Jan. 30, 1940. F. DURNEY 2,188,534

LOOP FASTENER

Filed Dec. 15, 1938

Fig. 1.

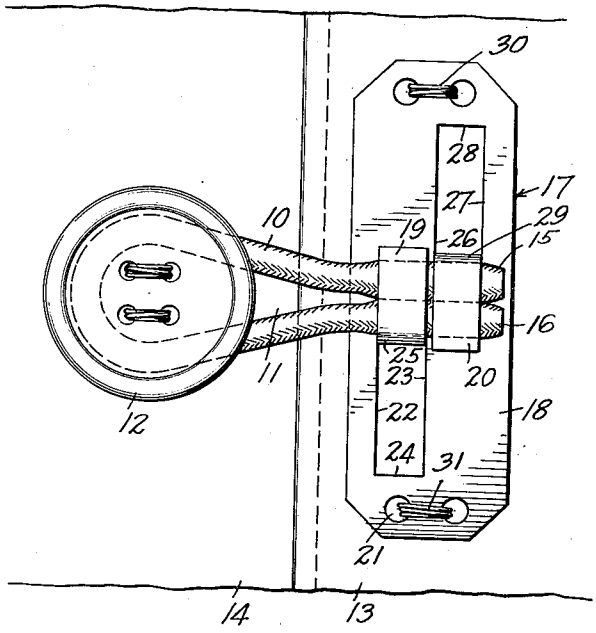


Fig. 2.

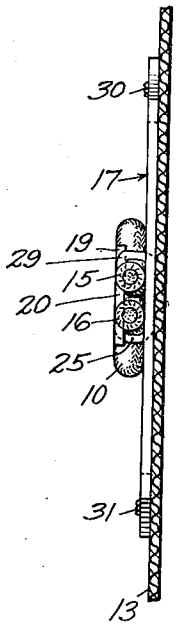


Fig. 3.

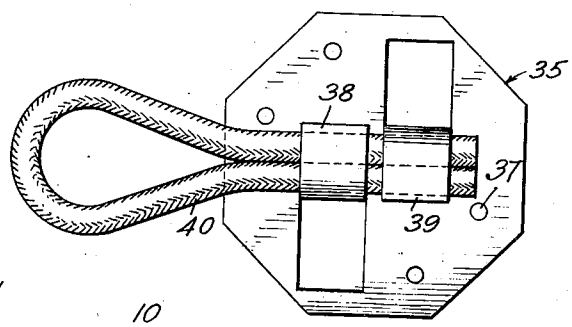
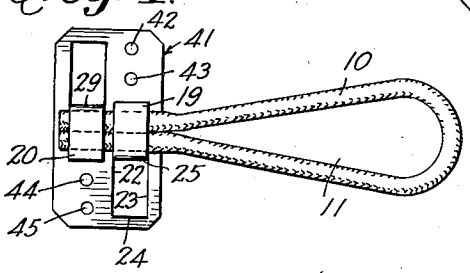


Fig. 4.



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LOOP FASTENER

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9 Claims. (Cl. 24—73)

This invention relates to loop fasteners of the type in which a loop is secured at its ends in a suitable holder, the holder being intended to be secured to a garment so that the loop takes the place of and functions like a buttonhole to engage a button, and the difficulties resulting from sewing the loop directly to the garment are avoided.

My invention contemplates the provision of a simple preformed and flat sheet-metal holder for the ends of an elastic loop, which holder occupies a small space and which may be quickly and easily sewn at any required point to an outer face of a garment in the same manner as a small snap-fastener element, with the loop projecting therefrom in position to engage a button.

My invention further contemplates the provision of a buttonhole loop and holder therefor, preassembled to form a unitary device readily handled and saleable as a unit, and adapted for economical manufacture, the holder having no projecting parts, and the loop fastening means thereof being cut from the material of the holder itself in such a manner that the loop is permanently and effectively held in a position wherein it extends transversely of the holder and beyond possibility of removal under the stresses of ordinary use and for the life of the garment to which the assembly it attached, though readily removable for replacement or adjustment, if necessary.

