

No. 847,007.

PATENTED MAR. 12, 1907.

I. KITSEE.
ELECTRIC SWITCH.

APPLICATION FILED MAR. 19, 1904.

Fig. 1.

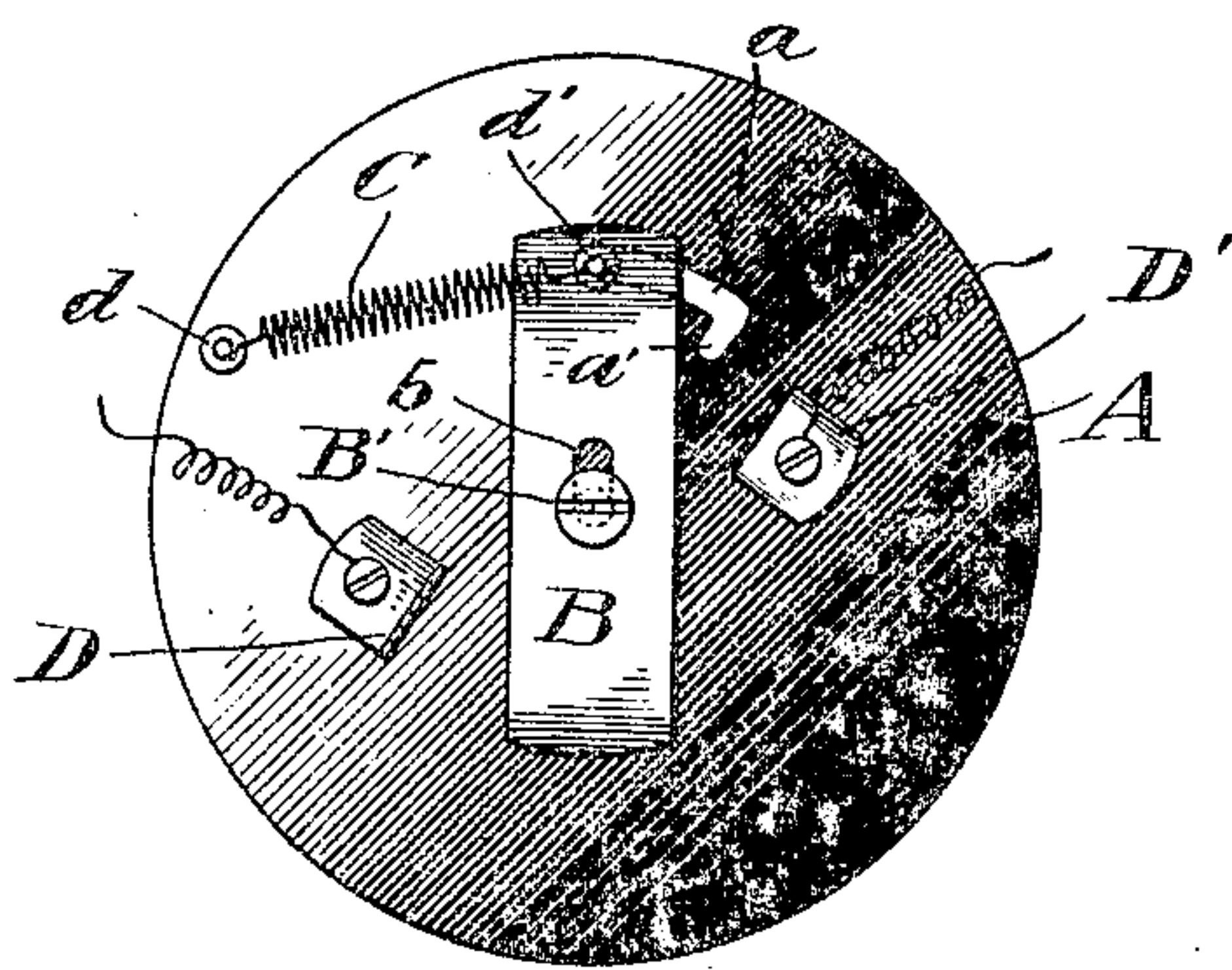


Fig. 2.

