Jan. 18, 1949. W. M. IRVIN 2,459,533

HOLDER FOR CHRISTMAS TREES, FLAGSTAFFS AND THE LIKE

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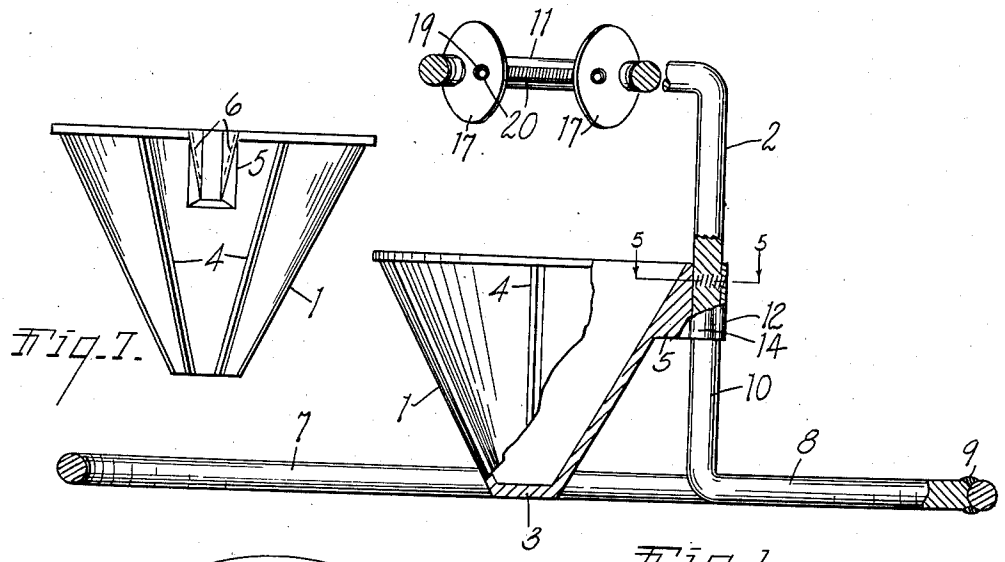


Fig. 1.

Fig. 7.

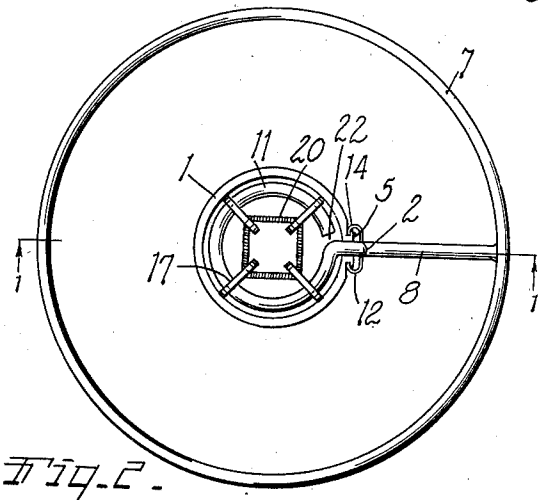


Fig. 2.

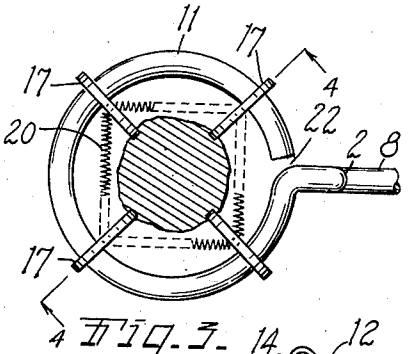


Fig. 3.

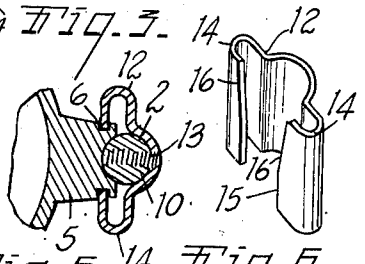


Fig. 5. Fig. 6.

