

March 18, 1958

W. A. WARREN

2,826,845

ARTIFICIAL CHRISTMAS TREE

Filed March 30, 1955

2 Sheets-Sheet 1

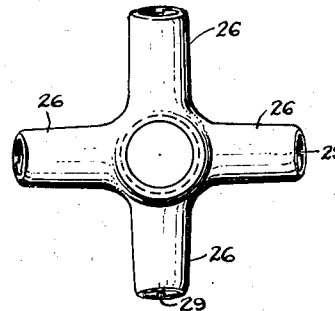
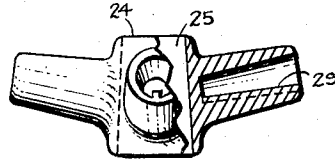
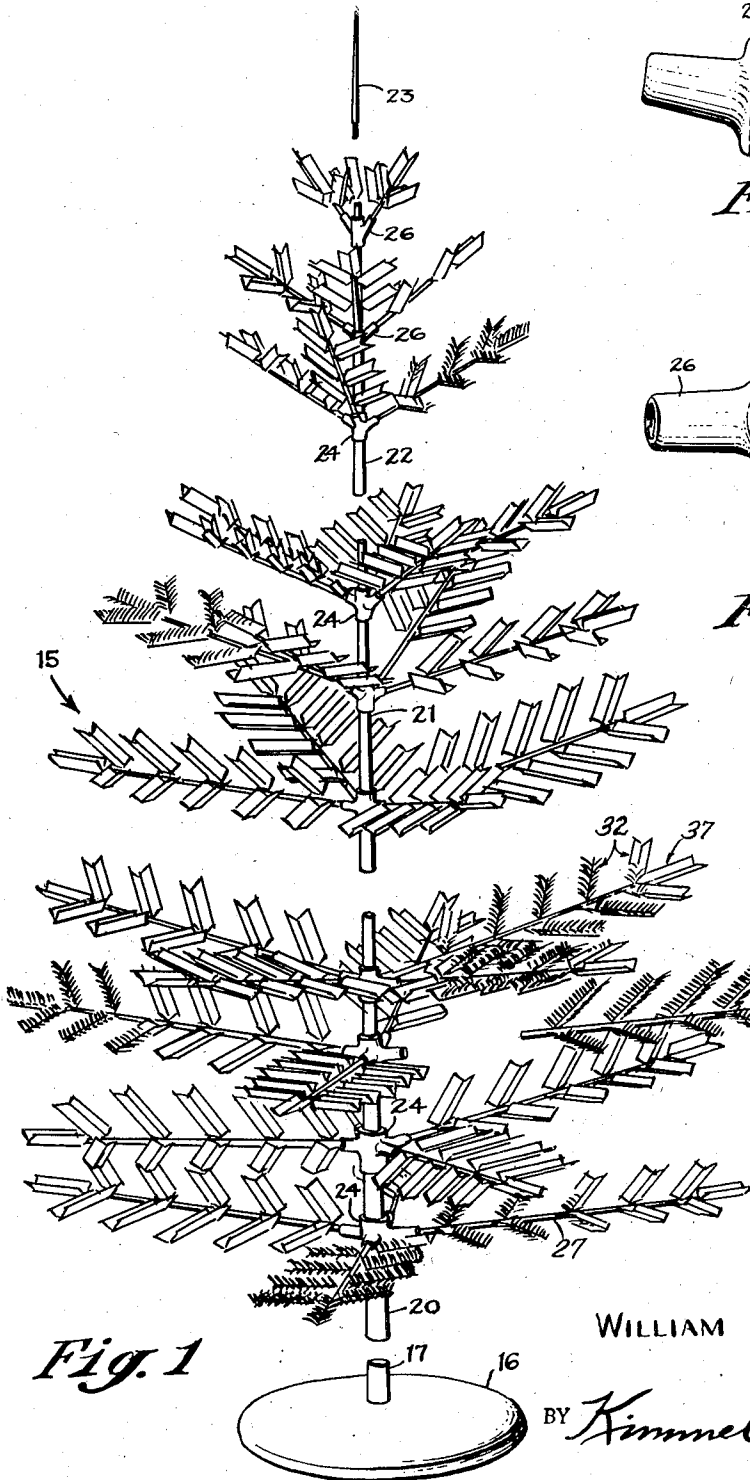
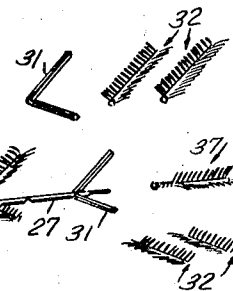


