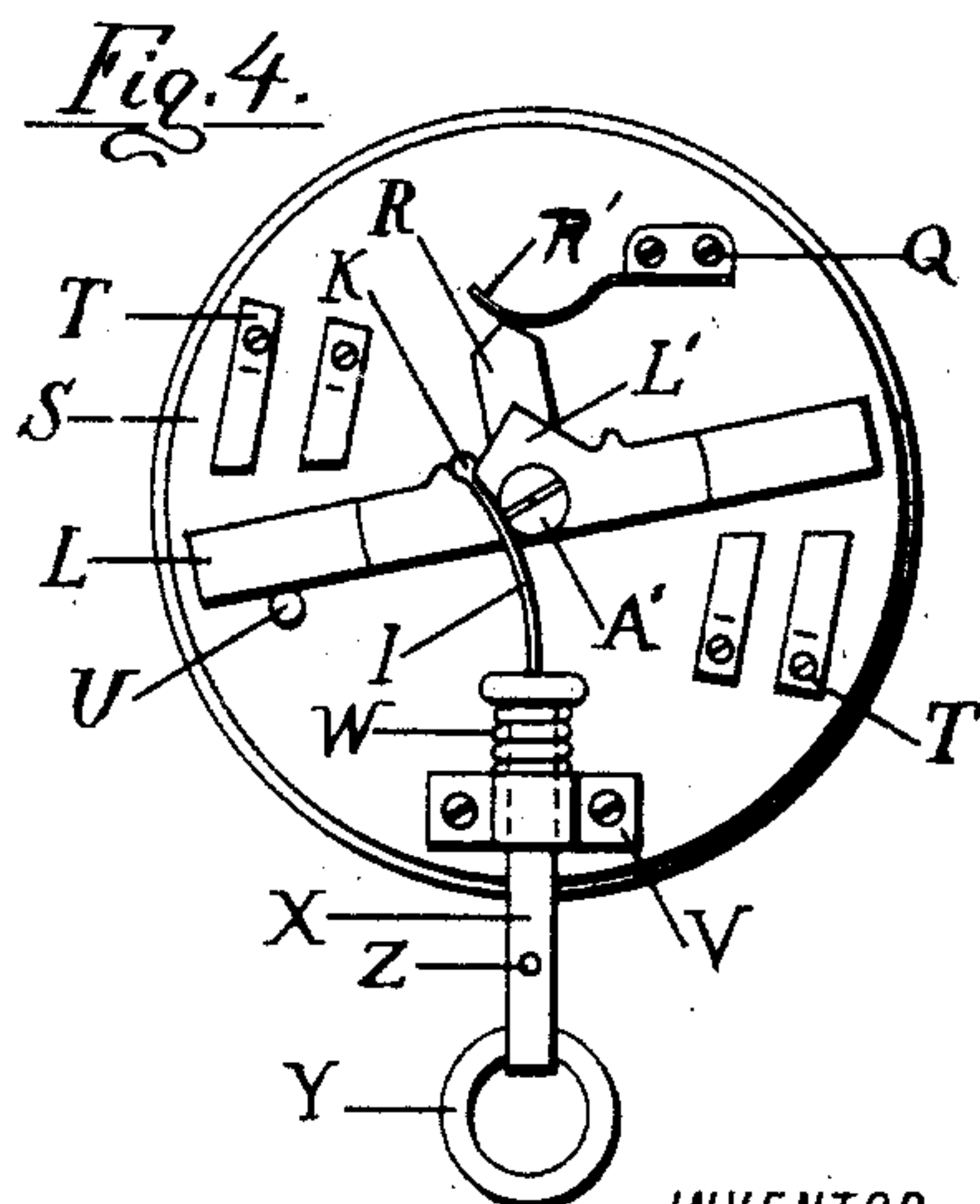
