March 11, 1952 S. E. WAITE 2,589,003

RUG

Filed March 25, 1950

FIG. 1.

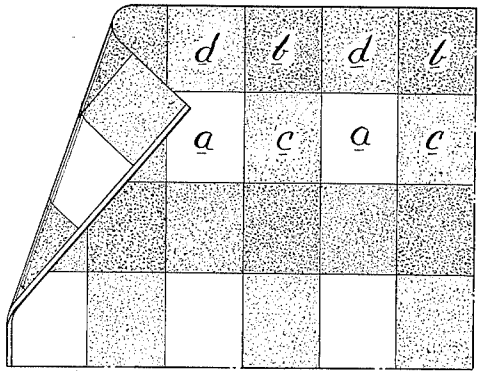


FIG. 2.

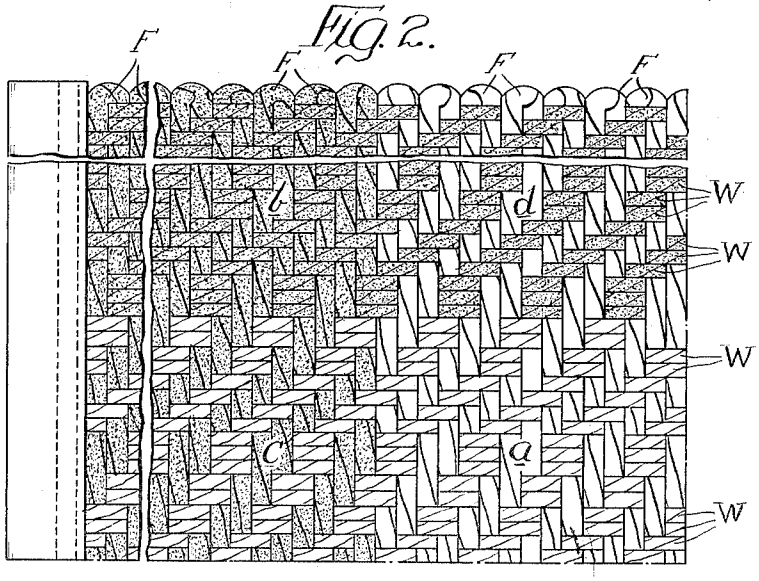


FIG. 3

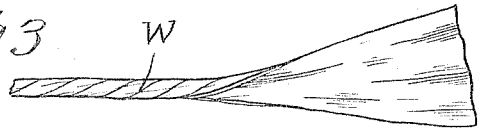
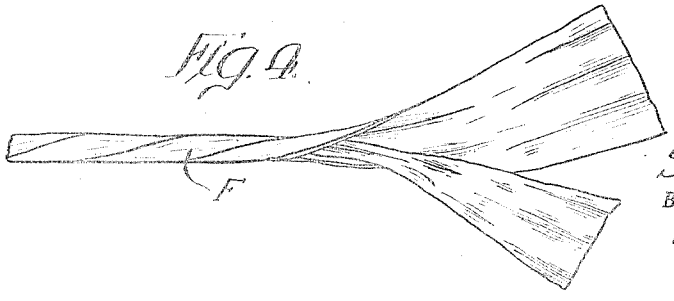


FIG. 4.



INVENTOR.
Stanley E. Waite
BY
Blaney & Blaney
Attys.

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RUG

Stanley E. Waite, Oshkosh, Wis., assignor to Waite Carpet Company, Oshkosh, Wis., a corporation of Wisconsin

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7 Claims. (Cl. 139—418)

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This invention pertains to a rug which may be advantageously produced from fiber or the like. Although the word "rug" will be used consistently hereinafter as a convenient term of reference, I would have it understood to include also floor and wall coverings generally as well as screens.

Among the primary objects of my invention is the production of a rug having a very distinctive and pleasing appearance, and of achieving this end with little or no added expense. The rug is a woven structure made up of filler and warp strands each of which may comprise a plurality of twisted yarns of fiber or the like. Each filler strand is characterized by a single color, and if two or more yarns are comprised in the strand the yarns are then of the same tone or color. From this point on the term "color" alone will be used to include also "tone," "hue," or other chromatic designation. In the rug two sets of filler strands, each of a different color, are used, as are also two sets of warp strands, each of a different color, but the colors in the two sets of filler and warp strands are the same. In the weave of the rug the warp strands recur regularly in units of one or more strands according to a prescribed arrangement by which to irregularize the appearance of the resulting pattern.

