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Protz, Jr.

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[54] **METHOD OF MAKING A RIBBON GARLAND**

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Related U.S. Patent Documents

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U.S. Applications:

[63] Continuation of Ser. No. 651,664, Feb. 6, 1991, Pat. No. 5,091,226.

[51] **Int. Cl.**[6] **A41G 1/04**

[52] **U.S. Cl.** **493/346**; 57/24; 428/10; 493/958

[58] **Field of Search** 57/24, 203; 156/148; 362/122; 428/7, 10, 27; 493/346, 958

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Exhibit E6—Photocopy of F. C. Young Garland Samples & Drawings used in Protest.

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[57] **ABSTRACT**

A decorative garland. A product and method of manufacture of garland includes a web having transversely cut center and border sections, and the center section has longer length transverse cuts and the border sections have shorter length transverse cuts. The cut film web is folded and then stuffed using a wire spine to hold a high density of cut film web. The stuffed web is then twisted causing formation of a helically rotated array of loops of the longer length transverse cut sections, and a tinsel-like material is positioned nearest the wire spine formed from the shorter length transverse cut sections of the web.

10 Claims, 3 Drawing Sheets

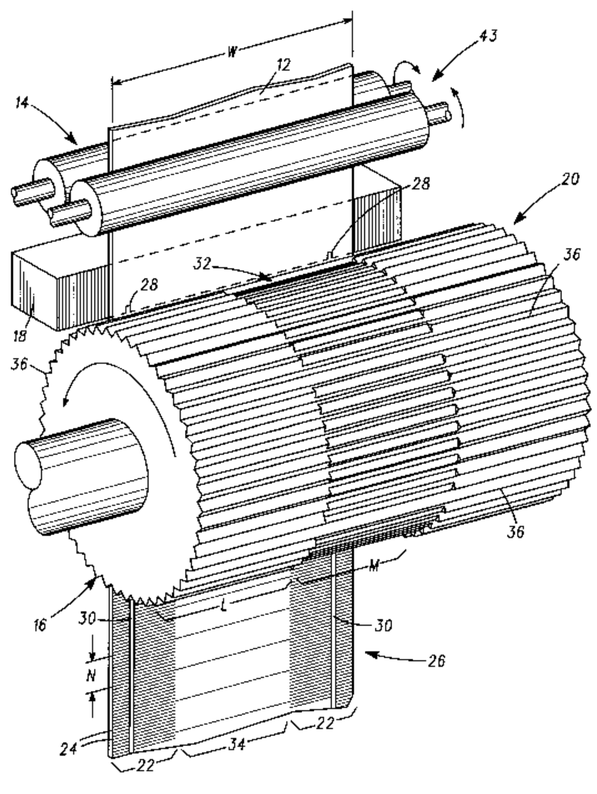

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Exhibit F1—National Tinsel, Christmas 1989 Catalog, p. 51.
Exhibit F2—Porth Decorative Products 1986 Catalog, "Tree Decoration Pack".
Exhibit F3—Proth Decorative Products 1990 Catalog, p. 18.
Exhibit G1—Photograph from National Tinsel 1991 Catalog showing Fantasy Garland & Curly Velvet Garland.
Exhibit G2—Photograph from National Tinsel 1991 Catalog showing Fantasy Garland & Curly Velvet Garland.
Exhibit G3—Photograph from National Tinsel 1991 Catalog showing Fantasy Garland & Curly Velvet Garland.
Exhibit G4—Photograph from National Tinsel 1991 Catalog showing Fantasy Garland.
Exhibit G5—Photograph of F. C. Young Angel Spun Garland.
Exhibit G6—Photograph of F. C. Young Angel Spun Garland.
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Exhibit G10—National Tinsel, Christmas 1991 Catalog, pp. 6 and 11.
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Exhibit H3—Santa's Best Tinsel 1992 Price List, pp. 3–15.
