

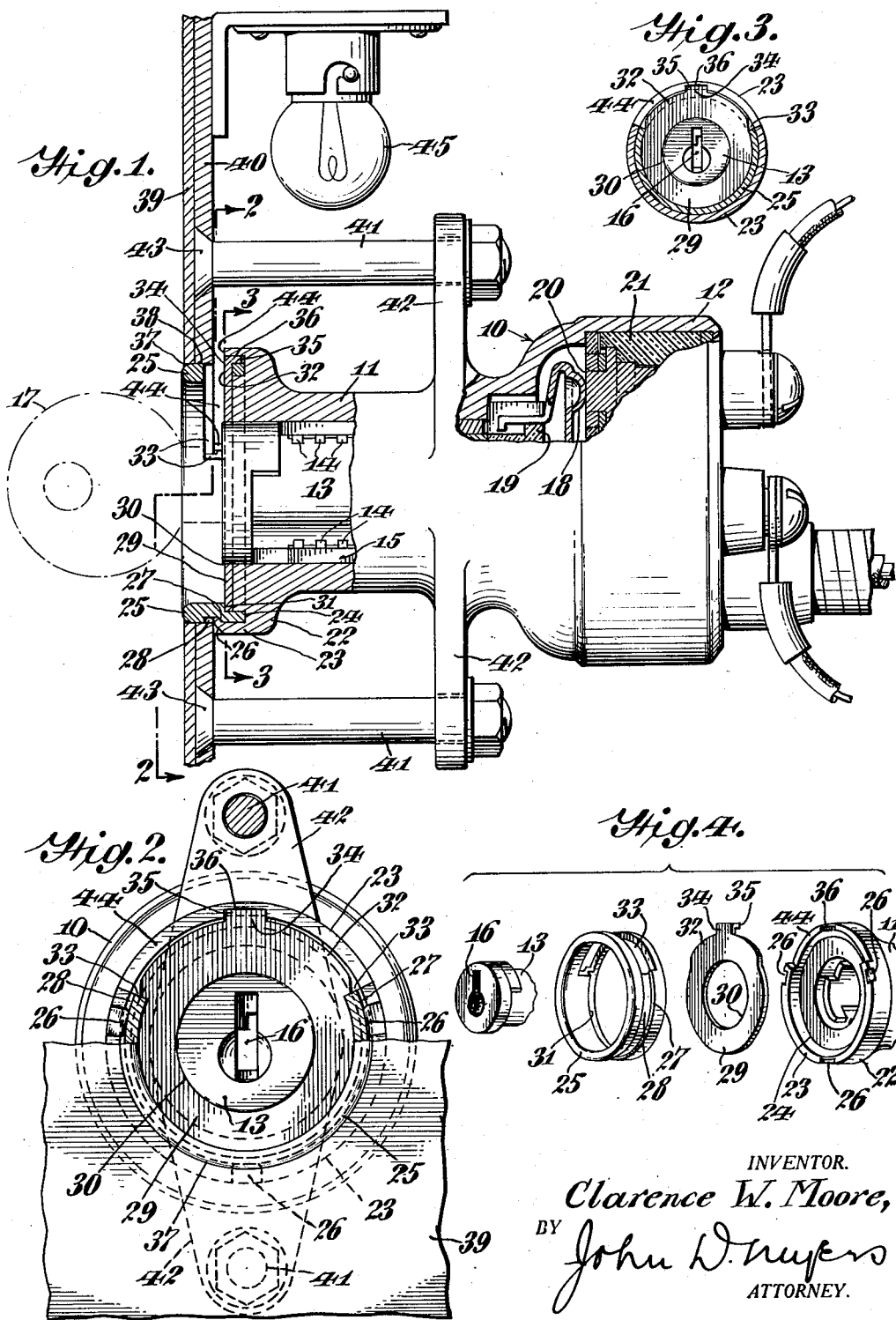
Aug. 4, 1936.

C. W. MOORE

2,049,658

HOUSING STRUCTURE

Filed May 28, 1934



INVENTOR.

Clarence W. Moore,

BY John D. Myers
ATTORNEY.

