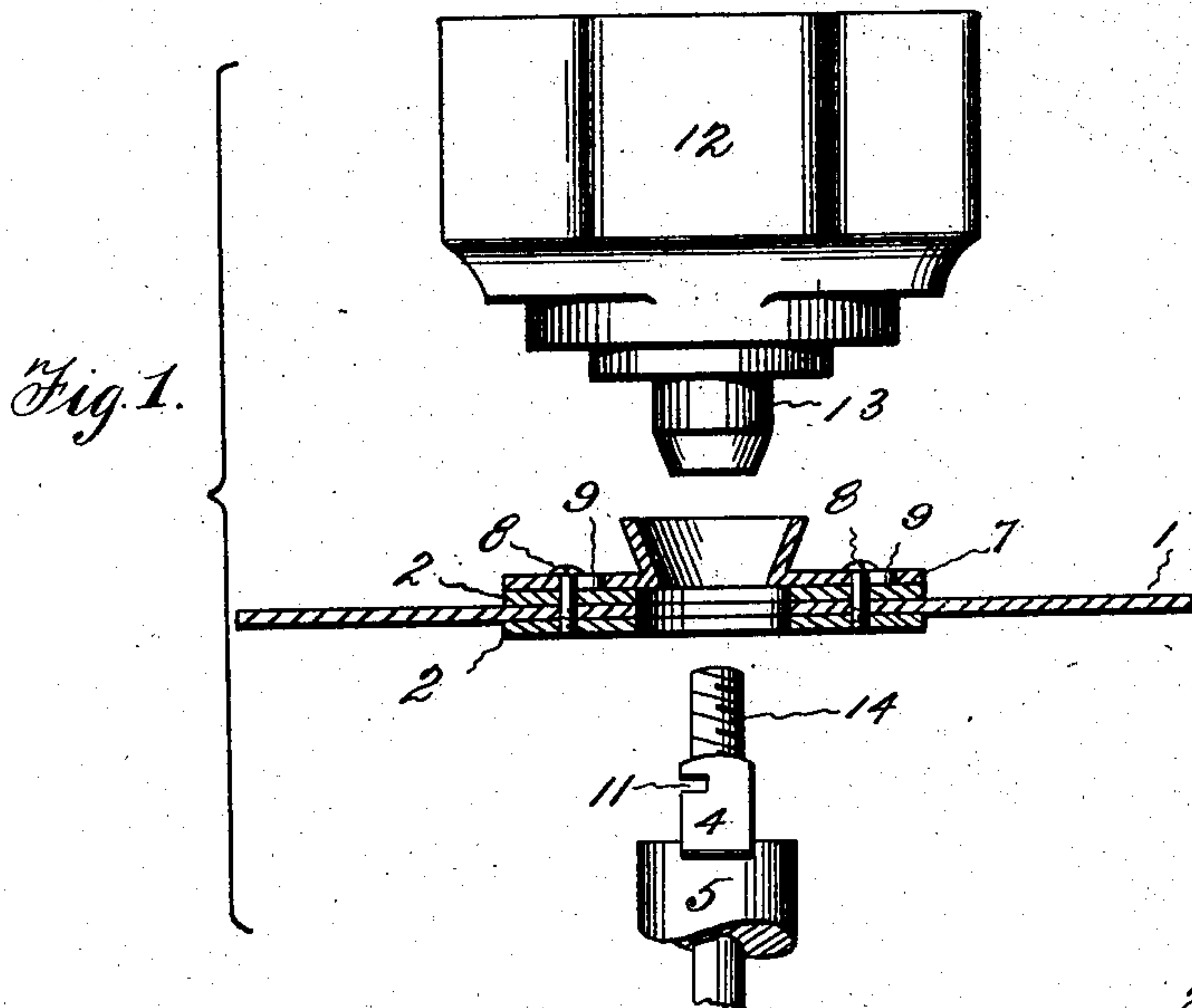


No. 749,949.

