United States Patent [19]

Sherman

[11] **3,715,900**

[45] **Feb. 13, 1973**

[54] **KEY RETAINER**

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[22] Filed: **Nov. 9, 1970**

[21] Appl. No.: **87,789**

[52] **U.S. Cl.** .....**70/456 R**

[51] **Int. Cl.** **A47g 29/10**

[58] **Field of Search**.....70/456 R, 456 B, 457, 458, 70/459; 24/3 K, 238, 239

[56] **References Cited**

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1,114,289	10/1914	Rittenhouse	59/85
2,482,386	9/1949	Vaisey	24/239
3,126,729	3/1964	Leopoldi	70/459
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Primary Examiner—Robert L. Wolfe

Attorney—Dominik, Knechtel and Godula

[57] **ABSTRACT**

A key retainer comprising generally a loop of resilient material having only one discontinuity provided by substantially facing adjacent ends thereof. This loop normally is slidably disposed within a sleeve, in a fashion such that one end thereof forms a relatively large ring for holding several keys whose ready removal normally is not required, and the opposite end thereof forms a smaller ring for holding a key or keys whose ready removal is desired.

4 Claims, 8 Drawing Figures

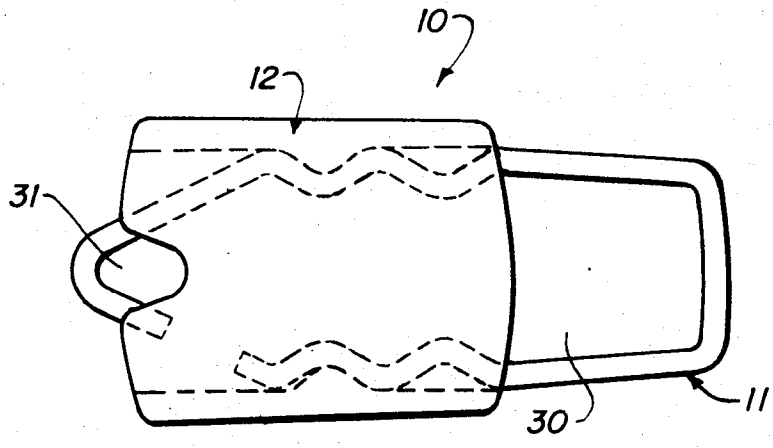


FIG. 1

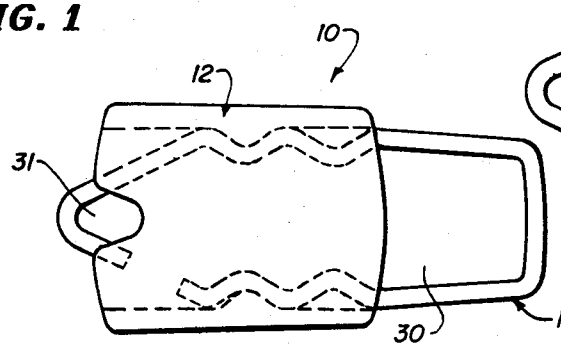


FIG. 2

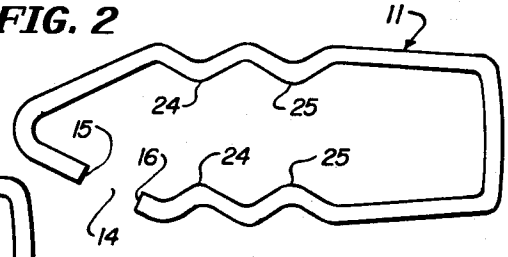


FIG. 3

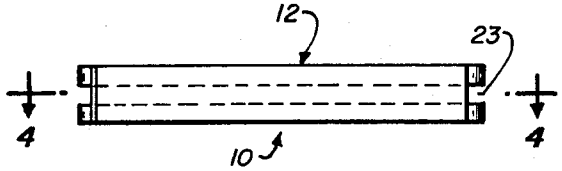


FIG. 4

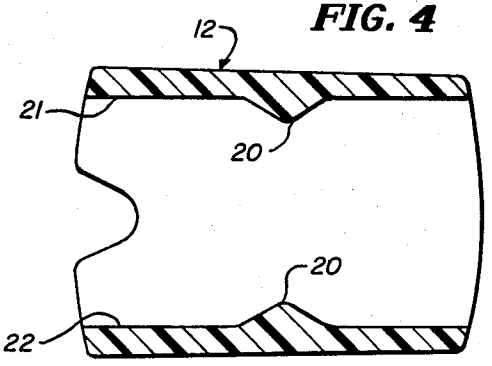


FIG. 5

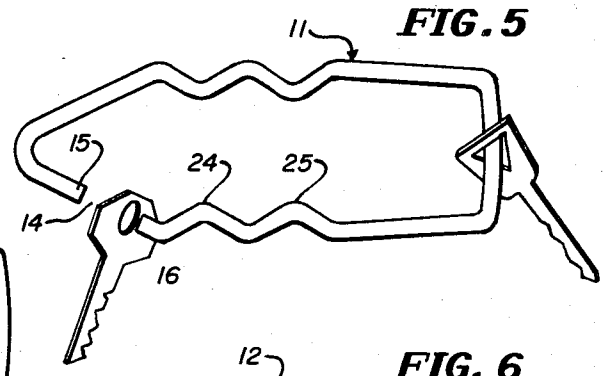


FIG. 7

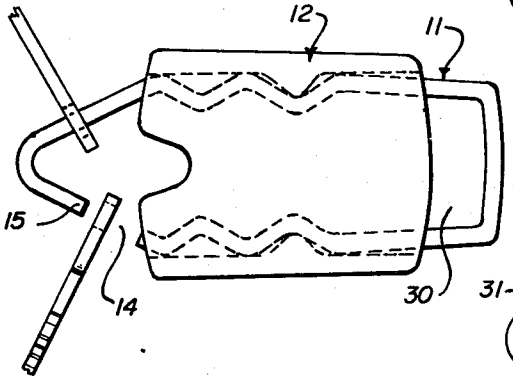


FIG. 6

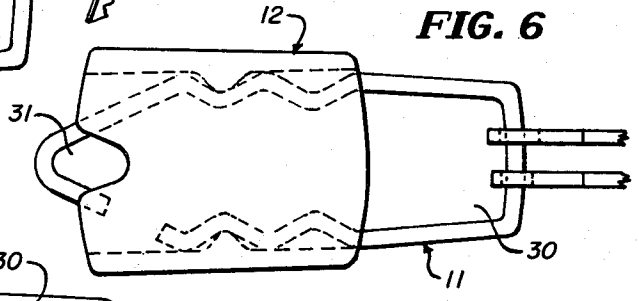
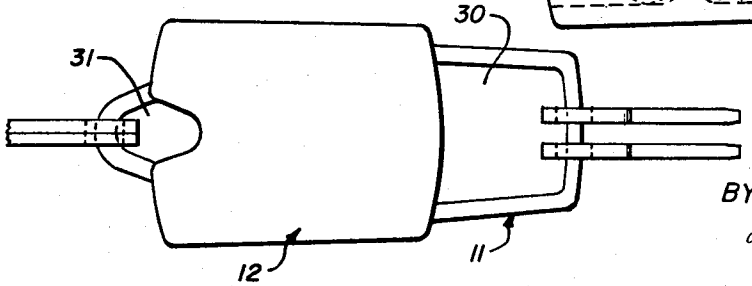


FIG. 8



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KEY RETAINER

This invention relates to key retainers and is particularly concerned with such retainers which are effective to provide quick and easy insertion and removal of the key.

