

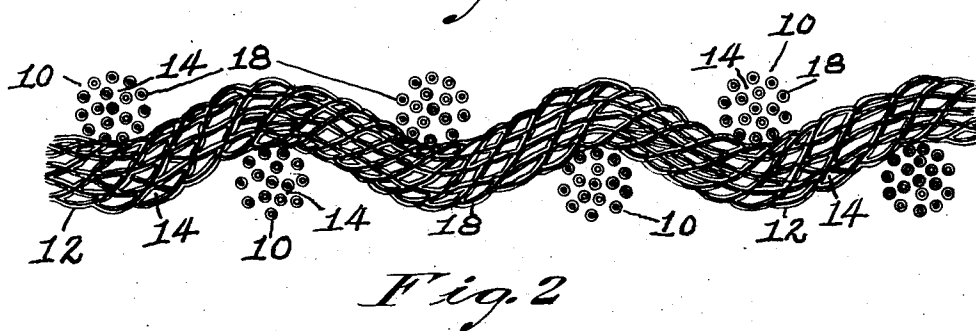
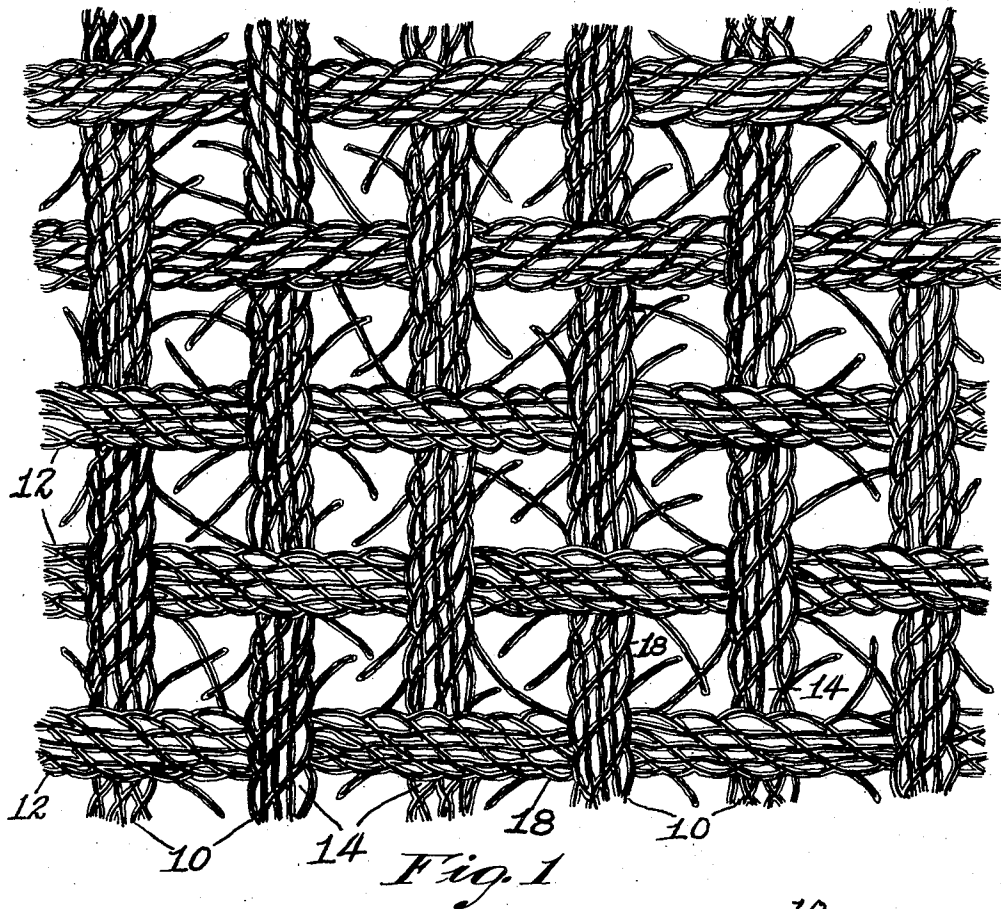
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RUBBERIZED FABRIC

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RUBBERIZED FABRIC

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This invention relates to a rubberized fabric and method of making the same.

The invention has for an object to produce a novel rubberized fabric of the type having its body portion composed at least in part of soft twisted threads and a major portion of the individual fibers comprising said soft twisted threads are individually rubber coated in such a manner as to preserve substantially all of the natural interstices between such fibers, whereby to impart to the fabric resiliency and a feeling comparable to the feeling which would be possessed by a fabric made with more resilient fibers.

With this general object in view, and such others as may hereinafter appear, the invention consists in the rubberized fabric and method of making the same hereinafter described and particularly defined in the claims at the end of this specification.

In the drawing, Fig. 1 is an enlarged diagrammatic plan; and Fig. 2 an enlarged diagrammatic cross-section illustrating a rubberized fabric embodying the present invention.

In general, the present rubberized fabric comprises a textile fabric, either a woven or knitted fabric, having the component threads making up the body of the fabric composed either in whole or in part of soft twisted threads. In a woven fabric the filling alone, or both the filling and the warp, may comprise soft twisted threads. A major portion of the individual fibers comprising the soft twisted threads of the fabric are in accordance with the present invention individually coated with a flexible resilient vulcanized rubber compound in such manner as to preserve substantially all of the natural interstices between such fibers whereby to impart to the fabric resiliency and a feeling comparable to the feeling which would be possessed by a fabric made with more resilient fibers. The present fabric is to be sharply distinguished from those prior rubberized fabrics in which the individual threads as a whole are encased within unitary coatings of rubber, imparting to these prior fabrics a stiff and rubber feeling typical for example of the rubberized fabrics which have been used in raincoat manufacture.

