

[54] KEY HOLDING DEVICE

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24/224 LS; 224/3; 224/5 R

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224/26 K, 26 D, 26 F, 5 R; 24/3 K, 3 J, 224
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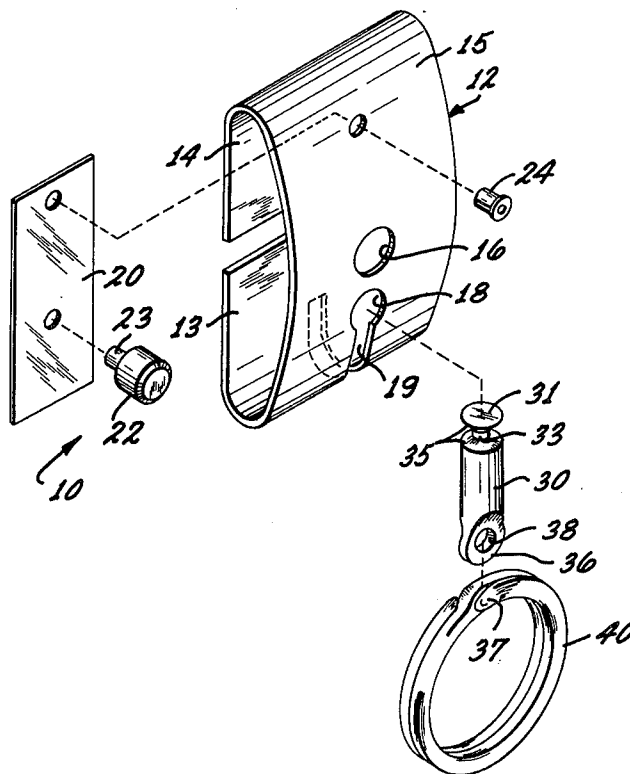
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[57]

ABSTRACT

A security type holding device for a key ring includes a metal holder having its outer end portions bent back on the front central portion thereof to form a clip which can be inserted on a belt worn on a person. The front central portion of the holder is formed with a first opening, a second opening spaced below the first opening, and an elongated slot extending down from the second opening. A leaf spring attached to the back surface of the front central portion is provided with a button which projects through the first opening on the holder and extends down to cover the second opening. A disconnect element is adapted to receive a key ring on the lower end thereof and has a head on the upper end thereof which can be inserted through the second opening on the holder to depress the leaf spring and permit the neck of the head to be engaged in the elongated slot. The disconnect element can be released from the holder by depressing the button to enable its head to be moved up into and out of the second opening.

