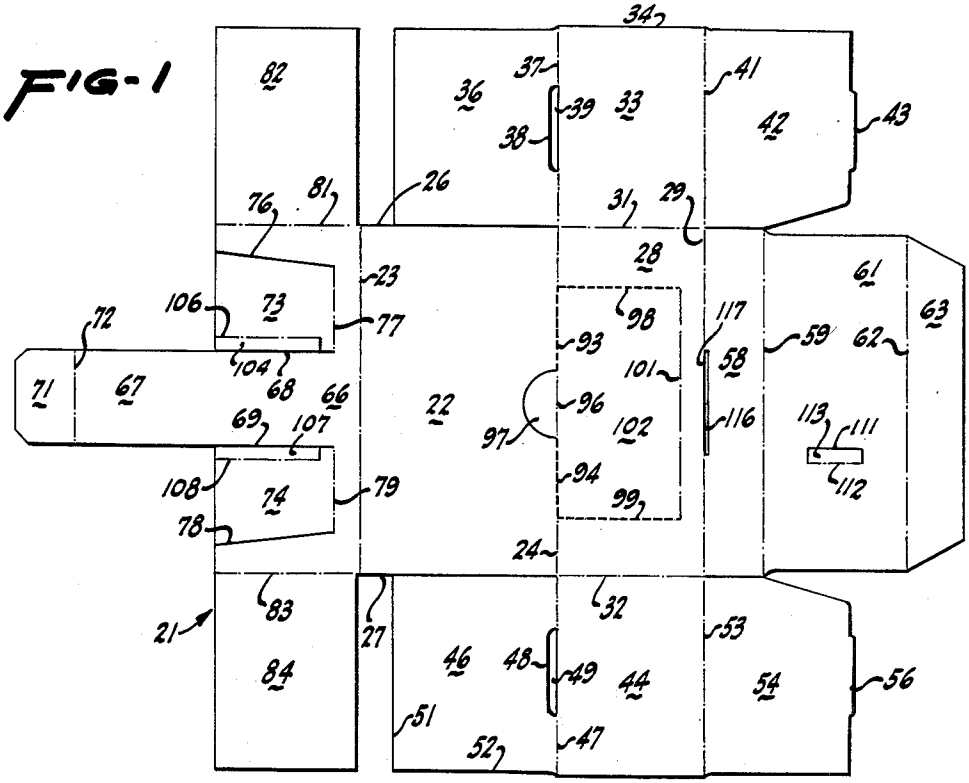
Oct. 29, 1963 H. L. DE VINES 3,108,685

LOCK BOX

Filed Sept. 26, 1962 2 Sheets-Sheet 1

FIG-1



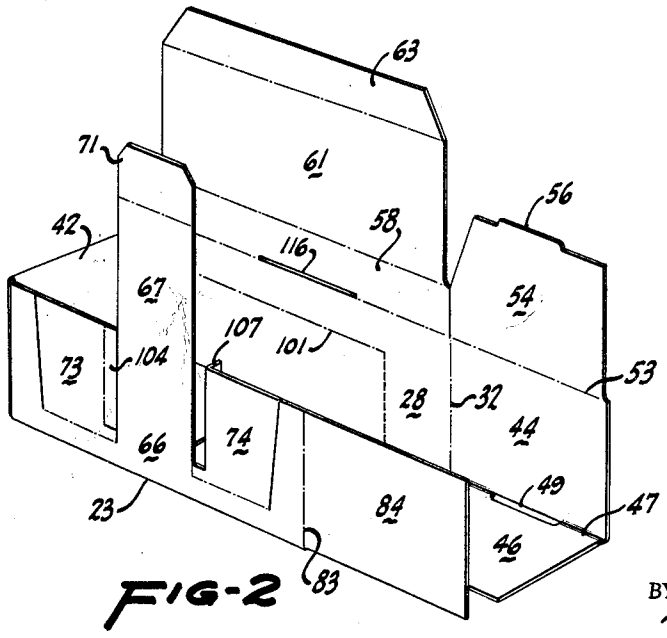


FIG-2

INVENTOR.
HOLLIS L. DeVINES
BY Lothrop & West
ATTORNEYS

Oct. 29, 1963 H. L. DE VINES 3,108,685

LOCK BOX

Filed Sept. 26, 1962 2 Sheets-Sheet 2

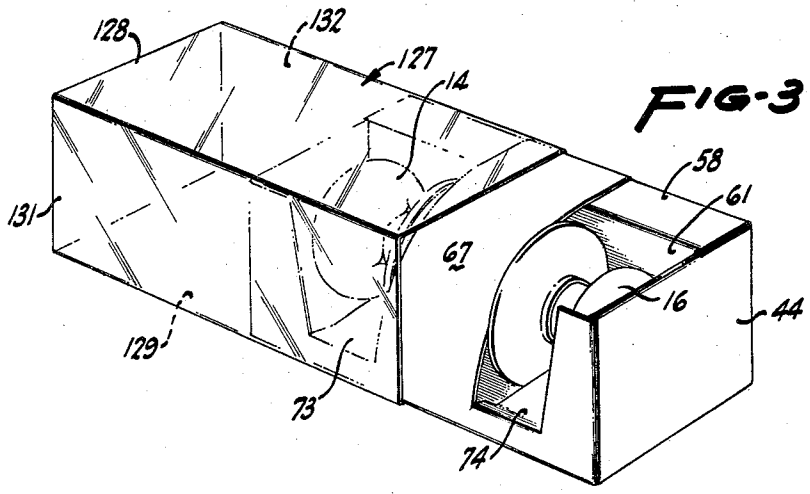
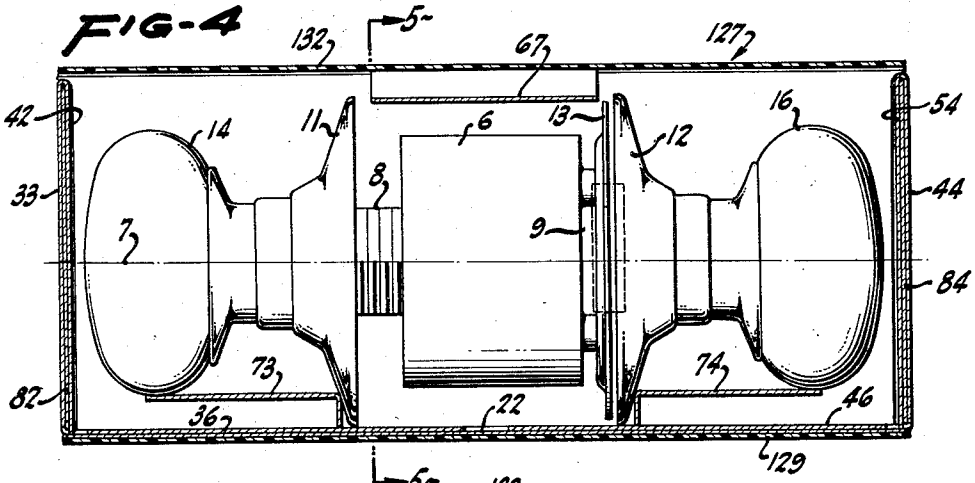


FIG-3

FIG-4



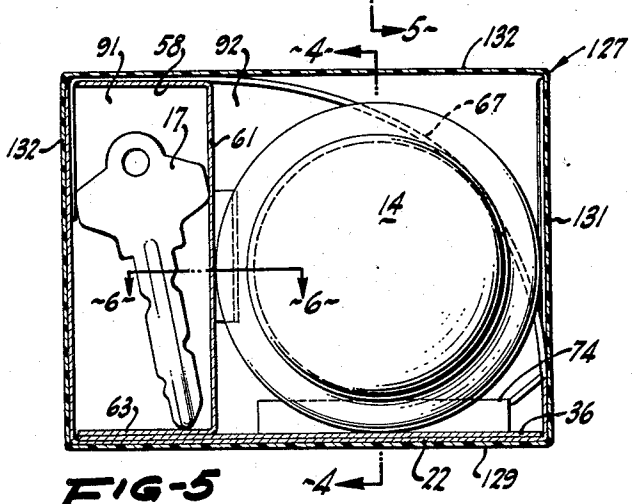


FIG-5

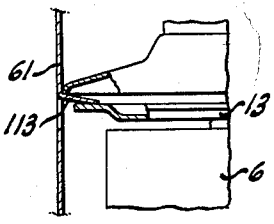


FIG-6

INVENTOR
HOLLIS L. DEVINES
BY Lothrop & West
ATTORNEYS

United States Patent Office 3,108,685 Patented Oct. 29, 1963

3,108,685

LOCK BOX

Hollis L. De Vines, San Francisco, Calif., assignor to Schlage Lock Company, a corporation

Filed Sept. 26, 1962, Ser. No. 226,323
5 Claims. (Cl. 206—45.33)

My invention relates to packages or enclosures primarily intended to protect and contain a lock. While the package is adaptable to locks of various different kinds and forms, it is especially designed for use with a cylindrical lock having a central body substantially symmetrical about a through axis and having rosettes of substantially planar configuration on either side of the body. The lock terminates in knobs at either end.

