No. 701,725. Patented June 3, 1902.

G. HIGGINSON.

ELECTRIC SWITCH.

(Application filed Jan. 28, 1902.)

(No Model.)

Fig. 1.

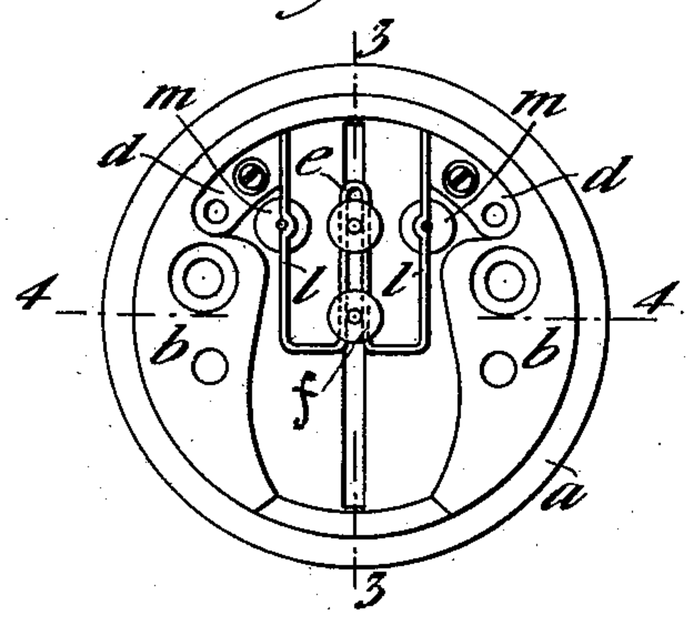


Fig. 2.

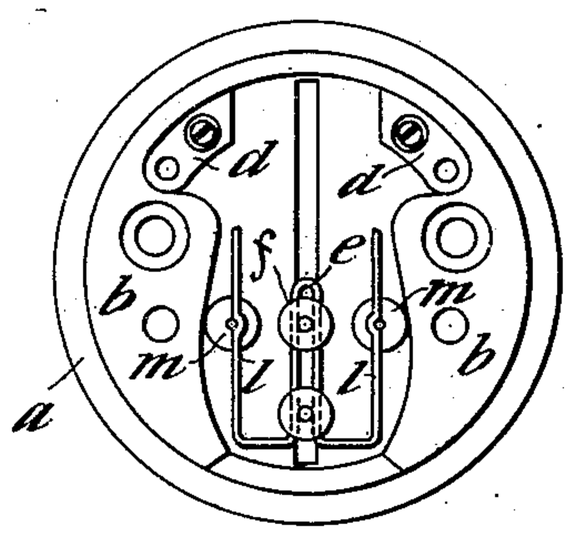


Fig. 3.

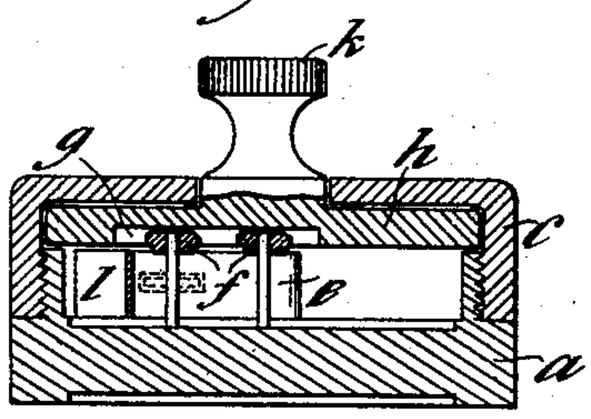


Fig. 4.

