

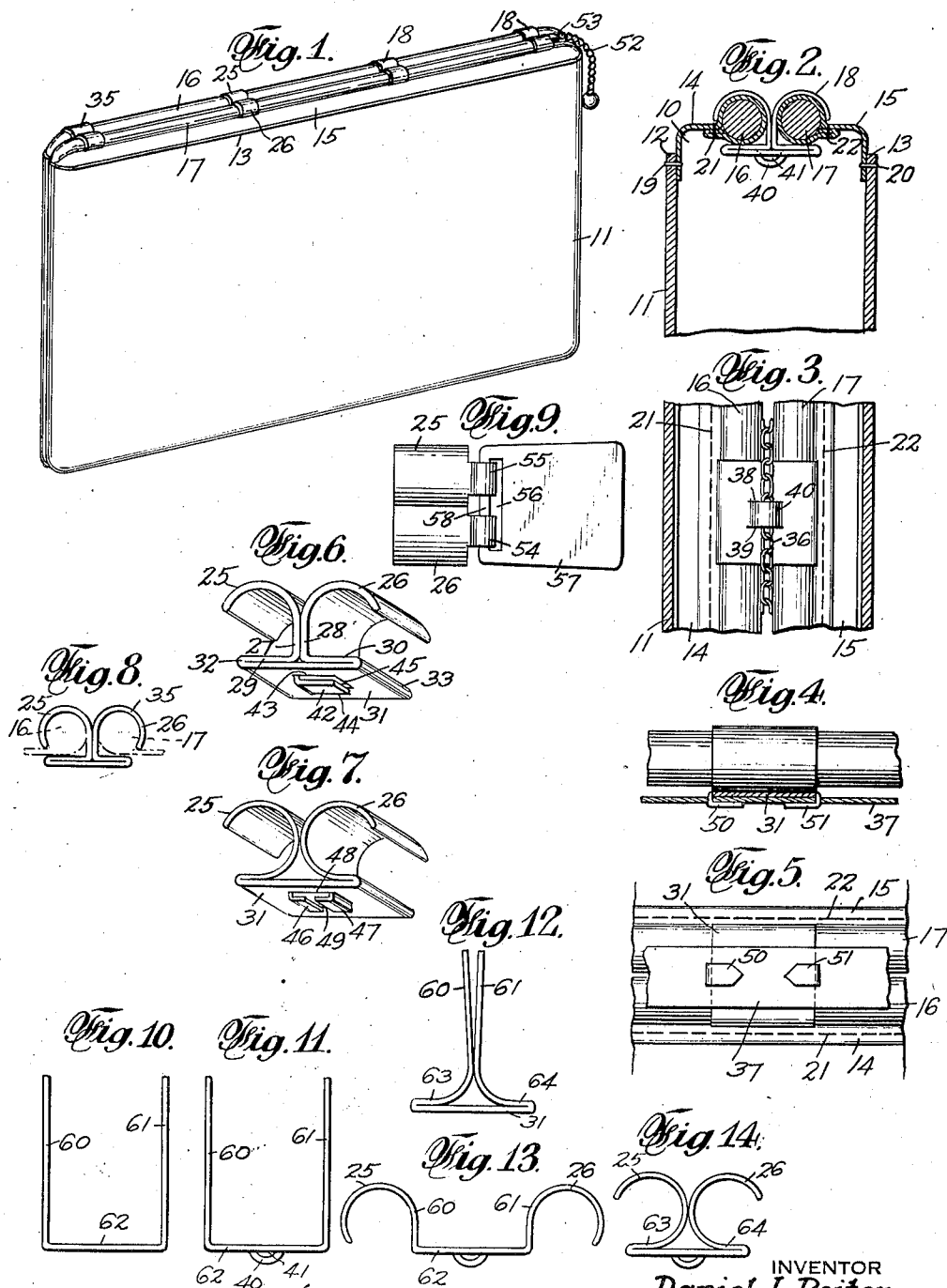
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SLIDE CLOSURE

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SLIDE CLOSURE

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6 Claims. (Cl. 24—207)

This invention relates to closures for openings in small articles such as bags, pocket books, pouches and the like, and relates particularly to slide closures which may be separately manufactured and later suitably secured, as by stitching, to the edges of the opening in the article to form the completed closure.

Slide closures of the type here involved have been previously made with beaded edges on which the slide closure elements are mounted. The beads are formed by wrapping the edge part of the material of the side walls of the article surrounding the opening in the article about a suitably shaped reinforcing or bead member. Difficulty has been experienced in securing the beads economically in place in their proper positions and it has been found necessary in the past to arrange the beads in parallel relation and so that one would lie below the other. The slide elements heretofore used are inefficient to carry the beads below each other and it has also been difficult and comparatively expensive to secure the beads at their ends in their proper relation.

My invention therefore contemplates the provision of a performed closure which may be made in continuous lengths if desired, and later cut to the proper length to fit the closure, which strips are adapted for quick and efficient attachment to the edges of the opening in an article to complete the closure.