In packaging locks it is customary to supply not only the cylindrical lock itself, but also certain adjuncts such as a latch bolt unit, a set of keys, a strike plate, installation templets, instruction manuals, screws and comparable items.

Since the knob configuration and other visible characteristics of individual locks vary substantially and because it is desired to make easier the identification of boxed locks, it is an object of the present invention to provide a lock box in which certain portions, at least, of the lock are readily visible.

Another object of the invention is to provide a lock box in which the lock is firmly and securely mounted.

Another object of the invention is to provide a lock box in which the various parts of the lock as normally furnished are packaged together but in which sundry parts are readily available individually.

Another object of the invention is to provide a lock box effective to position a lock within the box for improved handling and shipment.

Another object of the invention is to provide a lock box readily fabricated of inexpensive material to afford excellent protection to the lock.

Another object is in general to improve lock boxes.

Other objects together with the foregoing are attained in the embodiment of the invention described in the accompanying description and illustrated in the accompanying drawings, in which:

FIGURE 1 is a plan of a blank from which the box of the invention is erected;

FIGURE 2 is an isometric view showing the blank of FIGURE 1 in partially erected condition;

FIGURE 3 is an isometric view similar to FIGURE 2 but showing the box in fully erected condition and with the enclosure partly positioned thereon;

FIGURE 4 is a cross section, the plane of which is indicated by the lines 4—4 of FIGURE 5;

FIGURE 5 is a cross section, the plane of which is indicated by the lines 5—5 of FIGURE 4; and

FIGURE 6 is a detailed cross section with parts broken away, the plane of section being indicated by the line 6—6 of FIGURE 5.

The lock box of this invention is particularly useful in connection with a cylindrical lock. A typical lock of this short includes a central, approximately cylindrical body 6 symmetrical about a longitudinal axis 7. Extensions 8 and 9 extend from the central body 6 and carry a pair of approximately planar rosettes 11 and 12. Either one or both of the rosettes are movable toward the central body 6, usually by being rotated on threads on the extensions 8 and 9. In some instances the central body 6 includes a backing plate 13 relative to which the rosette 12, for example, can be moved axially. The lock also includes at the ends of the extensions 8 and 9 appropriate manual knobs 14 and 16, rotation of which relative to the central

body 6 actuates the lock mechanism. A key 17 represents various other accouterments accompanying the lock.

Pursuant to the invention there is provided a box blank 21 conveniently fabricated of fiberboard or cardboard. Usually this is but one sheet in thickness, although in some instances the blank is of corrugated fiberboard faced on both sides with planar sheets. The blank is cut and scored in various different ways so as to be readily erected into an appropriate enclosure. Included in the blank 21 is a botton panel 22 defined by a forward score or fold line 23 and a similar rearward fold line 24. The bottom panel 22 is also defined by a cut side edge 26 and an opposite cut side edge 27.

On the other side of the fold line 24 is a rectangular back panel 28 defined by an upper edge fold or score line 29 and side score lines 31 and 32. The blank is generally symmetrical. On one side of the score line 31 there is an end panel 33 having an edge 34. A rectangular bottom flap 36 is distinguished from the end panel 33 partly by a fold line 37 and also by a cut boundary 38 defining an opening 39 left after the intervening material is removed. On the other side of the end panel 33 is a fold line 41 continuing the fold line 29. This serves as a boundary for an end fold panel 42 having an edge configuration forming a tongue 43.

On the other side of the blank there is another end panel 44 on the opposite side of the score line 32 from the back panel 28. The panel 44 is divided from a bottom flap 46 partly by a fold line 47 extending the line 24 and partly by a cut line 48 circumscribing an opening 49 provided when the intervening material is punched out. The bottom flap 46 has edges 51 and 52. On the opposite side of the end panel 44 and across a fold line 53 extending the fold line 29 is a fold flap 54 contoured to define a tongue 56.

Separated from the back panel 28 by the fold line 29 is a top panel 58 of lesser width than the bottom panel 22. A fold line 59 distinguishes the top panel from a partition panel 61 separated by a fold line 62 from a flap 63.