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Exhibit H5—Santa's Best Tinsel 1992 Catalog, pp. 1,2,7, and 8.
Exhibit H6—Youngcraft 1992 Catalog, p. 6.
Exhibit H7—Youngcraft 1992 Price List, pp. 3–10.
Exhibit I—Porth Products Catalog (formerly Porth Textiles and Swan), Swan Christmas Decorations and Gift Dressings 1975–76, showing Tinsel Garland (double bubble garland with or without fringe).
Exhibit J1—Sample of Large Curly Velvet Garland.
Exhibit J2—Sample of Regular Curly Velvet Garland.
Exhibit J3—Sample of Garland with loop length about 1", loop width about ¼", and about ¼" fringe radiating from center.
Exhibit J4—Sample of Regular Tiffany Garland.
Exhibit J5—Sample of Garland with loop less than 1", loops less than ¼" with fringe almost as long as loop.
Exhibit J6—Sample of Garland with loop length about 1" and loop width less than ¼" with fringe as long as loop.
Exhibit J7—Sample of Angel Spun Garland.
Exhibit J8—Sample of Angel Hair Garland.
Exhibit J9—Sample of Garland with loop width less than ¼", loop length less than or about 1" with no fringe radiating from center.
Exhibit J10—Sample of Garland with loop width less than ¼", loop lenth less than or about 1" with additional shorter inner loop.
Exhibit J11—Sample of Garland with loop width less than ¼", loop length greater than 1" and less than ¼" fringe radiating from center.
Exhibit J12—Sample of Fantasy Garland.
Exhibit J13—Sample of Garland with 2 loop widths, loop length about 1", and less than ¼" fringe radiating from center.
Exhibit J14—Garland with loop width less than ¼", loop length about 1" and less than ¼" fringe radiating from center.
Exhibit J15—Garland with 2 loops, has twisted appearance, loop widths less than ¼", loop lenghts about 1", and fringe almost as long as loop.
Exhibit J16—Sample of Garland with loop width less than ¼", loop length about 1", and fringe radiating from center—some less than ¼" in length and in width and some as long as loop and half as wide as loop.
Exhibit J17—Sample of Garland with loop length about 1" and loop width less than ¼" with fringe radiating from center—some shorter than and some longer than loop.
Exhibit J18—Sample of Garland with loops about 1" and less than ¼" in width, with fringe longer than loops, and loops have a twisted appearance.
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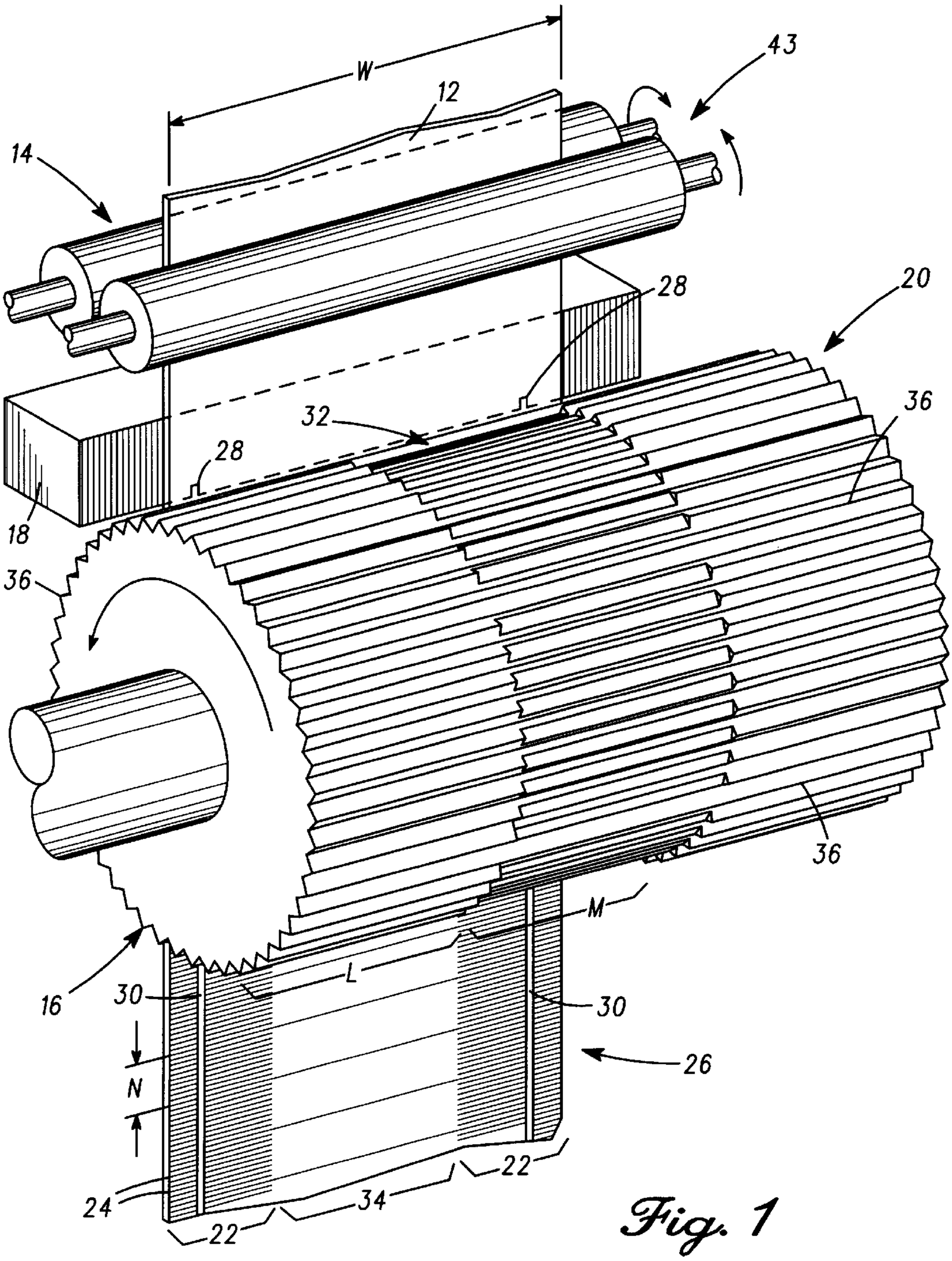


