

Aug. 5, 1958

J. G. UNDERWOOD ET AL

2,845,783

CHENILLE FUR STRIPS AND METHOD OF MANUFACTURE

Filed June 11, 1957

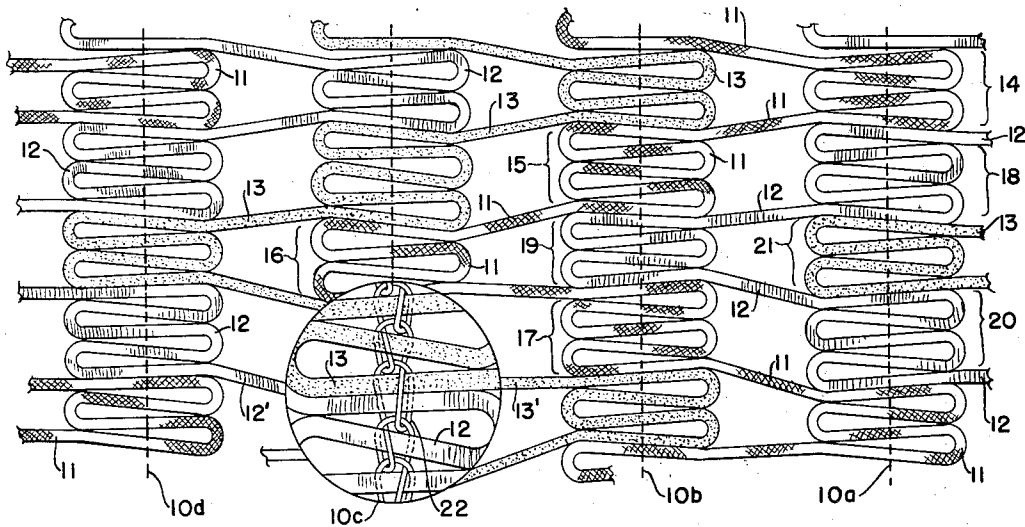


FIG. 1

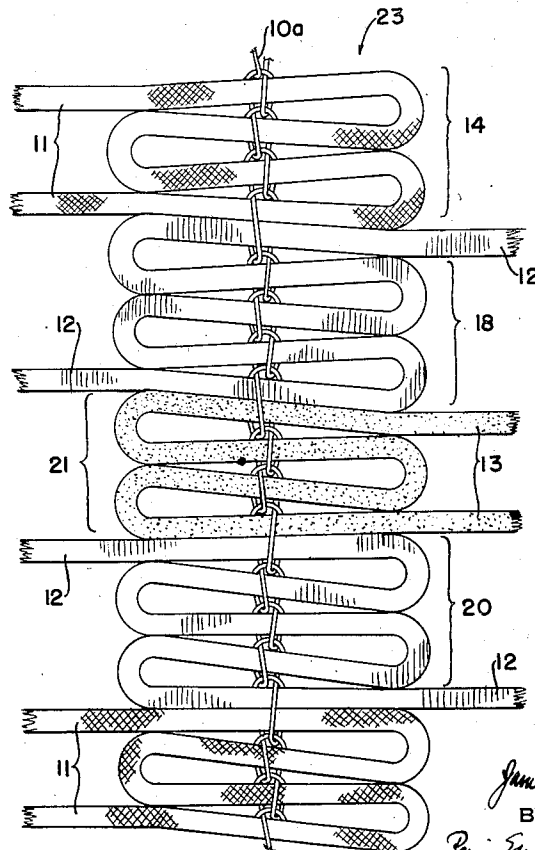


FIG. 2

INVENTOR
James Garfield Underwood
BY *Harold H. Shuttlesworth*
Reine Edwards, Morton Barron, Taylor
ATTORNEYS

1

2,845,783

CHENILLE FUR STRIPS AND METHOD OF MANUFACTURE

James Garfield Underwood, Broadalbin, and David H. Shuttleworth, Amsterdam, N. Y., assignors to Mohasco Industries, Inc., Amsterdam, N. Y., a corporation of New York

Application June 11, 1957, Serial No. 665,005

7 Claims. (Cl. 66—193)

This invention relates to pile fabrics of chenille construction and of a type especially suitable for floor covering purposes. More particularly, the invention is concerned with a novel chenille fur strip for use in the weaving of such fabrics and with a method, by which the new strip may be produced rapidly and at low cost by knitting operations. The use of the new strip results in attractive surface effects in the pile of the fabric with respect to both texture and color and permits production of the fabric in a substantially continuous loom operation and without stoppage of the loom in each cycle for combing up the portions of the chenille fur strips, which form the pile elements of the fabric.

