Dec. 31, 1940. R. H. SMYTHE 2,226,640

AUXILIARY LOCK

Filed Aug. 28, 1939

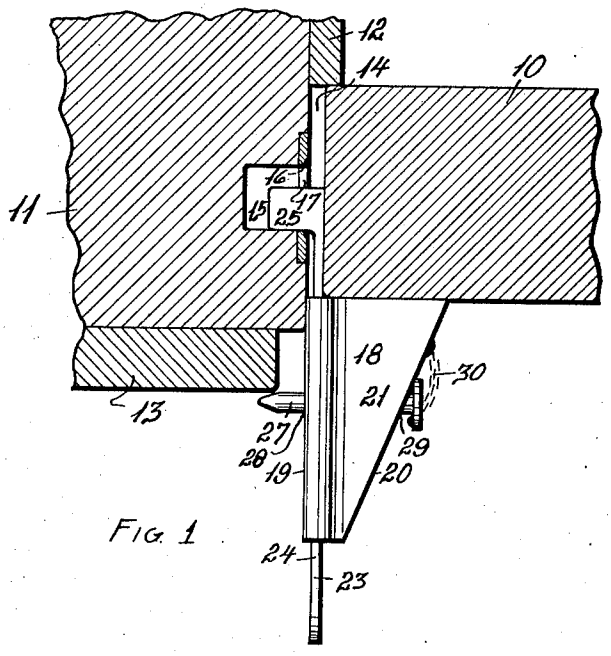


FIG. 1

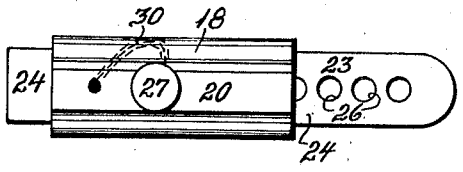


FIG. 2

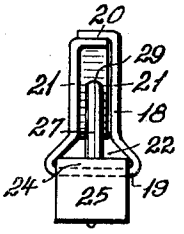


FIG. 3

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Patented Dec. 31, 1940 2,226,640

UNITED STATES PATENT OFFICE

2,226,640

AUXILIARY LOCK

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Application August 28, 1939, Serial No. 292,275

4 Claims. (Cl. 292—295)

This invention relates to door latches, and has as an object to provide a portable, and readily removable and replaceable, door locking device.

A further object is to provide a device of said character which is utilizable in connection with the conventional construction of doors.

A further object is to provide a device of said character which may be employed in connection with doors equipped with ordinary forms of latching means, and may be rendered operative in connection with elements provided for such latching means without removal of the latter.

A further object is to provide a device of said character which is light, rugged and simple in operation, and which may be manufactured at low cost.

My invention consists in the construction, arrangement, and combination of elements hereinafter set forth, pointed out in my claims, and illustrated by the accompanying drawing, in which—

Figure 1 is a showing of my latch operatively positioned with reference to the margin of a door and its jamb, the door margin and associated elements being in cross section and parts thereof being cut away, my device in this instance being so utilized and positioned as to exhibit a top view thereof. Figure 2 is a side view of my latch. Figure 3 is a front end elevation of my latch.

While my latch is susceptible of a variety of applications, it is of a type particularly adapted to be carried by travelers and to be used as an auxiliary lock on the doors of rooms temporarily occupied, for which the user does not possess a key or concerning which he desires additional assurance against intrusion. From the description which is to follow it will be apparent that in the employment of my latch in such manner one of the recesses with which the door jamb is ordinarily provided, for the reception of the bolt or catch of conventional locks or latches, may be availed of for the reception of an element of my latch; nevertheless my latch is functionally independent of the mechanism of the locking or latching mechanism with which the door may be equipped, and will therefore be most clearly described without reference to any such previously attached mechanism.

In Figure 1 a typical embodiment of my invention is illustrated as employed in practical application, wherein my latch is shown in operative association with a typical assembly comprising a door margin 10 and a jamb 11, the door being in closed position. The door and associated parts may be of any suitable construction and assembly, but for simplicity the showing may be taken to represent a conventional door, hinged to swing in a horizontal arc, the portions of the door margin and jamb shown being taken in horizontal cross section, and the door margin shown being the margin remote from the hinge. The portion of the door extending from the said margin toward the hinge, and the elements wherewith the door is associated for mounting, are omitted, as a variety of methods may be employed, and the precise construction with which my invention may be associated in practice is not material to an understanding thereof, the essential function of my latch being to hold the door margin in position as shown in the drawing so long as the latch is permitted to remain in locking position by the user thereof, whereby opening of the door from the opposite face thereof is prevented.

