

J. G. PETERSON.
MOVABLE CONTACT FOR ELECTRIC SWITCHES.
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922,033.

Patented May 18, 1909.

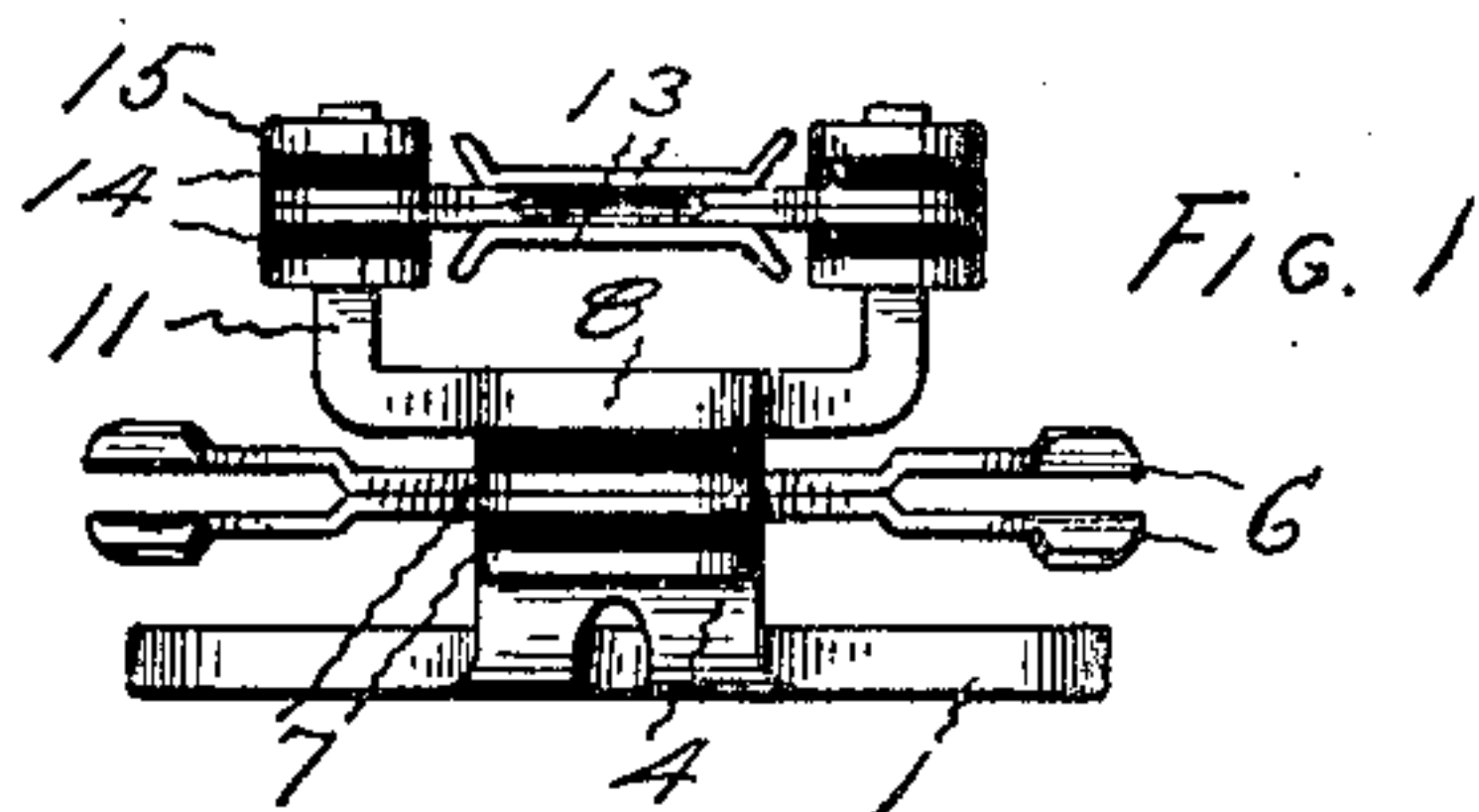


