Jan. 14, 1969 L. HOFFMAN ET AL 3,421,787

AUXILIARY DOOR LOCK

Filed June 1, 1967 Sheet 1 of 2

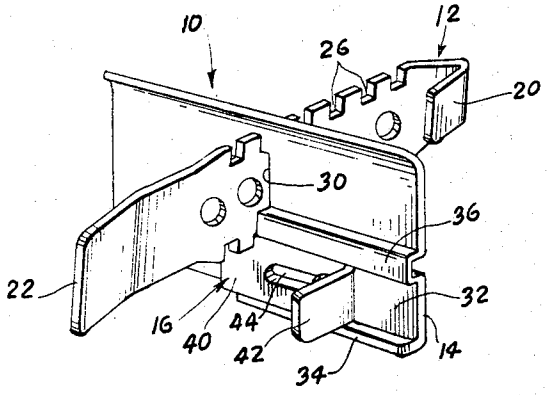


Fig. 1

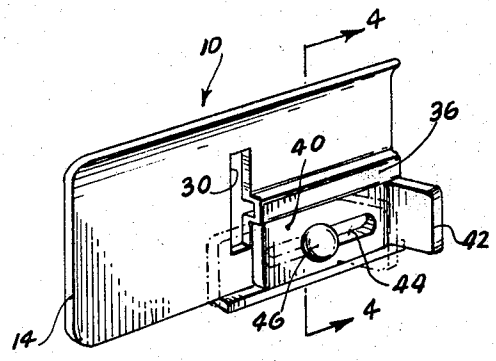


Fig. 3

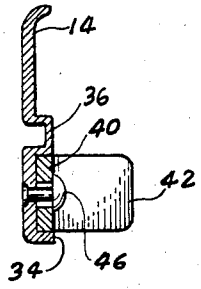


Fig. 4

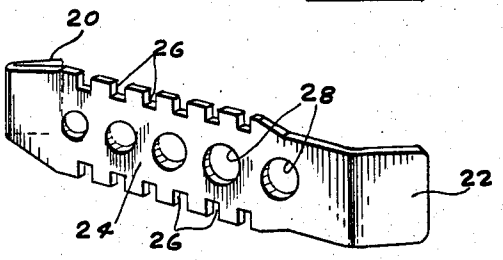


Fig. 2

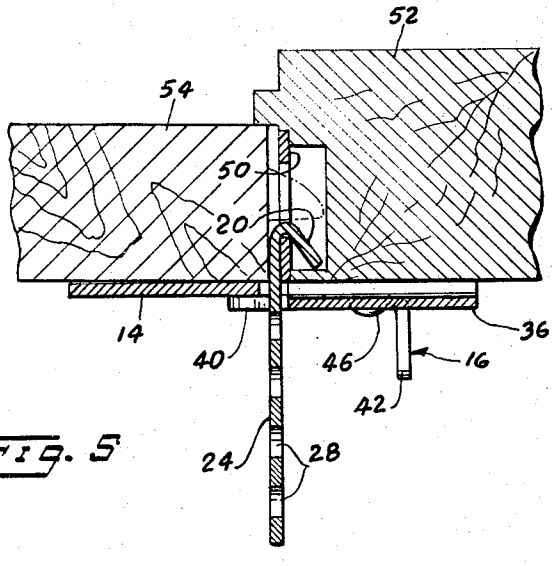


Fig. 5

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AUXILIARY DOOR LOCK

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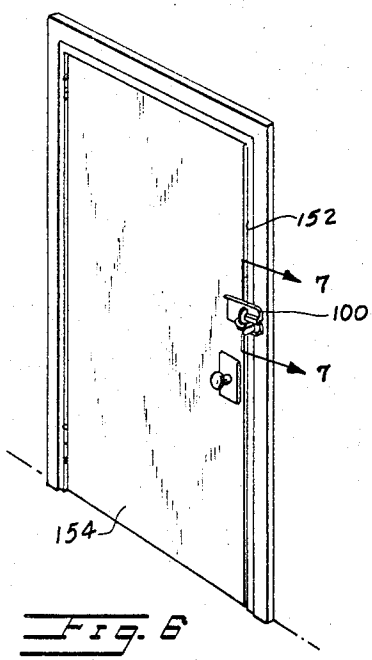


