

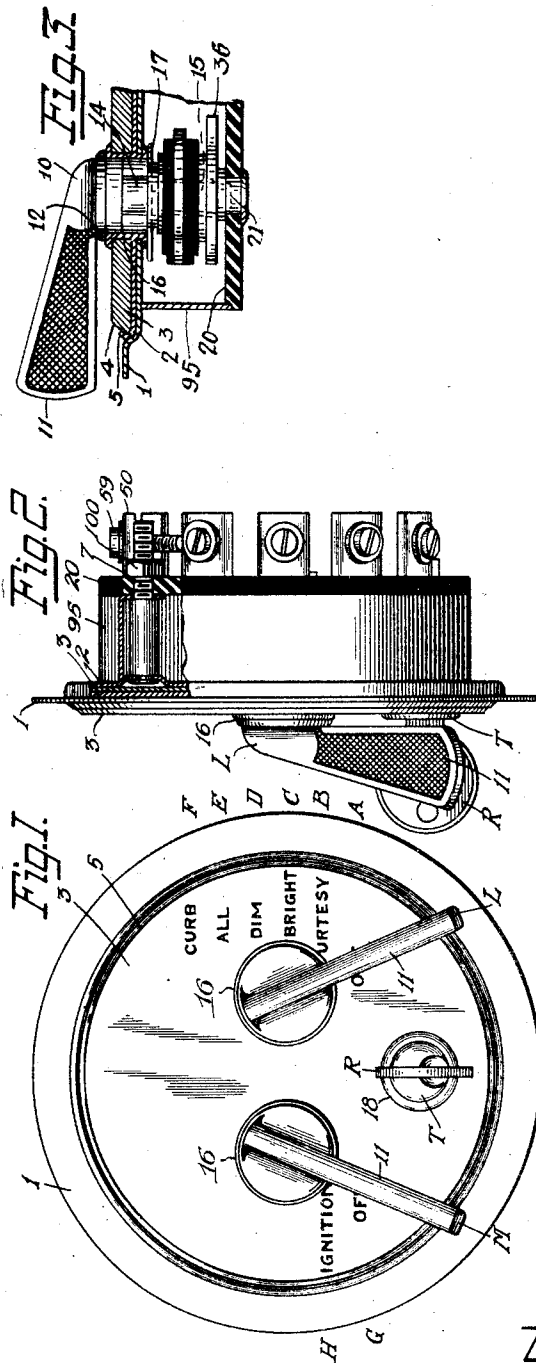
Aug. 21, 1928.

1,681,241

W. KAISLING

COMBINATION SWITCH

Original Filed Dec. 15, 1922



Inventor:
William Kaisting
By C. B. Camp,
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM KAISLING, OF CHICAGO, ILLINOIS, ASSIGNOR TO KELLOGG SWITCHBOARD AND SUPPLY COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

COMBINATION SWITCH.

Original application filed December 15, 1922, Serial No. 607,045. Divided and this application filed March 31, 1924. Serial No. 703,011.

This is a divisional application of my co-pending application Serial Number 607,045, filed December 15, 1922.

My invention relates to electrical switches in general, and has to do more particularly with switches for controlling a plurality of circuits. The present embodiment of my invention is constructed more particularly for use in connection with ignition or lighting circuits for automobiles or the like. An object of my invention is the provision of a switch of the class described, in which a feature of my invention is the manner in which the designating plate of my switch is held in place.

Another feature of my invention is the provision of actuating members for engaging rotor circuit controlling members and their supporting means for effecting rotary movement of said rotor members, and also the manner in which said actuating members are rotatably supported and maintained in the front part of my switch containing the designating plate.

The above features, as well as other desirable features and advantages not enumerated above, will be pointed out in the ensuing specification and appended claims.

For a better understanding of my invention, reference may be had to the accompanying drawings, in which like reference characters in the different views denote like parts, and in which

Fig. 1 is a front view of the switch of my invention;

Fig. 2 is a right side view of Fig. 1, having a portion of the switch cut away to show the manner in which the front and back parts of the switch are secured together;

Fig. 3 is a view showing the front part and back part of my switch in section, and also showing the rotor element and an actuating member for actuating said rotor element secured in said switch;

Referring now in general to my invention, it comprises a lighting switch unit L and an ignition switch unit M. The light switch unit L has a normal or off-position A and five operative positions B, C, D, E, and F, which switch unit L, when in these different positions will close circuits to effect the burning of certain lamps of the automobile.

The ignition switch unit M has a normal or "off" position G, in which position the

ignition apparatus is rendered inoperative, and an operative position H. I also provide locking mechanism which consists preferably of a pin-tumbler cylinder type lock T, which controls a pivotally supported locking plate, which is adapted to lock the lighting and ignition switch units L and M against rotation.

Referring now more in detail to my invention, I will first describe the manner in which the designating plate 2 and the switch units L and M are secured to the front part of my switch.

