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3,436,937

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KEY SAFE

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Fig. 1

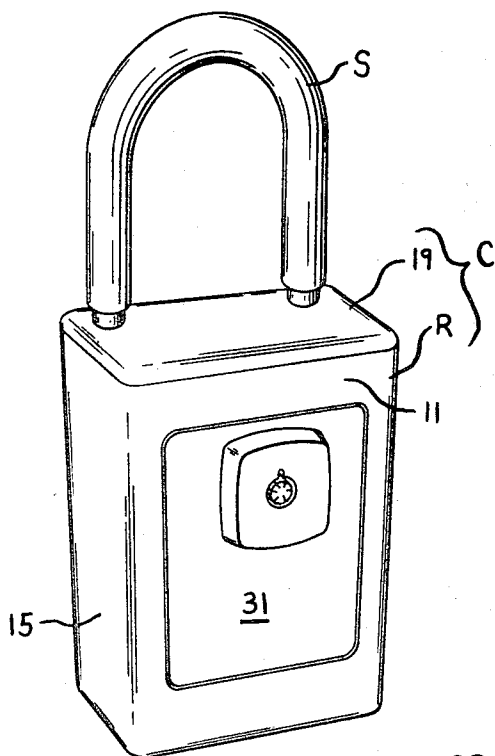
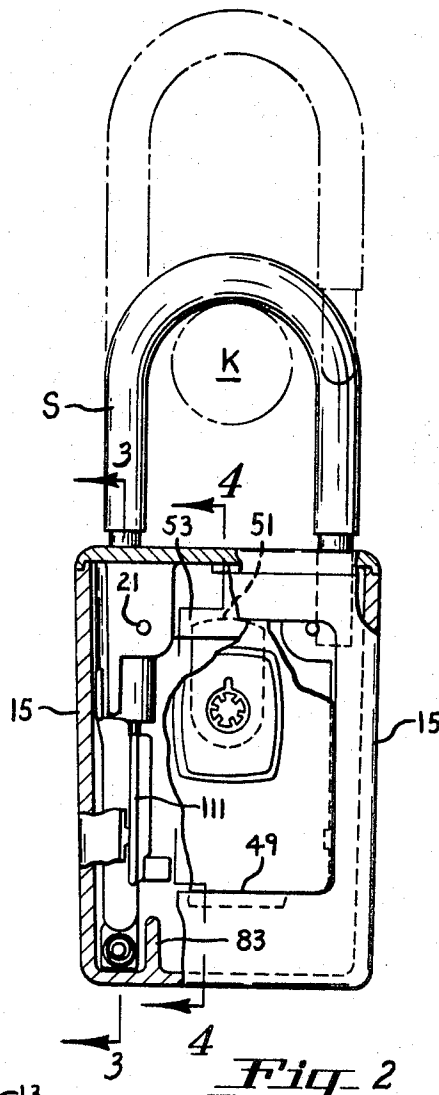