FIG. 2

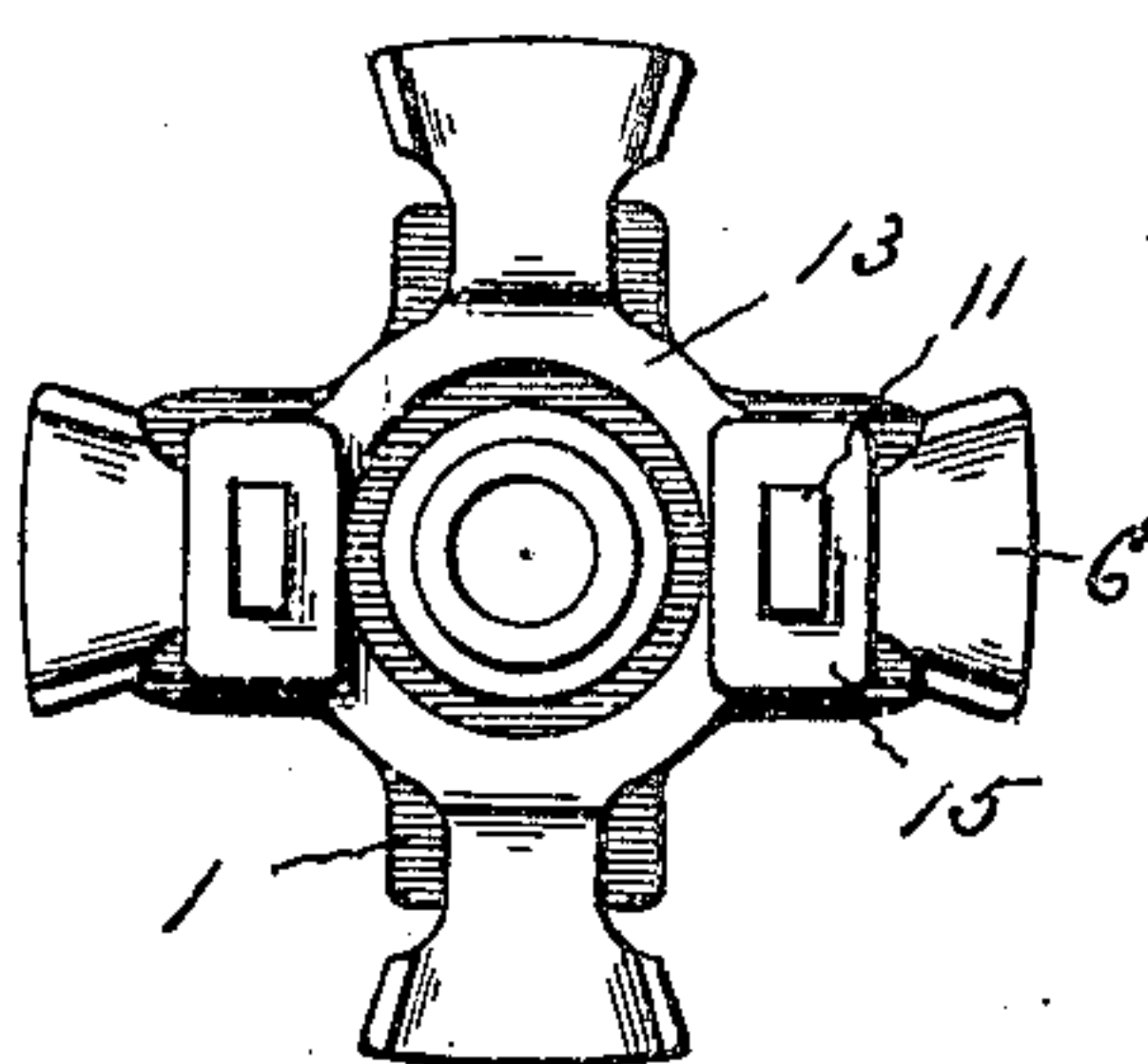


FIG. 4

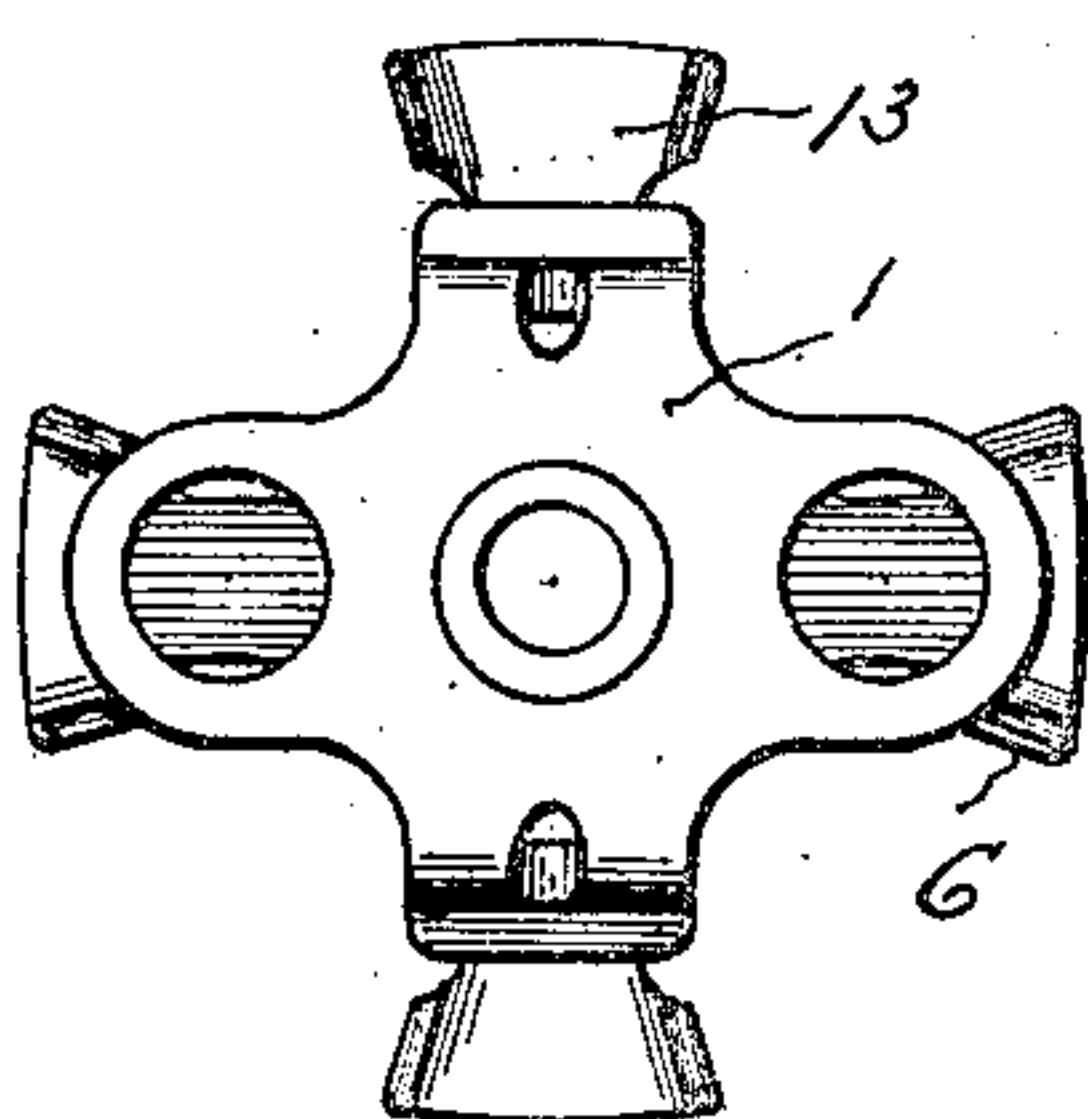