2 Claims, 4 Drawing Figures



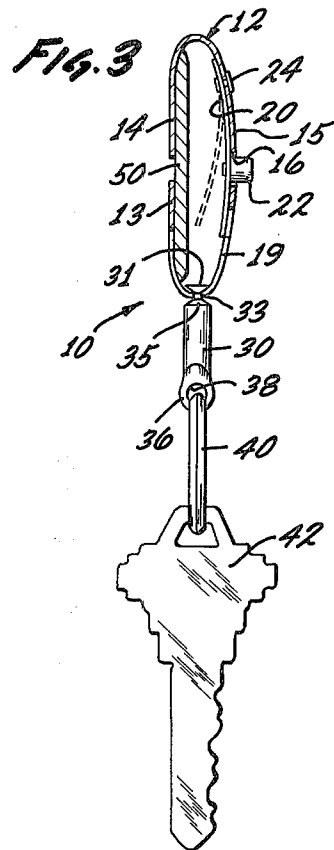
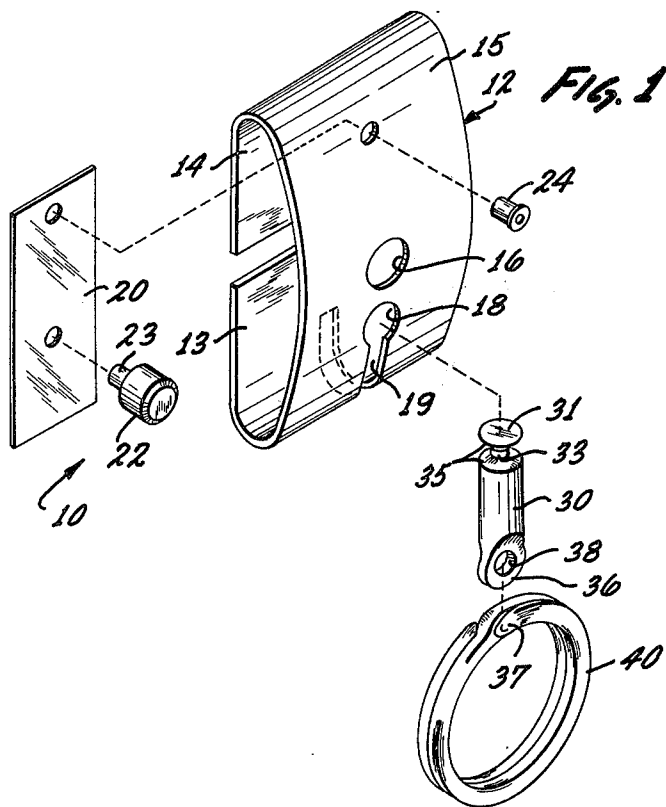
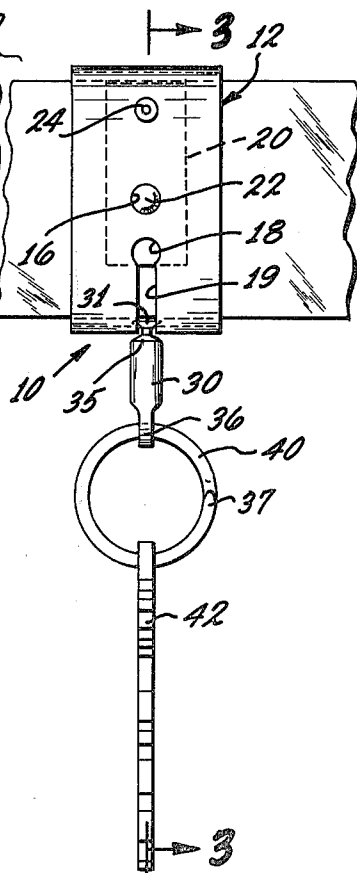
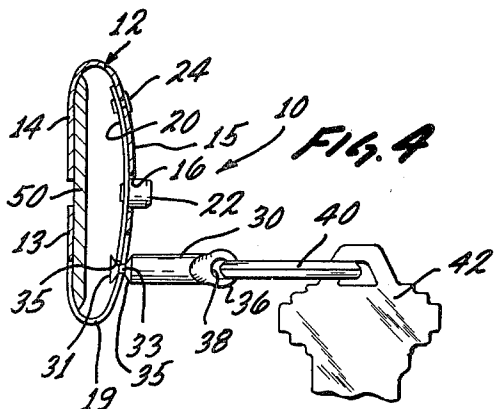
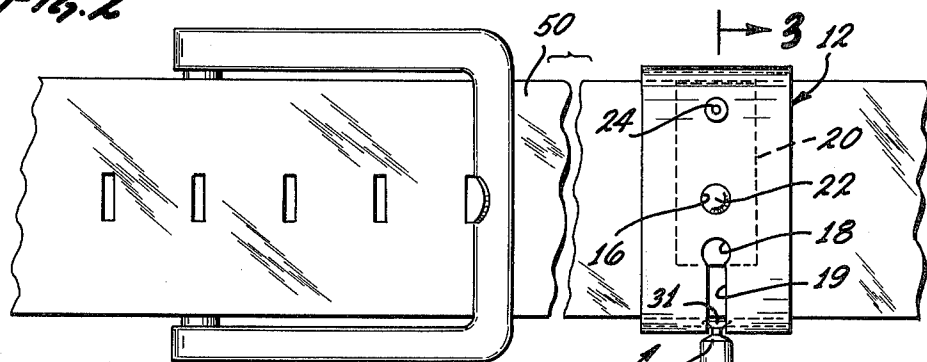


FIG. 2



KEY HOLDING DEVICE

This invention relates to security-type holding devices having a fast disconnect element and more particularly to such a device adapted for use in holding keys.

It is frequently necessary for a person to carry around with him several keys on a key ring which keys are needed in performing various duties during the course of a day. One such typical example is a gas station attendant who carries keys to enable him to open up the cash box, as well as other types of lock boxes and door locks as needed to effectively and efficiently operate a gas station while maintaining the necessary security provided by these locks.

