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Delgadillo

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[54] BURGLAR-PROOF LOCKING DEVICE

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[52] **U.S. Cl.** **70/56,** 292/281, 70/416, 70/417

[51] **Int. Cl.** **E05b 67/38**

[58] **Field of Search**.....70/56, 54, 55, 417, 418; 292/281; 70/416

[56] **References Cited**

UNITED STATES PATENTS

3,590,607	7/1971	Beaver	70/56
1,429,105	9/1922	Rudy	70/56
2,856,220	10/1958	Easley	292/148

FOREIGN PATENTS OR APPLICATIONS

227,884	1/1925	Great Britain	292/281
103,308	2/1964	Norway	70/56

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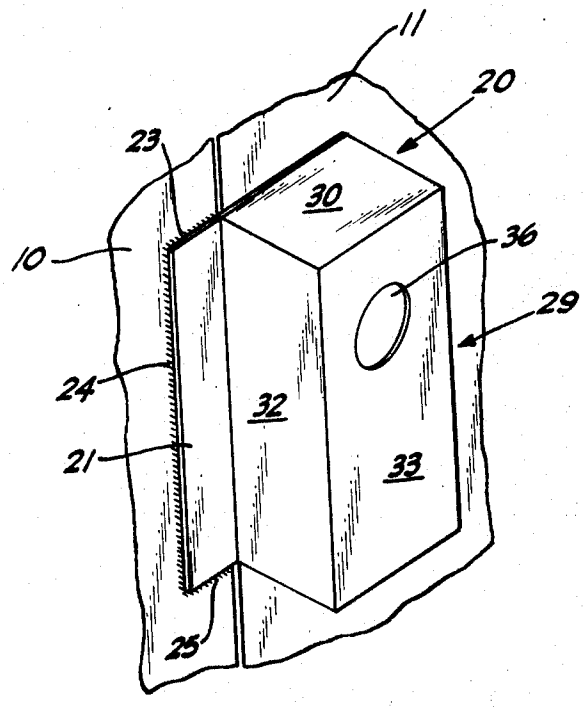
[57] **ABSTRACT**

A burglar-proof locking device for securing, with a conventional padlock, first and second members wherein a padlock-receiving staple is secured to the first member. The device comprises a unitary, hollow, box-like structure having top, front, back and first and second side walls of dimensions suitable for containing the padlock therein. The back wall is adapted to be connected to the second member and has a staple-receiving slot therein. The structure has an open bottom for insertion of the padlock so that it may engage the staple. The structure also has an opening in the front wall thereof which faces and is aligned with the staple-receiving slot for providing access for a padlock-actuating key.

