

No. 897,525.

PATENTED SEPT. 1, 1908.

F. C. DE REAMER.
ELECTRIC SWITCH.

APPLICATION FILED AUG. 1, 1905.

Fig. 1.

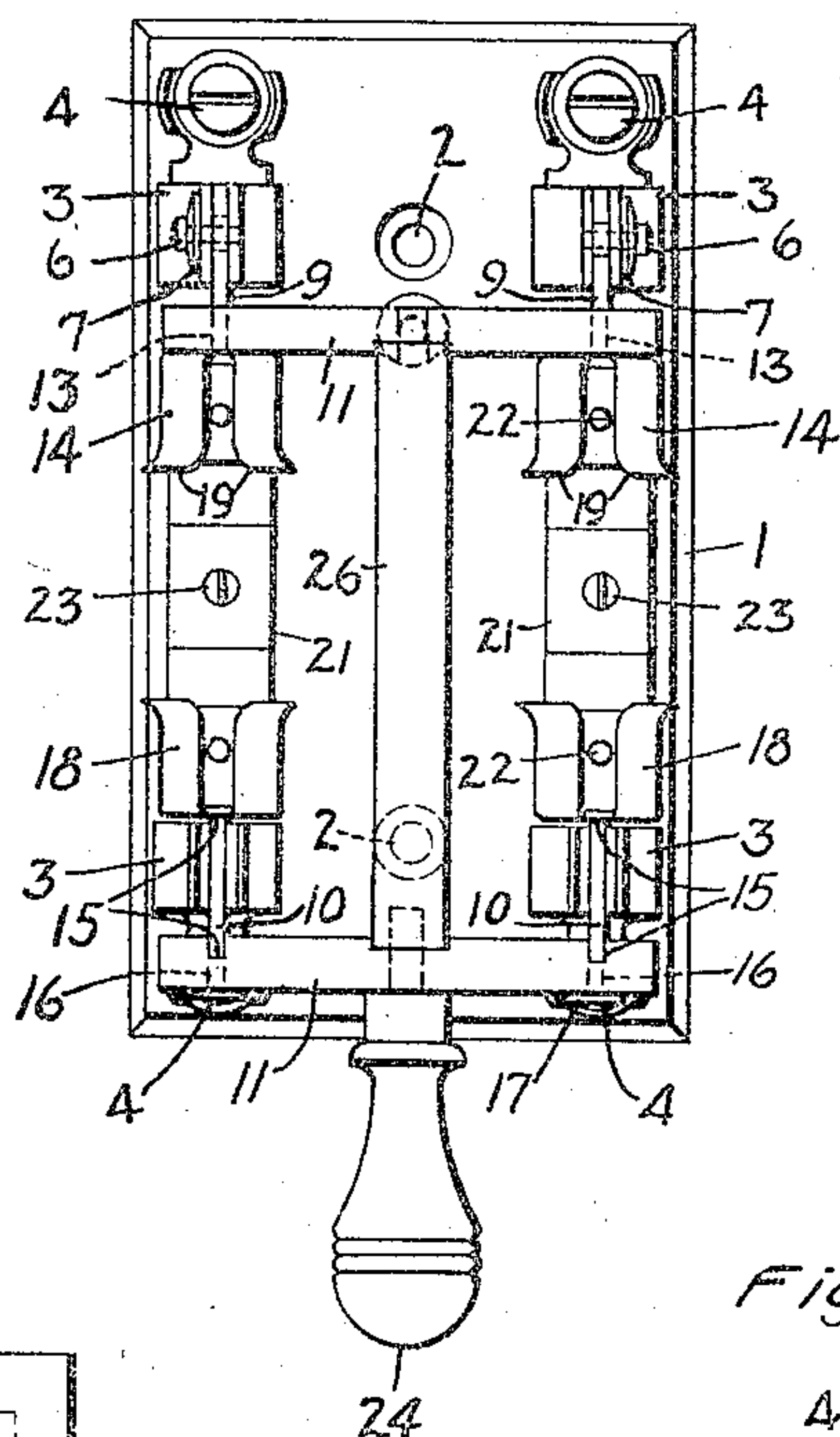


Fig. 4.

