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ROTARY SNAP SWITCH.

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903,705.

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Fig. 1.

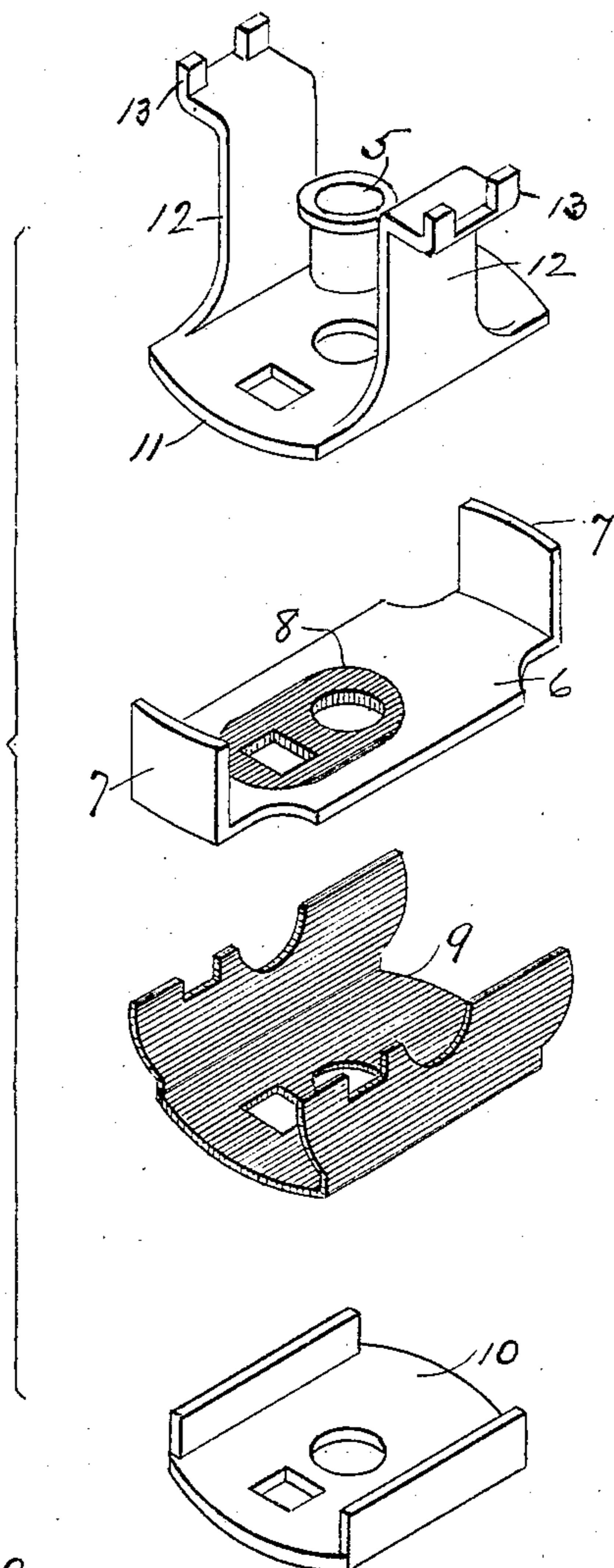
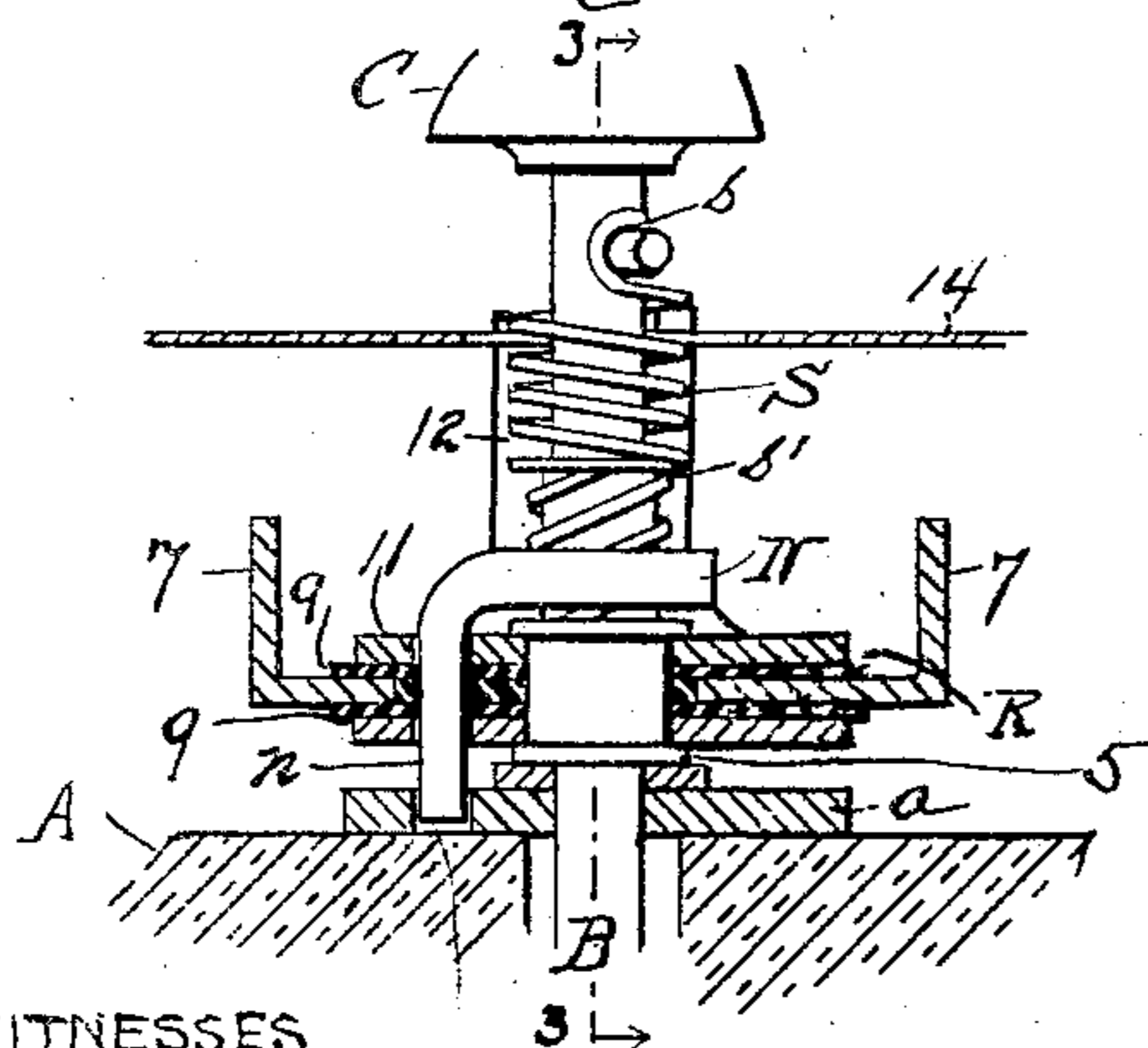


