April 28, 1964 A. ABRAMSON 3,131,112

MOLDED PLASTIC SEGMENTED TRUNK AND BRANCH HOLDER MEANS FOR SIMULATED CHRISTMAS TREES

Filed Feb. 20, 1961

Fig. 1.

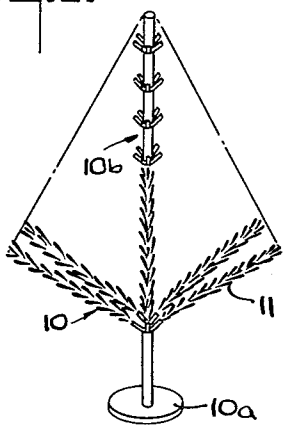
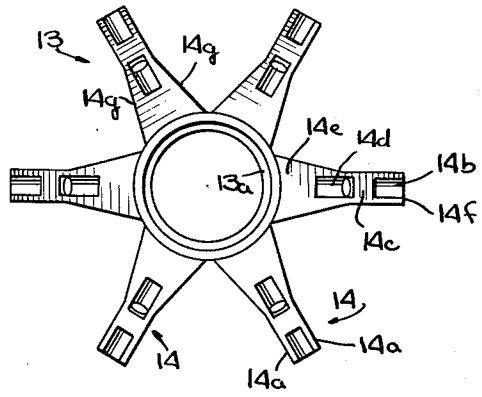


Fig. 2.



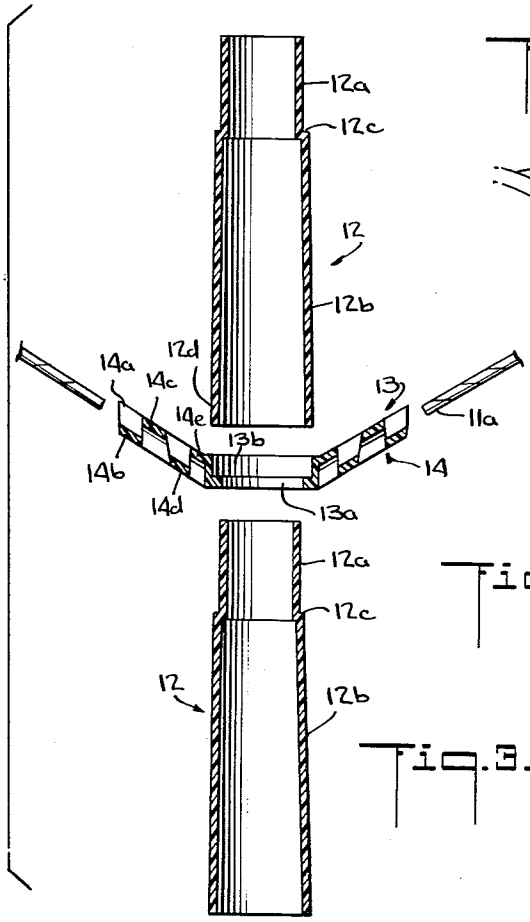


Fig. 3.

Fig. 5.

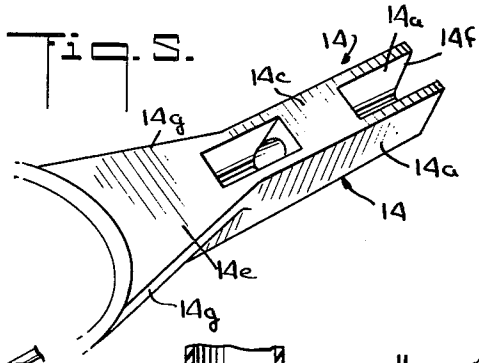
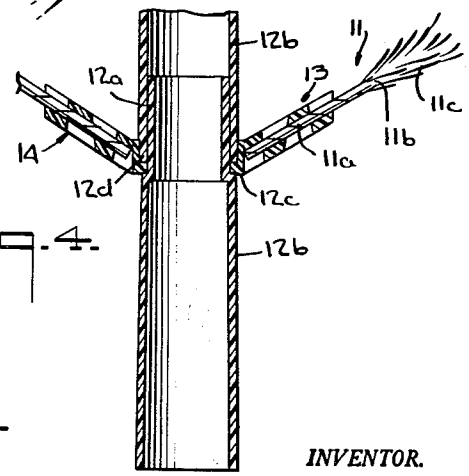


Fig. 4.



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3,131,112

MOLDED PLASTIC SEGMENTED TRUNK AND BRANCH HOLDER MEANS FOR SIMULATED CHRISTMAS TREES

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Filed Feb. 20, 1961, Ser. No. 90,456
6 Claims. (Cl. 161—24)

This invention relates to ornamental and decorative devices and more particularly is directed to artificial simulated Christmas tree constructions.

