

No. 848,067,

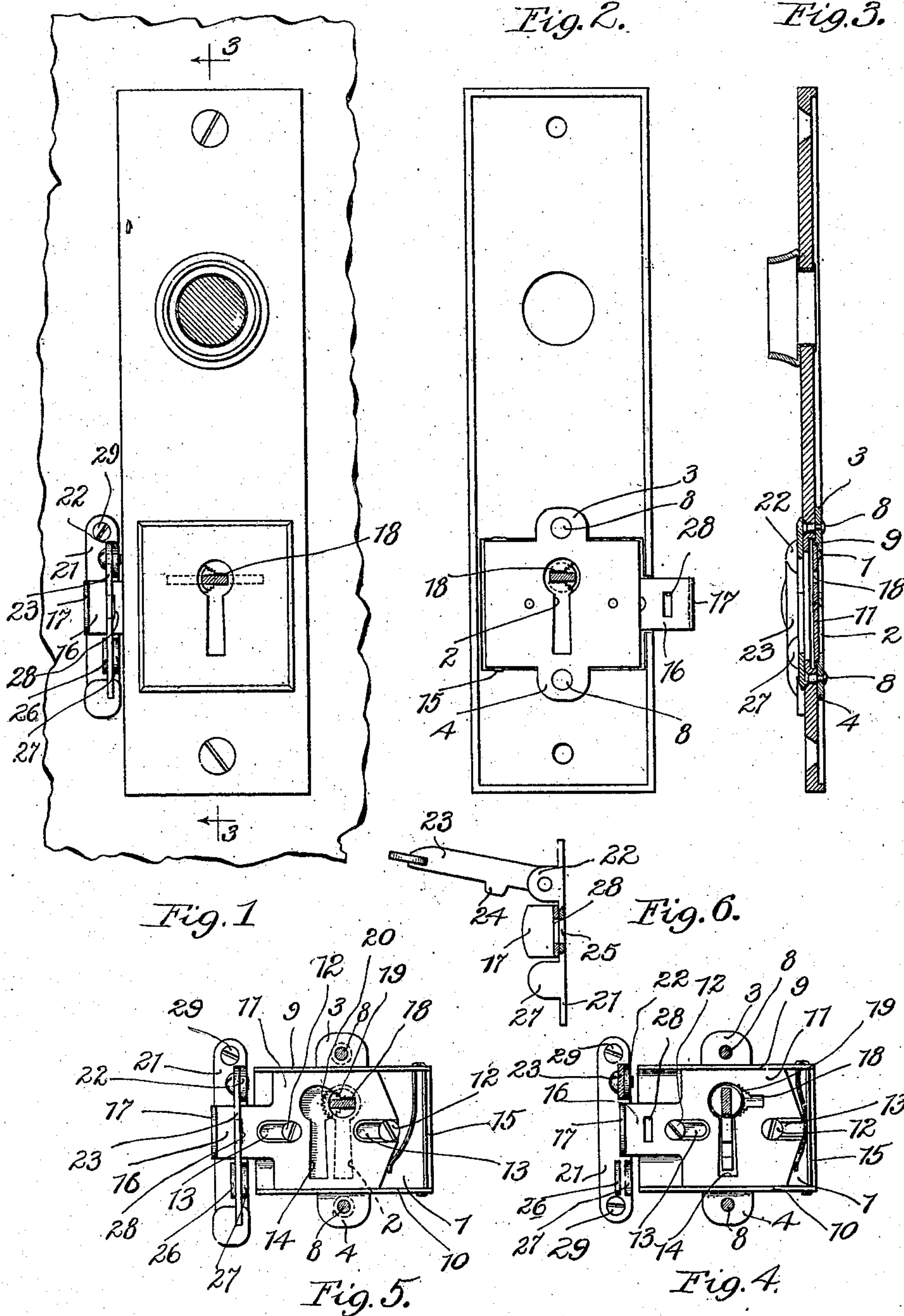
PATENTED MAR. 26, 1907.

A. A. SVENSEN.

KEY FASTENER.

APPLICATION FILED APR. 4, 1906.

3 SHEETS—SHEET 1.



Witnesses:  
Leonard W. Novander.  
George C. Higham.

Inventor  
Andes A. Svensen  
By Charles A. Proven  
Attorney







# UNITED STATES PATENT OFFICE.

ANDES AUGUST SVENSEN, OF EVANSTON, ILLINOIS.

## KEY-FASTENER.

No. 848,067.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed April 4, 1906. Serial No. 309,798.

*To all whom it may concern:*

Be it known that I, ANDES AUGUST SVENSEN, a citizen of the United States, residing at Evanston, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Key-Fasteners, (Case 1,) of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to locks, and more particularly to the ordinary door-locks or the like, and contemplates improved locking mechanism for association with the lock to lock a key in such manner within the lock that manipulation or displacement thereof from the opposite side of the doors will be prevented.