Fig. 1

Fig. 2

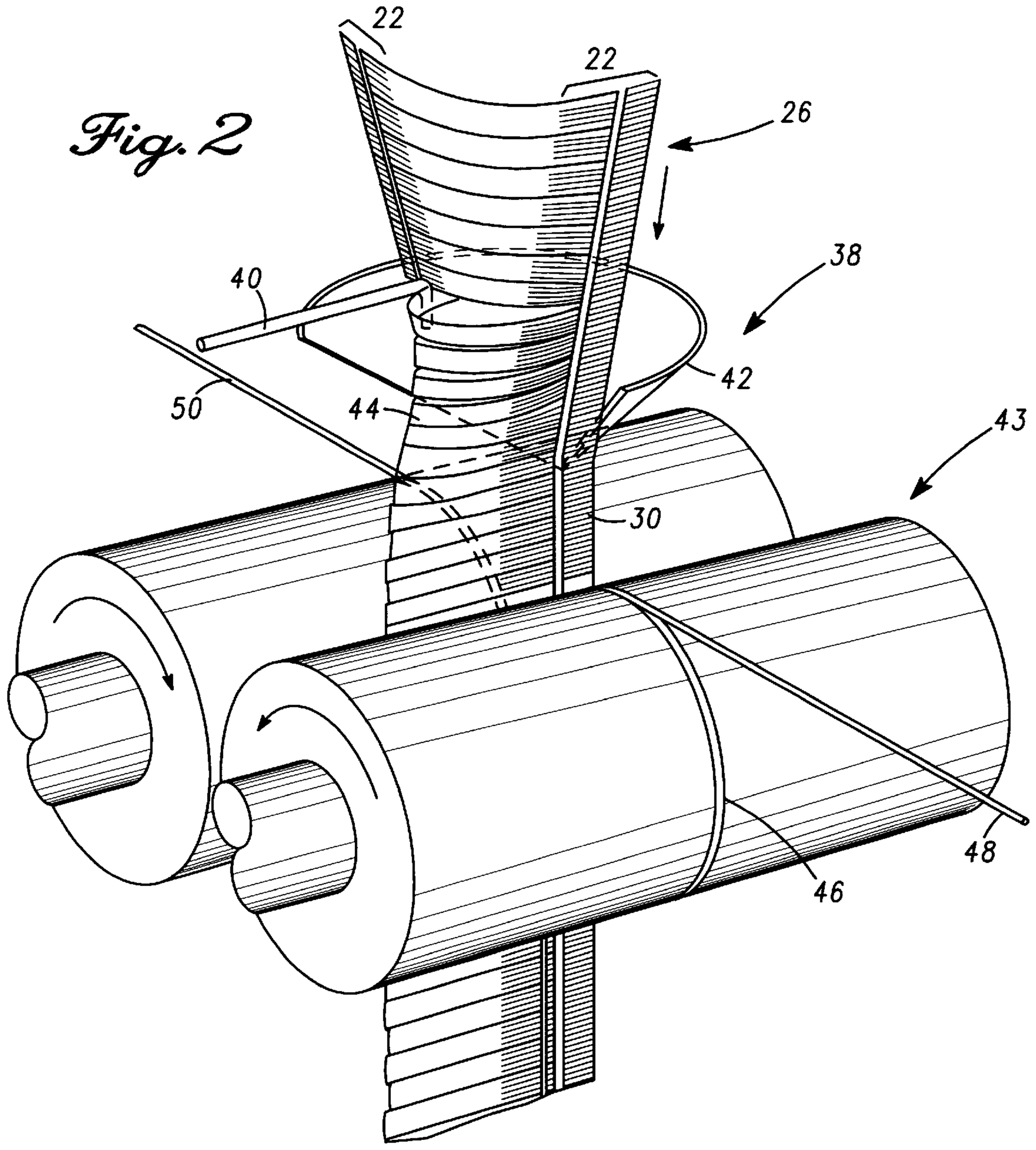
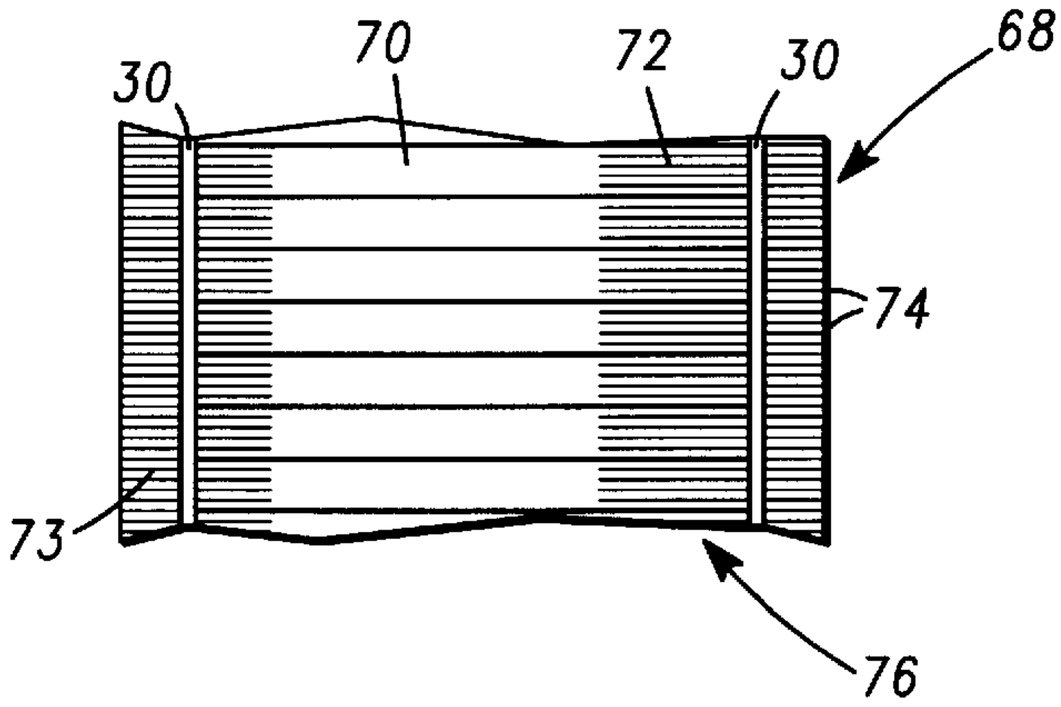


