

No. 773,626.

PATENTED NOV. 1, 1904.

W. F. BOSSERT.
KNIFE SWITCH.

APPLICATION FILED MAR. 7, 1904.

NO MODEL.

Fig. 1.

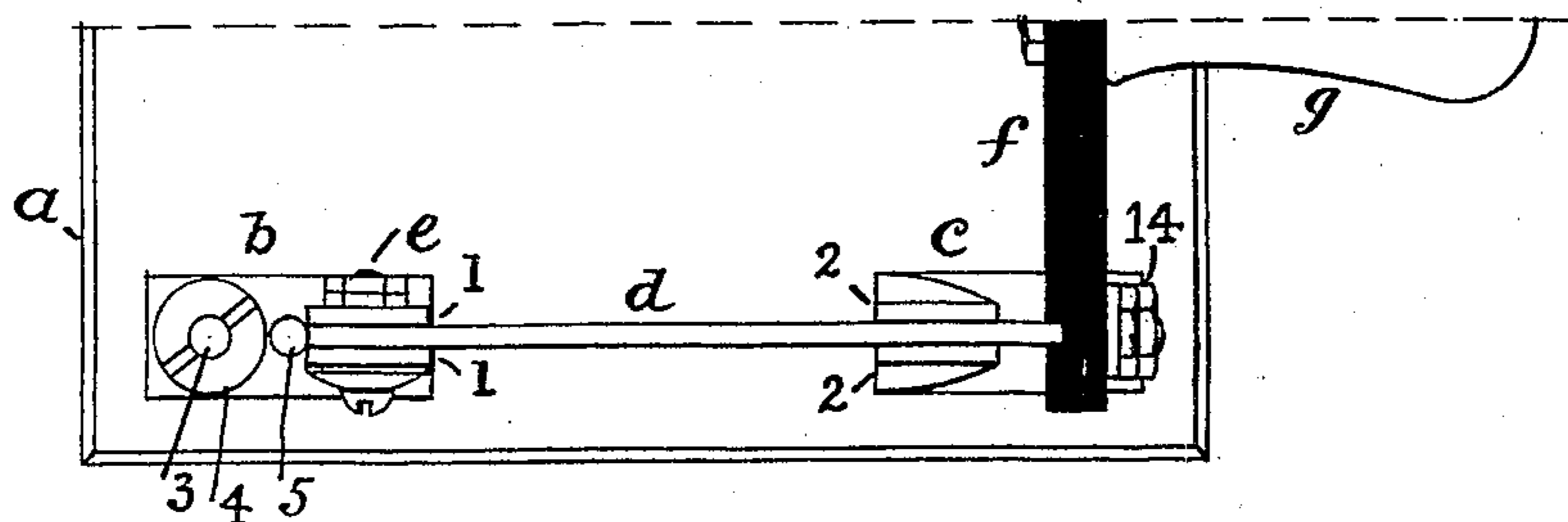


Fig. 2.

