Aug. 31, 1954 P. W. FELT 2,687,756

MOLDED FLEXIBLE KEY HOLDER

Filed May 7, 1951

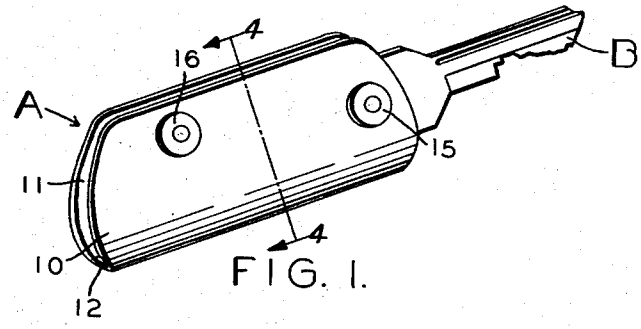


FIG. 1.

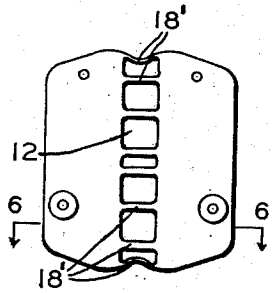


FIG. 5.

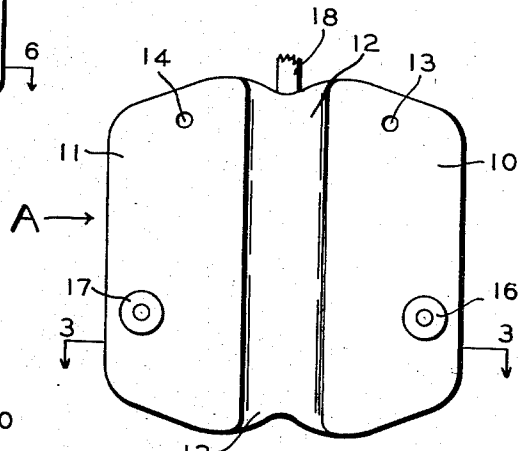


FIG. 2.

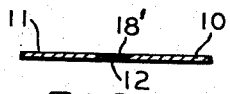


FIG. 6.

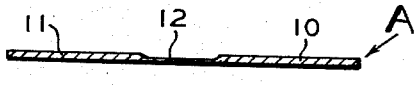


FIG. 3.

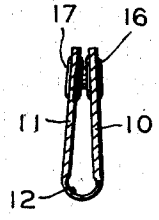


FIG. 4.

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MOLDED FLEXIBLE KEY HOLDER

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2 Claims. (Cl. 150—40)

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My invention relates to an improvement in a flexible key holder molded of plastic and particularly of a type for containing automobile and household keys.

It is a primary feature of my invention to provide a one-piece molded key holder having relatively thick but flexible side walls which are joined by an integral thin central portion adapted to provide a hinge means for the side walls of the holder so that the side walls may be maintained in close parallel relation when the holder is closed, and the side walls easily forced apart when it is desired to select a key supported within the side walls. The keys are pivoted on a removable pin extending through both walls of the holder. A snap fastener is provided to maintain the side walls in close parallel closed relationship.

It is a feature to provide a key holder which is molded in one piece of plastic in a flat state and which will flex centrally for easy opening and closing. When the key holder has been molded and is folded on the thin central portion, in use, it will tend to remain folded although the side walls are relatively thick and form a strong protective cover for the keys held in the holder.

My plastic key holder may be molded singularly or in a series, one adjacent the other to minimize the molding cost in making the same. In molding my key case flat, the mold cost is reduced and it is desirable to mold the same from polyethylene molding material or vinylite or similar flexible plastic material which is wear resistant and which provides the desired flexibility.

A further feature of my flexible plastic key case resides in the advantage that the above plastic material gives to the user in providing a key case which may be readily washed to cleanse the same, which enhances the character of the key case so that it can be kept clean, and may be molded of the above plastics in a variety of colors.

The invention will appear more clearly from the following detailed description when taken in connection with the accompanying drawings showing by way of example a preferred embodiment of the inventive idea.

