

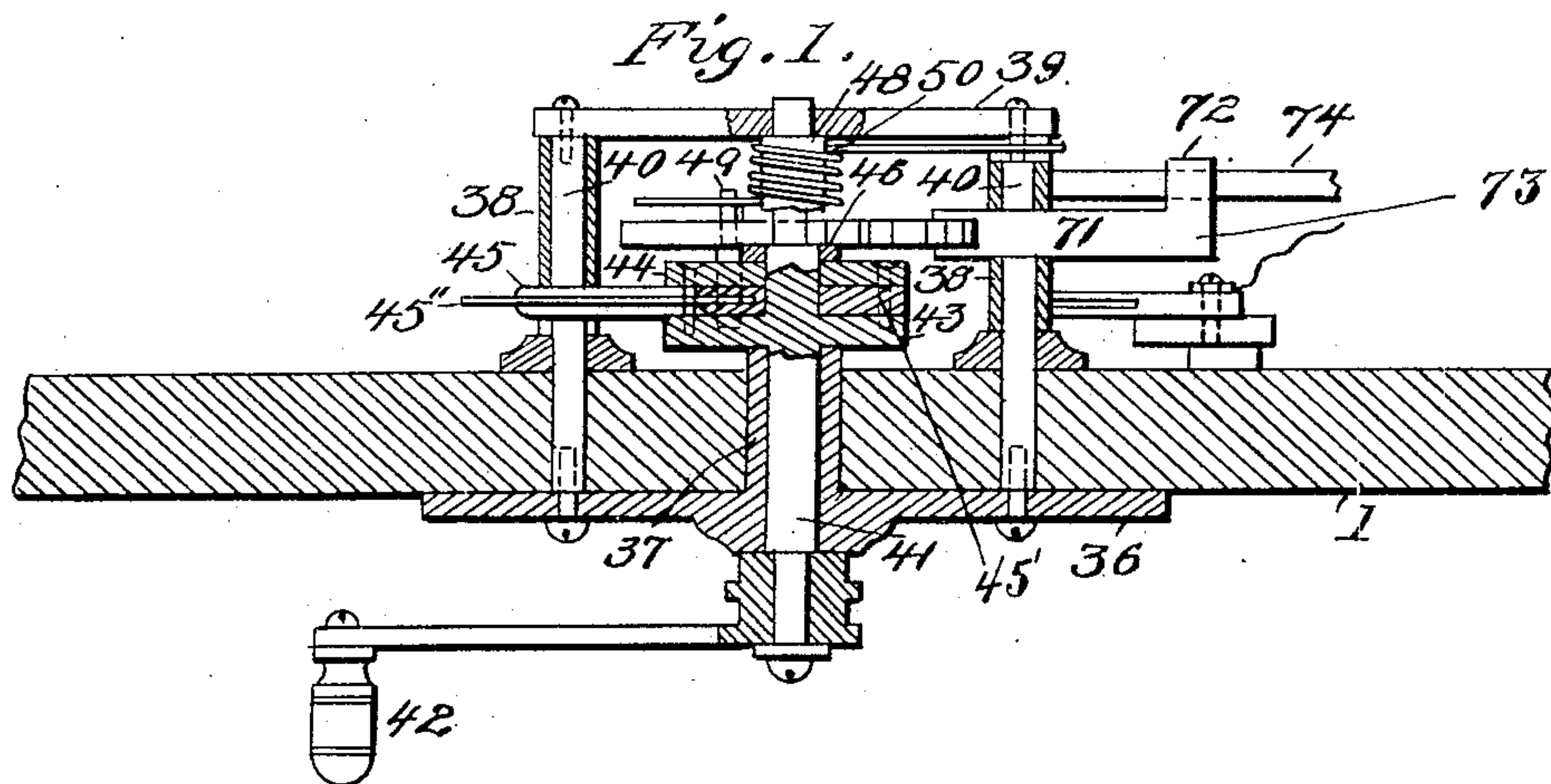
No. 748,123.

PATENTED DEC. 29, 1903.