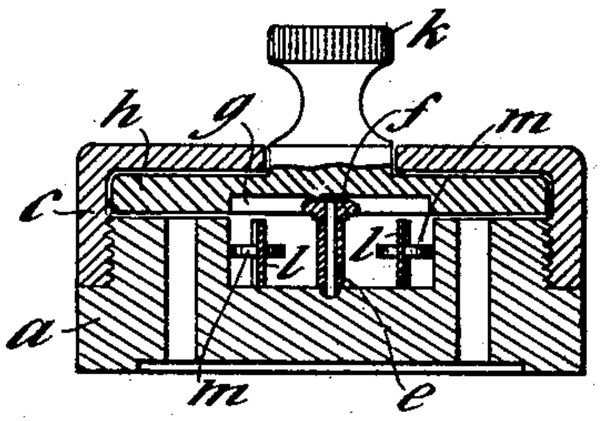
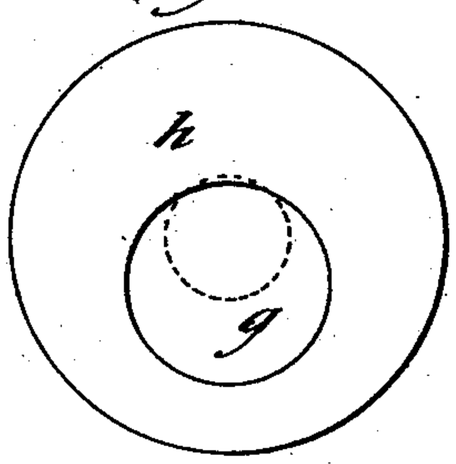


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

GEORGE HIGGINSON, OF WESTMINSTER, LONDON, ENGLAND.

ELECTRIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 701,725, dated June 3, 1902.

Application filed January 28, 1902. Serial No. 91,583. (No model.)

To all whom it may concern:

Be it known that I, GEORGE HIGGINSON, a citizen of England, residing at 31 Buckingham Gate, Westminster, London, England, have invented a certain new and useful Electric Switch, of which the following is a specification.

This invention relates to an electric switch so arranged that by turning a knob or handle continuously in either direction the closing and opening of the circuit are alternately effected, as will be described, with reference to the accompanying drawings.

Figure 1 is a plan of the switch with cover and disk removed, showing the circuit closed. Fig. 2 is a similar plan showing the circuit open. Fig. 3 is a section on the line 3 3 of Fig. 1, and Fig. 4 is a section on the line 4 4 of Fig. 1, with cover and disk in place. Fig. 5 is a plan of the eccentric disk looking at its under side.

a is a base of non-conducting material, such as porcelain, made with two projecting inclined ribs *b* and externally screw-threaded to receive a cap *c*, screwed on it. On the base are fixed two pieces of metal *d*, to each of which one of the circuit-wires is connected. A piece *e* is guided in a longitudinal groove, so that it can be slid to and fro, for which purpose it has mounted on it two rollers *f*, both of which are engaged within an eccentric recess *g* in the under face of a disk *h*, having a boss which passes through the cap *c* and terminates as a button or knob *k*. The sliding piece *e* consists of a strip of elastic metal bent to **W** form, its limbs *l* having mounted in them rollers *m*, which bear against the inclined faces of the projecting ribs *b*.

When the parts are in the position shown in Fig. 2, there being no conducting connection of the metal pieces *d*, the circuit is open. On now by means of the knob *k* turning the disk *h* half-around, the eccentric *g*, acting on the rollers *f*, causes the piece *e* to slide forward until its limbs *l* pass between the metal pieces *d*, and thereupon as the rollers *m* pass over the ends of the inclines *b* the limbs *l* snap against the metal pieces *d*, making contact with them, the **W**-strip forming a bridge connecting them, and so closing the circuit.

By turning the knob *k*, and with it the disk *h*, half-around the piece *e* is withdrawn, breaking the contact of its limbs *l* with the metal pieces *d*, and so opening the circuit.

As the eccentric recess *g* operates the same in whichever direction it is turned, the circuit can be closed and opened alternately by turning the knob *k* in either direction.

The eccentric recess *g* is made of greater diameter than the distance between the outsides of the rollers *f*, so that they have freedom to move some distance within the recess, and consequently when the sliding piece *e* is moved by the eccentric near to the end of its stroke the elasticity of the limbs *l* causes it to spring to the end of its stroke independently of the eccentric.

Having thus described the nature of my said invention and the best means I know of carrying the same into practical effect, I claim—

1. An electric switch comprising an insulating-base having fixed on it two contact-pieces connected respectively to any circuit-wires, a sliding piece in form of a **W**-shaped elastic strip to form a bridge connecting the contacts, and a disk having an eccentric recess engaging rollers on the sliding piece to effect its to-and-fro motion, constructed and operating substantially as described.

2. An electric switch comprising an insulating-base, two contact-pieces mounted thereon, a sliding **W**-shaped elastic strip forming a bridge between the contacts, rollers on the strip, and a cam device arranged to reciprocate the sliding piece or strip; substantially as described.

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

GEO. HIGGINSON.

Witnesses:

GERALD L. SMITH,

EDWARD GARDNER.