March 23, 1943. H. B. KEATS 2,314,646

ESCUTCHEON PLATE FOR DOOR LATCHES

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FIG. 1

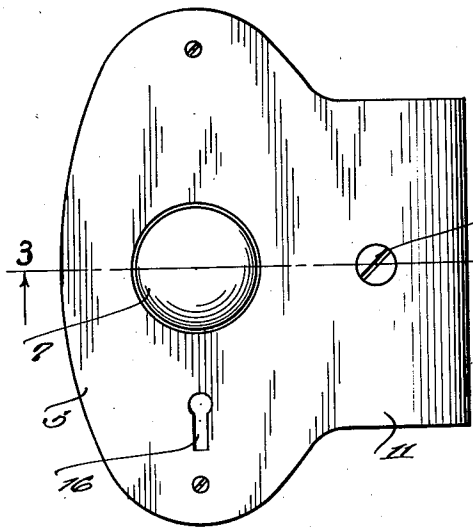


FIG. 2

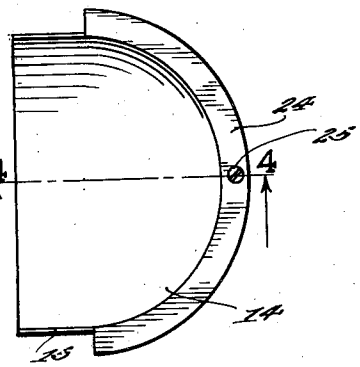


FIG. 3

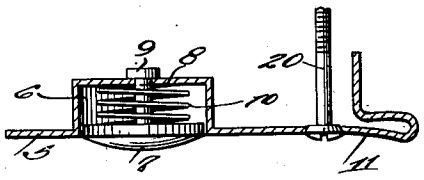


FIG. 4



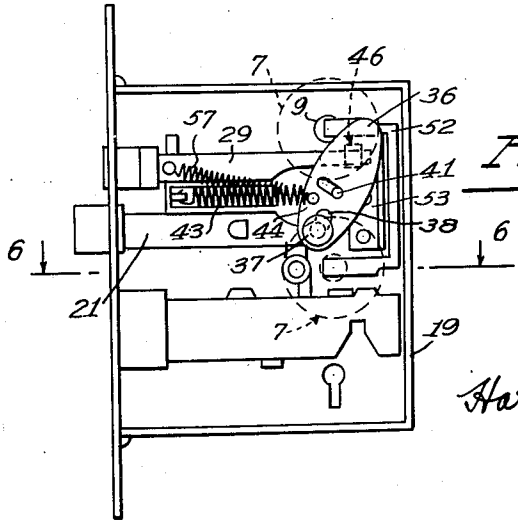


FIG. 8

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FIG. 5

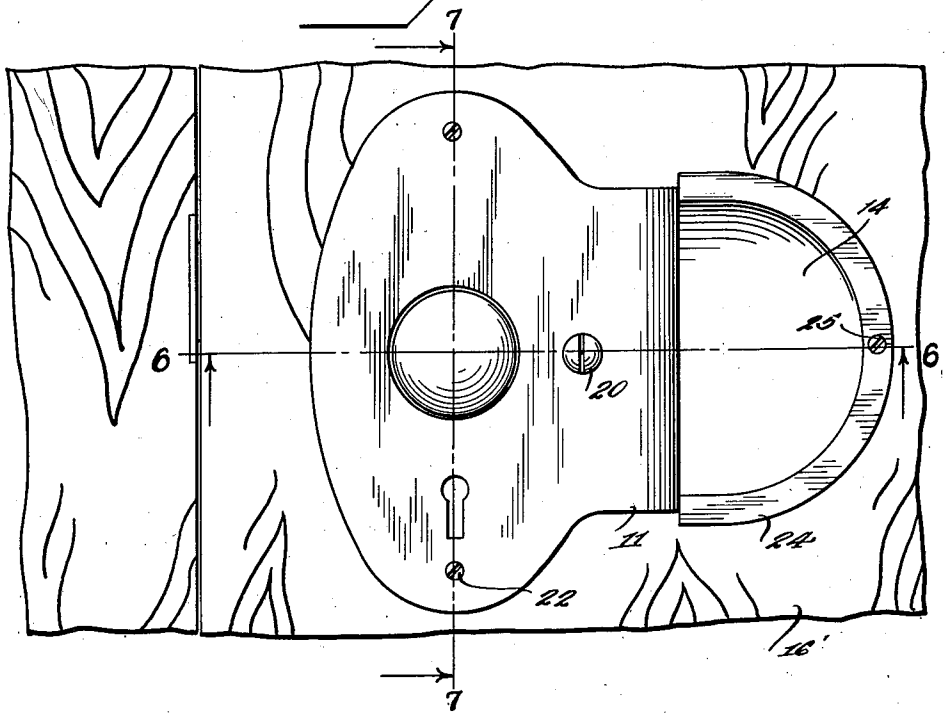


FIG. 6

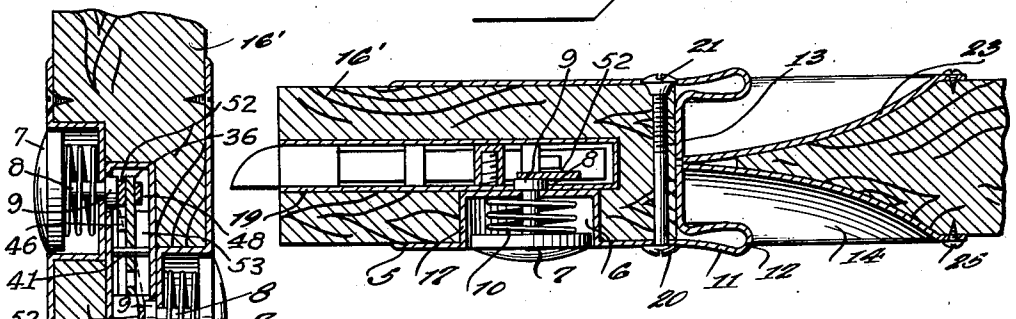


FIG. 7

Harold B. Keats. INVENTOR.

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UNITED STATES PATENT OFFICE

2,314,646

ESCUTCHEON PLATE FOR DOOR LATCHES

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Application December 23, 1940, Serial No. 371,424

8 Claims. (Cl. 292—1)

This invention relates to improvements in escutcheon plates for door latches and has for its object to provide a plate having a recessed finger button for operating the latch and a recessed handhold for opening and closing the door whereby the plate will be substantially flush with the surface of the door on which it is mounted.

A further object of the invention resides in providing a device of the above-mentioned character which is simple and durable in construction, attractive in appearance, efficient in use, and inexpensive to manufacture.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same,

Fig. 1 is an elevation of one part of the escutcheon plate,

Fig. 2 is an elevation of the other part of the plate,

Fig. 3 is a section taken on line 3—3 of Fig. 1,

Fig. 4 is a section taken on line 4—4 of Fig. 2,

Fig. 5 is an elevation of the escutcheon plate applied to a door latch,

Fig. 6 is a section taken on line 6—6 of Fig. 5, the cutting plane passing through the latch mechanism on the line 6—6 of Fig. 8.

Fig. 7 is a section taken on line 7—7 of Fig. 5.

Fig. 8 is an elevation of a latch mechanism with which my invention is designed to cooperate, the cover plate being omitted.

