May 2, 1933. N. S. HILLYARD 1,906,858

KEY CONTAINER

Filed May 13, 1931

Fig. 1.

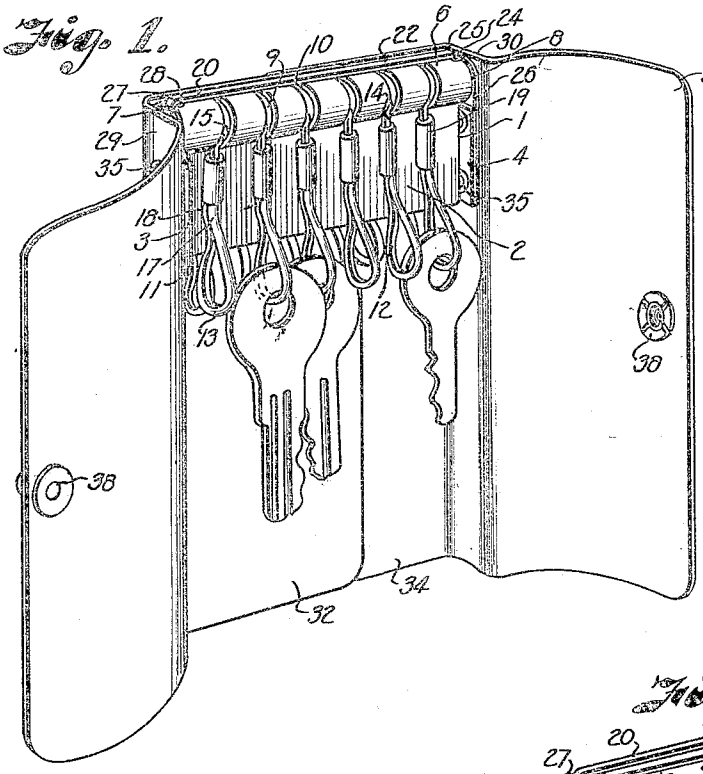


Fig. 2.

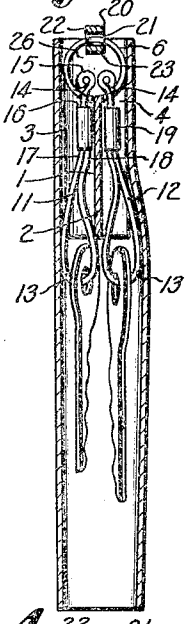


Fig. 4.

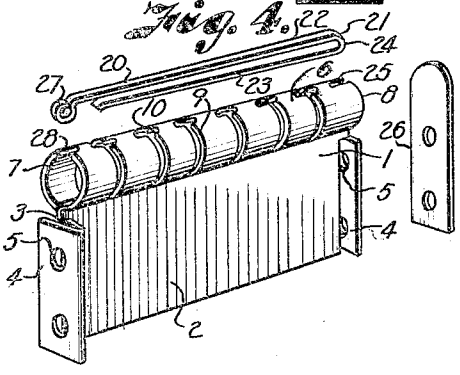


Fig. 3.

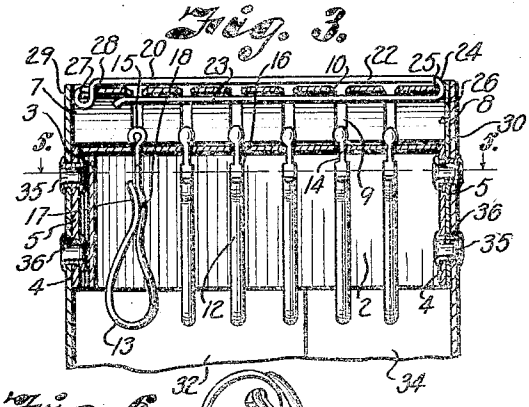


Fig. 5.