The present rug displays a pattern of four blocks making up a single unit, and these units recur regularly throughout the entire area of the rug. Two blocks of each unit are monotones, each exhibiting a single color which differs from that of the other so that the appearance of the pattern weave is not emphasized; the remaining two blocks, however, are of two colors, and in one the first color predominates whereas in the other the second color predominates. In each of the blocks wherein two colors are exhibited, the weave pattern contributes a distinctive note to its appearance, and this is augmented by the irregularized weave pattern already noted.

As illustrative of a suggestive embodiment of my invention there is shown in the accompanying drawing—

In Figure 1, a view in elevation of a section of the rug adjacent one of its corners which is turned back sufficiently to exhibit upon its reverse side a pattern the same as is displayed upon its front side;

In Fig. 2, a view in elevation, greatly enlarged, of a small section of the rug including portions of four blocks comprised in a single unit of the pattern;

In Fig. 3, a fragmentary view of a single-yarn warp strand having its end portion untwisted; and

In Fig. 4, a fragmentary view of a two-yarn filler strand, the yarns being untwisted at the end.

The rug herein illustrated is a twill weave having a pattern of four blocks *a*, *b*, *c*, and *d*, occurring recurrently in a regular order, and each

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exhibiting a different appearance. In the woven structure of the rug are two sets of filler strands F crossed by two sets of warp strands W. Each set of filler strands consists of one or more yarns of one color which differs from that of the other set, and likewise each set of warp strands consists of one or more yarns of one color which differs from that of the other; the colors of the two sets of filler and of warp strands are desirably the same. Strands so made, when interwoven, will produce a novel chromatic effect in which the differing colors are effectively displayed in harmony or in contrast, as the case may be. One simple way of achieving two colors which harmonize effectively is to use a dye of the same color for each of the yarns that are to be twisted together into a single strand, but applied thereto in differing amounts or strengths. For the sole purpose of convenience in description, the overall color effect, which differs in the two sets of strands, will be referred to hereinafter as "light" and "dark," respectively.

The two sets of light and dark strands are woven into a rug structure in the special manner shortly to be described to produce a design of four blocks each differing in appearance from the others in that (*a*) one is all light, (*b*) the second is all dark, (*c*) the third is predominantly light, and (*d*) the fourth is predominantly dark. The blocks designated as *a*, *b*, *c*, and *d* in the drawing have these respective differing characteristics. It is not difficult to achieve this effect since in a twill weave the filler strands remain slightly spaced apart whereas the exposed area of the warp strands which are contiguously disposed exceeds that of the filler strands, and to a limited extent at least this ratio of one to the other is controllable according to the pattern of the weave itself.

In the illustrated rug, the filler strands are all light throughout the area of one row of blocks comprised in the pattern; in the area of the next adjacent row of blocks in the pattern the filler strands are all dark; and in the succeeding rows of blocks comprised in the rug pattern the filler strands are alternately light and dark, as just described. The warp strands are similarly chosen, i. e., those which are disposed throughout the area of one row of blocks in the pattern are all dark, while those in the next adjacent row of blocks are all light, and so on alternately throughout the entire structure of the rug. There is thus presented a differing appearance in each unit of four adjacent blocks because in one (*a*) the filler and warp strands are all light, and in another (*b*) they are all dark, in a third (*c*) the light warp strands predominate, and in a fourth (*d*) the dark warp strands predominate. This differing appearance in each of the four blocks comprised in a single unit of the pattern may be enhanced or modified by variations in the colors chosen for the filler and warp strands; it may also

be enhanced or modified by variations in the twill weave itself. For example, the filler strands may be slightly larger than the warp strands, or be twisted less tightly so as to flatten laterally more readily; and the warp strands may be arranged recurrently in units which vary in the number of its strands and arrangement. Each unit of warp strands is misaligned with the adjacent units by a distance approximating the width of one filler strand, thereby to irregularize the exposure of warp strands between the filler strands. An arrangement of 1, 1, 1, 1, 2, 2, and 3 warp strands, occurring in this order (a total of seven such units), is comprised in each of the groups illustrated in Fig. 2. This is just one of several combinations that is both suitable and effective for producing an irregular wavy effect in the appearance of each block.