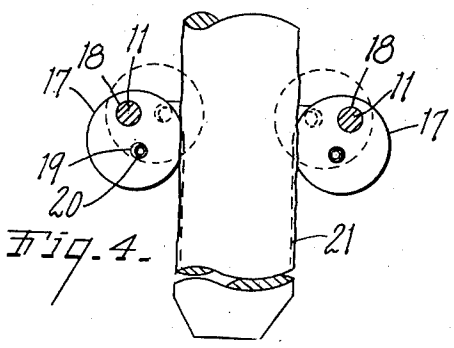


Fig. 4.

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HOLDER FOR CHRISTMAS TREES, FLAGSTAFFS, AND THE LIKE

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11 Claims. (Cl. 248—38)

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This invention relates to improvements in holder for Christmas trees, flag staffs, and the like.

The principal objects of this invention are:

First, to provide a holder for supporting Christmas trees, flag staffs and the like, which will automatically grip and hold the bottom of a Christmas tree or flag staff without tightening or adjusting any clamps or other gripping elements on the holder.

Second, to provide a holder of the type described which automatically compensates for irregularities in the surface on which it is placed.

Third, to provide a holder which will retain a tight grip on a Christmas tree or the like supported therein as the base of the tree shrinks due to drying out of the wood.

Fourth, to provide a holder of this class in which the object supported can be mounted or removed by simply moving vertically into or out of the holder.

Fifth, to provide a holder which is extremely inexpensive to manufacture and of durable construction.

Other objects and advantages pertaining to the details and economies of my invention will be apparent from a consideration of the following description and claims.

The drawings, of which there is one sheet, illustrate a preferred form of my holder.

Fig. 1 is a side elevational view of my holder in erected position and partially broken away in vertical cross section along the plane of the line 1—1 in Fig. 2.

Fig. 2 is a plan view of my holder.

Fig. 3 is an enlarged fragmentary plan view of the upper work engaging portion of my holder illustrating the work in supported position therein.

Fig. 4 is a fragmentary vertical cross sectional view taken on the plane of the line 4—4 in Fig. 3.

Fig. 5 is a fragmentary horizontal cross sectional view taken on the plan of the line 5—5 in Fig. 1 and illustrating the connection between the socket member and upright of my holder.

Fig. 6 is a perspective view of the clip used to attach the socket member to the upright of my holder.

Fig. 7 is a rear elevational view of the socket member of my holder.

My holder consists of a socket member 1 adapted to receive the end of the trunk or bole of a tree or the base of a flag staff or similar article and a standard or upright 2 adapted to support the socket member and engage the work supported at a point above the socket member 1.

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The socket member 1 is preferably of inverted conical tapered cross section having a flat truncated bottom 3 and reinforcing ribs 4 formed along the outside surface thereof. The socket member is conveniently formed as a casting and is provided with a boss or lateral projection 5 of the side thereof having downwardly converging grooves 6 formed in its sides for a purpose to be described presently. The conical shape of the socket member is provided so that the side walls of the socket member will engage and laterally support the boles of trees or other object to be supported of different diameters.

The standard 2 consists of a base 7 arranged to support the remainder of the holder against tilting on the ground or floor. The base 7 is desirably formed of round rod stock and is preferably annular, as shown, as that shape requires the least amount of material. Extending radially inwardly from the base 7 is an arm 8 formed of the same stock as the base and secured to the base as by welding at 9. The arm 8 terminates short of the center of the base and is bent upwardly in an upright portion 10. The upper end of the upright 10 is turned horizontally and formed into a ring or annular support 11 of larger diameter than the largest tree or staff to be mounted in the holder.

A clip 12 is secured to an intermediate portion of the upright 10, as by welding at 13, the clip being provided with a semi-cylindrical portion embracing the rear side of the mast and opposed return bend folds 14 terminating in the opposed flanges 15. The flanges 15 are positioned in a plane approximately tangential to the inner surface of the upright and spaced slightly therefrom and the upper edges of the flanges are tapered outwardly, as at 16, to conform to and engage the tapered grooves 6 in the boss 5 of the socket. The rear or outer surface of the boss 5 is grooved to fit against the inner side of the upright 10 when the socket is engaged with the clip.

