EXPANDIBLE CLOSURE DEVICE


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The present invention relates generally to fastener means and more particularly to fastener means employed on leather goods products and the like.

Various fastener devices have been constructed in the past and some have even included means for increasing or decreasing the capacity of a closure wall such as the wall in a billfold, card case, or similar device. For the most part the known devices have included a plurality of spaced snap fastener members mounted on one wall panel and a fastener member on another panel which is selectively engageable therewith. Selection of one of the spaced fastener members provides means for adjusting the capacity of a device. Such devices are relatively expensive to make, are not self-adjusting, and are limited by the number of spaced fastener members. For these other reasons the known devices are unsatisfactory. These and the other disadvantages of the known devices are overcome by the present expandible closure device which includes a pair of cooperating snap member members mounted respectively on a pair of wall panels, one of said members being slidable mounted in a track on the associated wall panel to change the relative positions of said panels when fastened together.

A principal object of the present invention is to provide relatively inexpensive means for adjusting the connection between wall members.

Another object is to provide self-adjusting fastener means for fastening together a pair of wall panels, such as the wall panels on a card case, billfold, purse or similar articles.

Another object is to provide means for increasing or decreasing the capacity of card cases, billfolds, purses and the like.

Still another object is to provide self-adjusting fastener means which are relatively easy to construct and install and which require no special skill to operate.

These and other objects and advantages of the present invention will become apparent after considering the following specification in conjunction with the accompanying drawings, wherein:

FIG. 1 is a face view of the inside of a billfold and card case constructed according to the present invention, the card case being shown closed in solid outline and open in dotted outline;

FIG. 2 is a fragmentary view of the billfold portion having the card case, the view being taken along line 2—2 in FIG. 1;

FIG. 3 is a fragmentary view similar to FIG. 2 showing the card case expanded to take care of increased capacity;

FIG. 4 is a fragmentary plan view of a wall panel having an adjustable snap fastener thereon constructed according to the present invention, said fastener being shown in an alternate adjustment position in phantom outline;

FIG. 5 is a fragmentary cross-sectional view taken on line 5—5 of FIG. 4;

FIG. 6 is a fragmentary perspective view of the card case and adjacent billfold portion of FIG. 1, the card case being shown open;

FIG. 7 is a fragmentary view of a panel having a modified form of mounting the adjustable snap fastener of FIGS. 1—6;

FIG. 8 is a view taken of the opposite side of the panel of FIG. 7;

FIG. 9 is a fragmentary cross-sectional view taken on line 9—9 of FIG. 7; and

FIG. 10 is a perspective view of an open card case having an adjustable snap fastener constructed according to the present invention.

Referring to the drawings by reference numbers, the number 20 in FIG. 1 refers to a billfold having a card case 22 mounted on an inner wall thereof as shown. The card case 22 has a foldable outer wall 24 with two overlapping closure panels 26 and 28. The panel 26 is the outer closure panel and has a female fastener member 30 mounted thereon.

The panel 28 is the inner closure panel and it folds behind the panel 26 and carries a male fastener 32 (see FIG. 5). The male fastener 32 has a fastener portion 33 and also has two spaced flange portions 34 and 36 which are connected by a stem 38. The male fastener 32 is slidable mounted in a track constructed in an opening 40 in panel 28. The track is formed by a pair of spaced U-shaped track members 42 and 44 which are mounted on opposite side edges of the opening 40. In the case of a card case of similar leather goods device, the track members may have flanged edge portions such as the rounded edge flanges 46 (FIG. 5) which are compressed into engagement with opposite surfaces of the panel 28 and provide a smooth connection therewith.

The flanges 34 and 36 on the fastener 32 engage opposite sides of the track member 42 and 44, and can be moved back and forth along the track in the opening 40.

In FIG. 2 the card case 22 is shown closed about a plurality of card windows 48. In this illustration, relatively few card windows 48 are shown in the card case, and the fastener 32 is positioned in the opening 40 adjacent the rightward end thereof. In FIG. 3 the number of card windows 48 is substantially greater than in FIG. 2, and the male fastener 32 is in a position nearer to the left end of the opening 40. FIG. 4 also illustrates two extreme positions of the male fastener member 32 in the opening 40.

FIG. 6 shows the card case 22 open with the male member 32 at an intermediate position.

It is understood that the male and female members 30 and 32 can be interchanged without changing the nature of the invention, and it is also understood that either or both fastener members 30 and 32 may be movable in openings or tracks for greater adjustment.

