

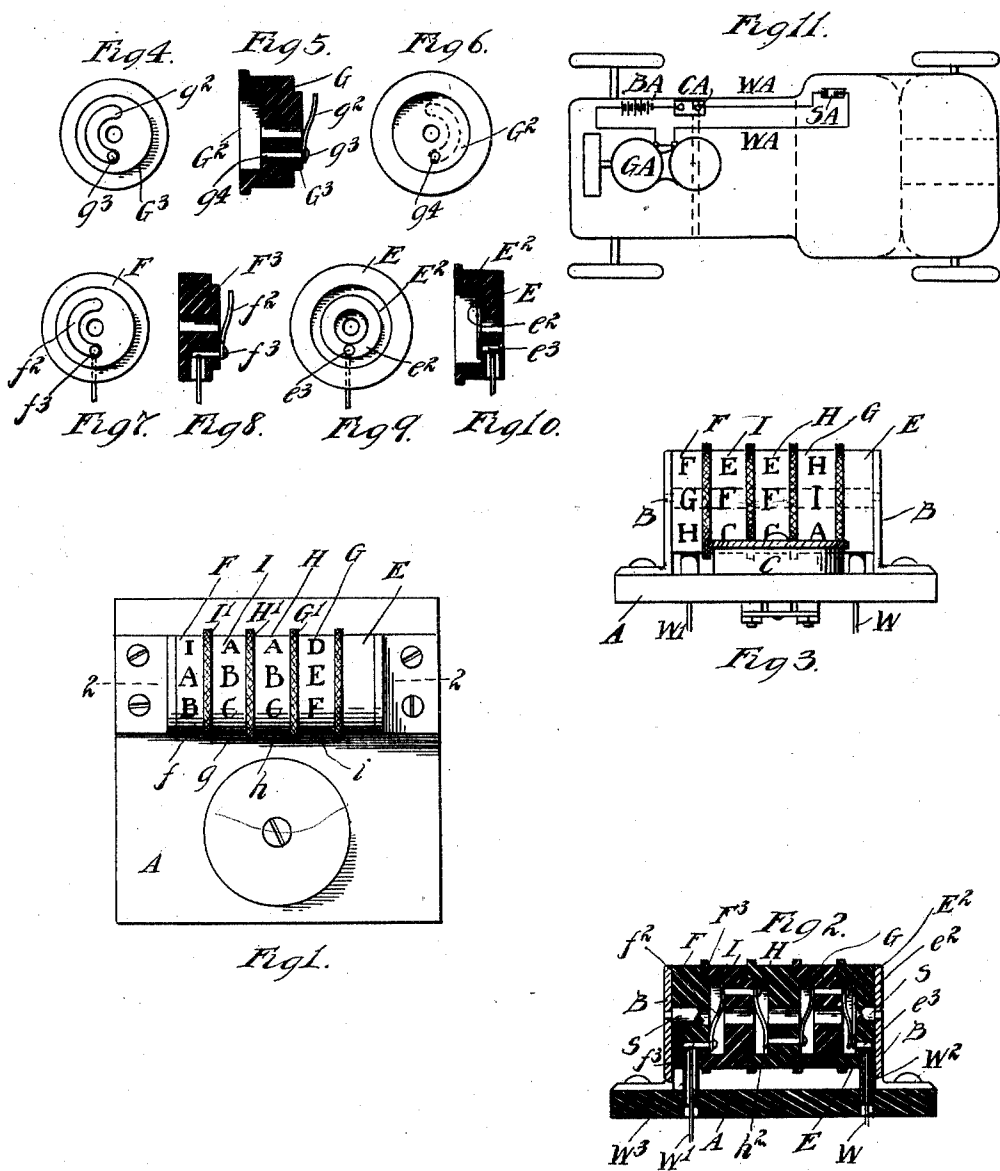
No. 759,600.

PATENTED MAY 10, 1904.

F. L. FAUROUTE.
ELECTRICAL SWITCH.

APPLICATION FILED MAR. 14, 1903.

NO MODEL.



WITNESSES
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FAY LEONE FAUROTÉ, OF ANN ARBOR, MICHIGAN.

ELECTRICAL SWITCH.

SPECIFICATION forming part of Letters Patent No. 759,600, dated May 10, 1904.

Application filed March 14, 1903. Serial No. 147,730. (No model.)

To all whom it may concern:

Be it known that I, FAY LEONE FAUROTÉ, a citizen of the United States, residing at Ann Arbor, county of Washtenaw, State of Michigan, have invented a certain new and useful Improvement in Electrical Switches; and I declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to electrical switches; and the object of my improvements is to provide an improved switch to be placed in the electric circuit of an automobile and one in which the circuit can only be completed by a predetermined definite arrangement of parts, which arrangement is not apparent to the observer. I accomplish this object in the device illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of the switch. Fig. 2 is a section on the line 2 2 of Fig. 1. Fig. 3 is a front elevation of Fig. 1. Fig. 4 is an end view of one of the movable disks. Fig. 5 is a central section of the same. Fig. 6 is a view similar to Fig. 4, but showing the opposite end of the disk. Fig. 7 is a view showing the inner end of the left-hand stationary disk. Fig. 8 is a central section of the disk shown in Fig. 7. Fig. 9 is a view showing the inner end of the right-hand stationary disk. Fig. 10 is a central section of the disk shown in Fig. 9. Fig. 11 is a plan view of an automobile with a switch embodying my invention interposed in the electric circuit.

