

# United States Patent

[19]

[11] 3,832,841

Cole

[45] Sept. 3, 1974

## [54] ORNAMENTAL EXPANSIBLE STRIP

[75] Inventor: **Bernard M. Cole**, Old Westbury,  
L.I., N.Y.[73] Assignee: **Stribbons Ltd.**, Roslyn Heights,  
N.Y.[22] Filed: **Apr. 12, 1973**[21] Appl. No.: **350,404**[52] U.S. Cl. .... **57/152, 57/163**[51] Int. Cl. .... **D02g 3/32, D02g 3/38, D02g 3/12**[58] Field of Search ..... **87/2, 5-7;**  
**57/152, 163**

## [56] References Cited

## UNITED STATES PATENTS

1,066,759	7/1913	Schloss .....	87/2
2,061,021	11/1936	Chittenden et al. ....	57/163
2,452,228	10/1948	Dawes et al. ....	87/2
2,902,819	9/1959	Ross.....	57/163 X

3,115,745 12/1963 Lathem et al..... 57/152 X  
3,387,451 6/1968 Cape et al..... 57/163  
3,388,546 6/1968 McCarthy et al..... 57/163 X

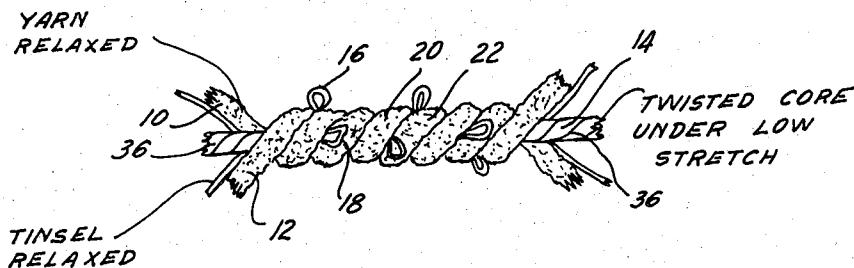
Primary Examiner—George F. Mautz  
Assistant Examiner—Charles Gorenstein

[57]