7 Claims, 5 Drawing Figures



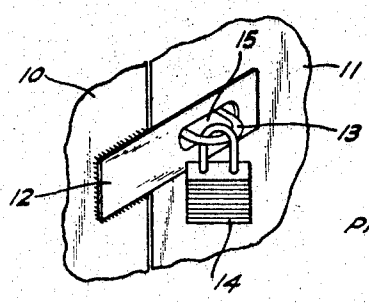


Fig 1
PRIOR ART

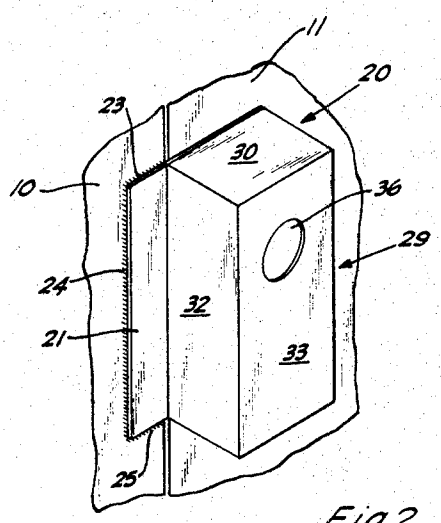


Fig 2

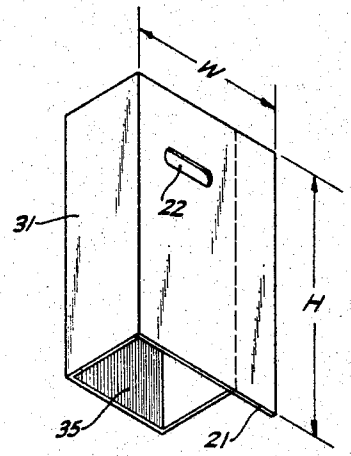


Fig 3

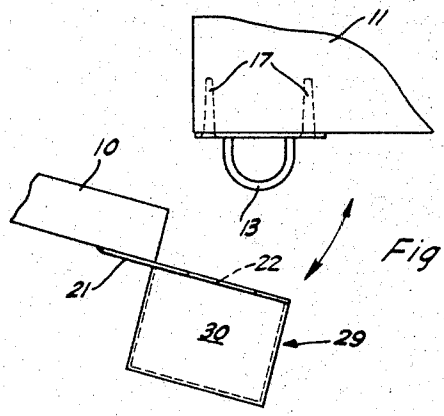


Fig 4

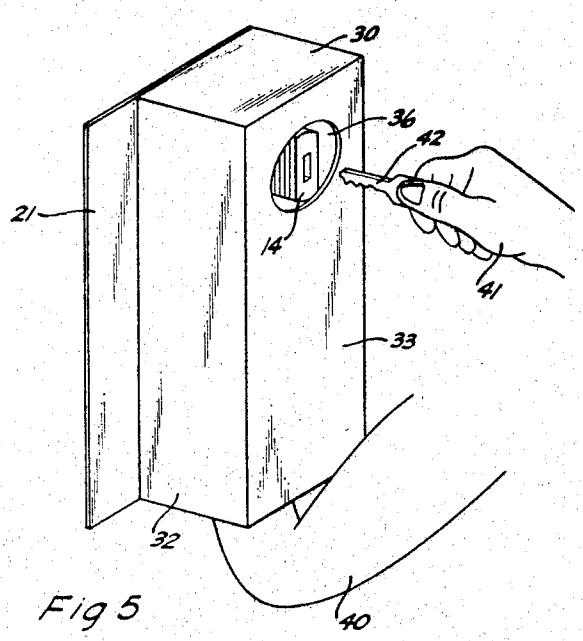


Fig 5

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BURGLAR-PROOF LOCKING DEVICE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a burglar-proof locking device and, more particularly, to a locking device which is strong enough to resist a sustained sledge hammer attack and which is readily adaptable to structures using existing locking devices.

2. Description of the Prior Art

One common type of conventional locking device for securing first and second relatively movable members, such as a door and a wall, includes a hasp, one side of which is usually welded to the door. The other side of the hasp has a slot therein through which extends a U-shaped staple secured to the wall. With the staple extending through the slot in the hasp, a padlock is placed on the staple thereby preventing removal of the staple from the slot in the hasp.

Such a locking device has a serious disadvantage associated therewith, namely that due to the fragile nature of the staple, it is almost impossible to make it strong enough to defy a sustained sledge hammer attack. As a result, there have been numerous instances where locked facilities have been burglarized, the burglars gaining entrance simply by breaking off the staple and padlock with a sledge hammer.

In order to solve this problem and to make these conventional hasp and staple locking devices resistant to thieves and trespassers, devices have been suggested for shielding the staple and padlock from unauthorized tampering. However, all of such suggested devices have had only limited success and, as a result, have not gained wide acceptance. In addition, many of such devices have required a complete redesigning of existing locking systems making them too expensive to be practical.

SUMMARY OF THE INVENTION

In accordance with the present invention, there is provided a locking device which solves all of the problems discussed above with conventional locking devices and with so-called shielding devices. The present device may be simply installed in existing structures utilizing conventional locking devices thereby avoiding the necessity for completely redesigning existing locking systems. In addition, the present locking device is strong enough to withstand the most energetic sledge hammer attack. In fact, in actual tests, the design resisted all efforts of several crews assigned to break the present locking device.

Briefly, the present locking device for securing first and second relatively movable members includes a padlock-receiving staple secured to one of the members and a padlock which extends around the staple in a conventional manner. The conventional hasp is replaced by a unitary, hollow, box-like structure having top, front, back and first and second side walls of dimensions suitable for containing the padlock therein. The back wall is adapted to be connected to the second member and has a staple-receiving slot therein. The structure has an open bottom for insertion of the padlock so that it may engage the staple. The structure also has an opening in the front wall thereof which faces and is aligned with the staple-receiving slot for providing access for a padlock-actuating key. To attach

the padlock, one hand is extended into the structure from the bottom thereof and the padlock is slipped into place and snapped shut. To unlock, one hand is again extended into the structure from the bottom thereof to grasp and turn the padlock toward the opening in the front wall thereof. With the other hand, a key is inserted through the opening in the front wall and the padlock is unlocked and removed.

It is therefore an object of the present invention to provide a burglar-proof locking device.

It is a further object of the present invention to provide a locking device which is strong enough to withstand a sustained sledge hammer attack.

