

Dec. 5, 1933.

W. R. SCHLAGE

1,938,112

ESCUTCHEON PLATE LOCK AND ADJUSTMENT INDICATOR

Filed July 21, 1930

2 Sheets-Sheet 1

Fig. 1.

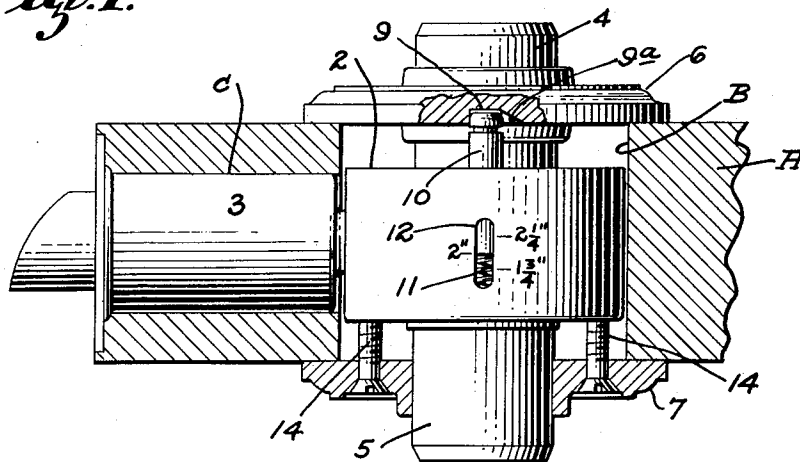


Fig. 2

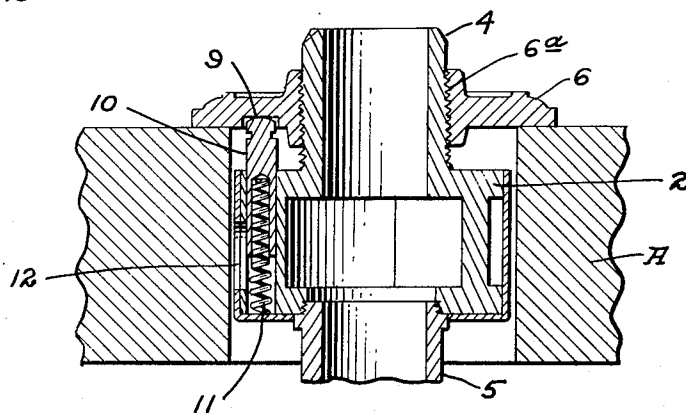
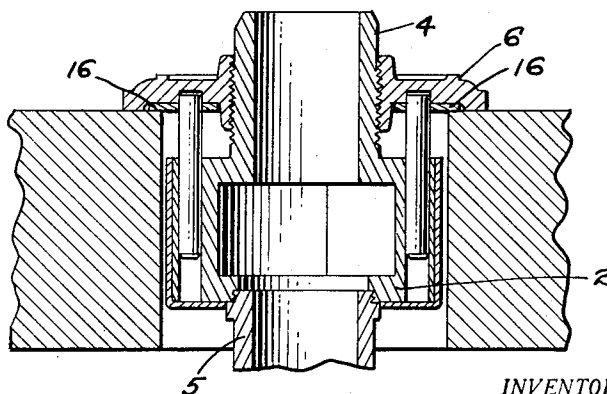


Fig. 3.



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Fig. 4.

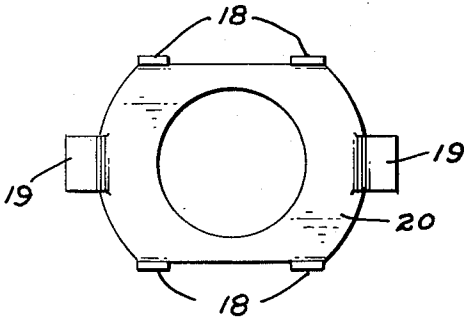


Fig. 5.

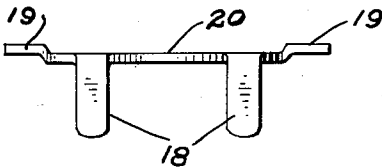


Fig. 6.