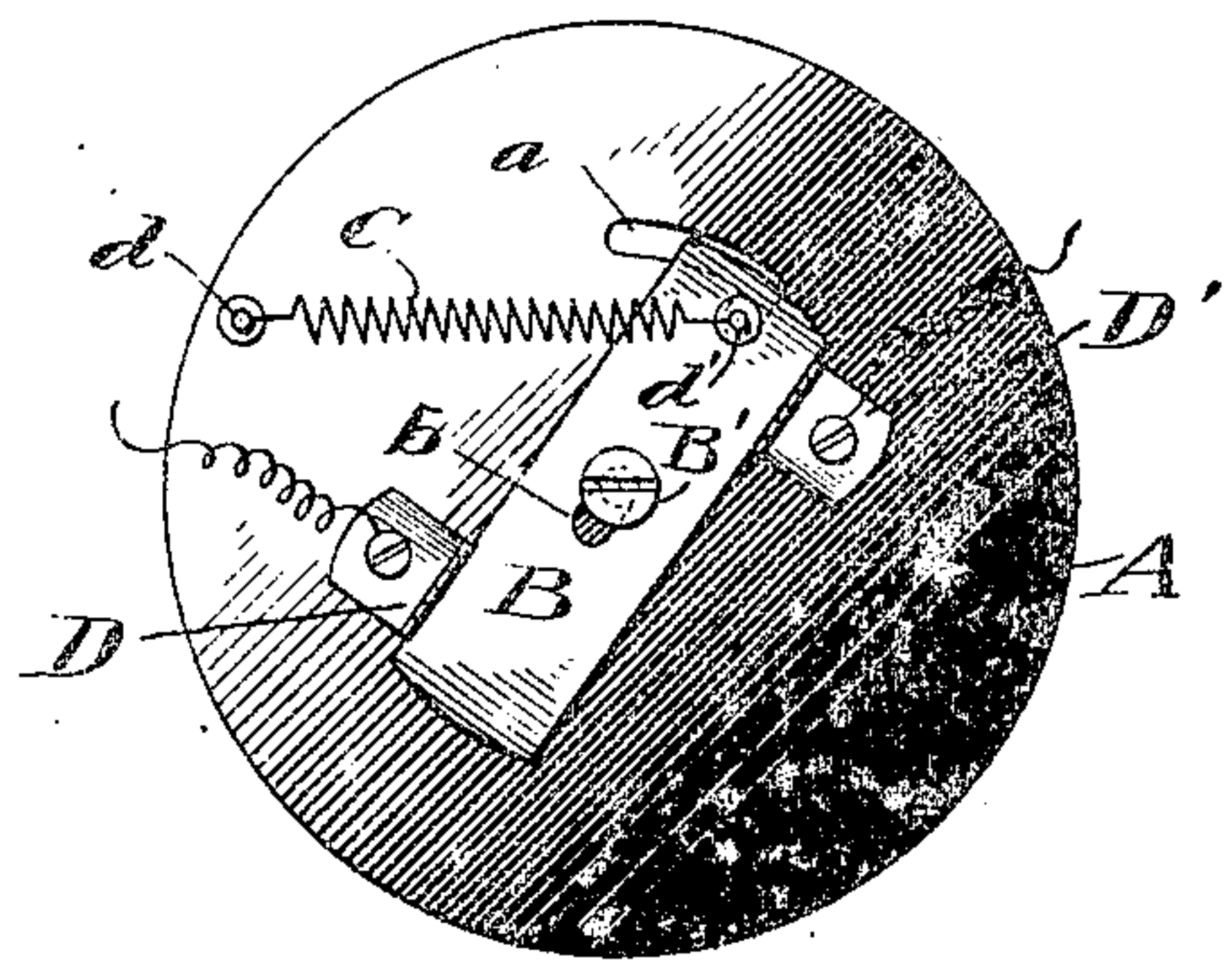


Fig. 3.