It is a still further object of the present invention to provide a locking device which positions a protective structure around a staple and padlock to shield such elements from a sledge hammer attack.

It is another object of the present invention to provide a burglar-proof locking device which is compatible with systems including conventional hasp-staple locking devices.

Still other objects, features and attendant advantages of the present invention will become apparent to those skilled in the art from a reading of the following detailed description of the preferred embodiment constructed in accordance therewith, taken in conjunction with the accompanying drawings wherein like numerals designate like parts in the several figures and wherein:

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an isometric view of a conventional, prior art, hasp-staple locking device;

FIG. 2 is an isometric view of the present locking device looking downwardly from the left and showing its relationship to a door and a wall;

FIG. 3 is an isometric view of the back of the locking device of FIG. 2 looking upwardly from the left;

FIG. 4 is a top plan view of the locking device of FIGS. 2 and 3 and showing the relationship of the parts thereof to the door and wall of FIG. 2; and

FIG. 5 is an isometric view of the present locking device, similar to the view of FIG. 2, and showing the manner of unlocking the padlock.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring now to the drawings and, more particularly, to FIG. 1 thereof, one common type of conventional locking device for securing a door **10** to a wall **11** to prevent the unauthorized opening of door **10** includes a steel hasp **12**, a staple **13** and a padlock **14**. Staple **13** is secured either to door **10** or wall **11**, depending upon whether door **10** swings inwardly or outwardly, staple **13** being shown secured to wall **11**. In such a case, one side of hasp **12** is attached, typically by welding, to door **10**, the other side of hasp **12** having a slot **15** therein which receives and straddles staple **13** when door **10** is in the closed position, as shown. In such position, padlock **14** may be slipped over and secured to staple **13** thereby preventing removal of staple **13** from hasp **12**.

Due to the fragile nature of staple **13** and its ready accessibility, it is impossible to make staple **13** strong enough to withstand a sustained sledge hammer attack. Therefore, entrance to the locked facility is relatively

easily gained by breaking off staple 13 and padlock 14 thereby permitting movement of door 10.

Referring now to FIGS. 2–4, the present locking device, generally designated 20, is designed to shield staple 13 and padlock 14 from a sledge hammer attack to therefore make door 10 strong enough to resist thieves and trespassers. In addition, locking device 20 may be used with a system such as that shown in FIG. 1 without a complete redesign thereof. More specifically, locking device 20 is a unitary, box-like structure comprising a generally rectangular, planar, back plate 21. The width *w* of back plate 21 is approximately equal to the corresponding dimension of hasp 12 of the embodiment of FIG. 1. On the other hand, the height *h* of back plate 21 is substantially greater than the corresponding dimension of hasp 12. The resultant dimensions of back plate 21 are relatively large compared to the dimensions of conventional hasps.

Back plate 21 is adapted to completely replace hasp 12 and one side thereof is adapted to be secured to door 10. Such securing would typically be achieved by welding plate 21 to door 10, as at 23, 24 and 25. As shown most clearly in FIG. 3, the other side of back plate 21 has a slot 22 therein, adjacent the top thereof, such slot having the same general dimensions as slot 15 in hasp 12. Such other side of back plate 21 is adapted to abut against wall 10 whereupon a staple 13 attached thereto by means such as screws 17 extends through slot 22 in back plate 21. To this point, operation is identical to the operation of the locking device described with reference to FIG. 1 whereby door 10 may be locked by slipping a padlock 14 over staple 13 thereby preventing the removal of staple 13 from slot 22 in back plate 21.

Device 20 also includes a housing, generally designated 29, which is connected to back plate 21 and which entirely encloses and surrounds slot 22 and staple 13 to shield staple 13 and padlock 14. More specifically, housing 29 may include a top plate 30 connected along and extending outwardly from that portion of the top edge of plate 21 which abuts against wall 11. Housing 29 may also include first and second side plates 31 and 32 which are connected to and extend outwardly from back plate 21, on either side of slot 22, side plates 31 and 32 being aligned with and connected to the side edges of top plate 30. Plates 30, 31 and 32 all extend outwardly from back plate 21 by equal amounts whereby a front plate 33 may be connected to the outermost edges of plates 30–32. Typically, each of plates 21 and 30-33 is made from hardened steel and they are connected together to form a unitary structure which is strong enough to defy any sustained sledge hammer attack. As shown most clearly in FIG. 3, the bottom of housing 29 is open, at 35, to permit access to staple 13. Finally, front plate 33 has a key-opening 36 therein, opening 36 being aligned with and facing slot 22 and staple 13.