In producing the present fabric I may proceed in any usual manner to impregnate a textile fabric of the character referred to with a solution

of a well broken down vulcanizable rubber compound. In practice a typical solution may be made up as follows:

	Parts	
Rubber	100	5
Sulphur	3 3/4	
Accelerator e. g. Altex	1 1/2	
Antioxidant e. g. Agerite white	1	
Whiting	65	
Zinc oxide	5	10
Stearic acid	1	

Two pounds of this compound are dissolved in one gallon of naptha, 72 degree naptha with a low end point being satisfactory.

After the fabric has been dipped into the rubber coating composition, the excess solution is squeezed out and the product may be dried for thirty minutes at 140° F. and then vulcanized for one hour at 260° F. in hot air. Suitable and known forms of apparatus may be employed for performing there operations.

The amount of pressure employed in squeezing out the excess of the rubber solution is so regulated that in the resultant fabric, after the same has been vulcanized, an amount of rubber compound within the limits of one-fourth to two parts by weight based upon the weight of the fabric remains in the fabric.

Referring now to the drawing, which as above stated diagrammatically illustrates a fabric embodying the present invention, 10 comprise the warp threads of the fabric and 12 the filling threads. The fabric may be woven with any desired degree of closeness and either the warp or the filling, and preferably both, are in accordance with the present invention composed of soft twisted threads. These soft twisted threads are characterized by the presence of natural interstices indicated at 14 between the component fibers making up the soft twisted threads. During the process of rubberizing the fabric, the individual soft twisted threads comprising either the warp or weft, or both, are saturated with the solution of the rubber compound and the latter is of a character such as to be sufficiently fluid so that when the saturated fabric is passed between squeeze rolls set extremely close together, the excess of the rubber solution is squeezed out and the individual threads compressed into a 50

small fraction of their original size. The character of these soft twisted threads, however, is such that after passing through the squeeze rolls they again resume their normal condition and the original interstices 14 between the individual fibers making up the threads are restored, thus providing an individual coating of rubber compound herein shown at 18 upon the individual fibers, while the individual threads themselves are not encased within a continuous coating of rubber as has been the case with prior rubberized fabrics of which I am aware. The individual rubber coating of the individual fibers of the threads preserves the natural interstices between the threads themselves and also preserves the natural interstices between the individual fibers making up the threads, so that the resulting fabric has imparted to it a resiliency and compressibility comparable to that which would be possessed by a similar fabric made with more resilient fibers. These characteristics render the fabric suitable for use in the production of various articles including padding material, floor mats, and the like, and when fabrics comparable to the fabrics that are at present employed in lining material for garments, neckties and the like, are treated with the present invention, the rubber coating on the individual fibers of the soft twisted threads serves to impart thereto the desired spring and resiliency whereby the entire fabric has imparted to it the ability to remain in a substantially wrinkleless condition and at the same time to permit the fabric to retain its natural ability to drape and conform to different shapes. These two characteristics enable the fabric to be most successfully used as lining material for garments, for neckties, and other similar purposes where these characteristics are desirable. Garments lined with the present material have been found to remain in shape, and after pressing to retain their pressed shapes. When used as a lining for neckties, the lining assists in maintaining the tie in its tied condition and to reduce to a minimum the wrinkles which usually result from the tying.

While the preferred embodiment of the invention has been herein described, it will be understood that the invention may be embodied in other forms within the scope of the following claims.

Having thus described the invention, what is claimed is:

1. An article of manufacture fabricated from threads, a substantial part of the component threads being composed of soft twisted threads of non-slippery fibers, and a major portion of the individual fibers comprising the soft twisted threads being coated with an extremely thin, flexible, resilient rubber coating conforming to the individual fibers of said soft twisted threads, the interstices between said fibers being unfilled by said rubber coatings to preserve substantially all of the natural interstices between such fibers whereby to impart to the fabric a feeling comparable to the feeling of a fabric composed of more resilient fibers.

2. An article of manufacture fabricated from woven threads, a substantial part of the component threads being composed of soft twisted threads of non-slippery fibers, and a major portion of the individual fibers comprising the soft twisted threads being coated with an extremely thin, flexible, resilient rubber coating conforming to the individual fibers of said soft twisted threads, the interstices between said fibers being unfilled by said rubber coatings to preserve substantially all of the natural interstices between said fibers whereby to impart to the fabric a feeling comparable to the feeling of a fabric composed of more resilient fibers.

3. An article of manufacture fabricated from threads, a substantial part of the component threads being composed of soft twisted threads of non-slippery fibers, and a major portion of the individual fibers comprising the soft twisted threads being coated with an extremely thin, flexible, resilient, vulcanized rubber coating conforming to the individual fibers of said soft twisted threads, the interstices between said fibers being unfilled by said rubber coatings, said rubber being present in an amount within a range of from one-fourth to twice the weight of the fabric while preserving substantially all of the natural interstices between such fibers whereby to impart to the fabric a feeling comparable to the feeling of a fabric composed of more resilient fibers.

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