United States Patent

[11] 3,570,435

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[54] **METHOD OF MAKING DECORATIVE ARTICLES EMPLOYING YARN OR THE LIKE**
10 Claims, 9 Drawing Figs.

[52] **U.S. Cl.** **112/266,** 112/439
[51] **Int. Cl.** **D05c 15/00**
[50] **Field of Search** 112/266, 78, 410, 439

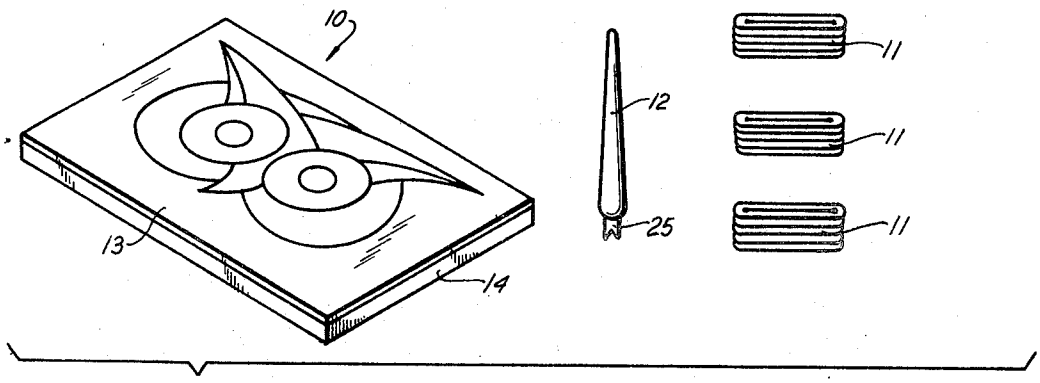
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ABSTRACT: A base is provided having a pierceable elastic surface and a penetrable yieldable interior. The surface is provided with pattern areas defined by demarcations, which may be surface cuts. The free end of a yarn strand is pushed into the base at a point on one demarcation, and the yarn is severed at a point spaced from the embedded end to create a cut yarn strand. The other end of the cut strand is then pushed into the base at a point on another demarcation spaced from the first. These steps are repeated with additional strands placed adjacent to each other, to cover the various pattern areas. The surface may bear indicia indicating the color of yarn to be used and the direction in which the strands are to be placed.



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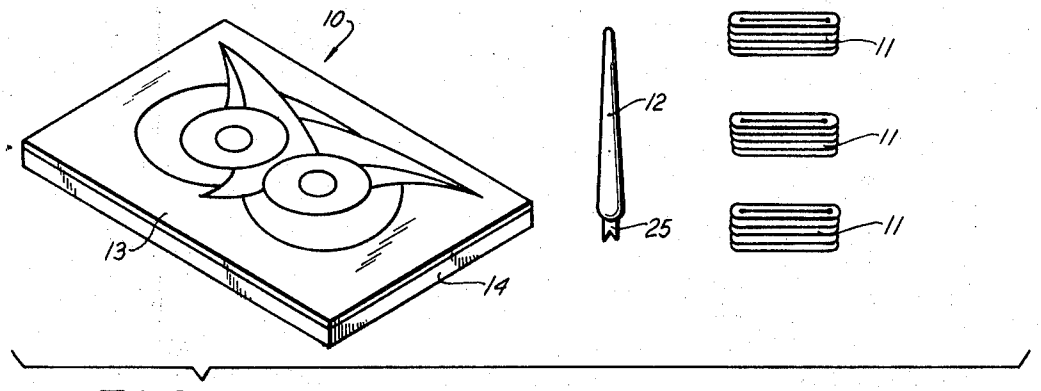


