

No. 753,258.

PATENTED MAR. 1, 1904.

G. W. HART.
ELECTRIC SWITCH.
APPLICATION FILED NOV. 23, 1903.

NO MODEL.

Fig. 1.

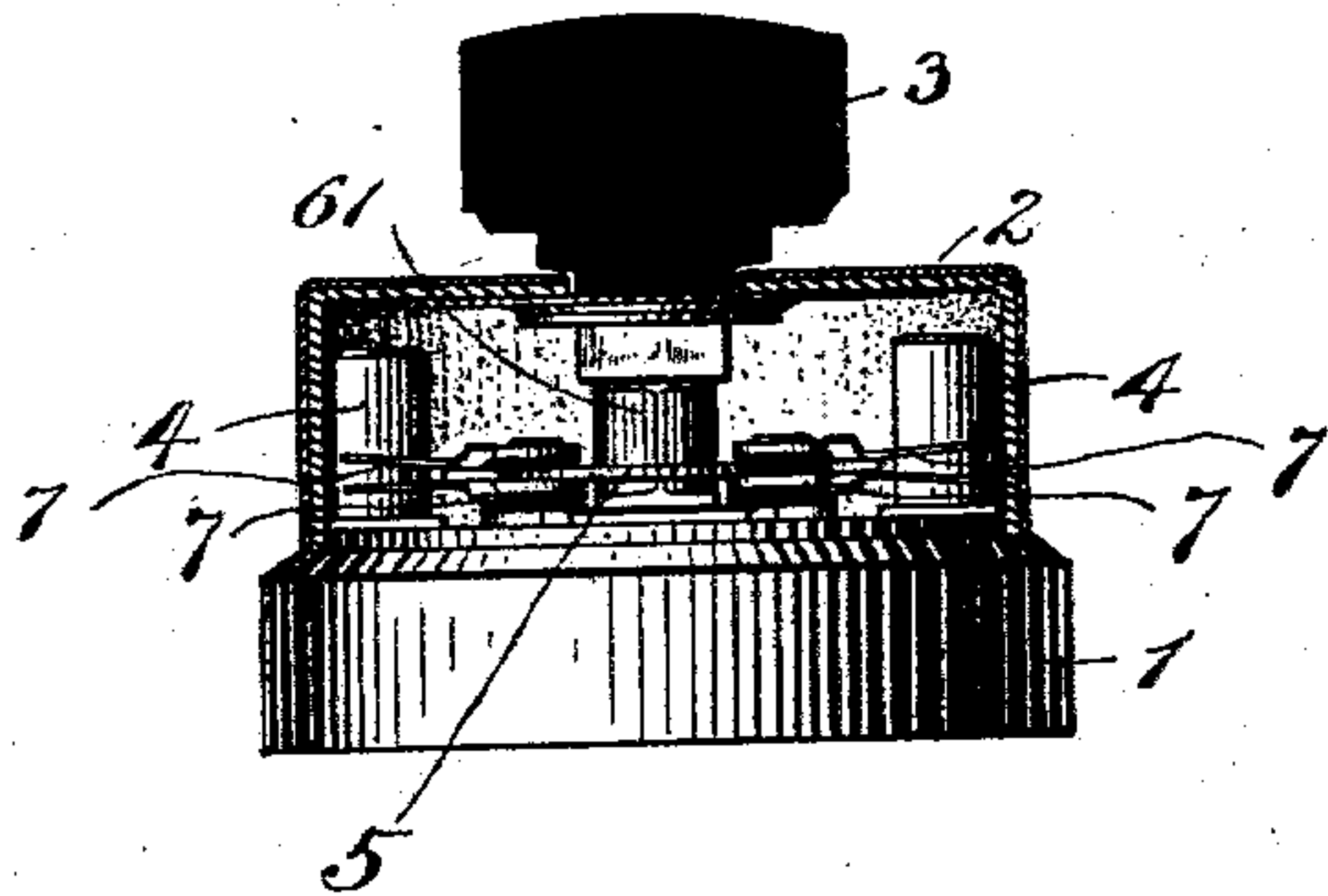


Fig. 2.

