United States Patent

[11] 3,582,028

[72] Inventor **John G. Purdy**
708 Mary St., Dowagiac, Mich. 49047

[21] Appl. No. **753,141**
[22] Filed **Aug. 16, 1968**
[45] Patented **June 1, 1971**

[54] **TREE HOLDER**
4 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **248/44**
[51] **Int. Cl.** **A47g 33/12**
[50] **Field of Search** 248/44, 48, 46, 111, 188.1, 188.2, 188.7; 211/69.5; 116/173

[56] **References Cited**

UNITED STATES PATENTS

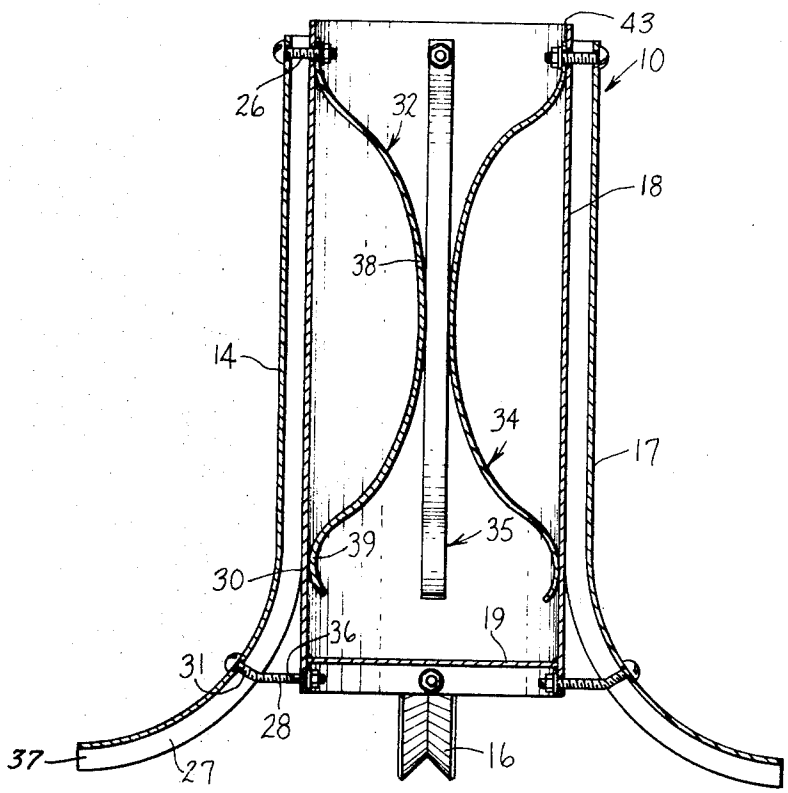
1,298,380	3/1919	Owen	248/48
1,411,722	4/1922	Grenzebach	248/44
1,732,284	10/1929	Schulze	248/44
2,867,398	1/1959	Rose	248/44
3,313,505	4/1967	Petrie	248/165
1,528,883	3/1925	Lindquist	248/46

FOREIGN PATENTS

13,265	6/1911	Great Britain	248/44
618,971	3/1961	Italy	248/44
104,763	6/1942	Sweden	248/44

Primary Examiner—Marion Parsons, Jr.
Attorney—Woodhams, Blanchard and Flynn

ABSTRACT: A tree holder having an upwardly opening and elongated container supported by four legs which extend downwardly along and then outwardly and downwardly from the container. The legs are connected to the container near the lower ends thereof by manually adjustable means for changing the locations of the lower ends of said legs relative to the lengthwise extent of the container. Four resiliently flexible elements are secured to the inner side of said container for engaging the butt of a tree extending into the container and for resisting lateral movement of the butt with respect to the container.



