Dec. 31, 1929. J. MAYER 1,741,530

ELASTICIZED FABRIC

Filed Nov. 2, 1928

Fig. 1.

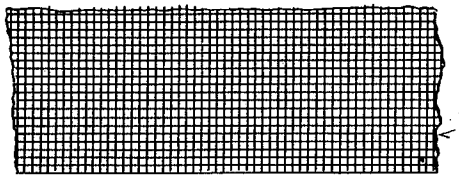


Fig. 2.

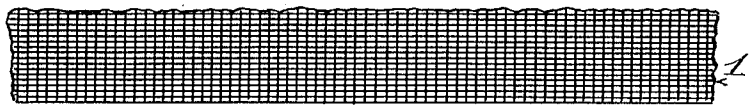
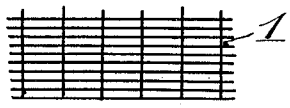


Fig. 3.



Fig. 4.



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UNITED STATES PATENT OFFICE

JEROME MAYER, OF BELLE HARBOR, NEW YORK, ASSIGNOR TO COMFOLASTIC CORPORATION, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK

ELASTICIZED FABRIC

Application filed November 2, 1928. Serial No. 316,879.

This invention relates to elasticized fabrics and more particularly to knitted fabrics.

The object of the invention is to provide an elasticized knitted fabric of long life and durability.

A further object of the invention is to provide a knitted fabric with means for rendering the same elastic so that the knitted fabric may be used in all instances where elastic material is desired or necessary.

A further object of the invention is to provide a method of imparting elasticity to a knitted fabric.

Further objects of the invention will appear more fully hereinafter.

The invention consists in the process of imparting elasticity to a fabric and the product obtained thereby, all as will more fully be hereinafter set forth and finally pointed out in the appended claims.

Referring to the drawings in which effort has been made to diagrammatically illustrate the principles of my invention—

Figure 1 diagrammatically represents, in enlarged diagrammatic manner, a knitted fabric, such as rayon, in its normal condition;

Fig. 2 is a similar representation of a portion of the same fabric after it has been stretched to its limit of elasticity in one direction;

Fig. 3 is an edge view of the fabric shown in Fig. 2 with a facing of elastic material applied thereto; and

Fig. 4 is a greatly exaggerated view of the fabric shown in Fig. 2.

In all cases where elasticity is required or is desirable, such for example as garters, belts, garments, etc., it is desirable to employ an elastic fabric rather than an elastic per se. It will be apparent that if a fabric of the same color and texture as the body of the cloth can be produced artistry and beauty (in garments for example) can be secured and, furthermore, any desired width of fabric having elasticity can likewise be obtained.

It is among the special purposes of my present invention to provide a process of imparting elasticity to knitted fabrics of any desired width, color, texture, etc., and to thereby produce a product materially strenghtened as to its normal wearability and which will retain the elasticity imparted thereto throughout its life. While I will describe my invention as applied to knitted artificial silk fabric, such as rayon, I do not desire to be limited or restricted in this respect as it will be apparent that the principles of my invention may be equally applicable to other fabrics.

In accordance with my invention the knitted rayon 1 as it comes from the knitting machines (Fig. 1) in widths which are predetermined by the said machines and of any suitable or desired length, are finished in the usual way except that after the fabric is dyed the desired color, and before the fabric is allowed to dry, the fabric is stretched lengthwise, as shown in Figs. 2 and 4. In practice I have found that the best results are obtained when the fabric is stretched to the limit of its stretching, i. e. the fabric is stretched lengthwise with as great force as the fabric can withstand without breaking the threads thereof. The drying of the fabric after stretching causes the fabric to become set in its stretched condition.

The fabric in its stretched condition is then covered on one face thereof with a very thin sheet of transparent rubber 2 and the rubber sheet is thereupon vulcanized to one side of the fabric. After the rubber sheet has been vulcanized to one surface of the fabric the fabric is cut in the desired lengths and exceptional elasticity across the width of the fabric is thus permanently obtained.

It is quite possible to use exceedingly thin strips of rubber sheeting so that the additional weight given to the fabric is for all practical purposes negligible. By controlling the thickness of rubber sheeting the degree of elasticity, weight of the finished elasticized fabric, as well as the transparency thereof may be controlled.

The uses to which the fabric may be put are many. Without desiring to in any way limit the scope of my invention and merely for the purposes of illustrating some uses therefor I may mention the following. The fabric may be employed as waistbands on undergarments,

as garters, sleeve holders, socks. In general, the fabric may be employed in any and all parts of wearing material where a yielding close fit is desired. It may be used separately or as part of the fabric of any part of wearing apparel where it may be given the same color and be made of the same texture.

Many modifications and changes in details will readily occur to those skilled in the art without departing from the spirit and scope of my invention as defined in the claims. Therefore, I desire to have the foregoing illustrations regarded in the illustrative sense rather than in the limiting sense.

Having now set forth the objects and nature of my invention and having described the product thereof, as well as the process of producing the same, what I claim as new and useful and of my own invention and desire to secure by Letters Patent is:

1. The process of producing an elasticized fabric which comprises subjecting the fabric to a moisture treatment, then stretching the fabric in one direction, allowing the fabric to become set in its stretched condition, then vulcanizing a sheet of rubber on one face of the fabric to thereby impart elasticity thereto in a direction transverse to the direction of its initial stretching.

2. As an article of manufacture, a knitted fabric stretched in one direction and set whereby it has been substantially deprived of its elasticity in that direction, and a sheet of substantially unstretched rubber vulcanized to one surface of the fabric.

In testimony whereof I have hereunto set my hand on this 31st day of October A. D., 1928.

JEROME MAYER.