July 1, 1947. W. R. SCHLAGE 2,423,206

ESCUTCHEON PLATE FASTENER

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Fig. 1.

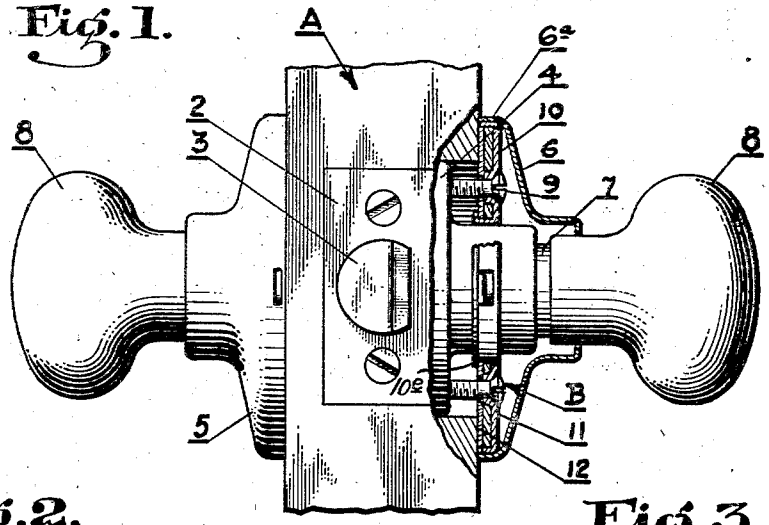


Fig. 2.

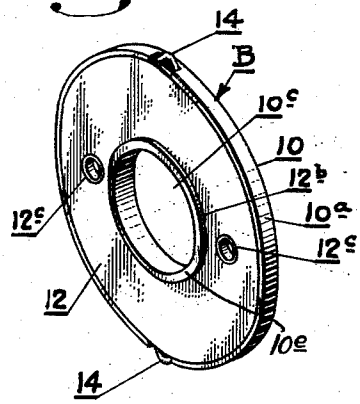


Fig. 3

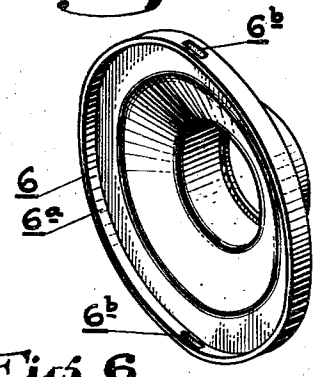


Fig. 6.

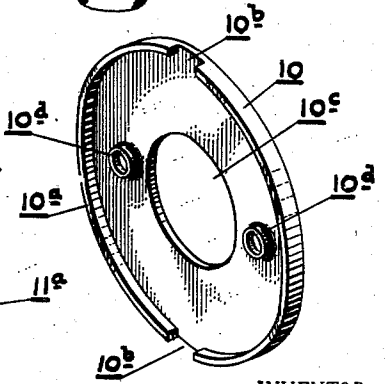


Fig. 4

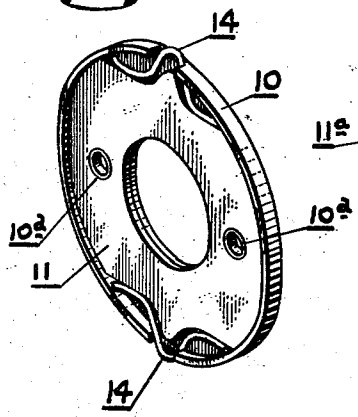
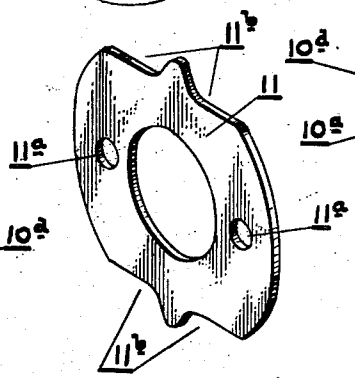


Fig. 5.



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Fig. 7.

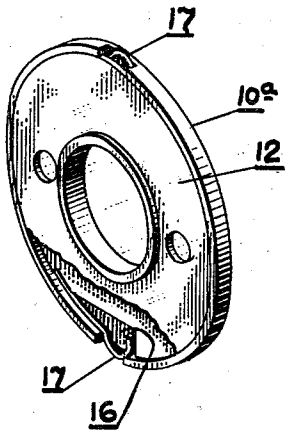


Fig. 9.

