

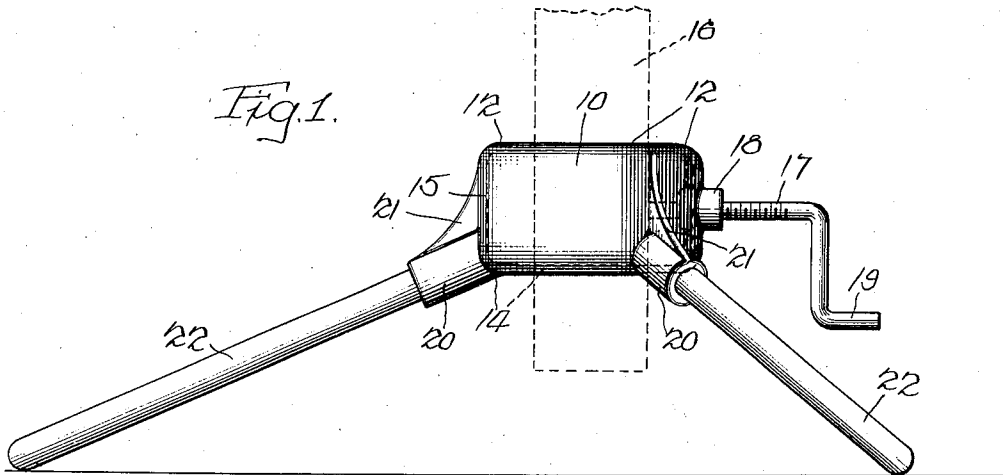
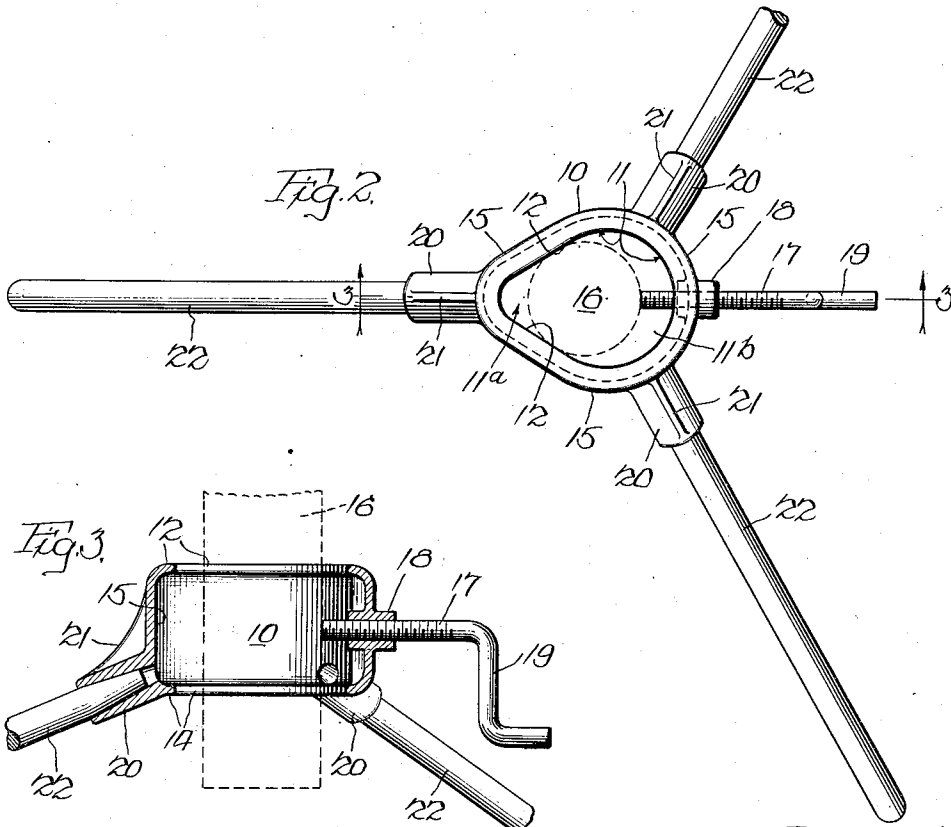
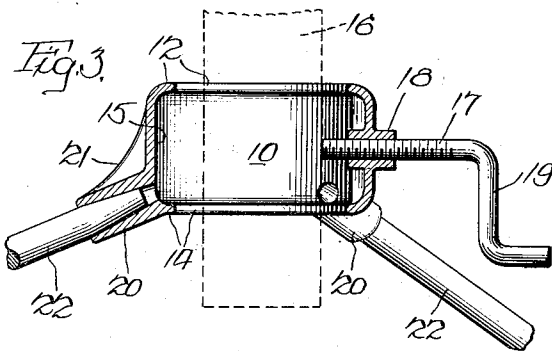
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ATTACHMENT BASE FOR VERTICAL SHAFTS

