T. MODLARZ  
ARTIFICIAL CHRISTMAS TREE  
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2 Sheets-Sheet 1
This invention relates to ornamentation, and has more particular reference to an improved form of artificial Christmas tree.

The primary object of the present invention is to provide an artificial Christmas tree which is extremely simple and durable in construction and so constituted as to be of a highly ornamental and pleasing appearance.

A more specific object of the present invention is to provide a Christmas tree of the above kind which may be readily collapsed when not required for use, so as to require a minimum amount of space when stored away, and which may be readily set up for use in an expeditious manner as well as effectively maintained in operative condition against accidentally collapsing.

Briefly stated, the invention contemplates the provision of an artificial Christmas tree embodying a main staff or trunk, a plurality of rings of gradually increasing diameters adapted to be disposed in spaced superimposed relation surrounding and concentric with the trunk and having suitable artificial sprays or twigs secured thereto, and means, preferably collapsible relative to the trunk for supporting the rings in their spaced superimposed relation about the trunk.

Other objects will become apparent as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts herein-after more fully described, shown in the accompanying drawings and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views,

Figure 1 is an elevational view of a Christmas tree constructed in accordance with the present invention, in assembled operative condition, and illustrated in connection with a supporting base shown in central transverse section;

Figure 2 is a view similar to Figure 1 with the supporting base in elevation and the spray carrying rings removed, the collapsed position of the ring supporting means being indicated by dotted lines; Figure 2A is an enlarged detail view of the upper part of the device shown in Figure 2;

Figure 3 is a top plan view of one of the spray carrying rings;

Figure 4 is an enlarged fragmentary horizontal section taken substantially upon line 4—4 of Figure 2 to reveal the manner in which the radial rods engage the trunk to maintain the downwardly diverging rods in outwardly swung supporting position;

Figure 5 is a view somewhat similar to Figure 2 illustrating a modified form of the invention with the spray carrying rings removed;

Figure 6 is an enlarged fragmentary view partly in elevation and partly in vertical section, showing the trunk and opposed ring supporting arms of the tree shown in Figure 5, and more clearly illustrating the manner in which these arms or rods are mounted upon the trunk, the collapsed position of one of the arms being indicated by dotted lines;

Figure 7 is a horizontal section taken substantially upon line 7—7 of Figure 5 with the base omitted and one of the rings illustrated as operatively disposed by dotted lines; and

Figure 8 is a view similar to Figure 3 showing a modified form of spray carrying ring.

Referring more in detail to the drawings, and more particularly to the form of the invention shown in Figures 1 to 4 inclusive, 5 indicates the tree trunk preferably consisting in a straight vertical staff of cylindrical form in cross section and gradually tapering smaller from bottom to top so as to terminate in a pointed upper end as at 6.

A plurality, preferably four, of equally spaced rods 7 of resilient wire have their upper ends adjacent and secured to the trunk 5 adjacent to but slightly below the pointed end 6 of the trunk, and these rods are normally tensioned to spring inwardly and assume a position adjacent to or alongside the trunk 5, parallel with the latter, as indicated by dotted lines in Figure 2. However, these rods are adapted to be sprung outwardly by being flexed at a point near their upper ends, so as to assume a downwardly diverging relation as indicated by full lines in Figures 1 and 2 when set up for use, means being provided for releasably maintaining the rods 6 in this outwardly spread downwardly diverging relation, such as radial rods 8 hinged at their outer ends to the lower ends of the rods 7 as at 9 and to have their inner ends removably seated in radial equally spaced sockets provided in the trunk 5 near the lower end of the latter as indicated in Figure 4 at 10. It is thus apparent that upon springing the rods 7 out-
wardly beyond a predetermined point, the inner ends of the rods 8 may be disengaged from the trunk and then said rods 8 may be swung upwardly parallel to the rods 7 to which they are attached, thus allowing the rods 7 to spring inwardly adjacent the trunk. This will present the major part of the tree construction in such collapsed form as to require very little space when stored away.

