

[54] **FIBER FLEECE FOR MEDICAL OR HYGIENICAL PURPOSES**

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[58] Field of Search 128/156, 284, 290 W, 296

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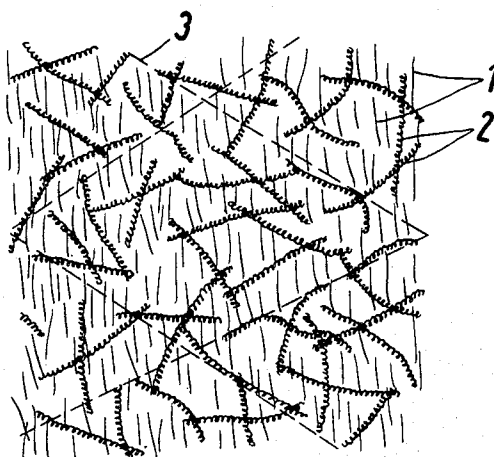
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[57] **ABSTRACT**

There is disclosed a fiber fleece for medical or hygienical purpose, which is characterized by the fact that it is composed of fibers and overtwisted filaments and its binder content is so low that the overtwisted filaments change their twisting when being wetted by water.

9 Claims, 3 Drawing Figures



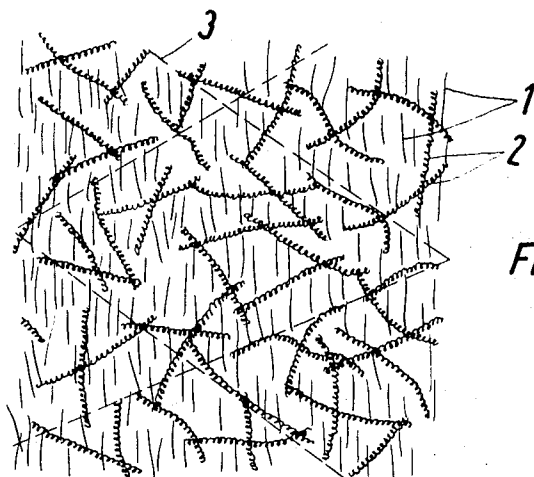


Fig. 1

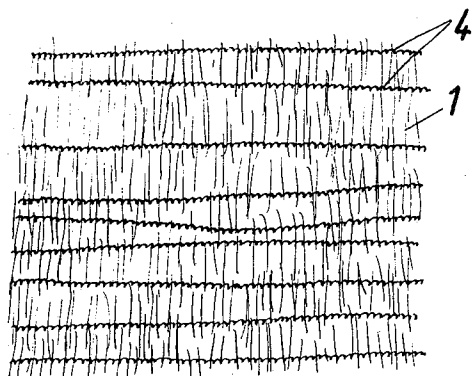


Fig. 2

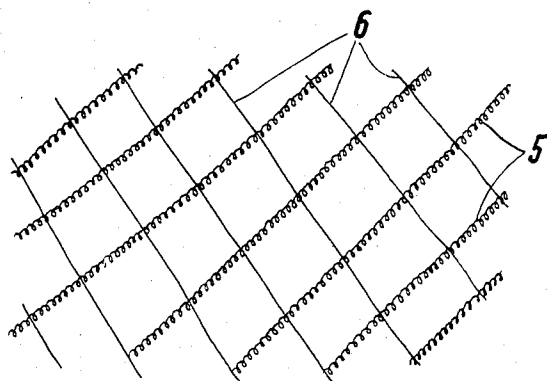


Fig. 3

FIBER FLEECE FOR MEDICAL OR HYGIENICAL PURPOSES

This invention relates to fiber fleece for medical or hygienical purposes. Fiber fleece generally is composed of fiber, generally cotton fibers or fibers of synthetic wool made of cellulose, the positions of which have a preferred orientation, and it generally contains low binder contents. The strength of such fiber fleece thus is lesser transverse of this orientation. The expression "fiber fleece" here is understood to principally include all so-called non-woven products.

Fiber fleeces when being used for medical or hygienical purposes do have the advantage that they are much cheaper than fabrics, but they have the disadvantage that they cause a greater localization of heat in the dry state on skin than fabric does and that they lie so tightly on the skin after being wetted that the breathability of the skin is greatly impaired. A further disadvantage of the fiber fleeces is their low transverse strength.