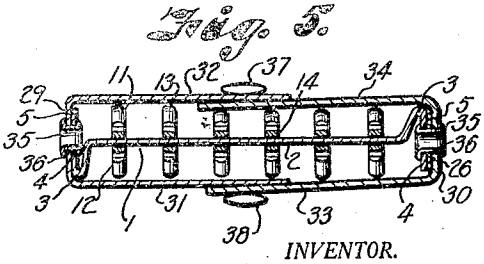
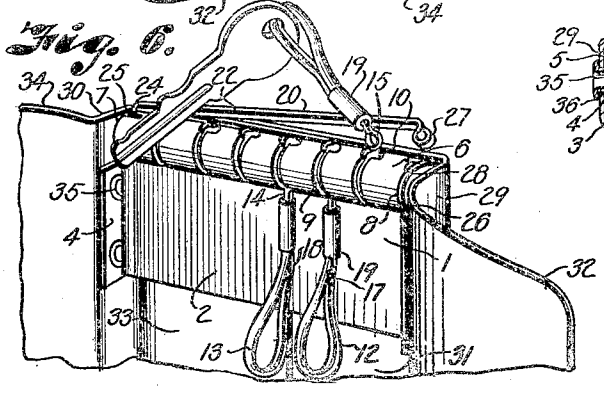


Fig. 6.



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UNITED STATES PATENT OFFICE

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KEY CONTAINER

Application filed May 13, 1931. Serial No. 537,047.

This invention relates to key containers and more particularly to those of that character employing cases for enclosing keys, the principal objects of the invention being to increase the key-carrying capacities of such cases without materially increasing the size thereof and to provide for ready removal of individual keys from the case.

It is also an important object of the invention to provide for secure retention of the key hooks in the container to prevent their accidental displacement.

In accomplishing these and other objects of the invention I have provided improved details of structure, the preferred form of which is illustrated in the accompanying drawing wherein:

Fig. 1 is a perspective view of a key retainer constructed in accordance with my invention, the closing flaps of the case being opened to illustrate the key-carrying members.

Fig. 2 is a vertical cross section through the key retainer.

Fig. 3 is a vertical longitudinal central section through the key retainer.

Fig. 4 is a detail perspective view of the key-supporting member and the latch bar for preventing accidental displacement of the key-carrying members.

Fig. 5 is a horizontal section through the key retainer on the line 5—5, Fig. 3.

Fig. 6 is a detail perspective view of the upper portion of a key retainer illustrating removal of one of the key-carrying members from the key-supporting member.

Referring more in detail to the drawing:

1 designates a key-supporting member which is preferably stamped from a single sheet of metal and includes a vertically positioned rectangular-shaped plate portion 2 having its ends bent laterally as at 3 and then retractively upon themselves to form laterally extending T shaped flanges 4 having their side edges projecting equal distances from opposite sides of the plate and having intermediate openings 5 for attaching a cover case later described.

The upper longitudinal edge of the plate portion protrudes above the flanges and is curved to form a tubular portion 6 having open ends 7 and 8 in line with the flanges 4. Formed at spaced intervals along the length of the tubular portion, is a series of arcuate slots 9 having notched portions forming openings 10 preferably positioned in alignment with the plate portion 2.

The tubular portion 6 is preferably positioned with its axis in the plane of the plate 2 so that the slots 9 extend equally from opposite sides thereof for accommodating sets of key-carrying members or hooks 11 and 12 on opposite sides of the plate portion, as best illustrated in Fig. 2.

The key-carrying members are preferably formed of wire-like material and are bent to form hooks 13 having reduced necks 14 extending through the slots 9 and terminating in substantially spherical shaped heads 15 of slightly larger diameter than the width of the slots so that the key-carrying members are retained in the slots but are adapted to swing in an arc from the plate 2, whereby the heads 15 may be removed through the enlarged openings 10.

In order to retain the heads in engagement with the inner periphery of the tubular portion of the supporting member and to limit their inward movement, the necks 14 are provided with shoulders 16 for engaging the outer periphery of the tubular portion of the support. The free ends 17 of the hooks are preferably curved inwardly to seat in a complementary curved portion 18 formed below the shoulders 16 to close the open end of the hook and prevent removal of a key carried thereby.