FIG. 1

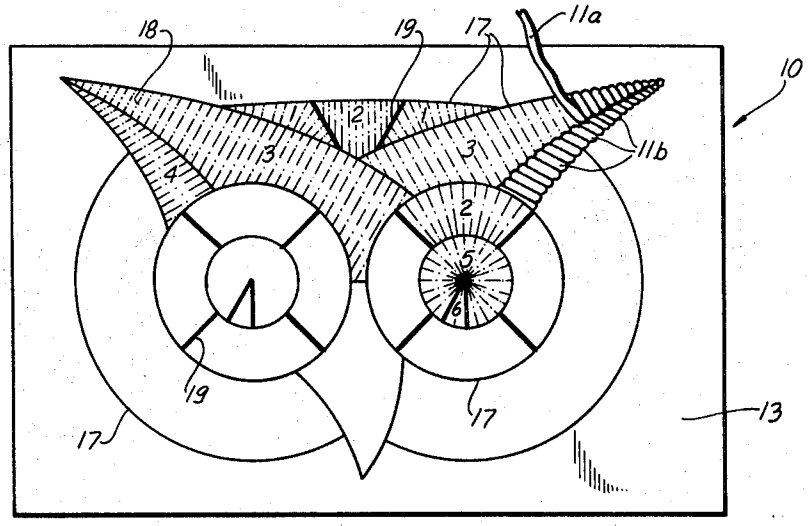


FIG. 2

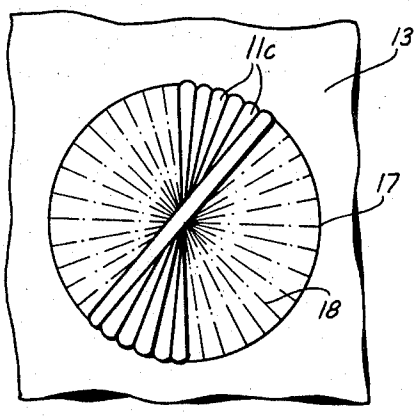


FIG. 8

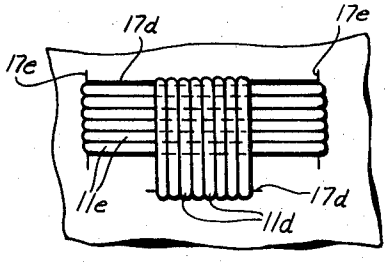


FIG. 9

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2 Sheets-Sheet 2

FIG. 3

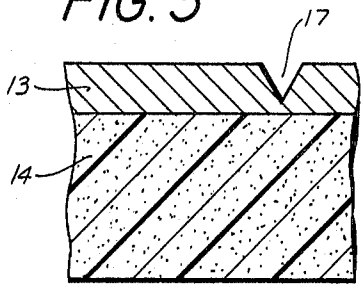


FIG. 4

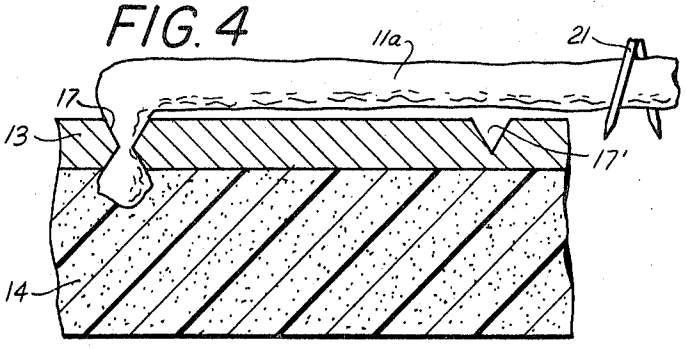
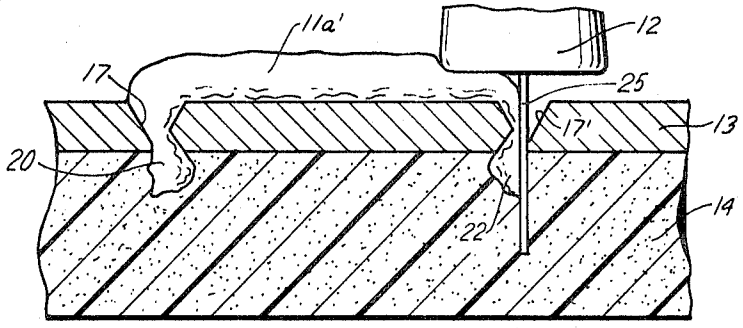