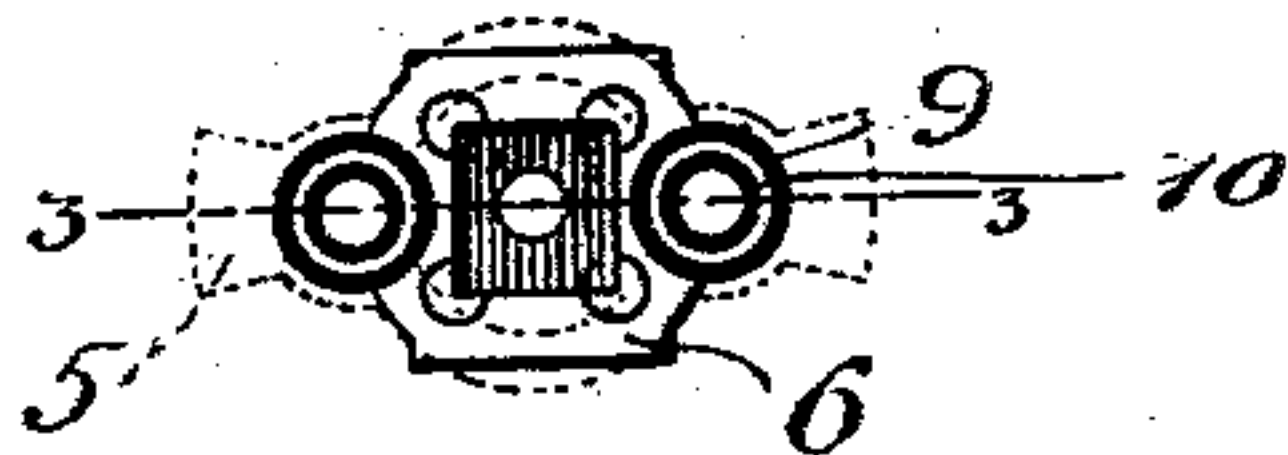


Fig. 4.

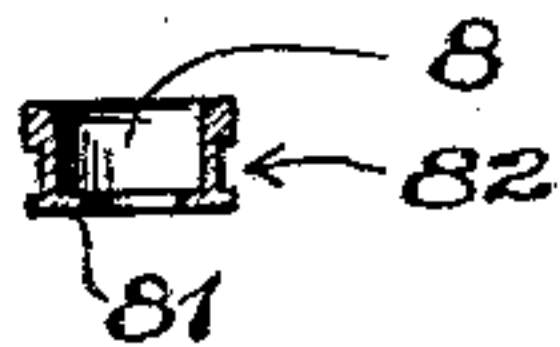
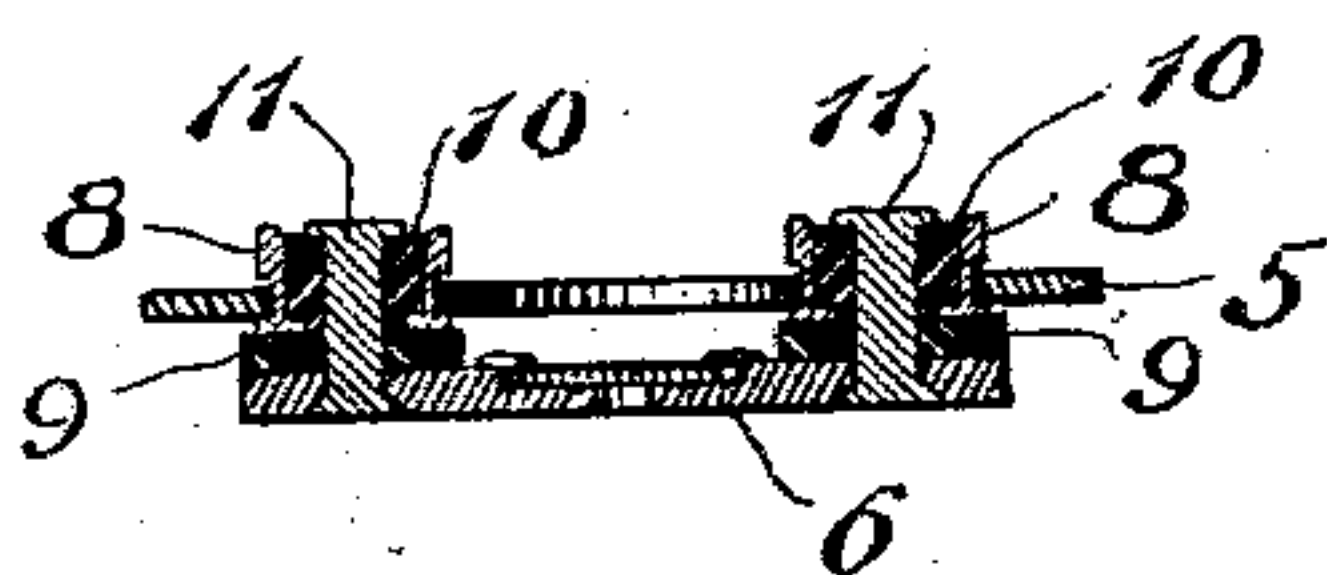


Fig. 5.



Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

GERALD W. HART, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE
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ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 753,258, dated March 1, 1904.

Application filed November 23, 1903. Serial No. 182,276. (No model.)

To all whom it may concern:

Be it known that I, GERALD W. HART, a citizen of the United States, residing at Hartford, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Electric Switches, of which the following is a full, clear, and exact description.

My invention relates to electrical appliances, and has particular utility in connection with electric switches.

The main object of my invention is to provide a new and effective means for insulating and mounting certain current-carrying parts.

