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NOVELTY WOOL AND MOHAIR KNOP YARN

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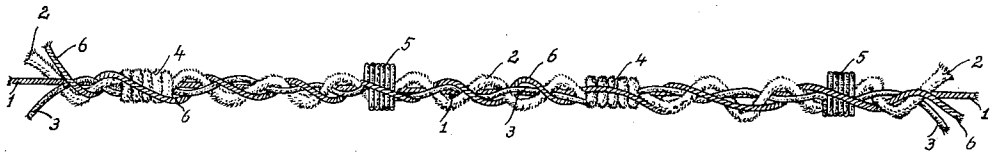


FIG. 1

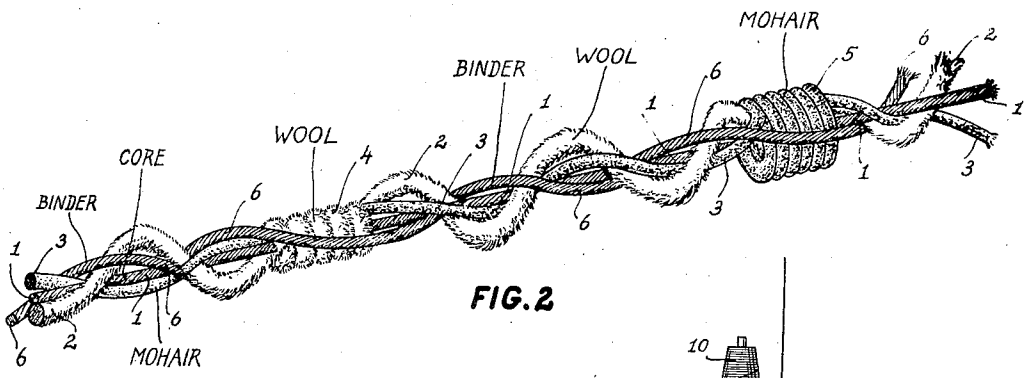


FIG. 2

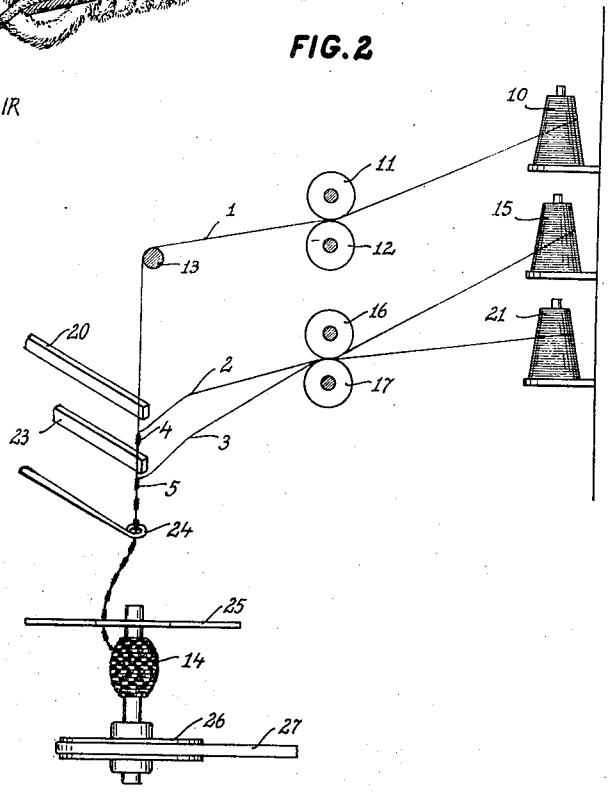


FIG. 3

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NOVELTY WOOL AND MOHAIR KNOP YARN

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Original application July 4, 1939, Serial No. 282,775. Divided and this application November 24, 1939, Serial No. 305,759

4 Claims. (Cl. 57—144)

My invention relates to the art of textiles and to a novelty yarn formed of separate threads or strands of mohair and wool, said novelty yarn having alternate knops of wool and mohair along its length. More particularly my invention relates to a yarn comprising a thread or strand of mohair and a thread or strand of wool twisted together and about a core thread and having alternate knops of mohair and knops of wool along its length.