FIG. 5



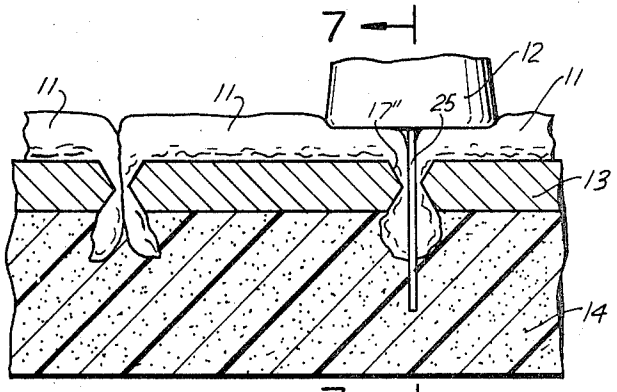


FIG. 6

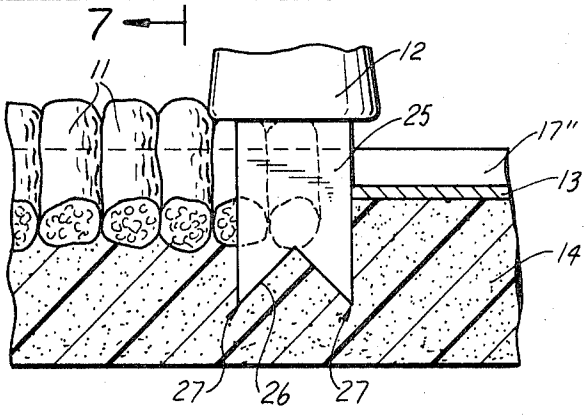


FIG. 7

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METHOD OF MAKING DECORATIVE ARTICLES EMPLOYING YARN OR THE LIKE

This invention relates generally to ornamentation and has particular reference to a method of making decorative articles in which yarn or other elongate material, preferably of various colors, is the principal medium of ornamentation.

A general object of the invention is to provide a method of producing a textured ornamental article composed of strands of yarn or the like, such as wool, ribbon, cord, etc.

A more particular object is to provide such a method of simplified nature, intended for use by anyone, and not requiring special skill.

According to the invention the yarn is not "stitched" to an underlay in any ordinary sense of the word, but is held in association the ornamented surface by an effective snaring or pinching action resulting from the nature of the surface itself and the method by which the yarn is applied. The resulting articles are nonetheless difficult to distinguish from ordinary needlework, and the invention thus makes it possible for relatively unskilled persons rapidly and inexpensively, and pleasurably, to produce decorative articles using yarn.

Additional objects and features of the invention will be apparent from the following description in which reference is made to the accompanying drawings.

In the drawings:

FIG. 1 is a perspective view of the components furnished to carry out the method, namely, a bise, yarn, and a tool;

FIG. 2 is a plan view of the base in the process of receiving yarn;

FIG. 3 is a fragmentary enlarged cross-sectional view through the base;

FIGS. 4, 5, and 6 are views similar to FIG. 3 showing successive steps in the procedure;

FIG. 7 is a cross-sectional view taken on line 7–7 of FIG. 6;

FIG. 8 is a fragmentary plan view of a base showing a variation in the procedure; and

FIG. 9 is a fragmentary plan view of a base showing another variation in the procedure.

The materials for carrying out the procedure comprise, as shown in FIG. 1, a base 10, yarn 11, and a tool 12.

The base is composed of a relatively thin upper layer 13 bonded, as by adhesive, to a thicker rigidifying nether layer 14. The top layer 13 is made of an elastic material such as paper, defining a pierceable surface on the base element. The term "pierceable" is intended to refer to that quality which permits an attenuated tool to rupture and penetrate through an intact area of the material under mildly applied pressure. The "elasticity" of the material alludes to an inherent stiffness and to the tendency of the walls of a hole or aperture to resist enlargement of the hole and thus exert a pinching effect upon a compressible strand extending through the hole and having a normal cross-sectional area greater than that of the hole. Paper has been mentioned as a material having the desired characteristics. Thin foils of various metals, such as aluminum, or of certain plastics, or of stiff cloth are also useful for the contemplated purpose. A material such as felt, on the other had, would not be suitable.

The other layer 14 is made of material which is relatively stiff and rigid, yet yieldable and readily penetrable. Many cellular materials, such as expanded polystyrene, exhibit these qualities and hence are preferred for the present purpose. Layer 14 fulfills a rigidifying purpose with respect to the thin overlying layer 13, yet it receives and accommodates bunches of yarn as presently to be described. The term "cellular" is intended to signify the presence of a multiplicity of air or gas-filled spaces which are readily collapsible under mildly applied relatively concentrated pressures. Layer 14 need not necessarily be cellular; any material capable of "giving" and accepting the ends of the yarn strands to be pushed into it can be used.