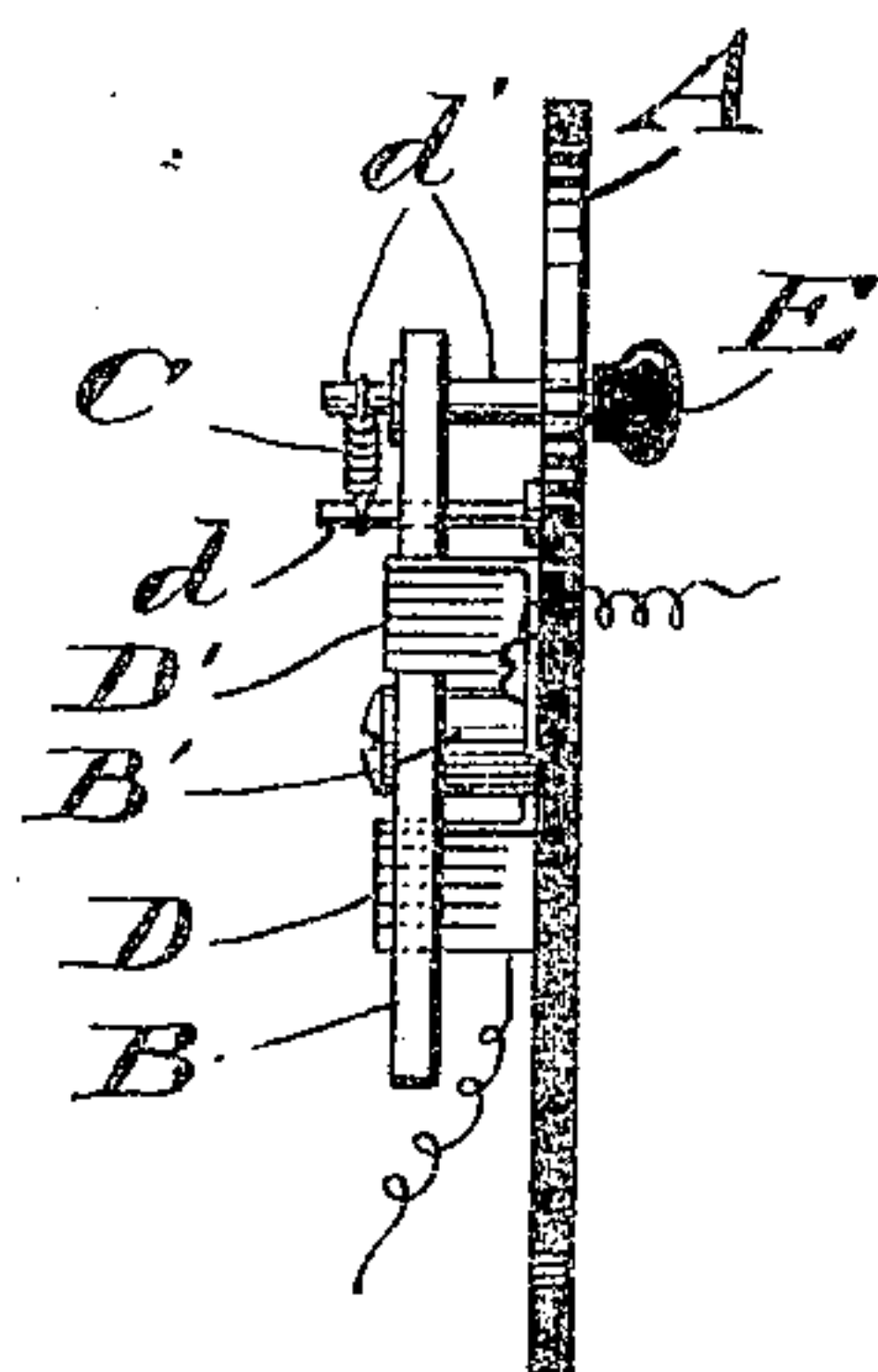
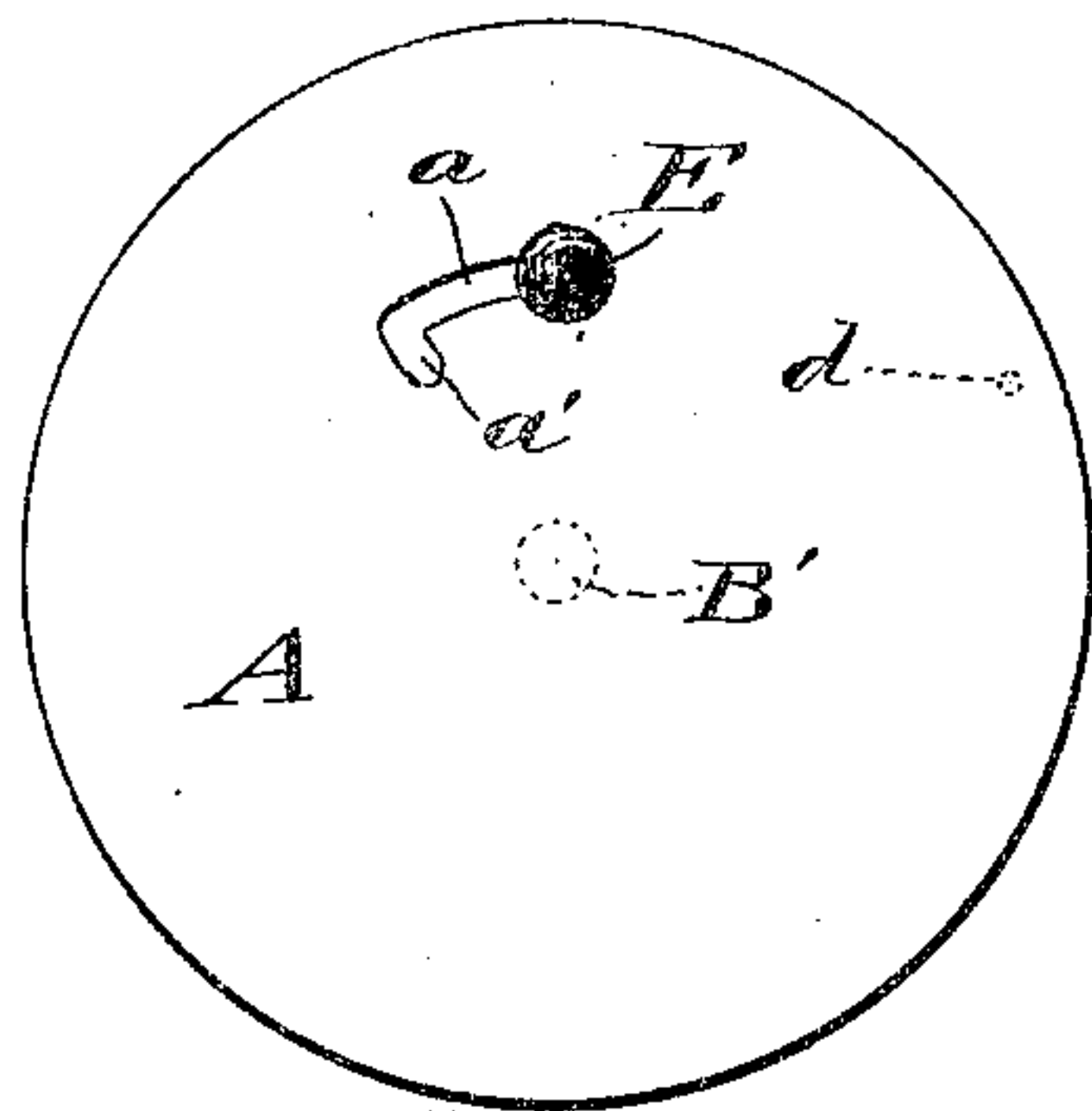