Numerous different types of key retainers for retaining one or more keys already are well-known and are extensively used. One such well-known key retainer simply comprises a ring of metal or alternative resilient material formed to provide a circumferentially extending discontinuity providing access between opposite sides of the ring. In use, a key is inserted by expanding the outer end of the discontinuity sufficiently to receive a key which is worked through the length of discontinuity until free at the other end whereby to be held captive on the ring itself. Withdrawal of the key is affected by a reversal of the insertion process, with the exception that the key is offered to the said other end of the ring discontinuity.

Due to the high degree of ring resilience which is essential to insure that the key is firmly and safely held captive, the insertion and removal of a key can be difficult. This difficulty is accentuated by the need for the ring to be free of projections or abrupt discontinuities which could present a hazard, and this together with the ring resilience often makes initial expansion of the circumferential discontinuity extremely difficult.

Another type of key retainer is disclosed in U.S. Pat. No. 2,129,436, and includes an elongated loop of resilient material having a hook at each end thereof, and a flat sleeve for receiving the loop therein in a fashion such as to normally close both hooks. By slidably manipulating the sleeve, one or both hooks can be released for inserting and removing keys.

The key retainer of this patent is generally satisfactory, however, it does suffer from several objectionable features. In particular, it may be noted that the keys retained by the large hook at its one end are subject to being lost when the sleeve is manipulated to insert or remove a key from the smaller hook at its opposite end.

The key retainer of the present invention, however, on the other hand, comprises generally a loop of resilient material having only one transverse discontinuity provided by substantially facing adjacent ends thereof. This loop normally is slidably disposed within a sleeve, in a fashion such that one end thereof forms a relatively large ring for holding several keys whose ready removal normally is not required, and the opposite end thereof forms a smaller ring for holding a key or keys whose ready removal is desired. For example, the keys on the larger ring may be household or business keys while the keys on the smaller ring may be car keys.

