Oct. 27, 1936. A. BLUMENTHAL ET AL 2,058,948

PILE FABRIC AND METHOD OF PRODUCING THE SAME

Filed June 13, 1936

Fig. 1.

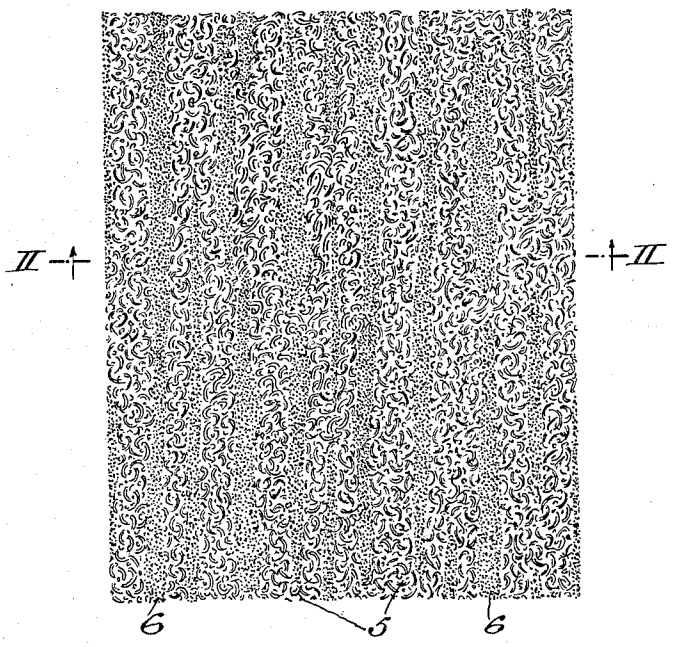


Fig. 2.

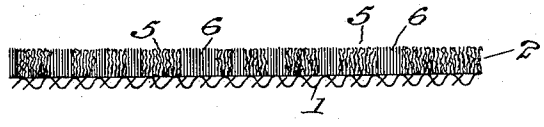
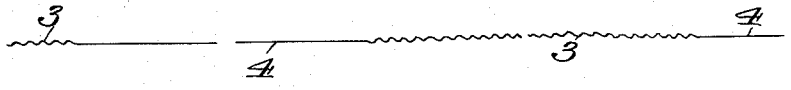


Fig. 3.



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PILE FABRIC AND METHOD OF PRODUCING THE SAME

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6 Claims. (Cl. 139—391)

This invention relates to a pile fabric and method of producing the same, and particularly to such a fabric in which the pile comprises threads composed in whole or in part of animal fibers, parts of each pile thread being curled and parts being relatively uncurled.

An object of the invention is to provide such a fabric having an irregularly mottled appearance resulting from the nature and distribution of the pile threads.

A further object is to provide a method of treating and weaving the pile threads in order to secure the desired appearance of the finished fabric.

A still further object consists in providing certain improvements in the form, construction and arrangement of the parts, in the materials employed, and in the steps followed, whereby the above named and other objects may effectively be attained.

Referring to the drawing;

Fig. 1 represents a plan view, on a slightly enlarged scale, of the pile face of a fabric constructed in accordance with the present invention;

Fig. 2 represents a vertical section taken along the line II—II of Fig. 1, looking in the direction of the arrows; and

Fig. 3 represents a single pile thread or yarn having the characteristics desired in the making of a fabric such as that shown in Figs. 1 and 2.

As illustrated herein, the fabric includes a backing 1 of any suitable or customary construction, from which project the pile elements 2, here shown as being a cut warp pile. Each pile end is treated, as hereinafter described, so that it consists of curled portions 3 alternating with plain or relatively uncurled portions 4; the ends being woven into the fabric in such a manner as to obviate so far as possible the formation of a regular pattern. As shown in Fig. 1, certain areas of the pile surface are made up of curled pile tufts 5 while other areas are made up of plain or relatively uncurled pile tufts 6, these areas being of irregular size, shape and distribution. It will be understood that the light reflecting characteristics of the two types of pile tufts are appreciably different, so that a very attractive and interesting mottled or jaspé effect results.

