

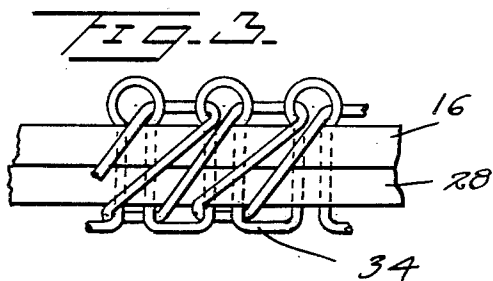
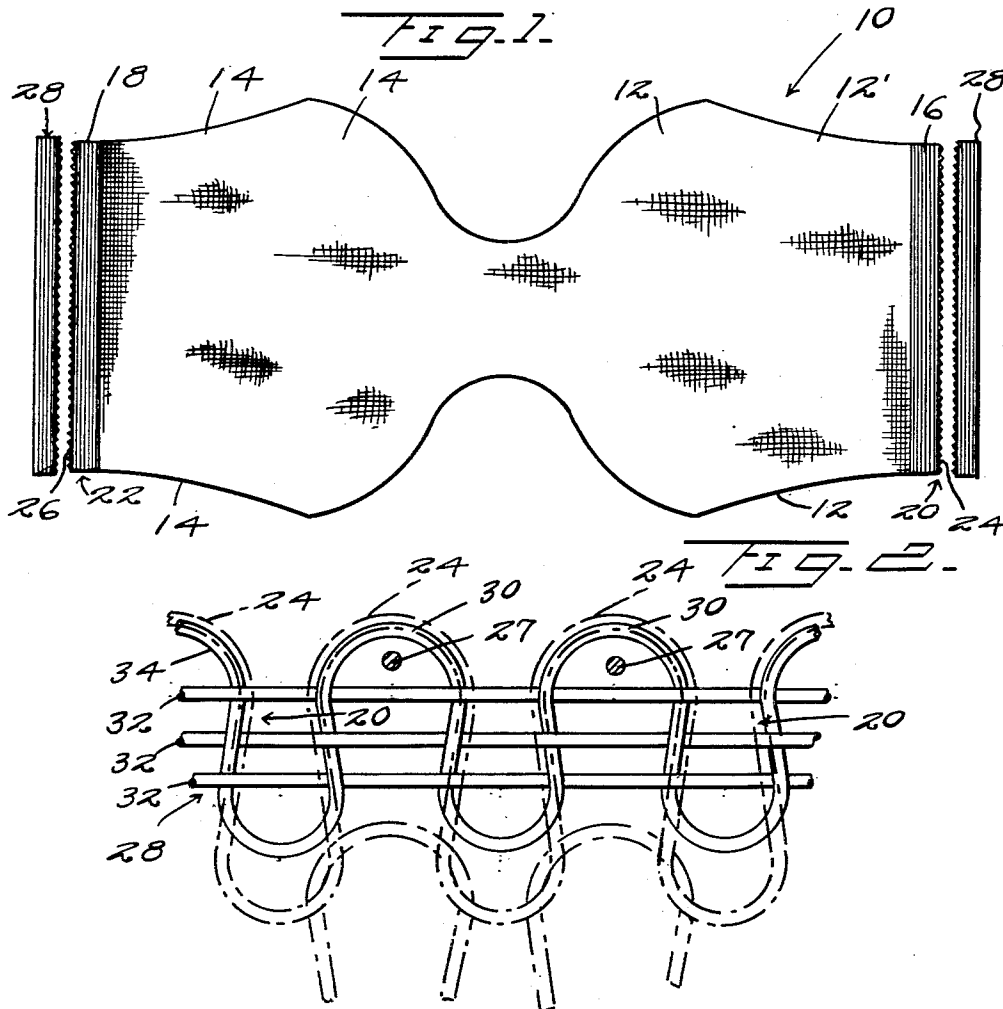
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PROCESS FOR ATTACHING A STRIP OF ELASTIC TO A GARMENT

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PROCESS FOR ATTACHING A STRIP OF ELASTIC
TO A GARMENT

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1 Claim. (Cl. 112—262)

This invention relates to a process for attaching a band of elastic material to a garment waist, and more specifically, this invention pertains to a process for securing an elastic tape or band to the upper end of an undergarment.

Heretofore, manufacturers of knitted fabrics encountered numerous problems in securing a band of elastic material to the upper end, or waist portion, of undergarments such as briefs. Manufacturers of briefs formed of "Helanca Nylon," which stretch substantially 150%, encounter an intensified problem of attaching a waist band of elastic material in such a manner that the band will have substantially the same amount of stretch as the garment possesses. Perhaps the most widely applied and currently utilized method comprises the formation of a waist encircling pocket by lapping the upper end of the garment over a band of elastic material and securing the marginal edge of the overlapped portion to the body of the garment. This is unsatisfactory for many reasons, among which resides the fact that it is wasteful of the material.