The present tree further embodies a plurality of rings 11 preferably in the form of wire hoops and of gradually increasing diameter. These rings 11 are thus adapted to be placed in surrounding relation to the trunk 5 and rods 7 concentric with the trunk and in spaced superimposed relation so as to be horizontally disposed to contact with the rods 7, when expanded, at different points or elevations. The diameters of the rings 11 are so graduated that said rings will be supported by the rods 7 at uniformly spaced intervals substantially from top to bottom of the pyramidal space, the corners of which are defined by the rods 7. Suitably secured at close intervals to each ring 11 throughout its extent are artificial sprays or branches 12, which may be of any well known or preferred form and so disposed as to project inwardly, outwardly, above and below the rings, as illustrated in Figures 1 and 3, so that when the rings are operatively disposed, the several rods, rings and the trunk will be hidden to a great extent, and insuring the production of an artificial Christmas tree having a realistic appearance and a symmetrical or pleasing form.

While the provision of artificial sprays 12 is preferable, it is apparent that the rings 11 may be left bare, thus enabling the attachment of new sprays of real trees each time the device is set up for use.

As shown more clearly in Figure 2, the rods 7 are preferably provided with outwardly projecting lugs 13 at points where the several rings 11 are adapted to be disposed in engagement with the rods 7, whereby the rings 11 may be seated upon said lugs and positively supported against accidental downward displacement such as might cause bending of the rods 7 and 8 and marring of the appearance of the tree. By having the rings 13 project upwardly as well as outwardly, as shown, a more positive support for the rings is had. As shown in Figures 1 and 2 the tree may be carried by a weighted supporting base including a metal disk 14 having a central upstanding socket 15 for snug reception of lower end of the trunk 5.

Assuming that the rings 11 are removed and the device is collapsed as shown in Figure 2, it is simply necessary to spring the rods 7 outwardly to the full line position of Figure 2 and then swing the rods 8 downwardly to the horizontal position with their inner ends engaged in the sockets 10 of the trunk. The rings 11 are then successively placed in position surrounding the trunk and the rods 7, starting with the larger rings and ending with the smallest upper ring, the rings being successively disposed above the trunk and then slipped downwardly thereon. The tree is then in set up condition, and a reversal of this operation only, as is obvious, is necessary to effect the collapse of the device. As shown in Figure 1 additional sprays 12 may be suitably placed about the trunk in the horizontal plane of the lower ends of the rods 7 to produce a better appearance. Further, additional sprays 12 may be fastened to the projecting upper end portion of the trunk 5 to complete the finished appearance of the tree.

As illustrated in Figure 2A the upper ends of the rods 7 may be formed with eyes 15 encircling the trunk 5 and disposed in contacting superimposed relation between stop members carried in spaced relation by the trunk, such as cross pins 16. In this way the rods 7 are hinged on the trunk so as to be capable of being swung horizontally in case it is desired to bring all of the rods together at one side of the trunk when the device is collapsed.

In the form of the invention shown in Figures 5 to 7 inclusive, the trunk 5 is carried by a supporting base 14A 15A and is preferably of hollow form as illustrated in Figure 6. This form of the invention is adapted for use with the rings 11, but different supporting means as associated with the trunk in lieu of the rods 7 and 8. A separate supporting means is provided for each ring including a plurality of radial arms 17, hinged at their inner ends as at 18 to the trunk 5 for vertical swinging movement so as to either be capable of being swung upwardly alongside the trunk as illustrated in Figure 6 by dotted lines or downwardly to horizontal position as indicated in Figures 5 and 6 by full lines, the downward swinging movement of the arms 17 being suitably limited as by providing the inner ends of the same with inwardly projecting extensions 19 adapted to pass into and engage the upper end walls of slots 20 provided in the trunk 5. Naturally, the engagement of the extensions 19 with the end walls of the slots 20 will occur when the arms are horizontally disposed.