To place keys on the larger ring, the loop is removed from the sleeve, the keys threaded on to it, and the loop then is slidably extended through the sleeve until a first or a second locking position is engaged. In the first locking position, the keys on the larger ring are locked thereon, and the discontinuity in the loop is concealed, thereby preventing any additional key or keys being placed on or removed from the smaller ring.

To place or remove keys from the smaller ring, the loop is slidably extended further through the sleeve to the second locking position. In this latter position, the discontinuity in the loop is exposed, thereby permitting an additional key or keys to be threaded onto the smaller ring. In this position, the keys on the larger ring are maintained locked thereon and cannot be removed.

To lock the keys on the smaller ring, the loop is slidably extended through the sleeve in the opposite direction to the first locking position. The discontinuity is again concealed by the sleeve, hence removal of the keys on the smaller ring is prevented, as is removal of the keys on the larger ring.

This construction of the key retainer is such that placement of a key or keys on the smaller ring and locking it thereon by slidably extending the loop through the sleeve to engage the first locking position effectively locks the key retainer so that it cannot come apart in the pocket or purse, spilling the keys. Furthermore, the key or keys on the smaller loop can be easily and readily removed, without fear of spilling the keys on the larger loop, since they are lockingly retained thereon by the sleeve and cannot be removed unless and until the loop is fully removed from the sleeve. Accidental removal of the loop is virtually impossible because of the two locking positions which are engaged during its removal.

Accordingly, it is an object of the present invention to provide new and improved key retainers which are effective to provide quick and easy insertion and removal of a key or keys.

It is another object to provide improved key retainers having a construction such that the key retainers can be effectively locked so that they cannot come apart in the pocket or purse, spilling the keys.

Other objects of the invention will in part be obvious and will in part appear hereinafter.

The invention accordingly comprises an article of manufacture possessing the features, properties, and the relation of elements which will be exemplified in the article hereinafter described, and the scope of the invention will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings in which:

FIG. **1** is a top plan view of a key retainer exemplary of the present invention;

FIG. **2** is a top plan view of the resilient loop portion of the key retainer of FIG. **1**;

FIG. **3** is a side plan view of the sleeve of the key retainer of FIG. **1**;

FIG. **4** is a sectional view taken along lines **4-4** of FIG. **3**;

FIG. **5** is a plan view generally illustrating the manner in which keys are threaded onto the loop portion of the key retainer;

FIG. **6** is a top plan view generally illustrating the key retainer with the loop thereof in a first locking position whereat keys on the larger ring portion thereof are effectively locked thereon;

FIG. **7** is a similar plan view of the key retainer, illustrating the loop engaged in the second locking position whereat the discontinuity in the loop is exposed permitting keys to be inserted or removed from the smaller ring portion thereof; and

FIG. **8** is a top plan view generally illustrating the manner in which keys are effectively locked on both the smaller and the larger ring portions thereof.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring now to the drawings, the key retainer **10** comprises an elongated loop **11** of resilient material, preferably a chrome finished steel wire, which is frictionally and slidably retained within a tubular body or sleeve **12**. The loop **11**, as can be best seen in FIG. **2**, is generally rectangular-shaped and has a single discontinuity **14** at its one end, formed by the spaced adjacent ends **15** and **16** which are in substantially facing relationship. The end of the loop **11** having the discontinuity **14** in it preferably and advantageously is of a different shape than its opposite end so that this one end can be easily identified as the end in which the discontinuity **14** is provided. In other words, the different shape readily identifies or indicates the direction in which the loop **11** is slidably moved to insert or remove keys from the key retainer **10**, as will be apparent from the description below. In the illustrated embodiment, this end of the loop **11** is generally triangular-shaped, however, however, it also could be almost any shape so long as the loop **11** functions in conjunction with the sleeve **12** in the manner described herein.

The sleeve **12** has a slot **23** extending through it, of substantially the same width as the loop **11**. The sleeve **12** can be formed as an integral unit by, for example, molding it of plastic, however, preferably and advantageously, it is formed of two halves which are affixed together in suitable fashion, such as by adhesively affixing them together. A two-piece construction permits numerous different sleeves to be employed. For example, the two halves can be of different colors, or one half can be embellished with a name, a symbol or a legend of an advertising nature and easily affixed to another half of a selected color or design.

The opposite edges **21** and **22** of the slot **23** within the sleeve **12**, as can be best seen in FIG. **4**, each have a projection **20** formed on them, substantially centrally between the ends of the sleeve and in opposed facing relationship. These projections **20** cooperate with the respective pairs of convolutions **24** and **25** formed in the longer sides **26** and **27** of the loop **11**, to form a first and a second locking position for the loop **11** within the sleeve **12**. The inherent resiliency of the loop **11** frictionally and snap-actingly engages the pairs of convolutions **24** and **25** with the projections **20**, to thereby effectively lock the loop **11** in either the first or second locking positions.

