Oct. 27, 1964 S. RANOHA 3,154,457

DECORATIVE AND ORNAMENTAL ARTICLES

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Fig. 1

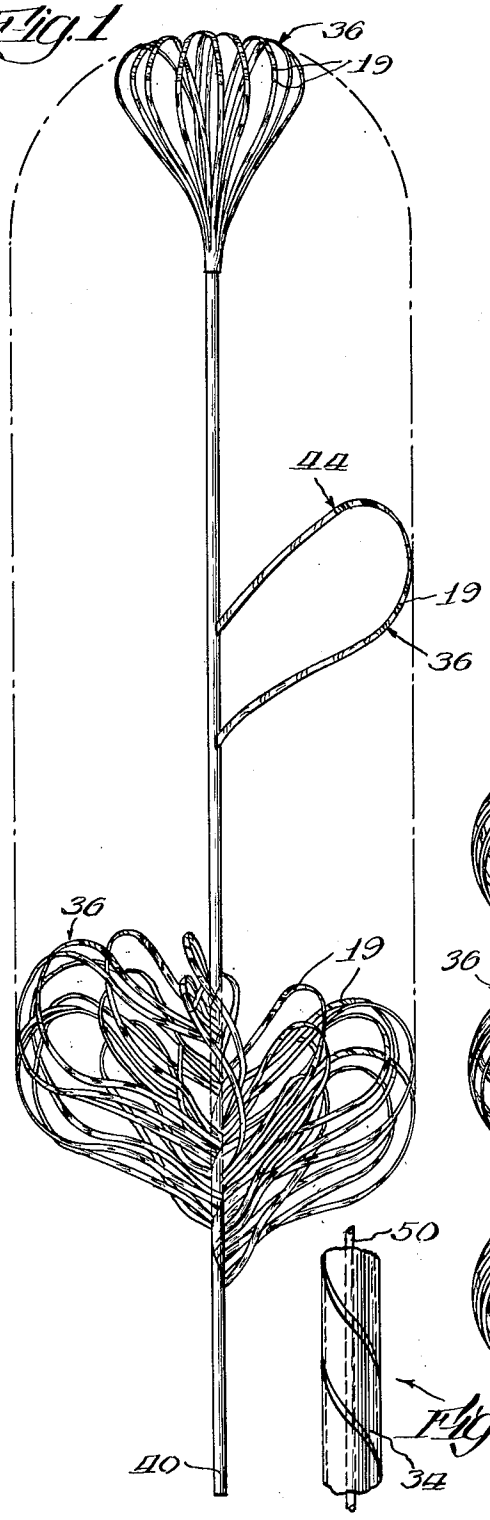


Fig. 2

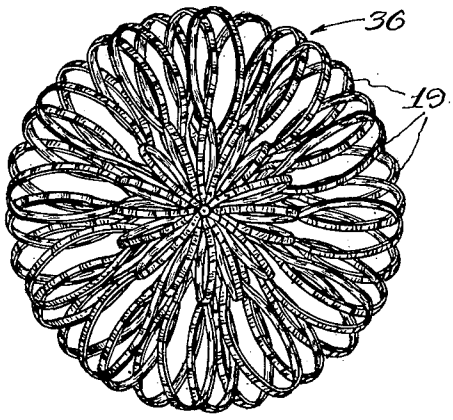


Fig. 3

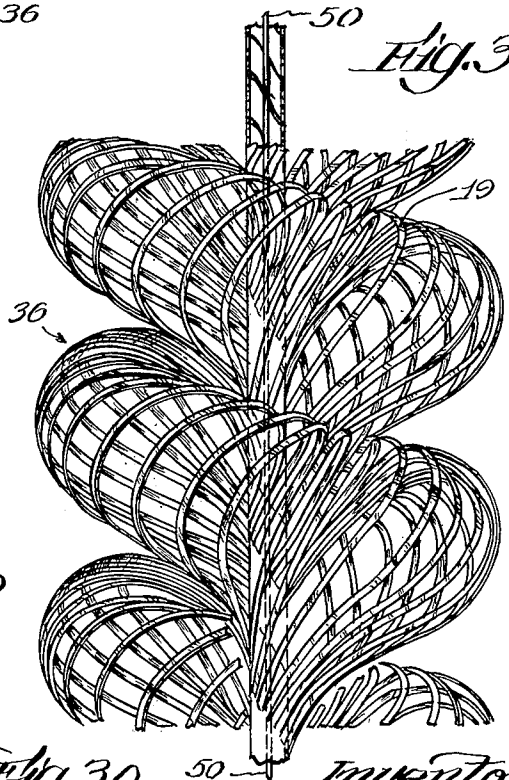


Fig. 3A

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Fig. 1

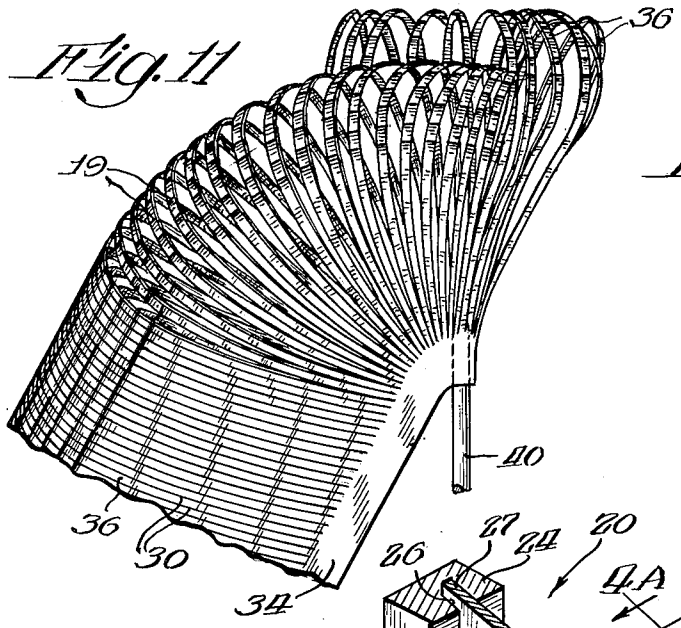
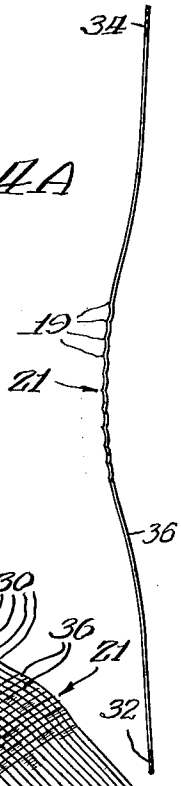


