

C. A. PFANSTIEHL.
ELECTRIC SWITCH.
APPLICATION FILED AUG. 22, 1907.

998,301.

Patented July 18, 1911.

Fig. 1.

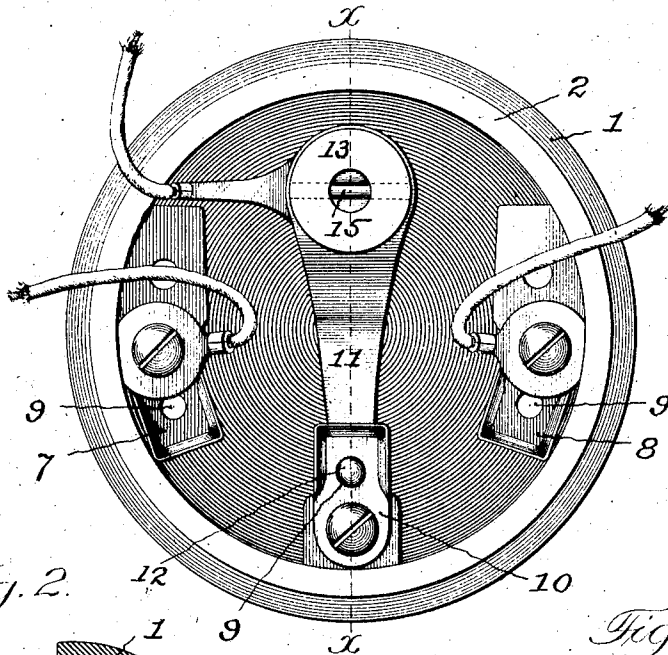


Fig. 2.

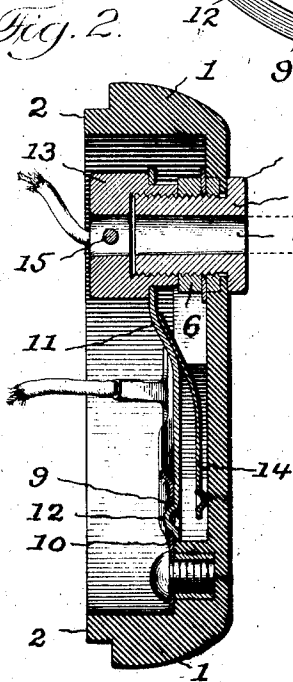


Fig. 3.

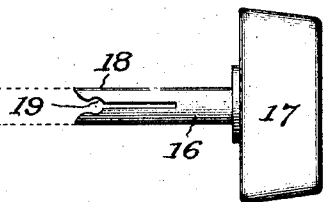
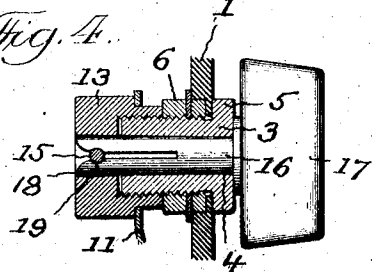


Fig. 4.



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UNITED STATES PATENT OFFICE.

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ELECTRIC SWITCH.

998,301.

Specification of Letters Patent. Patented July 18, 1911.

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To all whom it may concern:

Be it known that I, CARL A. PFANSTIEHL, a citizen of the United States of America, and a resident of Highland Park, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

This invention relates to that type of inclosed electric switches employed more especially in the electric ignition systems of automobiles and the like. And the present improvement has for its object to provide a simple and efficient structural formation and arrangement of parts, whereby the inclosed movable switch member is shifted to its different positions, and the unauthorized movement of said member rendered very difficult; and which in addition affords a very efficient contact between the switch member and terminals after long use, all as will hereinafter more fully appear.

In the accompanying drawings:—Figure 1, is a rear elevation of an electric switch embodying the present invention. Fig. 2, is a section of the same, on line $x-x$ Fig. 1. Fig. 3, is an elevation of the operating key in a detached condition. Fig. 4, is a detail section with the operating key in position. Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 is the inclosing casing preferably formed in whole of a non-conducting material; such casing has a cup shape, the rear end open end of which is formed with an annular rim 2 adapted to fit a corresponding recess in the base or support on which the switch is mounted.

3 is a guide bushing formed with a central guide bore 4; an outer marginal head 5, and an elongated screw-threaded shank adapted to receive the attaching nut 6 by which said guide bushing is secured in a stationary manner in an orifice formed therefor in the front wall of the casing 1, as shown. Said screw threaded shank in addition to receiving the attaching nut 6, also receives the hub of the movable arm or of the switch, hereinafter described.

7 and 8 are a pair of resilient terminal fingers secured in a properly insulated manner and in spaced relation within the inclosing casing 1 with their free ends extending into the path of the free end of the movable switch member, and provided with orifices

9 in such free ends for purposes hereinafter stated.

10, is an inactive or dummy finger arranged intermediate of the terminal fingers 7 and 8, and adapted to have frictional contact with the movable switch member when the circuit is broken, and with a view to preserve the contact parts of such member in a clean and good conducting condition. Such inactive finger is of a counterpart construction with that of the terminal fingers 7 and 8 before described.

11, is a resilient bar forming the movable switch member above referred to, and which is provided at its free end with a rounded projection 12 adapted to fit into the opening 9 of one or the other of the resilient contact fingers aforesaid, to hold the parts in proper position and provide a very perfect electric contact under long continued use. At the other end the bar 11 is connected to a hub 13 having a screw-threaded bore fitting upon the screw-threaded inner end of the guide bushing 3. In the described construction the hub 13 turns by means of its screw-threaded bore upon the screw-threaded inner end of the guide bushing 3 in the swinging adjustment of the movable switch member aforesaid. The inner end of the bore of said hub 13 is of a diameter equal to the bore of the guide bushing 3, and longitudinally alined therewith, as shown, for the reception of the stem of the operating key, hereinafter described.

14 is a supplementary spring member attached to the resilient bar 11 and bearing upon the inner surface of the front wall of the casing 1, with a tendency to force the free end of said resilient bar into forcible contact with the respective terminals aforesaid.

15 is a cross pin intersecting the smaller bore of the hub 13 to form a member of the manual operating means of the switch.

16 is the stem of the operating key, having at one end an operating head 17, and at the other end a forked extension 18 adapted to straddle the cross pin 15, when in place, and constitute an operative connection between the key and the movable member of the switch.

19 are recesses formed in opposed relation in the members of the forked extension 18, for a better engagement with the cross pin 15, aforesaid.

Having thus fully described my said invention what I claim as new and desire to secure by Letters Patent, is:

5 1. In an electric switch of the type herein described, the combination of an inclosing casing, a pair of active resilient terminal fingers secured in insulated relation in said casing, a movable switch member, a pivot hub therefor formed with an axial bore, a
10 cross pin secured in said hub and intersecting said bore and adapted for operative engagement with the forked extensions of an operating key, substantially as set forth.

15 2. In an electric switch of the type herein described, the combination of an inclosing casing, a pair of active resilient terminal

fingers secured in insulated relation in said casing, a guide bushing fixed to the casing and formed with an axial bore, a movable switch arm, a pivot hub therefor journaled
20 on said guide bushing and having an axial bore in alinement with the bore of the guide bushing, a cross pin intersecting said bore and adapted for operative engagement with the forked extension of an operating key, 25 substantially as set forth.

Signed at Highland Park, Ills., this 19th day of August 1907.

CARL A. PFANSTIEHL.

Witnesses:

ROBERT BURNS,
HENRY MOE.