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E. H. ZIMMER

2,313,380

SAFETY SWITCH

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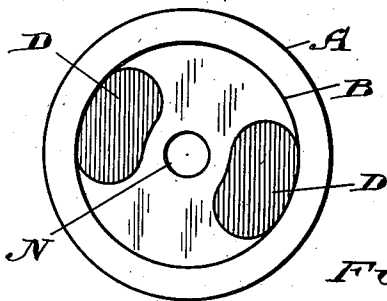
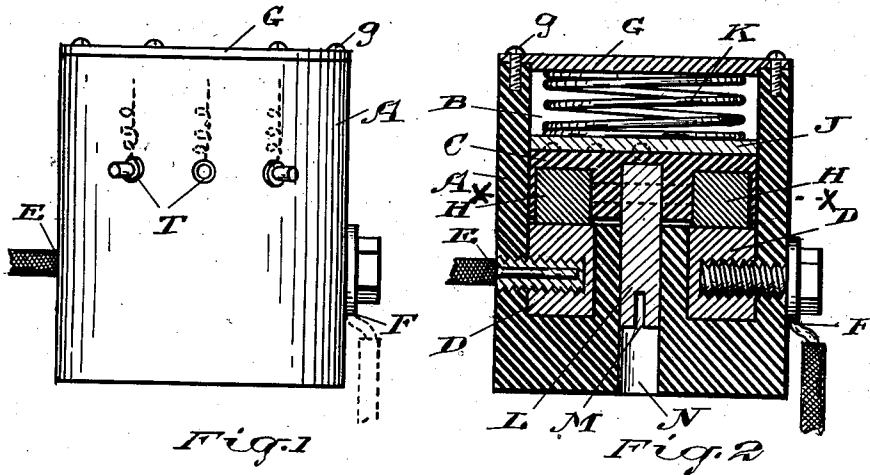


Fig. 3

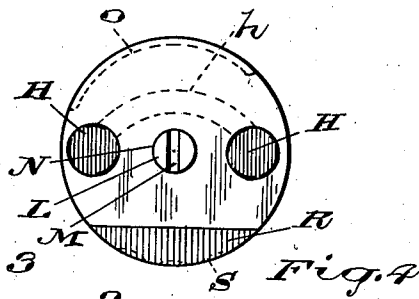


Fig. 4

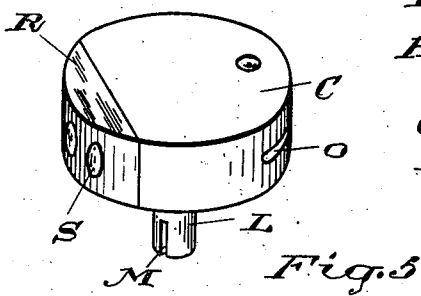


Fig. 5

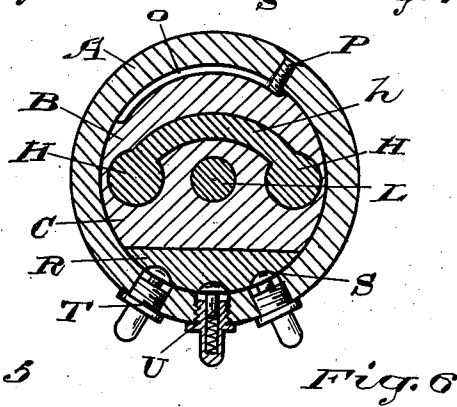


Fig. 6

Inventor
Elmer H. Zimmer
by Smith & Cameron
his Attorneys

UNITED STATES PATENT OFFICE

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SAFETY SWITCH

Elmer H. Zimmer, Toronto, Ontario, Canada

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1 Claim. (Cl. 200—42)

This invention relates to a switch adapted to control the battery ammeter, coil, gas and all other parts of the electrical equipment of a motor vehicle.

The device is adapted to be mounted on the instrument board or secured to any suitable part of the vehicle, within convenient reach of the operator, and actuated by a detachable key, so that all electrically connected parts of the motor and other gadgets may at the same instant be cut off or on, through the ground connection.