Fig. 3C



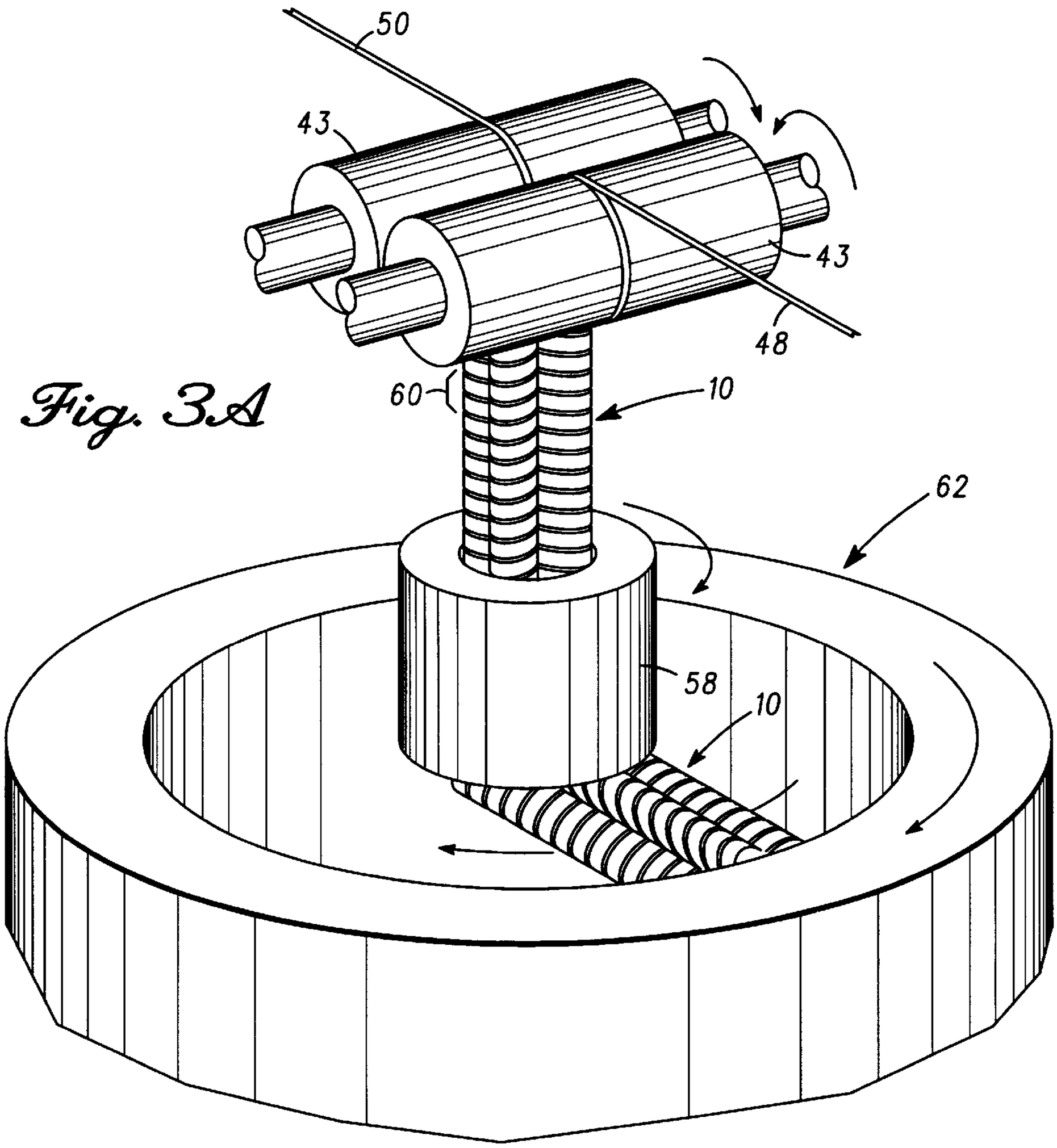


Fig. 3A

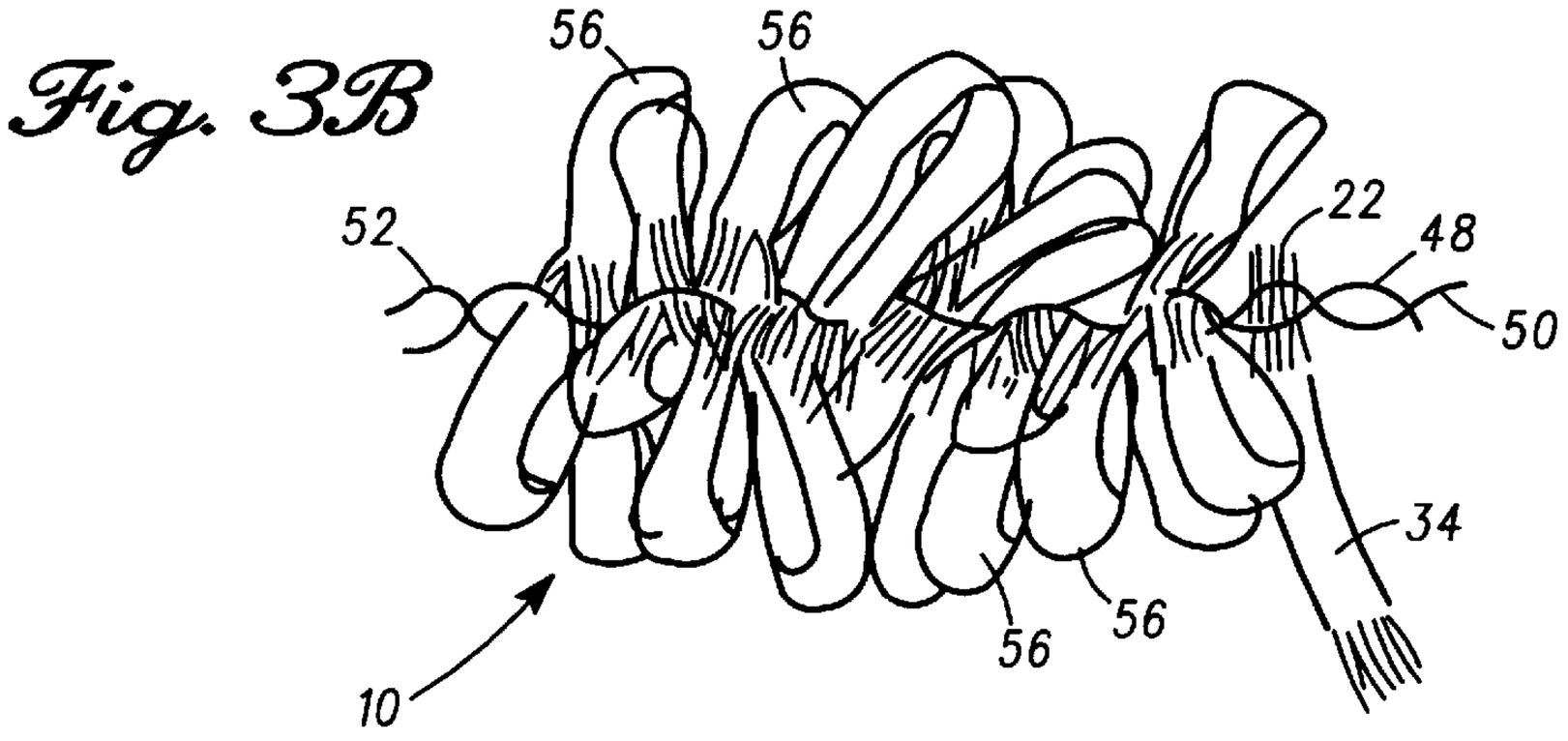


Fig. 3B

METHOD OF MAKING A RIBBON GARLAND

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates the additions made by reissue.

This is a continuation of co-pending application Ser. No. 07/651,664, now U.S. Pat. No. 5,091,226 filed on Feb. 6, 1991.

The present invention is directed generally to a decorative garland. More particularly, the invention is directed to a decorative garland constructed from a cut film web having a center web portion with widely spaced transversely cut sections forming loops upon longitudinal folding of the web. The web further includes a border web portion with narrowly spaced transversely cut sections forming a fine cut, tinsel-like appearance near the wire spine holding the film web.

Previous decorative garland typically has a uniform, finely cut tinsel appearance or consists of a longitudinal string of bows or loops. Garland thus has not been constructed from a web of cut film to produce a product of varying decorative appearance. In addition, it has been extremely difficult to produce decorative garland using wider film web sections for the loop type of elements or wide cut tinsel elements. The supporting wire spin can crush and distort wider strips of loops or tinsel elements, creating an unattractive appearance for the garland, and it is also difficult to stuff any substantial amount of film web into the wire spine having wide strips for the loops or tinsel elements.

It is therefore an object of the invention to provide an improved decorative garland and method of manufacture.

It is another object of the invention to provide a novel decorative garland having at least two different film web texture features.