On the other side of the forward fold line 23 of the bottom panel 22 is a front panel 66 partially separated from an integral strap 67 by cut lines 68 and 69. The strap terminates in a tab 71 bounded by a fold line 72. On either side of the strap 67 are panels 73 and 74. The side panel 73 is partly defined by the cut line 68 along one edge and by a similar cut line 76 on the other edge as well as by a fold line 77. Similarly, the panel 74 is on one edge defined by the cut line 69, on the other edge by a cut line 78 and finally by a fold line 79. One end of the front panel 66 ends at a fold line 81 marking the boundary of an end flap 82, whereas the other end of the front panel 66 is marked by a fold line 83 partially defining an end flap 84.

In the erection of the blank as so far described, the bottom panel 22 is arranged horizontally, usually on a support, in a position to underlie and be parallel to the axis 7 of the lock. Then the bottom flaps 36 and 46 are rotated upwardly about the fold lines 37 and 47, respectively, so that they are upstanding from the horizontal plane of the blank. Then the back panel 28 and its attachments is rotated upwardly about the fold line 24 until the back panel itself extends upwardly at approximately a right angle to the bottom panel. This makes the flaps 36 and 46 again substantially horizontal. Then the end panels 33 and 44 are rotated forward about their repective score lines 31 and 32 with the bottom flaps 36 and 46 sliding just above and over the bottom panel 22. This substantially encloses the ends of the box.

The end flaps 82 and 84 are then folded upwardly about the fold lines 81 and 83 with respect to the front panel 66 and then the entire front panel and its appur-

tenances is rotated upwardly about the fold line 23. This rotates the end flaps 82 and 84 across the inner faces of the end panels 33 and 44 until they come to rest just above the inwardly projecting bottom flaps 36 and 46. With the parts in this position, the members 42 and 54 are rotated through approximately one hundred eighty degrees around their respective fold lines 41 and 53 and are forced downwardly to overlie the next adjacent flaps 82 and 84. They are brought to rest with the tongue 43 occupying the opening 39 and resting against the boundary 38 and with the tongue 56 occupying the opening 49 and resting against the edge 48. This provides three material thicknesses at the ends, the thicknesses being the panel 33, the flap 82 and the panel 42 at one end and the panel 44, the flap 84 and the flap 54 at the other end. At this time the box is in the condition shown in FIGURE 2 except that both ends are closed.

It is then in order to position the accouterments 17 such as the latch bolt unit, the strike box, keys, instruction sheet, templet, and the like, in the box on the bottom panel 22 next to the fold line 24. Alternatively, the box temporarily can be turned to rest on the back panel 28 and the mentioned equipment positioned thereon. Following that, the top panel 58 with its attachments is rotated about the fold line 29 until it is parallel to the bottom panel 22. Furthermore, the flap 63 is rotated approximately ninety degrees with respect to the partition panel 61 and the partition panel then is rotated through about ninety degrees around the fold line 59 so that the flap 63 is disposed substantially parallel to the bottom panel 22 and overlies portions of the inwardly extending bottom flaps 36 and 46.

This positioning of the panel 61 makes an arrangement, as shown particularly in FIGURE 5. The interior of the box is divided into two compartments. One of these is an auxiliary equipment compartment 91 and the other is a lock compartment 92. Once the partition panel 61 and the flap 63 have been positioned as shown in FIGURE 5, the compartment 91 is relatively inaccessible. It sometimes occurs that the contents of the compartment 91 are to be separately withdrawn from the package. For that reason, the fold line 24 is altered in part to include two lines 93 and 94 of perforations separated by an intervening fold line 96 and augmented by a semicircular cut line forming a tab 97. The perforated lines 93 and 94 are continued on parallel side lines 98 and 99 ending at a fold line 101. This assemblage of perforated lines and fold lines and cut lines defines a panel 102 as a subdivision of the back panel 28. When the tab 97 is grasped and the panel 102 is pulled, the perforated lines 93, 94, 98 and 99 sever the panel 102 partially from the back panel 28. The tab 97 itself is folded partially around the line 96 and the panel 102 itself is folded around a fold line 101, thus affording an opening giving access to the contents of the compartment 91.

The panels 73 and 74 are rotated about their fold lines 77 and 79 to lie parallel to the bottom panel 22. The panel 73 is provided with a flap 104 separated therefrom by a fold line 106 and similarly the panel 74 is provided with a flap 107 separated from it by a fold line 108. These flaps are turned at right angles to the bottom panel 22 and to the panels 73 and 74, particularly as illustrated in FIGURE 4. Following this, the lock is positioned in the compartment 92. To assist in holding the lock in place the partition panel 61 can be provided with a cut line 111 and a fold line 112 to afford an outstanding tab 113 (FIGURE 6). This can be positioned between the rosette 12 and the backing plate 13. This alone is sufficient to assist in locating the lock, but if desired the rosette 12 can be turned toward the plate 13 forcibly to clamp the tab 113 and thus to prevent the lock from rotating within the box. The panels 73 and 74 afford support for the knobs 14 and 16, whereas the rosettes 11 and 12, being somewhat greater in diameter than the diameter of the central body 6, approximately abut the partition panel 61 and the bottom panel 22, but preferably are slightly spaced from the top panel.