In the drawings, wherein for the purpose of illustration I have shown a preferred embodiment of my invention, the numeral 5 denotes a metal plate of substantially oval contour, although it is apparent the plate may be of any desired shape. A circular recess 6 is stamped in the body of the plate adapted to receive a slidable push button 7 having a stem 8 which projects through an aperture in the bottom of the recess and has a nut 9 or other suitable means applied to its extended end for securing the stem against removal. A coil spring 10 is mounted on the stem between the button 7 and bottom of the recess 6 adapted to normally hold the button in a position flush with the surface of the plate. The plate 5 has a lateral extension 11 at one side which is reversely bent, as at 12, to provide a gripping edge with its free end bent inwardly at right angles to form a wall 13. A handhold socket plate 14 of semi-circular contour and concaved transversely is adapted to be disposed with its straight edge in abutting relation to the wall 13 of the plate 5 and the gripping edge 12 of the plate 5 overlaps the side edges of the socket plate and fits in recesses 15 formed therein.

The escutcheon plate disclosed in the drawings is particularly designed for use with automatic door latches of the type disclosed in my prior Patent Number 2,188,642, but it is intended that the plate may be applied to any latch wherein the latching mechanism is actuated by a push button. It is also obvious the plate may be applied to other types of latches and when applied to latches controlled by a key the plate is provided with a keyhole 16. The plate may be applied to only one side of the latch, but as shown in Figs. 5, 6 and 7 is ordinarily applied to both sides. The plate 5 is secured to the surface of the door 16', by providing a hole 17 to receive the recess 6 and an aperture 18 is formed in the latch casing 19 through which the nut 9 projects for engaging the actuating mechanism of the latch. The plates on opposite sides of the door are disposed in opposed relation, but the recess 6 of one plate is placed above the recess of the other plate so that the push buttons may engage opposite ends of a rockable actuating member of the latch mechanism. The plates on opposite sides of the door are clamped together and to the surface of the door by a bolt or bolts 20 passing transversely through the door, and one of the plates having a nut 20^a threaded on the end for adjustably clamping the plates in position. The upper and lower ends of the plates are secured in substantially flush relation to the surface of the door by screws 22. The socket plates 14 are disposed in recesses 23 cut in the door and are provided with a marginal flange 24 which is secured to the surface of the door by screws 25.

In Fig. 8 I have shown a latch mechanism made in keeping with my patent aforesaid. In this figure, 21 is the actuating bolt, 29 is the latching bolt, and 36 is the actuating lever whose abutment lug 46 is designed to be engaged by the inner end of the latching bolt 29 when said bolt is in its inner position.

A pivot screw 37 passes through a slot 38 in the link or lever 36 and is secured to the actuating bolt 21. The link or lever 36 is journalled on a pin 41. A tension spring 43 has one of its ends connected to the casing 19 and its other end connected at 44 to the link or lever 36.

A lighter tension spring 57 has one end connected to the latching bolt 29 and its other end secured to the link or lever 36, or to the inner

end of the actuating bolt 21, so that when the lug 46 of the link or lever is pushed aside latching bolt 29 will be retracted.

A push-button-operated lever 52 has one leg arranged to underlie the free end of the link or lever 36 so that when a button 7 is pushed in the link or lever 52 will be rocked accordingly to release latching bolt 29 from lug 46. The lever 52 is pivotally mounted on a bracket 53. The latching mechanism shown in Fig. 8 is substantially that illustrated in my aforesaid patent and the numbered parts in Fig. 8 bear the same reference numbers as like parts in that patent and perform the same functions in substantially the same way.

While I have shown and described, for illustration purposes only, a latch mechanism, I make no claim per se to the same as any push-button-operated latch mechanism may be employed with my invention.

In use, the plate 5 and socket plate 14 are mounted on the door in cooperative relation with the gripping edge 12 extending over the socket, thus permitting the fingers of the hand to be inserted in the socket behind the gripping edge which serves as a handhold for moving the door to open or closed position while the button is pushed in by the thumb of the same hand to release the latch. The plates including the finger button are substantially flush with the surface of the door and provide an attractive escutcheon plate which embodies all the essential elements for actuating the latch and opening and closing the door.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same and that certain changes in the shape, size, and arrangement of the parts may be made without departing from the spirit of the invention or the scope of the subjoined claims.

