ABSTRACT

A ring-type holder for keys and the like has a metal ring with spaced apart ends and a closure member provided with a slot into which the ends of the ring fit. The ring and closure member are interlocked within the slot to retain keys or other objects on the ring. The closure member has a recess into which a lens is fitted to hold a photograph or written material in place behind the lens. Apertures open into the recess from the slot so that the end of the ring can be inserted into the slot and thence through the aperture to apply a force against the back of the lens for dislodging the lens.

10 Claims, 4 Drawing Figures
RING-TYPE HOLDER

BACKGROUND OF THE INVENTION

This invention relates in general to ring-type holders, and more particularly to a ring-type holder having a removable element.

Some key holders of current manufacture have lenses behind which small photographs or some other printed materials such as advertising or identification are retained. Normally, the lens snaps into a recess in a plastic closure member which interlocks with the ends of a metal ring so as to retain keys on the ring. To remove the lens the user must pry it outwardly from a thumb-nail groove which extends behind the lens. Often the lens is lodged tight enough to break one's thumbnail. Sometimes a tightly held lens is removed with thin implement such as a fingernail file, but this can damage the plastic closer member as well as the lens.

SUMMARY OF THE INVENTION

One of the principal objects of the present invention is to provide a ring-type holder with means for holding a photograph or printed material. Another object is to provide a holder of the type stated which has a lens capable of being easily removed. A further object is to provide a holder of the type stated in which the lens is easily removed without using one's thumbnail or fingernail. These and other objects and advantages will become apparent hereinafter.

DESCRIPTION OF THE DRAWINGS

In the accompanying drawings which form part of the specification and wherein like numerals and letters refer to like parts wherever they occur:

FIG. 1 is a perspective view of a ring-type holder constructed in accordance with and embodying the present invention;

FIG. 2 is an exploded perspective view of the holder;

FIG. 3 is a sectional view taken along lines 3-3 of FIG. 1; and

FIG. 4 is a sectional view showing the ring placed to dislodge the lens from the closure member.

DETAILED DESCRIPTION

Referring now to the drawings (FIG. 1), R designates a ring-type holder which includes a metal ring 2 and a closure member 4 interlocked with the ends of the ring 2 and bridging the space between them so as to close the ring 2.

The ring 2 possesses a generally U-shaped configuration (FIGS. 2 and 3) and is formed from steel or some other metal having a limited amount of resiliency. In particular, the ring 2 includes a loop portion 6 on which keys are retained, arcuate clamping portions 8 at the ends of the loop portion 6, and diverging end portions 10 at the ends of the clamping portions 8. The clamping portions 8 are bowed outwardly and merge into the end portions 10 at inwardly directed fulcrum surfaces 12 which are generally convex in configuration. The end portions 10 form the free ends of the ring 2.

The closure member 4 is preferably injection molded from a suitable plastic and consists of two segments (FIG. 2), namely, a base plate 14 and a top plate 16. The latter retains a lens 18, behind which a photograph or a piece of paper containing identification, advertisement, or the like is held. The base plate 14 and the top plate 16 are permanently joined together whereas the lens 18 is retained in the top plate such that it can be easily snapped out of it. The base plate 14 is somewhat elliptical in configuration and has a flat inwardly presented surface from which a cylindrical boss 20 projects (FIGS. 2-4). The top plate 16 has the same peripheral configuration as the base plate 14 and likewise has a flat inwardly presented surface from which a somewhat larger cylindrical boss 22 projects (FIGS. 3 and 4). Moreover, the interior of the boss 22 has an axially extended socket 24 which snugly receives the boss 20 on the base plate 14. The base plate 14 and the top plate 16 are joined together along a glue line 26 (FIG. 4) located within the socket 24 so that the bosses 20 and 22 form a connector between the two plates 14 and 16 which are otherwise spaced apart. The interfitting bosses 20 and 22 are such that the flat inside faces of the two plates 14 and 16 are parallel and define a slot 28 which opens outwardly along the entire periphery of the closure member 4. The slot 28 is wide enough to accommodate the end portions 10 on the ring 2. The width of the slot 28, however, is somewhat less than the length of the end portions 10 on the ring 2, that is the distance from their free ends to their fulcrum points 12.

The top plate 14 is further provided with a recess 30 (FIGS. 2 and 4) which opens out of the outside face thereof, and this recess is defined by a flat bottom surface 32 and an inclined side surface 34 which forms an inwardly opening groove along the periphery of the recess 30. The diameter of the recess 30 is somewhat greater than the diameter of the boss 22 and between the boss 32, and the groove 34 the top plate 16 is provided with apertures 36 (FIGS. 2-4) which are located where the elliptical plates 14 and 16 have their smallest width. Both apertures 36 are wide enough to accommodate the end portion 10 of the ring 2.