To hold the lock in its so established position, the strap 67 is bent throughout substantially its entire length to overlie the central body 6. The width of the strap is approximately that of the normal spacing between the rosettes 11 and 12 or the corresponding parts of the lock so that the side edges of the strap are disposed freely between the rosettes. The strap itself extends over the lock and also passes over the top panel 58. The tab end 71 of the strap is folded down around the fold line 72 and is received in an opening or socket 116 formed by a cut or cuts 117 approximately on the fold line 29 but usually extending partly into the panel 58. Thus, as shown in FIGURE 5 particularly, the tab 71 is frictionally retained in the socket and the strap overlying the lock assists in holding it in position.

Finally, and to hold all of the parts in assembled relationship, the package as so far described is surrounded by a clear plastic partial envelope 127 having a top wall 128, a bottom wall 129 and side walls 131 and 132. The envelope or jacket 127 is substantially the same length as the box and accommodates the box with a sliding frictional fit. When in final position as shown in FIGURE 4, the package is self-contained and is complete. The knobs of the lock are exposed to view when the jacket 127 is in position. If the jacket is partly or entirely retracted, one or both of the knobs are made available for at least partial rotation and operation if that is desired. The parts, being visible, can easily be inspected and checked. If desired, the back panel 102 can be left open or entirely omitted and the contents of the compartment 91 can then also be observed through the jacket 127 when it is in place.

What is claimed is:

1. A lock box for a lock having a central body substantially symmetrical about an axis with rosettes on either side of said body, at least one of said rosettes being movable toward said body comprising a planar bottom panel adapted to underlie said lock parallel to said axis, a back panel upstanding from one edge of said bottom panel, means on said back panel foming a socket, a front panel upstanding from another edge of said bottom panel, a strap extending from said front panel over said central body and having a tab extending into said socket, a top panel extending forwardly from said back panel, a partition panel depending from said top panel, and means forming a flange on said partition panel adapted to extend between said body and said one rosette in a position to be gripped thereby.

2. A lock box for a lock having a central body substantially symmetrical about an axis with rosettes on either side of said body comprising a planar bottom panel adapted to underlie said lock parallel to said axis, a back panel upstanding from one edge of said bottom panel, a top panel extending forwardly from the upper edge of said back panel, a partition panel depending from the forward edge of said top panel and dividing said lock box into two compartments, means forming a socket adjacent the intersection of said top panel and said back panel, and a strap extending from said front panel and over said top panel and having a tab extending into said socket.

3. A lock box as in claim 2 in which said strap is substantially equal in width to the distance between said rosettes.

4. A lock box for a lock having a central body substantially symmetrical about an axis comprising a planar bottom panel adapted to underlie said lock parallel to said axis, a back panel upstanding from one edge of said bottom panel, a top panel extending forwardly from the upper edge of said back panel, a partition panel depending from the forward edge of said top panel and dividing said lock box into two compartments, means forming a

socket adjacent the intersection of said top panel and said back panel, a strap extending from said front panel and over said top panel and having a tab extending into said socket, and means forming a weakened boundary defining a detachable portion of said back panel.

5. A lock box for a lock having a central body substantially symmetrical about an axis comprising a planar bottom panel adapted to underlie said lock parallel to said axis, a back panel upstanding from one edge of said bottom panel, a top panel extending forwardly from the upper edge of said back panel, a partition panel depending from the forward edge of said top panel and dividing said lock box into two compartments, means forming a socket midway between the ends of said lock box and

adjacent the intersection of said top panel and said back panel, a strap extending from the central portion of said front panel over said top panel and having a tab extending into said socket, and a transparent envelope surrounding and engaging said top, front, bottom and back panels and said strap to hold said lock box closed.

References Cited in the file of this patent

UNITED STATES PATENTS

1,320,933	Schoenfeld	Nov. 4, 1919
1,550,687	Gibson	Aug. 25, 1925
1,569,679	Sanborn	Jan. 12, 1926
2,157,954	Gould	May 9, 1939