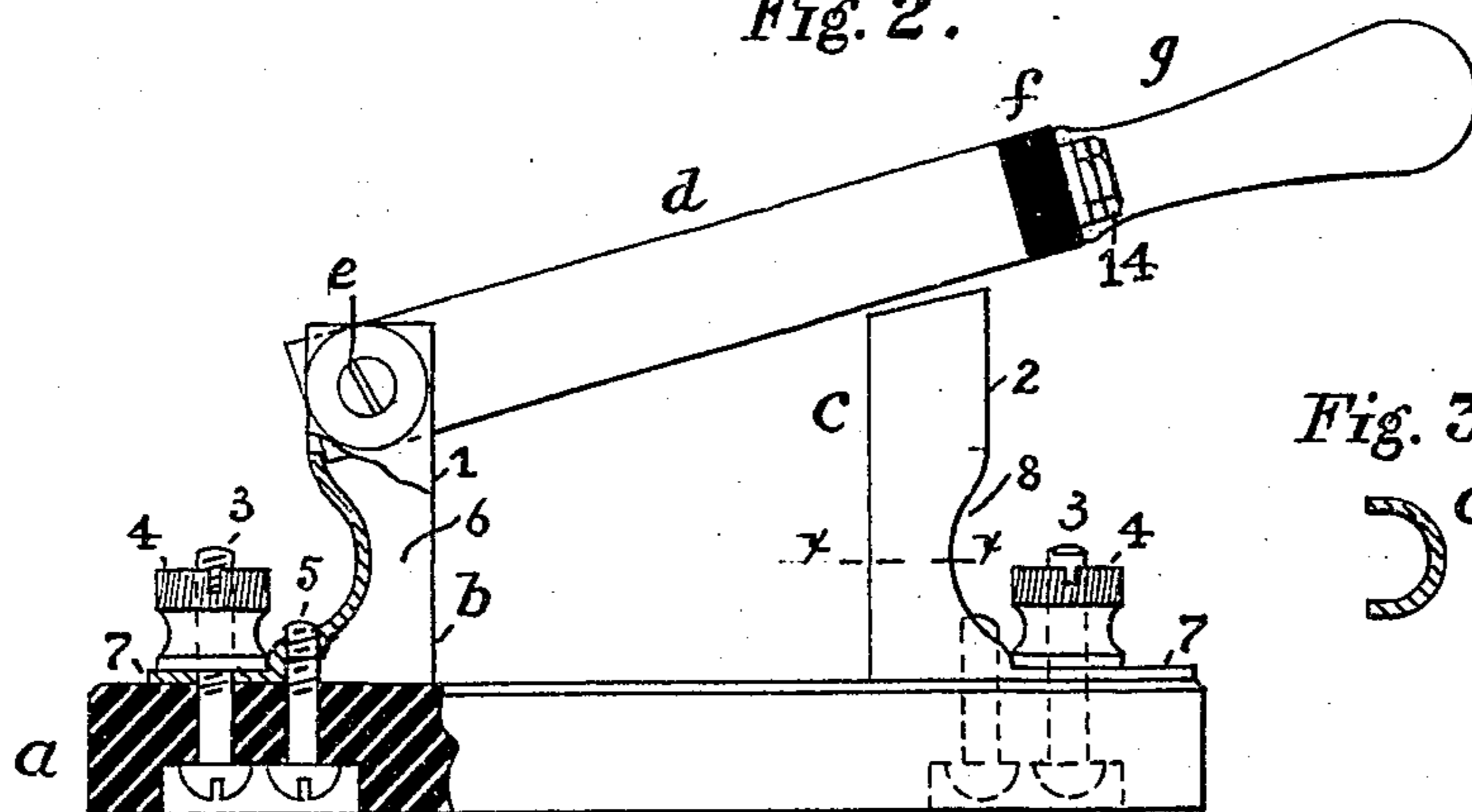


Fig. 4.

