Sept. 29, 1925. 1,555,032

J. SIEGEL

ELASTIC FABRIC

Filed Oct. 9, 1923

Fig. 1.

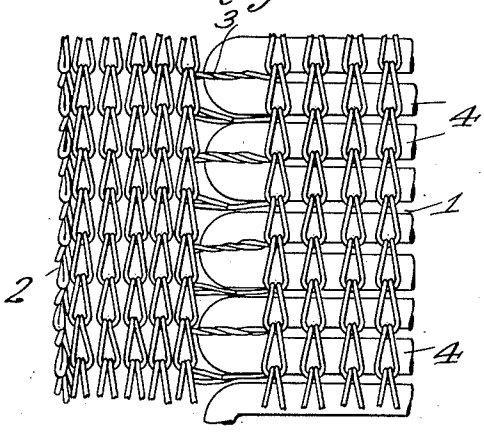


Fig. 2.

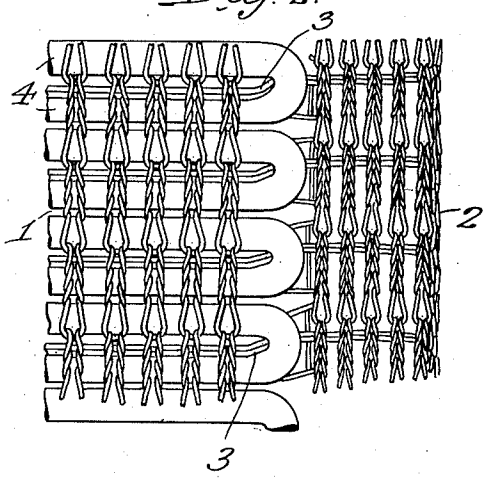


Fig. 3.

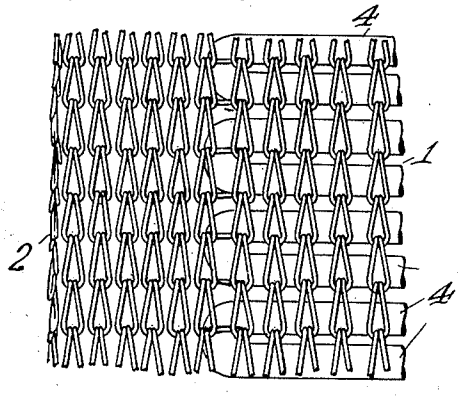
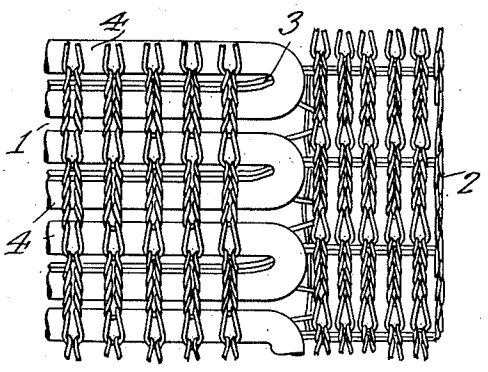


Fig. 4.



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Patented Sept. 29, 1925. 1,555,032

UNITED STATES PATENT OFFICE.

JOSEPH SIEGEL, OF DETROIT, MICHIGAN, ASSIGNOR TO AMERICAN LADY CORSET CO. INC., A CORPORATION OF MICHIGAN.

ELASTIC FABRIC.

Application filed October 9, 1923. Serial No. 667,506.

To all whom it may concern:

Be it known that I, JOSEPH SIEGEL, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Elastic Fabrics, of which the following is a full, clear, and exact description.

This invention relates to elastic fabrics, and preferably to fabrics which are intended for incorporation into garments or other articles where suitable fastening means must be passed through the fabric. For example, in the formation of garments, when the fabric composing the remainder of the garment is stitched to the elastic insert, the needle forming the stitch frequently severs, pierces, or otherwise injures the elastic strands of the elastic fabric and thus weakens the elastic fabric and destroys a great deal of its elasticity. Prior attempts have been made to provide elastic fabrics with inelastic marginal portions to which the stitching may be made, but such fabrics have always been woven with weft and warp threads with the result that the inelastic threads running parallel with the elastic strands greatly limited the elasticity of the fabric.

An object of the invention is to provide an improved flat elastic fabric, having an inelastic margin to which other fabrics or articles may be secured without possibility of injury to the elastic strands of the fabric; which will have a maximum of elasticity; which, when embodied in garments, will be exceptionally durable and permit folding of the garment in a very compact manner without placing the elastic strands under stress; and which will be relatively inexpensive to manufacture. Other objects and advantages will be apparent from the following description of an embodiment of the invention, and the novel features will be particularly pointed out hereinafter in claims.

