Dec. 20, 1966 J. A. VAN METER 3,292,401

ACCESSORY HOLDER

Filed Feb. 24, 1965

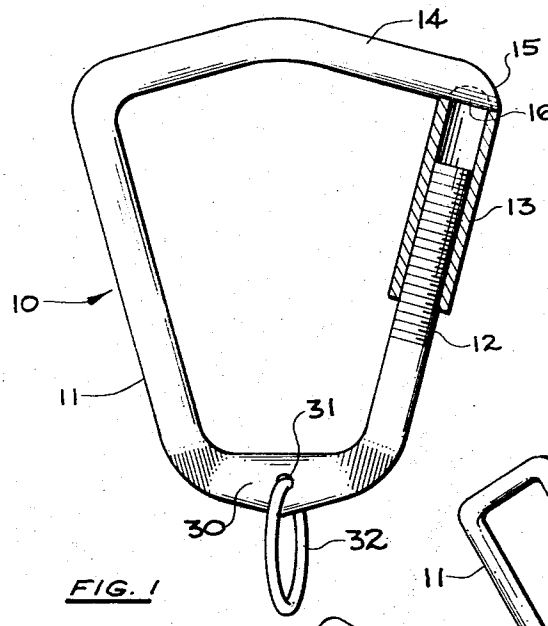


FIG. 1

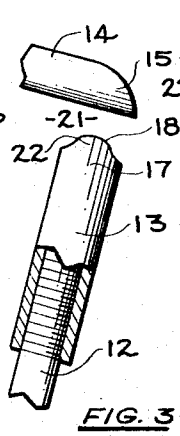


FIG. 3

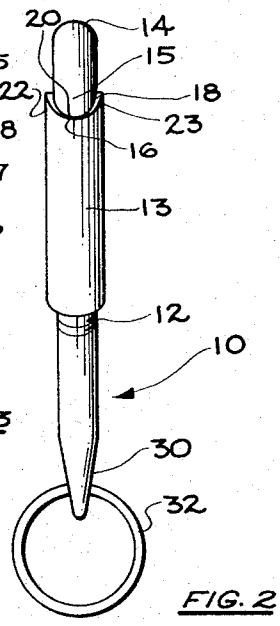


FIG. 2

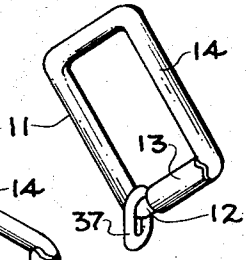


FIG. 6

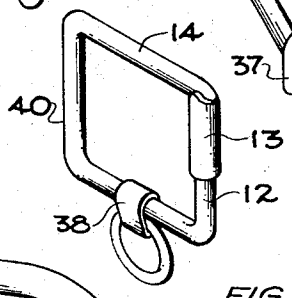


FIG. 7

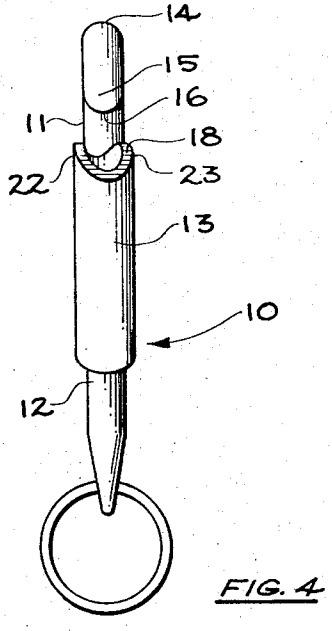


FIG. 4

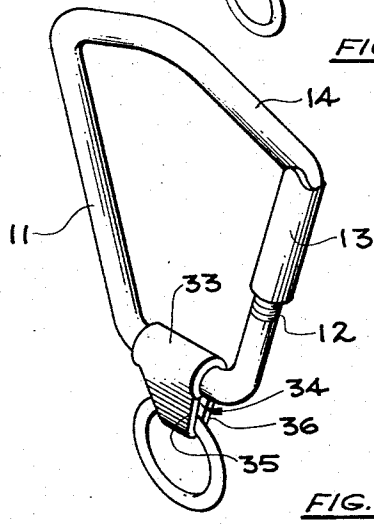


FIG. 5

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ACCESSORY HOLDER

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This invention relates to accessory holders commonly referred to as "key rings" and more particularly to a link holder for releasably retaining a plurality of pocket accessories such as keys, pocket tools, charms, etc.