For a better understanding of the invention, reference may be made to the accompanying drawing, in which

Fig. 1 is a plan view with one section enlarged of a knitted material, from which the chenille fur strips of the invention are produced; and

Fig. 2 is a plan view on an enlarged scale of one form of the new chenille fur strip.

In the production of the chenille fur strip of the invention, a fabric made up of a plurality of the strips and illustrated in Fig. 1 is first made by knitting operations, following which the fabric is severed by longitudinal cuts to form the individual strips. The fabric comprises a plurality of parallel chains of stitches of a relatively light yarn, which may be of any suitable material and is commonly spun from cotton. In the fabric, the chains are connected by a plurality of relatively heavy pile yarns, which are of different colors and are laid in groups of consecutive stitches of each of a plurality of adjacent chains to form series of loops with alternate loops in each series extending in opposite directions. The pile yarns are laid in rotation in the groups of stitches of each chain and each yarn is caused to form loops in the stitches of a number of chains in sequence and then forms loops in the stitches of the same chains in the reverse sequence. Accordingly, in the fabric, each pile yarn is of generally sinuous form and extends back and forth across a plurality of chains of stitches. In addition, each pile yarn has a sinuous portion laid in a group of consecutive stitches in each chain to form a series of loops. The number of loops of a yarn in the different series thereof vary and the number is even when the yarn continues beyond the chain, and is odd when the yarn reverses direction at the chain.

The fabric shown in Fig. 1 is made up of four of the new strips and includes four chains 10a, 10b, 10c, and 10d of stitches and three pile yarns 11, 12, 13 of different colors, each of which forms loops in three adjacent chains. It is to be understood that pile yarns of additional colors may be employed, if desired, and each pile yarn may form loops in two or more chains, although, preferably, each yarn crosses and forms loops in at least three chains.

In the fabric illustrated, the yarn 11 is led from the left from a stitch in chain 10b to a stitch in chain 10a and is then laid in opposite directions in a group of

2

consecutive stitches in chain 10a to form a series of loops 14. From the last of these loops, the yarn passes back to a stitch in chain 10b in the same course as the last stitch of the group in chain 10a binding a loop 14. As the yarn 11 passes from chain 10a back toward 10b, the yarn undergoes a reversal of direction at chain 10a and, accordingly, there is an odd number of loops, in this case three, in the series 14.

On reaching chain 10b, yarn 11 is laid alternately in opposite directions in a plurality of stitches in the chain to produce a series of loops 15 extending alternately in opposite directions from the chain. From the last of the loops, the yarn passes to chain 10c and is laid in a group of consecutive stitches in that chain to form a series of loops 16. As the yarn continues past chain 10b to chain 10c, the series 15 in chain 10b contains an even number of loops, in this case, four. At chain 10c, the yarn undergoes a reversal in direction, so that the series 16 contains an odd number of loops, in this case three. From chain 10c, the yarn returns to chain 10b and is laid in a group of consecutive stitches to form a series of loops 17. The yarn continues beyond chain 10b to chain 10a, so that the number of loops in the series 17 is even, and in this case four. At chain 10a, the cycle of operations with respect to yarn 11 is complete, and the yarn forms another series of loops in the stitches of chain 10a, which correspond to loops 14.

The yarn 12 is led to chain 10a from the right and is laid in a group of consecutive stitches of the chain to form a series of loops 18. The yarn then continues to chain 10b, forms a series of loops 19 in the stitches thereof, and then returns to chain 10a. As the yarn 12 continues past chain 10a and reverses direction at chain 10b, the series 18 and 19 contain an even and an odd number of loops, respectively, and correspond, respectively, to the series of loops 15 and 16 of yarn 11. At chain 10a, the yarn 12 forms a series 20 containing an even number of loops and then continues to the chain at the right of chain 10a.

The yarn 13 is led to chain 10a from the right and is laid in the stitches of the chain to form a series of loops 21, which are odd in number, so that the yarn reverses direction at the chain and returns to the adjacent chain at the right.

At the completion of the knitting operation, each stitch of each of the chains has at least one pile yarn laid therein and the end stitches of each group binding a series of loops contain two yarns extending in opposite directions from the stitch. Thus, the stitch 22 in chain 10c binds yarn 13', which continues from the stitch to chain 10b, and stitch 22 also binds yarn 12', which continues from the stitch to chain 10d.