Referring now to FIG. 5, in operation, housing 29 of locking device 20 is welded, as at 23, 24 and 25, to door 10 to completely replace the hasp 12 of prior art devices. To attach padlock 14 and to secure door 10, one arm 40 may be extended into housing 29, through bottom 35 thereof, whereupon padlock 14 may be slipped over staple 13 and snapped shut. In this condition, staple 13 may not be removed from slot 22 in back plate 21 and door 10 may not be moved relative to wall 11. In addition, plates 30–33 completely shield staple 13 and padlock 14 from a sledge hammer attack. In addition, by making housing 29 of hardened steel and by welding back plate 21 to door 10, it cannot be destroyed by conventional means. On the other hand, it is a simple matter for an authorized person to gain access to door 10. More specifically, to unlock padlock 14, arm 40 is again extended through bottom 35 of housing 29 and padlock 14 is grasped and turned so that the keyhold therein faces opening 36 in front plate 33 of housing 29. With the other hand 41, a key 42 is inserted through opening 36 in front plate 33 and padlock 14 may be opened. Once padlock 14 has been opened and removed, staple 13 may be removed from slot 22 in back plate 21 and door 10 may be opened.

It can therefore be seen that in accordance with the present invention, there is provided a locking device 20 which solves all of the problems discussed previously with conventional locking devices and with so-called shielding devices. Locking device 20 may be simply installed in existing structures utilizing conventional locking devices thereby avoiding the necessity for completely redesigning existing locking systems. In addition, locking device 20 is strong enough to withstand the most energetic sledge hammer attack.

While the invention has been described with respect to the preferred physical embodiment constructed in accordance therewith, it will be apparent to those skilled in the art that various modifications and improvements may be made without departing from the scope and spirit of the invention. Accordingly, it is to be understood that the invention is not to be limited by the specific illustrative embodiment, but only by the scope of the appended claims.

I claim:

1. A locking device for use, in combination with a padlock including a shackle extending from the top thereof and a key hole in the body thereof, in securing first and second members wherein a padlock-receiving staple is secured to said first member, comprising:

a unitary, box-like, hollow member having dimensions suitable for containing said padlock therein, said unitary member having a back wall, one portion of said back wall being connected to said second member, another portion of said back wall abutting against said first member, said another portion of said back wall having a staple-receiving slot therein, adjacent the top thereof, said unitary member having top, front, and first and second side walls in addition to said back wall, said structure having an open bottom for insertion of said padlock for engagement with said staple, said structure having an opening in the front wall thereof facing and aligned with said staple-receiving slot in said back wall for providing access for a padlock-actuating key, the height of said member being great enough to require the insertion through said open bottom of a significant portion of a forearm in order to grasp said padlock, the depth of said member being great enough to permit rotation of said padlock to align the bottom thereof with said opening in said front wall when said key hole in said padlock is in the bottom thereof.

2. A locking device for use, in combination with a padlock including a shackle extending from the top thereof and a key hole in the body thereof, in securing first and second relatively movable members wherein a conventional staple is secured to said first member, comprising:

a planar back plate, one side of said back plate adapted to be connected to said second relatively movable member, the other side of said back plate adapted to abut against said first member and having a slot therein positioned adjacent the top thereof and adapted to receive and straddle said staple, said plate being elongated in a direction parallel to said one and other sides so that said staple and said padlock secured thereto are spaced substantially from the bottom of said back plate; and

a housing connected to said back plate and entirely enclosing and surrounding said slot and said staple on the top, sides, and front thereof whereby access to said staple may be gained only through the open, bottom of said housing, said housing having a key-opening in one of the top, sides, or front thereof, said key-opening facing and being aligned with said slot, the dimensions of said housing being great enough to permit rotation of said padlock to align the bottom thereof with said key-opening when said key hole in said padlock is in the bottom thereof.

3. A locking device according to claim 1 wherein said key-opening is in the front of said housing.

4. A locking device according to claim 1 wherein said housing comprises:

a top plate connected along and extending outwardly from the top edge of said back plate;

first and second side plates connected to and extending outwardly from said back plate, on either side of said slot, the top edges of said side plates being connected to said top plate; and

a front plate connected to the outermost edges of said top and side plates whereby access to said staple may be gained through the bottom of said housing.

5. A locking device according to claim 4 wherein said top plate extends along only that portion of the top edge of said back plate which abuts against said first member.

6. A locking device according to claim 4 wherein said back, top, front, and first and second side plates are made from steel.

7. A locking device according to claim 6 wherein said back, top, front, and first and second side plates are welded together and wherein said one side of said back plate is adapted to be welded to said second member.

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