Accessory holders and key rings employed in the past generally include a wire or bar which has been bent in a generally circular or rectangular configuration and which has a closure means which when open permits accessories such as keys to be mounted on the wire so that when the closure means is closed, the wire forms an endless link retaining the plurality of keys or other accessories thereon. Other accessories than keys are sometimes employed, such as for example, pocket knives, miniature screw drivers, souveniers, charms and other objects. Such accessories generally are provided with a retaining hole or aperture through which the wire or bar is passed when the closure mechanism is opened. Such an arrangement permits the accessories to slide on the link so that a particular key or accessory may be located and used without interference from adjacent keys or accessories on the link.

Difficulties have been encountered when employing conventional key retainers and accessory holders which are due largely to the fact that the closure means for locking the entry onto the link entails the use of a spring biased closure member which must be held back by finger pressure while the accessories are loaded onto the link. In instances where many keys are being loaded or assembled on the link, it is difficult to maintain the closure member against the spring tension while so loading. Also, the spring has a tendency to wear out and experience has shown that the strength of the spring becomes weakened with usage. Furthermore, a sliding closure member is particularly susceptible to clogging by dirt and other foreign matter which may lodge itself between the closure member and the portion of the link on which it is slidably mounted. In other instances, over-center toggle mechanisms have been employed to perfect closure of the link and such devices are relatively complex to manufacture since small parts must be employed and assembled. Furthermore, over-center toggle mechanisms can easily be displaced upon inadvertent contact with other possessions which are carried in a purse or pocket so that the closure means opens and the accessories or keys on the link are permitted to become disengaged from the link.

To obviate these difficulties as well as others, the accessory holder of the present invention provides a wire or bar link which employs a unique closure feature by mounting a closure sleeve on a screw leg portion of the link which upon rotation forceably engages a shaped free end of the sleeve with the opposite or free end of the link. The free end of the link may be said to be a shaped projection which is oval in cross section, offering a rounded smooth cam follower to the shaped free end of the closure sleeve which is notched in the form of an irregular cam surface to register or mate with the projection cam follower. The projection portion of the link is arranged at a right angle to the screw portion thereof, so that rotation of the closure sleeve causes the sleeve notch to cam against the shaped free end of the projection portion so that the projection portion rides over the cam surface of the notch and slips into the notch. The projection portion of the link is sufficiently rigid so that as the projection portion rides into the sleeve notch over the irregular cam surface as the sleeve is rotated, the projection portion is forced outwardly until the closure member or sleeve cam surface permits the projection portion to snap into the closure sleeve notch.

By such construction, a positive closure is achieved which cannot be inadvertently released and which cannot be rendered inoperative by prolonged use or which is susceptible to clogging by dirt or foreign matter. By employing the closure of the present invention, the freedom of design of an accessory holder is afforded so that the overall configuration may be rectangular, square, hexagonal or any combination thereof.

Therefore it is a primary object of the present invention to provide an accessory holder which includes a positive closure member for assuring the retention of keys and other accessories on the holder link.

It is another object of the present invention to provide an accessory link holder which provides a novel closure mechanism adapted to receive a projection portion of the link upon the rotation of the closure mechanism to effect positive closure of the link.

Still a further object of the present invention is to provide a novel closure means for a key or accessory link which is readily maintainable and is not susceptible to clogging by dirt or other foreign matter which would normally render a closing mechanism inoperative.

Still a further object of the present invention is to provide a novel closure means for a link key holder which is readily positionable between closed position and an open position without the necessity of holding the closure sleeve against spring tension.

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description taken in connection with the accompanying drawing, in which:

FIGURE 1 is a front elevational view, partly in section, of an accessory ring or holder in accordance with the present invention;

FIGURE 2 is a side elevational view of the accessory holder of FIGURE 1 showing the closure sleeve mated with the cantilevered projection portion of the link main body or member;

FIGURE 3 is a partial sectional view of a portion of the holder of FIGURE 1 showing the closure sleeve retracted to provide an opening into the holder interior;

FIGURE 4 is a side elevational view of the accessory holder similar to FIGURE 2 showing the closure sleeve retracted as illustrated in FIGURE 3;

FIGURE 5 is a perspective view of the accessory holder shown in FIGURE 1 modified to incorporate a movable link;

FIGURE 6 is a perspective view of a modification of the present invention illustrating the incorporation of a chain ring carried by the body member; and

FIGURE 7 is a perspective view of another modification of the present invention showing a sliding link carried by a portion of the link body member.