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ATTACHMENT BASE FOR VERTICAL SHAFTS

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2 Claims. (Cl. 248—38)

These improvements relate to attachment devices providing a base or support for such vertical shafts as the trunks of small ornamental trees, flag masts, etc. The present structure was designed chiefly as a Christmas tree support.

The chief objects of the invention are, first, to provide a supporting attachment base according to which the vertical shaft may be of various diameters and of various cross-sectional shapes, including irregular ones, and yet be accommodated and held peculiarly firmly by the device; secondly, to provide a construction according to which the operation of mounting and securing the shaft in the device is simple and easy, as is also the removal of the shaft therefrom; thirdly, to provide a construction that may have the effective area of the base, large or small as may be desired, and especially providing such substantially large areas as will afford a very unusual stability in such temporary attachment devices as are used for supporting Christmas trees, which variability in the base area is accomplished by having simple legs of such material as wood, and providing them in longer or shorter lengths as the particular situation may suggest. A further advantage in this same connection is that while the legs may extend outward or away from the center a considerable distance, yet since they are simple bars they are substantially non-obstructive either from the standpoint of appearance or that of available space around the bottom of the tree. Other objects attained by the construction shown are strength and rigidity, simplicity, low cost, convenience in use, and the occupation of but small space when in knock-down or disassembled condition.

In the drawing, Figure 1 is a side elevation of the device complete;

Fig. 2 is a top plan thereof; and

Fig. 3 is a medial vertical sectional view as on the line 3—3 of Fig. 2.

The body 10 of the holder is a casting in the form of a hollow annular shell which is open at the top and bottom and thus provides a hollow interior 11 the shape of which in top view is shown in Fig. 2 and which shape includes a constricted portion 11a and an enlarged portion 11b, these two portions merging into each other. That shape is defined by flange-like upper extensions 12 and similar lower extensions 14 integral with the vertical and continuous side walls 15. These flanges are shown sectionally in Fig. 3 and by dotted lines in Figs. 1 and 2. There is thus provided vertically through the body of the device an opening which is elongated and sub-

stantially V-shaped at its one end portion, which opening is defined by upper and lower flange-like parts extending inward, and which flange-like parts contact the object to be held.

The vertical shaft-like object 16 may be considered the stem or trunk of a Christmas tree or the like, a flag staff, or any similar vertical rod-like or shaft-like object desired to be held firmly. It extends through the opening 11 and is forced against the upper flanges 12 and the lower flanges 14 defining the constricted part of the opening in top view. A threaded screw-shaft 17 is preferably employed for forcing the object 16 into such association with the body and for holding it in that position.

To this end a boss 18 is formed integrally with the body 10 and has a threaded opening therein for screw-shaft 17, which shaft is directed toward the apex of the substantially V-shaped opening 11, or toward the narrow part 11a thereof, as viewed in Fig. 2, and this boss 18 and screw shaft 17 are substantially midway between the top and bottom of the body 10 as shown in Figs. 1 and 3. To facilitate the operation the screw-shaft 17 preferably terminates in a bell-crank handled lever 19 by which the desired pressure can be applied very rapidly, easily and satisfactorily.

