

No. 810,536.

PATENTED JAN. 23, 1906.

H. HOLZER.

TURNING SWITCH WITH LIGHTED HANDLE FOR ELECTRIC LINES.

APPLICATION FILED APR. 10, 1905.

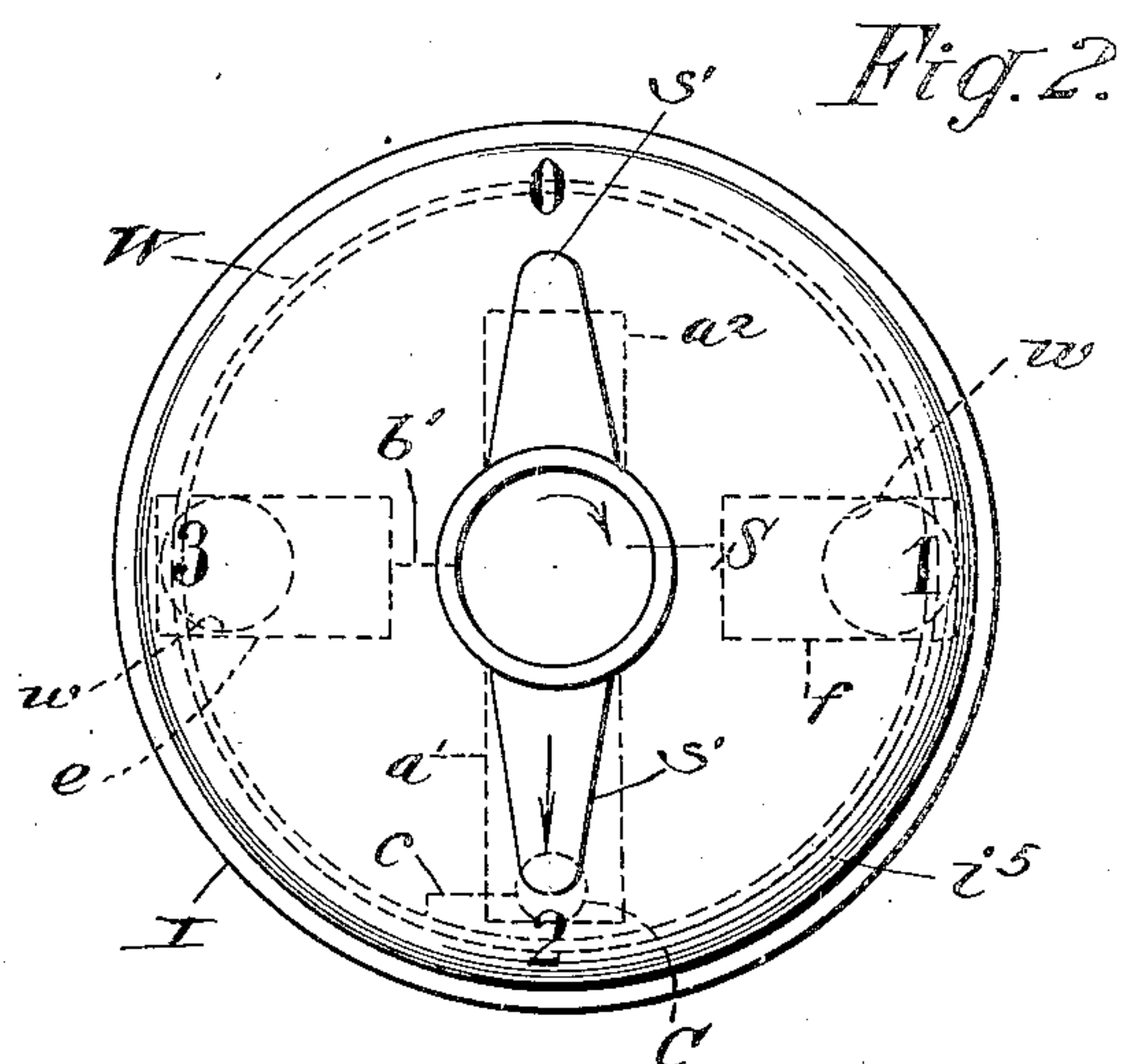
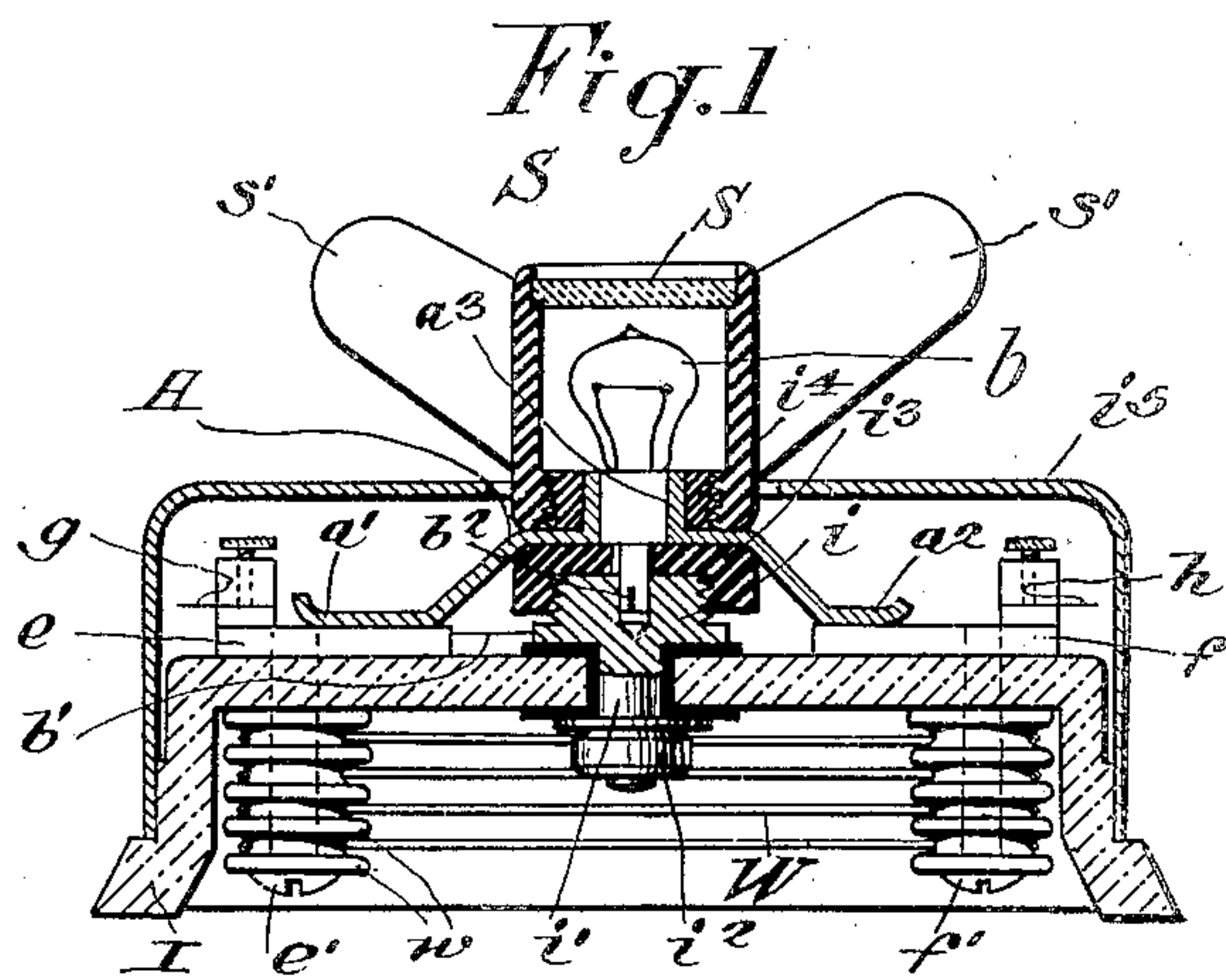