My invention further relates to the gimp or ratine twist having an unusual crinkled effect between said knops of mohair and wool, such gimp or ratine twist being formed by the shrinkage of the thread or strand of mohair against the thread or strand of wool.

My invention further relates to a novelty yarn formed by twisting a thread or strand of mohair and a thread or strand of wool about a core thread and then shrinking the resulting yarn, which shrinking causes the greater shrinking strand or thread of mohair to force the strand or thread of wool out into arcuate loops to give a crepe effect.

This application is a division of my co-pending application Serial No. 282,775, filed July 4, 1939. For the sake of brevity, I shall refer to the threads or strands of mohair and wool as threads of mohair or threads of wool, respectively, said threads consisting of a plurality of twisted fibres of wool or mohair respectively.

My invention further relates to a novelty fabric formed from the novelty yarn described above and particularly a fabric in which such novelty yarn comprises all or part of the woof or filler and/or all or part of the warp. My yarn may comprise all or part of the fabric.

The desirability of providing textile yarns of attractive and distinctive appearance has long been recognized. One method of obtaining such novelty effect is by the provision of knops on said yarn which consists of loops of thread bunched and twisted about specific areas of the core of the novelty yarn. Such knops are formed by twisting a thread of suitable yarn about a core thread which is alternately progressed and stopped so that such over-twisted thread alternately bunches in the form of loops about such core thread and then progresses on and twists.

I have provided a novel textile yarn of distinctive appearance which comprises a core material which may be of cotton and twisted about such core material, threads of wool and threads of mohair. I form alternate knops composed of threads of mohair and threads of wool in my yarn and further twist the threads of wool and threads of mohair in initially relatively close relation so that upon shrinking said yarn the faster shrinking threads of mohair act to press out the threads of wool in the form of bunching or loose arcuate loops.

Again, in the above twist, because of the greater shrinkage of the threads of mohair the mohair knops that are formed are relatively large, irregular and shiny, while the wool knops are relatively small, loose and bunchy.

Further, in addition to the enhancing of the beauty of the yarn by the use of this particular combination of threads of mohair and threads of wool in a twist formation, I secure a yarn of definitely superior properties. The threads of mohair shrinking far and fast as they do, tend to compress themselves about the threads of wool; the wool being a fluffier material absorbs the strain of the shrinking threads of mohair and further acts as a resilient base against which the threads of mohair may be compressed when the yarn is subject to strain in its actual use.

Alternatively, I may use mohair and wool of such relative count so that the mohair is bunched out into arcuate loops by the wool.

My invention therefore lies in the combination of threads of mohair and threads of wool in a particular twist whereby alternate knops of mohair and wool are spaced by gimp or ratine formed by twisted threads of mohair and threads of wool. In that ratine because of the respective differential shrinkage between the threads of mohair and the threads of wool the ratine has a peculiar crinkled effect formed by the forcing out by the threads of mohair of the threads of wool into arcuate fluffy loops.

Alternatively, the ratine may have its crinkled effect produced by the forcing out of the mohair by the wool, which would be determined by the relation of the count of the mohair to the wool.

It is, therefore, the object of my invention to provide a novel yarn comprising threads of wool and threads of mohair.

It is a further object of my invention to provide a novel yarn of twisted threads of wool and threads of mohair carrying alternate knops of wool and mohair at spaced intervals thereon.

It is a further object of my invention to provide a novel yarn of twisted threads of wool and threads of mohair in which the wool is formed into arcuate loops which extend out from the yarn.

It is a further object of my invention to provide a novel yarn of twisted threads of wool and

threads of mohair in which the mohair is formed into arcuate loops which extend out from the yarn.

It is a further object of my invention to provide a crinkled yarn formed of twisted threads of mohair and threads of wool in which because of the differential in shrinking properties between the threads of mohair and threads of wool, the wool is formed into arcuate fluffy loops.

It is a further object of my invention to provide a crinkled yarn formed of twisted threads of mohair and threads of wool in which because of the differential in shrinking properties between the threads of mohair and threads of wool, the mohair is formed into arcuate large loops.