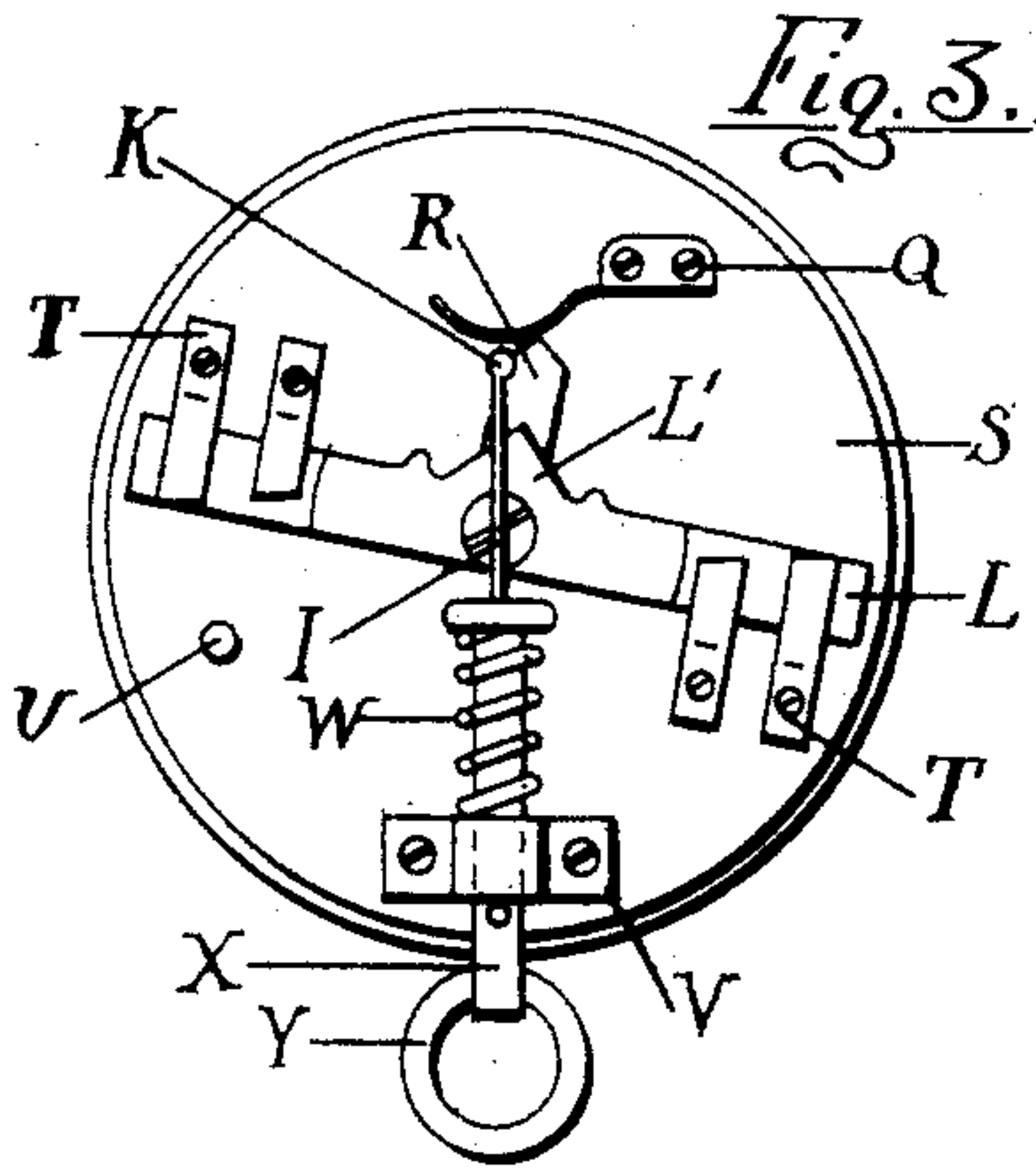
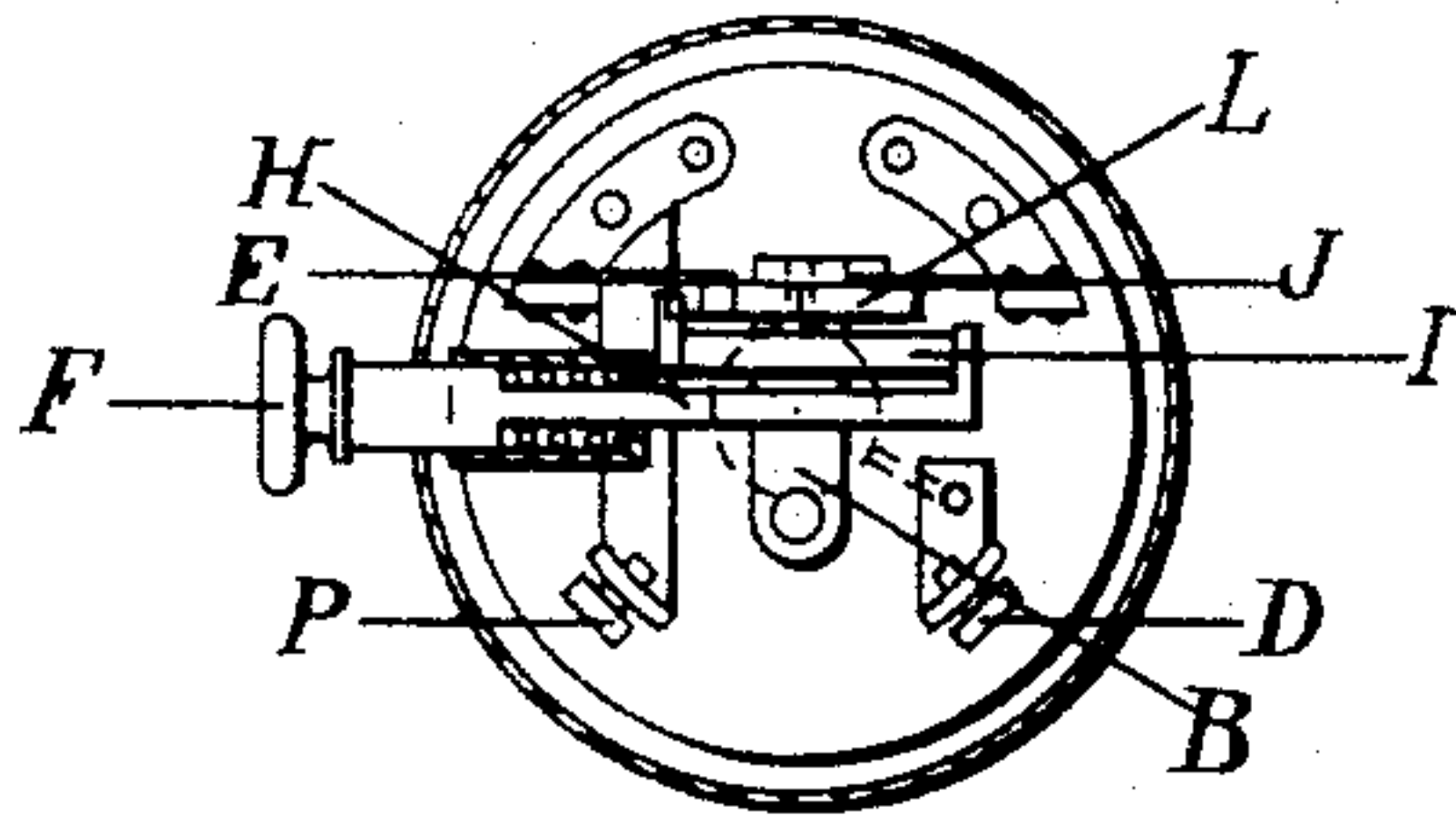