Fig. 2

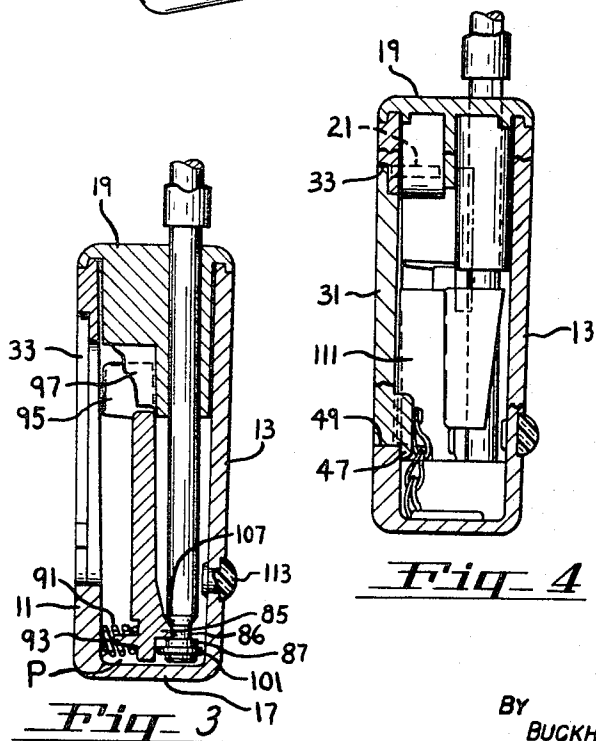


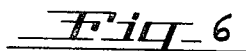
Fig. 4

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KEY SAFE

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12 Claims

ABSTRACT OF THE DISCLOSURE

A key safe of the type having a hollow box to contain a special key and mounted by means of a shackle, wherein the box comprises a receptacle having a cap through which the shackle legs slidably extend into the receptacle, the receptacle containing a latch for latching the shackle in its operative mounting position, and wherein there is a door in one wall of the receptacle through which access to the latch can be obtained, and wherein there are certain special relationships of the above and/or additional parts which will appear hereinafter.

BACKGROUND OF THE INVENTION

Field of invention

The invention relates to key safes which are present are primarily used by realtors, wherein each dwelling in a listing has a key safe mounted on the exterior thereof and containing the door key of the associated dwelling, and wherein one key can open all the safes, whereby the realtor need only carry only one key to obtain access to any number of dwellings.

Description of the prior art

Much of the prior art is contained in three patents to Williams, Nos. 2,911,814, 3,084,532 and 3,236,075 and the prior art references cited thereagainst. The second two Williams patents show key safes wherein a shackle mounting plate closes an opening in a receptacle, and a lock on the receptacle secures the receptacle to the shackle mounting plate. In Williams 2,911,814, a shackle extends through the receptacle and then into a closure member which is locked onto the receptacle.

BRIEF SUMMARY OF THE INVENTION

The basic features of the key safe are a key receptacle closed by a cap which provides guides for the legs of a shackle. A door on the receptacle when unlocked provides access to its interior where there is a latch for latching the shackle in its operative position and actuable to release the shackle for movement to an inoperative position. Other features which may be selectively combined with the above are (a) a relationship between the door and latch wherein the door when in place positively prevents the latch from releasing the shackle; (b) a door having an outer face flush with the outer face of the wall in which it is formed so as to prevent prying the key safe apart; (c) the construction wherein the cap retains the latch in place; (d) the construction whereby a lock on the door engages the cap to secure the door in place; (e) a simple construction wherein there is a simple plain cast receptacle and wherein the cap is constructed to provide many of the functions of the safe; and (f) the construction whereby the door conceals the means which secure the cap to the receptacle.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of the inventive key safe with the shackle in the latched operative position;

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FIG. 2 is a front elevational view of the key safe, with parts broken away for convenience in illustration, and showing in broken lines the shackle in its raised inoperative position;

FIG. 3 is a vertical section taken along line 3—3 of FIG. 2;

FIG. 4 is a vertical section taken along line 4—4 of FIG. 2;

FIG. 5 is an exploded view of the key safe;

FIG. 6 is a view of the underside of the cap of the key safe taken in the direction of the arrows 6—6 of FIG. 5; and

FIG. 7 is a bottom view of the latch taken in the direction of the arrows 7—7 of FIG. 5 and on a larger scale.

The key safe comprises a box-like safe member or case C which has a front wall 11, a rear wall 13 (FIG. 3), side walls 15, a bottom wall 17 and a top wall in the form of a cap 19. The walls 11, 13, 15 and 17 are provided by a receptacle R closed by the cap 19, the latter being secured to the front wall 11 of the case by a pair of pins 21 (FIGS. 2 and 4) in a manner presently to be described. The walls 17 and 19 may be considered as end walls.

The front wall has a flush door or cover 31 normally closing an opening 33 formed in the front wall. The configuration of the door is best shown in FIG. 5, the door being generally of rectangular panel form and being recessed on its rear face to provide (1) a pair of recessed face portions 35 to abut against a pair of recessed securing flanges 37 on the case C; (2) a pair of side margins 39 to abut against a pair of recessed stop flanges 41 fixed on the case; and (3) a pair of indentations 43 to accommodate a pair of stop lugs 45 formed on the case C. The recessed securing flanges 37 and the recessed stop flanges 41 are provided by a rabbetted construction of certain edge portions of the door opening. The door also has an integral hook portion 47 (FIGS. 4 and 5) at its lower end for hooking over an edge 49 defining the bottom of the opening 33. The hook portion 47 together with a lock L (FIG. 5) on the door 31 function to detachably secure the door in place when the lock and hook are both in their operative positions.