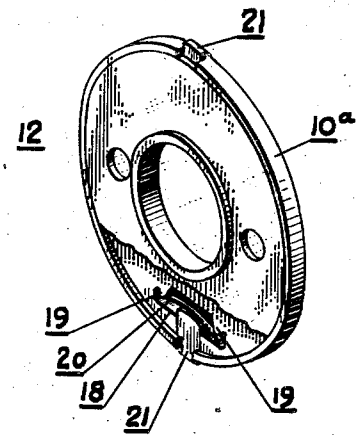


Fig. 8.

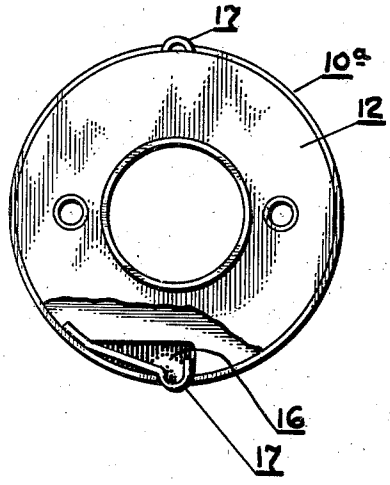
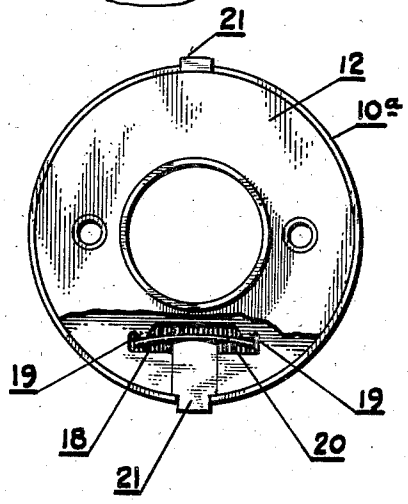


Fig. 10.



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UNITED STATES PATENT OFFICE

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ESCUTCHEON PLATE FASTENER

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Application July 5, 1943, Serial No. 493,502

2 Claims. (Cl. 292—357)

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This invention relates to a modified or improved form of escutcheon plate fastener, the improvement being on my former patent, No. 1,653,513, issued December 20, 1927, and entitled "Escutcheon plate fastener."

The object of the present invention is generally to improve and simplify the construction and operation of fasteners of the character described; to provide a mechanism which permits an escutcheon plate to be readily and quickly attached to a door lock and rigidly secured when applied; to provide a mechanism which also permits easy removal of the escutcheon plate for inspection, repair of a door lock, etc.; to provide a mechanism which eliminates the use of exterior screws and like fastening means; and further and more specifically stated, to provide one or more resilient springs or latches which engage the peripheral edge of the escutcheon plate to secure it in place.

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

Fig. 1 is an edge view of a door showing a lock installed therein, said view being partially in section to show the application of the invention;

Fig. 2 is a perspective view of a laminated clamping plate;

Fig. 3 is a perspective view of one of the escutcheon plates;

Fig. 4 is a perspective view of the clamping plate shown in Fig. 2, but showing the inner plate removed;

Fig. 5 is a perspective view of an intermediate plate carried by the clamping plate;

Fig. 6 is a perspective view of the outer plate of the clamping plate;

Fig. 7 is a perspective view partly broken away showing a modified form of laminated clamping plate;

Fig. 8 is a side elevation of Fig. 7;

Fig. 9 is a perspective view showing another modified form of laminated clamping plate; and

Fig. 10 is a side elevation of Fig. 9.

Referring to the drawings in detail, and particularly Figs. 1 to 6, inclusive, A indicates an ordinary door, 2 a latch plate, 3 the latch bolt, by which the door is locked or unlocked, 4 the lock housing, 5 and 6 the exterior escutcheon plates enclosing the lock housing, 7 the spindle of the lock, and 8 the knobs which are applied to the spindle. The escutcheon plate 5 is in this instance permanently secured to the lock housing 4; hence, when the housing 4 is inserted in the door, a clamping plate, generally indicated at B and forming a part of the housing, must be

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applied to the inner face of the door, and screws 9 passing through the clamping plate and having threaded engagement with the housing must also be employed in order to secure the lock housing in the door and to pull the escutcheon plate 5 snugly up against the outer face of the door.

The clamping plate used in the present instance is laminated in structure to provide rigidity and strength, and to form a housing or holder for one or more resilient latches or fasteners hereinafter to be described.

The clamping plate is covered or enclosed by the escutcheon plate 6, and the fasteners just referred to serve the function of securing the escutcheon plate 6 when applied and are at the same time constructed to permit ready removal of the escutcheon plate if the lock is to be inspected, repaired, or the like.