As shown in Figure 5, the arms 17 of each ring supporting means are of similar lengths, but the arms of the several ring supporting means progressively and gradually increase in length in a downward direction relative to the trunk so that when the rings are placed upon the arms, a somewhat conical structure is formed. The outer ends of the arms 17 are preferably formed of hook-
shape so as to define seats 21 which receive the adjacent portions of the rings so that the latter are effectively maintained in concentric relation to the trunk, in an obvious manner. These hook-shaped seats are preferably provided with narrow entrances, and as the arms are formed of resilient wire, the rings may be sprung into the seats so as to be effectively maintained therein against accidental upward displacement from operative positions although capable of being readily manually removed. In this form of the invention any possibility of exposed vertical rod portions is avoided due to the elimination of rods such as at 7 employed in the structure of Figure 1. In view of this fact a highly desirable tree is possible with the construction of Figure 5, although a greater number of collapsible members are necessarily provided. In this form of Figure 5, all of the arms 17 must be swung upwardly to collapsed position and some means provided for holding the arms of each set or ring supporting means in collapsed position adjacent the trunk, such as rubber bands or strings tied about the arms. However, when the tree of Figure 5 is set up for use, the arms 17 are swung to their horizontal operative positions as shown in Figure 5, whereupon the proper ring 11 is operatively engaged with the arms 17 of its particular supporting means. This construction enables the ready provision of rings carrying the sprays 12, at all elevations where the arms 17 are provided, and in this case, the projecting upper end of the trunk may be finished off with a spray such as used at 12b in Figure 1.

In Figure 8 a modified form of spray carrying ring is shown. This ring is identical with that of Figure 3 except the wire is formed of a series of directly connected outwardly curved arcuate portions having similar diameters lesser than that of the ring in its entirety, whereby the latter is of scalloped appearance. This enables the attachment of the sprays intermediate the ends of each arcuate portion and at the points of connection between adjacent ends of the arcuate portions so that the appearance of the tree is not too uniform and more natural.

What I claim as new is:

1. An artificial Christmas tree including a trunk staff, a plurality of rings adapted to carry tree sprays and formed of graduated different diameters, and means carried by the trunk staff for supporting the rings in surrounding concentric relation to the trunk staff and horizontally in spaced superposed relation, each ring embodying similar outwardly curved arcuate portions of lesser radius than that of the ring.

2. An artificial Christmas tree including a trunk staff, a plurality of rings adapted to carry tree sprays and formed of graduated different diameters, and means carried by the trunk staff for supporting the rings in surrounding concentric relation to the trunk staff and horizontally in spaced superposed relation, separate supporting means being provided for each ring and each embodying a plurality of arms projecting radially of the trunk staff and having ring receiving seats in their outer ends.

3. An artificial Christmas tree including a trunk staff, a plurality of rings adapted to carry tree sprays and formed of graduated different diameters, and means carried by the trunk staff for supporting the rings in surrounding concentric relation to the trunk staff and horizontally in spaced superposed relation, separate supporting means being provided for each ring and each embodying a plurality of arms projecting radially of the trunk staff and having ring receiving seats in their outer ends, said arms being hinged to the trunk staff for folding upwardly alongside the latter.

4. An artificial Christmas tree including a trunk staff, a plurality of rings adapted to carry tree sprays and formed of graduated different diameters, and means carried by the trunk staff for supporting the rings in surrounding concentric relation to the trunk staff and horizontally in spaced superposed relation, separate supporting means being provided for each ring and each embodying a plurality of arms projecting radially of the trunk staff and having ring receiving seats in their outer ends, said seats being resilient and having restricted entrances.

5. An artificial Christmas tree including a trunk staff, a plurality of rings adapted to carry tree sprays and formed of graduated different diameters, and means carried by the trunk staff for supporting the rings in surrounding concentric relation to the trunk staff and horizontally in spaced superposed relation, separate supporting means being provided for each ring and each embodying a plurality of arms projecting radially of the trunk staff and having ring receiving seats in their outer ends, said arms being hinged to the trunk staff for folding upwardly alongside the latter, and means to limit downward and outward swinging of the arms to horizontal positions.

In testimony whereof I affix my signature,

THOMAS MODLARZ.