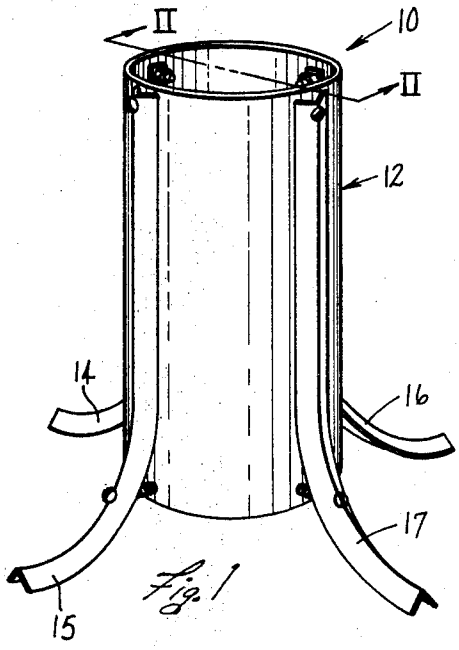


Fig. 1

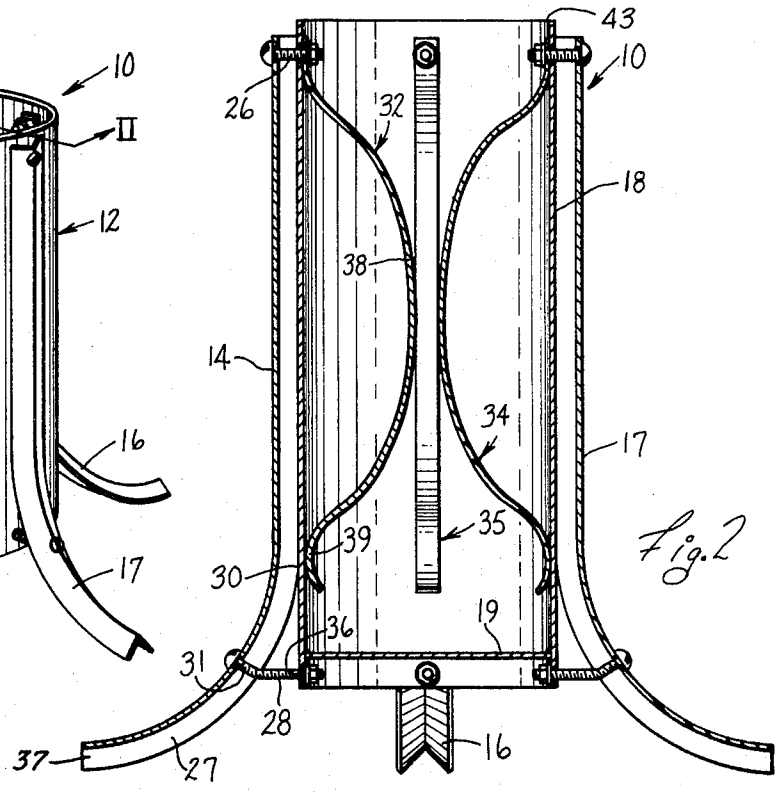


Fig. 2

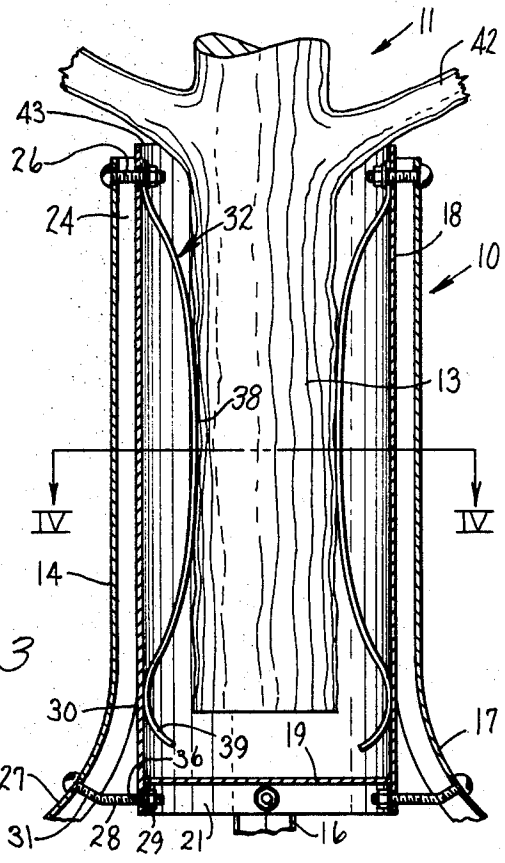


Fig. 3

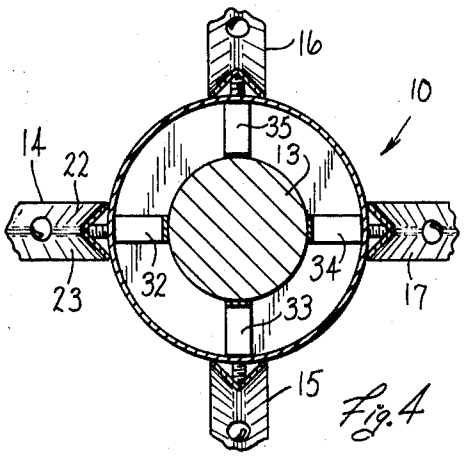


Fig. 4

INVENTOR.
JOHN G. PURDY

BY
Woodhams, Blanchard & Flynn
ATTORNEYS

TREE HOLDER

BACKGROUND OF THE INVENTION

This invention relates in general to a Christmas tree holder and, more particularly, to a type thereof having resilient means capable of adapting itself automatically to engage and properly hold tree butts of various sizes and shapes and having means for adjusting relatively the positions of supporting legs in a vertical direction.

It is common knowledge that the butt on a Christmas tree is often crooked or irregular in cross-sectional shape. Moreover, Christmas tree holders or standards are usually carried over from year to year for repeated use and it is at least rare that the butt of the Christmas tree used during any given year is of precisely the same size and shape as the butt of a Christmas tree used during the preceding or next year. Numerous attempts have been made over a long period of time to provide a Christmas tree holder which would automatically adapt itself to irregularities in the size and shape of the butt of the Christmas tree while still holding the Christmas tree firmly in an upright condition. Numerous attempts have also been made to provide a satisfactory Christmas tree holder having a container for holding a liquid into which the butt of the tree is received.

In addition to the foregoing, it has been recognized that Christmas tree standards are usually provided with three legs in order to have a tripod effect and thereby eliminate the problem of irregularities in the supporting surface. However, it is known that Christmas trees supported by standards having three legs often tip over because three legs do not provide sufficient stability unless the legs are made so long as to be unsightly or obstructive to walking near the tree. Furthermore, it a conventional container is mounted on legs and the tree butt is crooked, it is often necessary to tilt the holder at an unsafe angle to locate the main part of the tree in an upright position.