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

Fig. 1 is a front elevation of one form of my improved loop fastener as it appears secured in place to a garment and engaging a button.

Fig. 2 is a combined side elevation and vertical section of the same, the button, however, being omitted.

Fig. 3 is a front elevation similar to Fig. 1 of a modified form of the preassembled loop fastener.

Fig. 4 is a similar view of another modified form thereof.

In the practical embodiment of the invention which I have shown by way of example, the loop 10 is cut from a length of elastic cord and is folded or doubled on itself to provide the opening 11 adapted to function as a buttonhole and through which a suitable button as 12 of any type may be passed to detachably and separably secure the sections 13 and 14 of a garment together. The material of the loop 10 is such that it is preferably elastic longitudinally, being covered with textile material or thread of the required color to match the garment, so that due to the tendency of the loop to contract after being stretched to engage the bottom, the garment sections 13 and 14 are adequately held in their proper positions. The end portions 15 and 16 of the loop are permanently secured to the loop holder 17, which in turn may be coated with paint or enamel of the proper color or otherwise colored and finished to match the garment, if desired.

It will be noted that the holder 17 is made of flat sheet material such as metal, and comprises the flat body portion 18 and the bent integral loop-holding lugs 19 and 20. In the body portion 18 and adjacent the periphery thereof are made the sewing holes 21 shown as four in number, though it will be understood that any desired number of such sewing holes may be used as may be found convenient or desirable and that such holes are suitably spaced apart and positioned as required to permit the easy sewing of the assembled holder and loop to the garment.

The lug 19 is formed from the material of the body portion 18 removed from between the parallel cuts 22 and 23 and the end cut 24 joining the outer extremities of said parallel cuts. When the lug 19 is bent laterally out of the plane of the body portion from between the cuts 22, 23 and 24 and across the end portions 15 and 16 of the loop, a bend as 25 is formed therein against which one of the end portions as 16 is arranged. The remainder of the lug 19 past the bend is pressed toward the body and into substantially parallel relation thereto to somewhat flatten the loop end parts 15 and 16 and to hold them tightly against an imperforate flat part of the body portion, the bending of the lug resulting in the formation of an opening in the body portion. Similarly, the lug 20 is formed from the material between the parallel cuts 26 and 27 and the end connecting cut 28, being provided with a bend 29 where it joins the body portion. Said bend 29 abuts the end portion 15 of the loop, the remainder of said lug being arranged in substantially coplanar relation to the lug 19 and in substantially parallel relation to the body 18, though it will be understood that the outer ends of each of the lugs may be somewhat rounded, if desired.

It will be noted that an imperforate and unmutilated portion of the body of the holder is arranged between each lug and the adjacent part of the periphery of the holder, and that the bend as 25 of one lug as 19 is arranged adjacent the free end of the other lug as 20. The loop 10 being thus assembled with the holder

17, a unit is produced permitting the ready attachment thereof at any point of the garment which in many cases may be used advantageously to replace buttonholes, which stretch and wear at their edges or tear under the stresses of ordinary use and furthermore require an overlapping of one garment section over another.

My improved loop fastener while being readily attached by sewing at any desired point of a garment, does not require the overlapping of the adjacent garment sections but may be used where the garment sections are intended to be brought into edge-to-edge relation. The loop fastener may also be used at points where the buttonholes are worn out or unduly stretched or torn. Should the elastic loop 10 wear to any substantial extent, the entire loop fastener may be quickly and easily removed by cutting the sewing threads 30, 31 and the entire fastener replaced with a new one at insignificant cost and labor. The fasteners may be preformed in large quantities in different colors to match garments of different colors and require much less work to secure them to garments than is required in the formation of buttonholes, and are also well adapted for use on delicate fabrics where the use of buttonholes would be inadvisable. They may be used on a great variety of garments of different kinds such as infants' clothes, children's garments, polo shirts, dresses and sportswear of various descriptions.

