March 2, 1943. L. M. RABINOWITZ 2,312,775

ADJUSTABLE GARMENT STRAP

Filed Sept. 5, 1942

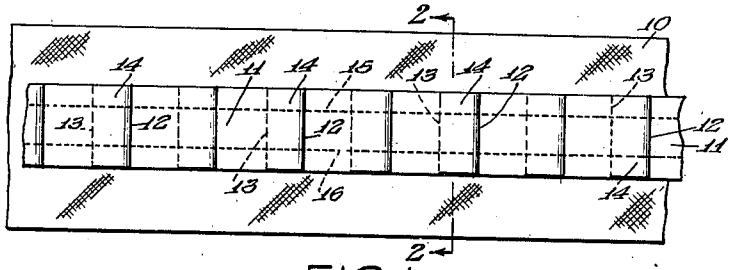


FIG. 1.



FIG. 2.

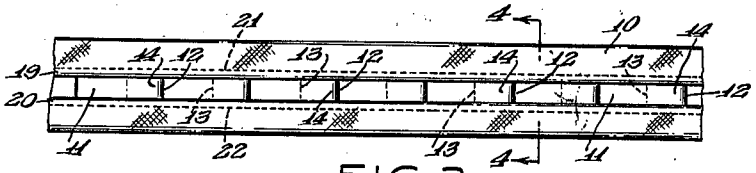


FIG. 3.



FIG. 4.

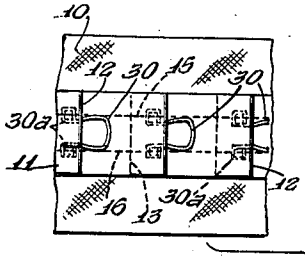


FIG. 5.

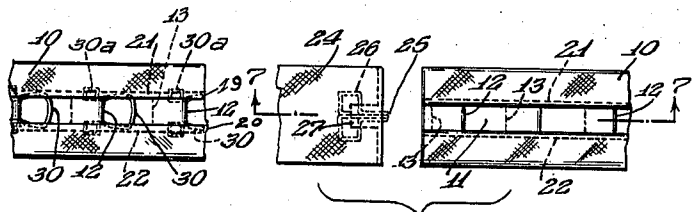


FIG. 6.

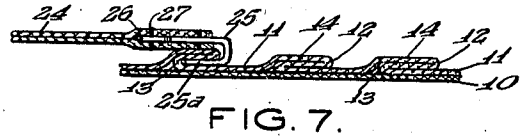


FIG. 7.

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ADJUSTABLE GARMENT STRAP

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2 Claims. (Cl. 24—206)

This invention relates generally to fastening devices and is more particularly directed to an adjustable strap, and the method of producing the same, for incorporation in women's garments and other articles, as one of a pair of cooperating fastening elements, where adjustability is essential or desirable, and the fastening must be readily effected and afford a maximum of security against separation of the connected fastening elements under those strains to which the garment or other article may be subjected in use.

While my invention, as will become manifest from the detailed description thereof, is susceptible of a multiplicity of uses where a fastening element of the kind may be advantageously employed in conjunction with a second fastening element of different characteristics, in producing a highly efficient fastening means, for the purposes of this disclosure, I have elected to present my invention, more or less specifically, as it may be incorporated in brassières, girdles and other types of women's undergarments. This, however, is merely illustrative and is not to be construed, in any sense, as limiting the scope of utility of my invention.

As is well known in producing brassières, for example, it is customary to provide such protective supports with a pair of straps, secured to the opposite sides thereof, the free ends of the straps being usually connectable about the back of the wearer by the interengagement of fastening devices, a mateable hooks and eyes or snap fasteners, sewn to the straps. For adjustment purposes, one of the straps may include a slide buckle or a series of eyes may be stitched thereto in spaced relation, longitudinally of the strap.

Aside from the known disadvantages which flow from the insecurity of fastening devices that are wholly dependent upon chain or similar stitches for anchoring them to fabric garment straps, the current shortages in metals which may be devoted to the production of articles such as hooks and eyes and snap fasteners, present a serious problem to the manufacturer as well as to the wearers of many types of women's garments in which the fastening straps are essential, not only as a means of supporting the garments on the wearers, but to permit of making the necessary form-fitting adjustments thereof.

Therefore, the primary objective of this invention is to provide a strap for garments and other purposes, to which it may be advantageously applied, which will meet all of the requirements of present type of female fastener-carrying elements, as the conventional wire eyes, for example, my strap being formed entirely of fabric and embodying integral surfaces that are adapted to be engaged by cooperating hooks, in a manner which will not only facilitate the fastening of a garment of which it is a part, but provide a fastening of greater security and strength than is attainable in prior hook and eye combinations.

Another object of my invention is to provide for the production of a garment strap or the like, embodying a series of pockets formed of a constituent material of the strap and so disposed that a hook may be guided into pocket-engaging position and firmly interlocked with the coacting surfaces of the pocket in a single continuing movement, the disengagement of the hook from the pocket being equally easily accomplished in a reverse relative movement of the hook and the strap in which the pockets are embodied.

