

J. J. WESLEY.  
 VISUAL INDICATOR FOR KEY OPERATED SWITCHES.  
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975,490.

Patented Nov. 15, 1910.

Fig. 1.

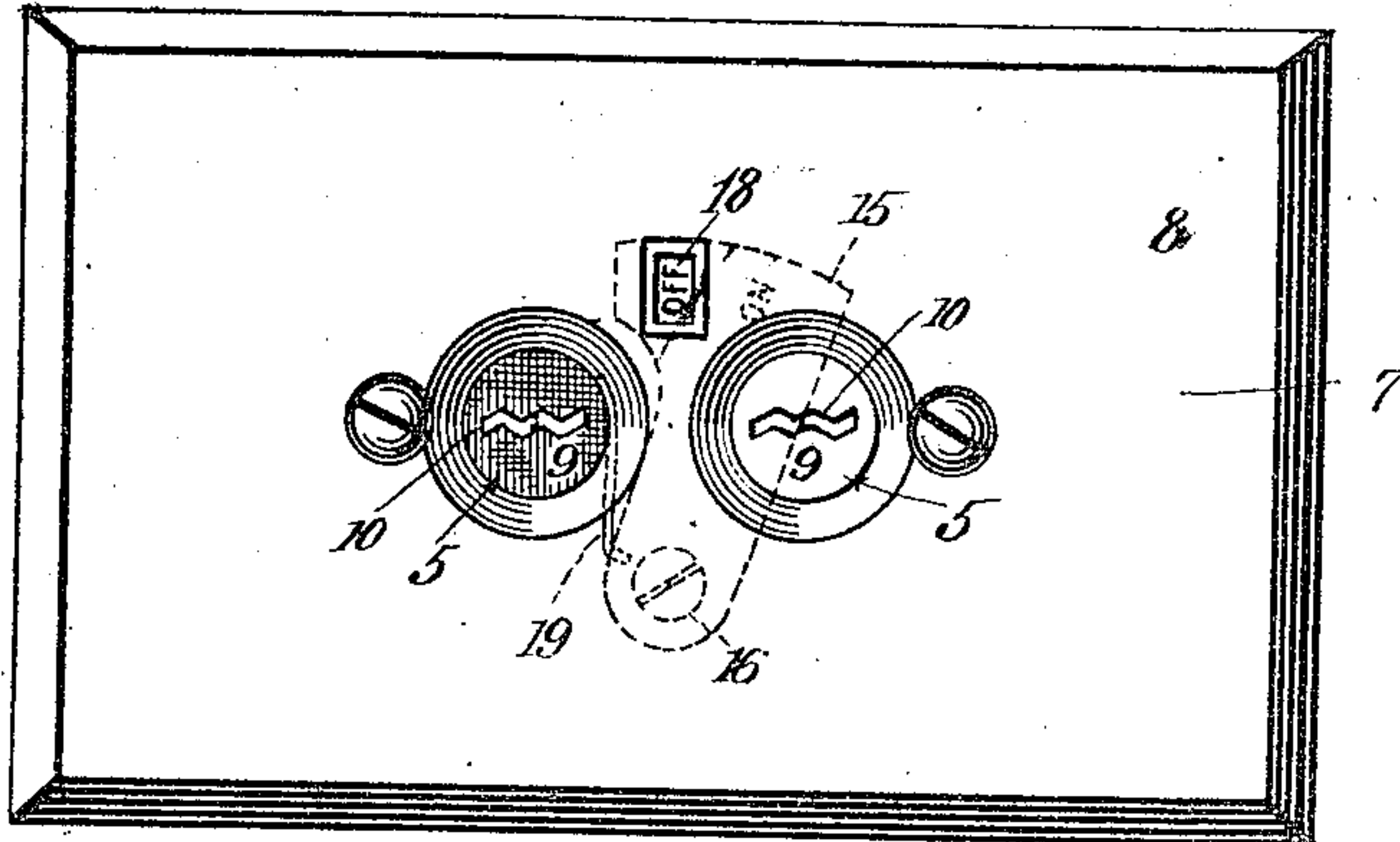


Fig. 2.