Fig. 4.



WITNESSES:

Edwin Q. Stalley
H. C. Yeller

INVENTOR

I. Kitsee

UNITED STATES PATENT OFFICE.

ISIDOR KITSEE, OF PHILADELPHIA, PENNSYLVANIA.

ELECTRIC SWITCH.

No. 847,007.

Specification of Letters Patent.

Patented March 12, 1907.

Application filed March 19, 1904. Serial No. 198,908.

To all whom it may concern:

Be it known that I, ISIDOR KITSEE, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

My invention relates to an improvement in electric switches, and has more special reference to that class of switches in which the contact is made by a positive motion and the contact is broken by a spring-actuated release motion.

The object of my invention is to provide a switch of this character which will be so simply constructed as to be made at a comparative small cost, and the parts of the switch will be so few in number that it will not be liable to get out of order easily, while the same will be entirely durable and efficient in action and will meet all the requirements demanded of switches of this description.

My device consists, essentially, of the features and arrangements, as will hereinafter be more fully described, illustrated in the drawing, and more clearly pointed out in the claims following this specification.

Referring to the drawing, Figure 1 is a rear elevation of my improved switch, showing the parts in the condition they will assume when the contact is broken. Fig. 2 is a similar view to Fig. 1, showing the position of the parts when the contact is made and circuit established through the switch. Fig. 3 is an edge elevation of the switch, the parts being in a position as shown in Fig. 1. Fig. 4 is a face view of the switch when the contact or circuit is broken.

A represents a face-plate, which I term the "stationary" part of the switch, and this face-plate may be made of any suitable insulating material, or if the same is made of conducting material it is understood that the different parts must be insulated therefrom.

B represents the movable part of the switch, made of conducting material. This movable member is pivoted to the stationary member A by means of the screw B', which passes through a slot b, formed longitudinally to the member B. Thus while the movable member is pivoted upon the screw B' it also has a certain amount of longitudinal movement upon said screw, said longitudinal movement being limited by the length of the slot b.

C is a spring connected at one end to the

movable member B and at the other end to the plate A at the point d.