It is a further object of the invention to provide an improved decorative garland constructed from a cut film web having widely spaced transverse cuts in a center web portion and narrowly spaced transverse cuts in a border web portion.

It is an additional object of the invention to provide a novel decorative garland constructed from a film web folded longitudinally along a line through a center web portion.

It is yet another object of the invention to provide an improved decorative garland having a wire spine twisted along a folded border web portion of a cut film web and forming a spiraled plurality of wide cut loops extending from the wire spine and a plurality of narrow cut tinsel-like elements nearest the wire spine.

It is still a further object of the invention to provide a novel cut film web having a center web portion and border web portion with different widths of transversely cut sections for forming decorative garland.

It is yet an additional object of the invention to provide an improved decorative garland having a mixture of a variable width cut film web held by a spirally wound wire spine.

It is still another object of the invention to provide a novel decorative garland comprised of a spirally wound wire spine holding a narrowly cut border web portion, allowing the wider cut center web portion to form undistorted loops extending from the wire spine.

It is yet a further object of the invention to provide an improved garland having a high density of web loops and/or tinsel-like elements by virtue of wrapping the wire around a crushable, narrowly cut border web portion.

Other objects, features and advantages of the present invention will be readily apparent from the following description of the preferred embodiments thereof, taken in conjunction with the accompanying drawings described below wherein like elements have like numerals throughout the several views.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates the feeding of raw web material to a cutting device for forming a cut film web;