It is also an object of my invention to provide a garment strap, as aforesaid, in which the hook-engaging pockets are produced in the requisite form in a strong, closely woven fabric to have a maximum resistivity to strains which may be imposed thereon in the body movements of the wearer of a garment of which my strap is a component; the pocket-forming fabric being encased in a lighter fabric, corresponding generally to the fabric of the garment, so that the completed strap harmonizes therewith.

A further important object of this invention is to provide a simple, economical and efficient method of producing a strap for garments or other purposes to which it may be applicable, having the aforesaid advantages and characteristics.

Other objects of my invention will become evident as the description proceeds, together with various uses to which my invention may be applied in conjunction with a cooperating strap carrying a hook or device which may be engaged with the fabric-formed pocket of my strap to complete the fastening function of the straps in the desired adjusted relationship.

In the accompanying drawing, I have shown a preferred embodiment of my invention, as it may be produced and employed in the manufacture and use of women's garments, together with a modification thereof. However, my invention may take other forms in attaining the objectives to which it is directed and may be applied to

various uses, other than those herein set forth, to which it may be found adaptable, within the spirit and scope of this disclosure.

In the drawing:

Figure 1 is a plan view of the cooperating components of my fastening means or strap, in a preliminary stage of production thereof.

Figure 2 is a cross-sectional view on the line 2—2 of Figure 1.

Figure 3 is a plan view of the completed strap, as formed to cooperate with a conventional type of garment hook.

Figure 4 is a transverse section on the line 4—4 of Figure 3.

Figure 5 is a view similar to Figure 3, illustrative of the manner in which a standard eye may be associated therewith to receive an entering hook.

Figure 6 is a plan view of end fragments of a hook-supporting strap and the strap of Figure 3 in contiguously spaced relation, as for the interengagement of the hook with a pocket in the opposite strap; and

Figure 7 is a longitudinal section on the line 7—7 of Figure 6.

Referring now to the drawing in detail, in which like characters of reference are employed to designate similar parts in the several views, my adjustable garment strap, as herein shown, comprises a strip of base fabric 10 of the requisite length, upon which is superimposed a length of tape 11 or other closely woven material, the tape being folded transversely upon itself at equidistantly spaced intervals along its length. The infold portion of each pleat or fold produced in the tape is of a sufficient depth, relative to the outer edge of the fold, to form a pocket adapted for the reception of a hook carried by a cooperating garment strap, when the folds are permanently incorporated in the tape by lines of stitching, traversing the pleated tape from end to end thereof, in uniting it to the base, in the manner which will become evident.

To admit of the formation of the folds in the tape 11, and provide for a series of pockets extending from end to end of the base fabric 10, the tape must of necessity be proportionately longer than the base strip which, as clearly shown in Figure 1, is appreciably wider than the tape 11, so as to provide for overlapping of the marginal portions of the base fabric upon the tape, in completing the formation of the strap, as will be explained.

In producing the strap, the tape 11, of appropriate length, is folded transversely upon itself, or pleated, at equidistantly spaced intervals, as indicated at 12 in solid lines and at 13 in dotted lines in Figure 1, the line 12 of each fold forming the outer edge thereof, while the adjacent dotted line 13 defines the inner edge of the fold, the portion between the lines 12 and 13 constituting the infold, indicated at 14. The pleated tape is then applied to the base strip 10 centrally of the longitudinal edges thereof and secured to the base fabric by parallel lines of stitching, as at 15, 16, which, as will be noted, are spaced inwardly of the outer edges of the tape sufficiently to unite the opposed surfaces of the tape constituting the individual folds in the formation of a series of pockets, the lines of stitching 15, 16 defining the sides of the pockets with the edge 13 of the infold of each thereof, between the lines of stitching, forming its base. Obviously, the outer edge 12, between the lines of stitching 15, 16 is a free edge and cooperates with the underlying fixed surface of the tape in defining the open end or mouth of the pocket.

The pleated tape may be positioned centrally of the base strip 10 in the process of sewing it thereto, or it may be basted or otherwise located in the appropriate position upon the base fabric, preliminary to the stitching operation, to suit the convenience of the operator or producer. Also, in lieu of pleating the tape prior to stitching it to the base fabric, the folds may be formed in the tape as it is sewn to the strip 10, or any other suitable procedure may be followed in the assembly of the tape and base fabric, as just described, to meet operational or other requirements.

When the pleated tape has been sewn to the base strip 10, the longitudinal edges of the latter, indicated at 17, 18, are oppositely inturned, in superposed relation to the tape, to overlie the pleats thereof, the marginal portions of the edges of the base fabric being turned under for the formation of the hems 19, 20, in the stitching of the overlapping base fabric to the tape along the parallel lines, indicated at 21, 22, in Figure 3. As will be noted, the hemmed edges 19, 20, of the base fabric, are in oppositely spaced relation, as secured in position in completion of the strap formation, the tape intermediate the spaced edges of the base fabric being exposed to afford free access to the pockets formed therein as previously described. The latter lines of stitching 21, 22, closely parallel the lines of stitching 15, 16, by means of which the tape is secured to the base fabric in pleated condition, and, in addition to anchoring the overlapped surfaces of the base fabric to the tape, serve to add to the security of the connection of the tape to the base strip and reinforce the pocket-defining stitching to increasing the resistance of the pocket structure to rending forces.