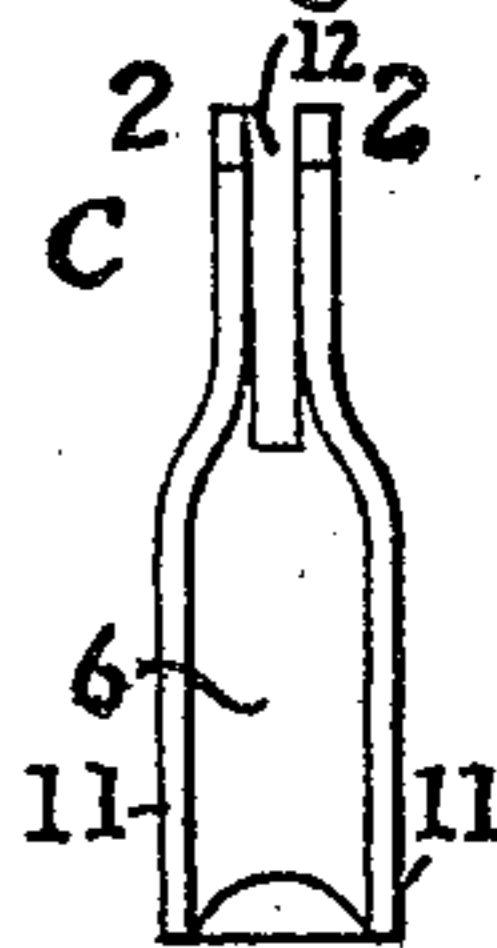
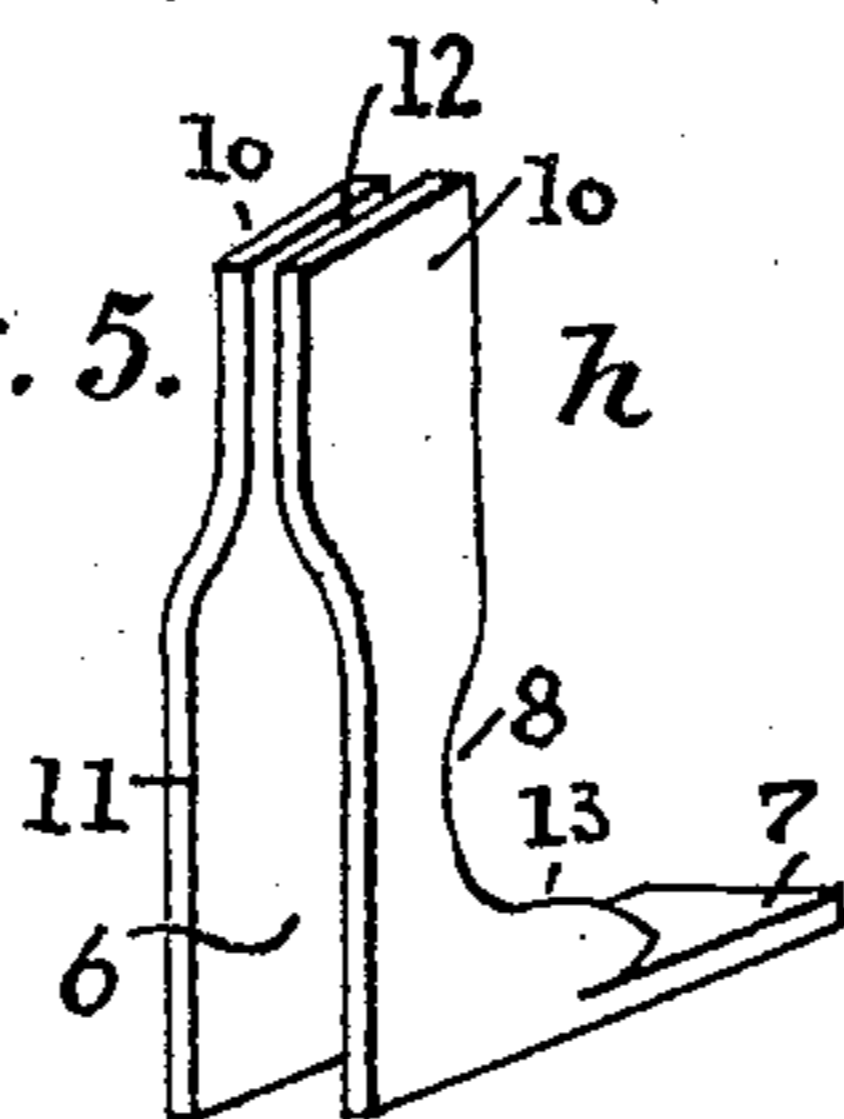


Fig. 3.



Fig. 5.



Attest.
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UNITED STATES PATENT OFFICE.

WILLIAM F. BOSSERT, OF UTICA, NEW YORK, ASSIGNOR TO THE BOSSERT ELECTRIC CONSTRUCTION COMPANY, OF UTICA, NEW YORK.

KNIFE-SWITCH.

SPECIFICATION forming part of Letters Patent No. 773,626, dated November 1, 1904.

Application filed March 7, 1904. Serial No. 196,902. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. BOSSERT, residing at Utica, in the county of Oneida and State of New York, have invented certain Improvements in Knife-Switches, of which the following is a specification.

The present invention relates to electric switches of the type known as "knife-switches," which consists of a suitable base of insulating material, such as slate, on which are secured hinge-posts and contact-posts, between which blades provided with a handle are adapted to make a connecting-path. The hinge and contact posts are commonly made in two or three pieces which are fitted and riveted to each other and sometimes are soldered together. The electric current when the posts are joined by the switch-blade passes through the length of the posts and when made, as referred to, in parts offer more or less resistance to its passage at the joints of the parts, which is liable to be increased by the use of the switch when the said joints become slackened. Therefore it is necessary in order to obviate this defect to make the hinge and contact posts in one solid piece and also to dispose of the metal employed in such manner as to obtain the greatest rigidity with the least amount of metal, at the same time to have sufficient area of metal to carry the maximum current with least heating of the parts; and my invention relates to posts of this type, as I will now proceed to describe and claim.