Fig. 4A



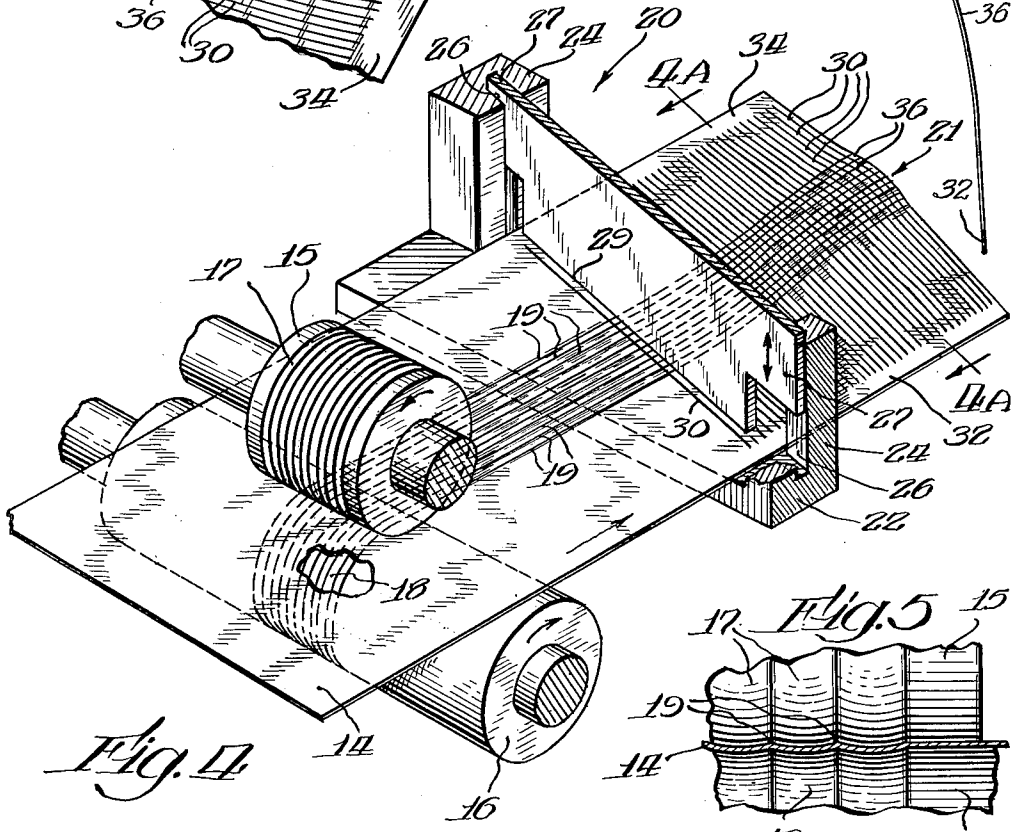


Fig. 4

Fig. 5

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Fig. 6

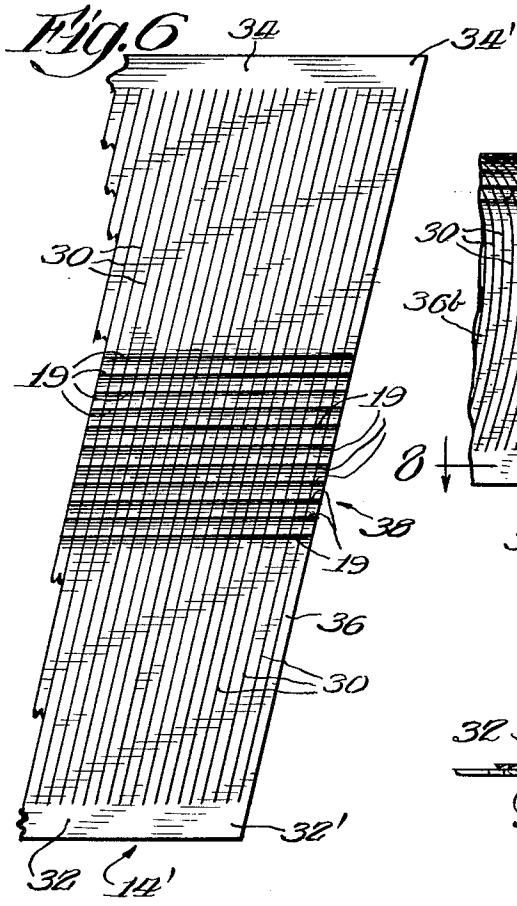


Fig. 7

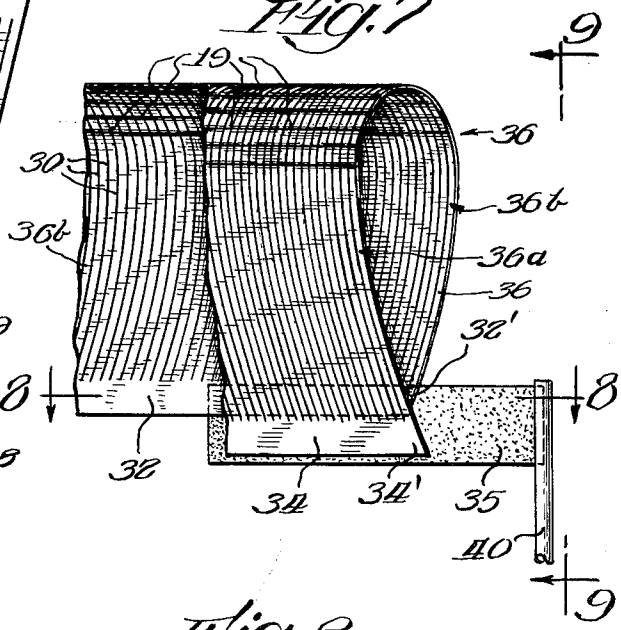


Fig. 8

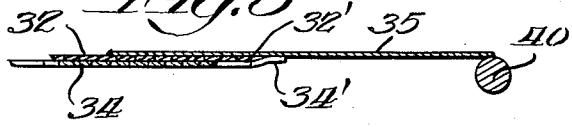


Fig. 9

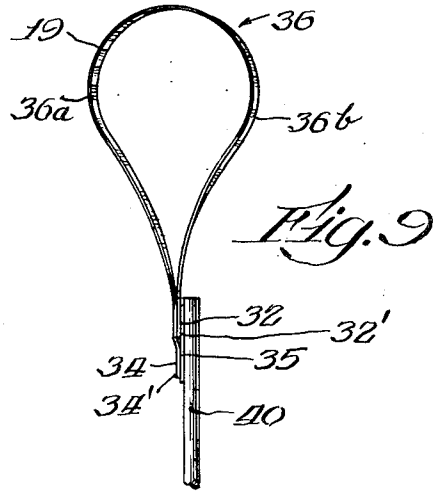
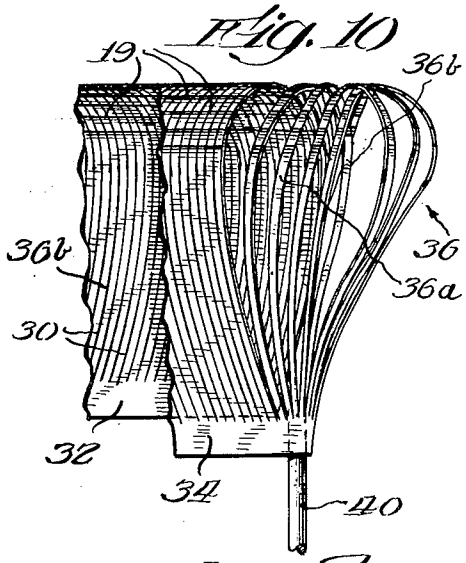


Fig. 10



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3,154,457

DECORATIVE AND ORNAMENTAL ARTICLES

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Filed Sept. 24, 1962, Ser. No. 225,457
5 Claims. (Cl. 161—22)

This invention relates to decorative and ornamental articles.

One of the objects of this invention is to provide a decorative and ornamental article adapted to form branches for an artificial tree.

Another object of this invention is to provide an artificial tree formed of branches made of a decorative and ornamental article forming this invention.

Another object of this invention is to provide a decorative and ornamental article adapted to form garlands, wreaths and other decorative products.

Another object of this invention is to provide a strip of material which is slitted intermediate the opposite edges of the strip to form parallel extending fingers or needles and opposite unslitted marginal edges for said fingers or needles, which strip is folded substantially midway of its width to form looped fingers or needles and then helically wound to form a garland, wreath, or branch for an artificial tree or other like object.