FIG. 6

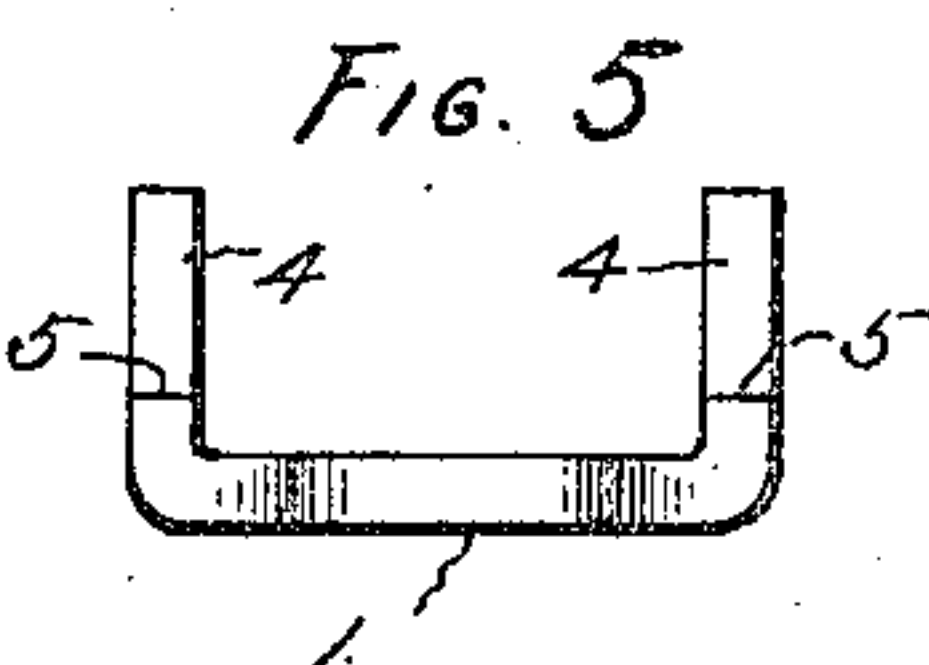
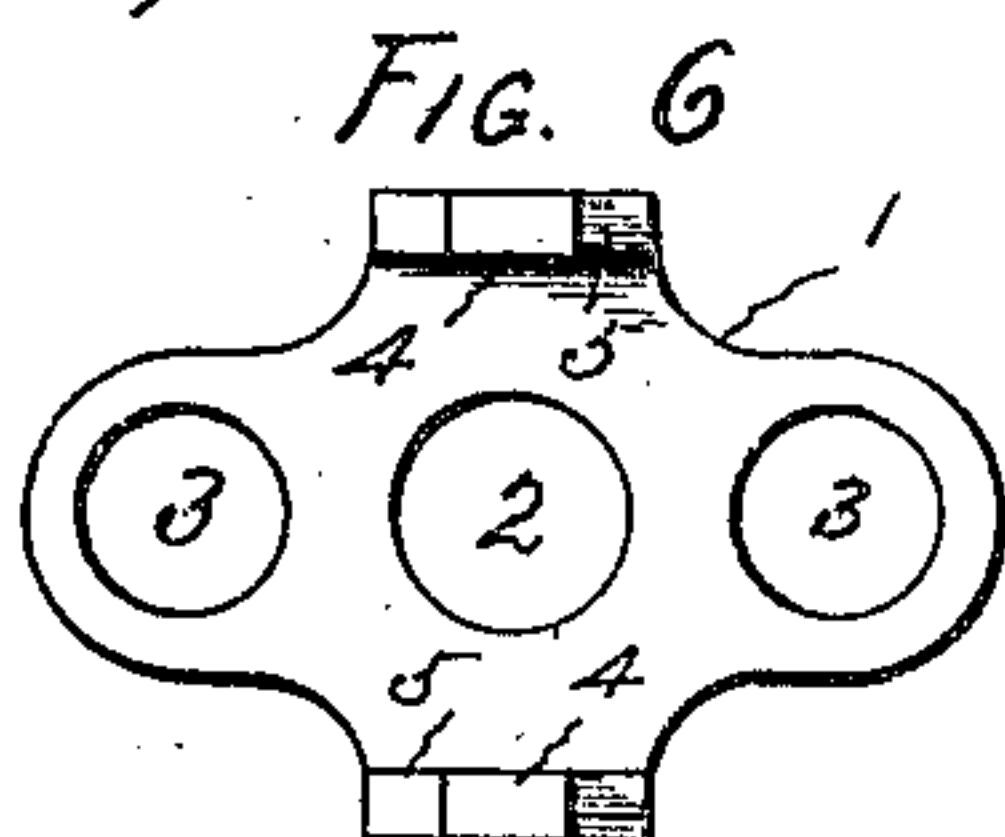