Fig. 6

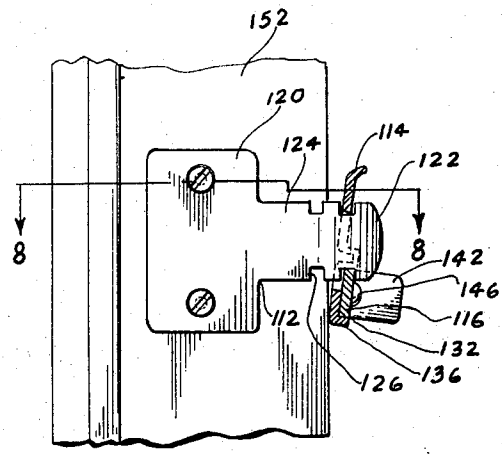


Fig. 7

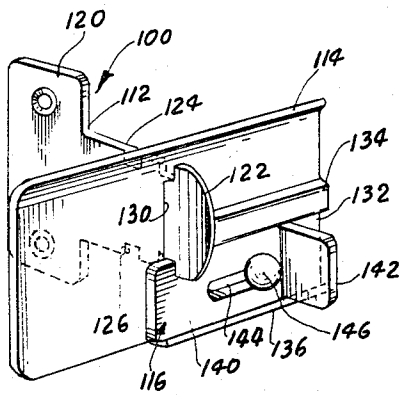


Fig. 9

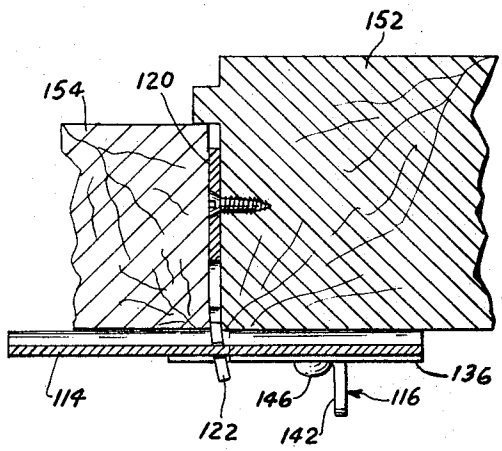


Fig. 8

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AUXILIARY DOOR LOCK

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Int. Cl. E05c 19/18

ABSTRACT OF THE DISCLOSURE

Auxiliary door locks of removable or semi-permanent type, suited for use on hotel and motel room doors and elsewhere, auxiliary to or in substitution of existing door locks.

Background of the invention

Field of the invention.—This invention has two principal uses: The first is the provision of a portable, removable door lock which may be installed on hotel and motel room doors and the like, to guard against unauthorized entry by persons having keys to the existing door locks. The second use involves the provision of a semipermanent auxiliary door lock which may be mounted on door posts to supplement existing door locks. The latter use would be applicable to more permanent tenants, rooming house guests and apartment house and private home occupants. In either case the lock proper is entirely removable from the door when not in use.

Description of the prior art.—The following United States patents were developed in the course of two Patent Office searches and they are believed to constitute the closest art to this invention: 584,677, 588,619, 614,052, 692,083, 826,538, 1,252,003, 1,869,689, 1,947,773, 2,067,779, 2,665,935, 2,903,286.

Summary of the invention

The invention comprises three basic components: a keeper plate which is either removably secured or otherwise affixed to the door post, a locking plate which engages the door, and a sliding bolt mounted on the locking plate for engagement with the keeper plate. An important feature of the invention resides in the fact that the locking plate is caused to interlock with the keeper plate when the bolt is moved into locking position. Consequently there is a locking action by both the locking plate and the bolt with respect to the keeper plate.

Two embodiments of the invention are illustrated in the drawing and described in the specification. In the first embodiment the keeper plate is provided with a hook-shaped inner end portion which engages the existing door jamb locking plate on the door post. The former is simply hooked into the latter and is readily removable therefrom. In the second embodiment the keeper plate is screwed or otherwise secured to the door post, this being in addition to the usual door jamb locking plate existing thereon. In this second embodiment of the invention the keeper plate is intended for relatively permanent attachment to the door post in the sense that it is not designed for removal following each use.