The lock L may be of several forms, the one shown incorporating the invention in the patent of D. A. Williams 3,237,436. Suffice it to say that a key (not shown) when inserted in the lock can turn the locking arm 51 from the upright operative position of FIG. 5 to a horizontal inoperative position. In its operative position the arm 51 fits behind a lock strike in the form of a web 53 (FIG. 2) on the cap 19 to lock the door in place with its front face flush with the front face of the front wall 11 (FIG. 4). In the inoperative position of the arm 51 it is clear of the strike 53 to permit removal of the door by tilting the door outwardly at its upper end and then moving the door upwardly so that the hook portion 47 is disengaged from the edge 49.

The door has a chain 55 (FIG. 5) for carrying the special key (not shown) which enables access to the building structure on which the key safe is hung (or facilitate use of the key in any other desired purpose).

The means for hanging the key safe on a building structure comprises a shackle S having a short leg 61 and a long leg 63, the bight of the shackle preferably being covered by an elastomer or plastic tube 64 to avoid marring the shank K (FIG. 2) of the door knob on which the shackle S may be hung.

The legs 61 and 63 are slidably received, respectively, in bores 65 and 67 (FIG. 5) formed in the cap 19, the bore 65 extending through a short boss 69 provided in cap 19, and the bore 67 extending through a long boss 71 provided on cap 19. The cap also has a pair of securing pads 73 which fit behind the securing flanges 37 and are formed with holes 75 to receive the pins 21 which are driven

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into holes 77 in the flanges 37 and then into the holes 75 in the pads 73 to secure the cap 19 to the receptacle R.

The long shackle leg 63 extends through its cap boss 71 and projects down into the case C in abutment with or just short of the bottom wall of the case.

Normally the shackle S is retained in its fully operative position shown in FIGS. 1-4 by a shackle latch member 81 whose overall shape is best shown in FIGS. 5 and 7. The latch member is generally of elongate form, the lower end of which fits in a pocket defined by a web 83 (FIG. 2) formed in the lower portion of receptacle R and by the walls of the receptacle R associated with the web. Such lower end has a projecting clevis like latch portion 85 (FIGS. 2 and 7) fitting in a reduced portion 86 of the shackle leg 63 and against a collar 87 formed on the leg by the reduced portion.

A compression spring 91 (FIG. 3) is disposed in the pocket P and surrounds a centering prong 93 of the latch member. The spring urges the latch member to remain in its operative latching position.

The upper end of the latch member has a rocker flange 95 which rather loosely fits (FIG. 3) between the front wall 11 and the cap boss 71, rests against the adjacent side wall 15 and is retained in place laterally by a web flange 97 on the cap 19 whereby the latch member is held in place within the receptacle R.

The latch member has a finger lug 99 by which the latch member may be pulled toward the front of the case against restraint of the spring 91, the rocker flange 95 rocking in the case to permit such movement of the latch member. This movement releases the long shackle leg 63 whereby the shackle may be pulled upwardly until a split ring 101 on the lower end of the long shackle leg engages the lower end of the associated shackle boss 71. At this point, the shackle is in the broken line position in FIG. 2 whereupon the shorter shackle leg 61 is spaced from the case a distance to permit the case and shackle to be separated from the door knob shank K.

In operation, with the door or cover 31 removed, the unlatched shackle S is hooked over the shank K of the door knob (or over any other supporting element) then the receptacle is moved upwardly so that the long shackle leg 63 slides downwardly into the case. When the lower end of such leg engages a camming surface 107 (FIG. 3) of the latch portion 85, the leg cams the lower end of the latch member 81 to the left (as the parts are shown in FIG. 3) to enable the latch portion to ride over the lower end of the shackle leg 63 and then snap into the recess 86 to latch the shackle in place with its short leg 61 projecting into the receptacle.

The door 31 is now mounted in place, the special key, not shown, being of course, placed in the case C first.

To remove the special key from the safe, the door 31 is unlocked and removed. This removal of the door in no way affects the shackle S, the latter being released only by releasing the latch member 81 by lifting the finger lug 99.