When such keys are carried in the pocket of the gas station attendant they may get lost or misplaced as he performs his sundry tasks. It is thus evident that there is a need for a key holding device which will securely and conveniently hold such keys and which will permit the keys to be quickly disconnected from the holding device when the attendant desires to use them. Furthermore, the key holding device should enable the keys to be again readily and securely engaged thereon when they are no longer needed.

Accordingly, one of the objects of the present invention is to provide a novel key holding device which securely holds a key ring having several keys coupled thereto while simply enabling the key ring to be readily detached from the key holding device when it is desired to use the keys.

Another object of the invention is to provide a security-type key holding device which can be simply and securely carried on a belt being worn by a person needing access to the keys.

Still another object of the invention is to provide an improved security-type holding device for keys which is compact, simple and inexpensive to manufacture.

With these and other objects in view, the invention consists in the construction, arrangement and combination of the various parts of the device whereby the objects contemplated are attained, as hereinafter set forth, pointed out in the appended claims and illustrated in the accompanying drawings.

In the drawings:

FIG. 1 is an exploded view of an improved security-type key holding device embodying the features of the present invention;

FIG. 2 shows the key holding device of FIG. 1 securely carried on a belt being worn by a person;

FIG. 3 is a sectional view of the key holding device as taken along line 3—3 of FIG. 2; and

FIG. 4 is a sectional view of the key holding device, similar to FIG. 3, but showing the disconnect element with its head near the upper end of the slot on the holder thereof.

In the embodiment of the invention depicted in FIGS. 1 to 4, inclusive, the key holding device 10 comprises a holder 12 formed of a rectangular strip of stainless steel having its lower and upper end portions 13 and 14, respectively, bent back on the front portion 15 thereof to form a clip-like structure. Note that the back wall of the holder 12 thus formed by the bent end portions 13 and 14 is flat while the front wall formed by the front portion 15 thereof is curved outwardly. The front portion 15 has a first opening 16 formed in the center thereof and a second opening 18 formed below and

spaced from the first opening. An elongated slot 19 extends downwardly from the lower edge of the second opening 18. This slot 19 extends down to the bottom of the front portion 15 and continues partly up the upwardly bent lower end portion 13. The diameter of opening 18 is of a larger dimension than the width of the slot 19.

A rectangularly shaped leaf spring 20 is disposed against the inner surface of the outwardly curved front portion 15 of the holder 12. Leaf spring 20 has a button 22 attached thereto by riveting a pin 23 integrally formed on the inner end of button 22 to the center of the surface of the leaf spring 20. A rivet 24 holds the upper end portion of the leaf spring 20 to the inner surface of portion 15 of the holder 12 and when so disposed the button 22 on leaf spring 20 projects through the opening 16 in the front portion 15. The lower portion of the leaf spring 20 extends down below button 22 to at least the upper end of the elongated slot 19 such that it covers the opening 18.

A disconnect element in the form of linkage member 30 is loosely but securely engaged by its head 31 in the slot 19 of the holder 12. As shown in FIGS. 1 and 4, this linkage member 30 is formed from a short length of round steel rod and its head 31 is formed by cutting a neck 33 just below the upper end thereof. The upper and lower edges 35 of the neck 33 are tapered. The lower end 36 of the linkage member 30 is formed by flattening the steel rod and drilling a hole 38 therethrough.

Attached to the lower end 36 of the linkage member 30 is a conventional multi-turn key ring 40 on which one or more keys 42 are held.

To engage the linkage member 30 on the holder 12, it is only necessary to position its head 31 in the enlarged opening 18 on the front wall portion 15 of the holder 12 and thus push in the lower end portion of the leaf spring 20. This enables the neck 33 of the linkage member 30 to snap down into the elongated slot 19 in which it is loosely but securely engaged. Note that by having the elongated slot 19 continue on part way up the bent back portion 13, the linkage member 30 can freely dangle vertically by its head 31 from the lower end of the holder. With the linkage member 30 securely held on the holder 12, the end 37 of the key ring 40 can be wedged open by the end 36 of member 30 and then advanced through the opening 38 and relative thereto along the ring until it is securely held on the lower end of the linkage member. The openings on one or more keys 42 can then be wedged on the end 37 of the key ring and similarly advanced along the ring until they are coupled thereto.