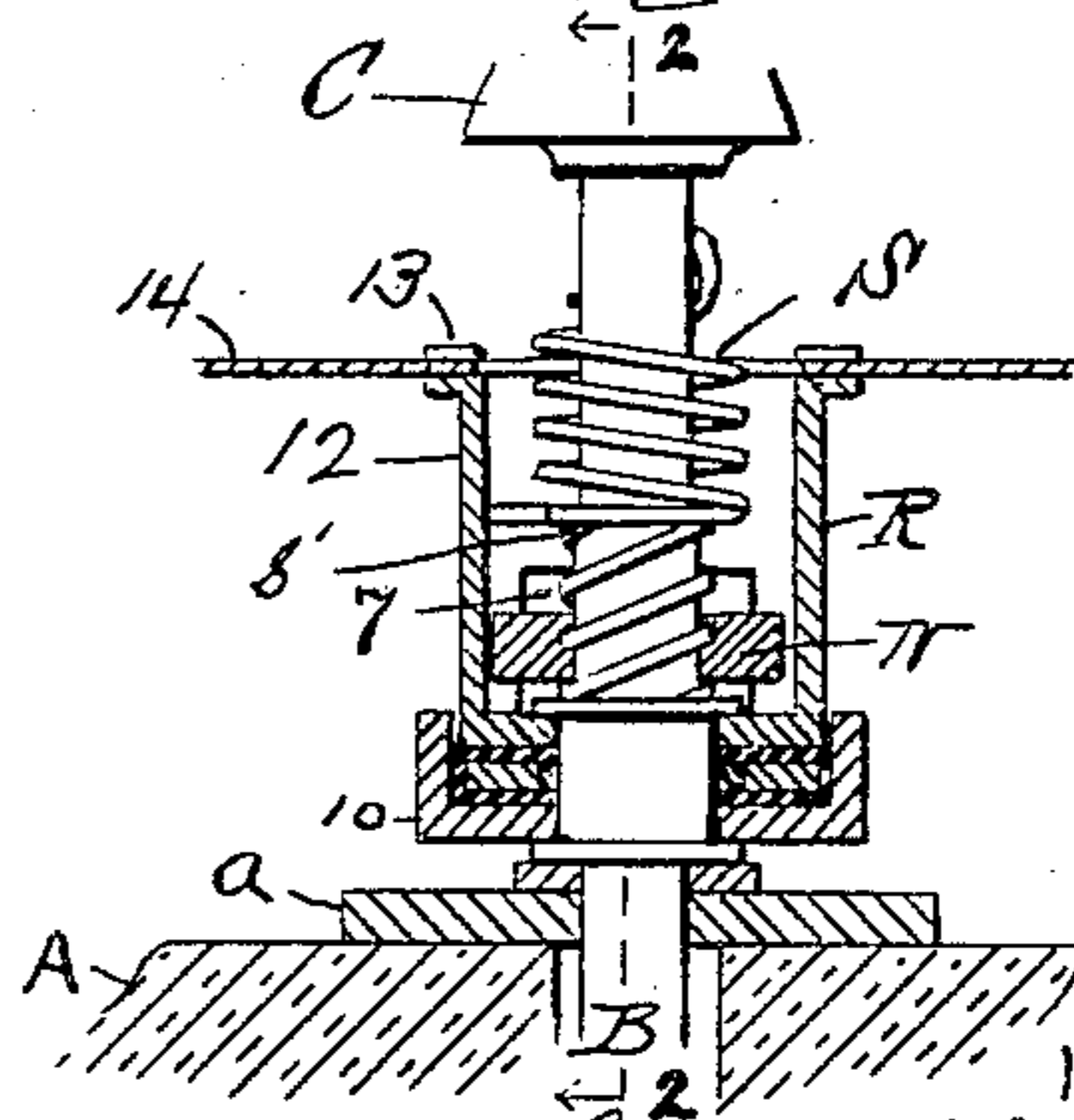
Fig. 2.