The clamping plate and the escutcheon plate to be secured thereto are best shown in Figs. 2 to 6, inclusive. The clamping plate is laminated in structure and consists of an outer plate 10, an intermediate plate 11, and an inner plate 12. The outer plate 10 is provided with an annular flange 10*a* within which the plates 11 and 12 nest. The flange is cut away as at 10*b* to form a pair of opposed openings through which fasteners or latches are projected, as will hereinafter be described. A central opening 10*c* is formed in the plate 10 to permit it to slip over the spindle of the lock when applied thereto, and a pair of tubular rivets 10*d* are formed in the face of the plate 10, and these, or a hub such as shown at 10*e* in Figs. 1 and 2, serve to unite and secure the several laminations forming the clamping plate.

The intermediate plate 11 is circular to fit within the flange 10*a* of plate 10. It is perforated as at 11*a* to permit the tubular rivets 10*d* to pass therethrough, and it is cut away as at 11*b* to form a pair of saddles which support a pair of springs 14, said springs being substantially U-shaped at their center portion to permit the rounded ends thereof to project through the openings 10*b* formed in the flange of plate 10.

The inner plate 12 is circular to fit within the flange 10*a* of the outer plate. tI has a central opening 12*b* and it is perforated as at 12*c* to receive the tubular rivets 10*d* see (Fig. 6) and to permit said rivets to be flanged or riveted over as shown in Figs. 8 and 10 when the three plates are assembled. The inner and outer plates retain or form a housing for the springs 14, while the intermediate plate forms a stiffener for the inner and outer plates and a saddle for the support of the springs.

The escutcheon plate 6, which is applied to cover the laminated clamping plate, is provided with an annular flange 6a which telescopes over the flange 10a of the plate 10. Two openings 6b are formed in the flange 6a, and these openings receive the rounded ends of the springs or fasteners 14, thereby releasably securing the escutcheon plate when applied.

In actual practice, when the lock is inserted in a door as shown in Fig. 1, it is secured by applying the clamping plate B to the inner face of a door and then inserting and tightening the screws 9. Thereafter the escutcheon plate 6 is slipped over the spindle and flange 6a will thus telescope over the clamping plate. It being understood that the fasteners, or in other words the rounded ends of the spring 14, are first depressed to permit application of the escutcheon plate; then, by rotating the plate 6 until the opening 6a registers with the springs, these will automatically project into said openings and thereby secure the escutcheon plate. To remove the escutcheon plate, it is only necessary to grasp and slightly rotate the same as such rotation will cause depression of the rounded ends of the springs, and thereby release the plate and permit its removal. Thus the plate is readily applied and is just as readily removed when necessity demands.

In Figs. 7 and 8, a slight modification of the laminated clamping plate is shown. The only difference is in the shape of the cut away portion 16 of the intermediate plate and the shape of the spring or fastener indicated at 17. In Figs. 9 and 10 another modification is shown. In this instance the intermediate plate is cut away to form a pocket 18 and two lugs 19 to form a support for a flat spring 20. This spring, in turn, actuates a depressible latch 21 which is adapted to enter the opening formed in the annular flange of the escutcheon plate.

In the modifications shown in Figs. 7 and 8, it should be understood that there are a pair of fasteners disposed opposite to each other, and the same is true of the latches 21, shown in Figs. 9 and 10, and while this and other features of the invention are more or less specifically illustrated, I wish it understood that various changes in form and proportion may be resorted to within the scope of the appended claims; similarly that the materials and finish of the several parts employed may be such as the experience and judgment of the manufacturer may dictate, or varying uses may demand.

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

1. In a door lock of the character described, a clamping plate consisting of an outer, an intermediate and an inner plate, means securing said plates together as a unit, an escutcheon plate forming a cover for the clamping plate, an annular flange on the escutcheon plate telescoping over and covering the peripheral edge of the clamping plate, and spring actuated means carried by the intermediate plate of the clamping plate projectable into retaining means formed in the annular flange of the escutcheon plate to retain it against removal.

2. In a door lock of the character described, a clamping plate consisting of an outer, an intermediate and an inner plate, means securing said plates together as a unit, an escutcheon plate forming a cover for the clamping plate, an annular flange on the escutcheon plate telescoping over and covering the peripheral edge of the clamping plate, a pair of opposed pockets formed in the intermediate plate of the clamping plate, a spring in each pocket and retained therein by the outer and inner plates of the clamping plate, and a rounded portion on each spring projectable from the peripheral edge of the clamping plate into engagement with the annular flange on the escutcheon plate to secure it against removal from the clamping plate.

WALTER R. SCHLAGE.

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German 624,309	Burri	Jan. 17, 1936