My invention further contemplates the provision of a closure wherein the beads are arranged in substantially coplanar relation and are maintained in that relation by the slide closure members.

My invention further contemplates the provision of a slide member which adequately holds the beads in their proper positions, which cannot readily be detached from the beads and is not likely to fall off, and which automatically arranges the beads in their proper relation.

My invention further contemplates the provision of a slide closure wherein the connecting means for the slide elements is concealed from view and is arranged in the interior of the article whereby the danger of catching or interfering with extraneous articles is avoided.

My invention further contemplates the provision of a slide closure which may be economically manufactured in large quantities and preformed in advance of use.

The various objects of my invention will be clear from the description which follows and from the drawing, in which,

Fig. 1 is a perspective view of an article such

as a pouch or bag to which my invention has been applied.

Fig. 2 is a fragmentary vertical section of the same.

Fig. 3 is a bottom plan view of Fig. 2.

Fig. 4 is an enlarged elevational view, partly in section, of one of the slide closure members showing a modified form of the means for securing a flexible element thereto.

Fig. 5 is a bottom plan view of the same.

Fig. 6 is a perspective view of one of the closure members showing another modified form of the means for securing a flexible element thereto.

Fig. 7 is a similar view of a modified form of the closure member and of the attaching means for the flexible element.

Fig. 8 is an elevational view of the closure member of Fig. 6 as it appears clamped tightly to a pair of beads for fixing it permanently to the beads against sliding movement.

Fig. 9 is a top plan view of a modified form of a finger piece for the end one of the slide closure members.

Figs. 10 to 14 inclusive are elevational views showing the forms assumed by the closure member during the process of making said member.

In the practical embodiment of my invention which I have illustrated by way of example, my improved closure is intended to be applied to the opening 10 of a suitable article 11 such as a bag, cosmetic pouch, pocket book or the like, said closure being preferably preformed in advance of its attachment to the edges 12 and 13 of the opening. As illustrated, my improved closure comprises the flexible elongated and comparatively narrow tapes 14 and 15, which when preassembled with the respective beads 16, 17 and the closure members 18, may be respectively secured to the edge portions 12 and 13 of the opening in the article 11 to complete the closure.

It will be understood that my new closure may be made of any continuous lengths desired, to be later cut up into the required lengths for attachment to the article. When the proper length has been cut from a continuous length with the desired number of closure members 18 thereon, the tape 14 may be readily secured to the opening edge 12 as by means of suitable stitching 19.

Similarly, the tape 15 may be secured to the opening edge 13 by the stitching 20. The inner edge portion of the tape 14 is wrapped about the bead member or cord 16 and secured in place as by means of the stitching 21. Similarly, the inner edge portion of the tape 15 covers the bead or

cord 17 and is secured in place thereabout by the stitching 22.

Means are provided for drawing the beads together and for maintaining them at the same level to close the opening 10. As has been indicated, said means comprises a plurality of closure members 18 made preferably of a single length of sheet material such as metal. Each of the closure members 18 engages both of the beads 16 and 17 and each comprises (Fig. 6) a pair of terminal cylindrical portions 25, 26, bent from the respective ends of the length. The lowermost parts of the beads 25, 26 are extended into the vertically extending parts 27, 28 respectively, which parts are preferably, though not necessarily in contact with each other. Bent from the lower ends of the parts 27, 28 are the horizontal flange parts 29 and 30 respectively, said horizontal flange parts in turn being joined by the horizontal flange 31 as by means of the integral bends 32, 33 respectively. The flange 31 is preferably in close contact with the flanges 29 and 30.

It will be understood that the portions 25 and 26 while of comparatively stiff material, are adapted to be bent into clamped engagement with the beads 16 and 17 if desired, so as to fix one of said closure members permanently against sliding movement to said beads.

As shown in Figs. 1 and 8, the end closure member 35 has its cylindrical portions so bent into permanent engagement with the beads and consequently is not movable or slidable on the beads.

Means are provided for limiting the relative movement of said closure members 18 so as to space them the proper distance apart on the beads when said members are in their operative positions or in the positions in which they close the opening. Said means may take the form of a suitable flexible element 36, shown in the form of a chain in Fig. 3 and shown in the form of the tape 37 in Fig. 4.

The chain 36 or the tape 37 is, however, concealed in the interior of the article 11, and is secured to the closure members 18 and 35 in any suitable manner. As shown in Figs. 2 and 3, a pair of parallel spaced slits 38 and 39 are made in the bottom flange 31, and the material 40 between said slits is bent downwardly to provide an opening 41. The chain 36 or tape 37 is passed through said opening 41, whereafter the projecting tongue or lug 40 is pressed back toward the flange 31 to secure the flexible element in position.

As shown in Fig. 6, the holding means for the flexible element may take the form of a lug or tongue 42 struck from the material of the flange 31 between three cuts, namely, the parallel cuts 43 and 44 and the connecting cut 45.

In Fig. 7, a pair of tongues as 46, 47 are struck from the flange 31 between the pair of parallel spaced cuts 48 and 49 and a cross cut midway between the ends of the parallel cut.