WITNESSES

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Fig. 3.



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UNITED STATES PATENT OFFICE.

GILBERT W. GOODRIDGE AND GEORGE B. THOMAS, OF BRIDGEPORT, CONNECTICUT,
ASSIGNORS TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, OF
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ROTARY SNAP-SWITCH.

No. 903,705.

Specification of Letters Patent.

Patented Nov. 10, 1908.

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To all whom it may concern:

Be it known that we, GILBERT W. GOODRIDGE and GEORGE B. THOMAS, both citizens of the United States of America, and residents of Bridgeport, in the county of Fairfield, in the State of Connecticut, have invented certain new and useful Improvements in Rotary Snap-Switches, of which the following is a specification.

Our invention relates to electrical switches of the rotary snap variety, and more particularly to that type of switch which is described in the Gibbs patent, No. 517,100, March 27, 1894; and which comprises an insulating base with a rotary but electrically "dead" central spindle having a handle and a screw thread, stationary contacts on the base and a rotary switch piece having movable within it a nut on the threaded part of the spindle to be moved longitudinally of the latter when the latter is turned against the strain of a spring and to be thereby lifted clear of the engaging teeth of the ratchet fixed on the base.

Our invention has been designed with the view of simplifying and improving the construction of the operative parts of the switch, and particularly the rotary switch member.

In the accompany drawings Figure 1 is a perspective view, illustrating the several component parts of the rotary switch member; Fig. 2 is a vertical section on the line 2—2, Fig. 3; and Fig. 3 is a section on the line 3—3, Fig. 2.

Referring to Figs. 2 and 3 A is the porcelain or other insulating base carrying the usual contact posts, not shown, and the fixed ratchet plate *a*, while B is the central spindle turning in a bearing in the base and provided at the opposite end with a suitable handle or button C, (partially shown), by which it may be turned. This spindle has coiled around it a spiral spring S, one end of which is connected to the spindle at *s*, Fig. 2, while the outer end bears upon an arm on the rotary switch piece R, (Fig. 3).

The spindle has a screw thread cut on it at *s*¹, and on this is a nut N with a leg *n* passing freely through a hole in the rotary switch piece R, Fig. 2, and adapted at its lower end to engage the teeth of the ratchet plate *a* on the base, and to be raised clear of the ratchet teeth by the rotation of the spindle, where-

upon the tensioned spring will cause the switch piece R to take the next position with a snap.

The construction of the rotary switch piece will be best understood by reference to Fig. 1. This piece is built up of sheet metal stampings and insulation sheets secured together by means of an eyelet or hollow rivet 5, through which the spindle B passes. There is a central switch contact blade, which may be of any well known type and made of one or more leaves or plates. In the present instance it is shown as a one-piece plate 6 with upturned contact ends 7, 7, to make and break contact with the stationary contacts on the base, and in this plate is an opening filled with a sheet 8 of paper or other suitable insulating material, and then around the whole of the central part of the plate 6 is folded or wrapped an insulating sheet 9. Under the plate thus enveloped is placed a flanged plate 10, and over it a plate 11 and the several plates and sheets being formed with suitable openings as shown for the passage of the leg *n* of the nut N and also for the reception of the eyelet 5, the latter is inserted and riveted over, (Fig. 2), to firmly clamp these sheets and plates together in such a way that the central contact-carrying switch plate 6 will be insulated by the described sheets from the top and bottom plates and from the eyelet and therefore from the spindle B.

The upper insulated part 11 is shown as provided with upwardly extending arms 12 having prongs 13 to be passed through openings in and to be clamped down on the indicating dial 14, Fig. 3. This dial does not need to be insulated from the arms 12 because the plate 11 is never in the electrical circuit.

We claim as our invention

1. A rotary switch piece for a snap switch, consisting of a central blade with contact ends punched to receive an insulating central piece, insulation enveloping the central plate, top and bottom plates, and means for securing these parts together.

2. A rotary switch piece for a snap switch, consisting of a central blade with contact ends punched to receive an insulating center piece, insulation enveloping the

central plate, top and bottom plates and an eyelet riveting the parts together and constituting a bearing for the operating spindle.

3. A rotary switch piece for a snap
5 switch, consisting of a central blade with contact ends, top and bottom plates and intermediate insulating sheets, the insulated top plate having arms and an indicating dial clamped thereon.

In testimony whereof we have signed our 10 names to this specification, in the presence of two subscribing witnesses.

GILBERT W. GOODRIDGE.
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Witnesses:

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