The portions of the pile yarns, which extend from one chain of stitches to the next and connect the chains to form the fabric, are cut to subdivide the fabric into chenille fur strips, and the connecting lengths of the pile yarns between the chains are severed along lines lying between and parallel to the chains. This results in the production of strips, typified by the strip 23, which contains the chain 10a and the pile yarns laid therein as illustrated in Fig. 1. In the completed strip, the portions of the pile yarns, which connected that strip to those on either side thereof in the knitted fabric and were subsequently severed, project outwardly from the chain beyond the loops and thus form the legs of tufts when the strip is employed in the weaving of a chenille fabric. The tuft legs of certain yarns extend in the same direction from the chain, while the legs formed of other yarns extend in opposite directions from the chain. Thus, yarn 11, as previously described, reverses direction at chain 10a, so that its portions connecting

3

that chain to chain 10b form tuft legs, both of which extend to the left of chain 10a. Similarly, yarn 13 reverses direction at chain 10a but approaches the chain from the right and returns to the right, so that the tuft legs of yarn 13 both project to the right of chain 10a. The yarn 12 crosses chain 10a first from right to left and then from left to right. Accordingly, on opposite sides of the series of loops 18 and 20, the yarn 12 forms tuft legs extending in opposite directions from the chain with the legs in the reverse arrangement in relation to the loops of the two series.

In strip 23 as shown in Fig. 2, the strip carries at its upper end a pair of tuft legs and three loops of the same yarn with the legs extending to the same side of chain 10a. Next, the strip has pile elements of yarn of a different color and consisting of four loops and two tuft legs extending to opposite sides of the chain. Thereafter and completing the cycle, the strip carries pile elements of yarn of a third color and consisting of three loops and two tuft legs extending from the chain in a direction opposite to that of the tuft legs of yarn 11. As is shown in Fig. 1, the fur strips, which include chains 10b and 10c, differ from strip 23 and from each other in the arrangement of the pile elements of yarns of the different colors carried thereby. Accordingly, by utilizing strips of the three different kinds in the weaving of a fabric, random color effects without a repeated pattern can readily be obtained.

In weaving a chenille fabric, in which the chenille fur strip of the invention is used, the strip may be inserted in a shed beneath the catcher warp yarns and then, after the warp yarns are lowered, the loops and tuft legs may be combed to an erect position. However, we prefer to employ the method of weaving a chenille fabric described in our Patent 2,779,354, issued January 29, 1957, in which the strip is inserted and bound in position without being combed up. When the new strip is employed in the practice of the patented method, the fabric produced has a pile surface with a rough irregular texture and contains both tuft legs and loops of pile yarns of a number of colors in random arrangement. Such pile fabrics are highly attractive.

We claim:

1. A strand for use as a chenille fur strip, which comprises a chain of stitches of relatively light yarn and a plurality of series of loops of relatively heavy pile yarns of different colors bound in successive groups of consecutive chain stitches with adjacent loops of each series lying at opposite sides of the chain, the end portions of

4

the pile yarns forming adjacent series of loops extending in opposite directions through stitches of the chain and terminating laterally from the chain beyond the ends of the loops.

2. The strand of claim 1, in which the end portions of each pair of pile yarns forming adjacent series of loops pass in opposite directions through the same stitch of the chain.

3. The strand of claim 1, in which the number of loops of pile yarn vary in the different series.

4. A fabric severable to form a plurality of strands suitable for use as chenille fur strips, which comprises a plurality of spaced parallel chains of stitches of relatively light yarn, and a plurality of relatively heavy pile yarns of different colors having sinuous portions bound in groups of consecutive stitches of each of a plurality of chains and forming series of loops extending to opposite sides of said chains, the number of loops varying in different series of each pile yarn, adjacent sinuous portions of each pile yarn being connected by lengths of the yarn extending across the space between the chains, in the stitches of which the portions are bound.

5. A method of making chenille fur, which comprises knitting a plurality of parallel chains of stitches of relatively light yarns, laying a plurality of relatively heavy pile yarns of different colors in the stitches of the chains with each pile yarn having portions laid sinuously in groups of consecutive stitches of each of a plurality of chains to form loops extending to opposite sides of said chains and lengths connecting adjacent sinuously laid portions and extending across the space between the chains, in the stitches of which said portions are laid, and severing said connecting lengths of pile yarn along lines parallel to the chain stitches.

6. The method of claim 5, in which the sinuously laid-in portions of the pile yarns produce loops shorter than the distance between adjacent chains.

7. The method of claim 5, in which the pile yarns are laid in stitches of a plurality of chains first in one order and then in the reverse order.

References Cited in the file of this patent

UNITED STATES PATENTS

2,213,720	Seim	Sept. 3, 1940
2,398,645	Kahn	Apr. 16, 1946
2,485,307	Newman	Oct. 18, 1949
2,541,499	Carney	Feb. 13, 1951
2,779,354	Underwood et al.	Jan. 29, 1957