UNITED STATES PATENT OFFICE

2,049,658

HOUSING STRUCTURE

Clarence W. Moore, Roslyn, Pa., assignor to
Mitchell Specialty Company, a corporation of
Pennsylvania

Application May 28, 1934, Serial No. 727,975

5 Claims. (Cl. 70—16)

The invention relates to housing structures and involves various improvements in housings for enclosing switch actuating and locking devices of the type used for controlling the electrical circuits of automobiles. As disclosed herein, the improved housing is employed in connection with a switch actuating and locking device for controlling starter and ignition circuits, but it will be understood that such disclosure is intended for illustrative purposes only, and that the invention is not to be limited thereby.

One of the primary purposes of the invention is the provision of a housing so constructed that the exposed front end thereof may be more easily and economically finished during the manufacture thereof than the structures heretofore used. This object is accomplished by the provision of a finishing washer and ferrule on the front end of the housing in such a manner as to avoid the necessity of finishing the exposed front end of the body portion of the housing proper.

A further object of the invention is the provision of an improved housing structure whereby the exposed end of the locking device encased thereby may be indirectly illuminated by means of the usual source of light positioned in the rear of the instrument panel of an automobile. This object is accomplished by providing an arcuate notch in the front end of the body portion of the housing and alining therewith an arcuate slot in the finishing ferrule, the alined notch and slot being positioned adjacent the rear edge of an opening in the instrument panel through which the ferrule extends, and being so arranged that the front end of the lock may be illuminated by the source of light commonly employed for illuminating other devices on the panel.

A still further object of the invention is the provision of means for positioning the housing on the instrument panel. This is accomplished by securing one end of the finishing ferrule to the front end of the body portion of the housing and inserting the opposite end thereof into a suitable opening in the instrument panel, with the edge of the front end of the housing proper abutting against the rear face of the panel, and securing the housing in this position by bolts or other suitable means.

Still other objects and advantages of the improved structure will be apparent from the following description, taken with the accompanying drawing wherein:

Fig. 1 is a side elevational view, partly in section, showing my improved housing, with a

switch and lock encased therein, mounted on an instrument panel;

Fig. 2 is a transverse sectional view, partly in elevation, taken on the line 2—2 of Fig. 1;

Fig. 3 is a reduced transverse sectional view, taken on the line 3—3 of Fig. 1; and

Fig. 4 is an exploded view showing a portion of the front end of the housing proper, the finishing washer and ferrule, and a portion of the front end of the lock cylinder.

As I have disclosed the same herein my improvements are embodied in a metal housing which is generally cylindrical in shape. For reasons of economy in manufacture, the housing is preferably cast from suitable material and is provided with a front cylindrical portion within which a locking device is encased, and an enlarged cylindrical rear portion within which a circuit controlling device is encased. Although other forms of locking devices may be employed therewith, I have shown my improvements herein in connection with a rotary lock cylinder provided with transversely extending spring-actuated plungers which engage within a longitudinal groove inside the housing for locking the switch in its "off" position.

The front end of the lock cylinder is provided with the usual opening for receiving a key by means of which the plungers are disengaged from the groove when the key is inserted and by means of which the lock cylinder may be rotated. Rotation of the lock cylinder serves to actuate a rotary contactor which is supported upon a contactor base engaging with the rear end of the lock cylinder for rotary movement therewith. The rotary contactor cooperates with a plurality of stationary contact elements supported by the terminal block mounted in the enlarged cylindrical portion of the housing for controlling the various electrical circuits for which the device is designed to be used.

In securing switch lock housings of this general type to instrument panels, it has been the practice heretofore to finish the entire body of the housing, or the front end thereof, and position the front end in a suitable opening in the instrument panel. Such a practice requires the use of an expensive housing and expensive finishing operations in order that the portions of the housing exposed to view through the instrument panel may provide ample security against tampering with the parts controlled by the lock and may not be unsightly. In order to avoid the use of an expensive housing body and costly finishing operations, I provide the front end of the

cylindrical portion 11 of the housing with an enlargement 22 having a marginal flange 23 extending longitudinally beyond the end of the body portion. An annular groove 24 is formed in the front end of the portion 11, within the marginal flange 23, and the inner end of a ferrule 25 is seated within this groove and secured therein by indenting or staking the flange at spaced points 26, the indentations engaging with a shoulder 27 forming one of the walls of a circumferential depression 28 in the ferrule.