## ABSTRACT

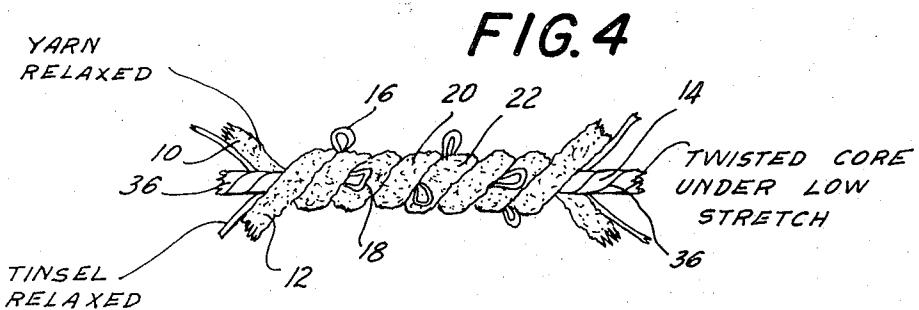
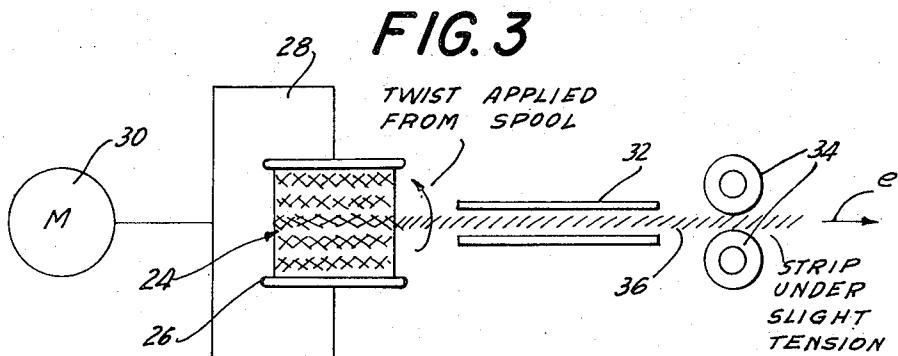
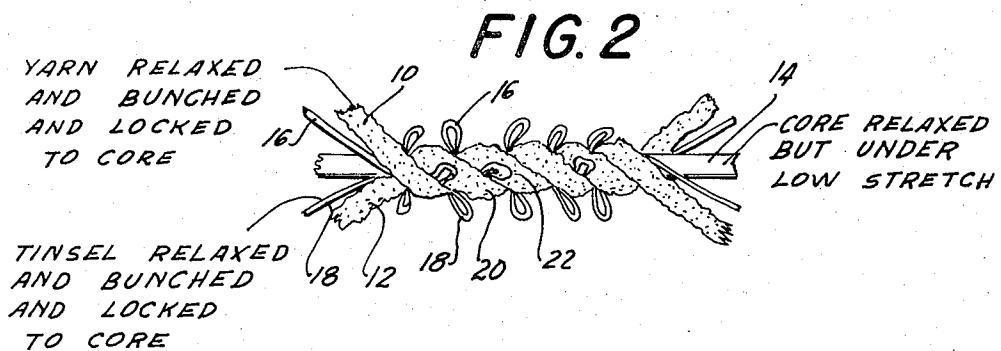
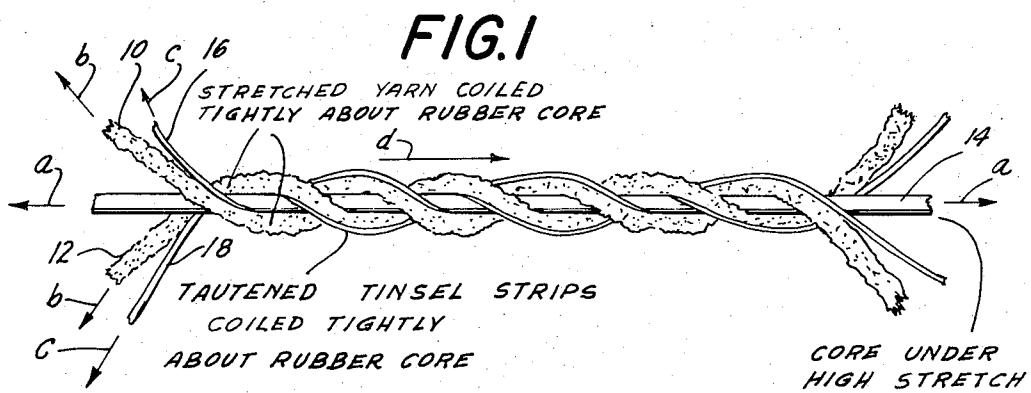
An ornamental expandable strip for use as a yarn stretch gift packages tie and as a decorator hair tie, and the method of making the same. The expandable strip comprises an elastic core under a retained low stretch and an ornamental yarn cover embracing the same, the yarn cover comprising yarn strands which are stretched and coiled about in the same direction and on opposite side of the elastic core, the core and yarn cover combinedly possessing a stable twist, the yarn being tightly wound, and locked to the stretched and twisted elastic core.

8 Claims, 4 Drawing Figures



PATENTED SEP 3 1974

3,832,841



## ORNAMENTAL EXPANSIBLE STRIP

This invention relates to an ornamental expandible strip for use as a yarn stretch gift package tie and as a decorative hair tie, and to the method of making the same.

Decorative expandible strips are extensively used in the packaging of gift boxes and are adapted for use for other purposes such as in ladies coiffures as a decorator hair tie. They are made to comprise an elastic, such as a rubber core provided with an ornamental yarn cover, fabricated to possess when in relaxed or contracted form a substantial extensibility, with the yarn cover tightly wound and locked to the elastic core, the core being also preferably twisted in its fabricated form, the resulting yarn cover being intended to possess the characteristics of a uniform and fullness of distribution on the core.

In the making of elastic strips according to prior methods, it was found necessary after winding yarn about an elastic core to follow this up by superimposing on the wound yarn a second layer of yarn or a binding strip in order to prevent the kinking up of the yarn, these steps being further so practiced as to introduce into the resulting product a desired twist. The practicing of these separate steps of the method was relatively difficult and complicated and the resulting product did not possess the optimum uniformity of distribution of the strands longitudinally of the core that was desired.

The principal objects of my invention are the making of an ornamental expandible strip possessing improved structural characteristics such as the obtaining of a product in which the yarn is distributed uniformly with the desired fullness and straightness along the length of the elastic core, the product having also a desired expansibility and contractability, and produced by a process, the practice of which may be carried out with simplicity and effectively.

In fabricating the product of my invention, the yarn strands, in the first step of the method are stretched and are coiled about a highly stretched elastic core. Coiling the yarn and stretching the same in coiling the same about in the same direction and on opposite sides of the elastic core produces an intermixing of the small texturized yarn employed which results in imparting the desired substantial yarn fluffiness to the resulting product, in also preventing curling and kinking of the yarns, as well as facilitating the interlocking of the yarns one to another and to the core. When the product of this first step is relaxed or contracted, the core is under a retained low stretch, thereby imparting to the product an inherent retained contractability, and the yarn coils of the cover are distributed uniformly with a desired fullness and straightness along the length of the core.