My invention will be best understood by reference to the accompanying drawings, in which—

Figure 1 is a front view showing a lock escutcheon-plate with my improved device applied thereto to lock the key. Fig. 2 is a rear view of the escutcheon-plate shown in Fig. 1 with the locking mechanism attached. Fig. 3 is a sectional view taken on line 3 3 of Fig. 1. Fig. 4 is a detached front view of my improved locking mechanism, showing the key in unlocked position. Fig. 5 is a similar view showing the key in locked position. Fig. 6 is a side elevation of auxiliary locking mechanism. Fig. 7 shows a modified arrangement of the locking mechanism with respect to the escutcheon-plate. Fig. 8 is a sectional view taken on line 8 8 of Fig. 7. Fig. 9 is a view similar to Fig. 7, the auxiliary locking mechanism being in modified construction. Fig. 10 is an enlarged end view of the auxiliary mechanism, taken on line 10 10 of Fig. 9. Fig. 11 is a detached view showing auxiliary locking mechanism in section, and Fig. 12 is a detached view showing guiding means for a movable member of the locking mechanism.

The device of my invention consists, primarily, of a supporting-plate 1, which is secured rigidly with respect to the lock of the door and has a keyhole 2, which will register with the lock-keyhole when the plate is in position. As shown in Figs. 7, 8, and 9, this supporting-plate has extensions or flat lugs 3 and 4, whereby it may be secured directly to the door-frame below the escutcheon-plate 5 by means of wood-screws 6, the escutcheon-plate being for this purpose slightly raised

from the door by means of a filling-plate 7. (Best shown in Fig. 8.) This enables my device to be applied to locks which are already in position. As shown in Figs. 2 and 3, this supporting-plate may be secured directly to the escutcheon-plate by means of rivets 8, passing through the extensions 3 and 4 and the escutcheon-plate, and thus my device may be applied directly to new locks to form a part thereof.

The horizontal edges of the supporting-plate are formed over a die a distance to form guideways 9 and 10, between which is mounted a plate 11, which is retained on the supporting-plate by the heads of the screws 12 and which may reciprocate on the supporting-frame the length of the slots 13, through which the screw is engaged. This reciprocating plate has also a keyhole 14; but a spring 15, supported from the supporting-plate and bearing against the rear edge of the reciprocating plate, tends to hold the reciprocating plate to the left in the drawings shown, in which position the keyholes will be out of register. An extension 16 from the left end of the movable plate terminates in the thumb-plate 17, by means of which the plate may be moved to the right against the action of the spring 15 to carry the keyholes into register to allow insertion of a key.

One of the objects of my invention is to cause the key to be locked against subsequent rotation after it has been turned to lock the door. Where the shank of the key is flat, this is accomplished in one way by the longitudinal slot 18 cut in the movable plate to the right of the keyhole 14. The plate 11 is held to the right until the key has been turned to lock the door, whereupon the shank is brought to a horizontal position and the plate released, the spring 15 then throwing the plate forwardly to engage the slot 18 about the key-shank, and subsequent rotation of the key will be prevented. Where the key-shank is round, other means must be provided for locking it, one way being to provide sharp teeth or serrations 19 along the right edge of the circular opening of the movable keyhole, as shown, and after the key has been suitably actuated these teeth will be carried into gripping engagement with the key-shank and will lock it against undesired rotation. Instead of having teeth on the right edge of the movable keyhole, teeth may be provided along the left edge of the



keyhole in the supporting-plate in such position that the plate 11 upon release will be moved to carry the key-shank against the points of the teeth to prevent subsequent rotation of the key. Both sets of teeth, however, may be used whereby the gripping action will be increased. Another modification would be the use of a slot in conjunction with either one or both sets of teeth, and the mechanism would then be adaptable for locking any shaped key.

So far the spring 15 furnishes the sole power for holding the key in locking engagement with the plates, and it may be desired to more rigidly and certainly lock the movable plate independently of the spring. This may be accomplished by auxiliary locking means. (Shown in Figs. 1 to 8.) This auxiliary locking mechanism comprises a base-plate 21, having a pivot extension 22, to which is pivoted at one end the latch-lever 23, having a tooth 24 extending from its lower edge for engagement in the opening 25 through the base-plate 21. The front end of the lever when the tooth engages in the slot 25 will engage and be locked between the extensions 26 and 27 at the lower end of the base-plate. The extension 16 from the movable plate 11 has a slot 28, and the base-plate 21 of the auxiliary locking means is secured in such position to the left of the escutcheon-plate that the slots 25 and 28 will register when the plate 11 has been pulled outwardly, and thus after the spring has acted to throw the plate to lock the key the plate may be rigidly locked in this position by the tooth 24, carried by the lever 23 to engage both the slots 25 and 28. This auxiliary mechanism may be secured to the door-frame by means of wood-screws 29, or, as shown in Fig. 7, may be integral with the supporting-plate 1, and this arrangement will be preferable where my device is to be used in connection with new locks, thus making the lock of my improved locking mechanism a unitary device. Of course where this auxiliary mechanism forms part of the supporting-plate it will be unnecessary to further secure the locking means, as by means of the wood-screws.

