

March 19, 1935.

D. P. MOORE

1,994,482

METHOD OF MAKING KNITTED PILE FABRICS

Filed April 28, 1932

Fig. 1.

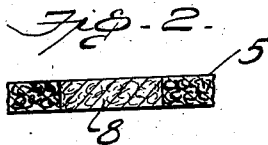
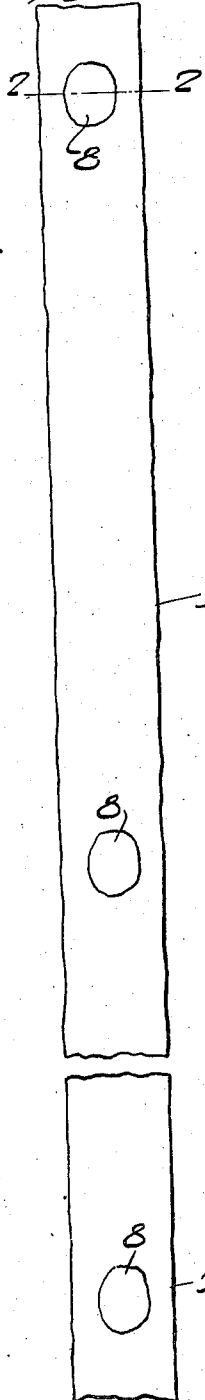


Fig. 3.

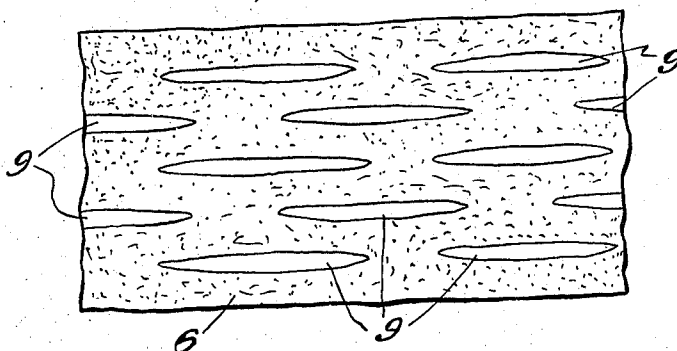
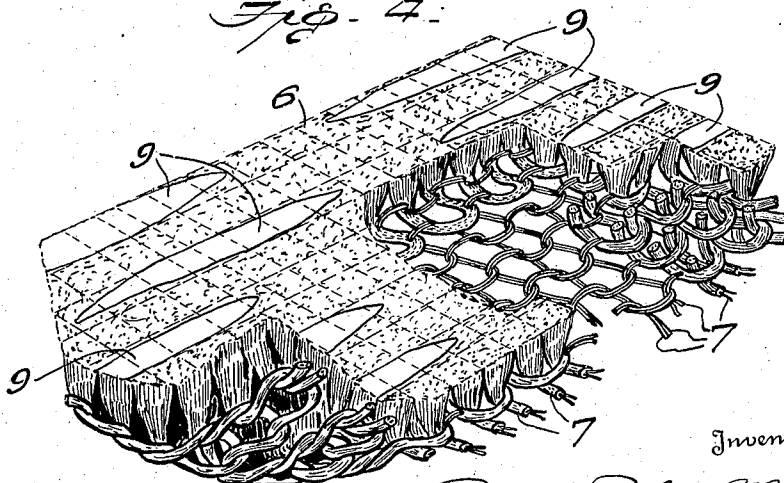


Fig. 4.



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UNITED STATES PATENT OFFICE

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METHOD OF MAKING KNITTED PILE
FABRICS

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4 Claims. (Cl. 66—191)

The present invention relates to improvements in methods of making knitted pile fabrics, one object of the invention being the provision of a method which will with the use of the machines as shown in my Letters Patents 1,848,370 and 1,849,466 produce a knitted pile fabric of a basic color or shade with flecks, spots, or mottles at random throughout the body thereof and on both sides, thus producing a fabric which is pleasing in appearance.

Another object of this invention is the provision of a method for making knitted pile fabrics which utilizes a roving or sliver composed of short loose fibers of one color or shade having inserts or inlays of short loose fibers of another color or shade, so that after the said roving or sliver is acted upon in one of the machines above mentioned, which machines are combined knitting machines and fiber feeding devices or attachments, the fabric produced thereby will be made of a base of the one color with spots, mottles or specks observable on both faces of the fabric of a different color or shade.

To carry this invention into effect, the sliver or roving is first formed in the usual manner in the first breaker of a carding machine, and while being delivered to the fiber feeding attachment of the knitting machine, there is introduced at stated intervals upon or into the body, as an inlay or insert, of the sliver or roving, small bunches, wads or the like of the different colored or natured fibers that are to constitute the "at random" mottles, bars and so forth on the fabric that is being knitted, the sliver with the inlays or inserts being disintegrated by my machine and the loose fibers thereof being fed to and distributed in the needles of the knitting machine and knitted in with the basic yarn so that the wads are distributed as separated portions throughout the fabric. The amount of the wad determines the width and length of the respective mottles, bars and so forth, and the distance between the introduction of the same determines the distances at which they may occur on the face of the fabric. This fabric is then treated in any desired manner to be used for ladies' and children's outer garments, or blankets and rugs, as the case may be.