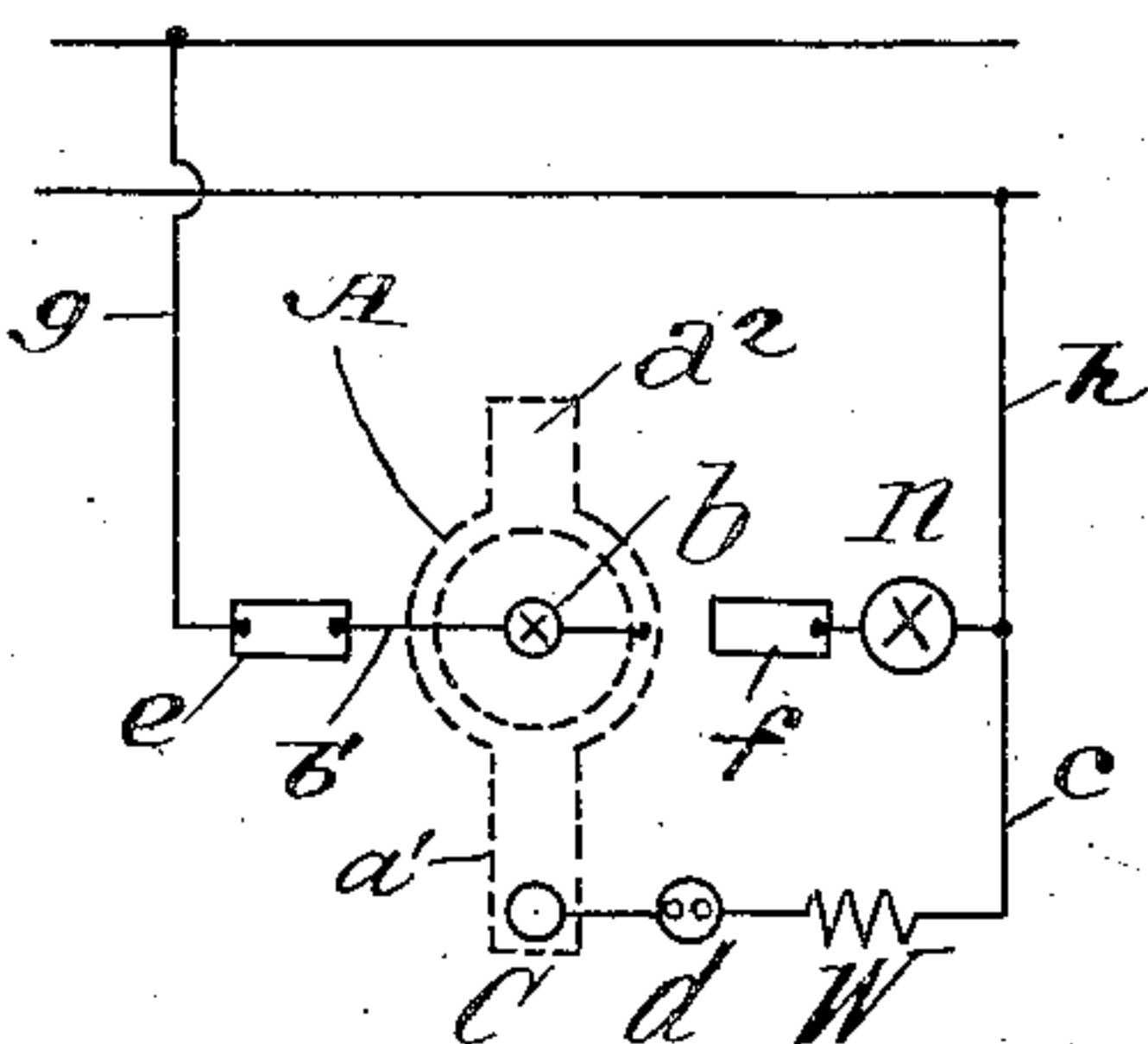
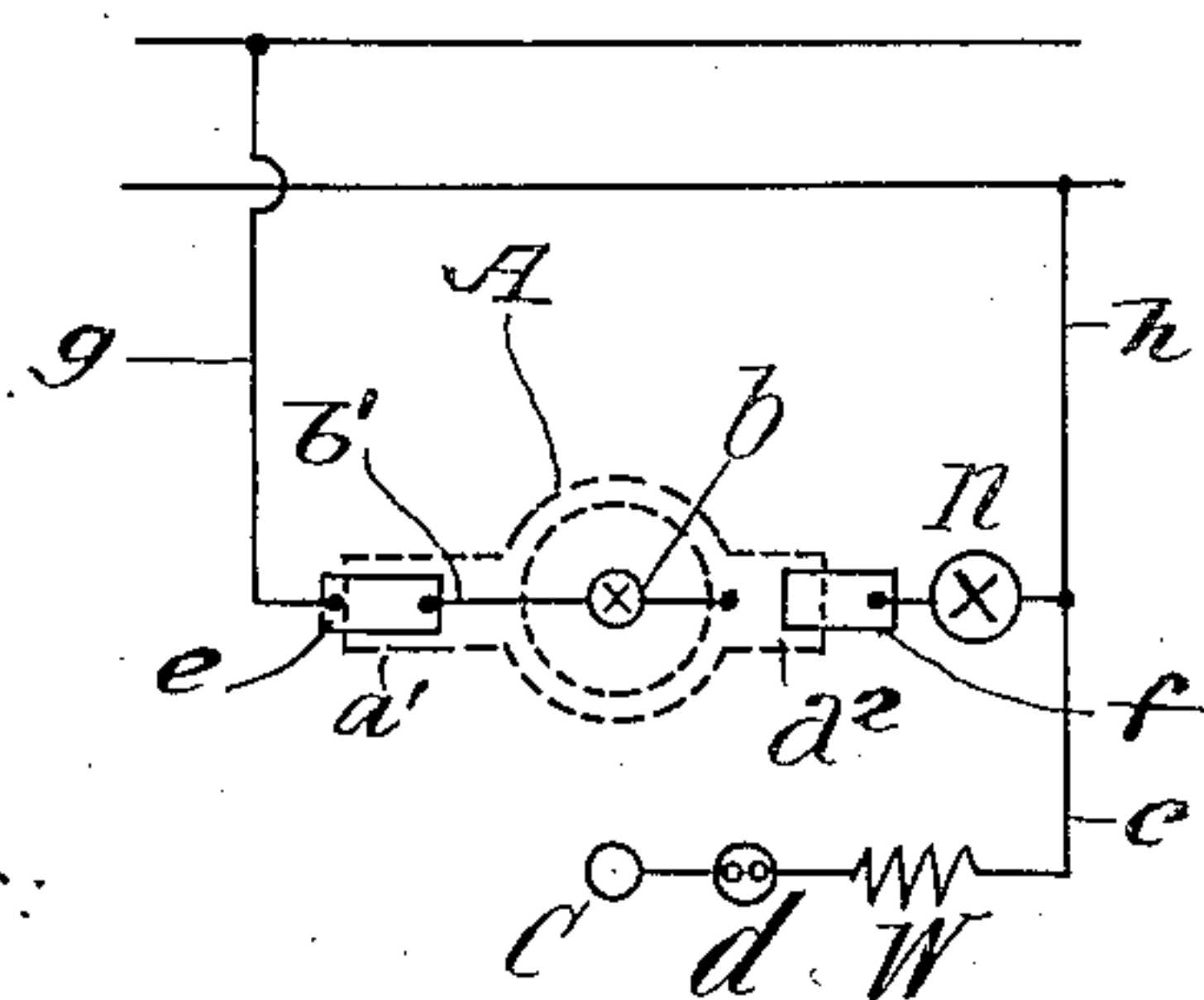


