Aug. 14, 1945. F. FERON 2,382,704

THREAD

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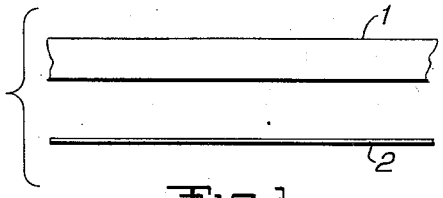


Fig. 1.

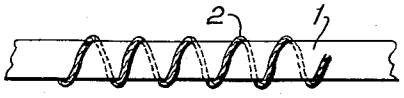


Fig. 2.

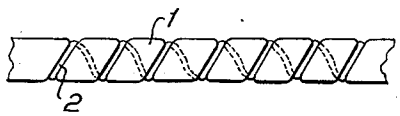


Fig. 3.

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THREAD

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2 Claims. (Cl. 57—144)

The present invention relates to new threads and fabrics or tissues.

The hair of the Angora rabbit is usually used in the spinning art for making threads having high qualities of softness and warmth and, furthermore, having a very characteristic ruffled appearance.

However, the use of the said threads in knitting and weaving processes is limited on account of the low tensile strength. Indeed, the hair of the Angora rabbit has no hook and the threads produced with this material lack cohesion. In order to remedy this drawback, the said hair is usually spun with other textile fibers, such as wool. These added fibers have no other object than to increase the strength of the threads through their natural hook. However, the proportion of fibers thus mixed with the hair of the Angora rabbit cannot exceed a certain limit (which is rather low) if the particular properties of the pure hair of Angora are retained. Therefore, it is not possible to mix and spin the Angora hair and textile fibers in such proportions that the desired strength and softness will be present in the resultant thread; consequently, threads having the characteristic softness of Angora are usually weak.

While the said threads may be used in hosiery and in weaving, with certain precautions, in the form of weft, their lack of strength does not allow their use for the warp. Therefore, it is impossible to make fabrics in which the warp and the weft are formed from threads of Angora material.

It is an object of this invention to provide a pure Angora thread which has sufficient strength to be employed in either the warp or the weft of a fabric.

In order to increase the strength of the thread made of hair of the Angora rabbit, while maintaining the qualities inherent in the material of which this thread is formed, the Angora strand is twisted with a cotton strand, preferably of a very fine number. The number of turns per inch are dependent upon the numbers of the Angora and cotton threads which are used. The cotton strand winds around the Angora strand in helicoidal turns, said turns having a rather high pitch. Under these conditions, the very fine cotton strand firmly supports the Angora strand and forms a core for the compound thread which is thus obtained. Furthermore, owing to the fineness of the cotton strand, on one hand, and to the soft and fuzzy texture of the Angora strand, on the other hand, the said cotton strand disappears, said cotton strand being completely embedded in the Angora strand, which Angora strand normally ruffles to form a uniform fuzzy surface. Under these conditions, it is possible to obtain a very strong compound thread, which has lost none of the characteristic qualities of the Angora threads, the proportion of cotton which is thus added being very low. The resulting compound threads are practically made from pure Angora and can be employed in the warp, as well as in the weft, of a fabric without difficulty.

The thus obtained fabrics, which form a new commercial product, can be used advantageously more particularly for making men's or ladies' clothing. The fabrics can keep their downy and ruffled appearance, which is characteristic for Angora threads. It is also possible, for certain uses, to coat and fix the Angora threads during the dressing operations in order to obtain a fabric having an appearance similar to that of the worsted fabrics.

The invention can be carried into effect, for instance, in the manner which will be explained with reference to the appended drawing, in which:

Fig. 1 shows the Angora strand 1 and the core strand 2, both strands being separated from one another.

Fig. 2 shows the core strand 2 wound in long turns on the Angora strand 1.

Fig. 3 shows the core strand 2 and the Angora strand 1, both strands being twisted together so that the core strand is completely embedded in the Angora strand to allow the Angora strand to keep its ordinary appearance.

Various modifications can be made to the compound strands which have been described above by way of example.

For instance, it is possible to use material other than cotton, such as flax, silk and the like, for twisting with the Angora strand.

In the like manner, the invention generally extends to any compound thread formed by combining a weak textile strand and a fine reinforcing strand, both strands being twisted together. This construction permits the use of any textile material which is otherwise too weak for normal use when spun in a pure condition.

Also, in the like manner, the field of uses is not limited to the production of tissues or fabrics of pure Angora. The threads made according to the invention can be combined either in warp or in weft with any other textile material. They can also be used advantageously in hosiery. In all

the cases, the strength of the commercial products made according to this invention is always much higher than that of similar articles made with Angora threads which have been spun by the usual methods.

I claim:

1. A compound thread comprising a strand of soft fibrous material such as Angora hair having a low tensile strength, and a fine textile reinforcing thread having a relatively high tensile strength twisted with said strand, said reinforcing thread being completely embedded within the fibers of said soft strand, whereby the periphery of the compound thread will be formed entirely from said soft fibrous material.

2. A compound thread comprising a soft strand of Angora rabbit hair having a relatively low tensile strength, and a fine cotton thread having a relatively high tensile strength helically wound around and completely embedded within said soft strand to form a reinforcing core, whereby the entire outer surface of the compound thread will be covered with Angora fibers.

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