A finishing washer 29 provided with a central opening 30 to receive the front end of the lock cylinder 13 is seated upon the front end of the portion 11 of the housing and is retained in position thereon by means of an annular shoulder 31 on the inside of the ferrule 25. The washer 29 is provided with a segmental portion 32 which extends into an arcuate slot 33 in the ferrule in order to prevent rotation of one of these elements with respect to the other. A lug 34 extending outwardly from the segmental portion 32 through the arcuate slot 33 is provided with a bent outer end 35 for engagement within a notch 36 in the marginal flange 23. The engagement of the bent end 35 with the notch 36 serves to prevent rotation of the washer 29 with respect to the housing, and the engagement of the segmental portion 32 in the arcuate slot 33 serves to prevent rotation of the ferrule with respect to the washer and the housing when the parts are assembled and the ferrule is secured to the housing in the manner described above.

The ferrule 25 is adapted to extend into aligned openings 37 and 38 in the instrument panel 39 and a reinforcing sub-panel 40 secured to the rear thereof. The marginal flange 23 on the front end of the housing abuts against the edge of the opening 38 in the sub-panel and is retained in position thereon by bolts 41 engaging with a pair of oppositely arranged arms 42 on the housing and having their heads 43 countersunk in the sub-panel and preferably welded thereto.

By providing an arcuate notch or cut-away portion 44 in the flange 23 and aligning the arcuate slot 33 in the ferrule therewith, indirect illumination for the front end of the lock cylinder 13 is secured from a source of light 45 such as is usually provided for the indirect illumination of other devices mounted on the instrument panel.

It will be apparent from the above description that I have provided an improved structure for finishing the front end of a lock housing or other similar device, and that means are provided thereby for indirectly illuminating the front end of the lock cylinder. It is to be understood, however, that the disclosure herein is illustrative only,

and that various changes are contemplated in the invention so long as they come within the scope of the appended claims.

What I desire to claim as my invention is:

1. In a casing structure for a switch lock including a lock cylinder, a hollow cylindrical member enclosing the lock cylinder, a washer surrounding said lock cylinder and supported against rotation on the front end of said cylindrical member, a ferrule secured to the front end of said cylindrical member and projecting forwardly thereof, and means on said ferrule for retaining said washer in position.

2. In a lock housing, a cylindrical portion having an opening therein for encasing a movable lock element, a marginal flange projecting longitudinally from one end thereof, a washer seated within said flange and having an opening therein aligning with the opening in said cylindrical portion, a ferrule having means thereon for retaining said washer in position, and interengaging means on said ferrule and said flange for securing said ferrule to said cylindrical portion.

3. In a switch lock structure, a lock cylinder housing having an annular groove in the front end thereof and a marginal flange extending forwardly of the body portion thereof, a washer supported on the front end of said housing within said flange and having a central opening therein to receive the lock cylinder, a ferrule having its inner end secured within said groove and projecting forwardly of said flange, and a shoulder on said ferrule for retaining said washer in position.

4. In a lock housing, a cylindrical portion having an opening therethrough for receiving a movable lock element, a marginal flange extending longitudinally beyond one end of said cylindrical portion and having a circumferential notch therein, and a ferrule secured to said end of the cylindrical portion and extending longitudinally beyond said flange and having a circumferential slot aligning with the notch in said flange.

5. In a lock housing, a cylindrical portion having an opening therethrough for receiving a movable lock element, an annular groove in one end thereof, a ferrule having one end thereof secured in said groove and a circumferential slot therein, a circumferential shoulder on the inside of said ferrule, a washer secured between the end of said cylindrical portion and said shoulder and having an opening therein in alignment with the opening through said cylindrical portion, and a marginal portion on said washer extending into said slot.

CLARENCE W. MOORE.