Aug. 13, 1974 T. HERMANSON 3,829,349

COLLAPSIBLE ARTIFICIAL TREE

Filed July 17, 1973

FIG. 1.

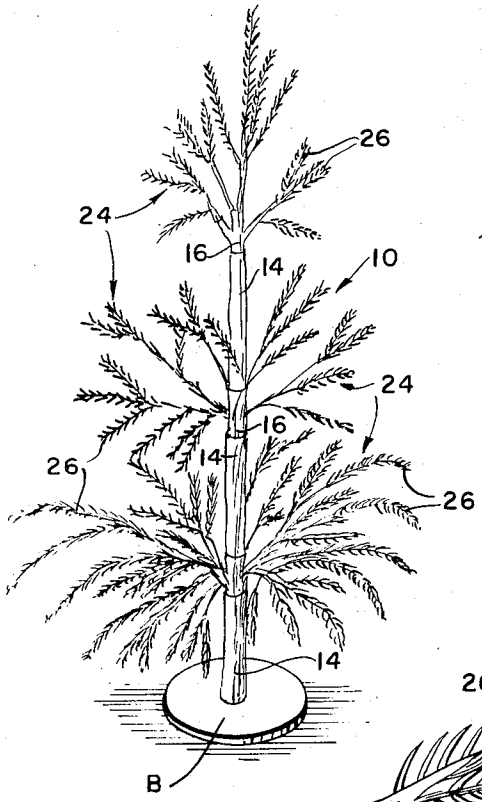


FIG. 2.

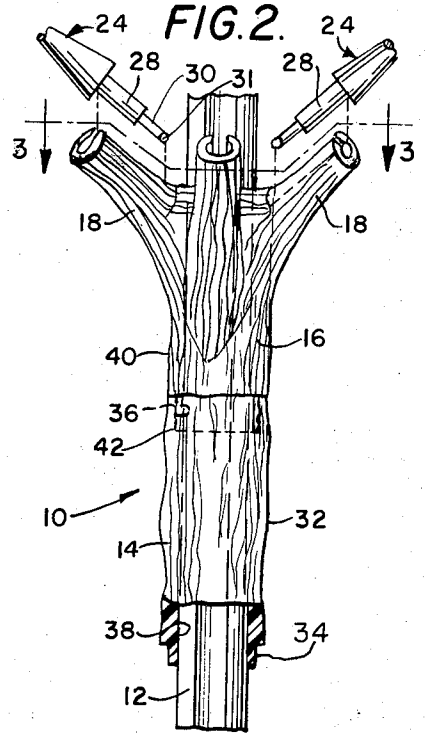


FIG. 3.

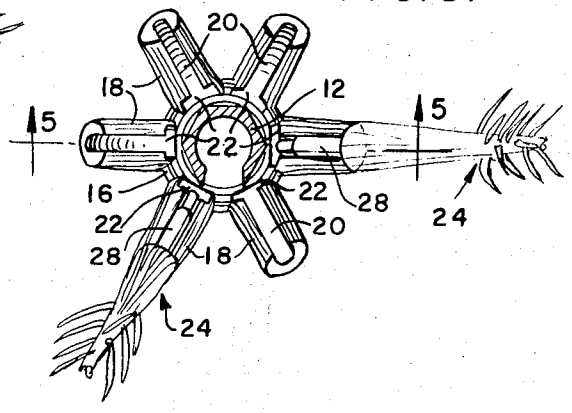


FIG. 4.

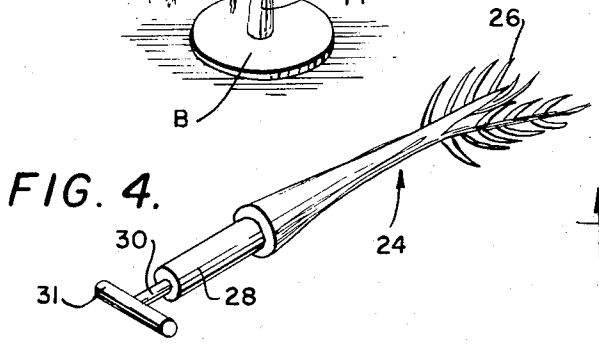


FIG. 5.

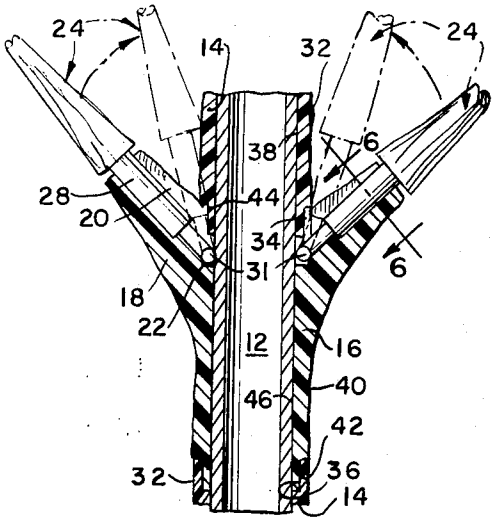
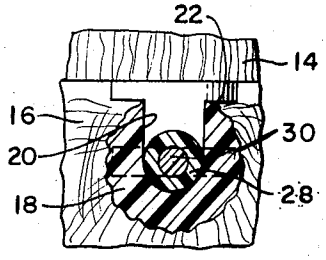


FIG. 6.