By way of example, the layer 14 may have a thickness of about one-half inch whereas the thinner layer 13 may be no more than 0.002 inches thick.

In the base 10 shown in FIGS. 1 and 2, the illustration of an owl's head represents the area to be covered with yarn to create a textured picture picture. The relatively thin solid lines represent slits or cuts 17. Thus, the entire outline of the owl's head is defined by slits 17, and within the outline are additional slits defining, for example, the owl's eyes. The slits 17 are formed only in the upper layer 13, and they may extend completely through the thickness of that layer. However, preferably, each slit extends only partially through the thickness of layer 13, as shown in FIG FIG. 3, and is wedge shaped to present walls converging toward layer 14.

Between opposing slits 17, guidelines 18 are provided on the surface of layer 13, such as by printing, these lines being represented by broken lines in FIG. 2. The guide lines inform the user of the direction in which the strands of yarn should be placed. Border lines 19, indicated by heavy solid lines in FIG. 2, may also be provided to inform the user where color is to change, and within the pattern areas delimited by slits 17 and border lines 19, some indicia, such as numerals, may be provided to inform the user of the color of yarn to be used for covering each area.

To embellish the exposed surface of the base 10, strands of compressible yarn, such as wool, are pushed into the base in predetermined fashion. One such strand 11*a* is shown in FIGS. 2, 4 and 5. The free end 20 of strand 11*a*, and the strand portion immediately adjacent to it, is pushed through one of the slits 17 and into the interior of layer 14 by tool 12. The strand is then held parallel to he base surface (FIG. 4), in a direction indicated by the appropriate guide line 18, and severed as by scissors 21 at a point beyond an opposing slit 17′ to create a cut strand 11*a*′ having a second free end 22 (FIG. 5). Tool 12 is then used to push the free end 22 of cut strand 11*a*′ through slit 17′ into the interior of layer 14. This completes the procedure with respect to cut strand 11*a*′ was created, is then pushed through slit 17 directly adjacent to end 20, and the procedure described above is repeated to produce a second strand side by side with strand 11 *a*′.

This procedure is repeated as many times as necessary to produce a series of cut strands, such as the strands 11*b* in FIG. 2, all arranged side by side covering a particular pattern area. In similar fashion, all the other pattern areas comprising the total design, in this case an owl's head, are covered. Where a slit separates two adjacent pattern areas, such as the slits 17″ in FIGS. 6 and 7, the slit accommodates two yarn ends.

The tool 12 has a handle and a flat spatulate operative end 25, preferably of metal, having a front edge 26 preferably concave or wedge shaped. The front edge terminates in attenuated piercing points 27 (FIG. 7). The edge 26 is narrow but not a knife edge. It must be sufficiently dull to prevent severance of the strand 11 during the procedure illustrated in FIGS. 4—7. On the other hand, it must be sufficiently thin to readily penetrate through the uncut portion of layer 13, beneath slit 17, if such an uncut portion is provided.

During the penetration of each yarn end into the base, as described, the strand is compressed as it passes through the slit or opening in the outer layer 13. This compression leaves a part of the strand near its free end in snared or pinched condition after the tool 12 is withdrawn, thus retaining the strand by friction in engagement with the elastic outer layer 13. This pinching action is augmented if the slit 17 does not extend through the entire thickness of layer 13, since the bottom of the opening through which the yarn passes into layer 14 is then very narrow. The bunched-up end of the yarn is accommodated within the interior of the layer 21 as a result of collapse of adjacent cells. This permits many bunches of yarn to remain encased within the layer 21 without causing any warping or distortion. The wedge shape of slits 17 serves as a "lead-in" to aid in locating the proper place to push the yarn in.

In the finished article the strand regions between the snared yarn ends lie in uncompressed untensioned exposed condition on the ornamented surface. Employment of strands in different colors, and variations in he shapes and extents of the covered areas, make it possible to produce an unlimited number of different ornamental effects.

