

Jan. 30, 1940.

R. BLOCH ET AL

2,188,640

LACE FABRIC

Filed Oct. 10, 1939

Fig. 1.

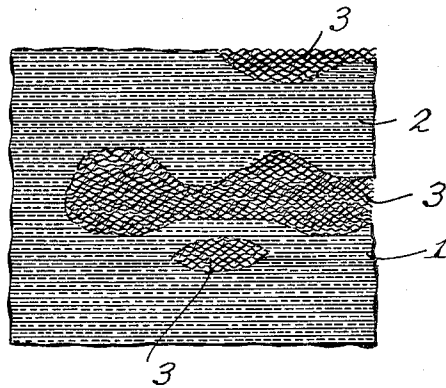


Fig. 2.

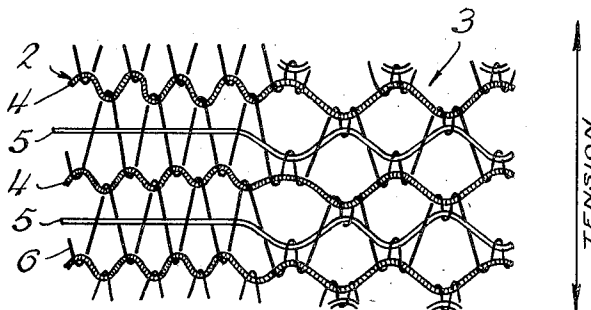
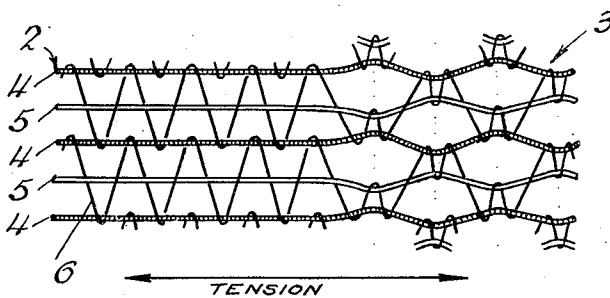


Fig. 3.



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UNITED STATES PATENT OFFICE

2,188,640

LACE FABRIC

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Application October 10, 1939, Serial No. 298,760

2 Claims. (Cl. 96—24)

This invention relates to a fabric made upon a lace machine.

The object of the invention is to produce a lace fabric which is suitable for use in the manufacture of garments worn by women, for instance, girdles or other foundation garments, or portions thereof, worn next to the skin, and is also suitable for stocking garter tops, elastic narrow fabrics, caps and other articles where elastic materials could be utilized. The material of this invention is a combination of alternate areas of clothing or closely woven portions and netting, providing stretch in both lengthwise and crosswise directions. The material, by reason of its peculiar construction, as will hereinafter appear, will fit or adjust itself to the form of the wearer, without exerting discomforting pressure.

In the drawing, Fig. 1 represents an enlarged plan view illustrating a portion of the complete fabric of this invention; Fig. 2 an enlarged detail of a section of the fabric under tension only crosswise of the warp threads, and Fig. 3 an enlarged detail of the same section of fabric under tension only in the direction of the run of the warp threads.

The section of lace fabric 1 comprises clothing portions 2 and netting portions 3. The clothing portion 2 has its threads in close relation, comparative to the relation of the netting portions 3, the latter exhibiting definite openings characteristic of net fabrics. The alternate portions of clothing and netting make up the whole fabric. The clothing portions may be formed in a predetermined design such as the petals of flowers, the spaces between the individual petals and individual flowers being joined by netting. The material is made upon a lace machine in which a series of initially parallel cotton-wound elastic or rubber threads 4, 5 are arranged in parallel relation and are connected together by a cotton tying or bobbin thread 6. The cotton-wound elastic or rubber threads, on the lace machine, are put under slight tension while the tying thread is being twisted with respect thereto and by reason of the manner in which the tying thread 6 is handled or manipulated the peculiar fabric of this invention is produced. Reference to Fig. 3 shows the relation of the elastic threads 4 and 5 with respect to each other and the relation of the cotton tying thread 6 with respect to the elastic threads and also the manner in which the tying thread 6 distorts the elastic threads. It is to be noted that a tying thread 6 (see Fig. 3, the top three threads 4, 5, 4) in the section of the material comprising clothing 2, passes under

and over the top thread 4, across (beneath) the thread 5, over and under the second thread 4, across (over, but not around) the intermediate thread 5, and thence, in its courses, repeating such relation throughout the portions of the fabric which are comprised of clothing. The tying thread 6, when it reaches the area of the netting 2, instead of embracing three warp threads, embraces but two, as is shown to the right of Fig. 3. It will be noted that the top course of the tying thread 6, in the area of the netting 3, passes across (beneath, but not around) the second thread 4, over and under the thread 5, over and under the second thread 4, then merely over the thread 5, under and over the top thread 4, under and over the thread 5, and under and over the first thread 4, under the thread 5 and repeating this course throughout the netting area. Each tying thread follows this same course throughout the fabric, forming the netting portions 3.

It is to be noted that the intermediate elastic threads 5, when the material is stretched either in warp-wise direction (Fig. 3) or across the warp (Fig. 2), do not substantially change their straight course in the area of the clothing 2, but merely stretch in the direction of the pull. The threads 4 in the area of the clothing, when the fabric is pulled across the warp (Fig. 2), take a sinuous position and when the fabric is pulled in the direction of the warp (Fig. 3) such threads 4 are substantially straight, whereas the intermediate threads 5 in the area of the clothing 2 in both directions remain substantially straight. All the elastic threads in the area of the netting, when subjected to pull either in warp-wise direction or across the warp, take sinuous positions. Actually, in the manufacture of the fabric, more linear length of elastic thread (about ten percent) is used, per foot of fabric length, in the threads 4 than in the threads 5, due to the fact that the tying threads 6, inasmuch as they embrace the threads 4, draw such threads out of a straight line into sinuous configuration during manufacture of the fabric.

We claim:

1. A fabric, made upon a lace machine, having clothing and netting portions, the clothing portions having their threads more densely arranged with respect to the netting portions, said fabric comprising elastic warp threads and non-elastic tying threads, said fabric being stretchable in the direction of the warp and across the warp, each warp thread running continuously through the clothing and the netting portions and being

5 tied together in said portions by the tying threads,
each tying thread being associated with three
elastic threads, in the clothing portion said tying
threads progressively passing around the outer
10 edge of said elastic threads and across the inter-
mediate elastic thread and in the netting portion
said tying thread passing progressively and suc-
cessively around the intermediate thread and one
of said outer threads, across said intermediate
15 thread and then around the other outer thread
and said intermediate thread, said outer threads
when the fabric is stretched across the warp tak-
ing a sinuous configuration in both the clothing
and netting areas, said intermediate threads in
the clothing portion being substantially straight
and sinuous in the netting portion.

2. A fabric, made upon a lace machine, com-
prising clothing and netting portions, elastic
warp threads and non-elastic tying threads, each
alternate elastic warp thread in the clothing por-
tions being tied together in pairs by the tying
5 threads passing around the elastic warp threads
of each pair and across the elastic threads inter-
mediate each pair of elastic threads, the tying
threads in the netting portions passing around
an intermediate thread and one of the threads 10
of such pair of threads, across the intermediate
thread, around the other thread of said pair of
threads, around the intermediate thread and
around said other thread of said pair of threads.

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