FIG. **2** shows the folding of the cut film web and the use of wires to receive and hold the cut film web along a longitudinal line within the narrowly spaced cut, border web portion; and

FIG. **3**A illustrates the spinning and twisting of the garland product to obtain the desired wire spine twist; FIG. **3**B shows a close view of the garland and wire spine region used for stuffing the cut film web and achieving the spiral arrangement of loops formed; and FIG. **3**C shows a web with asymmetrical cut widths for the center and border web portions.

DETAILED DESCRIPTION OF A PREFERRED EMBODIMENT

A decorative garland constructed in accordance with the invention is shown generally at **10** in FIG. **3**B. The structure of the decorative garland (hereinafter "garland **10**"), can best be understood by reference to FIGS. **1–3** showing various stages of manufacture. A source web (not shown) of material, such as conventional plastic, nylon, cloth fabric and the like, are precut to a desired width "W" for a starting web **12** shown in FIG. **1**. This starting web **12** is drawn by feed rollers **14** for selective cutting by a cutting means, such as a rotary cutter **16** and an associated cutting bar **18**. In order to generate the desired cutting pattern, the rotary cutter **16** has spaced cutting edges **20** extending the desired length "L" to form a border web portion **22** having narrowly spaced cuts **24**, transversely disposed along cut film web **26**. Note the cutting bar **18** interacts with the rotary cutter **16** to complete the cutting process, and includes at least one notch **28** to leave a continuous uncut web strip **30**. The uncut web strip **30** is needed to maintain the necessary rigidity and support to enable processing of the cut film web **26**.