That the invention may be more fully understood and its advantages fully appreciated, attention is invited to the accompanying drawing, in which:—

Figure 1 is a plan view of a portion of one form of sliver or roving, showing the inserts, additions or wads in place.

Figure 2 is a section on line 2—2 of Fig. 1.

Figure 3 is a plan view of a portion of fabric showing the mottled effect produced by such sliver.

Figure 4 is a diagrammatic perspective view of a portion of the fabric shown in Fig. 3, the background being black and the mottles white.

Referring to the drawing, the numeral 5 designates the sliver or roving, which is composed of short loose fibers, so that when the fabric is completed the sliver or roving forms the base 6, of the pile fabric, held in place by the web 7. Inserted, inlaid, or indented, as here shown, in the sliver at predetermined points throughout the length thereof, and before the sliver is fed to my miniature carding attachment are wads, tufts or pinches 8, of short loose fibers, which when the sliver therewith is fed into and through the fiber feeding device of either of the above mentioned patents, will be disintegrated, loosened or broken apart, will be distributed to the needles of the knitting machine and will be knitted in with the base 6 and the web 7, so as to form mottles, bars or specks 9, visible on and through the face of the fabric.

Although there has been described and illustrated only the inserted or inlaid wads or tufts, it is evident that if such wads or tufts are placed upon at stated intervals so that they are within the borders of the sliver or roving, that a very similar speckled, mottled or spotted fabric will result.

The closer the wads are to each other, the greater the number of specks, bars and the like, while, the thicker or smaller the wad, the longer or shorter will be the same.

Thus if a small wad of white fibers is inserted or inlaid in black sliver at predetermined intervals, say 18" to 24" apart, a very desirable black with white specks, bars or mottles results. This effect is demonstrated in the drawing. It has also been found that with a black base pile or sliver, red, yellow, green, blue and/or white wads can be used to give either two or many colored effects. Bases of green, red, white, yellow and blue have been used with remarkable effects.

The wads, pinches or tufts may be inserted, inlaid, placed on or indented upon the sliver by hand, or by an automatic machine which forms a small elongated opening in the sliver to receive the wad, or the wad is fed by a roller just previous to the sliver entering the fiber feeding device.

Heretofore, the sliver has been made up of solid or mixed, "heather," fibers, but this will not

and does not produce the effect herein described and shown, as this fabric shows decided boundaries between the mottles, bars or specks and the base pile, never heretofore produced in this manner.

It is also possible that the wads may be of different materials, as woolen, silk, cotton, rayon, linen and the like, while the base piles may be of any one of these fibers, or mixtures thereof.

This fabric needing a special finishing treatment, it is desirable to use a white mineral (neutral) oil in the fibers before putting it into sliver form. The fabric then when taken from the knitting machine is split open so that it can be slightly sheared. The flat fabric is then run through a steaming, underside against the steam flow, until the steam passing through removes the oil in vapor form. The fabric is then thoroughly dried and sheared to the desired pile height.

Where the words "speck" or "speckled" are used in the description and claims, it is intended that it also covers bars, mottles and dashes, which are in reality made up of a plurality of specks of the inlay or insert forming fibers.

What is claimed as new, is:—

1. A method of making a speckled, mottled or spotted knitted pile fabric, which consists in taking a roving or sliver of short loose fibers having

inserts or inlays of short loose fibers of a different shade or color from the body of the roving or sliver, disintegrating said roving and knitting the disintegrated fibers in with a basic yarn in a knitting machine.

2. A method of making a speckled, mottled or spotted knitted pile fabric as claimed on claim 1, wherein the disintegrating step consists in passing the roving or sliver through an attachment to a knitting machine to break up the roving or sliver and to feed the loosened fibers in to the hooks of the needles of the knitting machine during the knitting operation.

3. A method of making a speckled, mottled or spotted knitted pile fabric as claimed in claim 1, wherein the inserts or inlays terminate within the lateral borders of the roving or sliver.

4. A method of making a speckled, mottled or spotted knitted pile fabric, which consists in inlaying or inserting into or upon a sliver or roving of one color or shade or short loose fiber tufts, wads or bunches of short loose fibers of a different color or shade, and feeding the same into and through an attachment and knitting machines to disintegrate the roving or sliver and knit the disintegrated fibers in with the basic web of the knitted material.

DAVID PELTON MOORE.

CERTIFICATE OF CORRECTION.

Patent No. 1,994,482.

March 19, 1935.

DAVID PELTON MOORE.

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows: Page 2, second column, line 21, claim 4, for "or" second occurrence read of; and line 25, of said claim for "machines" read machine; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 16th day of April, A. D. 1935.

Leslie Frazer

(Seal)

Acting Commissioner of Patents.