ASYMMETRIC ARTIFICIAL CHRISTMAS TREE

Inventor: Boyd R. Wren, 9079 Pinata Way, Sacramento, Calif. 95826

Filed: Apr. 24, 1972

Appl. No.: 246,959

UNITED STATES PATENTS

Primary Examiner—George F. Lesmes
Assistant Examiner—Paul J. Thibodeau

ABSTRACT

This invention relates to an asymmetrical artificial tree assembly which may be adapted to receive decorations for use as an artificial Christmas tree including a base member for supporting a plurality of angular elements to define at least a portion of a cone. Each of the angular elements include an arm member extending radially from the base member and an upright strut member wherein the upright strut members are joined at the apex of the cone. The assembly includes a base member which is adapted to receive the angular elements in a plurality of selectively interchangeable configurations which form at least a full tree assembly, a half tree assembly, and a quarter tree assembly.

8 Claims, 7 Drawing Figures
ASYMMETRIC ARTIFICIAL CHRISTMAS TREE

This invention relates to an asymmetrical artificial tree assembly especially of the type which may be adapted to receive decorations such as electrical light bulbs for use as a Christmas tree. The tree is uniquely designed in order that it may be assembled to form a full tree, a half tree, or a quarter tree, depending on the particular location where the tree is to be displayed. For example, it is intended that the half tree assembly be used when the tree is set up for display against a wall or that the quarter tree assembly be used when the tree is set up for display in the corner of a room. A number of other advantages of the artificial tree assembly of the instant invention are: the tree is easily and quickly assembled in either of the three configurations which will most likely facilitate the economical use of available display space, the tree maintains the decorative and aesthetic qualities which a Christmas tree is intended to possess, and the construction is both inexpensive and safe.

It is, therefore, an object and feature of the instant invention to provide an artificial tree assembly comprising a base member which supports a plurality of angular elements to define at least a portion of a cone, the angular elements including arm members extending radially from the base member and upright strut members extending upwardly and inwardly from the outer ends of the arm members to the apex of the cone.

It is another object and feature of the instant invention to provide an artificial tree assembly having a plurality of selectively interchangeable configurations.

In correlation with the foregoing objects and features it is another object and feature of the instant invention to provide an artificial tree assembly which includes a plurality of electrical light bulbs attached thereto and electrical conducting means disposed within the angular elements for conducting electrical power to the light bulbs.

Other objects and attendant advantages of the instant invention will be readily appreciated as the same becomes better understood by reference to the following detailed description when considered in connection with the accompanying drawings wherein:

FIG. 1 is a front elevation view of a preferred embodiment of the instant invention;

FIG. 2 is an exploded side elevation view of a preferred embodiment of the instant invention;

FIG. 3 is a fragmentary view, partially cut away, of the base member;

FIG. 4 is a fragmentary exploded view of the connection between the arm members and strut members;

FIG. 5 is a side elevation view of a quarter tree constructed in accordance with the instant invention;

FIG. 6 is a plan view of a base member; and

FIG. 7 is a fragmentary view of an alternate embodiment of the instant invention.

Referring to the drawings, an artificial tree assembly is generally shown at 10. The tree assembly 10 includes a plurality of angular elements 12 supported on and attached to a base member 14 to define at least a portion of a cone. The angular elements 12 include arm members 16 which extend radially from the base member 14 and upright strut members 18 which extend upwardly and inwardly from the outer end 20 of the arm members 16 to the apex of the cone generally shown at 22. The tree assembly includes crown or cap member 24 which holds and joins the strut members 18 together at the apex of the cone.

The base member 14 includes an upper supporting surface 26 having a plurality of radially extending grooves 28 disposed thereon for nesting the arm members 16. The upper surface 26 of the base member is concave to define a "dish-like" surface as best shown in FIG. 3 and the arm members 16 are provided with a bend 30 thereby causing the arm member 16 to extend slightly upwardly as well as radially to enhance the decorative effect of the resulting tree assembly.

