June 10, 1958 J. W. LARKIN 2,837,805

RUBBERIZED BUTTONHOLE EYELET

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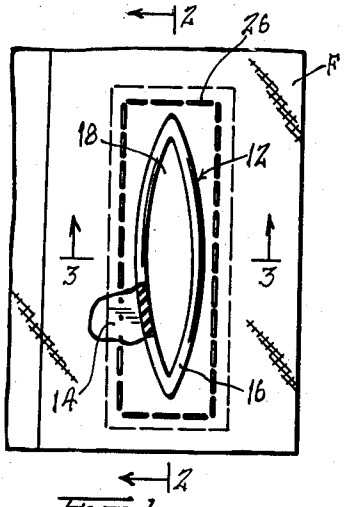


FIG. 1.

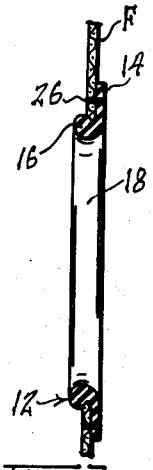


FIG. 2.

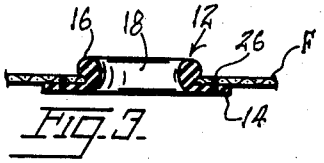


FIG. 3.

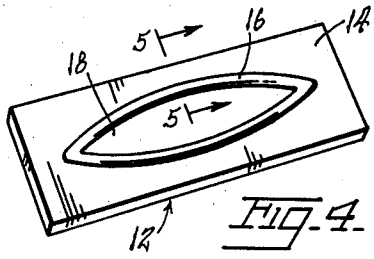


FIG. 4.

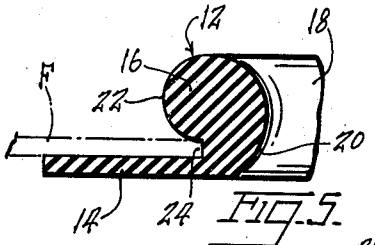


FIG. 5.

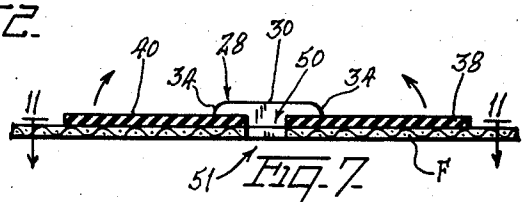


FIG. 7.

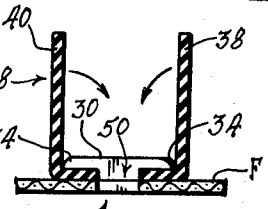


FIG. 8.

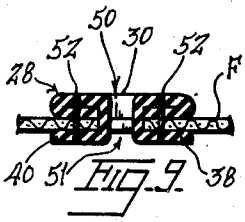


FIG. 9.

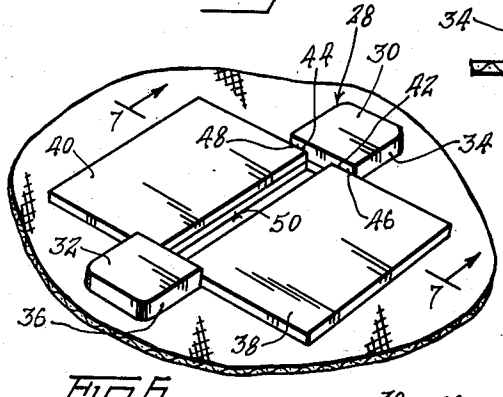


FIG. 6.

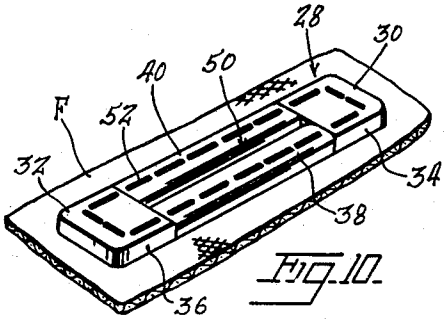


FIG. 10.

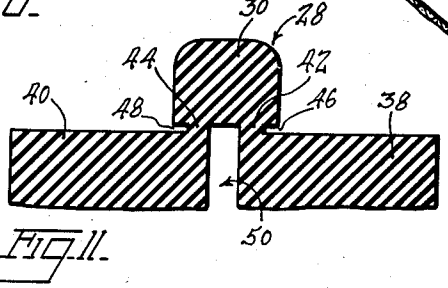


FIG. 11.

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RUBBERIZED BUTTONHOLE EYELET

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1 Claim. (Cl. 24—202)

This invention relates to a buttonhole eyelet, and more particularly has reference to a molded, rubberized eyelet, that can be swiftly attached to a piece of fabric to provide a buttonhole therein.