The necks 14 may also be provided with rubber sleeves 19 which are sleeved over the heads and over the free ends 17 of the hooks to cover the ends thereof, as illustrated in Figs. 1, 2 and 6.

In order to prevent accidental removal of the key-carrying members through the enlarged openings 10 in the tubular portion of the supporting member, I provide a latching or bar member 20 comprising a flat metal strip bent into a hairpin loop 21 to provide a shutter portion 22 for closing the outer side of the openings 10, and a bar re-

taining portion 23 which extends longitudinally through the tubular portion of the support to retain the latching member and at the same time close the inner side of the openings, thus providing double security to retain the hooks from passing through the openings since the openings are covered at both sides as illustrated in Fig. 3. The looped end 24 of the latching member is received in a notch 25 formed in the end of the tubular portion in line with the openings 10 and is retained therein by a leaf spring 26 fixed to the flange 4 by rivets which retain the cover case as later described.

The opposite end of the shutter portion of the latching bar is bent downwardly and outwardly to form a ring portion 27 which is received in a complementary notch 28 at the opposite end of the supporting member so that the latching member is normally retained thereby against lateral movement across the openings.

Fixed to the flanges 4 at the ends of the plate portion 2 is a cover case comprising complementary sections 29 and 30 preferably formed of flexible material and having flap portions 31, 32 and 33, 34, respectively, the flap portions 33 and 34 being adapted to overlap at one side of the key retainer and the flaps 31 and 33 at the opposite side, as best illustrated in Fig. 5.

The case members are preferably fixed to the flanges 4 by tubular rivets 35 extending through the openings 5 in the flanges and through complementary openings 36 in the cover members. The leaf spring 26 is also preferably secured by the rivets 35 and extends between the cover member 30 and the flange 4 at the right hand end of the plate, (Figs. 1, 3 and 4). The overlapping flaps of the cover members are provided with suitable securing means such as snap fasteners 37 and 38, so that the flaps may be retained in closed position to enclose the keys carried by the retainer.

In removing keys from a container constructed in accordance with my invention, the ring portion 27 at the end of the latching bar is lifted upwardly from the notch 28 and the entire latching bar is slid longitudinally against the tension of the spring leaf 26 to release the curved end 21 thereof from the notch 25. The latching member may then be free to move laterally from across the openings 10. The member 13 carrying the key to be removed is then rotated in an arc through its slot until the head portion thereof comes into alignment with the opening 10, at which point the head may be withdrawn therefrom, after which, the bar may be moved laterally to cover the opening and the ends thereof are latched in the notches 25 and 28, as previously described.

When the key is to be replaced in the container, the latching bar is removed by sliding it longitudinally against the tension of the leaf spring until it clears the notch 25, after which it may be slid laterally to expose the opening 10. The head of the key-carrying member may then be inserted through the opening and the key moved downwardly in the slot to lie against the plate portion 2.

It is obvious that I have provided a key retainer wherein two key-carrying members may be carried in each slot at opposite sides of the plate portion 2 and that the respective keys are accessible through the sides of the case by opening the flaps 32—34 or 31—33, as the case may be.

It is also obvious that the key-carrying members are swivelly mounted in the slots, making it unnecessary to turn the entire case when a key is inserted in a lock and that they are doubly secured against displacement due to the flat hairpin shaped latching bar closing the openings through which the hooks are inserted and removed from their support.

What I claim and desire to secure by Letters Patent is:

1. In a key retainer, a hook support comprising a tubular member having arcuate slots terminating in enlarged openings, key-carrying hooks operable in said slots and removable through said openings, a loop-shaped bar member having a shutter portion closing the outer side of said openings and an achoring portion closing the inner side of said openings to prevent removal of the key-carrying hooks, and a cover case associated with said hook support for enclosing keys carried by said hooks.

2. A key retainer comprising a plate member having a tubular portion provided with arcuate slots terminating in enlarged openings, key-carrying hooks operable in said slots, heads on said key-carrying hooks to retain the key-carrying hooks in the slots and adapted to move through said openings, and a loop-shaped bar member movable across opposite ends of said openings to normally prevent accidental removal of the key-carrying hooks.