A recessed section **32** of length "M" in the rotary cutter **16** allows formation of a center web portion **34** having a widely spaced transverse cut (e.g., of width "N" in FIG. **1**). That is, the cutting edges **20** are recessed along M to prevent cutting the web **12**. Therefore, the wider web portions **34** are formed by using selected cutting teeth, such as tooth **36**, to cut across the full width of the web **12**, except for the region of the uncut web **30**.

The resulting cut film web **26** is then fed to a folding and stuffing station **38** shown in FIG. **2**. The cut film web **26** is folded longitudinally along a line through the center web portion **34** using folding means. An example of such a folding means is shown in FIG. **2** wherein a curved rod **40** flips the edge of the cut film web **26**. The web **26** can then engage a "V" shaped guide device **42** which gathers or completes the fold of both of the border web portions **22** in a back to back manner.

Draw rolls **43** pull the folded web **44** at the same linear speed of travel as the feed rolls **14**. These draw rolls **43** include means for holding the folded web **44**, including wire grooves **46** for guiding a front wire **48** and a rear wire **50** into engagement with the folded web **44**. The wires **48** and **50** are

preferably metered out at a rate of travel of approximately one-sixth the rate of linear travel of the folded web **44**. These two wires **48** and **50** are then twisted about the narrow cut border web portions **22** to form a wire spine **52** (see FIG. **3**B) enabling the support and compaction, or stuffing, of the folded web **44** by the wire spine **52** without crushing or crinkling of the wider center web portion **34**. In addition, this speed differential between the wires and web enables forming a garland **10** having a high density of loops **56** and of narrowly cut border web portions **22** along the length of the wire spine **52**. In fact, due to the crushable nature of the narrowly cut portions **22**, the wire spine **52** can retain a substantial amount of web material compared to trying to compact wider cut web material. This high density stuffing further results in the narrowly cut, or closely spaced cut, tinsel-like border web portions **22** appearing as a distinctive tinsel-like decorative element. These tinsel-like elements are radially disposed near the wire spine **52**, and the bow-like loops **56** are disposed further from the wire spine **52** (see FIG. **3**B).

The twisting process is best illustrated in FIG. **3**A wherein the draw rolls **43** engage the folded web **44** with the wires **48** and **50** in the manner described hereinbefore. A rotating bushing assembly **58** centers and aids in twisting unfinished web **26**, resulting in forming the finished garland **10** just below the draw rolls **43** in region **60**. The assembly **58** also directs the garland **10** to a rotating drum **62**. In the drum **62** a centrifugal force is generated and is transmitted upward to the region **60** of the web **26**, causing the twisting of the wires **48** and **50** to form the helically wound wire spine **52**. The resulting finished garland **10** is also collected in the rotating drum **62**. The rate of linear travel for the folded web **44**, the infeed rate of the wires **48** and **50** and the rotational rate of the rotating drum **62** can be used, alone, or together, to control the pitch of the wire spine winding and the density of the folded web **44** along the wire spine **52**.

In other embodiments more than two wires can also be used and more than one type or number of the starting webs **12** (different color, different transverse cut spacing or even longitudinal cuts) could be used to take advantage of the features of the invention.

In another form of the invention shown in FIG. **3**C, a cut film web **68** can include widely spaced transverse cut sections **70** and a transversely adjacent web portions **72** and **73** having narrowly spaced transverse cut sections **74**. This asymmetric cut pattern with varying widths of transverse cut spacings will enable forming a garland having a different appearance than shown in FIG. **3**B.

The cut film web **68** shown in FIG. **3**C can be processed in a similar manner as shown in FIGS. **1**–**3**A to produce however a somewhat appearing garland. The appearance of the resulting garland would depend upon the selected location where the wires **48** and **50** were engaged with the cut film web **68**. For example, if the wires **48** and **50** were engaged along line **76** shown in FIG. **3**C, the resulting garland would generally still include loop shapes, such as the loops **56** in FIG. **3**B. However, the tinsel-like features of narrowly cut sections **74** will appear not only very near the wire spine **52** (as in FIG. **3**B), but will also appear radially further out from the wire spine **52** near the radial extension of the loops **56**. Other such decorative features can be generated by selecting different widths for the starting web **12** over which wide and narrow transverse cutting is carried out.