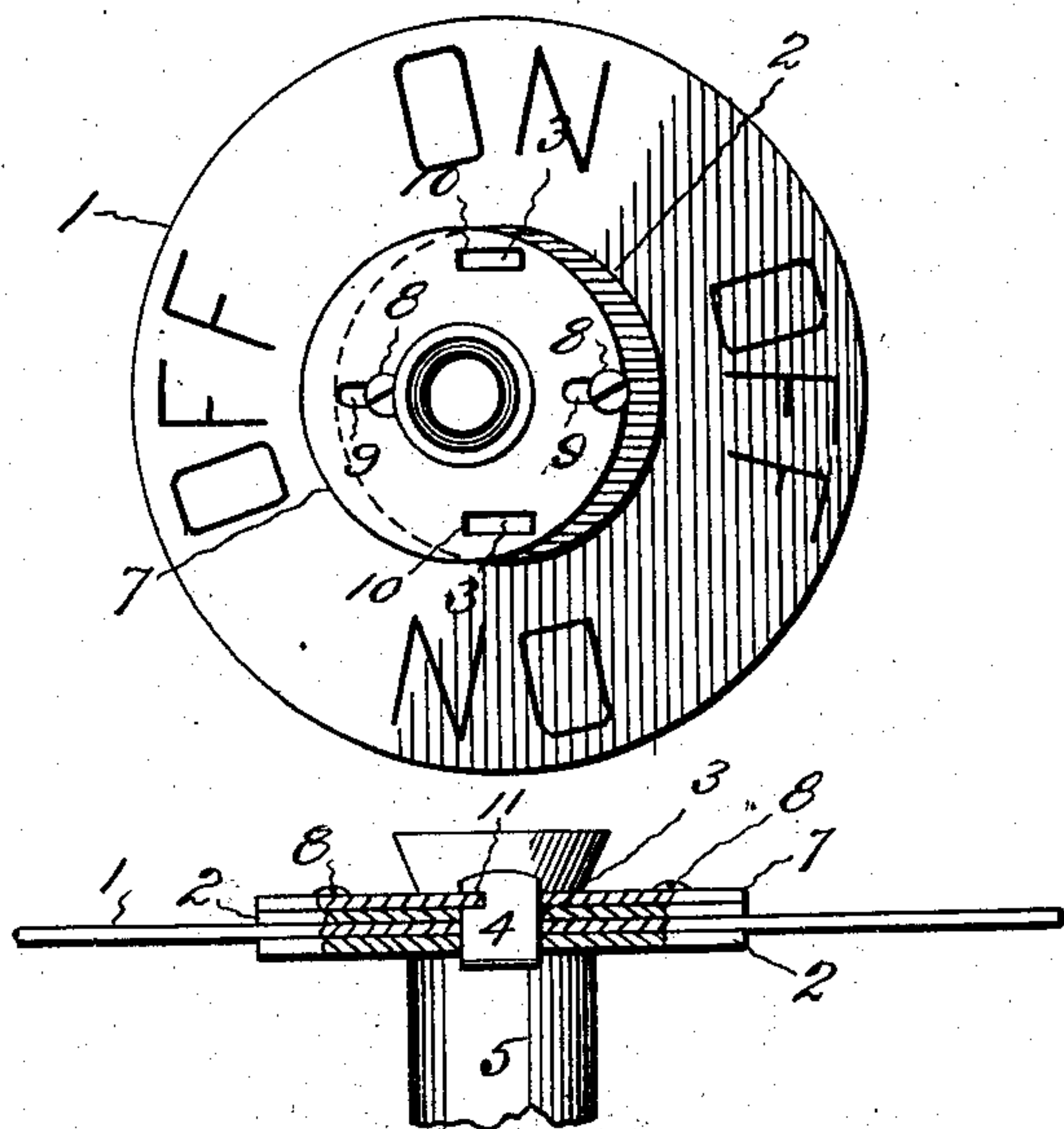
PATENTED JAN. 19, 1904.

C. G. PERKINS.  
INDICATING DIAL FOR SNAP ELECTRIC SWITCHES.  
APPLICATION FILED OCT. 29, 1903.

NO MODEL.

