Oct. 3, 1939. J. J. KULHANEK 2,175,124

BOX COVER RETAINER

Filed Sept. 2, 1937

Fig. 1.

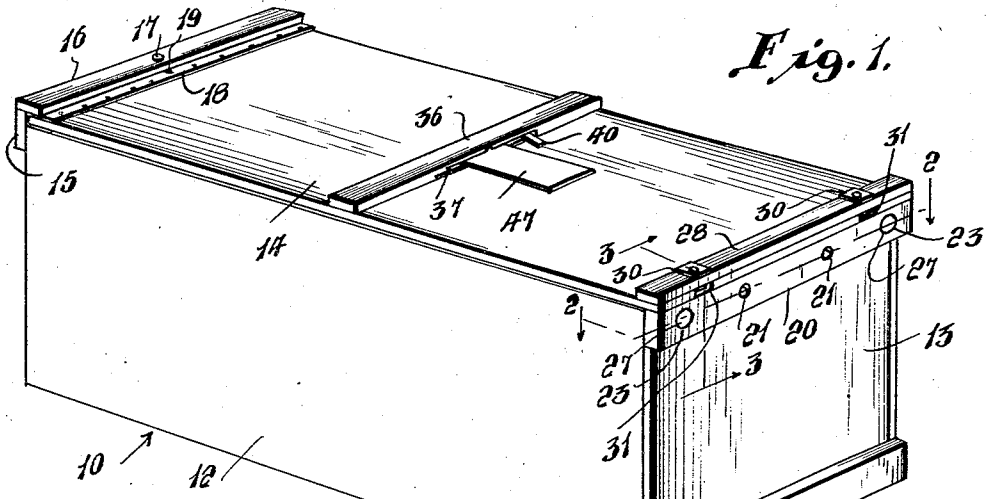


Fig. 2.

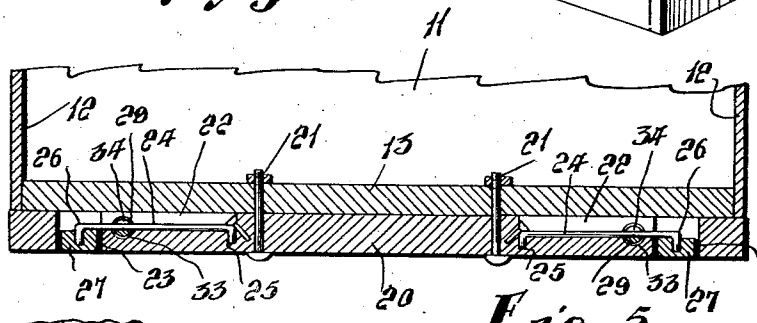


Fig. 3.

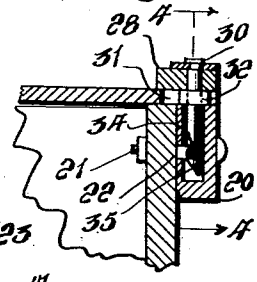


Fig. 5.

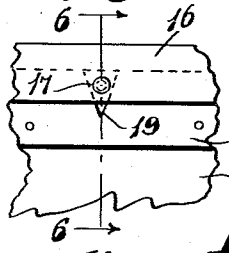


Fig. 6.

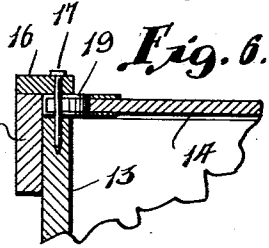


Fig. 4.

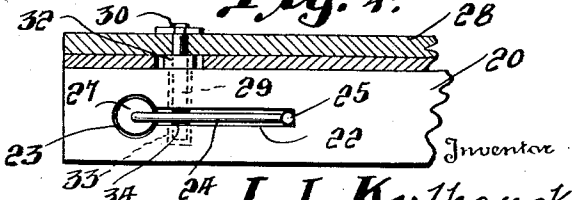
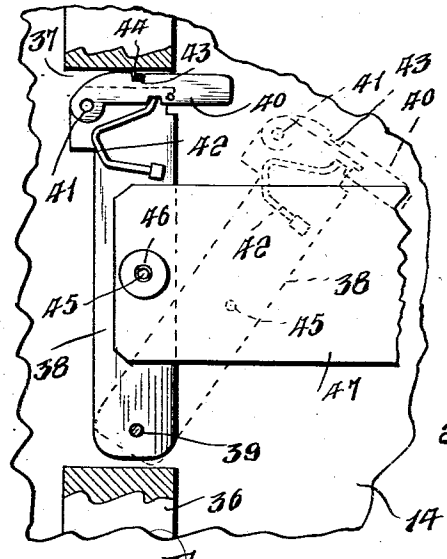


Fig. 7.