Again, manufacturers have attached the elastic band to the upper edge of the garment as by sewing, but this too has proved to be unsatisfactory for a number of reasons. For example, if the band should be cut slightly longer than the circumference at the waist of the garment, the stiffness of the tape or band relative to the fabric of the body of the garment will produce a distortion or lateral distension of the garment at its open upper end and at the same time the tension exerted on the tape by the fabric creates a corrugated effect transversely of the tape whereby when the adjacent sides of the tape are placed in juxtaposition the surfaces of the adjacent sides will not be in substantially continuous contact throughout their respective lengths.

On the other hand, should the tape be cut too small, then when it is sewed the fabric material will gather and produce wrinkles.

Thus, under either of these conditions the resulting garment negates sales appeal.

Numerous attempts have been made to find a method for applying an elastic band to a garment of the type described which is formed of a flat fabric known as "Helanca Nylon," to no avail. Because of the inherent characteristics of such textiles which enable it to stretch in substantially any direction under very light tension, it is virtually impossible to commercially produce briefs with an elastic band sewed at the waist even if the band were of the exact length. The elasticity of the fabric permits the operator of the sewing machine very little control over the fabric material making it impossible to commercially manufacture such garments while at the same time presenting a finished product that will appeal to the purchasing public.

Thus, one of the primary objects of this invention is to provide a process for attaching a strip of elastic material to the upper end of a pair of briefs without wasting material and in such a manner as to insure that the proper length of elastic material is incorporated therein.

Another object of this invention is to provide a process for securing a strip of elastic material to a garment of the type described by using conventional equipment and without sewing.

A further object of this invention is to provide a process for attaching a strip of elastic material to the waist of a pair of briefs formed of "full fashioned" fabric material, and wherein the process is non-complex and inexpensive in operation.

Other and further objects and advantages of the present invention will become more apparent from a consideration of the following specification when read in the light of the annexed drawing, in which:

Figure 1 is a front elevation of a brief blank and of strips of elastic material to be secured thereto.

Figure 2 is an enlarged diagrammatic view showing the

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fabric and the elastic strip mounted on the needles of a looping machine.

Figure 3 is an enlarged schematic view of one type of lock chain stitch which may be used to loop the elastic band to the fabric material.

Referring now more specifically to the drawing, reference numeral 10 designates, in general, a blank for forming a pair of woman's panties. The blank 10 is constructed of a knitted "full fashioned" flat fabric commonly known as "Helanca Nylon," and the main body portion 12, 14 may be knitted to a fifty-one gauge standard, for example, and is picoted at its opposite ends 16, 18 to substantially twenty-five and one-half gauge, whereby the number of stitches is reduced in half to facilitate the mounting of the blank on a looping machine as will be described below.

The outermost courses 20, 22 of the blank 10 terminate in loops 24, 26 of which, for example, the loops 24 are mounted on the needles 27 of a conventional looping machine (not shown).

The elastic tape or band is generally designated by the reference numeral 28 and is woven or knitted to provide a longitudinally extending series of loops 30 on at least one side thereof. In Figure 2 the band 28 is schematically illustrated as comprising a plurality of longitudinally extending flexible threads 32 interwoven transversely by a continuous thread 34. It will be understood that any type of elastic band may be used provided that the number of loops 30 per inch are substantially equal to the number of loops 24, 26 per inch formed at the end edges of the picoted ends 16, 18.

The elastic band 28 is mounted on the looping machine in juxtaposition relative to the end 16 of the blank 10, the loops 30 receiving the needles 27 of the machine therethrough.

The looping machine is then operated to loop the band 28 to the end edge of the picoted portion 16 by a series of lock chain stitches 34. Figure 3 illustrates one type of lock chain stitch which may be utilized in the looping operation.

Figure 2 illustrates the juxtaposition of the band 28 and the end portion 16 prior to the looping operation. After the looping operation has been completed the band 28 is rotated substantially 180° around the line of stitching 34 and falls into the plane of the blank 10. The stitching is made with an elastic thread having substantially the same stretch as the threads 32 of the band.

The above described series of operations is carried out to attach the band 28 to the end 18.

Thereafter, the main body portions are folded towards each other and the edges 12' and 14' are secured to each other to complete the garment.

Having described and illustrated one embodiment of this invention in detail, it will be understood that the same is offered by way of example, and that the invention is to be limited only by the scope of the appended claim.

What is claimed is:

A method for making briefs formed of a knitted fabric comprising the steps of forming an elongated knitted blank having a pair of oppositely disposed ends having a plurality of loops extending therefrom, reducing the transverse dimension thereof by reducing the plurality of loops at the end edges thereof by half, engaging said last named loops of one of said ends over the needles of a looping machine, engaging loops formed longitudinally of an edge of a strip of elastic material over said needles of said machine with said fabric and said strip in juxtaposition operating said machine to loop said fabric to said strip, removing the joined fabric and strip, securing a second strip of elastic material to the other end of said fabric as described, rotating said joined strips 180° along their respective lines of connection and into the plane of said blank, folding said blank intermediate the ends thereof, and securing the adjacent oppositely disposed marginal edges.

References Cited in the file of this patent

UNITED STATES PATENTS

472,815	Preston	Apr. 12, 1892
2,518,552	Kaplan	Aug. 15, 1950
2,623,210	Chatfield	Dec. 30, 1952