Jan. 20, 1953 J. MULLAN 2,625,814

EJECTING KEY CONTAINER

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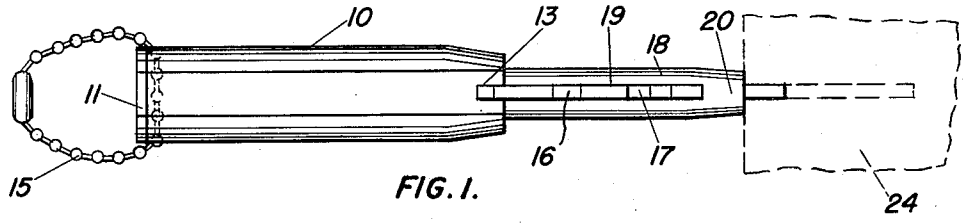


FIG. 1.

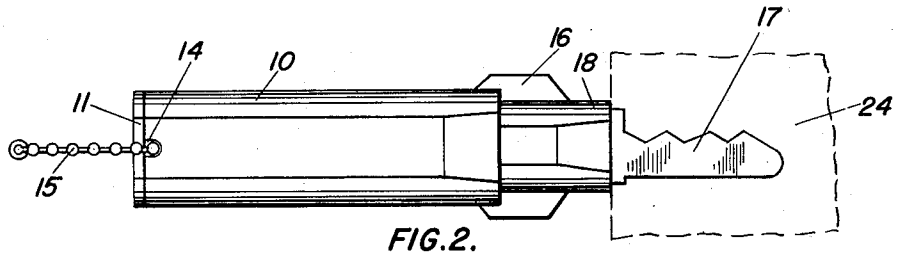


FIG. 2.

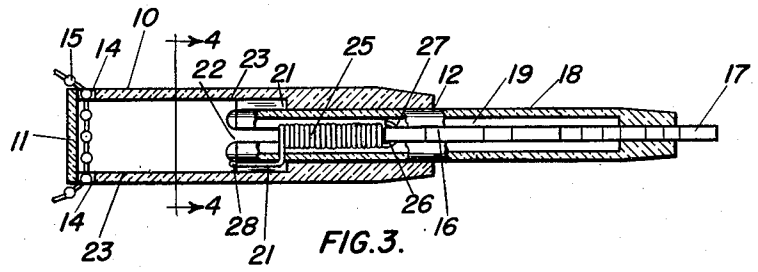


FIG. 3.

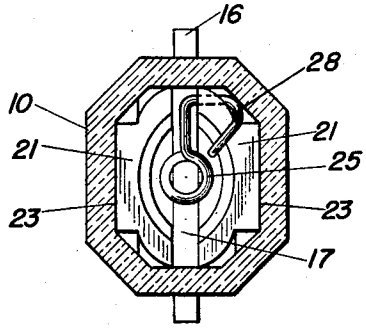


FIG. 4.

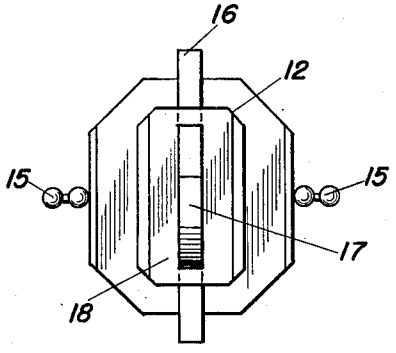


FIG. 5.

INVENTOR.
JOSEPH MULLAN.

BY Howard J. Whelan.
ATTORNEY.

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EJECTING KEY CONTAINER

Joseph Mullan, Baltimore, Md.

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2 Claims. (Cl. 70—414)

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This invention relates to keys for operating locks and more particularly to those intended to be carried on the person in a casing adapted to prevent damage to the key.

It is an object of this invention to provide a new and improved casing for holding a key conveniently and that will facilitate its use.

Another object of the invention is to provide a new and improved holder for a key that will serve to protect the key while not in use in a lock, while at the same time provide means for placing it in a lock, and turning it, and enable it to be ejected from the lock when returned to the position suitable for its removal.

A further object of the invention is to provide a casing and holder for a key that will hold the key securely, enable it to be readily changed, afford substantial holding of the key in the hand for its manipulation, and be attractive in appearance.

Additional objects will be evident as the invention is further outlined.

For a better understanding of the invention, its objects and the principles thereof, reference is made to the accompanying drawings. These drawings in conjunction with the following description outline a particular form by way of example, while the claims emphasize the scope of the invention and particularly point out its characteristic elements.

Referring to the drawings:

Figure 1 is a plan view of the key casing embodying this invention, the hollow clamping sleeve being shown in extended position encasing the key;

Figure 2 is a side elevation of Figure 1, with the clamping sleeve depressed into the hollow case;

Figure 3 is a plan view similar to Figure 1, with parts broken away to show its inner construction;

Figure 4 is a sectional view taken along line 4—4 of Figure 3, and

Figure 5 is an end view showing the key end of the casing.