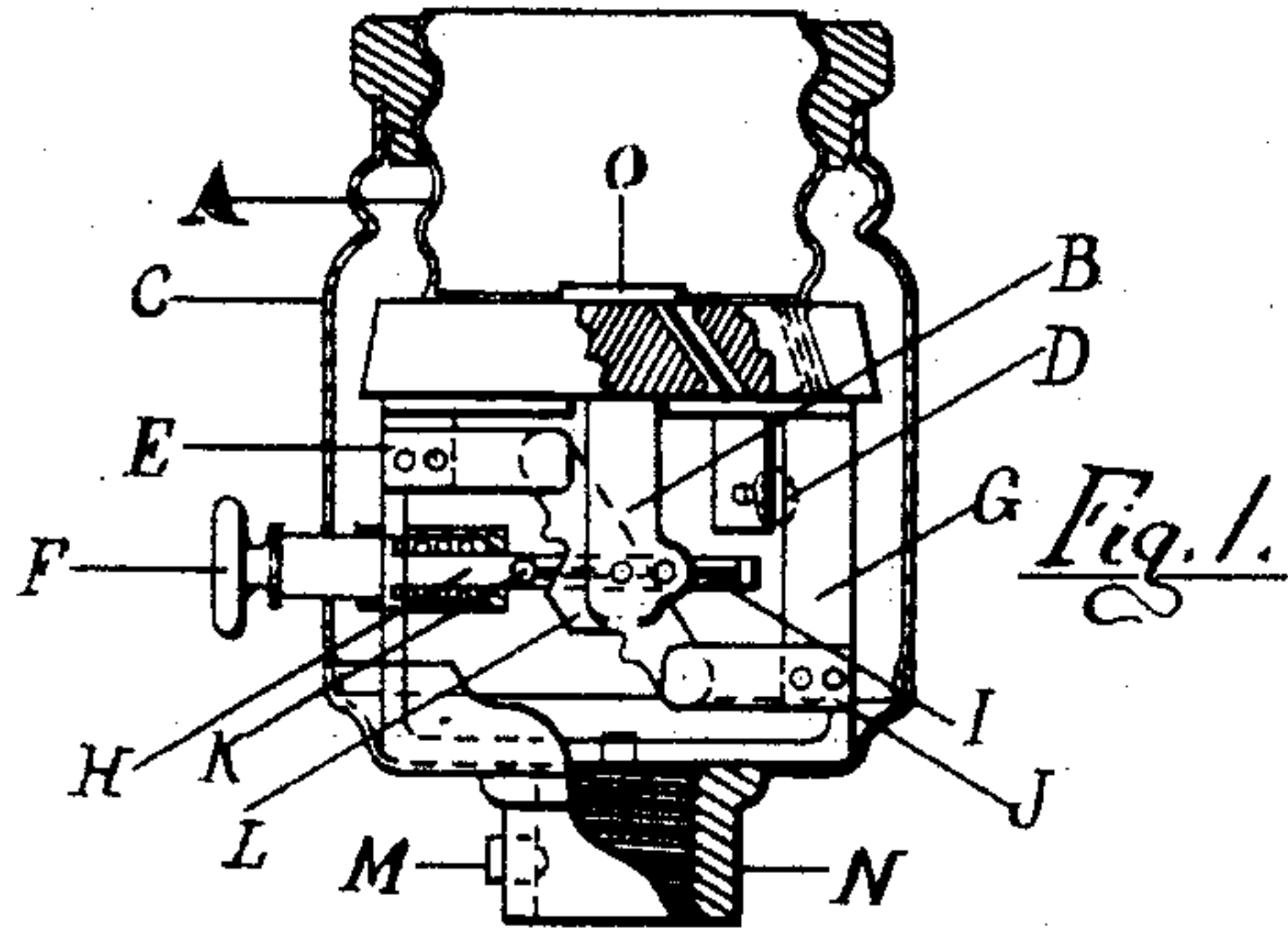