FIG. 9

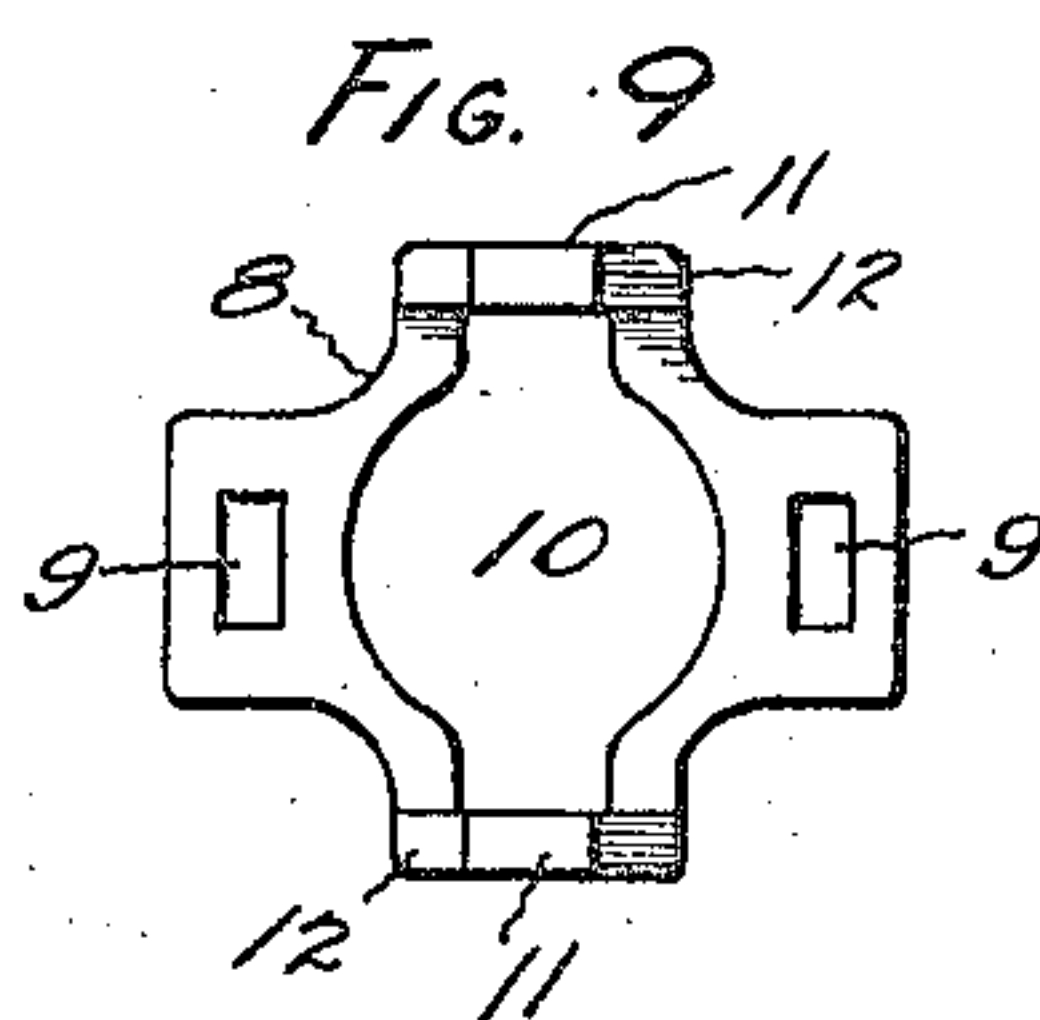