In the use of my invention, one end of a strap of the appropriate length, formed as described, is sewn or otherwise secured to a garment, the other end of the strap being freely suspended for interconnection with a hook-carrying strap oppositely fastened to the garment. Such a hook-carrying strap, indicated at 24, is shown in Figures 6 and 7, from which it will be observed that the hook 25 of a conventional form is connected to the end of the strap so that its nib 25a overlies one surface of the strap, as clearly shown in Figure 7. Usually, the strap is of double thickness, the body of the hook, indicated in dotted lines at 26, being interposed between the two end-forming layers of the fabric and secured thereto by suitable stitching, generally indicated at 27, the body of the hook thus being protectively concealed between the two thicknesses of fabric constituting the strap, with only the rounded portion thereof which merges into the nib 25a and the nib being exposed.

Since, in fixing the pocket-embodying strap to the garment, the base lines 13 of the several pockets are disposed toward the free or dependent end thereof, it will be evident that the hook 25 on the opposite garment strap 24 may be engaged in any preselected or predetermined one of the series of pockets of the strap conforming to my invention, by locating the hook in superposed relation to the pocket in which its nib is to be entered, with the outer surface of the nib disposed toward the exposed pleated tape of my strap, the nib 25a of the hook being then entered within the pocket by sliding it beneath the free edge 12 thereof for engagement of the base-

forming surface of the nib with said edge. The two straps are thus firmly and securely interlocked against such accidental separation as frequently occurs in the use of the conventional hook and eye connection or snap fasteners, the area of interengagement of the hook and pocket-defining surfaces obviously providing for greater stability in the connection of the two straps in resisting the strains to which it is subjected in the body movements of the wearer of the garment in which my invention is incorporated.

By providing my strap with a series of pockets, as will be manifest, various garment adjustments may be effected by entering the hook of the opposite strap in one pocket or another, as may be essential for the desired adjustment, the range of adjustments being limited only by the number of pockets that may be incorporated in a strap, the length of the hook-strap being dimensioned accordingly.

In the form of the invention shown in Figure 5, the strap is produced in the manner previously described. However, instead of providing for the interengagement of the hook with the pocket-defining surfaces, as explained, an eye, indicated at **30**, is entered in each of a predetermined number of pockets of the strap. Preferably, the apertured ends **30***a* of the eye are inserted within a fold in the tape in position to be interlocked with the tape and base fabric **10** by the lines of stitching which form the pockets in the tape and thereafter unite the overlapped edges of the base fabric thereto by stitching; as heretofore pointed out, the loop of the eye **30** protruding sufficiently beyond the open end or mouth of the pocket for the reception of the hook, which is entered therein in the customary manner in the union of such male and female fastening device; the legs of the eye **30** being maintained under the hemmed edges **19**, **20**, of the base fabric **10**. As in the preferred form of my invention, the eye-supporting strap is fixed to the garment to dispose the head of the eye toward the hook of the opposite strap for the interengagement of the two devices, which may be effected substantially in the manner heretofore described.

While I have described my invention in a more or less specific application, especially as regards its advantages in the production and use of women's garments, it will be apparent that it may be equally advantageously employed for many other purposes where relative adjustability of the fastening devices or of the articles with which they are associated for functioning is essential, my fastening strap not only providing for a wide range of adjustments, as pointed out, but affording a greater degree of security than has been attainable in many other types of fastening devices having corresponding uses.

I claim:

1. A garment strap comprising a strip of base fabric, a second and narrower strip of fabric superimposed upon the base fabric and folded upon itself at equidistantly spaced intervals longitudinally thereof to form a series of pockets, the sides of the pockets being defined by parallel lines of stitching extending from end to end of said narrower strip, inwardly of its respective outer edges and uniting it to the base strip, the marginal portions of the base strip being oppositely folded over upon the fold-embodying surface of the narrower strip with their edges in spaced relation to expose the pockets formed in said narrower strip for the entry of an engaging element therein, said marginal portions of the base strip being secured to the undersurface of the base strip through said pocket-forming narrower strip, throughout the length of the two strips.

2. A garment strap comprising a strip of base fabric, a second and narrower strip of fabric superimposed upon the base fabric and folded upon itself at equidistantly spaced intervals longitudinally thereof to form a series of pockets, the sides of the pockets being defined by parallel lines of stitching extending from end to end of said narrower strip, inwardly of its respective outer edges and uniting it to the base strip, an eye anchored within the area of each pocket, with its head end protruding therefrom, the marginal portions of the base strip being oppositely folded upon said fold-embodying surface of the narrower strip, with their edges in spaced relation to expose the protruding portions of the eyes associated with the respective pockets for engagement by a cooperating hook, the marginal portions of said base strip being secured to the undersurface thereof through said pocket-forming narrower strip, throughout the length of the strap.

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