The lens 18 fits into the recess 30, and its diameter is slightly greater than the smaller diameter end of the inclined side surface 34 but is about the same as the larger diameter end of the inclined side surface 34 (FIG. 4). Hence, when the lens 18 is forced toward the bottom surface 32 of the recess 30, it causes the top plate 16 to spread slightly at outer or small end of the side surface 34, and as a result the lens 18 snaps into the groove defined by the side surface 34. Once the lens 18 is in the groove the side surface 34 reverts back to its initial shape and secures the lens 18 in place. A photograph, or written material may be inserted between the lens 18 and the flat bottom surface 32.

In use, keys are installed on the ring 2 and accumulated on the loop portion 6 thereof. Then the diverging end portions 18 are inserted into the slot 28 between the two plates 14 and 16 of the closure member 4 and are advanced toward the boss 22. With the inside faces of end portions 10 presented against each side of the boss 22, the ring 2 is forced firmly toward the boss 22, and this causes the end portion 10 to spread apart. As a result, the convex fulcrum points 12 ride over the boss 22, and the end portions 10 spring together again as the arcuate clamping portions 8 located themselves at the boss 22. Indeed, the ring 2 firmly embraces the boss 22 at the arcuate clamping portions 8 (FIG. 3). Thus, the closure member 4 closes the space between the spaced apart ends of the ring 2 and retains the keys or other objects on the loop portion 6.

The ring 2 is removed from the closure member 4, merely by pulling it away from the closure member 4.
To remove the lens 18 from its recess 30 in the top plate 16 so that a picture or written material may be installed behind it, the ring 2 is first detached from the closure member 4. Then either one of the diverging end portions 10 on the ring 2 is inserted into the slot 28 between the base and top plates 14 and 16 (FIG. 4) and manipulated to bring the extreme end of that end portion 10 into one of the apertures 36. Thereupon, the fulcrum surface 12 at the opposite end of that end portion 10 is brought against the flat inwardly presented surface of the base plate 14 directly opposite from the aperture 36, and the loop portion is then pivoted away from the top plate 16, the pivot point of course being the fulcrum surface 12 on the end portion 10 that is within the slot 28. As a result, the free end of the end portion 10 moves through the aperture 36 and bears against the back side of the lens 18, causing the lens 18 to be dislodged from the recess 30.

Thereafter a photograph, or a piece of paper bearing written material such as an advertisement or identification is installed in the recess 30 and the lens 18 is snapped back in place, thus holding the photograph or paper in the recess 30.

The external configuration of the base and top plates 14 and 16 may be something other than elliptical. Also, the base plate 14, the top plate 16, and the connector between the two, that is the cylindrical boss 22 may be molded in one piece.

This invention is intended to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure which do not constitute departures from the spirit and scope of the invention.

What is claimed is:

1. A ring-type holder for keys and the like, said holder comprising: a ring having spaced apart ends; a closure member having a slot into which the ends of the ring fit and being detachably engaged with the closure member within the slot to retain objects on the ring, the closure member further having a recess and apertures providing access to the base of the recess; and a detachable element in the recess and engaged at its periphery by the closure member, the detachable element covering the aperture in the base of the recess, whereby the element can be dislodged from the recess by inserting an implement through the aperture and applying a force to the back face of the element.

2. A holder according to claim 1 wherein the element is a lens.

3. A holder according to claim 2 wherein the aperture is large enough to receive one of the ends of the ring so that the ring may be used to dislodge the lens.

4. A holder according to claim 3 wherein the aperture also opens into the slot and is accessible from the slot.

5. A holder according to claim 4 wherein the ring has an end portion which is longer than the width of the slot, the ring further being provided with a fulcrum surface at one end of the end portion and being configured so that when the fulcrum surface is positioned against the side surface defining the slot opposite from the aperture, the entire ring can be pivoted on that side surface to project the end portion into the aperture to dislodge the lens.

6. A holder according to claim 2 wherein the ring has loop portion, spaced apart clamping positions which are joined to the loop portion and bow outwardly, and diverging end portions which merge into the clamping portions; wherein the closure member has a connecting segment which is normally embraced by the clamping portions of the ring; and wherein at least one of the end portions is capable of fitting through the aperture to dislodge the lens.

7. A holder according to claim 6 wherein the aperture also opens into the slot and the width of the slot at the aperture is less than the length of said one end portion on the ring.

8. A holder according to claim 7 wherein said one end portion merges into the adjoining clamping portion on the ring at a generally convex fulcrum surface and whereby the ring and closure member are configured such that when said one end portion is in the slot with its free end in the aperture and the fulcrum surface against the closure member directly opposite the slot, the ring can be pivoted on its fulcrum surface such that said free end moves through the aperture and applies a force to the back of the lens.

9. A holder according to claim 8 wherein the back of the lens is substantially parallel to the major surfaces of the slot.

10. A holder according to claim 8 wherein the recess is bounded by a continuous slight groove, and the periphery of the lens is in the groove.

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