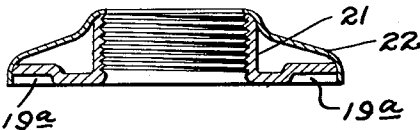
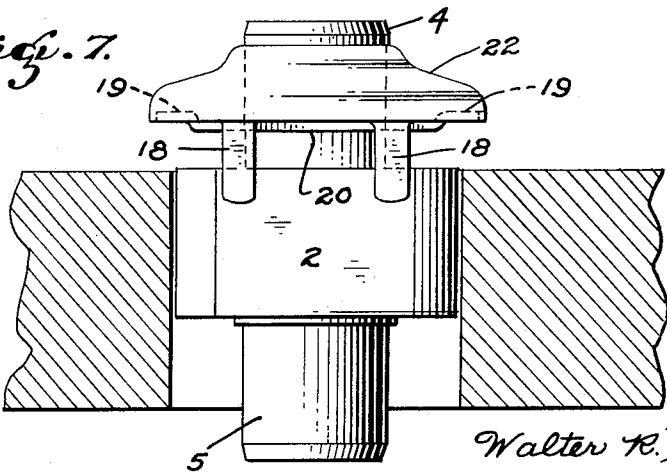


Fig. 7.



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ESCUTCHEON PLATE LOCK AND ADJUSTMENT INDICATOR

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Application July 21, 1930. Serial No. 469,359

15 Claims. (Cl. 70—16)

This invention relates to escutcheon plates for door locks and the like, and especially to adjustable escutcheon plates with means for locking them in adjusted position and for indicating their position.

Lock hardware and especially door locks and latches as applied to doors are practically all provided with inner and outer escutcheon plates which function, first, as a means to secure the lock mechanism in a door; and secondly, as an ornamentation. These plates are usually secured to a door by means of screws which extend through the plates and into the wood of the door or into the lock housing. It is obvious that this method of securing the plates is undesirable when the outer plates are considered as the mere removal of the screws, for instance by a burglar, makes opening of the door from the outside a comparatively simple matter. Again where locks of this character are installed in metal doors ordinary screw fastening means are out of the question.

In view of the above, different methods of securing the outer escutcheon plate have been developed, one method being disclosed in my former Patent Number 1,674,841 filed August 20, 1923, in which the outer escutcheon plate is permanently attached or secured to the lock housing while the lock housing in turn is secured in the door by means of an inner clamping plate. A second method is disclosed in my co-pending application, Serial Number 239,380 filed December 12, 1927. The outer escutcheon plate employed in that instance is adjustable. A threaded connection is formed between the escutcheon plate and a projecting hub on the lock housing. The inner face of the plate is provided with teeth and these teeth become embedded in the outer surface of the door when the lock is installed in the door. This method is fairly satisfactory where installations are made in wooden doors but they are out of the question when metal doors or metal face doors are considered.

The present application is particularly concerned with adjustable escutcheon plates, the object of the invention being to provide an adjustable escutcheon plate for the outer face of a door which may be applied to either wooden or metal doors; to provide means for locking the outer escutcheon plate with relation to the lock housing; and further, to provide an adjustment indicator.

The invention is shown by way of illustration in the accompanying drawings, in which—

Fig. 1 is a sectional view of a door showing the manner of securing the outer escutcheon plate,

Fig. 2 is a similar view showing the lock housing and the locking bar together with the outer escutcheon plate in section,

Fig. 3 is similar to Fig. 2, but showing a modified form of escutcheon plate lock,

Fig. 4 is a plan view of a modified form of a locking plate,

Fig. 5 is a side elevation thereof,

Fig. 6 shows a modified form of escutcheon plate, and

Fig. 7 is a partial sectional view showing the modified form of escutcheon plate secured with relation to the door lock.

Referring to the drawings in detail and particularly Figs. 1 and 2, A indicates a door in which is drilled or bored two holes indicated at B and C. The hole B is bored through the face of the door and is adapted to receive a lock housing generally indicated at 2, while the hole C is drilled through the edge of the door at right angles to the hole B; the hole C being provided for the reception of a bolt or latch housing such as indicated at 3. The housings 2 and 3 are in actual practice interlocked but as this feature forms no part of the present invention specific illustration thereof has not been resorted to.

The housing 2 is, in this instance, provided with two hub-like extensions one at each end thereof as indicated at 4 and 5, these hubs being provided for the reception of spindles, and knobs whereby a latch or bolt actuating mechanism contained within the housing 2 is operated. The hubs 4 and 5 also serve as supports for escutcheon plates generally indicated at 6 and 7, the plate 7 being slidably mounted on the hub 5 while a threaded connection 6a is formed between the plate 6 and the hub 4.

The plate 7 will hereinafter be referred to as the inner escutcheon plate and the plate 6 as the outer escutcheon plate, and as both are adjustable it is possible to center the housing 2 with relation to the opposite faces of the door and with relation to the latch housing 3, as this should be centrally positioned between the two faces of the door.