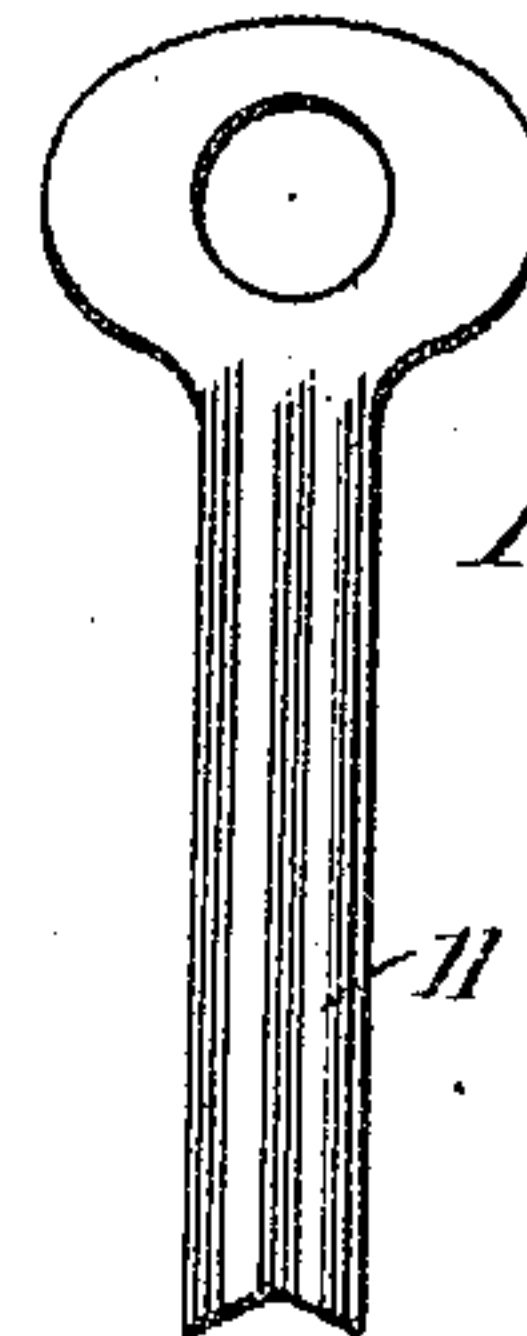
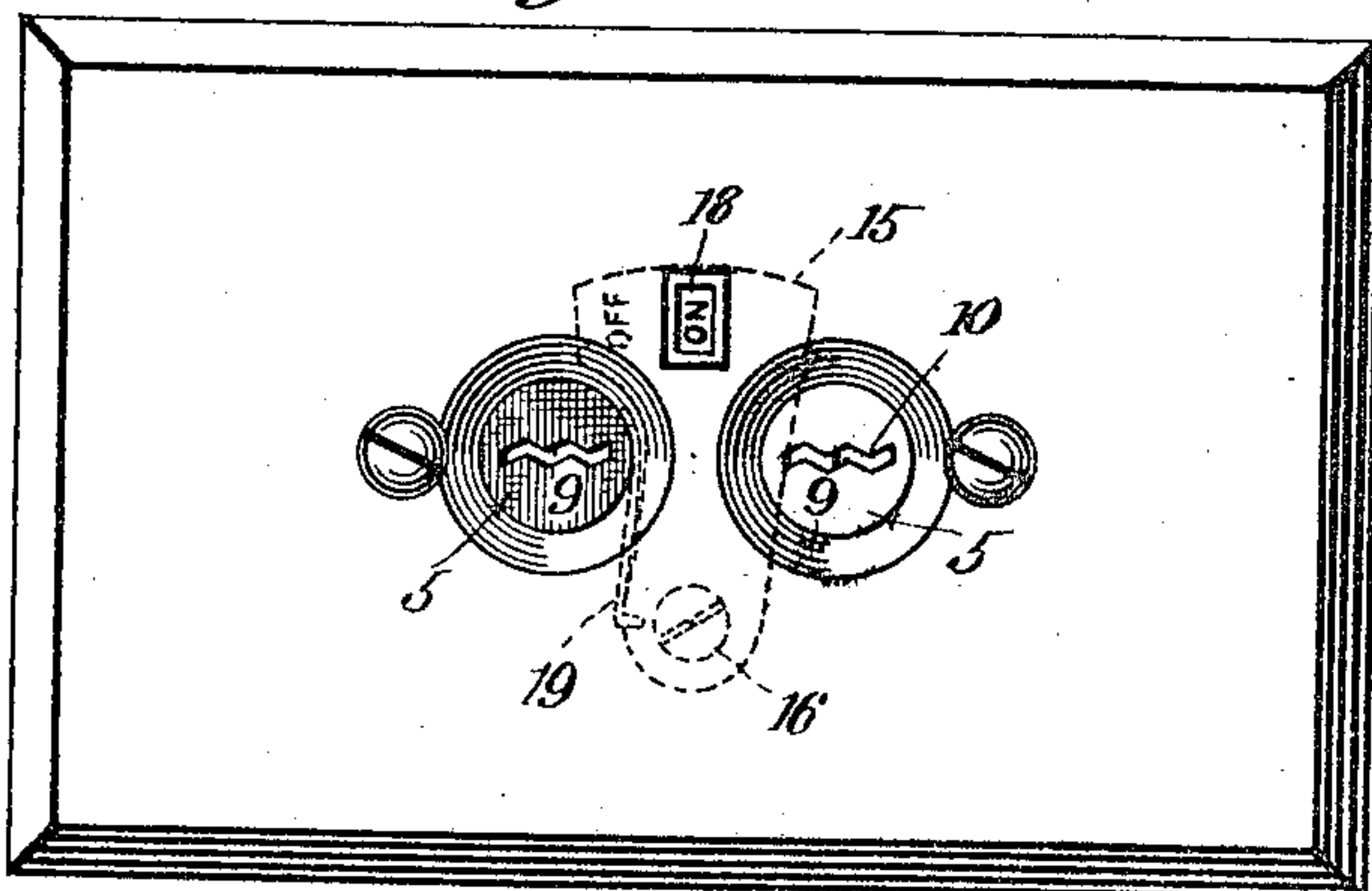