In the first step of the method, and to impart to the product an added ornamental feature, tautened metallic, such as tinsel strips are wound and also preferably coiled about in the same direction as the coiling of the yarn strands and on opposite sides of the core together with the coiling of the stretched yarn. In the resulting product, the tinsel strips are projected out by the relaxed stretched yarn coils and are rendered desirably surface visible.

In a second step of the method, the yarn and tinsel covered elastic core, under a slight tension applied

thereto, is rotated to impart a permanent (stable) twist to the product. This further aids in securing an interlock of the full yarn strands and metal tinsel strips to the elastic core and also results in straightening out and longitudinally aligning the strand coils on the elastic core.

To the accomplishment of the foregoing objects and such other objects as may hereinafter appear, my invention relates to the ornamental expandible strip product as sought to be defined in the appended claims, taken together with the following description and the accompanying drawings, in which:

FIG. 1 is a view of the first step in the method of fabricating the ornamental expandible strip product of the invention, with suitable legends applied explanatory of the practice of this step of the method;

FIG. 2 is a view of the product obtained from the first step of the method, with legends applied thereto explanatory of the structural characteristics of the product thus obtained;

FIG. 3 is a view depicting the second step of the method of fabricating the product, with legends applied thereto explanatory of the practice of this second step of the method; and

FIG. 4 is a view of the final fabricated product as obtained in the second step of the method shown in FIG. 3, with legends applied depicting structural and use characteristics of the end or final product thus obtained from the said second step of the method.

Referring now more in detail to the drawings, I shall first make reference to FIGS. 1 to 3 thereof, which depict and explain the steps of the method of fabricating the ornamental expandible strip product.

In the first step of the method shown in FIG. 1, yarn strands 10 and 12 are stretched and are coiled about in the same direction and on opposite sides of a highly stretched elastic core 14. The yarn is a texturized yarn which may be of any fabric material and is preferably nylon. The yarns 10 and 12 are coiled tightly about the rubber core 14, which latter is under tension being stretched approximately five times its normal length. Conjointly with the coiling of the yarns 10 and 12, there is also coiled tightly about the elastic core 15 and in the same direction as the coiling of the elastic core 14 tautened metallic strips (such as tinsel strips) 16 and 18, preferably made of Mylar. While the yarns 10 and 12 are indicated as single strands of yarn, I employ a plurality of strands of yarn for each side of the coiled assembly. In practice, I prefer to use eight carriers of yarn and tinsel strips in two sets of four, six carriers having the texturized yarn and two carriers having the tinsel strips.

The legendary matter to FIG. 1 of the drawings is explanatory of this described practice of the first step of the method. The elastic core 14 is under tension as indicated by the arrows *a*, *a*, the texturized yarn 10 and 12 is under stretch, as indicated by the arrows *b*, *b*, the tinsel strips 16 and 18 being tautened, is indicated by the arrows *c*, *c*, the direction of the attachment of the cover combination to the elastic core is indicated by the arrow *d*.

FIG. 2 shows the relaxed product of the first step of the method of FIG. 1, this product being wound on reels or spools for the practice of the second step of the method. The product shown in FIG. 2 depicts the yarn strands 10 and 12 relaxed, bunched and locked to the elastic core 14 and the tinsel strands 16 and 18 in their

relaxed condition, this combination forming the cover of the core. The yarn strands and the tinsel strands at this stage of the method are bunched and locked to the core in the manner illustrated in the figure. The core 14, although relaxed, is under a low stretch, the same having a retained low stretch about twice the normal length of the rubber core. As a result of the interrelated tensions of the now relaxed yarn strands and the low stretch of the elastic core, the core remaining under low tension by the radial pressure of the braided yarn biting into the same, the yarn strands are caused to be bunched together into closely interlocking coils 20 and 22 evenly distributed along the length of the low stretch core. The tinsel strands 16 and 18 are projected out by the relaxed stretched yarn coils 20, 22 and these are thereby rendered more visible along the surface of the resulting product, thereby enhancing the ornamental character of the product.

In the second step of the method, depicted in FIG. 3, the core and cover product of FIG. 2, now generally designated in combination as 24, wound on a reel or spool 26, and mounted on a support 28, is put at its open end under a slight tension as indicated by the arrow e; and the core and cover product is rotated in the same direction as the coiling of the yarn strands (as indicated in FIG. 4) by rotating the support 26 by means of a motor 30; and from the reel or spool 26, the core and cover product 24, is fed through a tube 32, and through and by a set of rollers 34. The result of this operation is to impart a slight twist to the rubber core and its cover as indicated by the character 36. This twist remains as a permanent or stable twist in the resulting product. The twist in the product aids in securing the desired interlock of the yarn strands and the metal tinsel strips to the elastic core and also results in straightening out and longitudinally aligning the strand coils 20 and 22 on the elastic core.