Fig. 3



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2 Sheets-Sheet 2

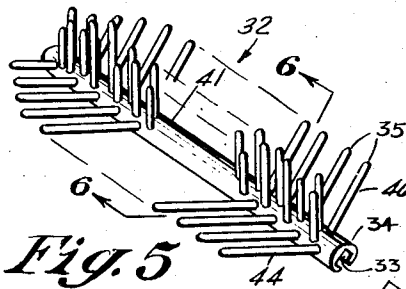


Fig. 5

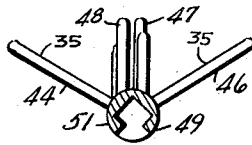


Fig. 6

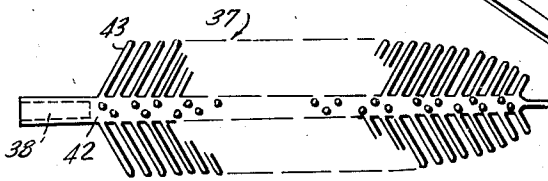
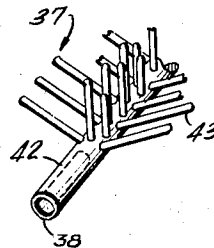


Fig. 7

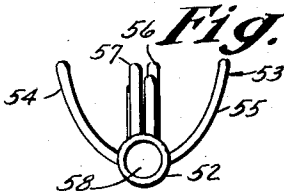


Fig. 8

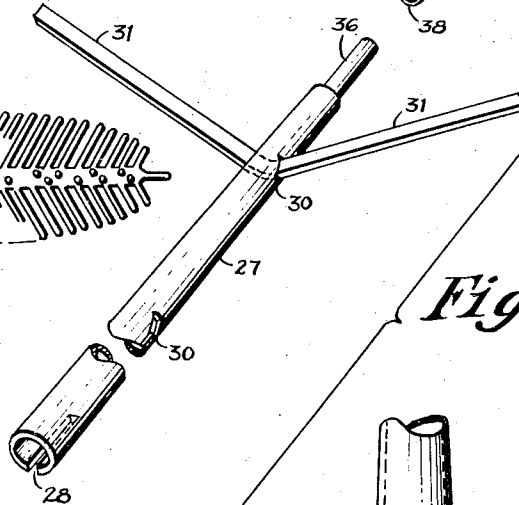


Fig. 4

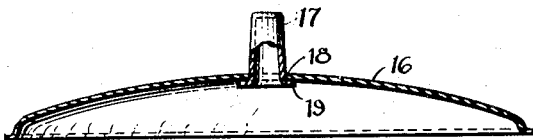
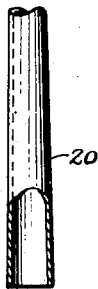
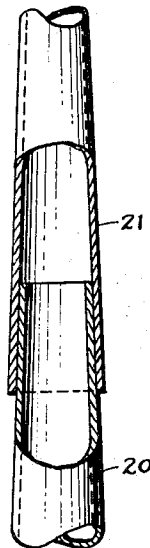


Fig. 9

Fig. 10



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ARTIFICIAL CHRISTMAS TREE

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Application March 30, 1955, Serial No. 497,927

3 Claims. (Cl. 41-15)

The present invention relates to artificial Christmas trees and more particularly to such trees which are assembled from readily separable members.

The primary object of the invention is to provide a structure of the class described which in appearance, form and symmetry as well as in color and texture will closely simulate a natural Christmas tree.

Another object of the invention is to provide an artificial tree which may be assembled and disassembled by unskilled persons with a minimum of direction and time, and which in its disassembled state may be packed in a relatively small container ready for reassembly and use year after year.