Referring to FIGURES 1 and 2 of the drawings, and accessory holder is shown which includes a link body member in the direction of arrow **10** comprising a main body member **11** which may be composed of any suitable wire or bar stock. The body member **11** is provided with a threaded leg portion **12** on which is mounted an elongated enclosure sleeve **13** which is adapted, upon rotation, to travel along the length of the leg portion. The body member **11** is also provided with a resiliently and integrally related projection portion **14**. The projection

portion is so related to the body member that a free or cantilevered end **15** of the projection portion is maintained at a right angle to the threaded leg portion **12** as shown in FIGURE 1 and it is further arranged in longitudinal planar alignment with the leg portion as shown in FIGURE 2. Although the body member may be of any suitable cross section configuration, it is to be noted that the cross section of the projection portion **14** is oval or rounded on its inside diameter wherein the rounded portion provides a cam follower **16**.

With reference to FIGURES 2 and 3, it is noted that the closure sleeve is threadably mounted on the leg portion **13** and that a free end **17** of the sleeve is configured with an irregular flat cam surface **18** so as to provide a U-shaped notch **20** in its free end. The notch is adapted to receive the cantilever projection portion end **15** of the body member **11** to effect a positive closure when the sleeve has been fully rotated to close an entrance **21** provided between the terminal end of the leg portion **13** and the projection portion **14**. The sleeve notch **20** may be said to be defined by a pair of parallel lobes **22** and **23** separated by a recess or channel adapted to registed with the free end **15** of the projection portion **14**. The continuous cam surface **18** defines the peripheral edge of the notch by progressing over the lobes and connecting the opposite ends thereof. The surface **18** is employed as a sleeve camming surface over which the cam follower **16** of the projection portion end **15** rides as the sleeve is rotated. FIGURE 4 more clearly illustrates the sleeve cam surface **18** by showing the sleeve retracted away from closure with the projection portion **14**.

The main body member **11** shown in FIGURES 1, 2 and 4, is provided with a flattened portion **30** which is fabricated by stamping the main body member. The flattened portion **30** is provided with a pierced hole **31** through which a jump ring **32** may be accommodated. By providing the flattened portion stamped from the main body member, a considerable savings in cost of manufacture is derived over alternate methods of attachment for the jump ring as used in conventional practice. Any suitable chain (not shown) can be attached to the jump ring to complete the accessory holder.

Referring now to FIGURE 5, the device of the present invention as shown in FIGURE 1 has been modified to the extent that the main body portion **11** has not been flattened as previously described but this embodiment includes a bale **33** composed of flat metal stock which has been bent about the main body member **11** and which includes an elongated opening **34** defined by paralled sides **35** and **36**. Such construction permits a chain or other suitable link device to be passed through the opening of the bale to complete the accessory holder. It is to be noted with respect to the embodiment of FIGURE 5 that the pentagonal configuration of the body member is such that the bale is retained on one side of the pentagon and that the bale side portions are crimped slightly around the mounting portion of the body member so that the bale is retained between the leg portion **12** and the opposite side of the main body member **11** of the pentagon. Such an arrangement insures that the bale will be maintained only on this portion of the body member and therefore will not interfere with keys, charms, etc. which may be carried on the exposed portions of the body member **11**.

Referring to FIGURES 6 and 7, another modification of the present invention is shown whereby the main body member **11** is rectangularly configured as shown in FIGURE 6 and configured as a square as shown in FIGURE 7. FIGURE 6 includes a chain link **37** which is disposed about the body member **11** so that the link may freely travel over the corners and lengths of the body member. However, with reference to FIGURE 7, it is noted that a loop or bale **38** is employed which is similar to the bale **33** of FIGURE 5. Bale **38** is slidably mounted

on the body member **11** so as to permit freedom of sliding motion between the leg portion **12** of the body member and an opposite side **40** of the body member.

The embodiments disclosed in FIGURES 5, 6 and 7 include the projection portion **14** and closure sleeve mechanism employed in FIGURES 1–4 inclusive. In each modification, it is noted that the projection portion **14** of the body member is disposed at a right angle to the closure sleeve **13** carried by the threaded leg portion **12**.

In operation, the closure sleeve **13** is rotated in a counter-clockwise direction so that its travel will be down the leg portion **12** of the body member **11**. The travel of closure sleeve **13** widens the opening **21** between the free end of the closure sleeve and the free end **15** of the projection portion **14**. When the opening is of sufficient width, keys, charms, etc. may be loaded or mounted on the body member **11** via the projection portion **14** by slipping the free end **15** through small apertures or holes provided on the accessories to be mounted. To close the opening **21**, closure sleeve **13** is rotated in a clockwise direction so that sleeve linear diplacement upward on the leg portion **12** is achieved bringing the free end **17** of the closure sleeve into contact with the cantilevered free end **15** of the projection portion **14**. The first engagement of the closure sleeve with the free end **15** is made via the upper portion of the lobes **22** and **23** with the cam follower **16** provided on the free end **15**. Continued rotation of the sleeve causes the projection portion to bend rearward slightly as the closure sleeve is pressured or forcedly urged against the projection portion **14**. However, as rotation continues, the cam follower **16** progresses on the irregular camming surface **18** until the free end **15** mates or registers with the notch and snaps into the notch **20** when the lobes **22** and **23** are related on opposite sides of the free end **15**. In order to uncouple the closure sleeve **13** with respect to the free end **15** of the projection portion **14**, it is necessary to exercise sufficient rotary action of the closure sleeve **13** to overcome the resiliency of the cantilevered projection portion **14**. This is easily accomplished through means of finger pressure but cannot be readily achieved by inadvertent tumbling or contact with other accessories in the purse or pocket. Consequently, a positive closure is achieved through the use and employment of the present invention which is easily and readily opened and closed to permit access to the holder.