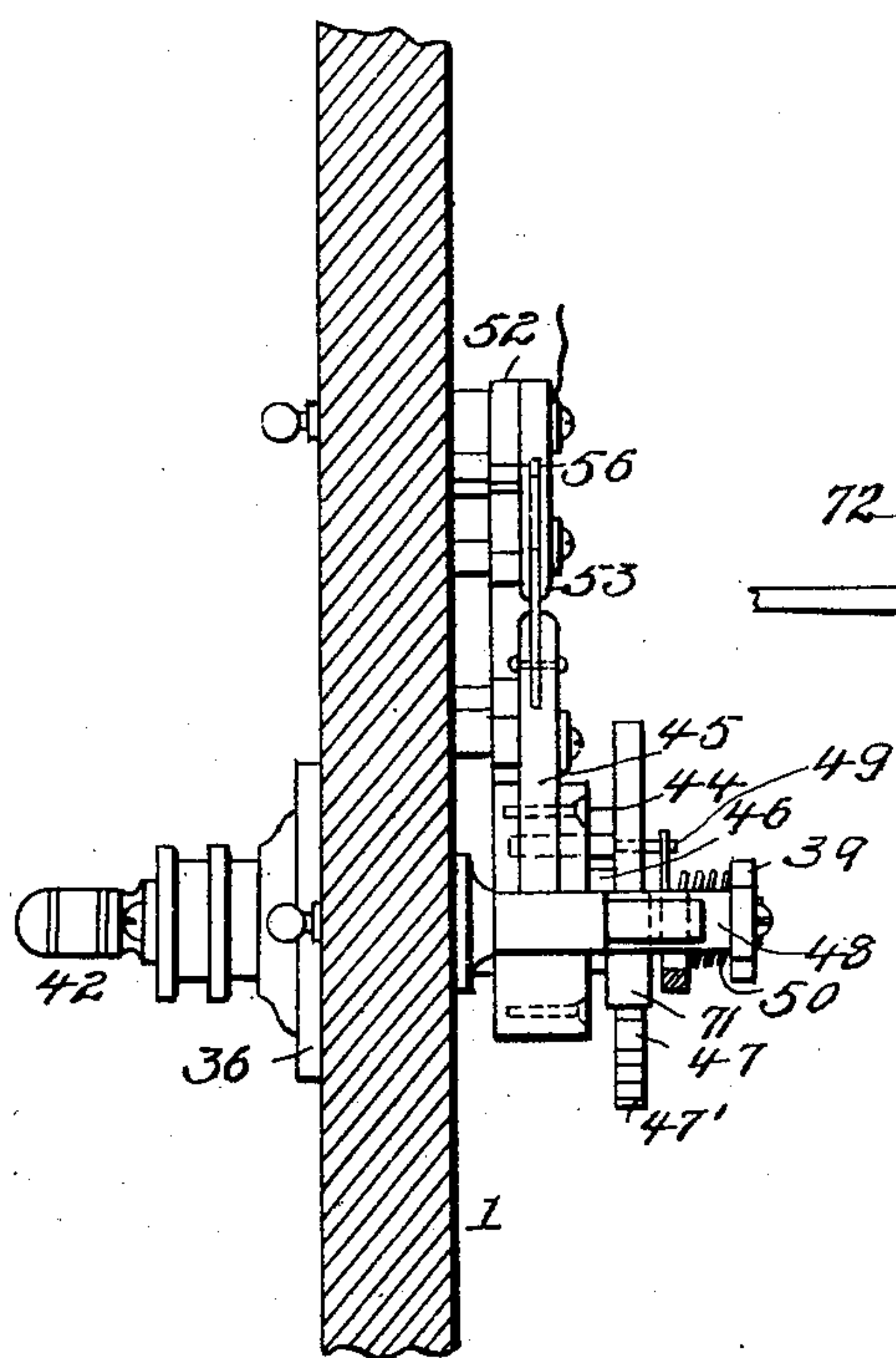
I. G. WATERMAN.  
ELECTRIC SWITCH.

APPLICATION FILED JULY 1, 1902.