It is not in all cases essential to preform any slits or other openings in the surface layer. They facilitate the proper placement of successively pushed yarn ends, and to this extent they are desirable and simplify the procedure, but satisfactory results can be achieved with an unbroken intact surface layer 13. It is essential, of course, that this surface bear demarcations in the form of a pattern or design, to guide the user in performing the successive steps of the procedure. In a case in which no preformed openings are provided, slightly increased pressure is required to rupture the surface layer. The piercing points 27 on the tool 12 facilitate this action and insure the puncturing of a hole which is adequately undersized to establish the desired pinching action after the strand end has been pushed through.

In some cases it may not be necessary for the base element to be provided with a separate relatively thin outer layer such as that shown at 13. An equivalent "skin" may be inherently present as an integral part of a slab or sheet of expanded polystyrene or equivalent material. A separate skin layer is desirable, however, because it makes it commercially simpler and more economical to print desired designs, pictures, and other indicia, upon it prior to its lamination to the underlying rigidifying layer.

In FIG. 2, the cut strands are shown arranged side by side. However, different effects can be achieved by varying this pattern. Thus, as shown in FIG. 8, each strand 11*c* can be crossed over the previous one. In the example shown, slit 17 is circular, and each strand extends across a diameter of the circle. As a result, there is an increase in the height of the yarn above the surface of the base, toward the center of the circle, thereby increasing the three-dimensional appearance of that pattern area.

FIG. 9 shows another variation in which strands 11*d*, whose ends pass through slits 17*d*, cross over strands 11*e* whose ends pass through slits 17*e*.

The invention has been shown and described in preferred form only, and by way of example, and it is understood, therefore, that many variations may be made in the invention which will still be comprised within its spirit. Thus, while the embellishing material has been described in the above example as yarn, such as wool, other elongate material such as ribbon or cord can be used in place of the yarn.

I claim:

1. A method of making a decorative article, which comprises:

a. Providing a base having a pierceable elastic surface and a penetrable yieldable interior;

b. providing demarcations on said surface defining distinct pattern areas, at least two of said demarcations being spaced apart;

c. pushing the free end of a strand, and the strand portion immediately adjacent thereto, into the base at a point on one of said two demarcations, said strand portion and end being entirely accommodated within said base interior;

d. severing the strand at a point spaced from its end embedded in the base to create a cut strand having a second free end, the total length of said cut strand exceeding the distance between said two demarcations;

e. pushing the second free end of said cut strand, and the strand portion immediately adjacent thereto, into the base at a point on the other of said two demarcations; and

f. repeating steps (c) through (e) to produce a second cut strand on said base engaging said first-mentioned cut strand, the ends of said second strand being pushed into said base at points on said two demarcations, respectively, adjacent to the points at which the ends of said first mentioned strand are pushed into said base.

2. A method as defined in claim 1 wherein said surface bears indicia within said pattern areas indicating the direction in which said cut strands are to be placed.

3. A method as defined in claim 1 wherein said surface bears indicia within said pattern areas indicating (I) the colors of strands to be used for covering said areas, and (II) the locations at which colors are to be changed.

4. A method as defined in claim 1 wherein said first-mentioned and second cut strands are placed side by side.

5. A method as defined in claim 1 wherein said second strand crosses said first-mentioned strand.

6. A method as defined in claim 1 wherein said surface bears third and fourth spaced-apart demarcations, and including repeating steps (c) through (e) with a third cut yarn strand whose end regions are pushed into said base at points on said third and fourth demarcations, respectively, said third strand crossing said first-mentioned and second strands.

7. A method as defined in claim 1 wherein said demarcations are depressions in said surface.

8. A method as defined in claim 1 wherein said base is provided in the form of overlying layers one of which is relatively thin and defines said elastic surface and the nether one of which is a relatively thick rigidifying layer, said demarcations being cuts in said thin layer.

9. A method as defined in claim 8 wherein said cuts penetrate only partially through the thickness of said thin layer.

10. A method as defined in claim 8 wherein the walls of said cuts converge toward said nether layer.

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,570,435 Dated March 16, 1971

Inventor(s) John R. Morrison

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 2, line 35, before "was created" add ---. The new free end of strand 11a, created when cut strand 11a'---

Signed and sealed this 24th day of August 1971.

(SEAL)
Attest:

EDWARD M.FLETCHER, JR.
Attesting Officer

WILLIAM E. SCHUYLER, JR.
Commissioner of Patents

FORM PO-1050 (10-69)