Accordingly, a primary object of this invention has been the provision of a container-type Christmas tree holder having uniformly disposed legs and automatically adjustable means for engaging the butt of a Christmas tree, even though said butt may be irregular in shape or crooked, and holding the tree in an upright position.

A further object of this invention has been the provision of a tree holder, as aforesaid, having means for adjusting the positions of the surface-engaging ends of the legs in a vertical direction hence, lengthwise of the container.

Other objects and purposes of this invention will become apparent to persons familiar with this type of equipment upon reading the following specification and examining the accompanying drawings, in which:

FIG. 1 is a perspective view of a tree holder embodying the invention.

FIG. 2 is a sectional view taken along the line II–II in FIG. 1.

FIG. 3 is a fragment of FIG. 2 and showing the butt of a tree in its held position.

FIG. 4 is a sectional view taken along the line IV–IV in FIG. 3.

For convenience in description, the terms "upper," "lower" and words of similar import will have reference to the tree holder embodying the invention as appearing in FIG. 1. The terms "inner," "outer" and derivatives thereof will have reference to the geometric center of said tree holder and parts thereof.

SUMMARY OF THE INVENTION

The objects and purposes of the invention, including those set forth above, have been met by providing an upwardly opening and vertically elongated container having four or more legs secured to the external wall of the container and extending both downwardly and outwardly from said wall. A plurality of uniformly spaced, resiliently flexible elements are secured within said container for engaging the butt of a tree disposed within said container which is adapted to hold a liquid. Adjustment means is connected between the lower end of the container and adjacent portions of the legs for changing the positions therebetween whereby the locations of the lower ends of said legs can be adjusted in a direction lengthwise of the container.