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COLLAPSIBLE ARTIFICIAL TREE

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Int. Cl. A47g 33/06
U.S. Cl. 161—24 8 Claims

ABSTRACT OF THE DISCLOSURE

A collapsible artificial tree arrangement particularly adapted for Christmas decoration in which simulated branches are freely foldable substantially parallel to the trunk thereof in one direction for storage and freely pivotable to an erected condition for display. The arrangement including an elongated trunk core and a plurality of sectional trunk portions disposed therearound with some of said trunk portions having branch holding sockets and other of said trunk portions serving as spacing members.

FIELD OF THE INVENTION

The present invention relates to an artificial tree construction and more particularly to an assembled but collapsible artificial tree construction.

DESCRIPTION OF THE PRIOR ART

In the previously known artificial tree arrangements elongated trunk elements are provided with perforations into which individual branch elements are inserted. More recent arrangements include elongated trunk members having means for hingedly securing branch elements which may be selectively adjusted to a collapsed storage condition or to an erected display condition as exemplified by the Hermanson Patent (3,639,196), Abramson (3,115,435) and Lu (3,603,780). As is inherent in any design, the use of an article results in the knowledge of limitations of the article not previously contemplated. Thus with knowledge of the limitations of the prior art, applicant has developed the present invention.

SUMMARY OF THE INVENTION

The present invention comprises a new and improved collapsible artificial tree arrangement. It is a primary object of the present invention to provide an artificial tree which can be readily collapsed and stored in the assembled condition or erected from the storage condition thereof to a display condition.

Another object of the present invention is to provide an artificial tree which may be sold according to selective length or height and yet inexpensively manufactured.

An additional object of the present invention is to provide a plurality of sectional trunk portions which may be assembled around an elongated trunk core of any desired length.

It is a further object of the present invention to provide an artificial tree arrangement in which the vertical spacing between branches may be selectively altered.

It is still a further object of the present invention to provide an artificial tree arrangement in which the branch members may be securely attached to the trunk over an indefinite period of time.

It is moreover another object of the present invention to provide a collapsible artificial hinge tree arrangement requiring a minimum of parts.

BRIEF DESCRIPTION OF THE DRAWINGS

Other objects and a fuller understanding of the present invention may be had by referring to the following description and claims, taken in conjunction with the accompanying drawing, in which:

FIG. 1 represents a view in perspective of the tree arrangement of the present invention in erected display condition;

FIG. 2 represents an enlarged elevational view of a portion of the tree of FIG. 1 with a part of a trunk portion broken away for clarity of detail;

FIG. 3 is a view of the tree portion of FIG. 2 taken along the line 3—3;

FIG. 4 is an enlarged view in perspective of a branch element of the tree of the present invention;

FIG. 5 is a view of the tree portion illustrated in FIG. 3 along line 5—5; and

FIG. 6 is a further enlarged view of a tree portion taken along line 6—6 in FIG. 5.

DETAILED DESCRIPTION OF THE INVENTION

Referring now more particularly to the drawings it is seen in FIG. 1 that the artificial tree arrangement **10** according to the present invention is illustrated in the erected display condition on a base B, which may be of any convenient form. The tree arrangement **10** includes a plurality of sectional tubular portions **14** and **16** with branch members **24** provided with any desirable type of foliage **26** as the occasion may warrant. It is clear that the present tree arrangement **10** may be in the form of a Christmas tree or any other type of tree such as bamboo or the like, as may be desired for any particular motif.

It is seen in FIG. 1 that the sectional tubular portions **16** are provided with branch members **24** having foliage **26** at the free ends thereof. The sectional tubular portions **14** are merely spacing members of the trunk without branches thereon. Although the tubular portions **14** and **16** are vertically arranged in alternate relationship along the length of the tree **10**, it is clear that two or more of the tubular portions **14** may be disposed in succession if desired.

Looking now at the details of the tree **10** as illustrated in FIGS. 2–6, it is seen that the tree arrangement **10** comprises an elongated trunk core **12** which may conveniently be of aluminum tubing or of any other suitable material and form. Disposed around the core **12** are at least two sectional tubular trunk portions **14** and **16**. As mentioned above the tubular trunk portions **14** are not provided with branches and serve merely as spacer members. The tubular portions **16** on the other hand are provided with a plurality of hollow sockets **18** in which the branch members **24** are hingedly disposed. Each socket **18** extends from the tubular portions **16** upwardly at an incline therefrom. Along the upper side of each socket **18** a longitudinal slot **20** extends for the length thereof. Communicating with slot **20** is a notch **22** formed along the inner surface of tubular portions **16** at substantially 90° to slot **20** at the inner end thereof.