In the drawings forming part of the application:

Figure 1 is a perspective view of my key holder in closed position illustrating a key extending therefrom.

Figure 2 is a plan view of my key holder in flattened, molded position.

Figure 3 is an end view of the holder illustrated in Figure 2.

Figure 4 is a sectional view on the line 4—4 of Figure 1.

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Figure 5 illustrates an alternative form of my key holder.

Figure 6 is a section on the line 6—6 of Figure 5.

My key holder A is composed of a single piece of plastic material or the like and includes the longitudinal, semi-flexible side wall portions 10 and 11 which are joined by the thin, longitudinal, central portion 12, which is integral with the side wall portions 10 and 11. The side wall portions 10 and 11 are formed with the holes 13 and 14 respectively, which are adapted to receive a removable pin member 15 when the holder is brought into the position illustrated in Figure 1, thereby retaining the holder in the position shown in Figure 1.

To further aid in maintaining the side walls 10 and 11 in the closed position shown in Figure 1, a clasp member consisting of the male portion 16 and a female portion 17 is provided. The male portion 16 is secured adjacent the bottom end of the side wall 10 and adapted to engage with the female portion 17 of the snap fastener, which is secured adjacent the rear end of the side wall 11.

Where a key holder is made with sufficient thickness of side walls and the central hinging portion is of the same thickness, the ability of the side walls to maintain the position shown in Figure 1 is slight due to the stiffness throughout the central hinging portion. To do away with this objectionable feature and still provide side walls of sufficient thickness, I have provided a thin, central hinging portion such as 12 whereby the side walls may be easily kept in close parallel relation when the holder is in a closed position. My new construction is particularly adapted to molding of the same where the thin, central hinge portion is molded integral with the thicker side walls thereof. My device may be molded singly or in series, which may be connected by the gate 18 which is cut off after the molding is completed. In molding a series of the holders a further gate may extend from another edge of the device connecting an additional holder in the series.

In using my key holder, a removable pin 15 has mounted thereon a key such as B, and then the pin is secured through the holes 13 and 14. When the key B is not in use, it is pivoted into the holder formed by the side walls 10 and 11 together with the hinged central portion 12 and the members 16 and 17 engage together and may hold keys within the side walls. When the fastener, including the members 16 and 17, is disengaged, the side walls 10 and 11 tend to maintain their close parallel relationship due to the new construction of the central hinge portion 12.

In Figures 5 and 6 I have illustrated an alterna-

tive form of my key case wherein the central hinging portion 12 is formed with a series of transverse strengthening ribs 18' which strengthen the hinge portion of the key case. The ribs 18' also reenforce the hinge portion 12 in relation to the side walls 10 and 11 so as to prevent undue wear through the thin central hinge portion 12 which may take place in the use of my key case, particularly where the same is opened and closed a great number of times.

Further, the transverse strengthening ribs 18' permit the hinge portion 12 to be made very thin and thus permit it to flex more easily so as to wrap around the keys when it is closed.

The end strengthening ribs 18' along the marginal edge of the hinging portion 12 also strengthen the key case at this point against the wear of the keys striking the same when the key case is held with the key extended and the key case hangs down from the key B such as is the case when the key case A is used for ignition keys of an automobile and the key case hangs down toward the instrument board of the same.

The invention is not to be understood as restricted to the details set forth since these may be modified within the scope of the appended claims without departing from the spirit and scope of the invention.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:

1. A key case formed of a single piece of flexible plastic material, including a pair of identical side walls of a heavy thickness, a central hinge portion having a single arcuated fold common to each of said side walls comparatively thinner in thickness than said side walls, and a series of transverse strengthening ribs extending through said hinge portion and joining with the side walls.

2. A key case formed of a single piece of flexible plastic material including a pair of identical side walls of a relatively heavy thickness, a central hinge portion having a single arcuated fold common to each of said side walls comparatively thinner in thickness than said side walls, a series of transverse reinforcing ribs extending through said hinge portion and joining with said side walls, the width of said ribs being less than the width of the areas therebetween.

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