

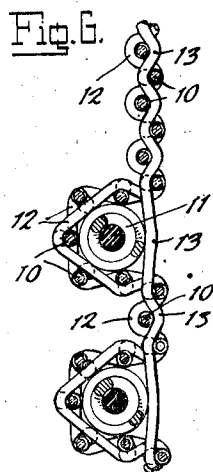
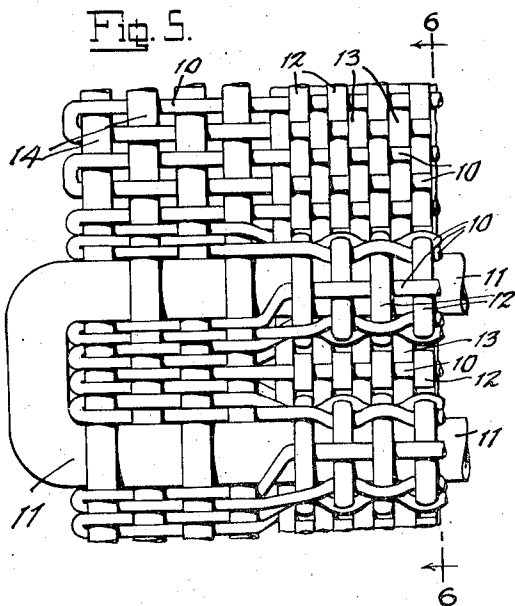
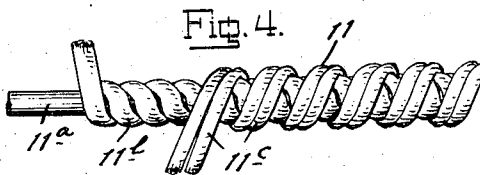
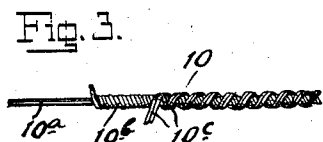
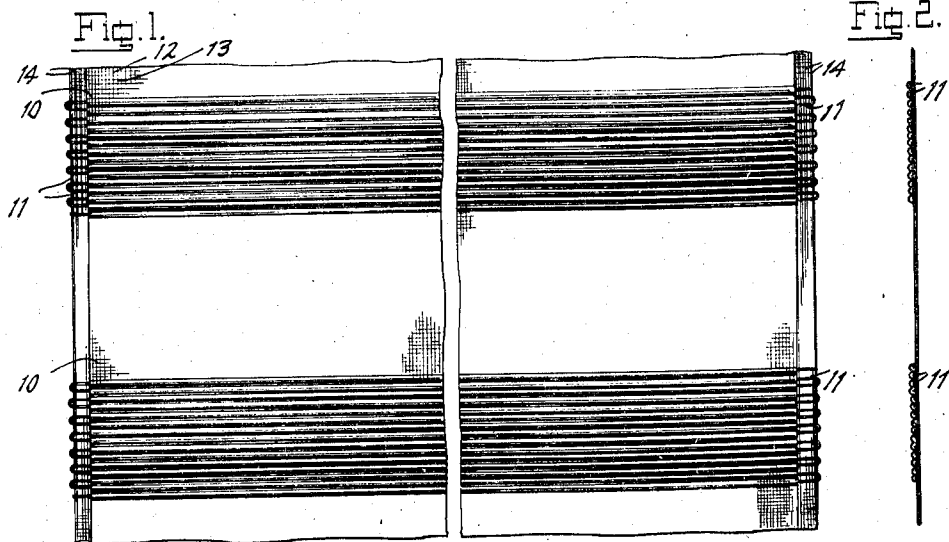
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2,128,764

ELASTIC FABRIC

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ELASTIC FABRIC

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2 Claims. (Cl. 139—421)

The present invention relates to an improved elastic fabric, particularly an elastic fabric of the type in which either the weft threads, or, in the case of two-way stretch fabric, both the warp and weft threads have elasticity, these elastic threads preferably consisting of a rubber core and a winding of yarn or other suitable fibrous material, but which may be of any other suitable type, as cut rubber threads, for example. Elastic fabric as heretofore produced was not only elastic but extremely flexible and pliable, this being particularly so in the case of thin material, so that while this fabric would stretch it would at the same time readily conform to the shape of the body over which it was engaged. While this fabric has been extensively used in the manufacture of corsets, girdles, foundation garments and the like, its use therefor, without bones, stays, or other such reinforcing or stiffening devices, has been objectionable, due to the fact that it would conform to and accentuate the shape of the body rather than cause the body to conform to a desired shape. The use of bones, stays, and the like has also been objectionable because they were uncomfortable, would show through the outer garments, and when used with elastic fabric were not capable of stretching with it.