An object of this invention is to eliminate these disadvantages of fiber fleeces. According to the invention, the fiber fleece not only consists of fibers, but also of pieces of overtwisted filaments, and its binder content is so low - provided a binder is present, in the first place, that the overtwisted filaments are capable of changing their position upon being wetted by a fluid, e.g., water. The overtwisted filaments preferably consist of cotton fibers or synthetic wool made of cellulose or mixtures thereof. As far as these overtwisted filaments the length of which can be substantially shorter than the width of the fiber fleece are disposed transverse of the longitudinal direction, they materially determine the transverse strength of the fiber fleece and thus substantially increase it.

When using such a fiber fleece, the overtwisted filaments have upon wetting the tendency of changing their position and of thereby moving themselves and the fibers contacting them. This change in twisting is generally reversed again upon drying. Consequently, such a fiber fleece which in its dry state is planar locally more or less moves out of such a planar position. A fiber fleece according to the invention lying on the skin will thus locally lift off the skin if it is wetted for instance by sweat.

The fiber content of such a fiber fleece can preferably be composed of 10 to 30 per cent of overtwisted filaments. The overtwisted filaments can have a length of several centimeters up to several decimeters, depending on the width of the fleece. The twisting of the filaments is preferably at least 1000, for instance 1200, i.e., 1000 respectively 1200 turns per meter length of the filaments.

Preferably, the pieces of overtwisted filaments are applied in such a way when making the fleece that they are prevailingly disposed more or less perpendicular relative to the preferred direction of the fibers. In particular, the overtwisted filaments can be disposed in direction of the width of the fleece, and their lengths

can be as large as the width of the fleece. For increasing the transverse strength of the fleece, it can be provided with stitch seams, and the stitching filaments can consist of overtwisted filaments. Also, a net of interlaced filaments can be introduced in a fiber fleece, of which net at least a portion of the filaments are overtwisted.

Fiber fleeces according to the invention are sensed to be cooler on skin than conventional fiber fleeces. This cooling effect can be increased even more by dyeing the fiber fleece violet. The dyeing in dark violet is particularly advantageous.

The invention is explained in closer detail by way of example in referring to the drawing showing certain modes of execution of the invention.

In FIG. 1 the fleece consists of staple fibers 1, preferably fibers of synthetic wool made of cellulose, and pieces of overtwisted filaments 2. Stitch seams have been denominated 3. The filament pieces represent about 15 to 30 per cent of the weight of the fleece.

In FIG. 2 the overtwisted filaments 4 are disposed in direction of the width of the fiber fleece, the fibers 1 of which are generally disposed in longitudinal direction of the fleece. The length of the filaments 4 is equal to the width of the fleece.

In FIG. 3 the filaments 5 are connected with filaments 6 into a net. The filaments 5 are overtwisted filaments; the filaments 6 may also be overtwisted filaments, or they may not. For instance, overtwisted and non-overtwisted filaments may be alternately arranged as filaments 5 or as filaments 6. Such a net may be placed between two fiber fleece layers.

What is claimed is:

1. A non-woven fiber fleece for medical or hygienical purposes comprising fibers and overtwisted filaments and having a so low binder content that the overtwisted filaments change their twisting upon being wetted by fluid, e.g., water.

2. A fiber fleece as defined in claim 1, its fiber content comprising 10 to 30 per cent overtwisted filaments

3. A fiber fleece as defined in claim 1, the twisting of said overtwisted filaments being at least 1000 turns per meter.

4. A fiber fleece as defined in claim 1, the length of said overtwisted filaments being several centimeters to decimeters.

5. A fiber fleece as defined in claim 1, said filaments extending over the entire width of said fiber fleece.

6. A fiber fleece as defined in claim 1, wherein overtwisted filaments are disposed transverse of the general direction of said fibers and are stitched together with said fiber fleece.

7. A fiber fleece as defined in claim 1, wherein overtwisted filaments are connected into a net with non-overtwisted filaments.

8. A fiber fleece as defined in claim 1, wherein overtwisted filaments are connected to a net.

9. A fiber fleece as defined in claim 1, dyed violet.

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