It will be noted that the body portion 18 of the holder 17 may be readily stamped out of sheet material with the cuts for the lugs simultaneously made therein and the sewing holes also simultaneously made. The only additional operation required is the turning over of the lugs laterally on to the end parts of the loop. When so turned, it will be noted that the compressive effect of the lugs upon the loop ends serves to so distort and flatten the loop material as to render it difficult, if not impossible, to withdraw the loop ends longitudinally from the lugs. It will also be noted that by the provision of bends as 25 and 29 on opposite sides of the transverse center line of the body portion for engaging different end parts of the loop, it becomes impossible to remove the loop from the lugs by stress applied longitudinally of the lugs or transversely of the loop in either direction since one bend serves to prevent withdrawal in one direction and the other bend to prevent withdrawal in the opposite direction.

It will further be noted that the distance between the bends 25 and 29 is slightly more than twice the diameter of the loop material so that the lugs need not be of any substantial length, particularly because of the provision of the oppositely disposed respective bends 25 and 29 therein. It will further be noted that, as shown in Figs. 3 and 4, the loop holder need not be very wide nor long, being in most cases substantially the size of the smallest size of snap fastener usually used in garments, the size of the length in comparison with the length of the loop 10 being exaggerated in Figs. 1 and 3 for purposes of clarity. In any case, the loop 10 extends preferably transversely of the holder thereby making it possible to arrange the sewing holes conveniently.

In that form of the invention shown in Fig. 3, the loop holder 35 is made of generally octagonal outline in the same manner as many of the small snap fasteners in common use. The sewing holes as 37 are conveniently arranged adjacent a pair of opposite edges of the holder but the lugs 38 and 39 may be substantially increased in width and spaced apart sufficiently to contact with and secure a substantial portion of the lengths of the end parts of the loop 40.

In that form of the invention shown in Fig. 4, the holder 41 is considerably shortened as compared to the form of Fig. 1, the sewing holes 42, 43 being arranged at the right of the opening in the holder resulting from the formation of the lug 20. Similarly, the sewing holes 44, 45 are arranged to the left of the opening resulting from the bending of the material of the holder between the cuts 22, 23, 24 to form the lug 19.

It will be seen that I have provided a simple preassembled loop fastener designed to be quickly and easily sewn to a garment at any desired point and which adequately and securely holds the loop ends from withdrawal in a longitudinal, lateral or transverse direction from the holder therefor, and which may nevertheless, be economically manufactured from a minimum amount of sheet material and is well designed to meet the severe 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 the invention as broadly as may be permitted by the state of the prior art and the scope of the appended claims.

I claim:

1. A loop fastener comprising a flat sheet metal holder having sewing holes therein adjacent its periphery and having a pair of longitudinally and transversely spaced rectangular openings therein in inwardly spaced relation to the periphery of the sheet, the material of the sheet removed to form the openings being bent laterally out of the plane of the remainder of the sheet and forming oppositely directed lugs each joined by a bend at one end thereof to the sheet, the end edge at the other end of each one of the lugs being straight and in substantial alignment transversely with the bend of the other of the lugs and said bends being in longitudinally spaced relation to each other and to the ends of the sheet and in transverse spaced relation to each other and to the side edges of the sheet, there being a flat unmutilated portion of the sheet between the outer edges of the lugs and the periphery of the sheet, the length of the sheet being slightly greater than the sum of the lengths of said openings, and the width of the sheet being slightly greater than the sum of the widths of the openings, and an elastic loop having its end portions arranged between the lugs and the remainder of the sheet and extending transversely across the sheet and across said unmutilated portion and held by said lugs.

2. In a loop fastener, an elastic loop doubled on itself to provide two end portions thereon arranged in juxtaposition, and a flat sheet metal holder for said end portions, said holder having sewing holes therein adjacent its periphery and having a pair of oppositely extending lugs each having a free end and arranged inwardly of said periphery and joined by a bend also arranged inwardly of the periphery of the holder to the remainder of the holder, the bend of one lug being adjacent the free end of the other lug, said lugs pressing the end portions of the loop against the remaining flat portion of the holder, each of said lugs being of sufficient length to engage both of said end portions of the loop.

