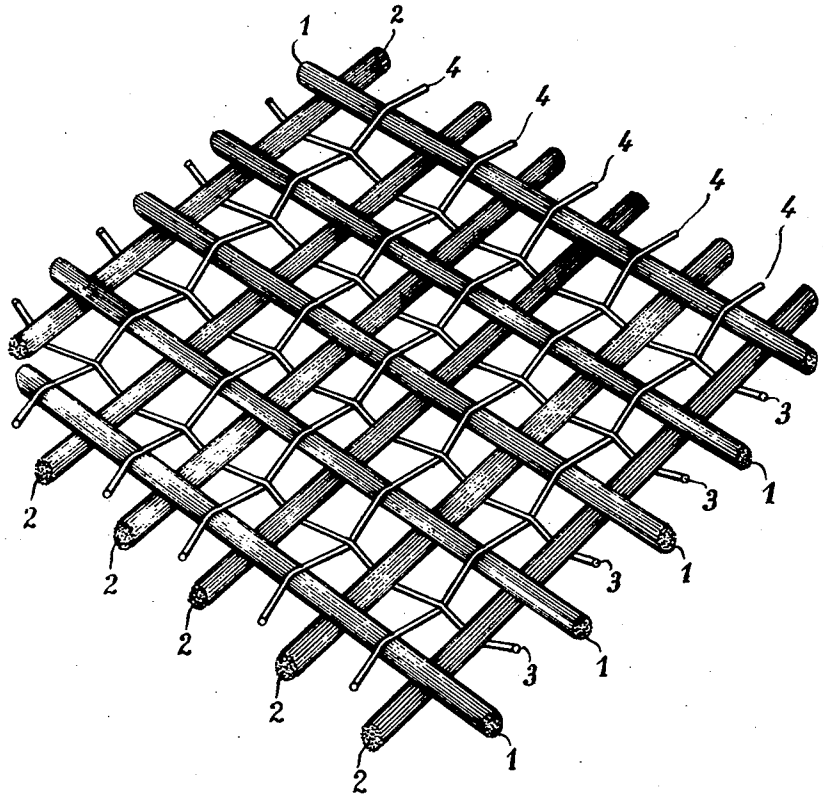
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MATERIAL IN GLASS FIBRE AND NEW INDUSTRIAL PRODUCT RESULTING THEREFROM

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MATERIAL IN GLASS FIBRE AND NEW INDUSTRIAL PRODUCT RESULTING THEREFROM

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The present invention relates to a glass fiber material.

Materials are known which are composed of unstranded glass fibre filaments, wherein the warp and weft are not woven and the two layers are merely disposed in superjacent relationship and assembled by auxiliary binding filaments.

Materials of the kind specified, as compared with the fabrics produced by conventional methods, have considerable resistance to elongation, such resistance being due firstly to the fact that the filaments are not stranded and secondly to the fact that the filaments remain straight, the weft and warp having no effect one upon another.

Materials of the kind specified are particularly useful for forming the framework of certain plastic materials.

The auxiliary binding filaments must of course carry out their task yet the presence thereof should not be detrimental to the straightness of the warp or weft filaments.

One known method consists in passing the said binding filaments alternately above and below the main filaments, one binding filament being disposed in the weft direction and another binding filament being disposed in the warp direction. This method means that the auxiliary binding filaments are to some extent woven with the main filaments and, even if the binding filaments are moderately stretched, this method produces undulations in the main filaments, which undulations considerably reduce the resistance to elongation of the finished materials.

It is an object of the present invention to provide a special arrangement of the auxiliary binding filaments which obviates the undulations hereinbefore defined. To this end, according to the invention the binding filaments comprise a warp and a weft which are woven together but which are not woven with the main filament.

In other words, the binding warp threads always stay on the same side of one of the layers of the main filaments, and the binding weft threads always remain on the same side of the other layer of main filaments.

With this and other objects in view which will become apparent in the following detailed description, the present invention will be clearly understood in connection with the accompanying drawing, in which the only figure is a perspective view of a piece of material according to the invention, the spaces between the meshes having been considerably enlarged for the sake of clarity.

Referring now to the drawing, it will be seen that the material comprises a first layer of main filaments **1** covering a second layer of main filaments **2**, filaments **1** being at 90° to the filaments **2**. Each filament **1** or **2** is formed of glass fibres which are disposed parallel with one another without twisting.

Binding weft and warp filaments indicated by **3** and **4**, respectively, can be made of glass fibres with or without stranding, or of any textile material. The diameter of the binding filaments is much less than the diameter of the main filaments **1** and **2**. As can be seen in the drawings, the filaments **3** and **4** are woven together. However, filaments **3** are always below filaments **2** and filaments **4** are always above filaments **1**.

Of course the material produced according to the invention is of much closer mesh than illustrated in the drawing and as a result the tensions of the auxiliary warp or weft filaments have no effect on the straightness of the main filaments, this feature giving great mechanical strength to the finished material.

While I have disclosed one embodiment of the present invention, it is to be understood that this embodiment is given by example only and not in a limiting sense, the scope of the present invention being determined by the objects and the claims.

I claim:

1. A material comprising a first main layer of unstranded glass fibre filaments and a second main layer of unstranded glass fibre filaments, the said layers being in superjacent relationship, the filaments of said first layer being disposed at 90° to the filaments of said second layer, and a plurality of auxiliary weft filaments and a plurality of auxiliary warp filaments, both said auxiliary filaments being substantially midway between adjacent ones of said main filaments, said auxiliary weft filaments being located on and outside one of the said layers in unwoven relation thereto, said auxiliary warp filaments being located on and outside the other of said layers in unwoven relation thereto and said auxiliary weft and warp filaments being woven together.

2. The material, as set forth in claim 1, wherein said auxiliary filaments consist of unstranded glass fibres.

3. The material, as set forth in claim 1, wherein said auxiliary filaments consist of stranded glass fibres.

4. The material, as set forth in claim 1, wherein said auxiliary filaments consist of conventional textile material.

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