(No Model.)

F. D'A. GOOLD.
ELECTRICAL SWITCH.

No. 436,412.

Patented Sept. 16, 1890



WITNESSES:

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FREDERICK D'A. GOOLD, OF NEW YORK, N. Y.

ELECTRICAL SWITCH.

SPECIFICATION forming part of Letters Patent No. 436,412, dated September 16, 1890.

Application filed July 15, 1890. Serial No. 358,783. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK D'A. GOOLD, a citizen of the United States, residing at New York, in the State of New York, have invented a new and useful Electrical Switch, of which the following is a specification.

My invention relates to improvements in electrical switches in which the mechanism by which the lights are turned on and off is moved in the same direction in either case, whether the lights are turned on or off.

The object of my improvement is to obtain an electrical switch which is compact and neat in construction, and one in which the lights are turned on or off by the same direction of movement of the mechanism provided for that purpose. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of a key-socket for a lamp with my attachment applied thereto, part of the casing of the socket being cut away in order to show the mechanism by which I attain my object. Fig. 2 is a view of Fig. 1, looking from below. Fig. 3 is a view of my invention as applied to an electrical switch for one or more lamps, showing the mechanism in its normal state when lights are turned on. Fig. 4 is a view of a similar switch, showing the position of the various parts during the operation of turning the lamps off.

Similar letters refer to similar parts throughout the several views.

In reference to Figs. 1 and 2, which illustrate my invention as applied to a key-socket, A represents the spirally-corrugated tube into which the lamp is screwed.

O represents the plate which makes the contact with the bottom of the lamp when the same is screwed into the socket.

P and D represent the screws under which the tap-wires are clamped.

The lever L is constructed in a peculiar shape, as shown in Fig. 1, and is capable of being oscillated on a central pivot by means of a pin K, which is attached to a flexible spring I, which in turn is attached to the end of a puppet-push, the other end of this push having attached to it a thumb-piece F, this thumb-piece F being capable of being pushed in against the spring in the puppet-slide and carrying the pin K against the inclined plane

of the peculiarly-shaped lever L. The pin K, sliding down the inclined plane, carries with it the lever L, oscillating it on the centrally-located pivot. The illustration shows the position of the lever in the socket when the lamp is turned on. To open the circuit, the slide H is pushed in. The pin K engages on the proper side of the lever and pulls it over, opening its contact with the brushes J and E.