It is a further object of my invention to provide a novelty yarn which comprises a core thread over which is twisted threads of mohair and threads of wool.

It is a further object of my invention to provide a novelty yarn which comprises a core thread over which is twisted threads of mohair and threads of wool, said novelty yarn having thereon alternate knops of mohair and wool.

It is a further object of my invention to provide a novelty yarn which comprises a core thread over which is twisted threads of mohair and threads of wool, said novelty yarn having thereon alternate knops of mohair and wool, said yarn being bound back with a binder thread.

It is a further object of my invention to provide a novelty yarn of relatively increased strength in which threads of wool and threads of mohair are twisted in such a way that upon shrinkage, the greater shrunk threads of mohair are tensioned against the more resilient and fluffy threads of wool.

These and other objects and advantages of my invention will be apparent from the following description and the drawing.

In the drawing, Figure 1 represents a side elevation of the yarn of my invention.

Figure 2 represents an enlarged section of a portion of the yarn shown in Figure 1.

Figure 3 is a diagrammatic showing of the apparatus and methods by which the novelty yarn of my invention is formed.

Referring now more specifically to the drawing, in Figure 1, 1 is the core thread of my yarn which core may be of cotton or any suitable similar material. Twisted about this core thread 1 is a thread of wool 2 and a thread of mohair 3. The thread of wool is formed into a knop 4 and the thread of mohair is formed into a knop 5 spaced therefrom. The yarn is bound back with a binder thread 6.

Specifically referring now to Figure 2 in which a section of the novelty yarn of Figure 1 is shown in enlarged form, it is to be noted that the knop 5 of mohair is loose and forms a shiny knop of relatively large mass while the knop 4 of wool is relatively small and bunchy.

Between these knops is the ratine or gimp which has a crinkled appearance of particular merit in which it will be noted the thicker thread of wool 2 is forced out into arcuate loops as shown by reason of the fact that the thread of mohair twisted therewith has shrunk relatively farther than the wool and thus pulls the wool into the arcuate form shown. Inasmuch as the threads of wool have a fluffy appearance and the threads of mohair a shiny sleek appearance, the yarn of my invention has a particularly pleasing effect.

It will be noted that when the threads of mohair 3 are subjected to longitudinal tension they are compressed against the threads of wool 2 and inasmuch as the threads of wool 2 are a fluffy and resilient material and the threads of mohair are thus given an unusual resilience and resistance to rupture.

In Figure 3 which diagrammatically represents the machine for manufacturing the novelty yarn of my invention, I show a supply of core thread on the spool 10 which travels between the rollers 11 and 12. These rollers alternately move the core thread material 1 forward and then arrest its motion so that the knops can be formed. The core thread 1 travels about the guide roller 13 and then towards the bobbin 14.

The wool is supplied from the spool 15 and travels between the rollers 16 and 17 which deliver it about the core thread 1. The faller bar 20 is located just above the point where the thread of wool 2 is twisted about the core thread 1 as set forth. The thread of mohair 3 is supplied from the spool 21 and passes between the rollers 16 and 17 and passes beneath the faller bar 23 at which point it is twisted over the core thread 1 and the thread of wool 2.

When the core thread 1 is progressed steadily forward the wool and mohair are twisted about it in an even twist which forms the ratine or gimp of the novelty yarn of my invention. When by means of the rollers 11 and 12 the forward movement of the core thread 1 is stopped, the wool and mohair are still being twisted about the core thread and form knops 4 and 5 of wool and mohair respectively.

The novelty yarn so formed of mohair and wool may then be bound down with a suitable binder thread according to methods which are well known in this art. One or more binders may be employed if desired.

The faller bar 20 and 23 prevent the threads of wool and the threads of mohair from rising up on the core thread and assist in forming the bunched knops.

The yarn thus formed passes through a guide 24 and thence through a lifter plate 25 on to the bobbin 14. The twisting is effected by means of the pulley 26 driven by the belt 27 shown which rotates the bobbin 14.