D D' are two spring-contacts, to which the terminals of the wires leading to the switch are connected. These contacts are arranged upon opposite sides of the movable member B and are secured to the rear of the plate A. The spring C tends to hold the movable member B out of contact with the contacts D D'.

d' is a pin extending forward and secured to one end of the movable part B. This pin d' protrudes through a slot a, the major portion of said slot being formed concentric with the pivotal point of the member B. A knob E is secured upon the outer end of the pin d' in front of the face-plate A, and by moving the knob E to the limit of the slot a against the tension of the spring C connection will be made between the movable member B and the two contacts D and D', thus establishing the circuit, and in order to hold the movable member in this position the slot a at this point is notched or cut away, so as to form an extension of the slot extending radially toward the pivotal point of the member B, thus forming a bayonet-slot, and the outer end of the spring C is secured to the plate a at a point where the tendency of the spring is not only to cause the pin d' to return to the end of the concentric slot a, but will also tend to pull the pin d' downward into the extension a' of said slot, this movement being allowed on account of the slot b in the movable member B. Thus when the pin d' is lodged within the extension a' of the slot the movable member B will be held in contact with the spring-contacts D and D', and to break this connection it is only necessary to raise the knob E till the pin d' is in alinement with the concentric portion of the slot a, when the spring C will act to draw the movable member away from both contact-springs, and thus break the contact.

It is well understood by persons versed in the art that the principal requirement in a switch of this character is that the circuit will be made and broken in a positive manner, so as to do away with all liability of arcing, and in this switch it will be seen that this is accomplished, for unless the movable member is moved in positive contact with the two contact-pins it is impossible for the spring to lock the switch by pulling the pin downward into the extension a' of the slot through the plate, and if the movable member is not

moved far enough to allow the spring to accomplish this locking the spring will instantly return the movable member to its original position, when the finger is released from the knob.

After the switch has been closed and the knob E is pressed upward the spring instantly acts upon the movable member to cause the same to move so as to make a positive and safe break in the circuit.

Of course I do not limit myself to the exact construction as here illustrated, as slight modifications can be made without departing from the scope of my invention.

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

1. A switch of the class described, comprising a face-plate having a bayonet-slot formed therein, a pair of contacts arranged upon the inner face of said plate and spaced apart, said contacts forming circuit-terminals, a movable conducting member arranged between said contacts and adapted to open and close the circuit therethrough, said member having a loose pivotal connection with the face-plate to permit the member having limited sliding movement thereon, and a projection carried by said member and extending through said slot for actuating said member, said projection cooperating with said slot to lock the movable member in engagement with said contacts.

2. A switch of the class described, comprising a face-plate having a bayonet-slot formed therein, a pair of contacts arranged upon the inner face of said plate and spaced apart, said contacts forming circuit-terminals, a movable conducting member arranged between said contacts and adapted to open and close the circuit therethrough, said member having a longitudinal slot, a pin arranged in said slot and connected to the face-plate, whereby said member is pivotally connected thereto but capable of limited sliding movement thereon, a projection carried by said member and extending through said bayonet-slot for actuating said member, said projection cooperating with said slot to lock the movable member in engagement with said contacts, and a spring for releasing the movable member from engagement with the contacts when the projection has been released from its engaged position in the slot.

3. In an electric switch, a stationary member, a movable member pivoted midway between its two ends to said stationary member, the movable member being provided with a slot formed longitudinally thereon,

through which the pivotal pin extends, two stationary contact-points adapted to be connected by the movable member when the same is moved in one direction, a spring tending to move the movable member so as to break connection, said spring so connected as to move the movable member longitudinally to the limit of its slot, when the connection is made between the two contact-points, and means whereby the movable member is automatically locked in this position when so moved, and a knob secured to the movable member for moving the same in the opposite direction longitudinally to allow the spring to return it to its original position as and for the purpose specified.

4. In an electric switch, a stationary member, a movable member, a longitudinal slot provided in the movable member, a pivot extending through said slot into the stationary part, two stationary contact points adapted to be electrically connected when the movable member is moved in one direction, a guideway formed in the stationary member concentric with the pivotal point of the movable member, a projection extending from the movable member and adapted to ride in said guideway, a spring connected to the movable member tending to hold the same so that its projection is at one end of the concentric slot when the contact is broken, a notch formed at the other end of the concentric slot into which the projection is forced by the spring when the contact is made between the two contact-points, and means secured to the movable member for raising the projection out of the notch and for moving the projection into alignment with the notch as and for the purpose specified.

5. An electric switch embracing a support, a movable conductor provided with a longitudinal slot and pivotally secured to said support, a spring connected to the movable conductor and support respectively, a guideway in the support, a projection from the movable conductor extending through said guideway, said guideway terminating in a notch, stationary contacts adapted to be secured to the current-carrying circuit and means to move to and fro said movable conductor.

In testimony whereof I hereby sign my name, in the presence of two subscribing witnesses, this 18th day of March, A. D. 1904.

ISIDOR KITSEE.

Witnesses:

EDITH R. STILLEY,
H. C. YETTER.