It must be realized that locks of this character are installed in doors of varying thickness and it is for this reason that adjustable housings and escutcheon plates are desirable. Where adjustable plates of this character are employed, it is essential that the outer plate, at least, be

provided with means for rigidly securing it in the adjusted position, and further, that such means be so located that it cannot be tampered with, or in other words reached from the exterior surface of the door. This is accomplished as follows:

Formed on the inner face of the outer escutcheon plate 6 are one or more recesses such as indicated at 9 and adapted to be projected into one or another of said recesses is a locking or retaining pin 10. This pin is carried by the housing 2 as shown in Figs. 1 and 2, and is normally projected by means of a spring 11. The recesses 9 are beveled off at one side as indicated at 9a, hence permitting the escutcheon plate to be rotated freely in one direction on the threaded connection 6a when adjusting the same, but rotation of the plate in the opposite direction will of course be prevented by the pin as it will engage the plate and secure it against rotation in the manner of a pawl on a ratchet wheel. Hence preventing removal or tampering with plate 6 from a point exterior of the door.

Doors usually come in standard sizes and thickness, for instance a 2¼ inch door, a 2 inch door, a 1¾ inch door, etc., these three being the standard sizes most generally used. In the present instance means are provided for setting the plate 6 in the proper position before applying it to the door. This is accomplished by slotting the housing 2 as indicated at 12 and providing marks on opposite sides thereof such as shown in Fig. 1. If the end of the pin 10 registers with the 1¾ inch mark then plate 6 is adjusted so that the housing 2 will be in a central position when placed in a 1¾ inch door. Similarly, if the end of the pin registers with the 2 inch mark then the housing will assume a central position with relation to a 2 inch door and so on. Hence it is possible to properly adjust the plate 6 before the lock is installed.

In actual operation, if a lock of this character is to be installed, the door is first measured for thickness. If it is found to be 2 inches thick, plate 6 is screwed inwardly until the end of the pin registers with the 2 inch mark, the housing is then inserted through the outer face of the door until the inner face of the plate 6 engages the adjacent face of the door. The second clamping plate is then slipped over the hub 5 and it is there secured by a pair of screws 14 which have threaded engagement with the housing 2 and as these screws are tightened both escutcheon plates are drawn snugly and tightly against the opposite faces of the door. The bolt or latch housing may then be inserted, or in some instances it is inserted prior to the insertion of the housing 2, but whenever inserted proper alignment or centralization between the housings 2 and 3 is insured.

In Figs. 1 and 2, a spring actuated pin 10 is relied upon to form an interlock between the housing and the outer escutcheon plate. In Fig. 3, two pins are employed. These are secured in a hardened steel plate 16 which is interposed between the face of the door and the inner face of the outer escutcheon plate. The pins project into the housing 2 and are slidable therein and they also project into recesses formed in the inner face of the escutcheon plate and when so positioned form an interlock between the housing and the escutcheon plate which prevents rotation thereof and thereby secures it in adjusted position. Furthermore, by employing a hardened steel plate, danger of opening the lock,

for instance by drilling through the escutcheon plate, is reduced to a minimum.

In Figs. 4 and 5, a modified form of a plate 20 similar to plate 16 is shown. This may be constructed of hardened steel or soft metal as desired. It is provided with two or more inwardly turned legs 18 which are adapted to engage the exterior surfaces of the housing 2, this being feasible in some instances particularly where the housing 2 is irregular in shape. The plate shown in Figs. 4 and 5 is also provided with two lugs such as shown at 19 and these are raised with relation to the plate 20 as shown in Fig. 5 so as to enter recesses or depressions formed in the inner face of the escutcheon plate, such depressions being clearly shown at 19a in Figs. 6 and 7, Fig. 7 showing the application of the plate shown in Figs. 4 and 5. A cheaper type of escutcheon plate as shown in Fig. 6, that is, a built up type consisting of an inner shell 21 and an exterior or finishing shell 22, the recess 19a being formed in the inner face of the inner shell by die operation or otherwise.

In conclusion it may be stated that it is evident that an interlock is formed between the outer escutcheon plate and the housing 2 regardless of whether pins or plates are employed. Where the pins are employed, as shown in Figs. 1, 2 and 3, the inner ends enter the lock housing while the outer ends enter recesses formed in the inner face of the escutcheon plate, thus interlocking the two members, and where plates are employed as shown in Figs. 4 to 7, inclusive, fingers 18 straddle the lock housing while lugs 19 enter recesses in the inner face of the escutcheon plate thereby forming an interlock between the housing and the plate. In either instance an interlock is formed which is inaccessible from the exterior surface of the door and as such cannot be tampered with.