It will be apparent that variations of the effect just referred to could be secured by the use of one or more entirely curled or entirely plain pile ends in combination with the partly curled and partly plain pile ends such as that shown in Fig. 3; those areas of the finished fabric which are made up of the latter type of thread being an embodiment of the invention above described.

Various methods of forming and setting a curl in threads are known. In the present case, and having in consideration particularly the curling of threads containing mohair, the procedure may desirably include the following steps:

A number of ends of pile material are brought together in a curling machine and twisted into a composite yarn having, for instance, 45 turns per foot. The number of ends thus twisted together may, in a typical case, be from 20 to 30, but more or less might be used and the degree of twist might be varied in accordance with the known characteristics of the material and the particular result desired. The twisted yarn is wound under medium tension onto a board or creel, which is then partly submerged in a tank of hot water and treated for a sufficient length of time to set the curl in that portion of the yarn which is submerged. A treatment for 7 hours at 200° F. has been found to be suitable for this purpose. The partially boiled off yarn is then dried and prepared for the untwisting machine, which untwists the composite yarn into its original number of component pile ends, each of which is wound separately on a spool. The partially twisted pile ends may then be combined with a suitable number of other similar ends on a warping frame, from which they may be run onto a beam or beams and prepared in the usual manner for mounting in a loom and weaving. The several warping and beaming operations result in a decidedly irregular distribution of the curled and plain portions of the individual pile ends, so that the finished material shows the jaspé effect previously described.

In connection with the foregoing description, it will be understood that the curl originally imparted to the several pile ends remains to a substantial extent in those portions which were submerged during the setting operation, while the portions not submerged will return substantially to their original plain or relatively uncurled condition.

The fabric herein described, including a pile face of threads, some or all of which contain animal fibres such as mohair, is of such a nature as to be useful particularly as an upholstery material or the like.

It will be understood that various changes may be resorted to in the form, construction and arrangement of the several parts, in the materials employed, and in the steps followed, without departing from the spirit and scope of our inven-

tion; and hence we do not intend to be limited to the details herein shown and described, except as they may be included in the claims.

What we claim is:

1. A pile fabric comprising, a ground, and pile threads composed at least in part of animal fibres, individual pile threads being curled throughout parts of their length and relatively uncurled throughout other parts of their length.

2. A pile fabric comprising, a ground, and pile threads composed at least in part of animal fibres, individual pile threads being curled throughout parts of their length and relatively uncurled throughout other parts of their length, the said curled and uncurled parts of the several pile threads being irregularly distributed throughout the fabric.

3. A cut pile fabric comprising, a ground, and pile threads composed at least in part of animal fibres, individual pile threads being curled throughout parts of their length and relatively uncurled throughout other parts of their length.

4. A cut pile fabric comprising a ground, and pile threads composed at least in part of animal fibres, individual pile threads being curled throughout parts of their length and relatively uncurled throughout other parts of their length, the said curled and uncurled parts of the several pile threads being irregularly distributed throughout the fabric.

5. The method of making a pile fabric which includes, twisting together into a composite yarn a number of pile threads, setting a curl in parts of said yarn, untwisting the yarn into its component threads, beaming said threads so that the curled parts thereof are irregularly distributed, and weaving said threads as pile material of a pile fabric.

6. The method of making a pile fabric which includes, twisting together into a composite yarn a number of pile threads composed at least in part of animal fibres, winding said yarn on a creel, subjecting part of the wound creel to a setting treatment whereby a curl is set in parts of the yarn, untwisting the yarn into its component threads, subjecting said threads to a plurality of warping or beaming operations so that the curled parts thereof are irregularly distributed, and weaving said threads as pile material of a pile fabric.

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