Among the objects of the invention is to improve artificial simulated Christmas tree constructions of the character described which shall be particularly adaptable for packaging and shipping in a knock-down condition yet requiring a minimum of skill and time for assembly into an attractive ornamental tree, which tree shall comprise an assembly of interfitting trunk segments which can be manufactured by quantity production methods in a variety of colors from plastic resinous material to be relatively light in weight yet rugged in construction to withstand breakage in periodic assembly and dismantling, which shall permit duplication of identical segments along the vertical height of the tree to provide a wide range of desired heights without the requirements of additional segments of different shapes and sizes, which trunk segments shall comprise identical tubular members and collars having radially extending sockets for receiving branches of a variety of conventional constructions, which collars shall be readily adaptable to injection molding techniques at minimum production cost, and which shall be efficient and practical to a high degree in use.

Other objects of the invention will in part be obvious and in part hereinafter pointed out.

The invention accordingly consists of features of construction, combination of elements and arrangement of parts which will be exemplified in the construction hereinafter disclosed, the scope of the application of which will be indicated in the claims following.

In the accompanying drawing in which an illustrative embodiment of the invention is shown:

FIG. 1 is a perspective view partly in phantom of a Christmas tree constructed to embody the invention.

FIG. 2 is a top view of the branch holder collar removed from the assembly.

FIG. 3 is an enlarged exploded view in vertical section of the segmented trunk of the Christmas tree shown in FIG. 1.

FIG. 4 is a view similar to FIG. 3 but with the parts shown in assembly, and

FIG. 5 is an enlarged fragmentary perspective view of a portion of the collar shown in FIG. 2 showing details of construction of a branch holder.

This invention is a continuation-in-part of subject matter covered in my copending application Serial No. 90,455, filed February 20, 1961, entitled Knock-Down Simulated Christmas Tree Constructions Having Adjustable and Collapsible Branches, filed herewith, and application Serial No. 78,938, filed December 28, 1960, for Decorative Simulated Christmas Tree Constructions.

Referring in detail to the drawings, 10 denotes an artificial Christmas tree constructed to embody the invention comprising a base 10*a* supporting a vertical trunk 10*b* having branches 11 extending therefrom in a radial and upward direction.

Branches 11 may be of any conventional construction but each, as shown in FIG. 4, formed generally with a leafless medial or trunk attaching end 11*a* which may

be an extension of an axial core 11*b* carrying simulated leaves 11*c*.

Trunk 10*b* is preferably formed as a segmented structure, each segment, as is clear from FIG. 3, comprising a tubular body 12 and a branch holder collar 13 having a plurality of integrally formed radially extending branch holders 14. Tubular body 12 may have an upper end section 12*a* of smaller cross-sectional area in relation to a lower section 12*b* of larger cross-sectional area and a shoulder 12*c* therebetween. All bodies 12 may be identical with upper end section 12*a* of each body forming an inner sleeve member and lower end section 12*b* forming an outer sleeve member of a telescoping interfitting connection between adjoining segments. Interposed between shoulder 12*c* and the free bottom end 12*d* of an adjoining segment, collar 13 is sized to fit around upper section 12*a* and seat on shoulder 12*c*.

Tubular bodies 12 and branch holder collars 13 may each be molded as unitary structures of suitable resinous plastic material, such as polystyrene, polyethylene, polypropylene or the like. Branch holder collars 13 may be constructed for the intended purpose of providing seating means for removably attaching branches 11 in a desired predetermined angular relation to trunk 10*b* and for ease in low cost quantity production by injection molding methods. To this end, branch holder collar 13 has a wall structure of relatively uniform thickness including a collar or annular ring portion of L-shaped cross-section providing a centrally extending horizontal flange 13*a* and a vertical flange 13*b*, the latter, when collar 13 is positioned on shoulder 12*c*, cooperating with tubular body upper end section 12*a* to provide a groove for receiving free bottom end 12*d* of the adjacent tubular body 12. Any suitable number of branch holders 14 may be integrally formed to extend from vertical flange 13*b*. For most purposes 4, 5 or 6 holders 14 symmetrically spaced around collar 13 will prove satisfactory.

As seen in FIGS. 2, 3 and 5 each branch holder 14 may comprise a pair of substantially parallel spaced apart vertical side walls 14*a* extending radially and upwardly from collar vertical flange 13*b*, side walls 14*a* being interconnected along the length thereof by a plurality of transverse wall portions 14*b*, 14*c*, 14*d* and 14*e* staggered with respect to each other and alternately positioned on the bottom and top edges of side walls 14*a*, the space therebetween forming a seat for removably receiving attaching branch end 11*a*. Described in greater detail and for facilitating injection molding of branch holder collars 13 as a unit, wall portion 14*b* is located adjacent free end 14*f* of holder 14 and extends across the bottom edges of side walls 14*a*. Wall portion 14*c* extends across the top edges of side walls 14*a* spaced from free end 14*f* in offset relation to wall portion 14*b*. Wall portion 14*d* extends across the bottom edges of side walls 14*a* spaced from wall portion 14*b* in offset relation to wall portion 14*c* and medialmost wall portion 14*e* extends across the top edges of side walls 14*a* integral with vertical flanges 13*b* and spaced from wall portion 14*c* in offset relation to wall portion 14*d*, wall portion 14*e* also having opposite lateral extensions beyond side walls 14*a* serving as strengthening webs or ribs defined by converging opposite edges 14*g*. The interior surfaces of transverse wall portions 14*b*, 14*c*, 14*d* and 14*e* may be shaped to conform to the contour of attaching branch end 11*a*, as for example, as will be seen in FIGS. 2 and 5, said interior surfaces having a semi-circular concave contour.