It is also apparent that when the escutcheon plate is applied to doors having recessed panels the socket plates may be dispensed with as the lateral extensions 11 will project beyond the inner edge of the door stile in spaced relation to the recessed panel providing a space for insertion of the fingers to grip the lateral extension.

Having thus described my invention, I claim:

1. The combination with a door latch, of a sheet metal escutcheon plate adapted to be mounted on the door having a lateral extension at one side reversely bent to form a gripping edge, a push button carried by said escutcheon plate, and a socket plate recessed in the door adjacent the gripping edge of said lateral extension, said socket plate extending beneath said gripping edge, said button being mounted at such a distance from the gripping edge that with the fingers of the hand in the socket and beneath said extension the finger button may be pressed by the thumb of the same hand.

2. The combination with a door latch, of a sheet metal escutcheon plate adapted to be mounted on the door having a pocket recessed in the door, a finger button slidably mounted in said pocket for actuating said latch mechanism, a lateral extension at one side of said plate adjacent said pocket to provide a gripping edge, and a socket plate recessed in the door adjacent said gripping edge and extending beneath the gripping edge, said button being mounted at such a distance from the gripping edge that with the fingers of the hand in the socket and beneath said extension the finger button may be pressed by the thumb of the same hand.

3. An escutcheon plate for door latches comprising a plate having a lateral extension at one side, said extension having its free end reversely bent to provide a handhold, and a hand socket plate recessed in the door and extending beneath the handhold, said socket plate being concaved transversely and having recesses to receive said handhold.

4. The combination with a door latch, of an escutcheon plate adapted to be mounted on the door, said door having a recessed pocket therein, said escutcheon plate having an inwardly extended socket adapted to extend into said pocket in the door, and a finger button slidably mounted in said socket and carried by said plate for actuating said latch mechanism.

5. In a door having latching mechanism of the push-button-actuated type, an escutcheon plate of sheet metal mounted on the face of the door and having a socket part, a push-button mounted in and carried by said socket part for effecting operation of the latching mechanism of the door, said plate having a lateral extension, said door having a pocket recessed in the same, said extension in part overlying said pocket to constitute a gripping edge, said push-button and said extension being constructed so that upon insertion of the fingers of one's hand in said pocket and beneath said extension the push-button may be actuated by the thumb of the hand.

6. The combination with a door latch of an escutcheon plate adapted to be mounted on the door having a lateral extension at one side reversely bent to form a gripping edge, and a socket plate recessed in the door adjacent the gripping edge of said lateral extension, said socket extending beneath said gripping edge, said socket plate having side edges underlying said lateral extension, said side edges being shaped to fit said gripping edge.

7. A combined escutcheon plate and push-button carrier comprising a sheet metal body having a cup-like portion, a push-button mounted therein, said plate having a lateral extension bent back upon itself to form a gripping edge, the bent-back portion terminating in a wall portion extended in a direction inwardly away from the face plane of the plate, the distance between the gripping edge and the cup-like portion being such that when the fingers of the user's hand engage with the gripping edge, the thumb of the hand can be held over said cup-like portion to push in the push-button therein and at the same time the fingers exert a pull on the plate in a direction opposite the force applied to the push-button.

8. The combination with a door latch, of a sheet metal escutcheon plate adapted to be mounted flatwise on a door and having a lateral extension at one side reversely inwardly bent to form a gripping edge, the door having a recess beneath said gripping edge and extending laterally away from the same, a concave socket plate located in said recess and in part extending beneath said gripping edge, said socket plate being narrower than the width of the escutcheon plate measured along the gripping edge, whereby the sides of the socket plate will underlie said gripping edge, said sides being recessed to fit the reversely bent part of said extension.

HAROLD B. KEATS.