In Figs. 9, 10, 11, and 12 I show modified auxiliary locking means. Here I provide a base-plate 30, which may be integral with the supporting-plate or separate therefrom and secured by wood-screws 31, as shown, this base-plate having a bridge part or strap 32, between which and the plate the extension 16 of the movable plate passes, being also guided therein by the pin 33 engaging in the slot 34 in said extension. In the center of this bridge or strap member a lever 35 is pivoted by means of the pivot-screw or pin 36, a handle 37 extending from the front end of the lever. This lever is of such length that a tooth 38, extending from the front edge thereof, will engage in a slot or channel

39 cut in the inner face of the thumb-plate 17. When the spring has moved the plate 11 to lock the key, this lever is then rotated to carry the tooth into the slot, thus to rigidly lock the plate independently of the spring. The spring may be insufficient to cause enough pressure to sufficiently bite or grip the teeth into the key, and in the locking arrangement shown in Figs. 1 to 6 the slots 28 and 25 may be relatively so disposed that additional pull must be exerted on the plate 11 to carry them into register, this pull serving to draw the teeth-points into good biting and gripping engagement with the key, and when the lever 23 is then locked this secure engagement will be maintained. In the same way in the modification shown in Figs. 9, 10, 11, and 12 the adjustment may be such that the plate 11 must be pulled out a distance before the lever can be locked. This additional pull, however, in this modification may be inherent in the plate 17 and in the lever, the slot and lever ends being so adjusted that when the lever is forced into locking engagement additional pull will be exerted on the plate and the frame-gripping relation of the teeth against the key maintained.

I do not wish to be limited to the precise arrangements and mechanical constructions herein shown and described, as changes may readily be made without departing from the scope of the following claims, which I desire to secure by Letters Patent.

I claim—

1. In a locking device for association with door-locks or the like, the combination with a plate adapted to be secured rigidly with respect to the lock, said plate having a keyhole in register with the lock-keyhole, a movable plate lying adjacent to the immovable plate and also having a keyhole, spring mechanism tending to move the movable plate at one side to hold the keyhole thereof out of register with the other keyholes to prevent insertion of a key in the lock, said keyhole when the plate is removed in the other direction coming in register to allow insertion of a key, a slot at one side of said keyhole for engaging the shank of the inserted key when said shank is flat upon return of the movable plate by the spring mechanism, gripping-teeth about the front edge of said slot and about the face of the keyhole in the immovable plate for engaging the shank of the inserted key when said shank is round upon return movement of the plate by the spring mechanism whereby an inserted key is locked against subsequent rotation or escape from the lock, and auxiliary locking means for engaging an extension on said movable plate and thereby locking said movable plate after actuation by the spring mechanism to hold the slot or teeth in firm engagement with the inserted key.



2. In a locking device for association with  
a door-lock or the like, the combination with  
a plate adapted to be secured with respect  
to the lock and having a keyhole in register  
5 with the lock-keyhole, of a movable plate  
mounted on the immovable plate and also  
having a keyhole, spring means tending to  
hold the movable plate and keyhole therein  
to one side to prevent insertion of a key in  
10 the lock, movement of the movable plate  
against the spring action causing the key-  
holes to come into register to allow insertion  
of a key, teeth at one side of the movable  
keyhole brought into engagement with the  
15 shank of the inserted key as the movable  
plate is returned toward its normal position  
by the spring, and a pivoted locking-lever  
provided with a handle and adapted to be  
swung into engagement with a slot in an ex-  
20 tension of the movable plate after actuation  
thereof by the spring means to hold the teeth  
in firm gripping engagement with the key.

3. In a locking device for association with  
a door-lock or the like, the combination with  
25 a supporting-plate adapted to be secured with  
respect to the lock and having a keyhole in  
register with the lock-keyhole, a second plate

mounted on said supporting-plate to be recip-  
rocated thereon and also having a keyhole, a  
spring tending to hold said movable plate to 30  
one side and the keyholes out of register, move-  
ment of the plate in the other direction caus-  
ing the keyholes to come into register to allow  
insertion of a key in the lock, locking-teeth  
along one side of the keyhole of the movable 35  
plate, locking-teeth along the opposite side of  
the keyhole of the supporting-plate, said teeth  
coöperating to form a clamping-jaw for en-  
gaging and gripping the shank of an inserted  
key upon return of the movable plate to its 40  
normal position by the spring whereby said  
key is prevented from subsequent turning  
or escape of the lock, and an auxiliary lock-  
ing-lever pivoted adjacent to the supporting  
and movable plates and provided with a 45  
tooth for engaging a slot in the movable  
plate to rigidly lock the teeth in firm grip-  
ping engagement with the key.

In witness whereof I hereunto subscribe  
my name this 26th day of March, A. D. 1906. 50

ANDES AUGUST SVENSEN.

Witnesses:

CHARLES J. SCHMIDT,  
LEONARD W. NOVANDER.