FIG. 4 shows the end fabricated product as resulting from the second step of the method (FIG. 3). As shown in this end product, the elastic core 14 is characterized by a retained twist, the core also retaining its low stretch in the manner above described. The now relaxed yarn 10 and 12, with the interspersed tinsel strips 16 and 18, tightly wound, contracted on and locked to a stretched and twisted elastic core, yields a fabricated product, which in addition to the structural and use characteristics described, is characterized by yarn coils which are distributed uniformly with the desired fullness and straightness along the length of the elastic core, as sought to be illustrated in FIG. 4 of the drawings.

The method of making the product of the invention is considerably simplified with relation to prior art methods in that by coiling yarn strands in a stretched condition and coiling the same about the stretched elastic core in a single method step results in obtaining a yarn cover the strands of which are securely locked to the core when contracted after the practice of this first step and the coils of the yarn are effectively and uniformly distributed along the length of the product. With the simultaneous and conjoint coiling of the tinsel strips onto the assembly in this step of the method, the product is highly ornamented by the loops of the tinsel strip extending to the exterior of the formed product.

The second step of the method may be practiced with facility and this latter step is used merely to introduce a permanent twist to the product with the result of aiding in securing the interlock of the yarn strands and the metal strips to the elastic core and in adding in straightening out and longitudinally aligning the strand coils to the elastic strip. There results from this method the structural characteristics of the product as described.

It will be apparent that changes may be made in the materials employed and the practices of the steps of the method described, without departing from the spirit of the invention in the following claims.

I claim:

- 15 1. The method of making an ornamental expandable strip which comprises as a first step coiling stretched yarn about, in the same direction and on opposite sides of a highly stretched elastic core, relaxing the stretch on the core, thereby obtaining a core relaxed, but under a retained low stretch and a yarn cover therefor the strands of which are contracted and locked to the core, then subjecting the core and cover, under a slight tension applied thereto, to rotation in the same direction as the coiling of the yarn strands to apply a twist to the combined core and cover, thereby resulting in a combined core and cover, when relaxed, possessing a retained low stretch and a stable twist with the yarn cover tightly contracted on and locked to the elastic core.
- 20 2. The method of claim 1, wherein the yarn of the yarn cover is a textured yarn.
- 25 3. The method of claim 2, wherein the textured yarn of the cover comprises a plurality of yarn strands in each of the coiled opposite sides of the elastic core.
- 30 4. The method of claim 1, wherein tautened tinsel strips are coiled about in the same direction as the coiling of the yarn strands and on opposite sides of the elastic core in the first step of the method conjointly with the coiling of the stretched yarns about the elastic core.
- 35 5. An ornamental expandable strip comprising a low-stretched elastic core and an ornamental yarn cover embracing the same, the yarn cover comprising yarn strands stretched and coiled about in the same direction and on opposite sides of the elastic core, each of the coiled strands being coiled about the stretched core, the core and yarn cover combinedly possessing a stable twist, the yarn cover being tightly wound, contracted on and locked to the stretched and twisted elastic core.
- 40 6. The ornamental expandable strip of claim 5, wherein the yarn of the yarn covers is a textured yarn.
- 45 7. The ornamental expandable strip of claim 6, wherein the textured yarn strands of the cover comprises a plurality of yarn strands on each of the opposite sides of the elastic core.
- 50 8. The ornamental expandable strip of claim 5, wherein tautened tinsel strips are coiled about in the same direction as the coiling of the yarn strands and on opposite sides of the elastic core conjointly with the coiled stretched yarn strands.

\* \* \* \* \*

UNITED STATES PATENT OFFICE  
CERTIFICATE OF CORRECTION

PATENT NO. : 3,832,841  
DATED : September 3, 1974  
INVENTOR(S) : BERNARD M. COLE

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

on front page after "Assignee:" delete  
"STRIBBONS LTD. Roslyn Heights, New York" and insert--  
CONNECTICUT NARROW FABRICS CORP., Roslyn Heights,  
New York--.

Signed and Sealed this

ninth Day of September 1975

[SEAL]

Attest:

RUTH C. MASON  
*Attesting Officer*

C. MARSHALL DANN  
*Commissioner of Patents and Trademarks*