In an effective embodiment of the invention there are two yarns twisted together in the filler strands which are thereby rendered fuller, and appear somewhat looser and wider, and are characterized upon their exposed surfaces by rugae which appear as long spirals lengthwise thereof. The surface of each filler strand is thereby roughened considerably so as to stand out distinctively. Each warp strand on the other hand is desirably composed of a single yarn the same in size and weight as each of the yarns in the filler strand. The width of such a single-yarn strand is considerably less than that of the two-yarn filler strand, and it twists more readily and tightly. Since the warp strands are arranged in groups made of units wherein the number of strands are varied, the widths of some of the units will exceed that of the filler strands, whereas in others it will be less. This is a further irregularizing feature which characterizes the overall pattern of the rug. Furthermore, the rugae resulating from tighter twisting of the yarns comprised in the warp strands are less coarse than are those in the filler strands, and do not extend lengthwise thereof to the same extent as the more loosely twisted yarns of the filler strands.

The rug of this invention is reversible in that there is a duplication of the pattern on the opposite sides of the rug. This observation applies both to the size, positioning, and color of the several blocks in the pattern, and also to the irregularities and distinctive features resulting from a weave having the special characteristics hereinbefore noted.

Attached hereto, and marked Exhibit A, is a swatch of the rug embodying this invention.

I claim:

1. A fibrous rug structure having filler and warp strands combined into a twill weave, a first group of the filler strands being of a first color and extended crosswise of the rug to provide a wide band, a second group of the filler strands being of a second color and extended crosswise of the rug to provide a wide band contiguous to the first band, and other groups of filler strands of the said first and second colors alternately being extended crosswise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, a first group of warp strands being of said first color and extended lengthwise of the rug to provide a wide band, a second group of warp strands being of the said second color and extended lengthwise of the rug to form a second wide band contiguous to the first band, and other groups of warp strands of the said first and second colors alternately being extended lengthwise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, the warp strands being arranged in regularly recurring units ranging from one to three strands, each unit of warp strands being misaligned with the adjacent units by a distance approximating the width of one filler strand whereby to irregularize the display of warp strands between the filler strands.

2. A fibrous rug structure having filler strands combined with warp strands in a twill weave, the filler strands being the wider, the warp strands being arranged in regularly recurring units varying in the number of strands comprised in each, the filler strands being of two colors with the first color alone employed for production of a one-color band, and the second color alone employed for production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending crosswise of the rug, and the warp strands being of two colors with the said first color alone employed for production of a one-color band, and the said second color alone employed for production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending lengthwise of the rug, the warp strands being arranged in regularly recurring units varying in the number of strands comprised in each, and each unit of warp strands crossing two of the filler strands first under and then over, the arrangement being such as to produce a distinctive pattern characterized by a plurality of units each consisting of four rectangular blocks of which one displays only the said first color, another only the said second color, a third predominantly the said first color, and the fourth predominantly the said second color, with the blocks displaying two colors exhibiting the warp strands in irregular weave lines according to the variations in the numbers of warp strands comprised in each of the misaligned units.

3. A fibrous rug structure having filler and warp strands combined into a twill weave, a first group of the filler strands being of a first color and extended crosswise of the rug to provide a wide band, a second group of filler strands being of a second color and extended crosswise of the rug to provide a wide band contiguous to the first band, and other groups of filler strands of the said first and second colors alternately being extended crosswise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, a first group of warp strands being of said first color and extended lengthwise of the rug to provide a wide band, a second group of warp strands being of said second color and extended lengthwise of the rug to form a second wide band contiguous to the first band, and other groups of warp strands of said first and second colors alternately being extended lengthwise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, the warp strands being arranged in regularly recurring units, each unit of warp strands being misaligned with the adjacent units, whereby to irregularize the display of warp strands between the filler strands.