Another object of this invention is to provide fingers or needles, as aforesaid, which have a slight twist and wherein the finger or needle surface changes angles and wherein the fingers are provided with light gathering facets.

One of the embodiments of this invention is directed to artificial trees of the type generally described in Patents No. 2,889,650, No. 2,893,149, and No. 3,041,767; however, the formation of the branches made in accordance with this invention is entirely different from that shown in said patents.

An object of this invention is to provide a branch for an artificial tree in which fingers are looped and are attached at their opposite ends to the branch rod forming a continuous finger. The looped fingers provide an attractive and pleasing appearance and give the branch a fullness which permits the use of a lesser number of branches than heretofore used to obtain the same results.

Other objects will become apparent as this description progresses.

In the drawings:

FIG. 1 is a view of a branch of an artificial tree formed in accordance with this invention. Portions along the stem or rod are omitted for purpose of clarity.

FIG. 2 is a top view of the branch shown in FIG. 1.

FIG. 3 is a view of a garland formed in accordance with this invention.

FIG. 3–A is an enlarged portion on FIG. 3, showing the helical or spiral winding of the strip.

FIG. 4 is a view of the machine used in slitting and forming transverse embossings on the fingers.

FIG. 4–A is an enlarged view of the strip taken on lines 4A—4A of FIG. 4.

FIG. 5 is an enlarged sectional view showing a portion of the rollers for forming the transverse embossings.

FIG. 6 is a view of a portion of the strip just prior to folding.