Mounted on the support member 11 are four disk-like gripping members 17 which are preferably circular in cross section and define eccentrically located apertures 18 for passing the ring 11. The members 17 also define the central apertures 19 through which is threaded a coil spring element 20. The spring 20 is of such a length as to normally maintain the gripping members in an extreme inward position relative to the support 11 as shown in Figs. 1 and 2. Note that the ring 11 is incomplete to permit easy assembly of the discs thereon.

In using my holder the socket member 1 is

mounted on the standard by engaging the flanges 15 with the grooves 6 and the holder is placed on the ground or floor in the desired position. Should the ground in the center of the base be higher than the level of the base, the socket member 7 will simply slide upwardly on the flanges 15 to compensate for this irregularity. A low level in the center of the base may be compensated for by flexing of the arm 8. The bole of the tree or base of the flag staff is then inserted vertically through the support 11 and spring 20 until the base of the tree or staff engages the socket member for vertically supporting the weight of the tree or staff. In passing through the spring 20 the tree or staff will engage the inner edges of the jaws or clamping elements 17 and rotate them downwardly and outwardly about the support 11. This outward rotation of the clamping element will extend the spring 20 and cause the edges of the elements 17 to bite into or tightly engage the sides of the tree or staff as indicated at 21 in Figs. 3 and 5. The tension of the spring and engagement of the elements 17 with the tree or staff will laterally support the tree or staff in the planes of each of the elements but the main lateral support for the tree or staff being obtained by reason of the gripping engagement of the disks with the tree or staff, resisting movement of the tree normal to each of the elements 17, as will be readily understood by considering Fig. 3. To remove the tree or staff it is only necessary to pull upwardly on the tree or staff.

In the case of a tree or the like the socket member 1 may be used to hold water for keeping the tree fresh.

It will be noted that the jaw support member 11 has an opening or split 22 which permits the jaw members 17 being threaded upon the support member and angularly spaced thereon. The holes 18 in the jaw members are a sliding fit with the support member 11 so that the jaw members are supported in radial relation to their support, that is, the holes are of such size that the jaw members are supported against substantial tilting and maintained in their radial position. I prefer to use at least four jaw members though a workable structure may be had with three jaw members. The jaw members may be economically produced as simple stampings of circular form and the holes 18 and 19 may be readily punched. Scrap metal may be used for these parts which add to the economy of production.

The holder is adapted for a very considerable range of diameter in the work or object supported and has highly effective gripping engagement with it, the springs 20 applying gripping stress to the object inserted between the jaw members. The lower end of the stem or bole of the tree or other objects supported is desirably tapered to facilitate centering in the socket. A plurality of the structures may be very compactly nested, the socket members first being removed and separately nested. The bases, uprights and attached parts can be nested or compactly arranged by laterally offsetting the upright portions.

I have illustrated and described a highly practical embodiment of my invention. I have not attempted to illustrate or describe other embodiments or adaptations as it is believed that this disclosure will enable those skilled in the art to embody or adapt my invention as may be desired.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A holder for Christmas trees, flag staffs and the like comprising, an inverted conical socket member having a truncated bottom and a lug on one side thereof defining downwardly converging opposed grooves on the sides of said lug, an annular base, an arm secured to said base and extending radially inwardly thereof and turned upwardly at its inner end to provide an upright, the upper end of said upright being formed into an incomplete ring parallel to the plane of said base and approximately concentric therewith, a clip welded to said upright and having opposed flanges engageable with said grooves in said lug to laterally support said socket member from said upright with the bottom of said socket member approximately in the plane of said base, a plurality of gripping disks defining accentric apertures and received on said ring, said disks defining other apertures, and a continuous coil spring extending through said other apertures to urge said disks inwardly of said ring.

2. A holder for Christmas trees, flag staffs and the like comprising, a socket member having a projection on one side thereof defining opposed grooves, a loop-like base, an arm extending inwardly from said base and extended upwardly at its inner end to form an upright, the upper end of said upright being provided with a ring, a clip on said upright and having opposed flanges engageable with said grooves in said projection on said socket member to laterally support said socket member from said upright with the bottom of said socket member approximately in the plane of said base, and a plurality of gripping disks defining eccentric apertures and received on said ring.