Brief description of the drawing

FIGURE 1 is a perspective view of an auxiliary door lock made in accordance with one form of the invention, wherein the keeper plate is hooked into the existing door jamb locking plate on the door post.

FIGURE 2 is a perspective view of the keeper plate component.

FIGURE 3 is a perspective view of the locking plate component of said door lock.

FIGURE 4 is a transverse section on the line 4—4 of FIGURE 3.

FIGURE 5 is a horizontal section through the assembled door lock, showing it mounted in engagement with a conventional door and door post.

FIGURE 6 is a perspective view of a conventional door and door post, showing mounted thereon a door lock made in accordance with the second form of this invention.

FIGURE 7 is a fragmentary section taken on the line 7—7 of FIGURE 6.

FIGURE 8 is a fragmentary horizontal section showing how the keeper plate is secured to the door post and showing also how the locking plate engages the keeper plate.

FIGURE 9 is a perspective view of the assembled door lock made in accordance with the second embodiment of this invention.

Description of a preferred embodiment

Referring in the first instance to the first form of this invention as illustrated in FIGURES 1–5 inclusive it will be observed that auxiliary door lock **10** consists of three main components: a keeper plate **12**, a locking plate **14** and a sliding bolt **16**.

The keeper plate **12** comprises an elongated strip having a hook-shaped element **20** at one end, a slightly curved or bent end portion **22** at its opposite end, and an elongated shank **24** intermediate said hook and end portions **20** and **22**, said shank being provided with a plurality of spaced notches **26** on opposite side edges thereof. A plurality of holes **28** may also be formed in said shank.

The locking plate **14** is a generally rectangular member having a transverse slot **30** formed therein to receive the keeper plate. A channel **32** is formed on said locking plate between a flange **34** along one side edge of said plate and a rib **36** formed a spaced distance from said flange, in parallel relation thereto. Channel **32** is adapted to receive and retain the sliding bolt **16** above mentioned.

The sliding bolt is a generally L-shaped member having a foot portion **40** and a transversely bent handle portion **42**. The foot portion is adapted to slide within and along channel **32**, handle portion **42** being the element by which it is manually moved in either direction along said channel.

It will now be observed that a longitudinally extending slot **44** is formed in the foot portion of said L-shaped sliding bolt **16** and a rivet **46** secured to the locking plate **14** and extending through slot **44** locks said sliding bolt in said channel while permitting it limited longitudinal movement therein.

In the use of this device hook-shaped element **20** of keeper plate **12** is hooked into the existing locking plate **50** in door jamb **52**. The locking plate **14** is then threaded upon the shank of said keeper plate as shown in FIGURES 1 and 5. When the locking plate is relatively tight against the door jamb **52** and door **54** sliding bolt **16** is moved into engagement with the nearest notch **26**. However, in order to enable the sliding bolt to enter said notch it is necessary to move the keeper plate laterally so that the oppositely situated notch will engage the locking plate **14** in the manner shown in FIGURE 1. Stated differently, oppositely situated notches **26** on the keeper plate are respectively engaged by the sliding bolt and the locking plate **14**. The keeper plate is accordingly not perpendicular to the plane of the locking plate. This firmly locks the two plates together and prevents unauthorized opening of the door, regardless of whether the existing door lock is or is not in locking position.

When it is desired to open the door the sliding bolt is disengaged from the keeper plate and this enables the keeper plate to be disengaged from the locking plate **14**. The locking plate **14** is then removed from the keeper

plate and the door is opened. This releases the keeper plate and permits its removal from the existing door jamb locking plate **50**.

Description of a second embodiment

Referring now to the second form of this invention as illustrated in FIGURES 6–9 inclusive it will be observed that auxiliary door lock **100** consists of three main components: a keeper plate **112**, a locking plate **114** and a sliding bolt **116**.

The keeper plate **112** comprises an elongated strip having a mounting plate element **120** at one end, a rounded end portion **122** at its opposite end and an elongated shank **124** intermediate said mounting plate and end portions **120** and **122**, said shank being provided with a plurality of spaced notches **126** on opposite side edges thereof. A plurality of holes may optionally be formed in said shank.