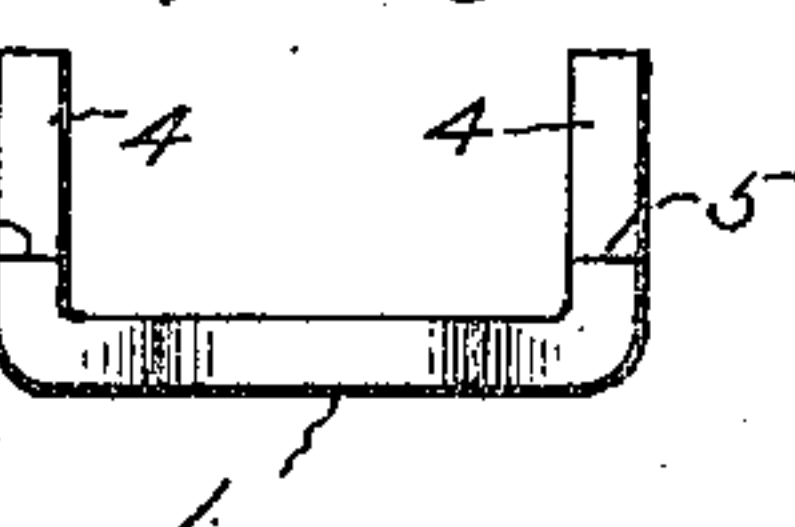
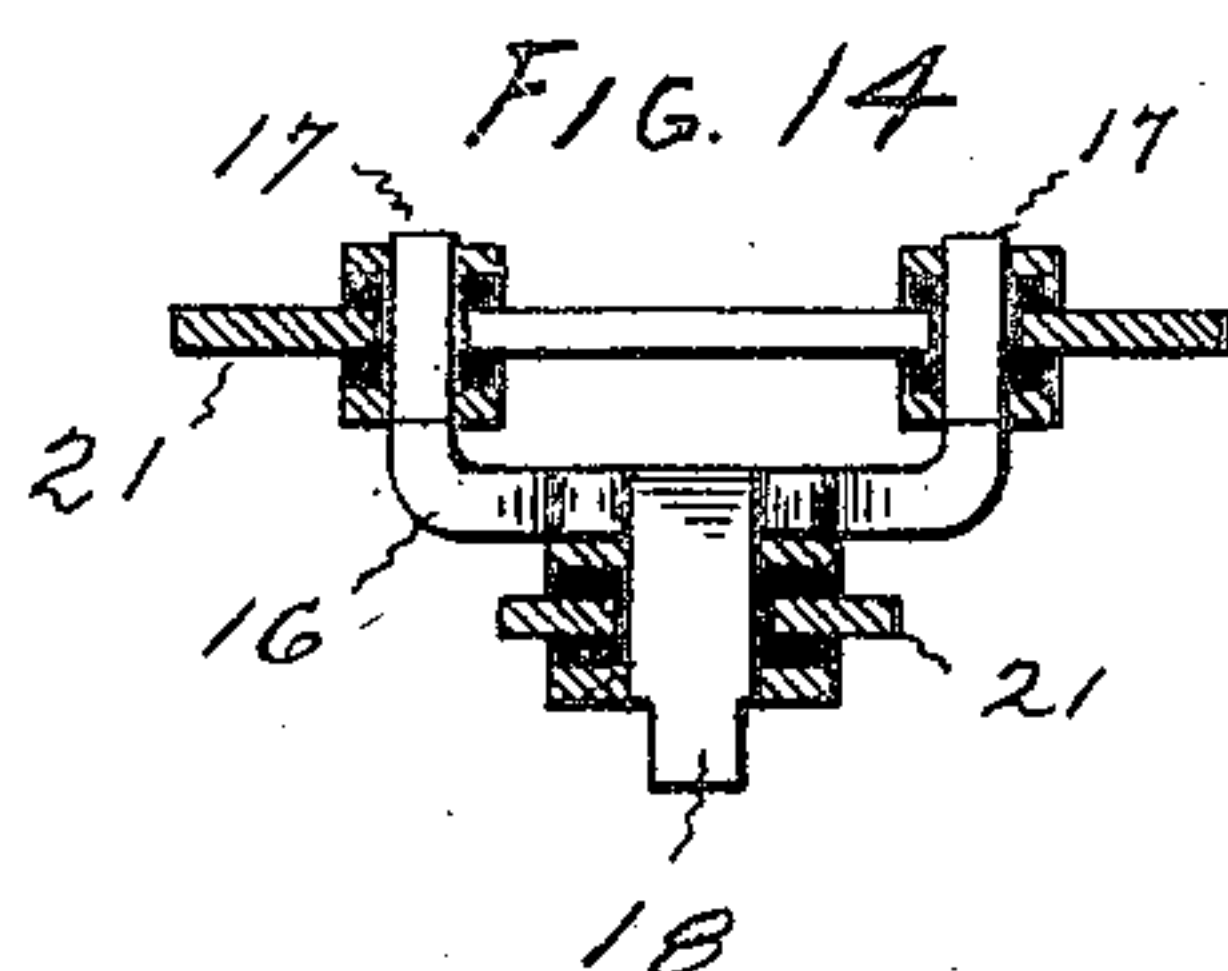