DETAILED DESCRIPTION

Referring to the drawings, numeral **10** designates the tree holder of the present invention which is primarily intended to support a Christmas tree **11** in an upright position while maintaining the butt **13** thereof moist. The tree holder **10** consists of an upwardly opening elongated container **12** which is preferably cylindrical and which is supported on a surface by the four legs **14**, **15**, **16** and **17**.

The elongated cylindrical container **12** has a sidewall **18** which is preferably about twice as large in diameter as the average tree which the tree holder **10** is to support. The elongated cylindrical container **12** also includes a bottom wall **19** which is secured within the container **12** and spaced upwardly from the lower edge of sidewall **18**, thereby providing in effect a downwardly extending skirt **21** for purposes hereinafter described. The container **12** may be constructed of light gauge metal and the bottom **19** may be secured in place by welding, thereby providing a watertight, upwardly opening container which may be filled with water.

The legs **14**, **15**, **16** and **17** may be substantially identical and therefore leg **14**, only, will be described in detail herein. Leg **14** (FIG. 2) may be formed from a piece of angle stock which is V-shaped in cross section and includes a pair of flanges **22** and **23**. The leg **14** has a straight upper portion **24**, the upper end of which is secured to the sidewall **18** by bolt **26**, with the apex of the V-shape pointing away from sidewall **18**. The leg **14** has a lower portion **27** which is curved outwardly and downwardly from the sidewall **18** at a point **30** thereon spaced upwardly from the bottom wall **19**.

An adjustment bolt **28** extends through an opening **31** in portion **27** of leg **14** near the skirt **21** and through an opening **36** through the skirt **21**. Thus, the adjustment bolt **28** is spaced downwardly from point **30** on sidewall **18**. The nut **29** on bolt **28** can be engaged from beneath the wall **19** of the tree holder **10**. When the adjustment bolt **28** is tightened, thereby drawing the curved portion **27** of leg **14** closer to the sidewall **18**, the lower end **37** is moved downwardly and inwardly relative to the container **12**, thereby increasing the effective vertical length of leg **14**.

The tree holder **10** has a plurality, here four, of gripping elements **32**, **33**, **34** and **35** disposed within the container **12** for holding the butt **13** of the tree **11** in a selected position within the container **12**. The gripping elements **32**, **33**, **34** and **35** are substantially identical and therefore gripping element **32**, only, will be described herein. The gripping element **32** is preferably constructed of a resilient and flexible material, such as spring steel, and is formed from an elongated, flat strip of such material into a curved shape. Gripping element **32** may be held at its upper end to sidewall **18** of container **12** by the bolt **26**, which also secures the upper end of the leg **14**. The gripping element **32** has a substantially U-shaped central portion **38** which opens toward the sidewall **18**, and extends in its unstressed condition of FIG. 2 substantially to the central axis of the container **12**. The gripping element **32** has an inwardly curved, lower portion **39** which facilitates easy upward and downward movement of said lower portion of the gripping element **32** along the wall **18** when a tree butt is being inserted into or removed from the tree holder **10**. The gripping element **32** preferably extends substantially the full length of the cylindrical container **12**. However, it is preferably of such length that it does not contact the bottom wall **19** at any time.

The tree **11** has lower branches **42** which are engageable with the upper edge **43** of the sidewall **18** for maintaining the lower end of the butt **13** spaced upwardly from the bottom wall **19** of the container.

OPERATION

Although the operation of the structure embodying the invention will be apparent from the foregoing description, a summary thereof will now be set forth.

The tree holder **10** is first placed in the desired location where it is to support a Christmas tree **11**. Since the tree holder **10** has four legs it will provide greater stability while in use than will a tree holder which has only three legs. However, if the surface on which the tree holder is to be supported is not level, or if the legs are not perfectly aligned, the four legs may not all contact the supporting surface at one time. If such is the case, the tree holder **10** will have a tendency to rock. In order to eliminate this, the effective length of one or more of the legs can be increased until all four are in equal engagement with the supporting surface. To do so the nut **29** of the adjustment bolt **28** on the short leg, such as **14**, is tightened until leg **14** has the appropriate length. Alternatively, one or more of the longer legs may be shortened by loosening their adjustment bolt.