The locking plate **114** is similar to that in the first form of this invention as above described, being a generally rectangular member having a transverse slot **130** formed therein to receive the keeper plate. A channel **132** is formed on said keeper plate between a flange **134** along one side edge of said plate and a rib **36** formed a spaced distance from said flange, in parallel relation thereto. Channel **132** is adapted to receive and retain sliding bolt **116** above mentioned.

The sliding bolt is a generally L-shaped member having a foot portion **140** and a transversely bent handle portion **142**. The foot portion is adapted to slide within and along channel **132**, handle portion **142** being the element by which it is manually moved in either direction along said channel.

It will again be observed that a longitudinally extending slot **144** is formed in the foot portion of said L-shaped sliding bolt **116** and a rivet **146** secured to the locking plate **114** and extending through slot **144** locks said sliding bolt in said channel while permitting it limited longitudinal movement therein. It is apparent that the sliding bolt and rivet of this second embodiment are similar to the same members in the first embodiment.

In the use of this device mounting plate element **120** of keeper plate **112** is secured by conventional permanent means to door jamb **152**, as by the wood screws shown in the drawing. The locking plate **114** is then threaded upon the shank of said keeper plate as shown in FIGURES 6–9 inclusive. When the locking plate is relatively tight against the door jamb **152** and the door **154** sliding bolt **116** is moved into engagement with the nearest notch **126**. However, in order to enable the sliding bolt to enter said notch it is necessary to move the locking plate rotationally so that the oppositely situated notch will engage the locking plate in the manner shown in FIGURE 7. Stated differently, oppositely situated notches **126** on the keeper plate are respectively engaged by the sliding bolt and the locking plate **114**. The keeper plate is accordingly not perpendicular to the plan of the locking plate. This firmly locks the two plates together and prevents unauthorized opening of the door, regardless of whether the existing door lock is or is not in locking position.

When it is desired to open the door the sliding bolt is disengaged from the keeper plate and this enables the keeper plate to be disengaged from the locking plate **114**. The locking plate **114** is then removed from the keeper plate and the door is opened. The keeper plate remains secured to the door jamb for repetitive use.

While there have been described two embodiments of the present invention it is clear that other embodiments and modifications may be had in accordance with the teachings thereof and the scope of the claims. For example, the holes which may be placed in the shank portions of the keeper plate are adapted to receive a sliding cylinder bolt which may be in addition to or in place of the sliding bolt shown in the drawing and above described. Also, the slightly curved end portion **22** of keeper plate **12** of the first form of this invention may be replaced by any other handle means which permits manual retention of the keeper plate in the door jamb locking plate while the door is being closed and while the sliding bolt and locking plate are being engaged therewith.

What is claimed is:

1. An auxiliary door lock comprising:

a keeper plate, said keeper plate engaging the door jamb and having a plurality of spaced notches on opposite side edges thereof;

a locking plate, said locking plate being adapted in conjunction with said keeper plate to constrain the door against opening; and

a sliding bolt, said sliding bolt being mounted in side-by-side relationship on said locking plate and selectively engaging one of said notches on said keeper plate, the respective notch on the opposite edge of said keeper plate engaging said locking plate in non-perpendicular relation to the plane of said locking plate.

2. An auxiliary door lock in accordance with claim **1** wherein said sliding bolt is secured in sliding relation to said locking plate by means of a rivet secured to said locking plate and a transverse slot in said sliding bolt engaging said rivet.

3. An auxiliary door lock in accordance with claim **2** wherein said keeper plate comprises:

a hook-shaped end, said hook-shaped end being adapted to engage the door jamb locking plate;

a curved opposite end; and

an elongated shank intermediate said hook-shaped end and said curved opposite end and having said notches situated on opposite side edges thereof.

4. An auxiliary door lock in accordance with claim **2** wherein said keeper plate comprises:

a mounting plate end, said mounting plate end being conventionally securable to the door jamb;

a rounded opposite end; and

an elongated shank intermediate said mounting plate end and said rounded opposite end and having said notches situated on opposite side edges thereof.

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