood that many of the details may be varied without departing from the spirit and scope of my invention.

It will also be understood that my invention may be embodied in switches of different types from those shown.

I claim as my invention—

1. A switch for electric circuits comprising a suitable base provided with stationary terminals, a movable contact member having one end bent to form a bow-spring and means for pivoting said spring end to one of the stationary terminals.

2. A switch for electric circuits comprising a suitable base provided with stationary contact-terminals, a coöperating movable contact

member having a spring portion, and an adjustable means for fastening said spring portion to one of the stationary terminals whereby the pressure exerted by said spring portion may be varied.

3. A switch for electric circuits comprising a base provided with stationary contact-terminals, a movable contact member having one end bent to form a bow-spring and an adjustable means for fastening said bow-spring to one of the stationary contact-terminals whereby the pressure exerted by said spring may be varied.

4. A switch for electric circuits comprising a suitable base having stationary contact-terminals, a movable contact member having one end bent to form a bow-spring and a screw or bolt for holding said spring in contact with one of the stationary contact-terminals and varying the pressure exerted by it.

5. A switch for electric circuits comprising a base, a pair of jaw-terminals mounted thereon, a movable member comprising a pair of blades, a connecting-head and an operating-handle, each of said blades being bent at its free end to form a bow-spring, a pair of terminals to which said spring ends are pivoted and means for varying the pressure exerted by said spring ends against said terminals.

6. A switch for electric circuits comprising a base having two pairs of jaw-terminals and a pair of block-terminals, a pair of blades connected at one end by an insulating-head and having their other ends bent to form bow-springs, and bolts or screws for pivotally fastening said spring ends to the block-terminals.

In testimony whereof I have hereunto subscribed my name this 31st day of March, A. D. 1897.

HERBERT B. SHALLENBERGER.

Witnesses:
WM. H. EHMSEN,
MARY M. SHALLENBERGER.