As shown in Figs. 4 and 5, however, the prongs 50 and 51 extend from the ends of the bottom flange 31 and are passed through the element 37, and bent on to the under side of said element to hold the closure member to the element.

The end one of the closure members is preferably provided with a finger piece to make it easy to move said member and through the medium of the flexible element, to move the remaining members except the fixed member 35. As shown in Fig. 1, the finger grip comprises a suitable

chain pull 52 secured to the projecting lug 53 of the last closure member of the row.

As shown in Fig. 9, a pair of eyes as 54 and 55 project from the cylindrical portions 25, 26, respectively, of the closure member, said eyes being passed through the opening 56 in the preferably flat finger piece 57, and thereafter bent about the cross bar 58 of said finger piece.

The closure members 18 may be economically and quickly bent from a single piece of sheet material and therefore are adapted for commercial production in large quantities. As shown in Figs. 7 and 14, the extending parts 27 and 28, instead of being made vertical, may be curved, if desired, to more completely encompass the bends and to form continuations of the bends 25 and 26.

In Fig. 10 is shown the first step of bending said closure members wherein the sides 60 and 61 are bent at right angles to the connecting portions 62. At the same time or as the next step, the lug or tongue 40 may be bent from between a pair of slits in the portion 62 (Fig. 11).

As the next step, said portions 60 and 61 may be bent to form the cylindrical portions 25 and 26, respectively, as shown in Fig. 13. Or, if desired, the lower end parts of the portions 60 and 61 may be first bent as shown in Fig. 12 to bring the upper parts of said portions together and to form the upper flanges 63 and 64 lying on the lower flange 31. If the length of material has been bent into the form of Fig. 12, the succeeding step would be to bend the upper parts of the portions 60 and 61 into the curved portions 25 and 26 respectively, to complete the closure member.

If the length has been bent into the form of Fig. 13, the succeeding step would be to bend the lower parts of the portions 60 and 61 into the position shown in Fig. 14 to complete the member.

In any case, it will be seen that my new closure member may be readily bent up from a length of sheet material at low cost by suitable machinery designed for that purpose, and by the method just described. It will further be seen that I have provided a closure which may be preformed in advance of its attachment to the opening in an article and which may be readily secured in place; that my new closure maintains the beads of the closure at the same level and tightly against each other; that any danger of the closure members leaving the beads is avoided, and that I have provided a structure well designed to meet the requirements of practical use.

While I have shown and described certain specific embodiments of my invention, I do not wish to be understood as limiting myself thereto but intend to claim my invention as broadly as may be permitted by the state of the prior art and the terms of the appended claims.

I claim:

1. In a slide closure for an elongated opening in an article, said closure having a pair of flexible tapes, and having a cylindrical bead along one of the edges of each of the tapes, a plurality of metallic closure members adapted to be slidably mounted on said beads to hold said tapes together, each of said members having a pair of cylindrical portions adapted to engage the beads, another substantially vertical portion of two contacting thicknesses of material adapted to be inserted between said beads, and a horizontal flange of two contacting thicknesses of material continuous with the thicknesses of said substan-

tially vertical portion adapted to be arranged below said beads.

2. A slide closure member of a single length of sheet material having a cylindrical bend at each end thereof, a flange of two contacting thicknesses of material at the central portion of said length, said flange being arranged below said bends and a pair of similar connecting portions of said length each extending at substantially right angles from said flange and integrally connecting the flange to the respective bends.

3. In a one-piece slide closure member, a pair of similar terminal cylindrical bends, a doubled flange of two contacting thicknesses of material integrally joining said bends and disposed parallel to the plane passing through the center lines of said bends, and a bendable portion projecting outwardly from the outer thickness of the flange and adapted to be bent about a flexible element to secure the member to said element.

4. In a slide closure member of a single length of material of uniform width, a pair of similar terminal oppositely disposed contacting bends each adapted to engage a bead, a flange of two contacting thicknesses of material bent from the central portion of said length, a portion of two contacting thicknesses of material integrally joining said bends and said flange and at substantially right angles to the flange, and a bendable

member projecting from the outer thickness of the flange and adapted to be bent about and to hold a flexible element.

5. In a slide closure member of a single length of sheet material, a cylindrical bend at one end of said length, a similar oppositely disposed cylindrical bend at the other end of said length, a pair of substantially vertical portions extending from the adjacent ends of said bends to provide two thicknesses of material between said bends, a horizontal doubled flange bent from the central portion of said length and integrally joined to said extending portions and arranged in vertical spaced relation to said bends, and means on the flange for holding a flexible element.

6. A closure member of a single length of sheet material comprising a pair of opposed cylindrical terminal bends each adapted to engage a bead, and a portion of two contacting thicknesses of material integrally joining said bends, an eye integral with and extending from at least one of said bends, and a finger piece member having a slot parallel to and adjacent one end thereof to form an end cross bar thereon, said eye passing through the slot and around the cross bar and thereby pivotally mounting the finger piece to the member.

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