It is proposed in the present invention to provide an elastic fabric in which certain areas, preferably in the form of strips extending in the direction of the weft of the woven fabric, have elastic reinforcing means interwoven therewith, which strips being elastic have the capacity to stretch but at the same time offer greater resistance to stretch than the main body of the fabric. These strips thus serve to shape the wearer's body and to prevent garments made from the cloth from being stretched out of shape. In the preferred form of the invention these strips will be woven into the body of the fabric of ordinary weave, so that in the use of the fabric in garments the sections of ordinary weave may be used in the same way as elastic fabric heretofore in use, while the stiffening strips will be of suitable width and position to reinforce the fabric at those portions where it is desired to cause the body of the wearer of the garment to conform to a desired shape. For instance, in the case of a girdle, reinforcing strips will extend vertically of the garment over the buttocks of the wearer.

Another object is to provide a fabric of this character in which the reinforcing means is so disposed that the side of the fabric away from the wearer is substantially smooth. Accordingly the fabric may be so used in the garment that the

smooth side will be at the outside of the garment while the ribbed side may be at the inside, or, if desired, may be covered with a lining, so that although the garment is reinforced in one direction it is smooth at both sides.

With the above and other objects in view embodiments of the invention are shown in the accompanying drawing and these embodiments will be hereinafter more fully described with reference thereto, and the invention will be finally pointed out in the claims.

In the drawing:

Fig. 1 is a face view of a section of elastic woven fabric according to the invention, the intermediate portion being broken away.

Fig. 2 is an edge view thereof.

Fig. 3 is a side view of the elastic thread used as the weft in weaving the cloth, the covering being partially unwound to show the core.

Fig. 4 is a side view of the elastic stiffening cord employed in weaving the stiffened sections, the covering being partially unwound to show the core.

Fig. 5 is an enlarged face view of a section of the fabric showing the selvage at one side and end portions of two of the stiffening ribs.

Fig. 6 is a sectional view taken along the line 6—6 of Fig. 5.

Similar reference characters indicated corresponding parts throughout the several figures of the drawing.

Referring to the drawing the elastic woven fabric, according to the exemplary illustrated embodiment of our invention, is woven in conventional manner from elastic weft threads, elastic stiffening cords and warp threads, these latter being non-elastic in the case of one-way stretch material, but which will be elastic when it is desired to produce two-way stretch material.

The elastic weft threads 10 are preferably numbered fifty or higher and as shown in Fig. 3 consist of a rubber core 10^a, a base winding 10^b of fibrous yarn, and an outer winding 10^c of fibrous yarn, preferably in double strands and wound in the opposite direction from the winding of the base winding 10^b. The elastic stiffening or reinforcing strands 11 are of much larger gauge than the threads 10 and are wound in substantially the same way, consisting of a rubber core 11^a, a base winding of fibrous yarn 11^b, and an outer winding of fibrous yarn 11^c. The elastic threads and cords may if desired be of any other suitable type, as for example cut rubber. For the purpose of incorporating the elastic stiffening cords certain of the warp threads 12 are in alternate arrange-

ment with certain others of the warp threads 13 as will presently more fully appear. Suitable selvage threads 14 are provided at each edge of the woven fabric in the usual manner.

5 As clearly shown in Figs. 5 and 6 the warp threads 12 and the warp threads 13 are interwoven in the body of the fabric with the elastic weft threads 10 in the usual manner. At the point where the strands 11 are interwoven the
10 warp threads 13 extend beneath the strands 11 while the warp threads 12 are carried over the strands 11 and are woven with weft threads, so that a woven covering is provided about the strands 11, causing them to project as a rib, while
15 the other side of the fabric remains smooth. After the covering is woven about one strands 11 the warp threads 12 together with the warp threads 13, are again interwoven with the weft threads 10 for several picks, the warp threads 12
20 being then woven over the next strands 11, and so on throughout the stiffening section, whereupon, weaving of the intermediate plain weave section is resumed.

It will be understood that the stiffening strips
25 as well as the intermediate plain weave sections may be of any desired widths, depending upon the particular use to which the material is to be put.

30 We have illustrated and described preferred and satisfactory embodiments of our invention,

but it will be obvious that changes may be made therein, within the spirit and scope thereof, as defined in the appended claims.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:—

1. A sheer woven elastic fabric including a body portion having elastic weft yarn and spaced bands woven in said body portion, each band comprising a plurality of adjacent elastic weft threads having greater resistance to stretch than the elastic weft yarn and certain of the warp and certain of the weft yarn being deflected from the plane of the fabric to enclose the elastic threads, and other of said weft yarn maintaining the weft threads on a face of the body of the fabric, said spaced bands serving to offer greater resistance to stretch than the main body portion of the fabric and being spaced to increase the resistance to stretch where desired when the fabric is incorporated in garments.

2. A sheer woven elastic fabric including a body portion formed with elastic weft yarn finer than No. 50, said body portion having spaced bands woven therein, each band comprising a plurality of elastic weft threads heavier than said elastic weft yarn and enclosed transversely by the warp threads and longitudinally by the weft yarn.

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