A. SOLLEN.

COMBINATION FABRIC.

APPLICATION FILED SEPT. 18, 1918.

1,355,177. Patented Oct. 12, 1920.

Fig. 1,

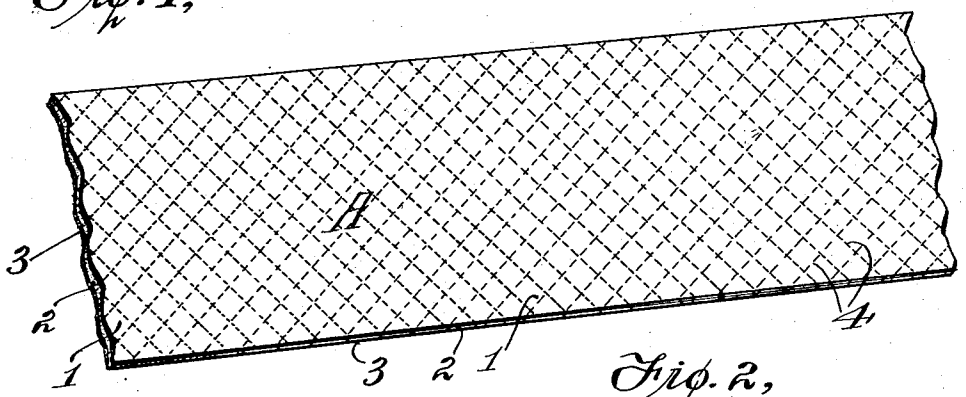


Fig. 2,

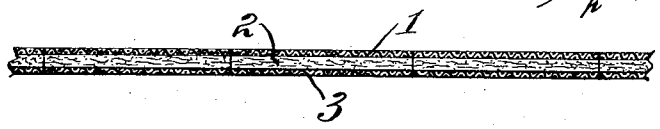


Fig. 3,

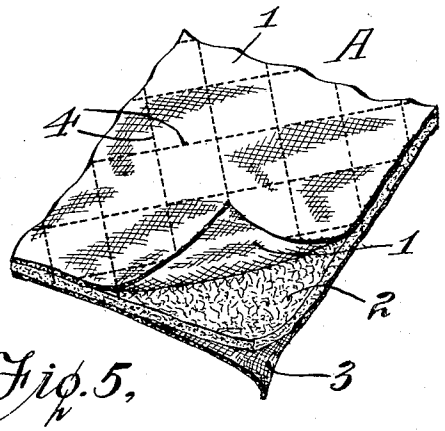


Fig. 4,

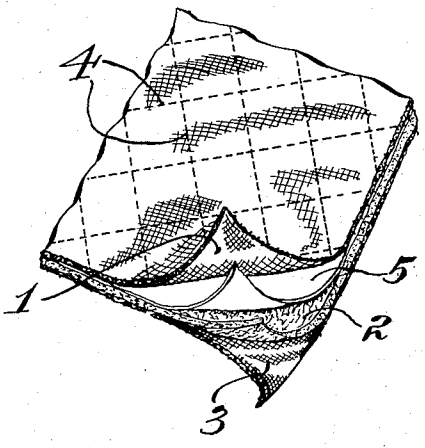
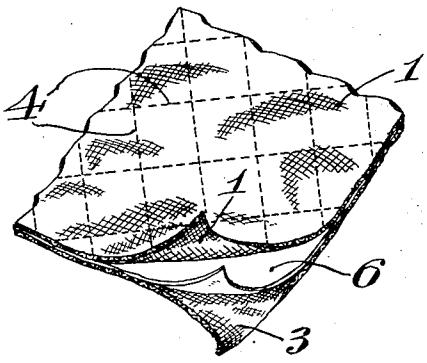


Fig. 5,



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UNITED STATES PATENT OFFICE.

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COMBINATION FABRIC.

1,355,177. Specification of Letters Patent. Patented Oct. 12, 1920.

Application filed September 18, 1918. Serial No. 254,582.

To all whom it may concern:

Be it known that I, ADAM SOLLEN, a citizen of Russia, residing at New York, in the county of New York and State of New York, have invented new and useful Improvements in Combination Fabric, of which the following is a specification.

This invention relates to a composite fabric well adapted for the manufacture of clothing intended for outdoor wear, although it will be of course understood that it is not limited in its useful application to the particular purpose stated, as it may be employed in any connection wherein it may be deemed useful or desirable.

One of the objects of my invention is the provision of a relatively thin and flexible light-weight, heat-retaining fabric composed of multiple layers of material united by stitches, forming what is commonly termed "quilt-stitching," so that the composite fabric may be cut and sewed much in the manner of an ordinary piece of cloth of a single ply or thickness.

Furthermore, my composite fabric may be made in large pieces or bolts so that, when desired, a number of such pieces may be superposed, one on the other, and cut at a single operation, by machines designed for cutting piles of cloth, thereby enabling a number of sections intended for making a plurality of garments to be cut at a single operation.