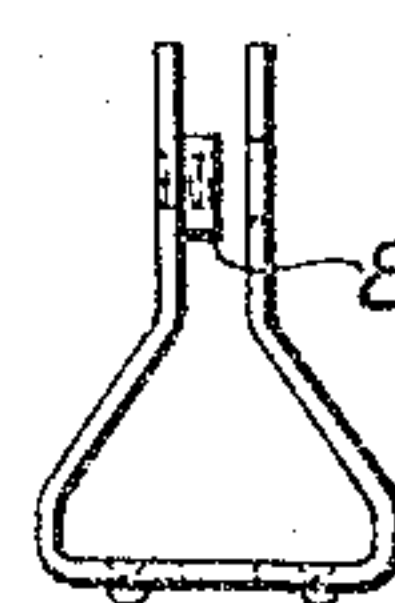


Fig. 2.

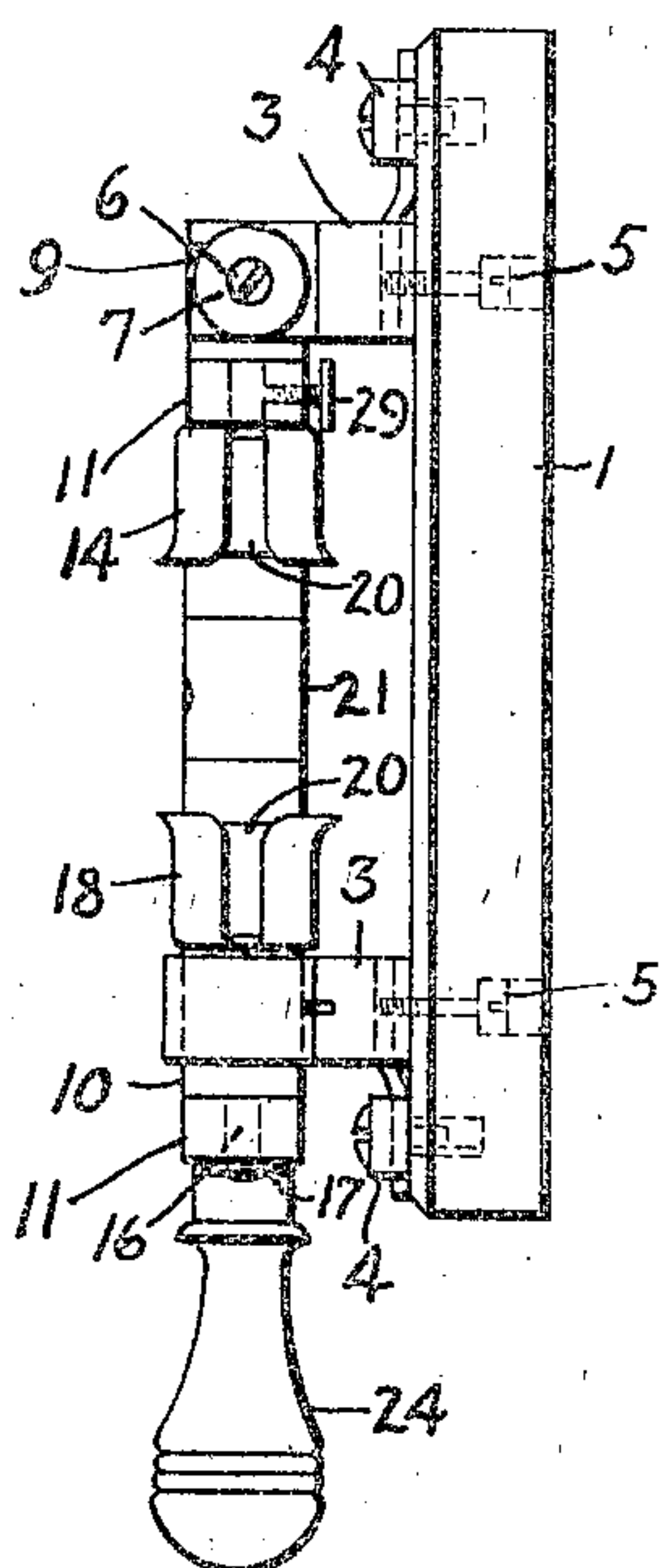
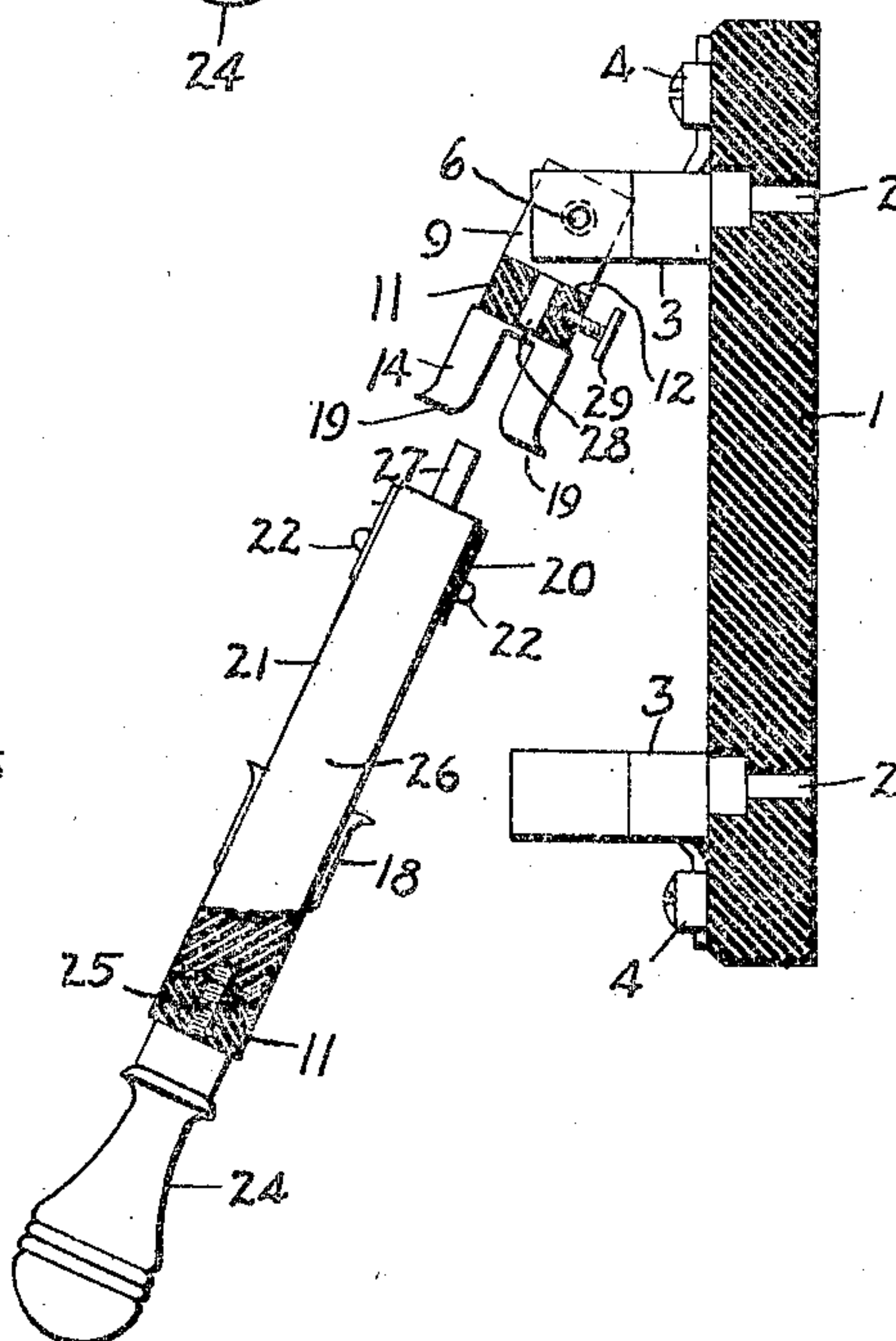