It should be noted that the upper edge 35 of the neck 33 on the linkage member 30 is outwardly tapered to the top of head 31. By use of such a construction, when the head 31 of linkage member 30 is moved up the elongated slot 19, as shown in FIG. 4, at the time the leaf spring 20 is covering the enlarged opening 18 on the upper end of the elongated slot 19, the tapered edge 35 thereof bears against the bottom edge of the leaf spring 20. This bearing action is directed in such a manner as to hold the leaf spring up against the inner surface of the front wall portion 15 of the holder 12. This assures that the head 31 can not inadvertently slip underneath the edge of the leaf spring 20 covering the opening 18 and cause the leaf spring to be pushed away from the front wall portion 15 such that the linkage member 30 is pulled out of the enlarged opening 18 on

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the holder.

As shown in FIGS. 2 and 3, the holder 12 is adapted to be conveniently and securely carried on a belt 50 worn by the party needing usage of the keys held thereon.

Thus in order to release the keys 42 from the holding device 10, it is necessary for the attendant to disconnect the linkage member 30 therefrom by using the finger of one of his hands to depress the button 22 extending through the opening 16 on holder 12. This causes the free end of leaf spring 20 to be pushed away from the inner front surface of holder 12. The attendant can then, by use of the fingers of his other hand, slide the linkage member 30 up the slot 19 enabling its head 31 to enter up into and then out of the enlarged opening 18.

Note that by making the bent end portions 13 and 14 of the holder 12 flat and the front portion 15 thereof rounded outwardly, sufficient space is provided between the outer surface of the belt 50 and the inner surface of the rounded front portion 15 of the holder to enable the button 22 to be pushed inwardly to depress the leaf spring 20 (FIG. 3).

Although the invention has been particularly described with reference to its use for holding keys, it may be employed for many other items that a person may desire to carry around with him while being assured that these items are in some way securely connected to his body so that they can not get lost or misplaced. Thus, for example, a fisherman or hunter may be interested in using the quick disconnect element or linkage member 30 of the holding device to retain a knife, a flashlight, or a pistol on his person. In this latter instance, the pistol may be coupled to the end of the disconnect element 30 by way of a chain while the pistol itself is carried in a holster worn by the person. Unhampered use of all such items becomes possible because of the quick disconnect element 30 on the holding device 10.

While the holding device shown and described herein is admirably adapted to fulfill the objects and advantages previously mentioned as desirable, it is to be understood that the invention is not limited to the specific features shown and described but that the means and configuration herein disclosed are susceptible of modification in form, materials, proportions and arrangement of parts without departing from the principles involved or sacrificing any of its advantages and the invention, therefore, may be embodied in various forms within the scope of the appended claims.

What is claimed is:

1. A security type holding device for keys comprising:

a holder formed of a sheet of metal having its upper and lower end portions bent back to form a substantially flat back wall and having its central portion rounded to form an outwardly curved front wall spaced from said back wall so as to form a lateral opening through which a belt being worn by a person can be passed and held flat against the back wall, said outwardly curved front wall having a centrally disposed first opening and a second opening with a slot extending downwardly from said second opening and partly across the lower end portion of the holder, said second opening having a width larger than the width of said slot, a leaf spring having a button attached to the surface thereof, said leaf spring fixed at its upper end to the underside of the outwardly curved front wall with the button thereof projecting through the first opening on said front wall and with the surface of the leaf spring resiliently urged to bear closely against the underside of the outwardly curved front wall so as to cover the second opening on the upper end of the slot, a disconnect element having a cylindrical body and having a head formed on the upper end thereof by a recessed neck, said neck having a diameter smaller than the width of said slot and said head and cylindrical body both having a diameter larger than the width of said slot, said head being of such a size that it can be inserted through the second opening to depress said leaf spring and then moved down such that said element is engaged by its recessed neck in said slot to thereby retain it on said holder, said neck when engaged in said slot having such a fit therein as to prevent said element from moving into the lateral opening of said holder, and means for securely coupling one or more keys to the lower end of said disconnect element, whereby the disconnect element has its head securely engaged by its recessed neck on the slot of said holder and can be removed therefrom by manually depressing said button to push the lower portion of the leaf spring inwardly into the spacing provided between the underside of the outwardly curved front wall and said belt to uncover said second opening and thereby enable the head of the disconnect element to be guided by its recessed neck along the slot up into and out of said second opening.

2. The invention in accordance with claim 1 wherein said head is formed with a flat top, and the recessed neck of said disconnect element is formed with its upper edge tapering outwardly to the tip of said head.

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