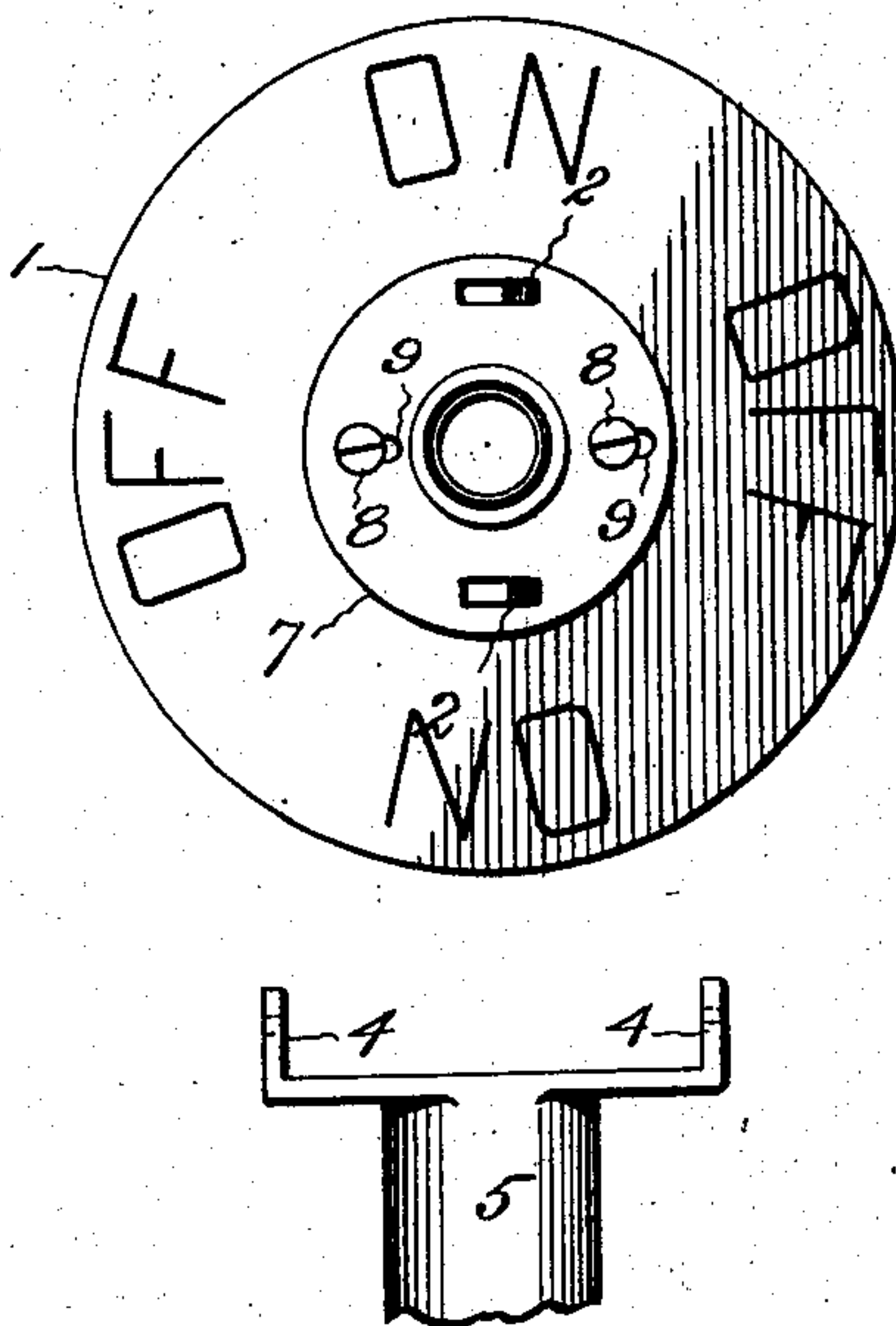


*Fig. 2.*



*Fig. 4.*

*Fig. 3.*



*Fig. 5.*

Witnesses:

Frank G. Campbell.  
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Inventor:

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by  
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# UNITED STATES PATENT OFFICE.

CHARLES G. PERKINS, OF HARTFORD, CONNECTICUT.

## INDICATING-DIAL FOR SNAP ELECTRIC SWITCHES.

SPECIFICATION forming part of Letters Patent No. 749,949, dated January 19, 1904.

Application filed October 29, 1903. Serial No. 178,982. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Indicating-Dials for Snap Electric Switches, of which the following is a specification.

This invention relates to a means for holding an indicating-dial onto a spindle-sleeve or operating-spindle of a rotary snap electric switch.

The object of the invention is to construct a dial that may be locked in position on the sleeve or spindle either manually or automatically as the handle is attached, but which can be easily and quickly detached when the handle is removed.

The embodiment of the invention that is illustrated has a dial adapted to be set upon notched lugs that extend upwardly from a spindle-sleeve, with a plate that is movable on the dial in such manner that its edges will pass into the notches cut in the edges of the lugs when the plate is pushed sidewise by hand or by the engagement of the end of a sleeve, which extends from the handle.