Each branch member **24** as thus seen in FIG. 4 comprises foliage **26** at the free end thereof and a reduced diameter shank portion **28**. The shank portion **28** may have at one end thereof an extension **30** with a trunnion portion **31** at substantially 90° thereto in the form of the letter T.

Each sectional trunk portion **14** includes an outer exposed surface **32** and an outer hidden surface of reduced diameter **34**. Each sectional trunk portion **14** also comprises a two-dimensional bore including a portion **36** and a reduced diametrical dimension portion **38**. Similarly, each sectional trunk portion **16** comprises an outer exposed surface **40**, an outer hidden surface **42** of reduced diameter, and a two-dimensional bore including a first portion **44** and a reduced diametrical dimension portion **46**.

ASSEMBLY OF THE PREFERRED EMBODIMENT

In order to assemble the tree arrangement **10** according to the present invention the trunk core **12** is first inserted

into one of the sectional trunk portions **14** or **16** depending upon which of these trunk portions should be situated at the lower end of the trunk. Assuming that it is desired to have a section **14** (without any branch members **24** thereon) adjacent the base B, the trunk core **12** is inserted into a sectional trunk portion **14** first. It is seen in FIG. 2 that the sectional trunk portion **14** is disposed with the reduced diameter portion **38** as the lower end thereof. The reduced diameter portion of the bore of sectional trunk portion **14** is made so that it may be slipped over core **12** with a slight amount of force. Next the trunk core **12** may be inserted into a sectional trunk portion **16** in such a manner that the core **12** enters the reduced diametrical dimension portion **46** which provides a snugly slidable fit with core **12**. When the core **12** is fully inserted into sectional trunk portion **16**, the outer hidden surface portion **42** is disposed within the portion **36** of the bore of sectional trunk portion **14**.

A branch member **24** may now be inserted into each socket **18** by lining up the trunnion portion **31** with a notch **22** and the shank portion **28** with the slot **20** associated therewith. By applying a slight downward pressure through the shank portion **28** and against the slot **20** to spread the sides thereof, the branch member **24** may be properly seated within the socket **18**. When the desired number of branch members **24** are seated in the sockets **18** of the sectional trunk portion **16**, the trunk core **12** may then be inserted into a further sectional trunk portion **14** or **16** until the outer hidden surface **34** or **42** thereof is seated within the portion **44** of the bore to securely lock the branch members **24** from accidental removal.

With the sectional trunk portions **14** and **16** and branch members **24** assembled as described above and illustrated in FIGS. 2 and 5 it is clear that the branch members **24** are then indefinitely, but securely mounted and adaptable to being hinged from the solid line display condition in the direction of the arrows in FIG. 5 to the folded or collapsed storage condition (in phantom).

In carrying out the above invention it is noted that in the preferred embodiment the sectional trunk portions **14** and **16** are of molded polyethylene having outer exposed surfaces with bark-like appearance. The branch members **24** may also conveniently be of molded polyethylene. Further in this connection the branch portions **30** and **31**, as disclosed, are of relatively rigid wire material with a portion of the wire **30** embedded within the shank portion **28**. However, portions **30** and **31** of the branch members **24** may be of any other suitable rigid material.

Although a single preferred embodiment of this invention has been described with a certain degree of particularity, it is understood that the present disclosure has been made only by way of example and that numerous changes and details of construction and in the arrangement of parts may be resorted to without departing from the spirit and scope of the invention as hereinafter claimed.

What is claimed is:

1. In an artificial tree, an elongated core over which are disposed two or more sectional trunk portions, characterized in that at least one of said trunk portions comprises one or more branch-holding sockets, each of said sockets including a longitudinal slot extending the length thereof and having a notch at its inner end, extending axially thereof and communicating with said slot from within the interior of said one of said trunk portions.

2. The structure as defined in claim **1** wherein a branch member including a shank portion is disposed within said slot.

3. The structure as defined in claim **2** wherein said shank portion of said branch member has a trunnion member extending in opposite directions from its inner end in the form of the letter T with said trunnion member being situated within said notch.

4. The structure as defined in claim **3** characterized in that said trunk portions are formed from a yieldable plastic material whereby said branch member may be snugly held within said slot and yet be pivotally hinged into and out of said slot to an erected condition or a collapsed condition.

5. The structure as defined in claim **4** characterized in that each of said trunk portions includes an exposed outer trunk surface and a hidden outer surface of reduced diametric dimension with said hidden outer surface being disposed within an adjacent one of said trunk portions.

6. The structure as defined in claim **5** wherein each of said trunk portions includes a two-dimensional bore with one portion of said bore being disposed in sliding relationship around the hidden outer surface of an adjacent one of said trunk portions and a reduced dimensional portion thereof being disposed around said core in frictional relationship therewith.

7. The structure as defined in claim **4** characterized in that said yieldable plastic material is polyethylene.

8. The structure as defined in claim **3** wherein said trunnion member extends from the inner end of said shank portion and is integrally formed therewith.

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U.S. Cl. X.R.

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