The novelty yarn thus formed is bound in a separate operation, in which the binding thread 6 is bound back over the yarn. If desired, the novelty yarn may also be bound back with still another binder thread. The binder threads secure the components of the novelty yarn against displacement. The binding operation by means of which my novelty yarn is bound down is not shown in the drawing since it is a well known operation in the art.

The novelty knop yarn formed as above set forth is then woven into a fabric. I may employ this novelty knop yarn as the weft or filler of a fabric or I may employ it as the warp or both as warp and weft. The novelty yarn may comprise all or part of the fabric. By combining this novel yarn with other yarns I may obtain pleasing aesthetic effects in fabrics.

After the fabric is formed it is washed in an emulsion of soap, soda ash, and warm water. This washing effects a shrinkage in both the wool and mohair. The cotton threads which constitute the core and binder remain substantially unchanged. The threads of mohair shrink relatively substantially faster and farther than the threads of wool and thus pull the threads of wool in the ratine or gimp into the arcuate loops

and give the desirable crinkled or crepe effect. The mohair knops shrink into the loose, irregular form while the wool knops shrink and become smaller and bunchy.

I wish to emphasize the new and unexpected effects which result from the combination of threads of mohair and threads of wool in the form of overtwist yarn over and above the pleasing aesthetic results which are so desirable in the art. These new and unexpected results are:

(1) The differential in shrinking properties between the threads of mohair and the threads of wool results in the threads of mohair forcing the threads of wool into the form of arcuate loops whereby a desirable crepe effect is obtained and at the same time whereby the threads of mohair themselves are given a slight loop effect.

When the reverse relative count of mohair and wool is employed, then the differential in shrinking properties between the threads of mohair and the threads of wool results in the threads of wool forcing the threads of mohair into the form of arcuate loops whereby a desirable crepe effect is obtained and at the same time whereby the threads of wool themselves are given a slight loop effect, and

(2) The threads of mohair lying in tensional contact with the resilient threads of wool are given increased longitudinal strength.

The threads of wool which I may employ may be white or colored by a skein dye process or may be formed by a mixture process, or my wool may constitute a mixture containing colored and/or white nubs or knickers.

The threads of mohair may be any desirable type of mohair having a shrinkage relatively much higher than that of wool.

The core or binder material may be of cotton, worsted, rayon, silk, wool, or mohair or any other suitable material.

Although the core and binder may be varied if desired, it is the particular combination of threads of wool and threads of mohair in the twisted formation as shown that produces the novelty yarn of my invention.

Although I have particularly pointed out the method by means of which I form a novelty yarn of threads of mohair and threads of wool having alternate knops of mohair and wool, it is to be understood that I can arrange the knops in other sequences if desired. The provision of spaced knops in my novelty yarn is of utility inasmuch as it provides definite areas of gimp or ratine in which the differential shrinkage properties of the threads of mohair and threads of wool respectively act to give the crepe effect described.

The apparatus and method whereby I form my novel twist yarn of threads of mohair and threads of wool have been given by way of example only. I intend to define my invention and to be limited only by the appended claims.

I claim:

1. A novelty yarn comprising a core thread and a thread of mohair and a thread of wool twisted over said core thread, and knops of mohair and wool formed in said novelty yarn, said knops of mohair being relatively large and shiny, and said knops of wool being relatively small and fluffy.

2. A novelty yarn comprising a core thread and a thread of mohair and a thread of wool twisted over said core thread, and knops of mohair and wool formed in said novelty yarn, said knops of mohair being relatively large and shiny, and said knops of wool being relatively small and fluffy, and a binder thread over said twist.

3. A novelty yarn comprising a core thread and a thread of mohair and a thread of wool twisted over said core thread, and alternate knops of mohair and wool formed in said novelty yarn, said knops of mohair being relatively large and shiny, and said knops of wool being relatively small and fluffy.

4. A novelty yarn comprising a core thread and a thread of mohair and a thread of wool twisted over said core thread, and alternate knops of mohair and wool formed in said novelty yarn, said knops of mohair being relatively large and shiny, and said knops of wool being relatively small and fluffy, and a binder thread over said twist.

EDWIN BRY.