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W. R. KEEN

2,866,255

FUR-EFFECT FABRIC AND METHOD OF MAKING SAME

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FIG. 1 FIG. 2 FIG. 3

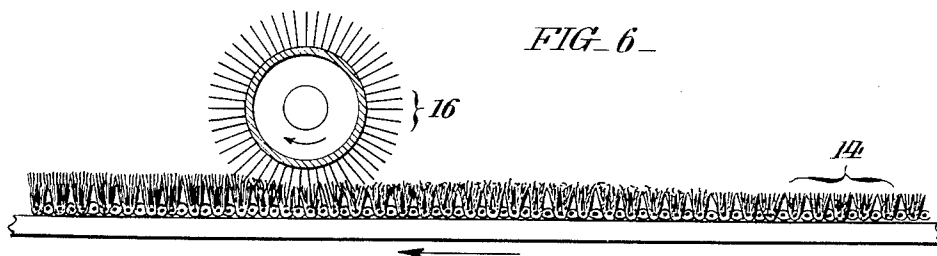
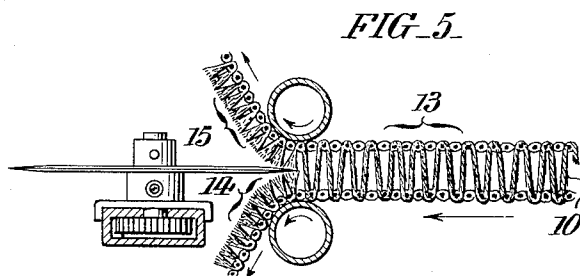
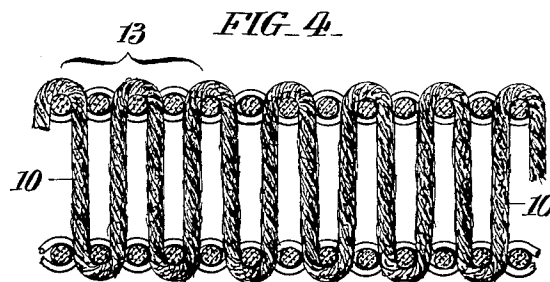
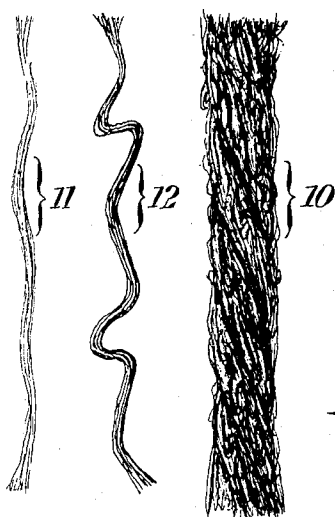
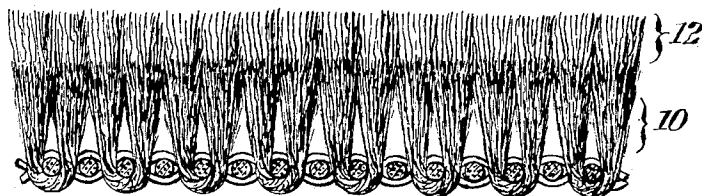


FIG. 7



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FUR-EFFECT FABRIC AND METHOD OF MAKING SAME

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6 Claims. (Cl. 28—72)

This invention relates to fur-effect fabrics and more particularly to fabrics which simulate natural furs and to a method for making such fabrics. Fabrics have been heretofore produced having a soft furry pile surface, which fabrics may be used as a substitute for natural furs. Such fabrics, however, have not simulated many natural furs, since they have normally provided only one face surface of substantially equal length pile fibers. It is the primary object of this invention to provide a woven fur-effect fabric from textile yarns which closely simulates natural furs by having a furry under-coating of fine fibers and coarser fibers extending beyond the under-coating in the manner of the beard hairs of a natural fur.

Many difficulties have been encountered in attempting to provide simulated beard hairs in a fur-effect fabric. In natural furs there are substantially two face surface levels. One is the lower level of the furry under-coat hairs and the other is the outer or upper level of the extended beard hairs. Great difficulty has been encountered in endeavoring to provide these two levels in fur-effect fabrics due to the impossibility of shearing the under-coat yarns to form one level without at the same time removing simulated beard hairs. It is accordingly a principal object of the present invention to provide a method of producing two substantially clearly defined levels of pile yarns in a fur-effect fabric.

Some fur effect fabrics having both the fine under-body and the higher extending beard hairs have been produced by knitting, whereby a small card is attached to the knitting machine and fibers of different fineness and length are carded and engaged by the knitting needles and knitted into the backing yarns as the pile. This method produces essentially the beard hair effect of furs in this fabric. However, the inherent characteristics of a knitted fabric are such that these fibers are not adequately anchored in the backing and the fabric therefore has a very pronounced tendency to shed in normal wear. Principally, they do not have the fabric stability of a woven pile fabric.