FIG. 7 is a view of the strip folded and showing it attached to a rod as in forming an artificial branch.

FIG. 8 is a view taken on lines 8—8 of FIG. 7.

FIG. 9 is a view taken on lines 9—9 of FIG. 7.

FIG. 10 is a view showing the strip wound around the tip of the stem in forming the branch, and

FIG. 11 is a view showing the strip being helically or spirally wound around the stem following the initial winding as in FIG. 10.

Reference will first be made to FIGS. 4, 5, 6 and 7, which illustrate the formation of the strip prior to its winding.

The material is preferably an aluminum foil, but may be paper or any other pliable material. As best seen in FIG. 4, the continuous strip of material 14 is fed from a roller (not shown) on which it has previously been rolled to pass between two rollers 15 and 16 to a slitting machine indicated generally at 20.

The upper roller 15 is shaped to provide spaced annular raised portions or ribs 17 and the lower roller 16 is provided with complementary annular depressions or female portions 18 into which the ribs extend. The ribs and female portions do not extend the full width of the rollers but are positioned centrally of the rollers. As the continuous strip of material 14 passes between the cooperating rollers 15 and 16, the ribs and depressions on said rollers produce equally spaced indentations, scorings or embossings 19 continuously along the length of the strip. These indentations extend for a portion of the width of the strip along the center of the strip and adjacent thereto. After the strip has been thus formed it continues forwardly to the slitting machine.