A further object of the invention is to provide a tree of the type referred to above which will have sufficient strength to support Christmas ornaments.

Other objects and advantages will become apparent in the following specification when read in light of the attached drawings, in which:

Figure 1 is a partially exploded perspective view of an artificial tree constructed according to the invention.

Figure 2 is an end elevation of one of the couplers shown partially in section.

Figure 3 is a top plan view of the coupler disclosed in Figure 2.

Figure 4 is an exploded perspective view of one of the limbs with parts broken away.

Figure 5 is a perspective view of one of the branches with parts broken away.

Figure 6 is a transverse cross-section taken on line 6-6 of Figure 5, looking in the direction of the arrows.

Figure 7 is a top plan view of the limb end with parts broken away.

Figure 8 is an end view of a modified form of leafed tree section.

Figure 9 is a transverse cross-section of the base with the trunk support and trunk shown partially in section.

Figure 10 is a fragmentary side elevation of the tree trunk showing the telescoping joint between sections in section.

Now referring to the drawings in detail, the reference numeral 15 indicates generally an artificial tree constructed according to the invention, which consists of a dish-shaped base element 16 provided with a trunk supporting inverted cup 17 that extends upwardly through an opening 18 formed in the base 16. The cup 17 is flanged at 19 to engage under the marginal edge of the opening 18 with the cup 17 and the base 16 secured together by any suitable means such as welding. It should be noted that the cup 17 is constructed with a diminishing taper toward its upper end.

An elongated tapered trunk member 20 is adapted to be telescoped over the trunk support cup 17 and frictionally held thereon. A second trunk element 21 is also provided with an upwardly diminishing taper and is adapted to be telescoped over the upper end of the trunk member 20, while a third trunk member 22, somewhat smaller than the previously named trunk members 20

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and 21, is provided with an upwardly diminishing taper and is adapted to be telescoped over the trunk member 21 at its upper end. A spike 23 telescopes onto the upper end of the trunk member 22 and provides the upper terminus of the trunk of the tree.

A series of coupling elements 24 are provided with a tapered bore 25 which is adapted to engage the tapered trunk of the tree at different heights depending on the size of the bore 25 in each coupler 24. The coupler 24 is provided with a series of radially extending sockets 26, the use of which will be described hereinafter. It should be noted that the coupler members 24 may have the socket members 26 extending at any desired angle and with any suitable number of the sockets 26 attached to each coupler. The couplers 24 will be constructed with a sufficient difference of internal bore to space the couplers at desired vertical intervals along the trunk sections 20, 21 and 22.

The tree 15 is provided with limbs 27 which are formed from tapered tubing and have a keyway 28 formed in the inner end thereof to engage with a key 29 extending longitudinally of the sockets 26. The inner end of the limb 27 is adapted to engage in the socket 26 with the keyway 28 engaging about the key 29 to prevent relative rotation between the limb 27 and the coupler 24. The limb 27 is further provided with spaced rectangular openings 30 which are adapted to receive rectangular branch supports or pins 31 as shown in Figure 4, the arrangement of the openings and pins being such as to dispose the latter in longitudinally and circumferentially spaced relation on the limbs.

In accordance with the present invention and as a principal feature thereof, a plurality of branches or leafed tree sections 32 are removably mounted on the pins 31 so as to provide a realistic tree-like appearance.

As a further and important feature of the present invention, these leafed tree sections are molded from a thermoset plastic material to provide a central stem 41 and a plurality of integrally formed outwardly extending elongated leaf-like elements 35. By the use of an appropriate plastic material such as polystyrene, polyethylene and the like, the stem 41 and the elements 35 are made pliantly flexible yet self-supporting in, and self-restoring to, a preset normal position. In the case of the branch section 32, the stem portion 41 is formed with a rectangular central socket or bore 33 dimensioned for receiving the pins 31 with the inner end 34 of the stem 41 in engagement with the limb 27.

A similar leafed tree section 37 is removably mounted on the outer end 36 of the limb. As here shown in Figure 4, the section 37 is formed with a central stem 42 and integrally formed outwardly extending elongated leaf-like elements 43. Mounting of the limb end 37 is facilitated by a provision in one end of the stem 42 of a longitudinally extending socket 38 which is dimensioned to engage over a reduced shank end 36 on the limb.