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BOX COVER RETAINER

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Application September 2, 1937, Serial No. 162,227

3 Claims. (Cl. 292—303)

This invention relates to certain new and useful improvements in a box cover retainer.

The primary object of the invention is to provide a retainer in the form of a lock or latch for the cover of a box or crate with the cover securely retained in position on the box or crate during shipment, the cover carrying a holder for an address or identification tag that is operable to permit release of the tag.

A further object of the invention is to provide a box or crate cover retainer of the foregoing character with the lock or latching device for the cover located at one end of the box or crate with the other end of the cover having an interlocking connection with a box or crate and a centering or positioning device for the cover to properly locate the lock or latching device cooperatively carried by the body of the box or crate and cover.

With the above and other objects in view that will become apparent as the nature of the invention is better understood, the same consists in the novel form, combination and arrangement of parts hereinafter more fully described, shown in the accompanying drawing and claimed.

In the drawing:

Figure 1 is a perspective view showing the box cover retainer of the present invention and also the tag holder for the cover;

Figure 2 is a fragmentary horizontal sectional view taken on line 2—2 of Figure 1, showing the latching devices for retaining the cover in position on the box and the push button for releasing the latching devices;

Figure 3 is a detail sectional view taken on line 3—3 of Figure 1, showing notched pins carried by the box cover engaged with keeper arms carried by the body of the box;

Figure 4 is a vertical detail sectional view taken on line 4—4 of Figure 3;

Figure 5 is a fragmentary top plan view of the box cover showing the interlocking connection between one end of the cover and box and the devices for centering or locating the cooperating latch devices carried by the box and cover at the opposite end of the box;

Figure 6 is a fragmentary sectional view taken on line 6—6 of Figure 5; and

Figure 7 is a fragmentary top plan view, partly in section of the box cover showing the holding device for the address or identification tag attached to the cover with the holding device shown in dotted line position for releasing the tag.

Referring more in detail to the accompanying drawing, the reference character 10 designates in general a box, crate or similar container including a bottom wall 11, side walls 12, end walls 13 and a removable cover 14 that has an interlocked and latched connection with the open upper end of the box.

The interlocking connection between one end of the cover 14 and the box 10 is shown more clearly in Figs. 1, 5 and 6, the upper edge of an end wall 13 having a cleat 15 secured thereto with the upper horizontal edge of the cleat 15 extending above the upper edge of said end wall 13 for the anchoring attachment of a bar 16 extending transversely of the end of the box 10. A centering nail or pin 17 is driven downwardly through the bar 16 midway the ends thereof for anchoring in the upper edge of the end wall 13, the mounting of the cleat 15 and bar 16 on the box end providing a transversely extending groove or channel as shown in Figure 6. One end of the cover 14 is reinforced by a metallic sheath 18 of U-shape that encloses the same and said end and metallic sheath is provided with a V-shaped notch 19 intermediate the side edges of the cover 14 to be received on or straddle the pin 17 that extends downwardly through the groove to enter the upper edge of the end wall 13.

The latch connection between the other end of the cover 14 and the body of the box 10 is shown more clearly in Figs. 1 to 4 and includes a bar 20 secured to the outer side of the opposite end wall 13 at the upper edge thereof by means of nut and bolt combinations 21 or other suitable anchor means. The inner side of the bar 20 facing the end wall 13 and adjacent each end thereof is provided with a longitudinally extending groove 22 and at the outer end of each groove, an opening 23 is formed that extends transversely through the bar 20. A resilient rod 24 extends lengthwise of each groove 22 in contact with the bottom wall of the groove, the inner end of each resilient rod 24 being anchored as at 25 in the bar 20 while the outer end of each rod 24 terminates centrally of the opening 23 and is anchored as at 26 to a push button 27 freely mounted in the opening 23 and adapted when pushed inwardly of such opening against the tension of the resilient rod 24 to move the outer end of said rod away from the bottom wall of the groove 22 as will at once be apparent from an inspection of Fig. 2. The adjacent end of the box cover 14 extends over the upper end of the bar 20 and has a cleat 28 secured to the upper side thereof flush with the end edge of the cover with notched pins carried by and depending from the cleat 28 to extend downwardly into grooves