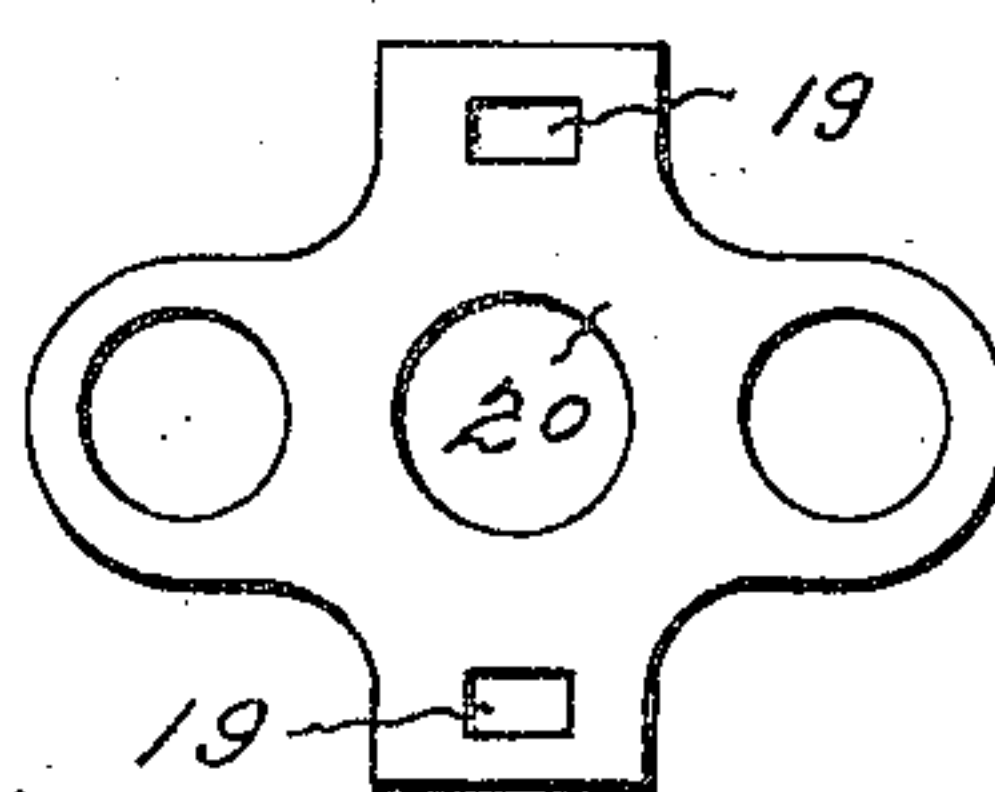