The sleeve **12** is shorter in length than the loop **11**, and the one end of the loop **11** forms in conjunction with the end of the sleeve **12** a relatively large ring **30** for holding several keys such as household or business keys whose ready removal is desired.

To place keys in the larger ring **30**, the loop **11** is removed from the sleeve **12** and the keys threaded onto it through the discontinuity **14**, as illustrated in FIG. **5**. Thereafter, the loop **11** is slidably extended through the sleeve **12** until the first or the second locking position is engaged. In the first locking position, the keys on the larger ring **30** are effectively locked thereon since the loop **11** is lockingly retained in the sleeve **12** by the cooperative action of the projections **20** and the convolutions **24**. In this position, it may be noted that the discontinuity **14** of the loop **11** is concealed so that keys cannot be placed on or removed from the smaller ring **31**.

By slidably extending the loop **11** through the sleeve **12** until the second locking position is engaged, the discontinuity **14** in the loop **11** is exposed so that a key or keys now can be threaded onto the smaller ring **31**. In this position, it may be noted that the keys on the larger ring **30** still are lockingly retained thereon and cannot be removed.

After the key or keys have been threaded onto the smaller ring **31** they are effectively locked thereon by slidably extending the loop **11** through the sleeve **12** in the opposite direction until the first locking position again is engaged. In this position it may be noted that the discontinuity **14** is concealed by the sleeve **12**, thereby preventing any keys from being removed from the smaller ring **31**.

As indicated above, the key retainer **10** is effectively locked so that it cannot come apart in the pocket or purse, when there are keys on at least the smaller ring **31** and the loop **11** is in the first locking position. The keys on the smaller ring **31** can be easily and readily removed, without fear of spilling the keys from the larger ring **30** since they are locked thereon by the sleeve **12** and cannot be removed unless and until the loop **11** is fully removed from the sleeve **12**.

While the key retainer **10** has been described above with one pair of projections **20** provided on the side edges **21** and **22** of the slot **23** within the sleeve **12**, and with two cooperating pairs of convolutions **24** and **25** on the loop **11**, the sleeve **12** may be provided with two pairs or two single projections or depressions adapted to mate with a single or pair of convolutions on the loop itself. Indeed, the loop **11** may well be retained within the sleeve **12** only with the discontinuity **14** concealed, requiring only one projection or depression and only one cooperating convolution provided on the loop **11**.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and certain changes may be made in the above article. Accordingly, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

What is claimed is:

1. A key retainer comprising, in combination: a sleeve having a slot therein, said slot having spaced-apart, parallel side walls; and a loop of resilient material which is substantially rectangular-shaped having opposite longer sides which slidably and frictionally engage respective ones of said side walls of said slot, the opposite ends of said loop extending from said sleeve forming a first and a second ring, respectively, for receiving keys, the opposite free ends of said loop being in spaced-apart, facing relationship so as to form a discontinuity in said loop for permitting keys to be inserted onto said loop, said discontinuity being disposed in said loop such that it normally is concealed by said sleeve and such that said loop must be removed from said sleeve to remove keys from said first ring and keys on said second ring must be removed before said loop can be removed from said sleeve, said keys on said second ring being removable by slidably extending said loop through said sleeve to expose said discontinuity, cooperating locking means comprising at least one projection on said side wall of said slot which matingly engages a convolution in said opposite longer side of said loop, the resiliency of said loop releasably lockingly engaging said convolution and said projection to

releasably lock said loop within said sleeve in at least one locking position, said discontinuity being concealed by said sleeve when said loop is releasably locked in said sleeve in said one locking position.

2. The key retainer of claim 1, wherein said slot in said sleeve has spaced-apart, parallel side walls and said loop of resilient material is substantially rectangular-shaped having opposite longer sides which slidably and frictionally engage respective ones of said opposite side walls of said slot, cooperating locking means on both said opposite side walls of said slot and on both said opposite longer sides of said loop for releasably locking said loop within said sleeve in at least one locking position, said discontinuity being concealed by said sleeve when said loop is releasably locked in said sleeve in said one locking position.

3. The key retainer of claim 2 wherein said cooperating locking means comprise at least on projection on each of said opposite side walls of said slot which matingly engage a convolution in each of said opposite longer sides of said loop, the resiliency of said loop releasably lockingly engaging said convolutions and said projections to releasably lock said loop in said locking position.

4. The key retainer of claim 3, wherein each of said opposite longer sides of said loop has a pair of convolutions which matingly engage said projections in said opposite side walls of said slot to thereby define a first and a second locking position for said loop within said sleeve, said discontinuity being respectively concealed by said sleeve and exposed when said loop is releasably locked in said first and second locking positions.

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