22 for engagement with the resilient rods 24. A pin 29 is carried by the cleat 28 adjacent each end thereof, the upper headed end 30 of the pin being anchored above the cleat while the adjacent underlying portion of the end of the cover 14 is cut away as at 31 to provide a clearance for the collar 32 anchored to the pin 29 in engagement with the bottom side of the cleat 28 for anchoring the pin to the cleat. The lower end of the pin 29 extends downwardly through a guiding recess 33 shown more clearly in Fig. 2 as extending transversely of the bottom wall of the groove 22 with a notch 34 in a side of the pin 29 to receive the resilient rod 24, the end of the pin 29 outwardly of the notch 34 being bevelled as at 35 to facilitate engagement of the notched pin with the rod.

In placing the cover 14 upon the box 10, one end of the cover is first interlockingly engaged with the bar 16, the same being centered on the box by the pin and notch connection 17—19, the other end of the cover being then lowered for directing the latch pins 29 into the grooves 22 of the bar 20 for latching engagement with the resilient rods 24, the pins 29 moving in the recesses 33 in the bar 20 guiding the cover to its correctly closed position. To release the cover, it is only necessary to press inwardly upon the buttons 27 to disengage the resilient rods 24 from the notched pins 29 and at which time the latched end of the cover may be raised from the box.

An address or identification tag holder is carried by the cover 14, the holder including a bar 36 secured to the upper side of the cover 14 and extending transversely thereof, the bar 36 being cut away at its underside as at 37 and having an arm 38 pivotally mounted as at 39 at one end thereof within the cut-away portion 37. The other end of the arm 38 carries a latch lever 40 pivoted thereto as at 41 and tensioned as at 42 for moving the notch 43 in the side of the latch lever into engagement with the keeper pin 44 within the cut away portion 37 as shown in Fig. 7. A relatively short upstanding pin 45 is carried by the arm 38 intermediate the ends thereof for the reception of the eyelet 46 carried by the address or identification tag 47. To release the tag 47 from the box cover 14, the latch lever 40 is moved on its pivotal mounting 41 against the tension of the spring 42 to disengage the latch lever from the keeper pin 44 whereupon the arm 38 may then be moved outwardly of the cut away portion 37 of the bar 36 to the dotted line position shown in Figure 7 to expose the tag holding pin 45 and at which time the tag may be readily removed from the arm 38.

From the above detailed description of the invention, it is believed that the construction and operation thereof will at once be apparent and while there is herein shown and described the preferred embodiment of the invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

I claim:

1. In a box cover retainer, a box body, a cover therefor, an interlocking centering connection between one end of the box body and the cover and a latch connection between the other end of the cover and box body including notched latch pins depending from the cover, concealed horizontal resilient keeper rods anchored at one end to the box body for engagement with the notched pins and a push button carried by the free end of each keeper rod for disengaging them from the notched pins, said body having openings therein with the push buttons positioned in said openings for operation exteriorly of the box.

2. In a box cover retainer, a box body, a cover therefor, an interlocking centering connection between one end of the box body and the cover and a latch connection between the other end of the cover and box body including notched latch pins depending from the cover, concealed horizontal resilient keeper rods anchored at one end to the box body for engagement with the notched pins and a push button carried by the free end of each keeper rod for disengaging them from the notched pins for holding the latter against movement longitudinally of the keeper rods, and guide grooves in the box body for the latch pins.

3. In a box cover retainer, a box body, a cover therefor, an interlocking centering connection between one end of the box body and the cover and a latch connection between the other end of the cover and box body including notched latch pins depending from the cover, concealed horizontal resilient keeper rods anchored at one end to the box body for engagement with the notched pins and a push button carried by the free end of each keeper rod for disengaging them from the notched pins, a bar extending transversely of the box at one end thereof for the support of the keeper rods, said bar being recessed on the side facing the box end for mounting the resilient keeper rods and transverse openings in the bar and corresponding ends of the recesses for mounting the operating buttons for the keeper rods.

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