Most usually, a buttonhole is formed by the provision of a slit-like aperture in a piece of fabric, after which, either by hand or through the use of suitable sewing machinery, stitching is applied throughout the edge of said aperture, to form a reinforcing welt thereon.

This method of forming buttonholes is time-consuming, and accordingly is relatively expensive, particularly in commercial as distinguished from household sewing operations.

The main object of the present invention, accordingly, is to provide a rubberized buttonhole eyelet, that will be preformed, will be adapted for positioning over the slit-like aperture with maximum speed and ease, and can be stitched to the fabric through a conventional, simple line of stitching that will involve a considerably smaller expenditure of time than has heretofore been required when conventional buttonhole-forming practices are followed.

A further object of importance is to provide an eyelet as stated which, by reason of its being formed of rubber or a similar strong, wear resistant material, will strengthen, and eliminate the fraying of, buttonholes in clothing.

Still another object is to provide a buttonhole eyelet that will improve the appearance of the cloth, by reason of its neat appearance, its characteristic of eliminating raggedness and fraying in buttonholes, and by reason of its adaptability to hold a proper shape throughout the lifetime of the garment.

Still another object of importance is to provide a buttonhole eyelet as stated which can be manufactured very cheaply, following mass production methods.

For further comprehension of the invention, and of the objects and advantages thereof, reference will be had to the following description and accompanying drawings, and to the appended claim in which the various novel features of the invention are more particularly set forth.

In the accompanying drawings forming a material part of this disclosure:

Fig. 1 is a plan view of a buttonhole eyelet formed according to the present invention, applied to a piece of fabric only a fragment of which is shown, the eyelet being shown partially in section.

Fig. 2 is a longitudinal sectional view on line 2—2 of Fig. 1.

Fig. 3 is a transverse sectional view on line 3—3 of Fig. 1.

Fig. 4 is a perspective view of the eyelet per se, on an enlarged scale.

Fig. 5 is a detail sectional view, still further enlarged, on line 5—5 of Fig. 4, the fabric being shown in dotted outline.

Fig. 6 is a perspective view of a modified form of eyelet, as it appears in the first step of applying the same to a piece of fabric, only a fragment of which is shown.

Fig. 7 is a transverse sectional view on line 7—7 of Fig. 6.

Figs. 8 and 9 are views on the same cutting plane as Fig. 7, showing the eyelet during further, successively following steps in the operation of applying the same to the garment, Fig. 9 showing the eyelet at the completion of the operation.

Fig. 10 is a view similar to Fig. 6 with the eyelet being shown at the completion of the operation of attaching the same to the fabric.

Fig. 11 is a plan sectional view on line 11—11 of Fig. 7.

In the form of the invention shown in Figs. 1–5, the eyelet, generally designated at 12, has been illustrated in association with a piece of fabric F, which may be part of a garment such as a shirt, coat, etc.

The eyelet 12 is formed from a single piece of soft, relatively thin rubber material, which may be suitably colored so as to cause the same to be matched with the color of the fabric, thus to be relatively inconspicuous when applied to the fabric. Further, the rubber would be wholly washable, and would be such as to be impervious to the chemical action of cleaning and dyeing solutions.

The eyelet 12 includes a flat backing member 14 which in the illustrated example, but not necessarily in every instance, is formed to an elongated, rectangular outer configuration. Extending longitudinally and centrally of the backing member, and terminating short of the opposite ends thereof, is an elliptical welt 16, projecting upwardly above the plane of the backing member as shown in Fig. 5. The welt extends about a slit-like aperture 18, in the backing member, through which the button, not shown, will be inserted during use of the eyelet.

As shown in Fig. 5, the welt, along its inner surface 20, is transversely curved through substantially 180° of a circle, with the arc described by the transversely curved inner surface 20 of the welt merging at one end into the underside of the backing member 14, and merging at its upper end into an outer surface 22 of the welt. The outer surface 22 is also transversely curved, oppositely to the surface 20, but is curved about a distinctly smaller radius, so as to terminate along its lower edge above and in closely spaced relation to the backing member 14, to provide an undercut groove 24 extending about the full periphery of the welt, adapted to receive the edge of the fabric F.

In use of the eyelet, the fabric is first cut to form an elongated, slit-like aperture therein coextensive in length with the welt 16. Then, the backing member is applied to the back surface of the fabric, and the welt is pressed upwardly through the aperture of the fabric. Stitching 26 is then applied, through the full marginal area of the backing member 14, with said stitching passing through the backing member and fabric, to secure the welt to the fabric.

