

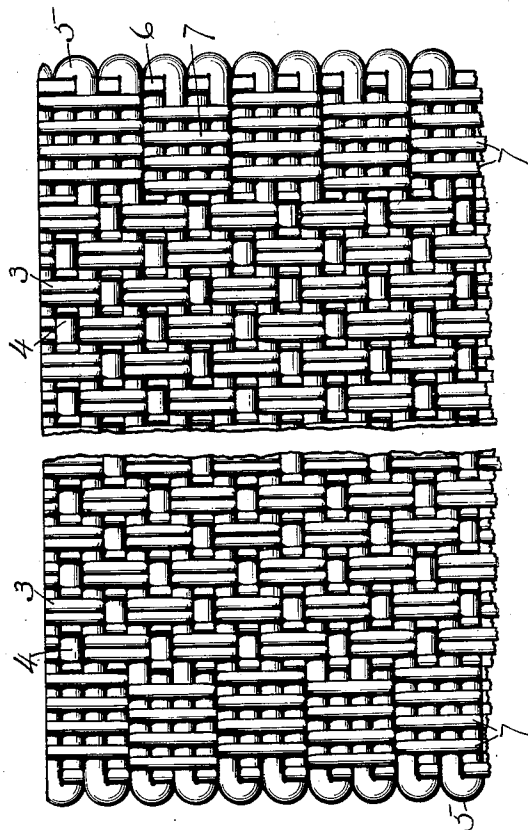
Sept. 28 , 1926.

1,601,484

S. J. TAYLOR

ELASTIC FABRIC

Filed Jan. 21, 1924



INVENTOR:

S. J. Taylor

by

Arthur B. Jenkins

ATTORNEY.

UNITED STATES PATENT OFFICE.

SCHUYLER J. TAYLOR, OF MIDDLETOWN, CONNECTICUT, ASSIGNOR TO THE RUSSELL MANUFACTURING COMPANY, OF MIDDLETOWN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELASTIC FABRIC.

Application filed January 21, 1924. Serial No. 687,427.

My invention relates to that class of fabrics that may be stretched and that will resume their normal conditions upon the release of force applied to stretch them, and an object of my invention, among others, is to produce a fabric of this class in which the elastic elements shall be retained in their normal and original positions.

One form of an elastic fabric embodying my invention, and in the construction and use of which the objects herein set out, as well as others, may be attained, is illustrated in the accompanying drawing in which the figure is a face view of a piece of fabric embodying my invention.

In the making of elastic fabrics prior to my invention it has been a common practice to extend the elastic elements lengthwise of the fabric, such elastic elements comprising the warp of the fabric. It has heretofore been proposed to construct an elastic fabric that may be stretched crosswise, but a difficulty has been encountered for the reason that the elastic elements comprising the weft will be drawn out of place at the selvage edge of the fabric and such edge will not therefore maintain its true shape. By the practice of my invention I have provided means whereby a fabric may be formed in which the elastic elements may be extended crosswise of the fabric, thus forming the weft, and which elastic elements are so supported at the selvage edge of the fabric as to maintain such edge in its original shape and without distortion thereof.

Such a fabric embodying my invention is illustrated in the drawing herein in which the numeral 3 indicates the warp threads that may be arranged in any manner common to the art of weaving and that may be disposed with respect to the weft in any way desired. The numeral 4 indicates the weft threads that are composed of elastic, suitably covered in a manner well known in the art of weaving elastic fabrics. These weft threads comprising elastic elements are woven into the fabric in a manner common to weaving of non-elastic fabrics, these weft threads having loops 5 at each side of the fabric, such weft threads of elastic elements extending back and forth across the fabric in a manner common to weaving.

These weft threads of elastic elements, owing to their elasticity, will be disturbed,

when force is applied lengthwise of such elements, and crosswise of the fabric, to such extent that the selvage edge comprised of the loops 5 will be distorted and drawn out of shape, and in order to prevent such distortion an anchoring thread 6 is extended lengthwise of the fabric and through each of the loops 5, this anchoring thread tending to prevent the loops from being drawn inward with respect to the warp threads when force is applied to stretch the fabric crosswise thereof.

I have found, however, that this anchoring thread 6, of itself, will not sufficiently retain the selvage edge in its original condition and I have, therefore, provided means for retaining such anchoring thread in place, this means comprising a supporting thread or threads 7 comprising a part of the warp, which supporting threads 7 are woven in any suitable manner to cross the anchoring thread and to cross each other in a manner to prevent the anchoring thread from being displaced and to retain such anchoring thread within the loops 5. In the arrangement shown herein the supporting threads are so woven that they alternately cross the weft threads comprising two loops, this especially on the face of the fabric, and as illustrated in the drawing, but it will be understood that the manner of crossing these supporting threads with respect to the anchoring thread, and with respect to each other, may be varied to any extent common to the art of weaving, and the number of these supporting threads that may be employed may also be varied to any extent desired.

In accordance with the provisions of the patent statutes I have described the principles of operation of my invention, together with the fabric which I now consider to represent the best embodiment thereof, but I desire to have it understood that the fabric shown is only illustrative and that the invention may be carried out by other means and applied to uses other than those above set out.

I claim—

1. An elastic fabric comprising a weft formed of elastic threads, an anchoring thread extending through the loops of the weft threads at the selvage edge of the fabric, and a supporting thread woven into the fabric and extending across at least each of

two threads comprising a loop to support the anchoring thread against movement lengthwise of the weft.

2. An elastic fabric comprising a weft
5 formed of elastic threads, an anchoring thread extending through each of the loops of the weft threads at the selvage edge of the fabric, and a supporting thread extending across a plurality of said loops and
10 across the anchoring thread in the direction of depth of the fabric to support the latter against movement lengthwise of the weft.

3. An elastic fabric comprising a weft
15 formed of elastic threads, an anchoring thread extending through each of the loops of the weft threads at the selvage edge of the fabric, and a supporting thread woven into the fabric in the direction of depth thereof between each pair of said loops to
20 support the anchoring threads against movement lengthwise of the weft.

4. An elastic fabric comprising a weft
formed of elastic threads, an anchoring thread extending through each of the loops
25 of the weft threads at the selvage edge of the fabric, and a supporting thread woven

into the fabric and evenly arranged to successively cross series of weft threads each composed of the same number of threads and to support the anchoring thread length- 30 wise of the weft.

5. An elastic fabric comprising a weft formed of elastic threads, an anchoring thread extending through each of the loops of the weft thread at the selvage edge of 35 the fabric, and a supporting thread woven into the fabric and extending over and under said loops and across said anchoring thread to hold the latter and prevent said elastic loops being drawn inward in the 40 weaving operation.

6. An elastic fabric comprising a weft formed of elastic thread, an anchoring thread extending through each of the loops of the weft threads at the selvage edge of 45 the fabric, and a supporting thread woven into the fabric and extending alternately over and under each pair of loops and across said anchoring thread to hold the latter against inward movement in the pull of the 50 elastic weft thread in weaving.

SCHUYLER J. TAYLOR.