Fig. 5.

Fig. 4.

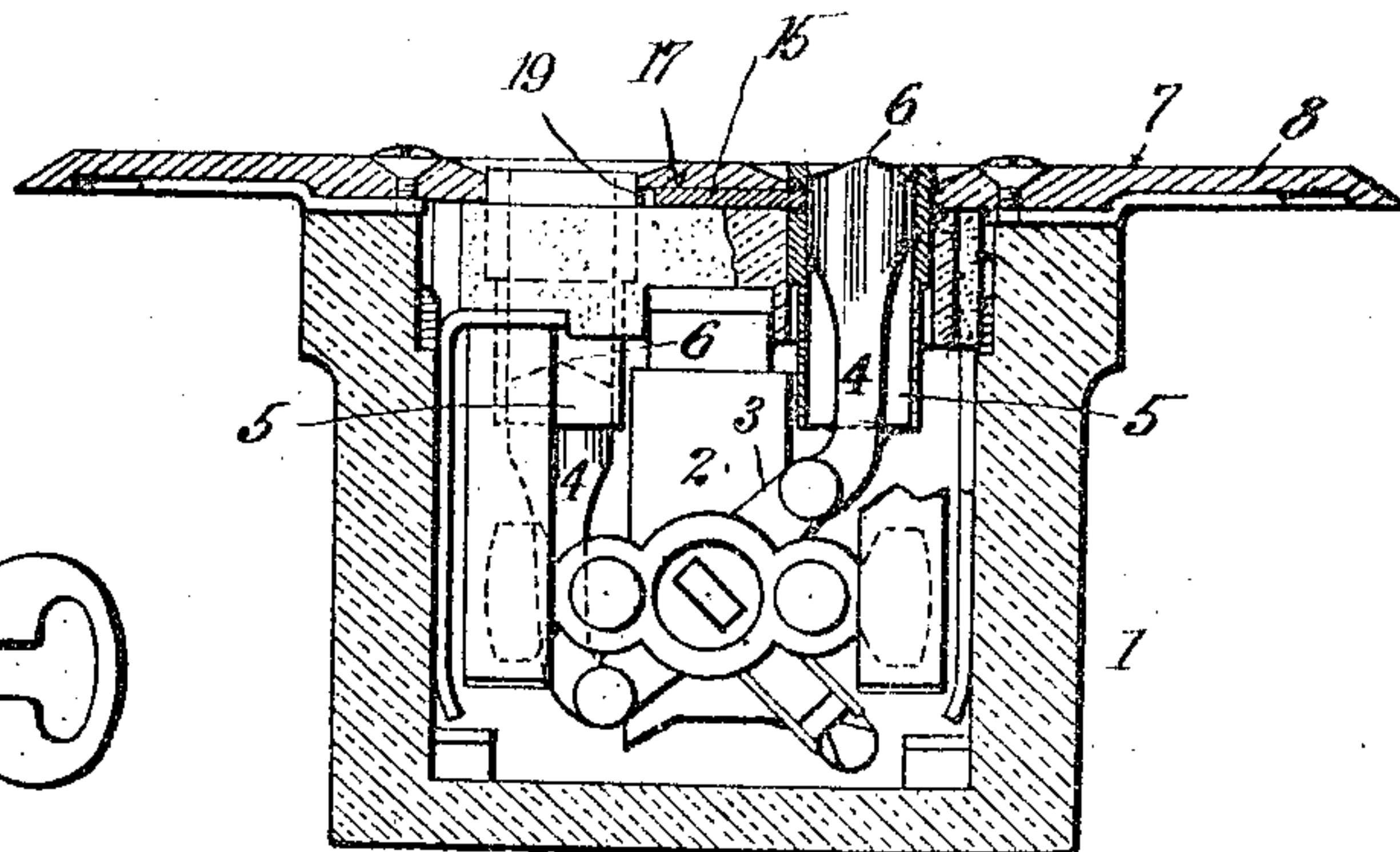