FIG. 12



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UNITED STATES PATENT OFFICE.

JOHANN G. PETERSON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE ARROW ELECTRIC COMPANY, OF HARTFORD, CONNECTICUT, A CORPORATION OF CONNECTICUT.

MOVABLE CONTACT FOR ELECTRIC SWITCHES.

No. 922,033.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed January 11, 1909. Serial No. 471,560.

To all whom it may concern:

Be it known that I, JOHANN G. PETERSON, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented new and useful Movable Contacts for Electric Switches, of which the following is a specification.

This invention relates to the construction of movable contacts for double pole rotary snap electric switches.

The object of the invention is to provide a construction, having parts which are simple and cheap to manufacture and assemble, which produces a strong, safe and efficient unit ready to be applied to the operating mechanism of a double pole switch of the above mentioned character.

Figure 1 of the drawings shows a side elevation of the contact plates and supports, for a double pole rotary snap electric switch, constructed according to this invention. Fig. 2 shows a plan of the same. Fig. 3 shows a bottom view. Fig. 4 shows a side view of the lower supporting plate. Fig. 5 shows an edge view of the lower supporting plate. Fig. 6 shows a plan of the lower supporting plate. Fig. 7 shows a side view of the upper supporting plate. Fig. 8 shows an edge view of the upper supporting plate. Fig. 9 shows a plan of the upper supporting plate. Fig. 10 shows an edge view of a modified form of upper supporting plate. Fig. 11 shows a side view of the same. Fig. 12 shows a plan of the same. Fig. 13 shows a plan of a lower supporting plate which is used with the upper supporting plate of modified form. Fig. 14 shows a view of the modified form of upper supporting plate with single plate contacts mounted thereon.

The lower supporting plate 1 of the first construction illustrated has a central perforation 2 for the passage of the operating spindle and perforations 3 for the connection of the plate with the operating mechanisms of the switch with which it is designed to be used. Extending upwardly from this plate, and preferably bent integral from the edges diametrically opposite and equal distances from the center, are two lugs 4 which are shouldered as at 5. Mounted on these lugs and supported by the shoulders are a pair of yielding contact plates 6, desirably made of spring bronze. These contact plates are electrically insulated from

the lugs by washers 7, of any suitable insulating material.

Mounted on the upper ends of the lugs, above the lower contact plates and insulating washers, is a supporting plate 8. This supporting plate has perforations 9 which receive the upper ends of the lugs that are headed over on the top of the upper surface after the plate has been placed in position, and a central opening 10, which spans the actuating mechanism. Projecting upwardly from this plate and preferably bent integral from the edges, diametrically opposite and equal distances from the center are lugs 11, which have shoulders 12. Mounted on these lugs and supported by the shoulders are a pair of yielding contact plates 13, desirably made of spring bronze. These contact plates are electrically insulated from the lugs by washers 14 of any suitable insulating material. Above the upper insulating washers are desirably placed metallic washers 15, over which the ends and the lugs of the upper supporting plate are headed. The perforations in the upper supporting plate for receiving the ends of the lugs of the lower plate, are so arranged that when the upper contact plates are mounted on the lugs of the upper supporting plate the upper contact plates will extend at right angles to the lower contact plates, which are mounted on the lugs of the lower supporting plate.

In the second form of the invention illustrated the upper plate 16 has shouldered lugs 17 projecting upwardly and shouldered lugs 18 projecting downwardly. These lugs are preferably bent from the edges of the plate at equal distances from the axis, the upper being diametrically opposite each other, and the lower being diametrically opposite each other, but the upper and lower being arranged at 90 degrees from each other. With this form of plate the upper yielding contacts are mounted on the upwardly projecting lugs and the lower yielding contacts are mounted on the downwardly projecting lugs, and suitably insulated, and then the downwardly projecting lugs are inserted in perforations 19 in the lower supporting plate 20 and headed over.

While it is preferred, as above described, to use double spring contact plates, single plates 21 may be mounted upon and insulated from the lugs, as illustrated in Fig. 14.

The construction herein described pro-

duces a firm unit having contact plates in different planes extending at right angles with each other and supported at two points only, whereby a maximum amount of yielding is permitted the contact plates.

The invention claimed is:

1. A movable contact for electric switches having a lower supporting plate, an upper supporting plate, lugs connecting the supporting plates and lugs projecting upwardly from the upper supporting plate, contact plates mounted on the lugs that connect the supporting plates, and contact plates extending at right angles to the other contact plates, mounted on the lugs projecting from the upper supporting plate.

2. A movable contact for electric switches having a supporting plate, lugs projecting upwardly from the supporting plate, yield-

ing contact plates mounted on said lugs, a supporting plate mounted on said lugs above the contact plates, lugs projecting from the last mentioned supporting plate, and yielding contact plates mounted on the lugs projecting from said last mentioned supporting plate.

3. A movable contact for electric switches having two supporting plates, lugs extending between and connecting the supporting plates, and lugs projecting upwardly from one of said supporting plates, contact plates mounted on the lugs between the supporting plates and on the lugs projecting upwardly from one of said supporting plates.

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