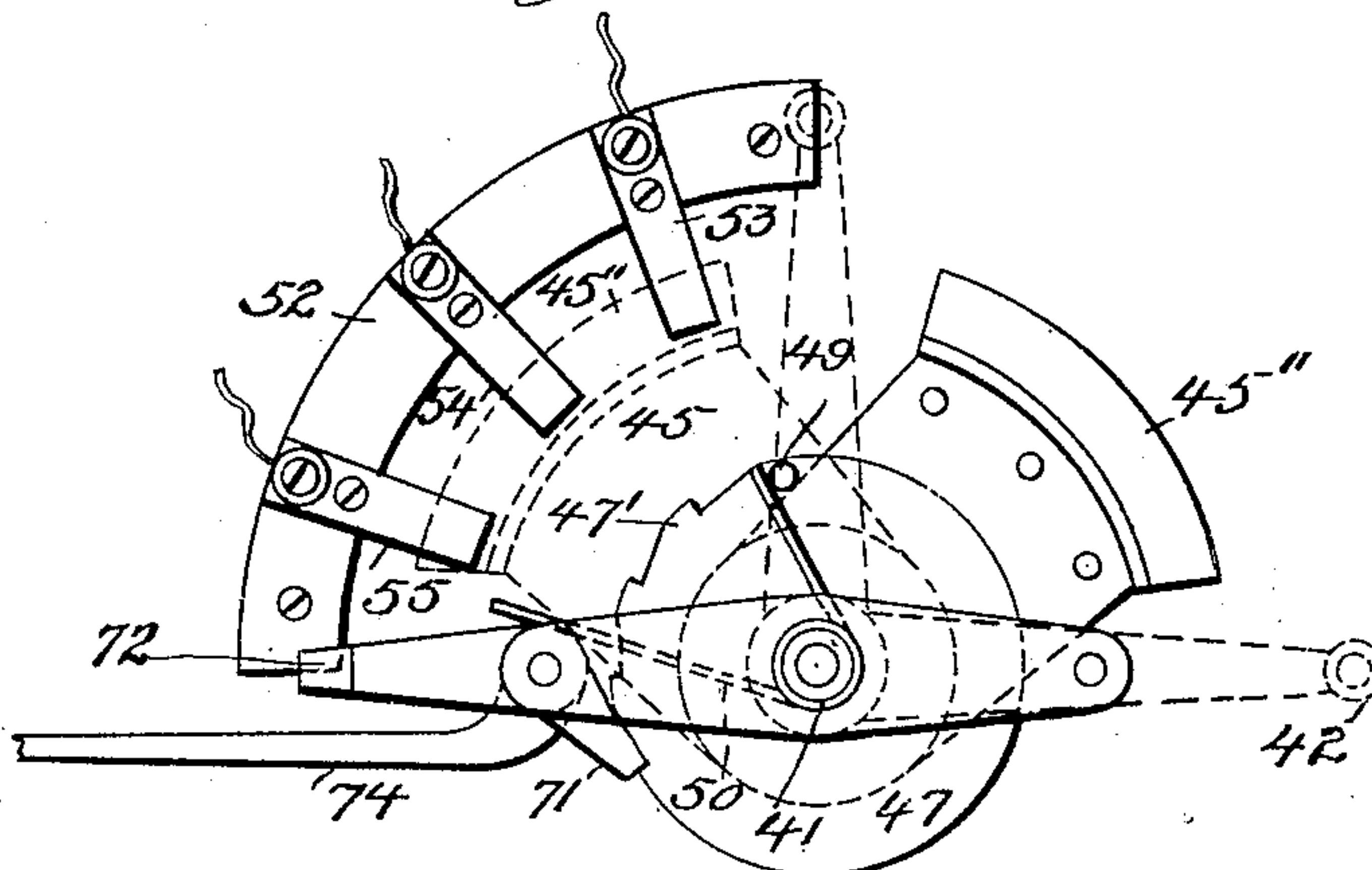
NO MODEL.