Fig. 3

Fig. 4



Witnesses:
C. Heymann
L. Waldman

Inventor:
Hans Holzer
by B. Singer Attorney

UNITED STATES PATENT OFFICE.

HANS HOLZER, OF FRANKFORT-ON-THE-MAIN, GERMANY.

TURNING SWITCH WITH LIGHTED HANDLE FOR ELECTRIC LINES.

No. 810,536.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed April 10, 1905. Serial No. 254,882.

To all whom it may concern:

Be it known that I, HANS HOLZER, a subject of the German Emperor, and a resident of Frankfort-on-the-Main, Germany, have
5 invented certain new and useful Improvements in Turning Switches with Lighted Handles for Electric Lines, of which the following is a specification.

The invention relates to improvements in
10 electric switches of that class wherein the switch member or body of the switch is provided with illuminating means to enable the operator to locate the switch in the dark.

It is the object of this invention to provide
15 a switch whereby an incandescent light placed upon or adjacent thereto may serve to indicate the position of the switch in a dark room, the said lamp being connected with a lighting or other circuit through the switch in
20 such a manner as to be simultaneously cut out when the circuit is cut in or to be entirely cut out when the lighting-circuit is cut out, the latter feature being to avoid lighting the lamp during the day-time.

In the drawings, Figure 1 is a sectional
25 view of a switch embodying the main features of my invention. Fig. 2 is a plan view thereof, and Figs. 3 and 4 are diagrammatic views.