Although particular embodiments of the invention have been illustrated and described, it will be obvious to those skilled in the art that various changes and modifications may be made without departing from the invention, and it is intended to cover in the appended claims, all such modifications and equivalents as fall within the true spirit and scope of this invention.

I claim:

1. An accessory holder comprising:

a body member having a resilient projection portion and a threaded portion arranged substantially at right angles to each other so as to define an opening between their opposing free ends;

a closure mechanism mounted on said threaded portion adapted to move towards and away from said projection portion to open and close said defined opening;

said closure mechanism having a notch in one end releasably engageable with said projection portion; and

said free end of said projection portion having a shape conforming to said closure mechanism notch so that forcible engagement of said closure mechanism with said projection portion causes said shaped free end to snap into said closure mechanism notch.

2. An accessory holder comprising:

a body member having a resilient projection portion and a threaded portion having free ends at right angle to each other and arranged in close proximity

to each other so as to define an opening between said opposing free ends;

a closure sleeve rotatably mounted on said threaded portion and adapted to move towards and away from said projection portion to open and close said defined opening;

said closure sleeve having an elongated notch in one end normal to the longitudinal axis of said closure sleeve and releasably engageable with said projection portion; and

said free end of said projection portion having a shape conforming to said closure sleeve notch so that forcible engagement of said closure sleeve with said projection portion responsive to said closure sleeve rotation causes said shaped free end to snap into said closure sleeve notch whereby said body member and said closure sleeve form an endless link.

3. The invention as defined is claim 2 wherein said body member includes a flattened portion and a bale connected to said flattened portion.

4. The invention as defined by claim 2 wherein said closure sleeve notch is defined by a pair of upright lobes projecting from one end of said closure sleeve and separated by a space for receiving said shaped free end.

5. A pocket accessory link holder comprising:

a body member of circular cross section having a resilient projection portion integral therewith and a threaded portion;

said projection portion and said threaded portion having free ends disposed at right angle to each other and arranged in close proximity to each other so as to define an opening between said opposing free ends;

a closure sleeve rotatably mounted on said threaded portion and adapted to move towards and away from said projection portion to open and close said defined opening;

said closure sleeve having on one end a pair of lobes defining an elongated notch normal to the longitudinal axis of said closure sleeve and releasably engageable with said projection portion;

said pair of lobes having a flat cam surface forming and endless peripheral path about said closure sleeve notch; and

said free end of said projection portion having a cam shaped to conform with said closure sleeve notch so that forcible engagement of said closure sleeve with said projection portion responsive to said closure sleeve rotation causes said cam to ride on said cam surface and to snap into said closure sleeve notch when said cam registers with said notch whereby said body member and said closure sleeve form an endless link.

6. The invention as defined in claim 5 wherein said body member takes the form of a square when said closure sleeve is in position to close said defined opening and including a slidably mounted chain loop closed about a portion of said body member in non-interferring relationship with said closure sleeve.

7. A closure mechanism for a pocket accessory having a body member configured in a manner so that its opposite ends are arranged at a right angle to each other so as to define an opening between the opposing opposite ends, the combination comprising:

a closure sleeve including means rotatably mounting said sleeve on one of the body member ends, whereby said sleeve is adapted to move towards and away from the other end of the body member responsive to rotary movement thereof;

one end of said closure sleeve having a pair of lobes defining a notch therebetween;

said lobes having an irregular flat cam surface forming a continuous peripheral path about said closure sleeve notch; and

a cam follower formed on the end of the body member opposite to its end carrying said closure sleeve selectively engageable with said closure sleeve to ride on said cam surface during rotation of said closure sleeve and to seat in said closure sleeve notch when said pair of lobes are on opposite sides of said cam follower.

8. The invention as defined in claim 7 including a bale slidably mounted on the body member in non-interferring relationship with said closure sleeve.

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