In the accompanying drawing:

Fig. 1 is an elevation of an edge portion of a knit fabric constructed in accordance with the invention;

Fig. 2 is a similar elevation of the reverse face of the fabric;

Fig. 3 is an elevation of an edge portion of a modified construction of a knit fabric; and,

Fig. 4 is an elevation of the reverse face of the fabric illustrated in Figure 3.

It will be understood that the drawings are diagrammatic only, and present as near as possible the appearance of the fabric forming the subject matter of the invention.

In the illustrated embodiment of the invention, the flat elastic fabric comprises a main or major section 1 and one or more marginal sections 2, each formed of interconnected threads. The marginal section 2 is connected to the major or main section 1 by threads more loosely interconnected than the interconnected threads of the marginal or main sections. More specifically, a portion of all of the threads connecting the marginal and major sections may be spaced apart longitudinally of the fabric, the spaced-apart connecting threads being illustrated in the drawing by the numeral 3.

The major section is provided with a continuous elastic strand 4 which is interwoven with the interconnected threads of that section, and runs from side to side successively in parallel stretches within the side limits of the section. Preferably, as illustrated, the bends of the elastic strand between successive runs are disposed in the space between the marginal and major sections where the theads are more widely or loosely interconnected, and with this arrangement the bends will not increase the thickness of the fabric.

In order to provide a fabric with maximum elasticity, the major and marginal portions are formed by knitting them in a plurality of layers from a plurality of threads, the stitches of the major section being interconnected to one another around the successive runs of the elastic strand. In the illustrated fabric, three threads are utilized and knit in two layers, and in order to define a marginal portion, the knitting is drop-stitched in at least one layer at the desired marginal side of the major section.

In Figures 1 and 2, both layers of the knit fabric are drop-stitched at the line of division between the major and marginal sections, so that the transverse connecting threads 3, formed by the drop-stitching, will serve as the sole connection between the major and marginal sections. The bends between the successive runs of the elastic strand are disposed in the drop-stitched por-

tion of the fabric between the marginal and major sections.

In the embodiment illustrated in Figures 3 and 4, only one of the layers is drop-stitched at the line of division between the marginal and major sections, the face with the continuous stitches being shown in Figure 3, and the face with the layer, having the drop-stitches being shown in Figure 4.

A knit fabric, because of the nature of the interconnection of its threads, is inherently stretchable to some extent, in distinction to woven fabrics, and therefore with a knit construction the runs of the elastic strand will have less restriction to stretching. When the fabric is utilized in the construction of garments, for example, the other portions of the garment will be secured to the marginal portion 2, and there will be no possibility of injury to the elastic strands by the securing means. When the garment is folded along the line of connection between the marginal and major sections, a very sharp fold in the elastic fabric may be effected without placing the runs of the elastic strand under flexure or stress, and consequently when such garments are left folded in this manner for some time, there will be less deterioration of the elastic strands.

It will be obvious that various changes in the details, herein described and illustrated for the purpose of explaining the invention, may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims.

I claim:

1. A flat elastic fabric comprising a main elastic section of interconnected threads, and a marginal inelastic section of interconnected threads connected to a side of the main section by threads more loosely interconnected than the interconnected threads of the marginal and main sections, the elasticity of the main section being from side to side.

2. A flat elastic fabric comprising a main elastic section of interconnected threads, and a marginal inelastic section of interconnected threads connected to a side of the main section by transverse threads which are spaced apart longitudinally of the fabric, whereby the threads connecting the marginal and main sections will be spaced more widely than in the main and marginal sections, the elasticity of the main section being from side to side.

3. A flat elastic fabric comprising main and marginal sections, each formed of interconnected threads, the marginal section being connected to a side of the main section by threads more loosely interconnected than the interconnected threads of the main and marginal sections, said main section having a continuous elastic strand interwoven therein and running from side to side successively in parallel stretches.

4. A flat elastic fabric comprising main and marginal sections, each formed of interconnected threads, the marginal section being connected to a side of the main section by threads extending transversely of the main section and spaced apart longitudinally, the main section having a continuous elastic strand interwoven therein and running transversely of the fabric in successive parallel stretches.

5. A flat elastic fabric, knit in a plurality of layers from a plurality of threads, and having a layer drop-stitched to define a marginal portion, the major portion having a continuous elastic strand between the layers interconnected with the stitching and extending back and forth from side to side in successive parallel layers within the limit defined by the drop-stitch.

In witness whereof, I hereunto subscribe my signature.

JOSEPH SIEGEL.