Figure 1 of the accompanying drawings shows a side elevation of a handle, a section of a dial, and a side elevation of the upper end of a spindle-sleeve and spindle separated from each other. Fig. 2 shows a plan of the dial with the locking-plate in the unlocking position. Fig. 3 shows a plan of the dial with the locking-plate in the locking position. Fig. 4 shows a side elevation of the upper end of the spindle-sleeve and dial with a part of the dial and locking-plate broken away in order to show the method of locking the dial to the sleeve, and Fig. 5 is a view of the upper end of the sleeve.

The dial 1 is lettered in a common manner to indicate the condition of the circuit. The dial preferably has an annular plate 2 secured to each side about the central perforation for the purpose of imparting additional thickness and strength to the dial. Through the dial and these annular plates two perforations 3 are made. These perforations are adapted to receive lugs 4, that extend upwardly from

the end of the spindle-sleeve 5, that fits the spindle 14.

Upon the upper face of the dial is the locking-plate 7. This plate is preferably held by screws 8, that extend through slots 9, so that the plate may be moved parallel with the plane of the dial. Perforations 10 are made through the locking-plate to correspond with the perforations made for the lugs through the annular strengthening-plates. Notches 11 are made in the edges of the lugs that extend upwardly from the end of the spindle-sleeve, and the edges of the locking-plate about the perforations are arranged to be slipped into these notches. The spindle-opening through the locking-plate is preferably made at one side, so that when the handle 12 is attached to the spindle 14 the sleeve 13, which projects from the handle, will push the locking-plate sidewise and cause the edges about the perforations to pass into the notches in the lugs—that is, the sleeve 13 projecting from the handle engages with the walls of the opening through the locking-plate and centers the plate and in centering the plate moves so that the edges about the perforations pass into the notches in the lugs. This prevents the removal of the dial from the lugs as long as the handle remains in place. The edges of the sleeve 13 are preferably beveled, and the walls of the opening through the locking-plate are preferably inclined, so that the engagement of these parts will move the locking-plate sidewise. When the handle is removed, the locking-plate can be pushed sidewise, so that the perforations through it coincide with the perforations through the annular strengthening-plates, and then the dial is free to be removed from the lugs on the spindle-sleeve.

This dial is easily placed in position on the spindle-sleeve, and then the locking-plate can be moved sidewise by hand, or if not moved by hand when the handle is screwed down the plate is pushed sidewise, so that the edges about its perforations will pass into the notches in the lugs that extend through the dial. When the locking-plate is in this position, it is impossible to remove the dial, and the locking-plate must always remain in this position as long as the handle is upon the spindle.



This invention provides a very simple automatic means for locking a dial to a spindle or spindle-sleeve, so that it will always remain in position and correctly indicate the condition of the circuit and yet will permit of a ready removal of the dial for the purpose of wiring the switch or for adjusting the brushes or renewing any of the parts.

The invention claimed is—

10 1. An indicating-dial for an electric switch having a locking-plate movably attached to one face, substantially as specified.

2. An indicating-dial for an electric switch having a locking-plate movably attached to  
15 one face and provided with an opening that when moved to one position is eccentric with the opening through the dial, and that when moved to another position is concentric with the opening through the dial, substantially as  
20 specified.

3. An indicating-dial for an electric switch having perforations and a central opening, and provided with a movable locking-plate having corresponding perforations and a central opening, the perforations and the opening  
25 through the locking-plate being so arranged that when the opening is concentric with the opening through the dial the perforations do

not coincide, but when the openings are eccentric the perforations coincide, substantially as  
30 specified.

4. In combination with an electric switch, a spindle-sleeve having extensions provided with notches, an indicating-dial adapted to be carried by the extensions from the end of the  
35 sleeve, a plate movably attached to the dial and adapted to engage the walls of the notches in the extensions when the dial is mounted on the sleeve, and a handle adapted to hold the plate so that it engages the notches in the ex-  
40 tensions on the sleeve, substantially as specified.

5. In combination with an electric switch, a spindle - sleeve with upwardly - extending notched lugs, a dial with perforations adapted  
45 to receive the lugs projecting from the sleeve, a plate attached to one face of the dial and adapted to be extended into the notches in the lugs, and a handle adapted to hold the plate with its edges extending into the notches  
50 in the lugs, substantially as specified.

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Witnesses:

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