June 2, 1953 S. J. VAISEY 2,640,237

DETACHABLE KEY RING

Filed Sept. 15, 1949

Fig. 1.

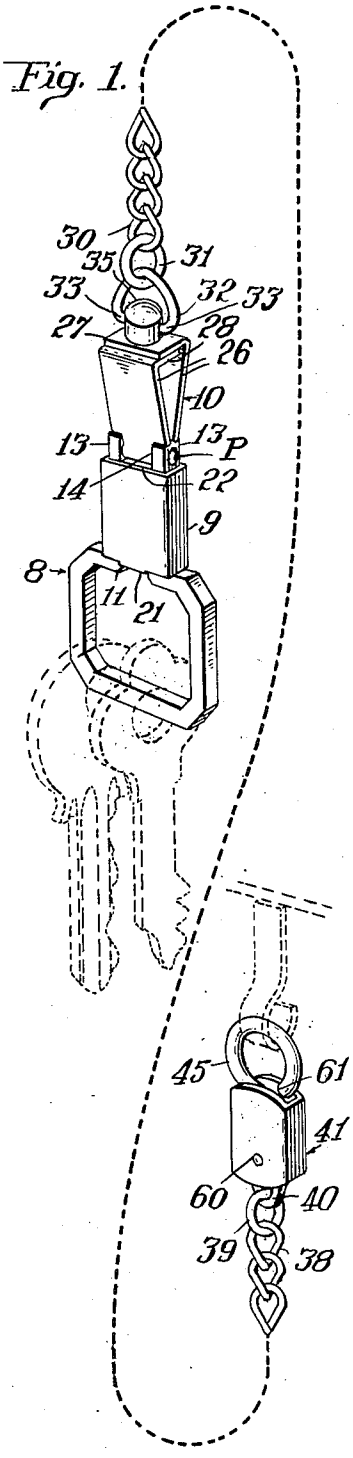


Fig. 2.

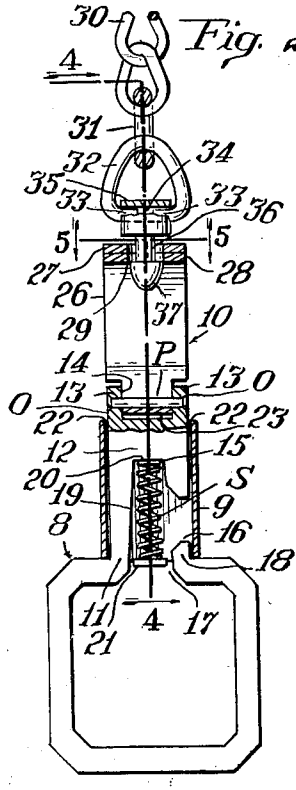


Fig. 3.

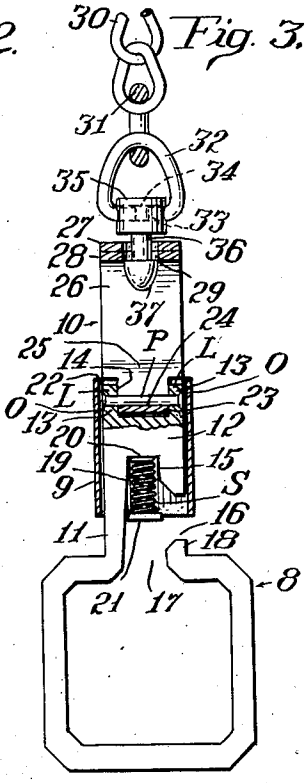


Fig. 4.

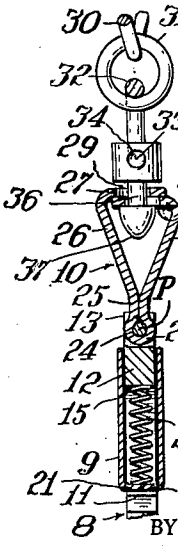


Fig. 5.

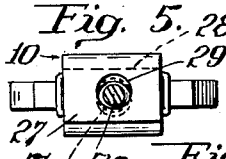


Fig. 7.