The device is specially adapted as a safety system for motor vehicles, to prevent the motor or other parts of the equipment from being electrified without the use of the special key for operating the switch.

In the drawing—

Figure 1 is an elevational view of the device.

Figure 2 is a vertical sectional view through the device.

Figure 3 is a top view into the interior of the casing with the top and parts removed.

Figure 4 is a bottom plan view of the commutator.

Figure 5 is a perspective view of the commutator, and

Figure 6 is a transverse sectional view on lines X—X, Figure 2.

Like letters of reference refer to corresponding parts throughout the various figures.

The casing A, is formed from some non-conducting material, and is preferably cylindrical in formation, having one-half hollowed to form a chamber B, for enclosing in rotary relation, a commutator C, adapted to be actuated for making and breaking circuit with metal contact plugs D and D, embedded in the opposite or solid portion of the casing and connected up with the anode terminal E connected up with the source of electrification, the battery, which is not shown on the drawing, and with the cathode terminal F, connected up with the ground.

Embedded in the commutator C, which is composed of some non-conducting material, is a metal connector comprising two contact plugs H—H, integrally joined together by a yoke h.

The plug portions of the commutator project slightly beyond the lower face of the commutator body to adapt them to engage in contact with the contact plugs D—D, when the commutator is adjusted to make circuit.

The chamber B, is closed by a removable end plate G retained in place by fastening screws g.

J, designates a pressure plate fitted adjacent with the top face of the commutator, and K,

designates a coil tension spring interposed between the end plate G and the pressure plate J, to maintain sufficient tension and contact between the plugs H and H, and the contact plugs D—D when the commutator is adjusted to make circuit.

Extending from the underside of the commutator C, is a shaft L, the outer end being formed with an indent M of a definite formation, to adapt it to be actuated by a key of a corresponding character.

The shaft L, projects downwardly to substantially midway into a bore or orifice N, formed centrally through the solid portion of the casing A, into which the key may be inserted to engage with the shaft L, for the purpose of rotating the commutator in either direction as for making and breaking the circuit.

Formed in the outer periphery of the commutator is segmental channel O, in which the pin P, fitted through the wall of the casing A, projects, as a stop to control the rotary adjustment of the commutator when being actuated to bring the plugs H and H into and out of contact with the plugs D and D, in the base of the casing to make and break the circuit.

Fitted in the periphery of the commutator C, is a contact plate R, having formed therein a series of seats S, positioned at regular intervals, to correspond with a series of terminals T, connecting with the respective coil, ammeter, gas gauge or other gadgets, as the case may be.

The terminals T, are screw connected through the wall of the casing in corresponding and relative positions to the seats S, and projecting from the inner ends of the terminals are spring actuating plunger contacts U, adapted to engage and disengage with the seats S, in the contact plate R, and make and break circuit connections with the gadgets simultaneously with the making and breaking circuit with the ground connection, while there is no direct circuit connection between the main source of electrification of the commutator and the anode connection, and the contact plate R.

By the rotating of the commutator by a key suitable for the purpose in either direction, the circuit connection is either made or broken to disconnect all functional gadgets from the source of electrification simultaneously, thereby preventing any part of the system from functioning separately.

Various modifications may be made in the formation of the parts and the arrangement of

assembling without deviating from the nature of my invention.

What I claim as new is:

In a safety switch for motor vehicles and the like, comprising a casing having a chamber formed in one end thereof, a removable cover fitted over said chamber, a commutator fitted in rotatable relation in said chamber, a shaft extending from said commutator into a bore communicating into said chamber, contact members embedded in the said commutator, and contact members embedded in the base of said casing, a contact plate fitted in the periphery of said

commutator, and a series of spring actuated terminal pins fitted in the periphery of said casing, a tension spring interposed between the said cover of said chamber and said commutator for maintaining an adjustable contact of the contact members of said commutator and contact members embedded in said casing, the said commutator adapted to be partially rotated for making and breaking contact with the respective contact members and means formed in said casing and commutator for limiting the rotation of said commutator therein.

ELMER H. ZIMMER.