The base member 14 includes fastener means consisting of a removable cap member 32 having a plurality of downwardly opening arcuate slots 34 disposed in a depending flange thereof. The cap member 32 includes hole 36 through which a threaded stud 38 which is mounted in the base member extends for receiving a wing nut 40 thereon to clamp the cap member 32 over the arm members 16 thereby holding the arm members 16 within the grooves 28 on the supporting surface 26 of the base member 14.

The tree assembly 10 may be provided with a plurality of electrical light bulbs 42 which are threaded into the arm members 16 and upright strut members 18. The light bulbs 42 disposed on the strut members 18 may be arranged in spiral fashion to increase the number of light bulbs thereby enhancing the beauty of the tree.

Obviously a number of suitable methods for supplying electrical current to the electrical light bulbs 42 would be obvious to a man skilled in the art. One electrical setup, which functions quite satisfactorily, includes disposing a low voltage transformer 44 within the base member 14. The transformer 44 is connected to any standard wall socket through a standard electrical cord 46. The transformer 44 is connected to a multiple outlet box 48 disposed on the base member 14 by any suitable electrical connection such as line 50. Transformer 44 not only reduces the line voltage from a wall socket to a level which will meet safety regulations for electrical devices of this nature such as under 52 volts, but also adds weight to the base to stabilize the tree assembly 10 to prevent the tree assembly 10 from tipping over if accidentally jarred.

The outlet box 48 includes a plurality of outlets for receiving prongs 52 which protrude from the arm members 16 and are connected to electrical current-carrying wires 54 encased within the arm members 16. Each arm member 16 includes an upwardly extending elbow portion at the outer end 20 thereof having a central bore 56 for receiving and holding the lower end 58 of the upright strut member 18. Disposed in the base of the bore 56 is a socket 60 for receiving a prong 62 extending from and connected to an electrical current-carrying wire 64 encased within the strut member 18. The electric current-carrying lines 54 and 64 in the arm members 16 and strut members 18 supply current to the sockets which hold the electrical light bulbs 42.

The tree assembly 10 as shown in the drawings includes six angular elements 12 which may be divided into adjacent pairs wherein the strut members 18 of each pair are electrically connected at the apex of the tree assembly 10 whereby each pair of angular elements comprises one electrical circuit or loop.

The bore 56 includes an additional socket 66 for receiving a prong 68 which extends from the strut member 18 and is provided to insure the proper angular po-
sitioning of the strut member 18 in respect to its mating arm member 16 and also to prevent the strut member 18 from rotating within the bore 56 while the tree is on display.

The tree assembly 10 shown in FIGS. 1 and 2 illustrates the half tree construction. The half tree is formed by using two substantially shorter arm members 16 at the rear of the base member; that is, two adjacent arm members 16 at the rear extend only slightly beyond the edge of the supporting surface 26 of the base member 14.

A full tree construction is not shown. However, it is to be understood that to construct a full tree would merely require the replacement of the two short arm members 16 with two full length arm members. Note that the strut members 18 are of a standard length and need not be of different lengths since the difference in height at the apex of the tree resulting from the use of the shorter arm members is hidden by the cap member 24.

The base member which is used in the full tree or half tree assemblies is provided with six radially extending grooves 28 as shown in FIG. 2. An artificial tree 10 which may be constructed in the form of a quarter tree requires four additional grooves 28 in the supporting surface 26 of the base member 14, as shown in FIGS. 5 and 6. To construct a quarter tree, five full length arm members 16 with their strut members 18 are disposed within grooves 28 which are grouped within a 90° quadrant of the supporting surface 26, and one short arm member 16 and its upright strut member 18 is disposed at the rear. The rear arm member 16 and strut member 18 provide support for the forward strut members to stabilize the assembly.