In the drawings which illustrate the invention, Figure 1 is a one-half plan view of a double-pole knife-switch. Fig. 2 is a side view, partly in section, of the previous figure. Fig. 3 is a section on line *xx* of Fig. 2. Fig. 4 is an inner or end view of a contact-post, and Fig. 5 is a perspective view of a blank casting of a post.

In the drawings, *a* represents a base of non-conducting material, such as slate, and *b* and *c* are hinge and contact posts, respectively, secured to the base *a* by the screws 3 and 5, which extend through the base *a*, counter-bored depressions being made in the under side of the base to provide for the heads of the screws.

d is a blade, one end of which is pivoted to the upper part of the hinge-post *b* by the screw *e*, provided with washers and nuts in the usual manner, while the opposite end of the blade is secured in the insulating-bar *f* by the nuts 14, and a handle *g* is attached to the outer side of the bar, as usual.

Referring to Fig. 5, *h* represents a post-blank as it appears when cast from copper in a mold, which is the preferred way of making the same, and it is of such length that the same blank is used for the hinge-post. By squaring its top, as shown by *b*, or by forming the top with an inward inclination, as shown by *c*, it is used as a contact-post, both in Fig. 2. The blank has a solid flat foot 7, in which a hole is bored or punched for the reception of the screw 3, and on the inner side from the foot the metal extends and rises into a semicircular column having two parallel sides 11 11, which near the top are curved toward each other and continue to the top as the parallel sides 10 10, separated by the gap 12, open on each end. To secure compactness in design and to provide a nut for the end of the screw 5, the metal is raised abruptly from the foot 7 at 13 and curved inward and outward, as at 8. The gap 12 is connected to the hollow interior 6 of the column, and as the metal is intended to have resilient properties the sides 10 10 act as springs and when used as a contact-post are pressed apart by the blade *d* and closely grip the same, and when the blade is withdrawn they close together and when used as a hinge-post keep in close contact with the blade. The blank *h* is cast smooth and requires no finishing except to burnish the exterior and to smooth the inner faces of the gap 12 between the sides 10 10.

It will be seen that the metal of the posts is arranged in a shape to secure the greatest strength, so that when in place provision is made for a firm footing upon the base, and of such rigidity that the blade *d* is kept in alignment between the hinge-post and the contact-post and that the wide base of the sides 11 11, narrowed to the sides 10 10, enables the latter to always pinch or grip upon the blade,

and thus secure good resilient contacts, and the posts being of one integrity give the least resistance to the current conveyed.

It will be understood that the screw 3, which acting to steady the foot 7 of the posts, is provided with the nut 4 to serve as a binding-post for the line-terminals.

I claim as my invention—

1. A switch-post of resilient material, having a foot on one side from which arises a hollow column closed upon three sides and open upon one side, whose parallel faces approach each other at their upper ends and form a gap whose parallel sides are open at each end.

2. A knife-switch post, of resilient metal, having a flat foot from which rises an open hollow column, rounded on its outer end, with parallel faces which approach each other at their upper ends and form a gap whose parallel sides are open at each end.

3. A knife-switch post of resilient metal, having a foot, perforated for a binding-screw and threaded for a holding-screw, from which extends an open hollow column with parallel faces which curve toward each other at their upper ends and form a gap whose parallel sides are open at each end.

4. A knife-switch post of resilient metal, having a flat foot perforated for a binding-screw and threaded for a holding-screw, from which extends a hollow column open on its inner end and rounded on its outer end, the sides being parallel and curving toward each other

at their upper ends where they terminate with a narrow gap between them open at each end.

5. The combination in a knife-switch, of a suitable base, a hinge-post and a contact-post, a blade pivoted to said hinge-post and adapted to engage said contact-post, both posts of resilient metal having a foot perforated for a binding-screw and threaded for a holding-screw, from which extends an open hollow column with parallel faces which curve toward each other at their upper ends and form a gap to receive the said blade whose parallel sides are open at each end.

6. The combination in a knife-switch, of a suitable base, a hinge-post and a contact-post, a blade pivoted to said hinge-post and adapted to engage said contact-post, both parts of resilient metal, having a flat foot perforated for a binding-screw and threaded for a holding-screw, from which extends a hollow column open on its inner end and rounded on its outer end, the sides being parallel and curving toward each other at their upper ends where they terminate with a narrow gap adapted to receive said blade between them open at each end.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 2d day of March, 1904.

WILLIAM F. BOSSERT.

Witnesses:

FREDERICK T. FOXENBERGER,
J. H. HILL.