Jamb 11 may be provided with the usual vertical lining strip 12, forming a part of the casing, and adjacent which the door rests when in closed position, thus affording a tighter and more secure closure; the jamb is usually provided with an inner facing 13, for the sake of appearance. When the door is in closed position there is a slight space 14 intermediate the vertical end wall of the door and the jamb; jamb 11 is also provided with a latch hole 15 opening toward and within the space defined by the vertical end wall of said door when the latter is in closed position. A convenient construction of latch hole 15 comprises a vertical slot in jamb 11, the portion of the jamb adjacent latch hole 15 being mortised to provide a recess for the insertion of a metal latch plate 16, having an aperture as indicated at 17, which aperture registers with latch hole 15. Latch plate 16 preferably is of metal, and firmly secured to jamb 11, thus effectively reinforcing the walls of hole 15 against any force applied in an attempt to swing the door open when a catch element is positioned within hole 15 as hereinafter mentioned.

I will now describe the construction of my latch itself. In such description and in the claims the latch will be contemplated to be in the position indicated in Figure 3 of the drawing.

My latch in the specific construction illustrated comprises a housing 18 having a base wall 19, a top 20, and side walls 21, the side walls being triangular intermediate the base and the top, as more clearly shown in Figure 1. The lower portions of the side walls 21 are in altitudinally angular relation with the base wall 19, converg-

ing upward therefrom for a short distance only, so that the upper portions of said walls are in spaced parallelism, and the top of the housing may be conveniently formed by bending the upper margins of the side walls at right angles to the respective side walls and so that one of said bent over margins overlies the other in close adjacency, all as will more clearly appear by reference to Figure 3. It will thus be noted that the base portion of the housing forms a slot, as indicated at 22, longitudinally of and overlying base wall 19, for the reception of slide plate portion 23 of a bolt 24.

Slide plate 23 is adapted to overlie base wall 19 as a slide bearing, and is suitably dimensioned with reference to slot 22 so as to be slidable longitudinally therein freely, but preferably restrained from substantial movement otherwise than longitudinally of slot 22. Slide plate 23 is provided at one end with an offset catch lug 25, thus forming a bolt 24 substantially L-shaped, as clearly shown in Figure 1. The central portion of slide plate 23 is provided with detent holes 26, selectively receivable of detent pin 27, for securing bolt 24 in operative position. Base wall 19 and top 20 are provided with apertures at 28 and 29 for the reception of detent pin 27, and preferably in suitable registration so that said pin may extend vertically through housing 18 perpendicular to base wall 19; apertures at 28 and 29 are so positioned that when pin 27 extends through housing 18 it may also extend through any desired one of the detent holes 26. To prevent disassociation of detent pin 27 and housing 18, said elements may be secured together by a flexible connection, such as chain 30.

To apply my latch for locking purposes, while the door is open catch lug 25 is inserted in catch hole 15, and slide plate 23 held flat against the jamb and extending inwardly, and the door is closed. Thereupon housing 18 is slid along slide plate 23, with the top thereof on that side of slide plate 23 opposite catch lug 25, until the front of housing 18 is adjacent the inner facing of door margin 16, whereupon detent pin 27 is thrust through top aperture 29, the most nearly registering of detent holes 26, in side plate 23, and base aperture 28, the elements of the apparatus thus being positioned as clearly shown in Figure 1. It is apparent that in this manner the elements form a secure latch, whereby the front of housing 18 prevents the inward movement of door margin 19, so long as detent pin 27 is permitted to remain in the position indicated.

Since many changes, variations, and modifications, in the specific form, construction, and arrangement of the elements shown and described may be had without departing from the spirit of my invention, I wish to be understood as being limited solely by the scope of the appended claims, rather than by any details of the illustrative showing and foregoing description.

I claim as my invention—

1. A device of the character described, including a housing with a slot therein, a detent pin, and a bolt comprising a catch lug and a slide plate receivable in said slot and a plurality of detent holes adapted to selectively receive said detent pin, said housing being formed with a base wall and spaced-apart side walls the lower portions of which converge upward from said base wall for a short distance only to form said slot.

2. A device of the character described, including a housing with a slot therein, a detent pin, and a bolt comprising a catch lug and a slide plate receivable in said slot and a plurality of detent holes adapted to selectively receive said detent pin, said housing being formed with a base wall and spaced-apart side walls the upper margins of which are bent inwardly so that one overlies the other to form a top, said top and said base wall being provided with registering apertures to receive said detent pin.

3. A device of the character described, including a housing with a slot therein, a detent pin, and a bolt comprising a catch lug and a slide plate receivable in said slot and a plurality of detent holes adapted to selectively receive said detent pin, said housing having a base wall and substantially triangular spaced-apart side walls formed with a pair of vertical edges to form an abutment to engage the face of a door.

4. A door latch including a housing with a slot therein, a detent pin, and a bolt comprising a catch lug and a slide plate receivable in said slot and a plurality of detent holes adapted to selectively receive said detent pin, said housing being formed with a base wall and substantially triangular spaced-apart side walls the lower portions of which converge upward from said base wall for a short distance only to form said slot and the upper margins of which are bent inwardly so that one overlies the other to form a top, said top and said base wall being provided with registering apertures to receive said detent pin, said side walls being formed with a pair of vertical edges to form an abutment to engage the face of a door.

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