It will be seen that the welt will protect the edge of the fabric aperture against fraying, since said edge of the aperture is engaged in the undercut groove 24, and the resultant buttonhole will, throughout the life of the garment, maintain a neat appearance, eliminating the possibility of fraying or enlargement of the buttonhole.

In the form of the invention shown in Figs. 6–10, the eyelet has been generally designated 28. As in the first form, the eyelet is molded from a single piece of relatively soft rubber material or the like. The thickness of the portions of the eyelet has been slightly exaggerated in Figs. 6–11, to facilitate a clear understanding of the construction.

When manufactured, the eyelet will appear as in Figs. 6, 7 and 11, and includes at opposite ends thereof head

portions **30, 32** respectively, the edges of which are transversely curved or rounded through 180° of a circle, as at **34, 36** respectively.

A pair of flaps **38, 40**, which in the applied position of the eyelet constitute backing members as will presently appear, are identically formed, and are spaced apart transversely of the eyelet, said flaps, before application of the eyelet, lying in acommon plane and being formed to rectangular outer configurations. The flaps, at their opposite ends, are integrally connected at **42, 44** to the confronting, inner surfaces of the head **30, 32**, with said connection of the flaps to the heads being disposed at opposite ends of the inner longitudinal edges of the flaps. The integral connections terminate short of the side of the heads, to provide short, transverse slits **46, 48** (see Figs. 6 and 11), the purpose of the slits being to facilitate bending of the eyelets from their Fig. 7 position to their Figs. 8 and 9 positions.

The inner longitudinal edges of the flaps **38, 40** are spaced apart, at opposite sides of and in symmetrical relation to the longitudinal center line of the eyelet, to provide a button-receiving slot or aperture **50**, in registration with a slit-like aperture **51** formed in the fabric F prior to or after application of the eyelet to the fabric.

In use of this form of the eyelet, the eyelet is positioned upon the fabric F in the manner shown in Figs. 6 and 7. Then, the free, outer longitudinal edges of flaps are swung upwardly in the direction of the arrows in Fig. 7, to their Fig. 8 positions, in which positions they project upwardly in registration with opposite sides of the heads **30, 32**. Then, said free longitudinal edges of the flaps are swung inwardly toward one another in the direction of the arrows shown in Fig. 8, and are extended downwardly through the openings **50, 51**. Thereafter, the free longitudinal edge portions are bent outwardly under the fabric, in opposite directions outwardly from the opening **50** to their Fig. 9 positions. Stitching **52** is now applied, through the full marginal area of the eyelet as shown in Figs. 9 and 10, and said stitching not only passes through the fabrics, but through the folded flaps at two locations upon the flaps, namely, the portion of the flaps adjacent the slits **46, 48** and the outer longitudinal edge portions of the flaps, that underlie the fabric. This securely attaches the eyelet to the fabric, and the flaps, extending along opposite sides of the aperture **51** of the fabric, protect the same and define a button-receiving opening.

In this form of the invention, as in the first form, the eyelet can be manufactured at low cost, following quantity production rubber molding methods. Further, the construction is such that, when the eyelet is applied to the fabric, the edge of the fabric, being wholly enclosed within the folded flap, is completely protected against

movement out of an intimate relationship with the eyelet, and against fraying.

While I have illustrated and described the preferred embodiments of my invention, it is to be understood that I do not limit myself to the precise constructions herein disclosed and that various changes and modifications may be made within the scope of the invention as defined in the appended claim.

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

A buttonhole eyelet comprising a body of resilient material having an elongated aperture for receiving a button, a portion of said body being adapted to overlie a fabric or the like to which the eyelet is applied and a second portion of said body underlying the first portion to extend under the fabric, and stitching extending about said aperture through said body for attaching the same to said fabric, said body including a backing member and a welt, the welt being solid and being extended along the full perimeter of said aperture to reinforce the eyelet along the edge of the aperture, said welt constituting the first-named portion and said backing member constituting the second portion of said body, the stitching being extended through said backing member, said welt being of elliptical configuration, the backing member being flat over its full area, the welt extending over substantially the full length of the backing member and being disposed longitudinally and centrally of the backing member, the welt having an inner surface defining the wall of the aperture, said inner surface being transversely rounded through substantially 180° with the lower edge of said inner surface merging into the underside of the backing member and the upper edge terminating at the top of the welt, said welt having an outer surface also transversely curved through substantially 180°, but about a radius substantially less than that of the inner surface, the upper edge of the inner surface merging into the upper edge of the outer surface of the welt, thereby constituting a welt substantially circular in cross section, the lower surface of the welt terminating above and in closely spaced relation to the top surface of the backing member to define therebetween an undercut groove extending along the outside of the welt to receive an adjacent edge of said fabric.

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