There is provided a switch connected by
30 main contacts *e* and *f* through branches *g* and *h* with the main line. An auxiliary contact *C* is provided, which connects by a branch *c* through branch *h* with side of the line, there
35 being inserted in said branch suitable resistance *W* and a plug *d*. The main lamp *n* is shown in the diagrammatic views inserted in branch *h* to represent the lighting system which the switch controls, and a small lamp
40 *b* is shown electrically connected with contact *e*, the latter serving to indicate the location of the switch at night. The lamp *b* is connected with the line by connection *b'* through contact *e*. The switch member *A*,
45 which, as shown, is of the spring type, is pivotally mounted upon the body *I* of the switch in a manner hereinafter more fully described. The switch-spring *A* is so proportioned with respect to its point of throw or, as shown, its
50 pivotal mounting as to form relatively long and short wiping or contact ends *a'* and *a''*, adapted to engage either of the main contacts *e* *f*. The auxiliary contact *C* is located a sufficient distance from the pivotal center of
55 the spring *A* to be out of the path of said short end *a''* and in the path of said long end *a'*.

From the foregoing it will be seen that when it is desired to turn on the lamp *n* and shunt out the lamp *b* the switch *A* will be turned in the position shown in Fig. 3, where-
60 in the contact ends *a'* and *a''* engage the contacts *e* and *f*. When it is desired to cut out the lamp *n* and light the lamp *b*, the switch *A* is turned to the position shown in Fig. 4, wherein contact end *a'* engages the auxiliary
65 contact *C*, cutting out the main circuit and closing circuit through contact *C*, spring *A*, lamp *b*, connection *b'*, and back to the main line. In this position lamp *b* is in circuit and serves to guide any one to find the switch at
70 night. During the day-time when the light *n* is turned off and it is not necessary to have the light *b* in circuit the switch *A* is rotated to bring the end *a''* nearest the auxiliary contact *C*, thereby cutting out both lamps *b* and
75 *n*, or if it is not desired to use the lamp *b* the plug *d* may be drawn, cutting said lamp permanently out of service.

The sectional view, Fig. 1, shows the position of the switch member *A* as illustrated
80 in Fig. 3, while the plan view in Fig. 2 illustrates the position shown in Fig. 4.

Next describing the construction of the switch as a whole, the same consists of a hollow base *I*, of porcelain or like insulating material, on which the contacts *C*, *e*, and *f* are
85 mounted, the contacts *e* and *f* being held in place by screws *e'* and *f'*, which support resistance-wires *W*, said screws passing through insulating-washers *w* and the base *I* to the
90 contacts *e* and *f*. A block *i* is mounted upon the base *I* and provided with a stem *i'*, projecting therethrough and anchored in place by a nut *i''*. A nut *i'''*, of suitable insulating material, is secured to the block *i* by thread-
95 ed engagement and forms a bearing for the switch-spring *A*. Said spring is provided with a centrally-disposed sleeve *a''*, in which the socket of the lamp *b* is mounted, there being formed on said lamp a shank *b''*, which
100 extends through said nut *i'''* and into the block *i*. A collar *i''''*, of suitable insulating material, rigidly secured to the sleeve *a''*, is provided on its periphery with screw-threads, to which the switch-key *S* is secured,
105 the latter comprising a centrally-disposed casing, of insulating material, into which the lamp *b* projects, a transparent top *s*, through which the rays of light pass, and suitable
110 wings *s'*. An outer casing *i''''''*, secured to the base *I*, incloses the operative parts of the switch and is provided with an aperture,

through which the key S projects. When the switch is in the position shown in Fig. 4, (referring also to Fig. 2,) the current passes from contact *e* by branch *b'* to block *i*, spindle *b*², through lamp *b*, spring A, to contact C, resistance W, back to the line, the said resistance W being connected with contact C in any desirable manner, which connection is clearly shown diagrammatically in Figs. 2, 3, and 4. In Fig. 2 the branch *c* is shown connecting the resistance W and contact C. One of the wings *s'*, as shown in Fig. 2, is provided with an arrow to indicate the position of the longer contact end *a'*, and the outer casing *i*⁵ is provided with numbers "0, 1, 2, 3," enabling the operator to determine the position in which he is turning the switch.

The device of my invention provides a means of avoiding the difficulties common in locating a switch in a dark room by a device which is simple and compact and capable of being substituted for the ordinary switch

without alteration of any kind. The branch circuit *c* and the resistance W may be contained in the switch-body, if desired.

I claim—

An electric switch comprising main contacts connected with the line, a pivotally-mounted switch member for closing circuit through said contacts, said member having relatively long and short contact ends, a lamp for said switch member connected therethrough with one side of the line, and an auxiliary contact connected with the other side, said auxiliary contact being out of the path of said short end and in the path of the long end of said switch member.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

HANS HOLZER.

Witnesses:

HEINRICH ILLIG,
KRUDER HERBST.