Once the legs are appropriately adjusted, the butt **13** of tree **11** is inserted into the elongated cylindrical container **12** and as said butt **13** moves downwardly, it engages and spreads the gripping elements **32—35** and passes therebetween. Since the gripping elements are independent of each other, the tree holder is capable of holding trees of various sizes and shapes. Since the gripping elements **32—35** are of a resiliently flexible material, such as spring steel, they will resist outward movement by the butt **13** and thus tightly grip the butt **13** thereby securely holding the tree **11** in place. The tree **11** is removed from the tree holder **10** by pulling it upwardly away from the holder **10** so that the butt **13** of tree **11** slides out of the cylindrical container **12**.

If the tree holder **10** is thereafter used in a different location where the supporting surface differs, the shorter leg may again be adjusted by bolt **28** until the legs **14**, **15**, **16** and **17** are in equal engagement with such supporting surface.

The lower end of the butt **13** is preferably cut off, if necessary, so that the upper edge **43** of the wall **18** is engaged by the lower branch or branches of the tree before the butt **13** can engage the bottom wall **19** of the container. This arrangement prevents rocking of the tree with respect to the container **12** around a horizontal axis. Further, since the lower end of the butt **13** cannot engage the bottom wall **19** of the container, the weight of the tree is primarily borne on the upper edge **43** of the wall **18** due to its engagement with the lower branch or branches of the tree. This support arrangement is desirable since, as is well known, the butt of a tree is generally crooked, which crookedness is accommodated and compensated for in the tree holder of the present invention by means of the flexible gripping elements **32—35**. Since the cross section of the container **12** is, as illustrated in FIGS. **3** and **4**, substantially greater than the cross section of the butt **13**, one or more of the flexible gripping elements **32—35** will resiliently deflect by a greater or lesser amount so as to accommodate for the crookedness of the butt, thereby enabling the tree to be maintained in the holder in a straight and upright position while at the same time the gripping elements **32—35** permit a secure gripping of the crooked butt of the tree to prevent same from rocking.

Although a particular preferred embodiment of the invention has been disclosed above for illustrative purposes, it will be understood that variations or modifications thereof which lie within the scope of the appended claims are fully contemplated.

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

1. A tree holder for engaging the butt of a tree to hold said tree in an upright position, comprising:

an upwardly opening and elongated container means having sidewall means and a bottom wall, said bottom wall being spaced upwardly from the lower edge of said sidewall means to form a downwardly projecting skirt means;

gripping means for engaging the butt of a tree and for maintaining the butt spaced from and out of contact with the sidewall means of said container means, said gripping means including a plurality of elongated and resiliently flexible gripping elements disposed within and extending lengthwise of said container means, one end of each gripping element being secured to said sidewall means and the central portion of each gripping element being normally bowed inwardly from said sidewall means toward the central lengthwise axis of the container means for engaging the butt of a tree;

four leg means secured to said container means and extending lengthwise along the outer surface of said sidewall means and substantially uniformly spaced therearound, each leg means having a substantially straight portion secured to said container means and extending downwardly along said container means to a point spaced upwardly from the lower edge of said sidewall means and a curved portion curving outwardly from said point and extending downwardly below said sidewall means; and

adjustable fastening means further securing at least one of said leg means to said sidewall means for permitting adjustment in the location of the extended end of the curved portion of said leg means both lengthwise of and laterally of said container means, said fastening means including bolt means extending through said skirt means and through said curved portion of said leg means downwardly from said point for permitting the curved portion to be deflected relative to said container means.

2. A tree holder according to claim 1, wherein there are four substantially U-shaped gripping elements disposed uniformly around said container wall means and the upper ends of said gripping elements are firmly secured to said container means, and the lower ends of said gripping elements are slideably engageable with and movable along the inner surface of said container means.

3. A tree holder according to claim 1, wherein said container means is substantially cylindrical and said bottom wall is substantially flat, and said sidewall means has a diameter adjacent said bottom wall substantially greater than the diameter of the butt of the tree adapted to be disposed within the container means.

4. A tree holder according to claim 1, wherein said container means includes annular surface means provided adjacent the upper end thereof for engaging the lower branch of a tree for holding the tree in an upright position, said surface means defining the uppermost point of said tree holder.