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANK C. DE REAMER, OF SCHENECTADY, NEW YORK, ASSIGNOR TO GENERAL ELECTRIC COMPANY, A CORPORATION OF NEW YORK.

ELECTRIC SWITCH.

No. 897,525.

Specification of Letters Patent.

Patented Sept. 1, 1908.

Application filed August 1, 1905. Serial No. 272,185.

To all whom it may concern:

Be it known that I, FRANK C. DE REAMER, a citizen of the United States, residing at Schenectady, county of Schenectady, State of New York, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

The present invention relates to electric cut-out devices, and more particularly to switches in which the movable member is provided with renewable fuses.

The object of my invention is to provide a simple, compact and highly efficient device of this character in which the fuses are adapted to be firmly clamped in position, and when desired may be renewed with facility.

The invention while applicable to various forms of switches is shown applied to a knife blade switch in the accompanying drawing forming a part of this specification, in which

Figure 1 is a plan view; Fig. 2 is a side elevation; Fig. 3 is a longitudinal central section; and Fig. 4 is an end elevation of a hinge clip.

The base 1 is in the form of a rectangular slab with countersunk holes 2 for the reception of the screws for securing it in place upon a wall or switch board. Near the opposite ends of the base 1 are pairs of clips 3 with binding posts 4 projecting therefrom and secured to the base by screws 5 extending therethrough from the back side.