When the cover or door 31 is in place, it is in contiguous relation to the front edge of a safety flange 111 (FIG. 4) provided on the latch member. This relationship positively prohibits movement of the latch member to its releasing position, so that no amount of juggling or striking of the safe will effect release of the shackle S when the door is locked in place. The just described safety flange feature is preferable, but, as an option, its relationship to the door or cover 31 may be such as to allow releasing movement of the latch member 81 even through the door or cover is in place. If this optional construction is adopted, the door or cover 31 can be secured in place on the receptacle R before the shackle S is moved to its latched condition, because, while such movement of the shackle S necessarily cams the latch to its releasing position (by virtue of cam surface 107), such movement of the latch member is permitted by the optional construction.

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An elastomer bumper 113 (FIGS. 3 and 5) snaps into holes in the rear wall of the receptacle and prevents marring the door or other adjacent surface. One or more elastomer suction cups could be employed instead of the bumper 113. Since the shackle legs are contained entirely within the case, they cannot mar the door.

While the receptacle R shown may be considered as being permanently closed at its lower end by the integral bottom wall 17 (and open at its upper end), it could be permanently closed at its upper end instead and open at its lower end. In such case, the lower end would be closed by a bottom cap, like cap 19, and the legs of the shackle S would slidably extend through the permanently closed top or upper end of the receptacle. In such case, the web 53 and the bosses for the shackle legs would be integral parts of the receptacle, while the web 83 would be formed on the bottom cap. Otherwise, the parts would be essentially the same as they are depicted in FIGS. 1-7.

Having described the invention in what is considered to be the preferred embodiment thereof, it is desired that it be understood that the invention is not to be limited other than by the provisions of the following claims.

I claim:

1. A key safe comprising:

a case made up of a receptacle and a cap, said receptacle having front and rear walls joined by end and bottom walls and being open at the top, said cap closing said open top, a shackle having a pair of legs slidably extending through said cap, at least one leg projecting into said receptacle and both legs terminating short of the bottom wall of said receptacle,

latch means in said receptacle latching said shackle in an operative position and actuatable to release said shackle for movement to an inoperative position, said front wall having a door opening formed therein, a door closing said opening, lock means carried by said door for locking said door in said closed position, said door when open providing access to said latch means to facilitate release of said shackle, said latch means having a manually actuatable releasing member which when actuated inactivates said latch means, said releasing member being separate and independent from said lock means whereby unlocking of said lock means has no effect on said latch means.

2. A key safe as in claim 1 wherein there are means mounting said releasing member for movement from a first inactive position to a second activating position, said door when closed occupying the second position of said releasing member to positively prevent release of said latch means, the walls of said receptacle being permanently joined to one another, said cap having inwardly extending bosses provided with bores to provide the sole guiding means for said legs.

3. A key safe as in claim 1 wherein said lock means has an interiorly disposed lock member movable from an operative position to an inoperative position, and a lock strike carried by said cap in fixed relation thereto and positioned to be engaged by said lock member in the operative position of the latter.

4. A key safe as in claim 1 wherein said front wall has a rabbeted edge portion at said opening, said door being seated against said rabbeted portion and having a thickness equal to the depth of said rabbet so that the outer face of said door is flush with the outer face of said front wall,

and means on said shackle for engaging said cap preventing complete separation of said shackle and cap.