4. A fibrous rug structure having filler and warp strands combined into a twill weave, a first group of the filler strands being of a first color and extended crosswise of the rug to provide a wide band, a second group of filler strands being of

a second color and extended crosswise of the rug to provide a wide band contiguous to the first band, and other groups of filler strands of the said first and second colors alternately being extended crosswise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, a first group of warp strands being of said first color and extended lengthwise of the rug to provide a wide band, a second group of warp strands being of said second color and extended lengthwise of the rug to form a second wide band contiguous to the first band, and other groups of warp strands of said first and second colors alternately being extended lengthwise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, the warp strands being arranged recurrently in units of 1, 1, 1, 1, 2, 2, and 3 strands each, in the order named, each unit of warp strands crossing two filler strands, over and under alternately, and each unit of warp strands being misaligned with the adjacent units by a distance approximately the width of one filler strand whereby to irregularize the display of warp strands between the filler strands.

5. A fibrous rug structure having filler and warp strands combined into a twill weave, a first group of the filler strands being of a first color and extended crosswise of the rug to provide a wide band, a second group of filler strands being of a second color and extended crosswise of the rug to provide a wide band contiguous to the first band, and other groups of filler strands of the said first and second colors alternately being extended crosswise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, a first group of warp strands being of said first color and extended lengthwise of the rug to provide a wide band, a second group of warp strands being of said second color and extended lengthwise of the rug to form a second wide band contiguous to the first band, and other groups of warp strands of said first and second colors alternately being extended lengthwise of the rug to provide additional wide bands in contiguous relation with the two colors thereof displayed in alternation, the filler strands and warp strands being relatively large and small, respectively, and the warp strands being arranged recurrently in units of varying number of strands, each unit of warp strands crossing two filler strands, over and under alternately, and one of the filler strands so crossed being comprised in the two filler strands crossed by the next adjacent unit of warp strands.

6. A fibrous rug structure having filler strands combined with warp strands in a twill weave, the filler strands being the wider, the warp strands being arranged in regularly recurring units varying from one to three strands each, the filler strands being of two colors with the first color alone employed for the production of a one-color band, and the second color alone employed for the production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending crosswise of the rug, and the warp strands being of two colors with the said first color alone employed for the production of a one-color band and the said second color alone employed for the production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending lengthwise of the rug, the warp

strands being arranged in regularly recurring units from one to three strands each and each unit of warp strands being misaligned with the adjacent units by a distance approximating the width of one filler strand whereby to irrgularize the display of warp strands between the filler strands, and each unit of warp strands crossing two of the filler strands, first under and then over, the arrangement being such as to produce a distinctive pattern characterized by a plurality of units each consisting of four regular blocks of which one displays only the said first color, another only the second color, a third predominantly the said first color, and the fourth predominantly the said second color with the blocks displaying two colors exhibiting the warp strands in irregular weave lines according to the variations in the number of warp strands comprised in each of the misaligned units.

7. A fibrous rug having filler strands combined with warp strands in a twill weave, each of the filler strands comprising plural yarns twisted together and with the filler and warp strands twisted relatively loose and tight, respectively, whereby the rugae of the filler strands remain coarser and of longer pitch and the width of the filler strands exceeds that of the warp strands, the warp strands arranged in regularly recurring units having a variable number of strands comprised therein and each unit of warp strands being misaligned with the adjacent units whereby to irregularize the display of warp strands between the filler strands of the rug structure, the filler strands being of two colors, with the first color alone employed for the production of a one-color band, and the second color alone employed for production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending crosswise of the rub, and the warp strands being of two colors with the said first color alone employed for production of a one-color band, and the said second color alone employed for production of a one-color band contiguous to the first band, and so on in alternation whereby to provide wide bands extending lengthwise of the rug, the warp strands being arranged in regularly recurring units varying in the number of strands comprised in each, and each unit of warp strands crossing two of the filler strands, first under and then over, the arrangement being such as to produce a distinctive pattern characterized by a plurality of units each consisting of four rectangular blocks of which one displays only the said first color, another only the said second color, a third predominantly the said first color, and the fourth predominantly the said second color, with the blocks displaying two colors exhibiting the warp strands in irregular weave lines according to the variations in the numbers of warp strands comprised in each of the misaligned units.

STANLEY E. WAITE.

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