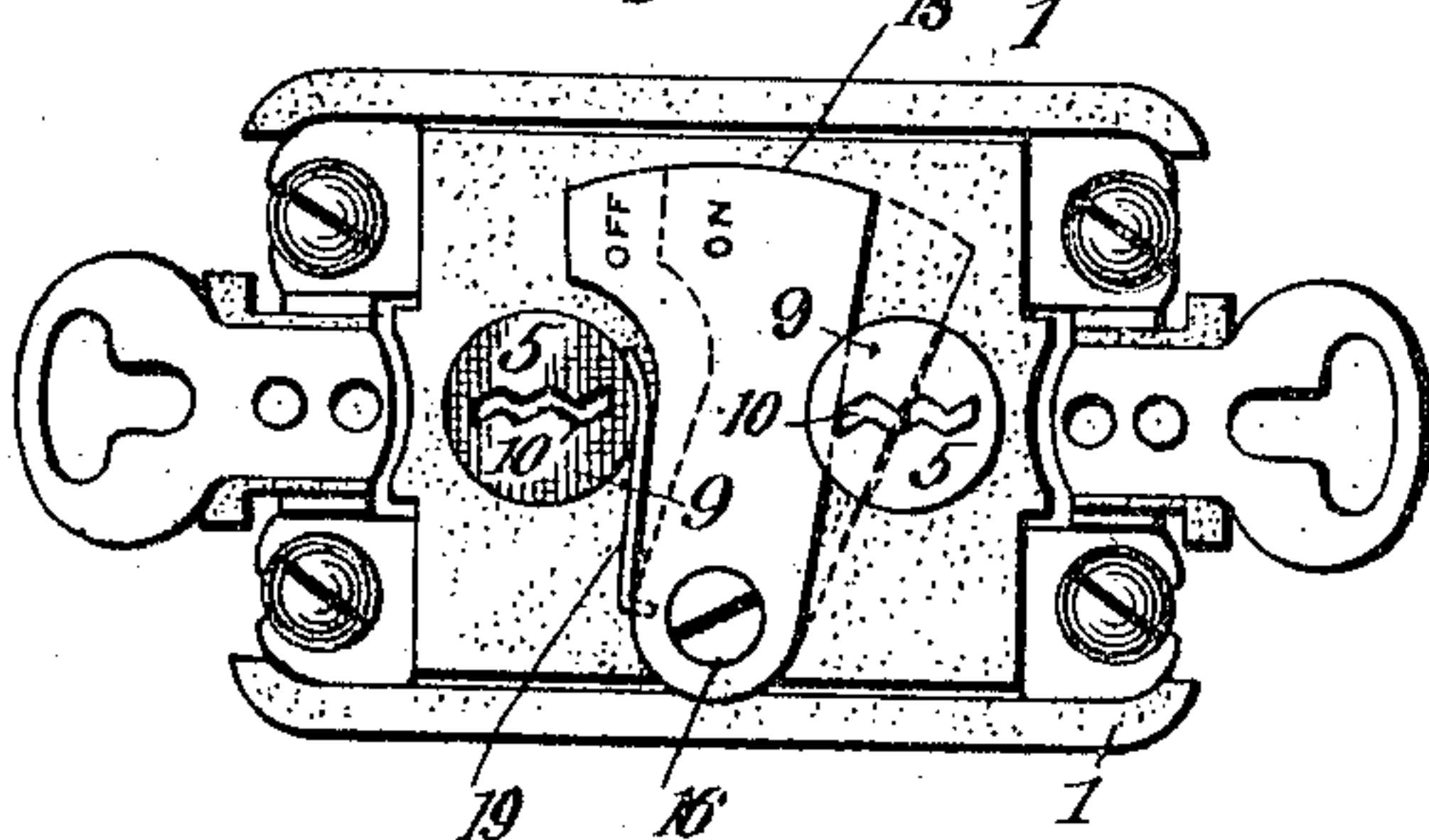