In the accompanying drawings, Figure 1 is a side elevation of an electric switch, the cap or cover being shown in vertical section. Fig. 2 is a plan view of certain detached details of construction, the switch-blade being shown in dotted outline. Fig. 3 is a relatively enlarged sectional view on the line 3 3, Fig. 2. Fig. 4 is a vertical section of a separate detail of construction. Fig. 5 is a plan view of the switch contact member detached.

In the particular form and application of my invention shown in the drawings, 1 represents the usual porcelain base of an electric switch.

2 is the cap or cover.

3 is the operating-handle, usually formed of insulating material.

4 4 are terminals.

5 is a switch blade or plate arranged to electrically connect or disconnect the terminals 4 4.

6 is a spider which has a suitable mounting upon a rotatable post or hub 61.

The switch-blade 5 is mounted upon and insulated from the spider 6, and the parts are so connected that when the spider 6 rotates it carries with it said switch blade or plate.

7 7 are contact members such as usually provided in electric switches. These contact members are carried by the terminals 4 4. Each terminal carries a pair of contact members 7 7, and the end of the switch blade or plate 5 is arranged in such a plane that when the parts are electrically connected each end

of the switch-blade will stand between a pair of contact members 7 7.

The construction of the switch-actuating mechanism is immaterial to this invention, and therefore need not be described at length. It is sufficient to state that when the operating-handle 3 is turned rotative motion is imparted to the hub or post 61, which in turn rotates the spider 6 and throws the switch-blade 5 either into or out of contact with the members 7 7.

The means for mounting and insulating the switch-blade 5 on and from the spider 6 may be described as follows: 8 is a bushing which may be in the form of a sleeve and which may be notched or recessed in its outer periphery, as at 82, Fig. 4. The switch-blade 5 in its preferable form has an elongated slot, the ends of the slot being of substantially the width of the diameter of the sleeve 8 at the bottom of the recess 82.

9 is an insulating-washer arranged to rest upon the spider 6. The sleeve or bushing 8 rests upon the washer 9. Within the sleeve or bushing 8 is seated an insulating-washer 10. One means of providing a suitable seat for the washer 10 may comprise a ledge 81.

11 is a rivet which passes through the insulating-washer 10, the sleeve 8, washer 9, and spider 6. When this rivet is headed up, it securely clamps together the said parts. It should be stated that the rivet 11 is sufficiently smaller than the sleeve 8 so as to make no connection therewith. Hence said sleeve 8 is effectively insulated from its support 6.

The parts are assembled by passing the sleeves through the enlarged central part of the slot in the switch-blade 5 and then moving them into the narrow ends of the slot. The washers may then be applied and the rivets passed through said parts and through the spider and finally headed up, as best seen in Fig. 3. I prefer that the switch-blade 5 shall make a loose connection with the bushings 8, and to that end the width of the recesses 82 is slightly greater than the thickness of the metal of the blade or plate 5. By this means should the contact members 7 7 be slightly out of the

plane of movement of the switch-blade 5 the latter may readily shift or tilt to a sufficient extent to make an effective connection between the contact members 7 7 without distorting or bending the same.

What I claim is—

1. In a device of the character described, a current-carrying blade or plate, a support therefor, a bushing affording a bearing for said plate, insulating material seated within said bushing and also located between said bushing and said support and means for securing said bushing to said support.

2. In a device of the character described, a current-carrying blade or plate, a support therefor, a metallic bushing affording a bearing for said plate, insulating material seated within said bushing and also located between said bushing and said support and means for securing said metallic bushing to said support said bushing and said support being insulated from each other at all times.

3. In a device of the character described, a current-carrying blade or plate, a support therefor, a metallic bushing affording a bearing for said plate, a supporting ledge or shoulder within said bushing, insulating material seated on said supporting ledge or shoulder and within said bushing and also located between and separating said bushing from said support and means for securing said bushing to said support said bushing and said support being insulated from each other at all times.

4. In a device of the character described, a current-carrying blade or plate, a support therefor, a bushing affording a bearing for said

plate, insulating material seated within said bushing and also located between said bushing and said support, a rivet passing through said insulating material and said support but insulated from the former said rivet securing said parts together.

5. In a device of the character described, a current-carrying blade or plate, a support therefor, a bushing affording a bearing for said plate, insulating material seated within said bushing and also located between said bushing and said support and means for securing said bushing to said support said parts being insulated from each other at all times said blade or plate being loosely held in place by said bushing.

6. In a device of the character described, a supporting member, a bushing carried thereby, a current-carrying member loosely supported on said bushing but insulated from the support for said bushing.

7. In a device of the character described, a current-carrying blade or plate, a support therefor, a bushing affording a bearing and a support for said plate said plate being insulated from said bushing-support said insulation being located between said bushing-support and said bushing and means to securely hold said bushing to said support.

Signed at Hartford, Connecticut, this 20th day of November, 1903.

GERALD W. HART.

Witnesses:

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A. I. INGHAM.