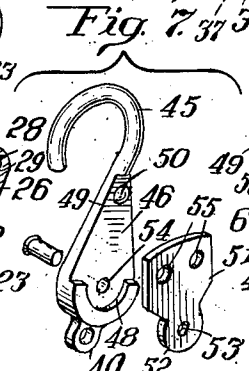
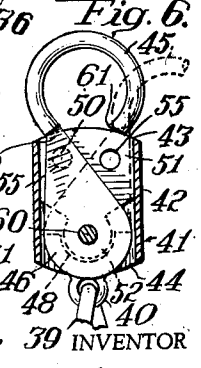


Fig. 6.



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DETACHABLE KEY RING

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1 Claim. (Cl. 24—84)

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This invention relates to detachable key rings.

The invention is more particularly directed to key rings that are readily detachably disconnected from the end of a chain or other flexible or resilient means.

More specifically, the invention is directed to a key ring that is quickly and readily detached from the end of a chain or the like by the use of one hand only.

In the prior art key chains, the key ring element is fixedly secured to the end of the key chain. In other prior art devices along this line of invention, it is rather difficult to detach the key ring from the chain.

Thus, it is apparent that the prior art devices, while quite satisfactory, have some objections thereto; namely, in the first mentioned prior art device the key ring is not detachable from the end of the chain and, therefore, a key on the key ring cannot be used unless the chain that is attached thereto is twisted, so to speak, along with the operation or turning of the key in the lock. In the other prior art key chains, it is difficult to remove the key ring from the key chain and requires a two-hand operation or manipulation to accomplish this result.

From a comparison of the prior art devices and applicant's detachable key chain, it is quite obvious that in the present invention there are advantages over the prior art devices; namely, that the key ring may be readily and quickly detached from the end of the key chain or the like and this may be accomplished even in darkness as all that is required to detach applicant's key ring from the end of the key chain or the like is a simple pressing or squeezing operation by the fingers on a clasp that is carried by the key ring and detachable from the end of the key chain. This detachment of the key ring may be accomplished by the use of the fingers of one hand only and the detachment of the key ring can be effected regardless of the position of the chain. For instance, the chain may be disposed horizontally outwardly from the user or it may be disposed at any inclination, including the vertical with respect to the horizontal.

With the above in mind, it is an object of my invention to provide a quickly and readily detachable key ring that is carried on the end of a flexible or resilient means, such as a chain, cord or the like.

Another object of my invention is to provide a quickly detachable connection between a key ring assembly and the end of a flexible element such as a chain or the like and the detachment

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being accomplished by the use of the fingers of one hand only.

Another object of my invention is to provide a quick detachable connection between the end of a key ring assembly and the end of a chain or the like, including a novel clasp which may be manipulated even in the darkness so as to readily disconnect the key ring, and with the keys thereon, from the end of a flexible and/or a resilient element such as a key chain, cord or the like.

Another object of my invention is to provide a novel clasp that is interposed between one end of a key ring and one end of a flexible element and which clasp is connected both to the key ring and the flexible element, the connection with the flexible element being a detachable one.

Another object of my invention is to provide a key ring assembly including a key ring connected to one end of a chain or the like and the key ring having pivotal and rotatable connections allowing a universal movement of the key ring with respect to the chain, or vice versa, and thus preventing the chain or the like from becoming entangled and allowing the key ring to be pivoted and/or rotated so that a selected key from a plurality of keys on the key ring may be readily grasped in the fingers for insertion and proper manipulation in a lock and, additionally, allowing a quick detachable connection, if desired, of the key ring from the chain.

Another object of my invention is to provide a quick detachable key ring from the end of a chain or the like and the other end of the chain being connected to an article of apparel by a suitable clasp and, specifically, this other end of the chain being connected to a trouser loop and, thus, anchoring that end of the chain to the article of clothing and wherein there are a minimum of simple working parts and the device, as a whole, may be manufactured rather inexpensively and yet possess such durable characteristics as to provide for long and efficient use.

With the above and other ojects in view, the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings and pointed out in the claims hereto appended, it being understood that various changes in the form, proportions, and minor details of construction, within the scope of the claim, may be resorted to without departing from the spirit of or sacrificing of any advantages of the invention.

In the drawings:

Fig. 1 is a perspective view of the quick detach-

able key ring showing the same attached to one end of a flexible or resilient means such as a chain, cord or the like and a suitable clasp at the other end of the chain that is attached to a trouser loop.

Fig. 2 is a vertical sectional view of the key chain assembly showing certain parts in elevation and others in cross-section and showing the key ring in closed position.

Fig. 3 is a view similar to Fig. 2 but showing the key ring in opened position.