The upper pair of clips 3 have transverse apertures for screws 6, and one member of each clip has a bearing collar 8 struck up therefrom into the space between the members of the clip to serve as a bearing for the switch blade section, and the aperture through the collar and the clip from which it is struck is screw threaded corresponding to the thread on the screw 6. Between the head of the screw and the outer clip member is a spring washer 7 which, when the screw is forced home, serves to yieldingly press the members of the clip into contact with the blade section.

The movable member of the switch comprises two pairs of blade sections 9, 10 carried by transverse bars 11 of insulating material. The upper pair 9 are transversely apertured near one end to provide bearings on the collar 8, and at the opposite ends are reduced in width to form shoulders 12 to engage the side

of bar 11 and tongues 13 which extend therethrough and are headed over on the inside of fuse receptacles 14. The lower pair of blade sections 10 are reduced in width at both ends to form shoulders 15 and tongues 16. The lower ends of the sections 10 extend into gains cut transversely in the lower bar 11 and the tongues 16 extend therethrough and are headed over washers 17, and the tongues 16 at the upper ends of the sections extend through and are headed over the inner ends of fuse receptacles 18. The length of the blade sections 10 is made sufficient to readily enter the lower contact clips 3 without interference of the latter with the bar 11 or the fuse receptacles 18.

The fuse receptacles 14 and 18 are made cup-shaped and longitudinally slotted to provide spring fingers 19 for firmly contacting with the metallic terminal caps 20 of the fuses 21 and the slots provide guides for the heads of the pins 22 which secure the caps 20 to the fuse tubes and thereby operate to position the fuses so that their indicators 23 will be visible when the movable member of the switch is in closed position.

The lower bar 11 is provided with a handle 24 having a screw 25 extending transversely through the bar and engaging a rectangular rod 26 of insulating material located on the inside of the bar at its center and extending at right angles thereto and detachably engaging the upper bar 11 at its center. This detachable connection is formed by providing the end of the rod 26 with a metallic rod 27 which enters a hole 28 in the upper bar 11, and the latter has a thumb screw 29 extending from the under side and entering the hole 28. Both bars 11 are joined for the reception of the ends of the rod 26 as indicated in Fig. 1.

When it is desired to renew the fuses the movable member of the switch is thrown back rendering the thumb screw 29 accessible, the latter is loosened and by a longitudinal pull upon the handle the rod 26 and the fuses 21 are drawn out of contact with the upper bar and the fuse receptacles 14 carried thereby as indicated in Fig. 3. The fuses may then be removed by hand from the receptacles 18 and new fuses inserted, and the operations above described repeated in inverse order.

I do not desire to restrict myself to the particular form or arrangement of parts herein shown and described, since it is apparent that they may be changed and modified without departing from my invention.

What I claim as new and desire to secure by Letters Patent of the United States, is,—

1. In an electric switch, the combination of a pair of contact blade sections, fuse receptacles secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections independent of said fuse receptacles.

2. In an electric switch, the combination of a pair of contact blade sections, cup-shaped fuse receptacles secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections.

3. In an electric switch, the combination of a pair of contact blade sections, cup-shaped fuse receptacles comprising a plurality of spring fingers secured to the adjacent ends of and in alinement with said blade sections, and means for supporting said blade sections.

4. In an electric switch, the combination of two insulating bars, contact blade sections secured to said bars, fuse receptacles secured to the adjacent ends of and in alinement with

said blade sections, and means for supporting said bars in fixed relative positions.

5. In an electric switch, the combination of two insulating bars, contact blade sections secured to said bars, fuse receptacles secured to adjacent ends of said blade sections, and a rod rigidly connected to one of said bars and detachably connected to the other bar.

6. In an electric switch, the combination of a plurality of stationary contacts, two insulating bars, contact blade sections secured to said bars, fuse receptacles secured to adjacent ends of said blade sections, a rod rigidly secured to one of said bars and entering an aperture in the other bar, and a thumb screw for engaging said rod extending into the aperture in the latter bar from the underside thereof when the switch is in closed position.

7. A hinge clip for electric switches having a bearing collar struck up on the inside of one member, and an aperture in the other member opposite said collar.

In witness whereof, I have hereunto set my hand this 29th day of July, 1905.

FRANK C. DE REAMER

Witnesses:

BENJAMIN B. HULL,
L. MAY WHITTAKER.