Fig. 3.

Witnesses:  
*Charles Ober*  
*Arthur Stone*

Joseph J. Wesley Inventor  
 By his Attorneys  
*Rosenbaum & Rockledge*



# UNITED STATES PATENT OFFICE.

JOSEPH J. WESLEY, OF HACKENSACK, NEW JERSEY.

VISUAL INDICATOR FOR KEY-OPERATED SWITCHES.

975,490.

Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed June 9, 1909. Serial No. 501,130.

*To all whom it may concern:*

Be it known that I, JOSEPH J. WESLEY, a citizen of the United States, residing at Hackensack, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Visual Indicators for Key-Operated Switches, of which the following is a full, clear, and exact description.

10 This invention relates to wall switches of the key actuated type, where the switch element or elements are moved to their alternate positions of throw by the insertion of a special instrument analogous to a key  
15 through an appropriate opening or openings of the switch casing. A type of mechanism in common use for securing the foregoing purposes employs an ordinary snap or wall switch movement, but in place of two actuating buttons, has a pair of interior stems or  
20 tappets which are not exposed or even visible from outside the switch casing, but which are pressed inward by a corrugated key inserted through one or another of two  
25 correspondingly corrugated openings at the locations usually occupied by the switch buttons. It is evident, in such a mechanism, that unless the operator is already acquainted with the position of the switch elements  
30 that it is a matter of trial or experiment to find into which of the two openings the key should be inserted to produce an actuation, and not until this has been done is it certainly known what circuit conditions have  
35 been established by the switch, assuming of course that the switch controlled lamps or other apparatus are not located in the immediate vicinity to supply an indication. It is the purpose of my invention to overcome this difficulty, and with this object in  
40 view I have provided a visual signal or indicator which shows at once the positions of the switch elements without necessitating the trial and experiment methods above referred to.

My invention consists in the features of construction and combination as hereinafter set forth and claimed.

50 In the drawings: Figure 1 is a plan view of a wall switch embodying the principles of my invention; Fig. 2 is a similar view, the switch elements being moved to their alternate positions of throw; Fig. 3 is a transverse sectional view; Fig. 4 is a plan view with the cover plate removed, and Fig.  
55 5 is a view of the operating key.