Fig. 4 is a vertical sectional view taken substantially on the lines 4—4 of Fig. 2.

Fig. 5 is a transverse view along the lines 5—5 of Fig. 2.

Fig. 6 is a vertical sectional view showing certain parts in elevation of the clasp of the fastening means for securing one end of the chain or the like to the trousers; and,

Fig. 7 is an exploded perspective view of certain component elements constituting the fastening means as shown in Fig. 6.

The invention will be more readily understood by referring to the drawings in detail wherein like reference numerals in the several figures all denote the same parts.

The key ring assembly includes the key ring denoted generally at 8, a slidable hollow closure for the key ring denoted generally at 9 and the quick detachable clasp denoted generally at 10. The key ring, as here shown, is of octagonal outline but, of course, may assume any polygonal outline or shape and also may be round or oval. The key ring 8 is provided with an integral arm 11 that extends outwardly from one side or portion of the ring proper and at the upper end of this arm there is a generally H-shaped head 12 and at the extreme upper end 13 of the arm there is a relatively wide recess 14 and inwardly of this recess and opposite of the same and in the same plane there is a relatively narrow recess 15. Opposite the inner side of the arm 11 of the key ring there is a throat or open space 16 through which keys are introduced to be held on the key ring and this throat continues inwardly of the key ring as at 17 so as to allow the keys to be placed on and carried by and removed from, if so desired, the key ring. The key ring opposite the throat 17 is provided with an outwardly extending projection 18 that is in alignment with the portion of the H-shaped head adjacent the recess 15. There is a hollow space 19 provided in the H-shaped portion of the head of the key ring and the coiled spring S is disposed in that hollow space. One end of the coiled spring engages an abutment 20 in the H-shaped head of the key ring and the other end of the coiled spring engages an abutment 21 that is a turned over tongue which is preferably integral with one of the walls of the slidable closure for the key ring.

The slidable closure 9 of the key ring is, as aforesaid, hollow and includes front, back and side walls and the abutment 21 at the inner end thereof and the outer end 22 of the same is entirely open. Thus, when the slidable closure is positioned about the arm and H-shaped head of the key ring, assuming, of course, that the spring S has been inserted in its proper position, the slidable closure embraces the arm 11 and the H-shaped head and surrounds the same and, as seen in Fig. 2, the spring S is exerting its motive force to maintain the slidable closure normally in a closed position, that is, where the opening or throat is normally closed and when the slidable closure is forcibly moved or slid outwardly the spring S is compressed and the closure 9 slides on the arm and H-shaped head of the key ring; thus, exposing the opening 16 in the key ring so that a key may either be placed on the ring or removed therefrom.

The recessed end 14 in the H-shaped head of the key ring provides, in part, a means for pivotal mounting of the clasp 10 in the H-shaped head of the key ring. The clasp 10 is of generally oblong shape and comprises substantially broad, flat, opposing side portions 26. The clasp is preferably made of resilient material such as metal or the like and the outer surfaces thereof are stantially smooth. One end 23 of the clasp 10 is preferably rounded and providing a circular opening or passageway 24 therein and immediately above this opening the opposing side portions 26 of the clasp are brought together in contacting relationship as denoted at 25, and then the opposite side portions 26 of the clasp diverge outwardly and the ends 27 and 28 are bent upon themselves in overlapping and preferably contacting relationship. The overlapped ends 27 and 28 of the clasp 10 are each provided with an opening substantially of the same size and when the clasp is in clasping position, as clearly shown in Fig. 4, the openings 29 are out of registry. The end 23 of the clasp is reduced as regards the width of the inclined sides thereof, see Figs. 2 and 3 and provides for the pivotal connection of the clasp with the recessed upper end of the H-shaped head of the key ring. The opposite legs L of the upper end of the H-shaped head are each provided with aligned openings O and this allows a pin or pintle P to be inserted and properly held in the aligned openings and in the passageway or opening 24 in the bottom of the clasp. The outer ends of the pintle may be upset slightly to prevent displacement of this pin. The flexible chain, cord or resilient means, as denoted at 30 and at one end thereof there is a ring 31 connected to the last link of the chain and in this link 31, a metal loop or link 32 is connected to the oppositely turned in ends 33 of which are seated in an opening 34 in a head 35 having a stem 36 thereon and a substantially ovate shaped end 37 at the end of the stem. The loop 32 is pivotally mounted in the opening 34 and when the ovate shaped head 37 is entered through the registered openings 29 of the clasp, assuming the clasp has been grasped in the fingers and squeezed to register the openings and then the clasp is released, and due to its inherent springy characteristics the portions of the turned over ends at the openings will extend over the ovate head and fasten the clasp and key ring to the end of the chain or the like. The connection of the clasp with the headed ovate ended member is a completely rotatable one allowing the clasp to turn 360° with respect to the headed member or vice versa.