3. In a loop fastener, a flexible loop compris-

ing a length of loop material doubled on itself to form two end portions, and a holder for the end portions of the loop holding said loop in transverse relation to the holder, said holder comprising a flat sheet having sewing holes therein and having a pair of lugs bent from the material of the holder inside of the periphery thereof, each of the lugs having a free end and being joined to the holder at its other end by an integral bend, the bend of one lug being adjacent the free end of the other lug, there being an unmutilated flat part on the sheet between the outer side edge of each lug and the adjacent side edge of the sheet, and another flat part between said free end and the adjacent end edge of the sheet, said sewing holes being arranged in the last-mentioned flat parts.

4. In a loop fastener adapted to be secured to a garment by sewing, a loop doubled on itself to arrange its ends adjacent to each other, and means adapted to be stitched to a garment and permanently secured to said ends for holding said loop, said means comprising a flat sheet provided with sewing holes and also provided with a lug bent laterally from that part of the material of the sheet inside of the periphery of the sheet into a position in laterally spaced parallel relation to the remainder of the sheet, said lug extending completely across the ends of the loop and terminating in inward spaced relation to the adjacent end edge of the sheet, said sewing holes being arranged between the end of the lug and said adjacent end edge of the sheet.

5. The combination with a loop doubled on itself and serving as a button hole, of a loop holder comprising a flat sheet having sewing holes therein and a pair of lugs bent from the material between the side and end edges of the sheet in opposite directions and into parallel spaced relation to the remainder of the sheet, each of said lugs extending completely across the doubled portion of the loop, the remainder of the sheet outside of the lugs being flat, the ends of the loop being held and pressed between said lugs and the remainder of the sheet, and said sewing holes being arranged in said remainder of the sheet between the ends of the lugs and said end edges of the sheet.

6. In a loop fastener, an elastic loop doubled on itself, and a substantially flat sew-on holder for the adjacent ends of the loop, said holder being of sheet metal and having spaced sewing holes therein adjacent its periphery, one flat face of said holder being adapted to contact with the outer face of a garment to which the holder is sewn, said holder having lugs outstanding from the other face thereof, and in substantially parallel spaced relation thereto and at a distance therefrom less than the normal cross-sectional diameter of the loop, each of the lugs being joined to the remainder of the holder by an integral bend all parts of which are in inward spaced relation to the periphery of the holder, the end portions of the loop extending transversely of the holder and being permanently secured to and held in contact with said other face of the holder by said lugs, each of said lugs extending completely across the ends of the loop.

7. In a loop fastener, a loop and a flat sheet holder for the ends of the loop, said holder comprising lugs struck from the inside portion of the sheet and bent to extend completely across said ends, the remainder of the sheet outwardly of the lugs being flat and having sewing holes therein between the lugs and the periphery of the sheet, the length of the sheet being slightly greater than twice the length of a lug, and the width of the sheet being slightly greater than twice the width of a lug.

8. A sew-on holder for an elastic loop comprising a flat sheet having sewing holes therein and having a pair of loop-holding lugs, the outer edges of said lugs being in inward spaced relation throughout to the adjacent edges of the sheet, one end of each lug being free and the other end being joined by a bend to the sheet, the bend of one lug being adjacent and substantially in transverse alignment with the free end of the other, all parts of said lugs including the bends being arranged inwardly of the periphery of the sheet, and at least one of said sewing holes being arranged in longitudinal alignment with one of the lugs.

9. A sew-on holder for an elastic loop comprising a flat sheet having sewing holes therein and having cuts therethrough in inward spaced relation to the periphery of the sheet, the material between the cuts being bent laterally of the sheet and into substantially parallel relation thereto to form loop-holding lugs each joined by a bend to the sheet, said lugs being arranged in adjacent relation and transversely of each other and transversely of the sheet, the bend being in inward spaced relation to the periphery of the sheet, and the bends of the respective lugs being at opposite ends of said lugs and in sufficiently spaced relation to the adjacent end edges of the sheet for the arrangement of said sewing holes in the sheet between said end edges and said bends.

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