3. A holder of the class described comprising, an inverted conical socket member having a flat bottom and a projection on one side thereof defining oppositely opening grooves, an annular base having an inwardly extending arm, an upright on said arm, an annular jaw support member of the upper end of said upright disposed parallel to the plane of the base and approximately concentric therewith, a clip on said upright having opposed flanges engageable with said groove in said projection on said socket member to laterally support the socket member while permitting it to rest on the surface on which the base is supported, a plurality of disk-like gripping jaws defining eccentric apertures and received on said support, and spring means extending between the said jaws acting to urge them inwardly of said support and yieldingly support them for gripping engagement with inserted work therebetween.

4. A holder of the class described comprising a base, an inverted conical socket member having a flat bottom and oppositely opening vertical grooves at one side thereof, an upright on said base, a ring-like support member on said upright disposed parallel to the plane to the base, a clip on said upright engageable with said grooves in said socket to laterally support said socket member from said upright, a plurality of disk-like gripping elements defining eccentric apertures received on said support whereby the gripping members are rotatably supported, and spring means extending between said gripping elements to urge them inwardly of said support for yielding gripping engagement with the work.

5. A holder of the class described comprising, a socket member, a base, an upright carried thereby, a horizontally disposed annular support member on said upright, means on said upright removably engageable with said socket

member to support the same in alignment with said support member with the bottom of the socket member in approximately the plane of the base, a plurality of disk-like jaw elements rotatable on said support and having gripping edges eccentric to the cross section of the support, and a continuous coil spring engaging said jaw members to urge their said gripping edges inwardly of their said support.

6. A holder of the class described comprising, a socket member, a loop-like base, an upright carried by said base, an annular support on said upright vertically spaced from said base, means on said upright engageable with said socket to laterally support the same from the upright while permitting it to rest on the surface on which the base is supported, a plurality of gripping elements rotatably mounted on said support member in angularly spaced relation thereon and having gripping edges eccentric to the cross section of said support, and coil spring elements connecting said gripping elements to yieldingly urge them inwardly.

7. A holder of the class described comprising, a socket member, a base, an upright carried by said base, an annular jaw support member on said upright, means on said support engageable with said socket member to laterally support the same in upright position, a plurality of gripping elements eccentrically mounted on said jaw support member, and spring means extending between said gripping elements to urge the edges thereof inwardly of the ring and apply gripping tension thereto.

8. In a structure of the class described the combination of an upright, a split annular horizontally disposed support member carried by said upright, a plurality of disk-like jaw members having eccentrically disposed holes therein permitting their being threaded on said support member from the split thereof and angularly disposed thereon relative to each other, said jaw members also having holes therethrough spaced inwardly relative to the said jaw support member, and a coil spring threaded through said second mentioned holes whereby the jaw members are yieldingly supported for gripping engagement with work forced downwardly between them into said socket member.

9. In a holder of the class described the combination of a horizontally disposed annular jaw support member, means for supporting said support member in elevated horizontal position, a plurality of radially disposed angularly spaced jaw members mounted on said support member for independently vertical swinging movement, and springs acting to yieldingly urge said jaw members inwardly and to yieldingly bias the jaw members into gripping engagement with work inserted downwardly between the jaw members.

10. In a holder of the class described the combination with a base, a downwardly tapered socket, an annular support member spaced vertically above said socket, a plurality of jaw members rotatably mounted on said support member and angularly spaced thereon to extend radially inward therefrom while permitting vertical swinging movement, and spring connections for said jaw members acting to yieldingly support them to receive work inserted between them and to bias the jaw members into gripping engagement with the work.

11. In a holder of the class described the combination with a base, an annular support member carried thereby, a plurality of jaw members rotatably mounted on said support member and angularly spaced thereon to extend radially inward therefrom while permitting vertical swinging movement, and acting on said jaw members to yieldingly support them to receive work inserted between them and to bias the jaw members into gripping engagement with the work.

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