When the lamp is turned on, the electrical circuit through the socket and the lamp is as follows: From the screw D to contact-plate O, through the lamp to the threaded tube or receptacle A, from thence to the standard G, and through the brush J and lever L and brush E to the screw P, the feeding-wires being attached under the screws P and D.

Figs. 3 and 4 represent my invention as applied to an ordinary electrical switch, to which are attached one or more lamps.

The mechanical construction for this switch does not differ essentially from my invention as shown in Figs. 1 and 2, where it is applied to a key-socket. The sliding piece X has attached to it a ring outside of the switch, to which can be applied a spring to operate it when the switch is put on the wire near the ceiling. The sliding piece X has a bearing V and a spring W, which keeps it in the position shown at Fig. 3 when it is not being operated. At the end of this sliding piece X is attached a flexible spring I, having a pin K at its end, which is longer than the spring wide, and so extends down below the edge of the spring. This pin K, being capable of sliding down the inclined plane L' of the lever L, it will be noticed that, no matter in what position the lever L leans, this pin K will always be in position where it will engage the lever in such a way as to oscillate it on its pivot-center. The arrangement as shown is a double-pole switch, inasmuch that one wire is closed or opened at each end of the lever L. The lever L has insulating material in its center, with metal ends capable of short-circuiting the brushes T' when the lamps are to be turned on. The lever L has integrally attached to it the projecting piece R at right angles to its longitudinal axis, this projecting piece R having its end shaped as shown. This projection bears up against the spring R, which acts as a lock to prevent the lever

L from shifting after the lights have been turned on or off. It can be readily seen that this switch can be operated by a push-button arrangement placed diametrically opposite to the bearing V, which would replace the sliding piece X. The lever L when in position, as shown in Fig. 4, bears against pin U, which checks its motion. After the sliding piece X has been pulled out, as shown in Fig. 4, to turn off the lights, or, in other words, to open the switch, the spring W springs it into position, as shown in Fig. 3. It is then ready to come down on the other side of the projecting position L' of the lever L. It will therefore be seen that the switch is open and closed by the same direction of movement of the sliding piece X, which, as previously stated, is one of the objects of my invention.

I do not wish to confine myself to the exact construction shown on the drawings, nor to the mechanical or artistic arrangement of the various parts.

I am fully aware of electrical switches being constructed with an oscillating arm on the knife-blade principle; but I am not aware of any arrangement by which this arm or lever can be oscillated by the same direction of motion of the mechanism provided for turning on and off the lights.

Having fully described my invention, so that any one skilled in the art can manufacture the same, what I claim as my invention, and desire to secure as such, is—

1. In an electrical switch, an oscillating lever having a V-shaped projection at its central point, in combination with a pin on a sliding flexible spring, said pin being capable of sliding down the V-shaped projection when turning the switch on or off.

2. In an electrical key-socket for a lamp, a lever having a V-shaped projection centrally

attached thereto, in combination with a pin on the end of the flexible spring, said pin being capable of sliding down said inverted-V projection in order to oscillate the lever round the centrally located pivot, and thereby make and break the electrical circuit.

3. In an electrical key-socket for the accommodation of an electrical lamp, the combination of the push F, the flexible spring I, the pin K, and the lever L, having a V-shaped projection integral therewith.

4. In an electrical switch for a number of lights, the combination of a sliding piece X, having attached at its end a ring Y, and at its other end having attached a flexible spring I, in turn having attached to its end a pin K, said pin K sliding upon an inclined plane L', which is centrally attached to a lever L, said lever L making and breaking electrical contact by short-circuiting or closing the brushes T T, as and for the purpose specified.

5. In an electrical switch for turning on and off a number of electrical lamps, the combination of the brushes T T, the lever L, having a V-shaped projection L' as an integral part thereof, a projection R at right angles to the longitudinal axis of the lever L, which acts as a check, keeping the lever L in position, and which bears against the spring Q, spring Q preventing the lever L from shifting when it is not operated upon by the pin K.

6. In an electrical switch, the combination of a sliding piece X, brushes T T, lever L, spring-finger I, projection L', spring Q, projection R, and pin U.

FREDK. D'A. GOOLD.

Witnesses:

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