5. A key safe as in claim 1 wherein there are mounting means within said case mounting said latch means in place,

said mounting means comprising portions of said receptacle and portions of said cap,
 said latch means comprising an elongate latch member extending parallel to said one leg of said shackle, said elongate latch member having a lower portion in latching engagement with the lower end portion of said one leg,
 said mounting means mounting said elongate latch member for lateral movement toward and away from said one leg.
 6. A key safe as in claim 1 wherein there are securing means for securing said cap to said receptacle, said front wall having a rabbetted edge portion through which said securing means extends,
 said door concealing said securing means when said door is locked in place but exposing said securing means when said door is open.
 7. A key safe as in claim 1 wherein said door when closed positively prevents release of said latch means, said lock means has an interiorly disposed lock member movable from an operative position to an inoperative position,
 a lock strike in fixed relation on said cap for engaging said lock member in the operative position of the latter,
 said door has an outer face flush with the outer face of said front wall,
 and means on said shackle for engaging said cap preventing complete separation of said shackle and cap, mounting means within said case mounting said latch means in place,
 said mounting means comprising portions of said receptacle and portions of said cap,
 securing means for securing said cap to said receptacle, said door concealing said securing means when said door is locked in place but exposing said securing means when said door is open.
 8. A shackle type key safe comprising:
 a box-like safe member and a shackle having a pair of legs slidably received by the box-like safe member, said box-like safe member including at least two separable body parts and means for locking the two parts together,
 latching means disposed within said safe member and latchably engaging said shackle to releasably hold it in an operative position,
 said latching means including a latch releasing member accessible only after said parts are separated, and movable from a first inoperative position to a second operable position,
 said body parts when together having a portion occupying said second operable position of said latch releasing member to prevent said latching releasing member from assuming its operable position.
 9. A shackle type key safe comprising:
 a hollow box-like safe member comprising a receptacle and a cap,
 said receptacle having a front wall and a rear wall and a pair of side walls joining said front and rear walls, and a bottom wall joining the front, rear and side walls, whereby said receptacle is open at the top thereof,
 said receptacle having an upright web wall in the lower portion thereof extending between the front and rear walls of said receptacle and disposed closer to one side wall than the other to define a pocket with the adjacent walls,
 said cap fitting on said receptacle at the upper end thereof to close the same,
 said cap having portions which with adjacent wall portions define an upper pocket in said receptacle, said cap having a pair of parallel passages formed therein parallel to the length of said receptacle, a shackle having a pair of legs slidably projecting into said passages,
 one leg being longer than the other and projecting into

said receptacle and down into the first mentioned pocket in an operative position and withdrawable from said pocket to assume an inoperative position,
 a single piece shackle latch member disposed within said receptacle and projecting into both pockets to be retained in place within said receptacle, the lower end of said shackle having a collar,
 said latch member engaging said collar to releasably retain said shackle in its operative position,
 spring means in said first mentioned pocket urging said latch member to remain in its operative engaging position,
 said latch member having a releasing portion accessible only from the interior of said receptacle whereby said latch member may be moved to a releasing position,
 said front wall having an opening formed therein to facilitate access to the releasing portion of said latch member,
 a door closing said opening, said door having a hook on its lower end to hook onto said front wall,
 a key lock on said door operable by a key to move a lock arm of said lock from an operative upright position to an inoperative position,
 said cap having portions disposed to engage said lock arm when the latter is in its operative position,
 said cap having portions to engage the lower end of said one shackle leg to prohibit withdrawal of said one shackle leg from said cap,
 said latch member having a safety flange projecting toward said door and terminating in contiguous relation to the latter when said door is in place and said latch is in its operative position,
 said latch member being movable toward said door when being actuated to release said shackle whereby when said door is in place said safety flange prohibits unlatching movement of said latch member.
 10. The key safe of claim 9 wherein said front wall has securing flanges covered by said door when the latter is locked in place, and
 securing means covered by said door and securing said flanges to said cap to retain said cap in place.
 11. The key safe of claim 10 wherein said receptacle tapers inwardly from top to bottom both exteriorly and interiorly to facilitate the casting thereof with the aid of an exteriorly disposed female mold member and an interiorly disposed male member separable in a direction lengthwise of said receptacle,
 and wherein said door has a hook on its lower end to hook onto said front wall.
 12. A key safe having a case composed of three parts, said case including upper and lower end walls and front and rear walls,
 a shackle slidably extending through the upper end wall,
 said case including a receptacle member which provides the front and rear walls of said case but one only of the end walls,
 the other end wall of said case comprising a cap member secured to said receptacle,
 said front wall having an opening formed therein, the third part of said case comprising a cover for said opening,
 first latch means carried by said cover for detachably locking said cover to said receptacle,
 and second latch means independent of said first latch means and disposed entirely within said case and mounted on portions of said case other than said cover and detachably locking said shackle to said case,
 said second latch means including actuator means operable when actuated for inactivating said second latch means,
 said actuator means being located inwardly of said cover and being exposed upon removal of said cover.

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U.S. Cl. X.R.