Still a further object of my invention is the provision of a composite fabric which, in addition to its light weight and heat-retaining qualities, may be readily washed or cleaned, after the manner of ordinary washable fabric goods.

It is also my purpose to provide a multiply or composite fabric embodying the desired attributes of strength, durability and cheapness, thus rendering it peculiarly useful and adapted for the manufacture of workmen's garments, sportsmen's suits and the like.

With the above recited objects, and others of a similar nature in view, my invention consists in the improved composite or multiply fabric set forth in and falling within the scope of the appended claims.

In the accompanying drawings:

Figure 1 is a perspective view of a portion of a quilt-stitched, multiply fabric embodying my invention.

Fig. 2 is a cross sectional view thereof.

Fig. 3 is a fragmentary perspective view showing the formation and location of the layers or plies of a preferred form of my invention.

Fig. 4 is a similar view of a modified form of the invention, wherein an additional sheet of fibrous material, such as paper, is employed.

Fig. 5 is a view of another form of my invention, showing an intermediate layer composed solely of fibrous material such as paper.

Referring now to the accompanying drawings in detail, the letter A indicates the body of my fabric as an entirety, and in Figs. 1 to 3 inclusive, such multiply fabric is composed of an outer or face layer 1, of suitable cloth, such as khaki, or the like, which may be water-proof, or not, as desired. This outer layer 1 is imposed upon a relatively thin and dense layer 2 of heat-retaining material, such as felt or batting, and which forms the intermediate layer of the composite fabric, this layer 2 being backed by an inner or lining layer 3 of a suitable fabric, such as cotton, canvas or other suitable or preferred lining material. The three layers constituting the multiply fabric are sewed or stitched together throughout by cross-lines of stitching 4, after the fashion of what is commonly known as quilt-stitching.

When the three layers just described are assembled and stitched together, the fabric will appear as best shown in Fig. 1, and will embody the desired attributes or qualities of flexibility, lightness and heat-retention, in addition to being readily workable, as by cutting into sections, sewing, manipulating and the like, and it may also be washed without showing signs of appreciable distortion due to shrinkage. This is because the fabric layers selected have substantially the same shrinkage properties or values, and if shrinkage occurs in the composite fabric during washing thereof the separate layers will shrink to substantially the same extent and without materially affecting the fabric as a whole.

In Fig. 4 I have shown a modified form of the invention, and in this instance I interpose an extra sheet 5, of fibrous material, such as paper or the like, between the felt or batting layer 2, and the outer

or facing layer 1, and this fibrous layer, possessing as it does the ability to retain heat, or to resist the penetration of cold, will add to the heat-retaining qualities of my fabric.

In Fig. 5 I have shown still a further modification of the invention; in this instance I dispense entirely with an intermediate layer 2 of felt or batting, and substitute therefor a fibrous layer 6 of paper or the like, which will appear as interposed between the lining layer 3 and the facing layer 1, the usual cross or quilt-stitching being employed in this instance for uniting the layers. Such a fabric as is shown in Fig. 5 will be very light, and will also possess considerable heat-retaining qualities.

While I have herein shown and described certain embodiments of my invention, I wish it to be understood that I do not confine myself to all the precise details set forth by way of illustration, as modification and variation may be made without departing from the spirit of the invention or exceeding the scope of the appended claims.

What I claim is:

1. As a new product of manufacture, a flexible composite fabric suitable for the manufacture of wearing apparel, comprising an outer layer of cloth, an intermediate layer of relatively thin and dense felt-like material, and a fabric lining layer, all united throughout by quilt-stitching.

2. As a new product of manufacture, a flexible composite fabric suitable for the manufacture of wearing apparel, comprising a cloth facing layer, an intermediate layer of fibrous material, a second intermediate layer of relatively thin and dense felt-like material, and a fabric lining layer all united throughout by quilt-stitching.

3. A flexible composite fabric suitable for the manufacture of wearing apparel comprising layers of cloth, paper, felt and a cloth lining layer, all united by lines of cross-stitching.

4. A flexible composite fabric suitable for the manufacture of wearing apparel, comprising a facing layer of khaki-cloth, an intermediate layer of relatively thin and dense felt-like material, and a cloth lining layer, all united by lines of cross-stitching, and said layers having substantially equal shrinkage values whereby the fabric made therefrom may be washed without appreciable distortion due to shrinkage.

5. As a new product of manufacture, a flexible multi-ply fabric, especially adapted for the manufacture of suitings, comprising a surface ply of a suitable suiting fabric, an inner ply of lining fabric, and a relatively thin and dense intermediate ply of closely matted fibrous material having cold-resisting and heat-retaining characteristics, the material of said plies having substantially uniform shrinkage properties and all the plies being quilt-stitched together throughout to provide a relatively thin, lightweight, composite fabric from which pattern sections may be cut suitable for the manufacture of wearing apparel.

In testimony whereof I have hereunto set my hand.

ADAM SOLLEN.