Referring to the drawings, 1 denotes the box or casing of the switch, and 2 denotes broadly the movement or mechanism by which the switch elements are impelled to  
60 their alternate positions of throw in the abrupt positive manner required in this class of apparatus. Any suitable or desired movement or mechanism may be employed to actuate the switch elements, these features  
65 not forming any particular part of the present invention. It is merely essential that there be a rocker or similar part 3 oscillating to and fro on an appropriate axis of the switch casing. I provide stems 4 pivoted to  
70 the rocker 3, and which are formed of corrugated sheet metal having somewhat the same outline as is usual in paracentric locks. These stems 4 are located in tubular guides  
75 5 in which they move in and out in somewhat the manner of the buttons sometimes employed in switches of this class. The length and outward movement of the stems  
80 4 is, however, only sufficient to project the tips 6 of their extremities beyond the plane of face 7 of the front plate 8 of the switch. From this position the stems move inward as far as is necessary to complete the requisite throw of the rocker 3. At their  
85 extremities the stems 4 pass through disks or plates 9 having corrugated apertures 10 of a form corresponding to the form of the stems 4. 11 denotes a key of similar transverse  
90 section adapted to be inserted through the apertures 10 to engage and depress the stems 4. I make the exposed extremities of the stems V-shaped as clearly shown in Fig. 3, the key 11 having a dovetailed extremity of  
95 reversely corresponding outline. The purpose of this formation of the stems is to prevent persons from operating the switch by inserting a wire in place of the key, it being evident that a wire would slide down the inclines and become wedged at the corners rather than produce a proper actuation.  
100

The foregoing completes the invention in all essential respects. The key 11 when properly inserted, depresses the projecting stem 4 and throws the switch to its alternate position. On account of the fact that the stems  
105 4 are pivoted to the rocker and have a length and throw sufficient to project their extremities into visible relation on the face 7, a constant indication is given to the operator of the position of the switch. For convenience one of the disks 9 is shaded or darkened,  
110 it being understood that the exposure of the



stem 4 within this darkened disk denotes the off condition of the switch and conversely. I desire to have it particularly made clear that I regard the invention complete in its characteristics as thus far described, serving as it does all of the purposes and functions related at the early portion of the description. However, I have provided an alternative construction or modification, which if desired, may be merely added to the foregoing and provide an indication in addition thereto. In this modified construction, however, it is of course not necessary to shade the disk 9 or even to have the stem 4 project sufficiently far to become visible.

15 denotes a shutter, banner or visual signal or indicator in the form of a plate pivoted to the top of the switch at the point 16. This shutter 15 enters an appropriate recess 17 on the underside of the cover plate 8, which is large enough to permit a limited angular movement of the shutter between the dotted and full line positions shown.

18 denotes an aperture in the cover plate 8, and the shutter is inscribed with the words "On" and "Off" in positions adapted to be exhibited through this aperture at the respective extreme positions of said shutter. The shutter is displaced to and fro by the action of the stems 4, for which purpose it is impelled against one of the stems by a spring 19. It is clear that when the stem against which the shutter rests is depressed, the shutter is free to move into its dotted line position under the action of its spring. Conversely when this stem is again projected, the shutter is pushed back by the engagement of the beveled extremity of said stem, which acts as a cam or wedge.

What I claim, is:—

1. A wall switch having an actuating rocker and longitudinally corrugated stems pivotally connected thereto and protruding through corrugated apertures to points where they are just visible at the face of the switch when fully projected, and a corrugated key cooperating therewith.

2. A wall switch having a rocker, stems connected thereto, and a pivoted shutter engaged by one of said stems and adapted to be displaced by the movement thereof, said shutter being exposed from the exterior of the switch.

3. A wall switch having a rocker, stems connected thereto, a pivoted shutter engaged by one of said stems and displaced thereby to alternate positions of throw, and a face plate or cover having an aperture through which said shutter is exposed.

4. A wall switch having a rocker, stems connected thereto, a shutter engaged by one of said stems and displaced thereby in one direction, a spring for displacing the shutter in the other direction, and a cover plate having an aperture through which said shutter is exposed.

5. A wall switch having a rocker, stems connected thereto, and a shutter adapted to be displaced by the movement of one of said parts, said shutter being exposed from the exterior of the switch.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

JOSEPH J. WESLEY.

Witnesses:

WALDO M. CHAPIN,  
WILLIAM C. LARY.