A cup-shaped mounting plate 1 is provided, in the cup-shaped portion of which is adapted to fit an escutcheon or designating plate 2 of suitable material, bearing the names of the different positions to which the switch units L and M may be operated. A transparent member 3 such as glass or the like is provided, and is of a size to fit into the cup-shaped portion of the mounting plate 1 and to engage the escutcheon or designating plate 2, said member 3 being transparent for the purpose of permitting the reading of the names borne by the escutcheon plate 2. The transparent member 3 has its peripheral edge 4 sloping towards the outer part of the cup-shaped member 1 and a ring 5 is provided which is suitably shaped to encircle and engage the sloping peripheral edge 4 of the transparent member 3, said ring member 5 being adapted to fit in the cup-shaped portion of the mounting plate 1 and being secured therein by means of lugs or extensions formed integrally with the ring member 5, and which lugs or extensions extend through suitable openings in the mounting plate 1 and then have their ends turned back to prevent the ring member 5 from becoming displaced from the mounting plate 1. Thus, it is apparent that the ring member 5 which engages the transparent member 3 will be securely held in the cup-shaped portion of the mounting plate 1. A pair of screw-threaded supporting studs 7 are provided and suitably secured in depressions in the bottom of the cup-shaped portion of mounting plate 1 so as not to interfere with the escutcheon plate 2 and transparent member 3.

The switch levers of the units L and M are constructed and secured in the mounting plate 1 in the same manner so that a de-

scription of one will be sufficient. The lever of the switch unit M comprises an L-shaped member 10 whose leg 11 serves as an operating handle for moving the same, the other leg of the L-shaped member 10 is provided with a flange 12, a circular portion 13, a rectangular portion 14 and a cylindrical end portion 15, as shown in dotted lines in Fig. 3. A ferrule 16 is provided which passes through suitable aligned openings in the transparent member 3, escutcheon or designating plate 2 and the mounting plate 1, and its end which protrudes slightly beyond the face of the plate 1 is spun over to secure the transparent member 3 and plate 2 to the mounting plate 1 against displacement. The opening in ferrule 16 is of a size to receive the cylindrical portion 13 of the lever 10 and when the lever 10 is in position in the opening of the ferrule, its flanged portion 12 rests against the ferrule 16. To secure the lever 10 in position in the opening of the ferrule 16 against longitudinal movement but to permit the same to be rotated, I provide a cotter pin 17 which passes through a suitable orifice in the rectangular portion 14 of the lever 10, and whose ends span the spun-over portion of the ferrule 16.

Another ferrule 18 similar to that of cylindrical member 16 is provided and is secured in suitable aligned openings in the plate 1, escutcheon plate 2 and transparent plate 3 in the same manner as cylindrical member 16 is secured, as described above. The said cylindrical member 18 is provided and adapted to receive one end of the tumbler lock T.

The ferrules 16 and 16' associated with the switching units L and M and the ferrule 18, through which the barrel of the lock extends, form securing means for the transparent member 3 and plate 2 to the plate 1 and the ring 5 which is secured to the mounting plate 2 by means of the tongue extensions encircles and engages a portion of the diverging side of the transparent member B to prevent the escutcheon plate 2 and the transparent member 3 from moving relative to each other.

The switch as a unit may be mounted on any suitable mounting member such as the dashboard or cowl of an automobile or the like, the outer portion of the mounting plate 1 outside of the cup-shaped portion of said plate 1 being adapted to rest against the face of the dashboard or cowl, or the like, while the rest of the switch protrudes rearwardly through an opening in the dashboard or cowl.

While I have described a certain form of my invention, it is to be understood that changes and modifications will readily suggest themselves to those skilled in the art, and, therefore, I do not wish to be limited to the exact structure as shown and described,

but aim to cover all such changes and modifications as come within the scope and spirit of the appended claims.

What I claim as new and desire to secure by United States Letters Patent, is:

1. In a switch of the class described including a cup-shaped mounting plate, a designating plate, a transparent plate for fitting into said mounting plate and adapted to engage said designating plate, and cylindrical members extending through openings in said plates and having their ends distorted whereby said designating and transparent plates are secured together by said cylindrical members to said mounting plate and a ring member adapted to engage said transparent plate to maintain the said transparent and designating plates in their proper relation and tabs integral with said ring extending through orifices in said mounting plate to secure the same to said mounting plate.

2. In a switch of the class described including a mounting plate, a designating plate and a transparent plate adapted to engage the cup-shaped portion of said mounting plate, said plates provided with openings, and a member for engaging said openings having its ends turned over to secure said designating and transparent plates in said cup-shaped portion and to said mounting plate against displacement and a ring member adapted to engage said transparent plate to maintain the said transparent and designating plates in their proper relation and tabs integral with said ring extending through orifices in said mounting plate to secure the same to said mounting plate.

3. In a switch of the class described including a cup-shaped mounting plate, an escutcheon plate, bearing words on its one face, adapted to fit in the cup-shaped portion of said mounting plate, a transparent plate for engaging said escutcheon plate and to permit the reading of said words, said plates provided with openings, and members for engaging said openings and having their one end engaging said mounting plate and their other end engaging said transparent plate, whereby said escutcheon plate is clamped between said mounting plate and said transparent plate and to secure said designating and transparent plates to said mounting plate and a ring member adapted to engage said transparent plate to maintain said transparent and designating plates in their proper relation and tabs integral with said ring extending through orifices in said mounting plate to secure the same to said mounting plate.

4. In a switch of the class described including a mounting member, a designation plate and another plate adapted to be mounted on said mounting member, said member and plates having openings therein,

cylindrical members for engaging said openings and adapted to secure said mounting member and said plates together as a unit and a ring member adapted to engage said transparent plate to maintain said transparent and designating plates in their proper relation and tabs integral with said ring extending through orifices in said mounting plate to secure the same to said mounting plate. 10

Signed by me at Chicago, in the county of Cook and State of Illinois this 22 day of March, 1924.

WM. KAISLING.