It should be noted that the limbs 27 may be constructed of various lengths and diameters and may be provided with varying numbers of branches 32 to permit the artificial tree 15 to be constructed with an upward taper closely simulating a natural tree in appearance.

In the use and operation of the invention, the base 16 has the trunk sections 20, 21 and 22 mounted thereon and the couplers 24, starting with the largest, are positioned on the trunk members 20, 21 and 22 to receive the limbs 27. Limbs 27 are then inserted in the sockets 26 of the couplers 24, and then the branch supports 31 are inserted through the limbs 27. The branch supports 31 are flared upwardly as shown in Figure 4, to provide a more natural appearance. Branches 32 are then inserted on the branch supports 31 and limb ends 37 are connected to the end of limbs 27, completing the individual branch

or limb construction. This procedure is repeated until all limbs have been provided with branches and ends, in accordance with the invention. The spike element 23 is then inserted in the top of the uppermost trunk section 22, and the tree is completed.

In the case of the leafed tree sections 32 and 37, the elongated leaf-like elements are preferably arranged in circumferentially spaced and longitudinally extending rows. In the case of sections 32 (and similarly in the case of section 37), a pair of such rows 44 and 46 extend from the central stem 41 at substantially diametrically opposed positions as seen in Figure 6 and on opposite sides of and substantially symmetrical to other elongated leaf-like elements arranged in one or more intermediate rows 47 and 48. The elements in the two center rows 47 and 48 are preferably staggered longitudinally from each other, as best seen in Figure 5. Conveniently the stem section 41 may be formed of channel shaped cross-section as seen in Figure 6, so as to define the longitudinal socket or bore 33 between a pair of spaced longitudinally extending sides 49 and 51 which are substantially diametrically opposed and serve to support the rows 44 and 46 of elongated leaf-like elements. As will be further observed from Figure 6, the outside rows 44 and 46 preferably extend both outwardly and upwardly so as to diverge symmetric to a center line plane of the stem and symmetrical to the intermediate rows 47 and 48.

A modified form of leafed tree section is illustrated in Figure 8. This section is also formed or molded from thermoset plastic material so as to provide a central stem 52 and integrally formed circumferentially spaced and longitudinally extending rows of elongated leaf-like elements 53 as in the case of the leafed tree sections 32 and 37. However, in the form illustrated, the outside, substantially diametrically opposed rows 54 and 55 have their elements curved outwardly and circumferentially of the stem in the direction of and substantially symmetric to the center rows 56 and 57. The upwardly curving elements in rows 54 and 55 thus define a cup-like arrangement simulating the natural form of the red fir (*Abies magnifica* A. Murray). In this arrangement the upper ends of the elements in rows 54 and 55 preferably termi-

nate in a substantially horizontal plane, adjacent the upper ends of the elements in the intermediate rows 56 and 57, it being noted that the elements in these latter rows are somewhat shorter in length. The stem 52 is here formed with a longitudinally extending opening or socket 58 dimensioned for receiving and mounting upon one of the pins 31 or the limb end 36.

What is claimed is:

1. In an artificial Christmas tree, a leafed tree section molded from thermoset plastic material to provide a central stem of inverted channel shaped cross-section defining a pair of spaced longitudinally extending sides each formed with a longitudinally extending row of outwardly extending elongated leaf-like elements, a third row of said elements projecting outwardly from said stem medially between said first mentioned rows, said stem being formed at one end with a longitudinally extending mounting socket, said stem and elements being plially flexible yet self-supporting in and self-restoring to a preset normal position.

2. In an artificial Christmas tree, a leafed tree section as characterized in claim 1 wherein said elongated leaf-like elements projecting from the longitudinally spaced sides of said stem are curved upwardly in a cup-like arrangement symmetrical to said third row of said elements.

3. In an artificial Christmas tree, a leafed tree section as characterized in claim 2 wherein said leaf-like elements are of uneven length and are progressively reduced in length from said end of said stem to the opposite end of said stem.

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