While preferred embodiments of the invention have been shown and described, it will be clear to those skilled in the art that various changes and modifications can be made without departing from the invention in its broader aspects as set forth in the claims provided hereinafter.

I claim:

1. A method of making a decorative garland, comprising the steps of:

providing a starting web of film material;

cutting said starting web film material between longitudinal edges, said cutting being selectively performed by cutting means to generate a cut pattern with said starting web film material having an uncut longitudinal web strip near each said longitudinal edge to maintain support of said cut pattern of said starting web film material and said cut pattern comprised of a shorter transverse length of cut web film material on one side of each said uncut web strip and a longer transverse length of cut web film material on the other side of said uncut web strip;

folding said web film material only once along a longitudinal axis of said cut web film material and along a single fold line about in the middle of said web film material to form a plurality of loops from said cut web film material; and

applying a wirelike spine to said folded cut web film material to form a plurality of loops extending radially outward from said wirelike spine, said wirelike spine further twisted about said cut web film material such that said shorter transverse length of cut web film material is disposed radially closer said wirelike spine than the ends of said loops.

2. The method as defined in claim **1** wherein said wirelike spine is applied to said folded cut form of said starting web film material with said shorter transverse length of said cut web film material being compacted or stuffed along the length of said wirelike spine thereby retaining a high density of said cut web film material along said wirelike spine.

3. The method as defined in claim **1** wherein said cut form of said starting web film material includes substantially equal width cuts longitudinally for said shorter and longer transverse lengths of said starting web film material.

4. The method as defined in claim **1** wherein said step of longitudinal folding results in a plurality of transverse cut strips of said starting web film material being folded against each other to form a plurality of said loops disposed in a helical pattern about said spine.

5. The method as defined in claim **1** wherein said cut form of starting web film material includes different longitudinal width transverse cuts of said starting web film material.

6. A method of making a decorative garland, comprising the steps of:

providing a starting web film material;

cutting transversely said starting web film material between longitudinal sides of said starting web film material and with at least a portion of the cut part of said starting web film material stopping short of each of the longitudinal sides of said starting web film material and further forming shorter transverse length cuts of border web film material portions adjacent the longitudinal sides of said web film material;

folding said cut starting web film material longitudinally along a line between the longitudinal sides of said cut web film material such that a plurality of loops are formed and said shorter transverse length cuts of border web material are disposed face on each other after folding; and

wrapping said folded web film material using a wirelike spine to hold said folded cut web film material by

twisting said wirelike spine about said folded cut web film material such that loops are formed on one side of said wirelike spine and the shorter transverse length cuts of border web material which are extensions of each said loop form open ended portions of said cut web film material radially closer to said wire spine compared to the radial end of each said loop, said twisted wirelike spine causing formation of a helically twisted array of loops along the length of said spine and further compacting said cut web film material along the length of said wirelike spine to retain a high density of said cut web film material along said wirelike spine.

7. A method of forming a decorative garland having a plurality of loops, comprising the steps of:

providing a starting web film material;

cutting said web film material between longitudinal sides of said web film material with substantially equal longitudinal width cuts and said web film material including a longer transverse length cut portion and with a shorter transverse length cut portion being positioned adjacent the longitudinal borders of said web film material, said longer and shorter transverse length cut portions separated by an uncut longitudinal web strip for providing support for said web film material;

folding said web between the longitudinal sides of said cut web film material;

wrapping said folded web film material along a longitudinal axis of said web film material using a wirelike spine to hold said folded cut web by twisting said spine about said folded cut web film material causing formation of said loops in a helically twisted array along the length of said spine and each of said shorter transverse length cut portions being disposed radially nearest said wire spine relative to said loops; and

compacting said shorter transverse length cut portion along said wirelike spine thereby retaining a high density of said cut web film material along said wirelike spine.

8. The method as defined in claim **7** wherein at least one of a rate of linear travel for said folded cut web film material and an infeed rate of said wirelike spine can be varied to control the level of said high density of said cut web film material along said wirelike spine.

9. A method of making a decorative garland comprising the steps of:

providing an elongate web of film material having longitudinal edges;

cutting said web between said longitudinal edges to form an uncut strip adjacent each of said longitudinal edges and to form a plurality of cut sections extending between said uncut strips;

folding said cut web so as to bring said uncut strips substantially parallel to and adjacent each other thereby forming said cut sections into loops extending between said uncut strips;

stuffing said folded cut web in a direction along its length to increase the density of said loops;

applying a wire-like spine to said stuffed folded cut web adjacent said uncut strips; and

twisting said wire-like spine to capture and retain said stuffed folded cut web and to arrange said loops radially around said wire-like spine.

10. A method as defined in claim 9 further including the step of cutting said web to form a plurality of cut sections extending outwardly from said uncut strips to said longitudinal edges.

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