Means for supporting the body 10 include preferably three integral tubular extensions 20 provided with reinforcing integral vanes 21 between the side walls 15 and the extensions 20, the extensions being hollow and preferably slightly tapering as shown to accommodate the inner ends of the legs 22. These legs 22 are preferably of wooden dowel-pin material, which can readily be obtained in open market and at small cost. Such material having a diameter of from one inch to one and one-fourth inches will be found strong enough for household Christmas-tree purposes, although when the device is proportioned for larger and heavier trees the legs will be proportionately increased in strength, or may suitably be of iron pipe material. For ordinary Christmas-tree purposes the legs 22 are about the diameter of the ordinary household broom handle, which feature is of advantage since such handles are usually to be found around the house and the same can be cut to any appropriate length to supply a deficiency through loss or to provide a base area as large as, in any event, may be deemed desirable. This base area would be indicated by drawing lines between the free ends of the leg members 22 of Fig. 2, such lines defining a triangle on the floor.

In other words, the spread of the legs can be made as desired by lengthening or shortening the legs; and, since these legs are preferably of wood for such ordinary purposes as Christmas tree mounting in the home, the matter of providing a suitable spread of the legs is something within the skill of anyone.

The slight taper of the interiors of the projections 20 respectively provides that when the legs are similarly tapered, which may be done rather roughly, as with a knife, the legs may be driven into the projection recesses with sufficient tightness to avoid the necessity of special holding means for them. The weight of the tree tends to bind the legs and hold them securely.

A further advantage of this construction is that the body may be applied to the stem of the tree with the tree lying on its side, and, after the body has been clamped tightly in place, the legs may be inserted in their recesses, and then the tree may simply be erected vertically and thereby made to rest upon the support as a whole. Being so raised it may be moved about and located in a very easy way by simply taking hold of the legs and swinging them around.

One of the important advantages of this construction is that a device of ordinary size for household use will accommodate trees having stems or trunks of a considerable variety of diameters, for example from one inch in diameter or even less to say five inches in diameter. In this respect then the device automatically adjusts itself to such various sizes of stem through the converging top and bottom flanges defining the V-shaped portion of the stem opening.

Another peculiarity of the present construction is that it accommodates shafts or stems of practically any cross-sectional shape, regular or irregular, which makes for further convenience in the avoidance of special shaping of the lower end of the tree.

According to all prior devices that I know of for holding Christmas trees, the operation of mounting the tree has been attended by difficulties of various kinds, and since the work of erecting such a tree in the home often falls upon the women of the family, or, if upon the men, then under circumstances of inadequate tools and a general inaptitude and disinclination for such work, I have therefore sought to provide a device according to which anyone can easily mount and erect a tree on such a holder, and which tree when so erected is supported so

rigidly and firmly as to avoid all danger of overturning, while avoiding the usual tying of the tree from various directions with cords fastened to nails driven into window and door casings and walls.

It will be observed that the body 10 is substantially wide in vertical directions so that the upper and lower flanges 12 and 14 are substantially widely spaced apart. When the object 16 is normally held it is contacted at five places, namely at two upper opposed places, two lower opposed places, and at the end of the screw-shaft. Such clamping action taken with the strength and rigidity of the construction holds the object peculiarly firmly and satisfactorily in every way.

I contemplate as being included in these improvements all such variations, changes or departures from what is thus specifically illustrated and described as fall within the scope of the appended claims.

I claim:

1. An attachment base of the character described comprising a hollow annular rigid body defining a vertical opening therethrough and which opening is elongated and substantially V-shaped at one end portion in top view and is adapted to accommodate a vertical shaft-like object to be held, with means for forcing such shaft-like object into tight association with the body at said V-shaped portion of said opening at least the substantially V-shaped portion of said opening being defined by upper and lower inwardly directed flanges, and supporting members extending downwardly from the body.

2. An attachment base of the character described comprising a hollow ring-like cast body having an annular continuous side wall and upper and lower integral flanges extending inwardly therefrom, said flanges being directed longitudinally to provide a pair of upper converging contact elements and a pair of lower converging contact elements, the upper and the lower contact elements being spaced vertically a substantial distance apart and being in substantially the same vertical planes and forming a constricted portion of the hollow interior of the body, said body having integral socket elements directed outwardly and downwardly and respectively adapted to receive supporting legs, and a screw-shaft threaded substantially horizontally through the body wall and directed in general toward the constricted portion of said hollow interior.

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