Accordingly, it is another object of this invention to provide a woven fur-effect fabric and a method of making such a fabric.

The above objects and others, which will be apparent from the following description, are achieved by weaving a pile fabric in which the pile yarns are formed by twisting or plying two or more different types of yarns in such a way that after the pile is cut one or more of these plies of yarn can be straightened out to a length appreciably longer than other plies of the composite yarn.

One embodiment of the fabric and method of the present invention is described in the following description in the drawings of which:

Fig. 1 is a drawing of a part of a textile fiber used in the present invention having the normal amount of crimp;

Fig. 2 is a drawing of a part of a textile fiber used in the invention having an excessive amount of crimp;

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Fig. 3 is a drawing of a part of a pile yarn formed of the fibers of Figs. 1 and 2;

Fig. 4 is a side elevation of a double woven fabric made according to the invention in which the yarn of

Fig. 3 is the pile yarn.

Fig. 5 is a schematic view showing the double woven pile fabric of Fig. 4 being split to form two cut pile fabrics;

Fig. 6 is a schematic view showing the crimp being removed from the pile yarns of one of the fabrics of Fig. 5; and

Fig. 7 is an enlarged side elevation showing the finished fabric made according to the invention.

The pile yarn 10 is formed from fibers 11 and 12. Fiber 11 is given the normal degree of crimp necessary for general processing, while fiber 12 is given an excessive degree of crimp as shown in Fig. 2. It will be apparent that the invention is particularly adapted to the use of synthetic fibers which require a certain amount of crimp for normal working. The degree of crimp in the fibers 11 and 12 may be fixed at any desired degree in order to obtain a particular desired effect. The yarn 10 may be formed of any proportion of fibers 11 and 12; but in the normal case, the fibers 11 will greatly outnumber the fibers 12. This is due to the fact that, as will be hereinafter more fully shown, the fibers 12 will simulate the extended beard hairs of a natural fur, while fibers 11 will form the furry under-coating. In order to achieve novel effects, additional fibers of different degrees of crimp may also be included with fibers 11 and 12 in the yarn 10. In simulating a natural fur, the fibers 12 which form the beard hairs will normally be coarser than the fibers 11 forming the under-fur.

The yarn 10 is woven as the pile yarn in the double woven pile fabric 13 as shown in Fig. 4, and the double woven fabric is split as shown in Fig. 5 to produce two cut pile fabrics 14 and 15. Substantially the same result may be achieved by weaving a looped pile fabric and cutting the loops in a conventional manner. However, when a single woven fabric is used, the pile surface should be sheared to insure a completely uniform pile surface.

The cut pile fabric 14 is shown in Fig. 6 undergoing a "tiger" operation to straighten the fibers 11 and 12 of the pile yarns 10. As the cut pile fabric 14 passes under the tiger 16, the fibers 11 and 12 of the yarns 10 are brushed and straightened. This operation causes the fibers 12 to extend a greater distance above the base of the fabric 14 than will the fibers 11, thus providing beard hairs. Due to the uniformity of the crimp throughout the fibers 11 and 12, respectively, they will rise to form substantially uniform pile levels. Due to the brushing operation of Fig. 6, the individual fibers 11 and 12 are separated in the yarns 10 to form dense furry pile surfaces.

Subsequent to tigering, the fabric 14 is passed over a hot grooved roller running at high speed which not only removes any remaining kink in the pile fibers, but separates the fibers to produce a fluffy, furry effect as shown in Fig. 7. This may be accomplished with finishing machines, such as are shown in United States Letters Patent Nos. 1,604,523, M. H. Kronson, October 26, 1926 and 1,771,144, P. P. Ruhe, et al., July 22, 1930, or the like.

Any suitable textile materials may be used in the yarns employed in the invention. Different weaves may also be employed. In the specific embodiment of the invention described above, a V weave is shown. It will be appreciated that a W or any other suitable weave may be used. Many other variations may be made in the process and fabric of the invention without departing from the scope of the invention as defined by the following claims.

Having thus described my invention, I claim:

1. A method of making a fur-effect fabric comprising the steps of forming a yarn of a plurality of textile fibers having different degrees of crimp, weaving yarns so formed as pile yarns in a woven pile fabric, cutting the pile yarns to form a uniform pile surface and removing the crimp from said fibers to form a plurality of separate pile surfaces.

2. The method of claim 1 wherein textile fibers having two different degrees of crimp are employed, one group of fibers being crimped sufficiently to permit normal working and the remainder of said fibers being crimped a substantially greater amount.

3. The method of claim 1 wherein one group of said

fibers are substantially coarser than the remainder thereof and are given a substantially greater degree of crimp.

4. The fabric made by the method of claim 1.

5. The fabric made by the method of claim 2.

6. The fabric made by the method of claim 3.

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