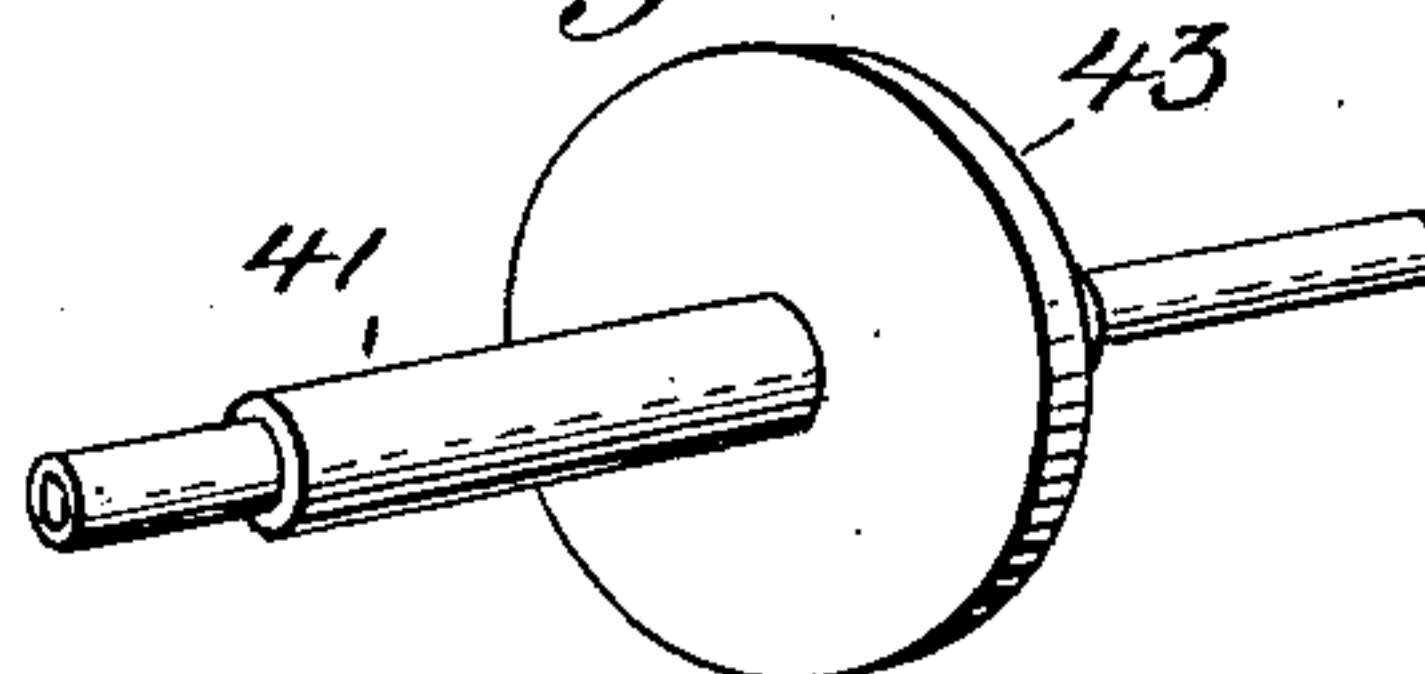
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses

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# UNITED STATES PATENT OFFICE.

ISAAC G. WATERMAN, OF SANTA BARBARA, CALIFORNIA.

## ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 748,123, dated December 29, 1903.

Original application filed February 27, 1902, Serial No. 95,908. Divided and this application filed July 1, 1902. Serial No. 113,911. (No model.)

### *To all whom it may concern:*

Be it known that I, ISAAC G. WATERMAN, a citizen of the United States, residing at Santa Barbara, county of Santa Barbara, and State of California, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

This invention relates to electric switches.

The object of the present invention is the provision of an electric switch of improved and novel construction adapted to be locked in engagement with its contacts and designed to be automatically thrown into the "off" or open position.

The invention is intended for use, though not necessarily so restricted, in connection with my invention for the electrical control of the flow of water to basins of washstands or lavatory-bowls set forth in my copending application, (of which the present application is a division,) Serial No. 95,908, filed February 27, 1902.

The invention embraces certain improved features and novel combinations of parts set forth in detail hereinafter and recited in the appended claim.

In the accompanying drawings, Figure 1 is a horizontal section; Fig. 2, a vertical section; Fig. 3, a rear view, and Fig. 4 a detail perspective view of certain parts.