3. In a key retainer comprising a plate member having a tubular portion provided with arcuate slots terminating in enlarged openings, key-carrying hooks operable in said slots, heads on said key-carrying hooks to retain the key-carrying hooks in the slots and adapted to move through said openings, a latch member movable across said openings to normally prevent accidental removal of the key-carrying hooks, flanges on the plate member, and a cover case fixed to said flanges for enclosing keys carried by said hooks.

4. A key retainer comprising a plate member having a tubular portion provided with

arcuate slots terminating in enlarged openings and having notches at its ends in line with said openings, key hooks operable in said slots to move in an arc, heads on the key hooks to retain the key hooks and adapted to move through said openings to permit removal of the key hooks, a loop-shaped bar member movable across said openings, and means on the bar member engaging in said notches to retain the bar member over said openings.

5. A key retainer comprising a plate member having a tubular portion provided with arcuate slots terminating in enlarged openings and having notches at its ends in line with said openings, key hooks operable in said slots to move in an arc, heads on the key hooks to retain the key hooks in said slots and adapted to move through the openings to permit removal of the key hooks, a loop-shaped bar member having a shutter portion closing the outer side of said openings and an anchoring portion engageable in one of the notches and closing the inner side of said openings, and a head on the opposite end of the shutter portion engaging in the other of said notches.

6. A key retainer comprising a plate member having laterally extending flanges at its ends, a tubular member formed on an upper edge of the plate member and having a series of slots provided with enlarged portions, a latch bar having a shutter portion received in the tubular member and having a portion overlying the enlarged openings, key retaining members operable in said slots, latching means for retaining the ends of the bar member to prevent removal of the key-carrying members through the openings, and a case fixed to said laterally extending flanges for enclosing keys carried by said key-retaining members.

7. A key retainer comprising a plate member having a tubular portion provided with arcuate slots terminating in enlarged openings, key-carrying members operable in said slots and removable through said openings, a latch bar normally closing said openings to prevent removal of the key-carrying members and a spring member fixed to said plate member for retaining the bar member against longitudinal displacement, and means for retaining the bar member against lateral displacement.

8. A key retainer comprising a plate member having a tubular portion provided with arcuate slots terminating in enlarged openings and having notches at its ends in line with said openings, key hooks operable in said slots to move in an arc, heads on the key hooks to retain the key hooks in said slots and adapted to move through the openings to permit removal of the key hooks, a loop-shaped bar member having a shutter portion closing the outer side of said openings and an anchoring portion engageable in one of the notches and closing the inner side of said openings, a head on the opposite end of the shutter portion engaging in the other of said notches, a cover case comprising sections fixed to the ends of said plate and having flaps overlapping at both sides of the plate, and means for securing the overlapping flaps to enclose keys carried by said hooks.

9. A key retainer including a plate member having a tubular portion provided with transverse slots terminating in enlarged openings, key-carrying members operable in said slots and removable through said openings, a latch member mounted on said tubular portion for rotary movement thereon to close said openings, and means for normally locking the latch against rotary movement on the tubular portion and in position for closing said openings.

10. A key retainer including a plate member having a tubular portion provided with transverse slots terminating in enlarged openings, key-carrying members operable in said slots and removable through said openings, a latch member mounted on said tubular portion for rotary and longitudinal movement thereon to close said openings, cooperative stop means on the tubular portion and latch to normally prevent rotation of the latch on said tubular portion, and resilient means for yieldingly holding the latch against longitudinal movement on said portion.

11. A key retainer including a plate member having a tubular portion provided with transverse slots terminating in enlarged openings, key-carrying members operable in said slots and removable through said openings, a longitudinal latch member having portions extending interiorly and exteriorly of the tubular portion to simultaneously close the inner and outer ends of said openings, and means for normally locking the latch against movement on the tubular portion.

In testimony whereof I affix my signature.

NEWTON S. HILLYARD.