The same reference numerals pertain to the same parts throughout the drawings.

In a particular form of key retainer the key is normally held completely enclosed in a case and when used in the lock it is pushed out by the finger of the operator. This has advantages in its own way and in many instances is preferred by certain people. However to individuals who prefer a key to be held at a distance from the hand, and its placement in the key hole by an easy movement of the hand, rather than between two fingers, the construction shown in this embodiment is preferable, especially when the withdrawal of the key may be quickly and conveniently arranged by turning the key to insertion position. This particular construction, is relatively simple. It consists of a hollow case 10 of quasi-cylindrical form having one end closed by a cap 11 and the other end open to form a mouth 12. Holes 14 are made in the wall of the case adjacent the cap 11, and serve to provide for the use of a holding chain or ring 15 of conventional form. The mouth portion of the case has a pair of oppositely located longitudinal slots 13 cut in the wall thereof to enable the enlarged head portion 16 of a key 17 to be held and limit its retracted position therein. The interior and exterior surfaces of the case may be of octagonal form or the contour may have any suitable form but that of a circle. This is made so, in order that a hollow clamping sleeve 18 therein having a similar transverse sectional contour, will be non-rotatable therein. The sleeve 18 is formed with a pair of oppositely placed slots 19 disposed longitudinally for almost its whole length. This arrangement of the slots gives a resilient characteristic to the walls of the sleeve and enables them to be pressed towards each other without limiting their tendency to expand outwardly back to normal contour. One end portion 20 of the sleeve beyond the ends of the slots 19, is restricted to an opening similar to the cross sectional area and form of the key 17, so the key shank may be located and reciprocated in the sleeve. The sleeve 18 is of a size to permit its loose placement inside the case and has lugs 21 on its periphery near its open end 22. These lugs 21 fit and lock into depressions 23 formed in the inner wall of the case 10. The lugs and depressions are coextensive, parallel and opposite each other and do not limit the reciprocating movement of the sleeve therein except for the amount necessary to move the key therein during insertion and ejection from the lock 24, it may be used in. It will be noted that the end of the key projects slightly beyond the sleeve when in normal position.

This is arranged so as to facilitate its alignment and insertion into the key hole of the lock 24. The key 17 is normally disposed in the sleeve 18 in the manner indicated in the drawings. Its surfaces are contacted by the surfaces of the walls that bound the slots 19 and hold the key securely in a position suitable for placement in the key hole. The key however can reciprocate in the sleeve during retraction and outward projection. To facilitate the movement of the key 17 in the

sleeve 18, a coil spring 25 is used as the tension element. One end portion 26 fastens into the hole 27 in the head of the key and holds on to it by its hooked form. The other end portion 28 of the spring 25 is bent to a multi-sided hook contour to engage over one of the lugs 21 of the sleeve as indicated in Figure 3. This form of attachment enables the spring 25 and key 17 to be pulled out without breaking off the hook 28 for a long wearing period. It cannot slip off while the sleeve is in the case because the lug and walls of the latter hold it in place. The device is furnished with a dummy key, that can be replaced by the actual one to be used, whenever that occasion arises. This dummy holds the parts in the proper relative position during storage and display and at the same time educates the prospective user in the manner of mounting the new key in the case and sleeve without extended written instructions.

The way of using the device is simple. After the operating key is mounted in it, it is aligned by the user with the key hole selected for its insertion. The small projecting portion of the key shank is inserted, and then the operator presses it in further, causing the sleeve to retract into the casing 10 and expose more of the shank in the lock until it reaches its hilt. The operator turns the case and this in turn rotates the sleeve and the key, causing the latter to operate the lock 24. While in locked position, the key is held there in the lock, but on returning it to unlocked position and the normal position of the key hole, the key being unrestrained by the lock will allow the tension spring element 25 to pull back on the key and retract it from the lock. The key is pulled back automatically into the sleeve where it stays until used again.

While but one general form of the invention is shown in the drawings and described in the specification, it is not desired to limit this application for patent to this particular form, as it is appreciated that other forms of construction could be made that would use the same principles and come within the scope of the appended claims.

Having thus described the invention, what is claimed is:

1. A key container comprising a hollow casing having an open end and a closed end, said casing also having a pair of opposed longitudinal slots cut in the wall thereof at the open end, a hollow sleeve extending within the hollow casing having a portion protruding outwardly therefrom, said sleeve being slidable within said casing and having the end of its protruding portion shaped to retain a key non-rotatably in the sleeve, said sleeve having slots extending longitudinally thereof and in alignment with the slots in the casing, the head of the key adapted to extend through the slots in the sleeve and adapted to be received and held against turning by the slots of the casing, whereby the key is movable longitudinally with the sleeve and rotatably with the casing, and interlocking portions between the casing and the sleeve.

2. A key container as set forth in claim 1, including a spring having one end secured to the head of the key and its opposite end secured to the aforesaid interlocking portions.

JOSEPH MULLAN.

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The following references are of record in the file of this patent:

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