The stationary framework of the switch consists of an ornamental face-plate 36, secured to the front of the base 1 and provided with the hub 37, the posts 38, the cross-piece 39, bridging the posts, and the rods 40, extending through the posts and connecting the cross-piece 39 with the face-plate 36.

The numeral 41 designates the shaft or axle of the switch, which extends through the face-plate and hub 37 and is journaled in the cross-piece 39, the same being provided with a suitable handle 42 and having a flange 43. Located on the shaft and held between the flange 43 and a clamping-plate 44 is switch-blade 45, which has its bottom portion 45' appreciably thicker than its contact edge 45".

Loose on the axle or shaft 41 and separated from the clamping-plate 44 by a collar 46 is a disk or wheel 47, having ratchet-teeth 47'. A collar 48 separates this wheel or disk from the cross-piece 39. The disk 47 is provided

with a pin 49, while 50 is a spring coiled around the collar 48 and bearing against the pin, which has a tendency to retract the disk or wheel 47. The pin 49 is extended out sufficiently far to contact with the switch-blade 45.

The numeral 52 designates an arc-shaped plate on which is mounted, but insulated therefrom, the contact or switch points 53, 54, and 55, having slots 56 and arranged in the arc of a circle and in the path of the contact portion 45" of the switch-blade, which is adapted to pass in the slotted portions 56 and make contact with the switch-points. It will be observed that the width of the switch-blade is such that it can electrically bridge all of the contact or switch points at one time.

Pivoted to the standard 38 is a pawl 71, having a lateral finger 72 and which is adapted to engage with any of the teeth of the ratchet-wheel or disk 47 and is held adapted for normal engagement therewith by the gravitation of the longer arm 73 of the pawl.

The numeral 74 designates a releasing-rod, which is pivoted on the standard 38 and extends under the finger 72 and is adapted to engage with the finger and release the pawl from engagement with the ratchet-wheel 47 when said releasing-rod is lifted a proper distance by any agency.

The handle 42 is normally held in the horizontal position (indicated in Figs. 1 and 2) by the action of the spring 50 through the ratchet-wheel 47 and pin 49, and the parts are in the position indicated in full lines in Fig. 3. On turning the switch-handle 42 a sufficient distance the pawl 71 will engage with a suitable tooth 47' on the ratchet-wheel 47, thereby locking the switch-blade in engagement with its switch-points against immediate return by the spring 50, the contact edge 45" passing in the slots of the switch-points. The switch-blade can be made to bridge switch-points 53 and 54, 54 and 55, or 53, 54, and 55 simultaneously and will be locked against immediate automatic return by spring 50 in each instance. If it is desired to return the switch-blade back again, this can be done by giving the handle 42 a backward movement, and the pawl will continue its locking engagement with the ratchet-wheel. Assuming that the



switch-blade is in engagement with certain of the switch-points, when the releasing lever or rod is lifted it will engage finger 72 and raise pawl 71 out of engagement with the tooth 47', with which it is engaged, whereupon the spring 50 will return all of the movable parts to normal position, thus causing the switch-blade to break contact with the switch-points with which it was engaged.

10 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

15 In a device of the class described, a switch for controlling circuits, comprising split switch-points, arranged in the arc of a circle, a frame, an axle journaled in the frame, a handle for the axle, a switch-blade secured to the axle and provided with a narrow contact edge which is adapted to slide into the

split switch-points, a wheel or disk provided 20 with ratchet-teeth and located on the axle and movable with the switch-blade, a spring coiled around the axle and having one portion bearing against the ratchet-wheel or disk and its other portion anchored and adapted to automatically accomplish the opening or releasing of the switch-blade from the switch-points, a gravitating pawl on the frame and adapted 25 to engage the teeth on the wheel or disk to hold the switch-blade in contact with the switch-points, and a releasing device to disengage the pawl from said teeth. 30

In testimony whereof I hereunto affix my signature in presence of two witnesses.

ISAAC G. WATERMAN.

Witnesses:

T. M. APPLGARTH,  
J. E. LITTLE.