A modified form of track structure 50 for a moveable fastener 62 is shown in FIGS. 7—10. The modified track structure 50 is similar to that described above but differs therefrom because it is of one-piece construction instead of two-piece construction. The structure 50 has a smooth surfaced wall portion 52 which engages one surface of a panel 66, and a pair of flanged portions 54 and 56 which are formed to engage the opposite edge portions of an opening 88 in the panel 66. The flanged portions 54 and 56 are integral with the wall portion 52 and are originally formed substantially at right angles to the portion 52. During installation the flanges 54 and 56 are bent around corresponding edge portions of the panel opening 88. In this way they form two spaced and substantially U-shaped cross-section tracks similar in construction to the track members 42 and 44 of FIG. 5. The free edges of the flanges 54 and 56 and the free edge of the wall portion 52 are also flanged to more securely engage the associated surfaces of the panel 28, and eliminate rough edges. The ends of the structure 50 can also be rounded for appearance as shown. It is also contemplated to use many different shapes and patterns for the subject track forming device, and it is contemplated to round the ends of the track opening 88.

FIG. 10 shows a modified card case 60 with the slid-
able male fastener 62 mounted in the track structure 50 on the panel 66. In the modified structure, the female fastener 68 is mounted on the panel 70 which is positioned behind the panel 66 when the case 60 is closed. Hinged connected window sections 64 are mounted on the card case 60. The modified card case 60 is shown to illustrate one of many possible variations of the device.

It is also contemplated to mount the movable fastener in an opening in the panel without providing any separate track forming means. In such case it may be desirable to stiffen the panel adjacent to the side edges of the opening to facilitate movement of the fastener and to prevent the fastener from working loose.

The present device can also be used on many other articles in addition to those shown and described herein, including many articles in the plastic, cloth and leather goods fields.

Thus there has been shown and described several preferred forms of a fastener device for increasing or decreasing the interior capacity of an article such as a card case or the like. Many changes, variations, modifications, and uses of the subject device will become apparent to those skilled in the art after considering this specification and the accompanying drawings. All such changes, variations, modifications and uses which do not depart from the spirit and scope of the invention are deemed to be covered by the invention which is limited only by the claims which follow.

What is claimed is:

1. Means for fastening two panels together comprising two panels, male and female snap fastener members mounted respectively on said panels, an opening in one of said panels, said opening having opposed stiffened marginal edge portions, and means carried by one of said fastener members freely slidably cooperating with said marginal portions to provide for relative movement of said fastener member in said opening.

2. Closure means for a flexible wall structure comprising a flexible wall having overlapping panels, a first fastener mounted on one of said panels, a second fastener adapted to cooperatively engage said first fastener mounted on the other of said panels, and means associated with one of said fasteners enabling said fastener to slidably move relative to the associated panel, said means including a track mounted on said panel and cooperating track engaging means mounted on said fastener permitting free sliding engagement therebetween.

3. A closure device for a wall structure comprising a wall structure having a pair of overlapping panels and cooperating means on said panels for fastening said panels together to close the wall structure, said cooperating means including a male fastener member mounted on one of said panels, a female fastener member mounted on the other of said panels, means forming a track in one of said panels, and means on one of said fastener members cooperatively engaged with said track forming means enabling said member to move back and forth in the track relative to the said panel.

4. The closure device defined in claim 3 wherein said means forming a track includes an elongated opening in the panel having opposite side edges, and a pair of opposed track forming members mounted on said panel in said opening adjacent to said opposite side edges.

5. The closure device defined in claim 3 wherein said means forming a track includes an elongated opening in said panel having spaced opposite side edges, and a flanged member having a wall portion engageable with the panel adjacent to said opening and a pair of spaced flanged portions engaged with said panel adjacent to the opposite side edges of said opening.

6. The closure device defined in claim 3 wherein said means forming a track includes an elongated opening in the panel having spaced opposite side edges.

7. An expandable closure device for fastening together a pair of panels comprising a pair of panels, a first fastener member mounted on one of said pair of panels, an elongated opening in the other of said pair of panels, a pair of spaced substantially parallel members mounted adjacent opposite side edges of said opening to form a track, and a second fastener member having cooperating track engaging means thereon positioned in the track, said second fastener member being slidably movable in said track relative to said associated panel.

8. A closure device for a card case or the like comprising a card case having a foldable outer wall with a pair of overlapping panels for enclosing a plurality of card holding windows, a first snap fastener member mounted on one of said panels, a second snap fastener member adapted to cooperate with said first snap fastener member to close the wall mounted on the other of said panels, and means associated with one of said fastener members enabling said member to move relative to the associated panel to increase or decrease the capacity of the card case, said last named means including a track mounted on one of said panels, and means slidably engageable with said track mounted on said one of said fastener members.

9. A self adjusting snap fastening device for leather goods articles having closure flaps comprising a pair of overlapping closure flaps, cooperating male and female snap fastener members mounted respectively on said closure flaps for cooperating to retain the flaps in closed position, an elongated opening in one of said flaps adjacent to a snap fastener member associated therewith, and means on said associated snap fastener member positioned in said opening and slidably cooperating with said one closure flap adjacent said opening to adjust the position of the said associated member relative to the associated closure flap.

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