A is an insulating-base. B B are standards rising from said base.

S S represent a shaft or arbor extending between the standards B B.

E is a disk upon the right-hand end of the shaft S, one end of said disk being contiguous to the right-hand standard B and the other end being hollowed out, as indicated in Figs. 2 and 10.

W² is a tube extending into the base A and into the disk E.

W is a wire extending up through the base through the tube W² and electrically connected with a pin e³.

e² is a ring, of conducting material, in electrical contact with the pin e³ and secured to the disk E at the bottom of the hollow E².

G is a disk upon the shaft S, having a smaller cylindrical projection G³, which extends into the hollow E² of the disk E and fits therein, so as to bring the two disks axially in line.

g³ is a pin eccentric to the disk G, secured therein and extending through said disk.

g² is a spring secured to the disk G by the staple g³ and yieldingly pressing against the ring e², so as to make electrical contact therewith. The pin g² extends through the disk G, forming an electrical contact at its other end g⁴.

H is a disk constructed like the disk G, the spring h², corresponding to the spring g², pressing against the bottom of the hollow G² eccentric to the disk G, so that at a certain part of its revolution relative to G² it shall make contact with the pin g³ at g⁴. The disk H has a cylindrical projection similar to G³, which fits into the hollow G² of the disk G.

I is a disk entirely similar to the disk H and bearing the same relation to the disk H that the latter bears to the disk G.

F is a disk contiguous to the standard B at the left of the base A. Said disk has a cylindrical projection F³, extending into the hollow of the disk I. The disk F is also provided on its inner end with the spring f² and pin f³ of the description already noted in connection with the other disks.

W³ is a tube similar to W², extending into the base A and disk F and preventing the rotation of said disk.

W' is a connecting-wire extending up through the base through the tube W³ and making an electrical contact with the pin f³.

G' H' I' are raised edges on the corresponding disks having their peripheries preferably milled, so that said disks may be turned thereby around the shaft S.

f g h i indicate series of index-letters, the

constituent letters of which are arranged at equal distances around the peripheries of the disks F I H G.

It will be observed that only at one angular position of each of the movable disks upon the shaft S is electrical contact made with its adjacent disks. When each of these disks is in an angular position to make contact with its adjacent disks on each side, the electrical circuit is complete from the wire W to the wire W' through the various pins and springs upon said disks. At any other angular position of either one or all of said disks the circuit is broken between W and W'. The series of letters *f g h i* are so arranged that when the electrical circuit is complete through the connection on the disks the letters in line at some predetermined position—for instance, at the highest point of the periphery—spell some particular word—for instance, "A B E," as shown in Fig. 1. This word can be carried in the mind and the position of the disk determined by the spelling of such word, as in a combination-lock.

In Fig. 11, G A represent a gas-engine; B A, the battery; C A, a sparking coil, and W A the primary circuit through the battery and coil. S A represent a switch embodying my invention interposed in the circuit W A.

The operation of the above-described device is as follows: The switch is placed in the electric circuit—say, for instance, the battery-circuit of an automobile. When it is desired to leave the vehicle, the movable disks upon the shaft S are turned so that there is no connection from W to W', and therefore it will be impossible to use the battery, and therefore the vehicle, until such connection is reestablished, and it will be possible to reestablish such connection only by a person having the combination word. Should one battery or one set of batteries become disabled, the switch C is turned to throw in the other set.

What I claim is—

1. An electric switch consisting of three or more parts adapted to have their relative positions changed, concealed means for forming a complete circuit through said parts at a predetermined relative position of said parts, and an index adapted to indicate the relative positions of said parts at which the circuit is complete through them, combined with a circuit adapted to so convey a current that it shall produce an electrical effect, said switch being interposed

in said circuit so that the circuit shall be interrupted except when the parts of the switch are arranged in the predetermined position.

2. In an electric switch, the combination of a plurality of adjacent coaxial insulation-disks, concealed conductors extending through the individual disks adapted to contact with each other at a predetermined relative position of the disks, and an index on said disks adapted to indicate said relative position thereof.

3. In an electric switch, the combination of a plurality of disks, each of said disks being provided with a cylindrical cavity on one side, and a cylindrical projection on the other side, said projection being adapted to fit into the cavity of an adjacent disk, a contact-point and a contact-arm on each of said disks, said arm being adapted to contact the contact-point on another of said disks at a certain relative angular position of said disks, and an index adapted to indicate such relative position.

4. In an electric switch, the combination of a plurality of relatively movable parts, insulated from each other, conductors concealed within said parts and adapted to contact each other to form a complete circuit through said parts at a predetermined relative position thereof, and an index adapted to indicate said relative position.

5. In an electric switch, the combination of a plurality of disks having their centers in line, means within the peripheries of said disks for forming a continuous electrical connection through said disks at a relative angular position thereof, and an index adapted to indicate such relative angular position of said disks.

6. In an electric switch, the combination of a plurality of disks, each of said disks being provided with a cylindrical cavity on one side, and a cylindrical projection on the other side, said projection being adapted to fit into the cavity of an adjacent disk, means within the peripheries of said disks for forming a continuous electrical connection through said disks at a relative angular position thereof, and an index adapted to indicate such relative angular position of said disks.

In testimony whereof I sign this specification in the presence of two witnesses.

FAY LEONE FAUROTÉ.

Witnesses:

S. B. CONGER,
JOS. GRAMLING.