The end 38 of the chain has a ring 39 attached thereto and this ring is connected to an eye 40 that depends from the fastening element generally indicated at 41. This fastening element consists of a hollow casing 42 open at both ends as at 43 and 44 and including front, back and side walls and mounted therein is a hook shaped element 45 with an enlarged spatulate shaped end 46 having a laterally outstanding arcuate shaped projection thereon at its bottom and providing a semi-circular recess 48 and a flat recessed portion 49 at one end of which there is an outstanding rounded projection 50. A spring-like plate 51 is seated in the recess 49,

and the substantially circular end 52 of this plate is provided with an opening 53 therein, and is positioned in the arcuate seat 43 adjacent which there is an opening 54. The plate 51, at its upper end carries spaced openings or recesses 55. When the plate 51 and the hook-like member are assembled within the casing 42, the openings 53 and 54 are in registry and there is a headed pin 60 that extends through openings in the back and front walls of the casing, all of which openings are in registry and the other end of the pin is upset to maintain the several parts in their associated working relationship. The fastening means 41 with the hook-shaped portion 45 is shown in closed position in full lines in Fig. 6 and when the hook-shaped portion 45 is moved to dotted line position shown in this drawing, an opening 61 will be uncovered so as to allow this hook-shaped member to be placed about a trouser loop, strap or the like. Thus, a sort of snap action takes place when the hook-shaped member 45 is pivotally moved on the pin 60 within the housing 42 to the dotted lined open position and this hook-shaped member is held in either of these positions by means of the projection 59 on the hook-shaped member engaging in either of the openings 55 in the spring-like plate 51.

From the foregoing, it is believed clear that the key ring 8 to which is attached the clasp 10 may be quickly detached from the end of the chain or the like by simply pressing or squeezing together the opposite preferably flat sides of the clasp so that the openings 29 in the overlapped ends thereof are in registry and thus the headed member that has been secured by the clasp will be released and will readily drop out of connection with the clasp so that the key ring with the keys thereon may be handled as a unit. In some instances in using the keys that are attached to the end of the chain or the like, it may not be necessary or desirable to disconnect the key ring from the end of the chain and, of course, under those circumstances, the clasp 10 is not manipulated and the key ring will be, for all intents or purposes, fixedly secured to the end of the chain or the like but it can be removed therefrom and very readily. As aforesaid, keys are either placed on or removed from the key ring by simply sliding the closure member 9 on the upper integral part of the key ring thus exposing the opening or throat into which the keys are introduced and then mounted on or removed from the key ring proper, as may be desired.

I claim:

A terminal member for a key chain having an attaching element for permanently connecting the same with an end of a chain, said terminal member including a depending connecting stem formed with a head at its lower end, and a readily detachable key ring assembly comprising a key ring having an integral lateral projection extending upwardly therefrom and provided with a straight transversely extending pintle across its upper end, a spring clasp formed from a resilient strip bent midway its length to form opposing substantially flat side arms integrally connected at their lower ends and diverging outwardly toward the upper end of the clasp, the connected lower ends of the arms forming a transversely extending open-ended bearing circular in cross section and through which the straight transversely extending pintle of the projection loosely passes and pivotally mounts the clasp for tilting movement about the pintle relative to the key ring, the said side arms of the clasp having inwardly extending overlapped outer ends each having an opening therein through which openings when registering said headed connecting stem passes, the arms then moving away from each other to dispose their openings out of registry and thereby mount the clasp for turning movement about the stem, said clasp being detachable from said stem by holding the key ring and the clasp in one hand and with fingers of the said hand pressing the arms of the clasp toward each other and thereby moving their openings toward a registering position allowing longitudinal movement of the headed stem upwardly out of the openings, whereby the clasp and the key ring may as a unit be quickly disconnected from the stem and the terminal member and the chain carrying the same allowed to drop free from the clasp while still holding the key ring and the clasp in the said hand.

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