The slitting machine includes a table 22 having a pair of spaced uprights or posts 24 positioned opposite each other. Each upright or post has a vertical groove 26 to receive the guide ends 27 of a knife or blade 28 provided at its lower end with a cutting edge 29. One of the posts 24 is positioned forwardly of the other so that the knife or blade is positioned at about a 15° slant relative to the longitudinal. The knife or blade is operatively connected to an operating mechanism (not shown) which will reciprocate the blade 28 in the guide posts in timed relation to the feeding of the aluminum material 14 so that spaced diagonal slits 30 are cut in the strip of material as it moves forwardly across the surface of the cutting table, with the knife 28 reciprocating to cut or slit the material. It should be noted that the cutting or knife edge 29 is of a length less than the width of the strip of material 14 so that as the knife cuts the diagonal slits 30 on a bias of approximately 15°, the opposite marginal edges of the strip, namely, the marginal edges 32 and 34 of the strip will not be cut. For purpose of illustration, strips of the following dimensions have provided excellent ornamental articles. The strip of material 14 should be preferably of a six inch width and the opposite uncut marginal edges 32 and 34 should each measure approximately one-fourth inch, with the slit extending approximately five and one-half inches in length. The spacing between each slit is approximately one-sixteenth of an inch, thus, each of the fingers indicated by the numeral 36 is approximately one-sixteenth of an inch in width and five and one-half inches in length.

The length of the strip of material to be used is determined by the length of the rod on which it is to be secured, if it is used in forming a branch, or the length of flexible wire or string if it is used in forming a garland or wreath. After the continuous roll of material 14 has

been slitted, as above described, it is cut to the desired length of strip which is identified by the numeral **14'**, a portion of which is shown in FIG. 4.

The transverse scorings **19**, in addition to providing reflecting facets in the finished looped fingers also facilitate the bending or folding of the fingers now to be described. The transverse scorings will give the strip a centrally bowed or humped appearance as at **21** after it has been slitted, as best shown in FIGS. 4 and 4A.

As best seen in FIG. 6, the front end **38** of the cut strip **14'** whcih extends across the width of the strip is on a slant or bias of approximately 15° with respect to the longitudinal. The cut strip **14'** of the desired length is folded upon itself as in FIG. 7, across the width of the strip and along the bowed or centrally humped portion **21**, along its entire length, and in so folding the marginal edges **32** and **34** will be positioned adjacent each other but in overlapping relation. The front corner edge **34'** of the upper marginal edge **34** in FIG. 6 will be positioned substantially flush or even with the front corner edge **32'** of the lower marginal edge **32**, however, since the marginal edge **34** when thus positioned extends below the marginal edge **32** almost the width of the marginal edge, the corner edge **34'** will be positioned below the corner edge **32'**. In this folded position, as best seen in FIG. 7, a strip of pressure sensitive tape **35** is secured to the two marginal edges **32** and **34** adjacent the front of the marginal edges to maintain the front portion of the strip in such folded position. A portion of the adhesive tape extends forwardly of the strip to permit it to be secured to the rod if forming a branch as in FIG. 1, or to the flexible wire or string if forming a garland as in FIG. 3, as the first step in the winding operation.

In the folded or bent position before the winding operation, the finger or needle **36** assumes a shape best shown in FIG. 7. The finger or needle forms a loop, which loop has a slight angular twist, giving the finger or needle surface an angular position which changes along the length of the needle surface. The loop of each finger or needle, in addition, gives the finger a generally centrally dome-shaped or bowed appearance, with the opposite sides **36*a*** and **36*b*** of each folded finger slanting gradually inwardly from the top towards the bottom or towards the opposite marginal edges which are adjacent each other. Also, in such folded position the sides **36*b*** of the fingers **36** on the side adjacent the marginal edge **32** slant forwardly from the marginal edge **32** up to the domed top of the finger, and the opposite side **36*a*** of the same finger, namely, the side of the finger adjacent the marginal edge **34** slants rearwardly from the marginal edge **34** up to the dome top of the finger, giving each finger a slight twist, as previously described. All of the sides **36*b*** of the fingers along the marginal edge **32** are parallel to each other and all of the sides **36*a*** of the fingers along the marginal edges **34** are parallel to each other.