The base member 14 includes indicia consisting of numbers 1 through 10 generally shown at 69 of FIG. 6 for identifying the grooves 28 and for specifying the combination of grooves 28 selected to hold the angular elements 12 to form one of the particular tree configurations. For example, and referring specifically to FIG. 6, the assembly directions for constructing a full tree would direct the use of six full length arm members 16 which are to be disposed within grooves 3, 6, 7, 8, 9 and 10. An assembly direction for a half tree would use the use of four full length arm members 16 in grooves 3, 6, 7 and 10 and two half length arm members 16 in grooves 8 and 9. Accordingly, for a quarter tree the assembly directions would direct the use of five full length arm members 16 in grooves 1, 2, 3, 4 and 5 and one short arm member 16 in groove 8. It is to be understood that the strut members 18 are connected to the arm members 16 in the same manner, regardless of whether the strut member is inserted in a standard length or short arm member 16.

The tree assembly 10 may support specially adapted panel members one of which is shown at 70 which are connected to the angular elements 12. The panel members 70 are constructed of a light weight plastic material in the form of a mesh so that they might receive and support ornaments 72 or other decorative objects. The panel member 70 may extend between adjacent upright strut members 18 of the angular elements 12 as shown in FIG. 5 or may extend radially from the center of the base member in which case they are adapted to be connected to the arm member 16 and upright strut member 18 of each of the angular elements 12, as shown in FIG. 7. The panel member 70 is designed to give the tree assembly 10 more body and a fuller appearance. The panel members 70 are provided with clips 76 which snap around the arm member 16 or strut member 18 to hold the panel members 70 in position.

The invention has been described in illustrative manner and is to be understood that the terminology that has been used is intended to be in the nature of words of description rather than of limitations.

Obviously, many modifications and variations of the instant invention are possible in light of the above teachings. It is, therefore, to be understood that the invention may be practiced otherwise than as specifically described herein.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. An artificial tree assembly comprising: a base member and a plurality of angular elements attached to and supported by said base member to define at least a portion of a cone; said angular elements including arm members extending radially from said base member and upright strut members extending upwardly and inwardly from the outer end of said arm members to the apex of the cone, each of said arm members including an upwardly extending elbow portion disposed adjacent the outer end thereof and having receiving means therein for receiving the lower end of said upright strut members, said base member comprising a stem and a disk supported on said stem and defining an upper support surface having a plurality of radially extending grooves formed therein for receiving said arm members, said grooves being disposed in said upper support surface at predetermined intervals to hold said arms in discrete angular orientations relative to one another, and a cap securable to the upper support surface and coacting therewith to hold said arms in said grooves.

2. An assembly as set forth in claim 1 wherein said angular elements include a plurality of electrical light bulbs attached thereto and electrical conducting means disposed within said angular elements for conducting electrical power to said light bulbs.

3. An assembly as set forth in claim 2 wherein said base member includes electrical power outlet means and supplying means for providing electrical power to said angular elements through said base member.

4. An assembly as set forth in claim 3 wherein said light bulbs are spirally arranged about said upper members.

5. An assembly as set forth in claim 1 wherein said assembly includes a plurality of panel members connected to said angular elements whereby said panels may be adapted to support ornamental objects.

6. An assembly as set forth in claim 5 wherein said panel members extend between adjacent upright strut members of said angular elements.

7. An assembly as set forth in claim 5 wherein said panel members extend radially from the central axis of the cone and are adapted to be connected to said angular elements.

8. An artificial tree assembly having a plurality of selectively interchangeable configurations comprising: a plurality of angular elements defining at least a portion of a cone including a plurality of spoke members of differing lengths and upright members extending upwardly and inwardly from the outer ends of said spoke members to the apex of the cone, and a base member.
having an upper circular support surface for supporting said angular elements which are adapted to hold said spoke members in a plurality of distinct distributions whereby said angular elements are disposed in select quadrants of the cone, the upper support surface of said base member including a plurality of radially extending grooves disposed thereon for nesting said arm members, the number of grooves in the base member being greater than the number of elements required to construct a full tree configuration whereby the grooves may receive said elements in any of the plurality of tree configurations, the base member further including indicia means for identifying the grooves and for specifying the combination of grooves utilized to hold said elements to construct a particular tree configuration, and a cap having a notched skirt portion which secures to said upper surface the arm members nested within said grooves.