While certain features of the present invention are more or less specifically described, I wish it understood that various changes may be resorted to within the scope of the appended claims. Similarly, that the materials and finishes of the several parts employed may be such as the manufacturer may decide, or varying conditions or uses may demand.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. In a structure of the character described, a housing, a hub member on one end thereof, an escutcheon plate carried by the hub, a threaded connection between the escutcheon plate and the hub whereby longitudinal adjustment is secured between the escutcheon plate and the housing when the escutcheon plate is rotated, and means carried by the housing and engageable with the escutcheon plate and forming an interlock therewith to retain the escutcheon plate against rotation so as to secure it in adjusted position, said means also functioning as an adjustment indicator.

2. In a structure of the character described, a housing, a hub member on one end thereof, an escutcheon plate carried by the hub, a threaded connection between the escutcheon plate and the hub whereby longitudinal adjustment is secured between the escutcheon plate and the housing when the escutcheon plate is rotated, means for retaining the escutcheon plate against rotation so as to secure it in adjusted position, and means for indicating the position of the escutcheon plate when adjusted.

3. In a structure of the character described,

a housing, a hub member on one end thereof, an escutcheon plate carried by the hub, a threaded connection between the escutcheon plate and the hub whereby longitudinal adjustment is secured between the escutcheon plate and the housing when the escutcheon plate is rotated, a pin carried by the housing and engageable with the escutcheon plate to form an interlock therewith to secure it in adjusted position, said pin being movable longitudinally with relation to the housing, and means for indicating the position of the pin when interlocked with the escutcheon plate so as to indicate the adjusted position of the escutcheon plate.

4. In a structure of the character described, a housing, an escutcheon plate adjustably mounted on an extension of the housing, means for locking the escutcheon plate with relation to the housing, and means for indicating the position of the escutcheon plate relative to the housing.

5. In a structure of the character described, a housing, a hub member on one end thereof, an escutcheon plate carried by the hub and adjustable longitudinally thereon, means for securing the escutcheon plate with relation to the housing when adjusted, and means for indicating the position of the escutcheon plate relative to the housing.

6. In a structure of the character described, a housing, a hub member on one end thereof, an escutcheon plate carried by the hub and adjustable longitudinally thereon, means for securing the escutcheon plate with relation to the housing when adjusted, and an adjustment indicator on the housing to determine the position of the escutcheon plate relative to the housing.

7. In a structure of the character described, a housing, an escutcheon plate carried by the housing, a threaded connection between the housing and the escutcheon plate whereby longitudinal adjustment is secured between the escutcheon plate and the housing, and resilient means engageable with the escutcheon plate and securing it against rotation in one direction.

8. In a structure of the character described, a housing, an escutcheon plate carried by the housing, a threaded connection between the housing and the escutcheon plate whereby longitudinal adjustment is secured between the escutcheon plate and the housing, a plate insertable between the escutcheon plate and the housing, means on the plate interlocking with the housing, and other means carried by the plate and interlocking with the escutcheon plate to secure the escutcheon plate against rotation.

9. In a structure of the character described, a housing, an escutcheon plate carried by the housing, a threaded connection between the housing and the escutcheon plate whereby longitudinal adjustment is secured between the escutcheon plate and the housing, a plate insertable between the escutcheon plate and the housing, lugs on one side of the plate interlocking with the housing, and lugs on the other side of the plate interlocking with the escutcheon plate and securing it against rotation.

10. In a structure of the character described a housing, an escutcheon plate disposed at one end thereof and adjustable to and away from the housing, and yieldable means engageable with the housing and the escutcheon plate and forming an interlock between the same.

11. In a structure of the character described a housing, an escutcheon plate disposed at one end thereof, and adjustable to and away from the housing, and other means adjustable to and away from the housing and forming an interlock between the escutcheon plate and the housing.

12. In a structure of the character described, a housing, an escutcheon plate disposed at one end thereof and adjustable to and away from the housing, a plate interposed between the escutcheon plate and the housing and adjustable to and away therefrom, and means on said plate interlocking said plate with the escutcheon plate and the housing.

13. In a structure of the character described a housing, an escutcheon plate rotatably mounted on an extension of the housing, and adjustable to and away from the housing, and means intermediate the escutcheon plate and the housing for securing the escutcheon plate against rotation.

14. In a structure of the character described a housing, an escutcheon plate rotatably mounted on an extension of the housing and adjustable to and away from the housing, and means intermediate the escutcheon plate and the housing for securing the escutcheon plate against rotation, said means being releasable from the other end of the housing.

15. In a structure of the character described a housing, an escutcheon plate rotatably mounted on the bearing extension of the housing, and releasable means intermediate the escutcheon plate and the housing for securing the escutcheon plate against rotation, said releasable means being non-releasable when assembled in a door.

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