In wrapping the aforesaid strip around a rid or flexible wire or string, the marginal edge **32** is positioned adjacent the surface around which it is wrapped and forms the inner wrapping edge. The marginal edge **34** forms the outer edge. For forming the branch of a tree, the aforementioned folded strip is wound around a rod, as best seen in FIGS. 1, 7, 8, 9, 10 and 11, and this will now be described.

The rod **40** is coated with a glue or other adhesive material. With the strip slitted and folded as aforesaid, the strip of material is positioned against the upper end of the rod. Attachment to the rod is first made, as seen in FIG. 7, with the adhesive tape **35** extending forwardly of the strip. The rod **40** is rotated so that the marginal edges **32** and **34** engage the tip portion of the rod with the looped fingers **36** extending outwardly thereof. Approximately two complete windings, as shown in FIG. 10, are made around the tip of the stem to form the branch tip. The rod is rotated slowly, preferably by mechanical means. Thereafter the marginal edges **32** and **34**, in the same relationship as heretofore explained, are helically wound around substantially the length of the rod with the marginal edge **32** first contacting the rod and the marginal edge **34** overlaying it and also being secured to the rod by virtue of the adhesive coating on said rod. The first helical winding is best seen in FIG. 11. Instead of adhesively coating the rod, pressure sensitive tape may be used to secure the strip **14'** to the rod. A portion of the lower end of the rod remains uncovered, as shown in FIG. 1, so that it may be inserted into the opening in the upright trunk for forming the artifical tree.

Each formed finger **36** is continuous and is looped with the central portion of the finger of bowed shape. Each finger extends from the marginal edge **32** to the marginal edge **34**. With the strip **14'** spirally or helically wound on the rod, the opposite ends of each finger when secured to the rod are on different planes. For purpose of illustration, one of such fingers is illustrated in FIG. 1 and is designated by the numeral **44**. It will be understood that the rod in FIG. 1 is covered with a multiplicity of such fingers, as is illustrated in the lower portion of FIG. 1 and best shown in plan in FIG. 2. Due to the fact that each finger is looped and is secured to the rod along two marginal edges and the sides **36*a*** and **36*b*** of the fingers along the opposite marginal edges slant in opposite directions, as heretofore described, the fingers each have a slight twist which produces an added attractiveness to the fingers. A decorative and attractive article is thus produced.

The formation of garlands or wreaths best shown in FIGS. 3 and 3A will now be described.

The strip **14*a*** is formed precisely in the same manner as hertofore described. Instead of securing it to the rod, the folded strip **14*a*** is secured to a string or flexible wire **50**. The strip may be helically or spirally wrapped around the string or wire **50** and tightly secured thereto by an adhesive coating, as was described in connection with the rod. The tip windings may or may not be used. Where the marginal edges of the strip are tightly secured to the string or wire, the shape of the fingers along the length of the string or wire will be as previously described and need not be redescribed. However, the folded strip may be spirally or helically wound loosely around a string or flexible wire **50**, such as shown in FIGS. 3 and 3A, with the marginal edges **32–34** of the strip secured only at their upper and lower ends to the string or wire, with the intermediate marginal edges remaining unglued or unsecured to the string or wire. The spiral windings of the strip will set and the plurality of looped fingers along the length will assume a loose spiral shape, as shown in FIG. 3. This arrangement lends itself to garlands, wreaths and the like and provides a very attractive, decorative and ornamental article.

It will be understood that various changes and modifications may be made from the foregoing without departing from the spirit and scope of the appended claims.

What is claimed is:

1. A decorative and ornamental article of manufacture formed of a strip of material, said strip having a longitudinal securing edge along each marginal edge thereof and a plurality of fingers extending transversely between said marginal edges, said strip being folded so that the two longitudinal securing edges are substantially adjacent each other with the fingers looped and continuing from one securing edge to the other, a holder and said strip having its longitudinally securing edges helically wound and secured to said holder with the looped fingers extending outwardly from said holder.

2. A decorative and ornamental article as described in claim 1, in which the fingers before the strip is folded are parallel to each other and extend diagonally between the marginal edges.

3. A decorative and ornamental article as described in claim 1, in which the fingers are provided with spaced parallel transverse scorings.

4. A branch as described in claim 1, wherein the securing edges of the strip is also wound around the outer end of the holder and secured thereto with the looped fingers forming a tip of looped fingers.

5. An artificial tree having a plurality of branches, each of said branches constructed as defined in claim 1.

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