The utility and operation of the invention will now be apparent. Christmas tree 10 may be packed for shipping in a carton in knockdown condition, that is preferably with tubular bodies 12 branches 11 and branch

holder collars **13** separated from each other to save space and prevent breakage.

Assembly of Christmas tree **10** is readily accomplished by first interconnecting base **10***a* with several tubular bodies **12** to form a lower branchless trunk section in the manner fully shown and described in my said copending application. At a desired level above base **10***a* the first branch holder collar **13** is positioned on upper end **12***a* to rest on shoulder **12***c*. At this point branches **11** may be mounted by inserting branch ends **11***a* into the seats in branch holders **14** defined by side walls **14***a* and transverse wall portions **14***b*, **14***c*, **14***d* and **14***e*. After all the branches are mounted on the lowermost collar or segment the next segment is added until tree **10** is erected to a desired or predetermined height and thereafter topped with a suitable ornament or finial (not shown).

After assembly in the above described manner, tree **10** may be shaped by rotating the various branch holder collars **13** with respect to each other to either vertically align or stagger branches **11**. If an upwardly tapering tree is required branches **11** may be provided in a range of different lengths for mounting in shorter length upward progression in the well understood manner.

When ready for storage Christmas tree **10** is readily disassembled by removing branches **11** from holders **14** and separating tubular bodies **12** and collars **13**.

It is thus seen that there is provided a molded plastic segmented trunk and branch holder means for simulated Christmas trees in which the several objects of the invention are achieved and which is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention, and as various changes might be made in the embodiment above set forth, it is to be understood that all matters herein set forth or shown in the accompanying drawing are to be interpreted as illustrative and not in a limiting sense.

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

1. In an artificial Christmas tree construction of the character described, a segmented trunk portion comprising substantially identical molded tubular members having a lower section of larger cross-sectional area relative to an upper section of smaller cross-sectional area and a should formed between said upper and lower sections, the smaller section of one member being sized to telescopingly engage the larger section of an adjoining member, a collar seated on said shoulder between adjoining members, said collar having integrally formed radially and upwardly extending branch holders for releasably mounting the ends of branches.

2. In an artificial Christmas tree construction of the character described, a segmented trunk portion comprising substantially identical molded tubular members having a lower section of larger cross-sectional area relative to an upper section of smaller cross-sectional area and a should formed between said upper and lower sections, a collar having a smaller bore corresponding to said smaller cross-sectional area adjacent a bottom side thereof for seating the collar on said shoulder and a larger cross-sectional area adjacent an upper side thereof corresponding to said larger cross-sectional area for receiving the larger section of an adjacent tubular member in telescoping relation, said collar having integrally formed radially and upwardly extending branch holders for releasably mounting the ends of artificial branches.

3. In an artificial Christmas tree construction, a branch mounting collar of molded plastic resinous material having a relatively uniform wall structure, said collar comprising an annular portion of L-shaped cross-section providing a centrally extending horizontal flange and a vertical flange extending from the outer edge of said horizontal flange, a plurality of branch holders extending radially and upwardly from said vertical flange, each branch holder including a pair of spaced vertical side walls interconnected along the length thereof by a plurality of transverse wall portions staggered with respect to each other and alternately positioned on the bottom and top edges of said side walls, a central space formed by said side walls and transverse wall portions forming a seat for removable branches.

4. In an artificial Christmas tree construction, a segmented trunk portion comprising molded tubular members each having a lower section of larger cross-sectional area relative to an upper section of smaller cross-sectional area and a shoulder formed between said upper and lower sections, the smaller section of one member being sized to telescopingly engage the larger section of an adjoining member, collars seated on said shoulders between adjoining members, each collar having integrally formed radially and upwardly extending branch holders, branches having axial core trunk attachment extensions, said branch holders having seats for removably receiving said branch attachment extensions, said collars being rotatable with respect to each other to trim the tree.

5. The artificial Christmas tree construction defined in claim 1 in which said branch holders include a pair of spaced vertical side walls extending from the collar, said side walls being interconnected along the length thereof by a plurality of transverse wall portions offset with respect to each other and alternately positioned on the bottom and top edges of said side walls, the space between said side walls and transverse wall portions forming a seat for said releasable mounting of the branches.

6. The artificial Christmas tree construction defined in claim 1 in which said branch holders include a pair of spaced vertical side walls extending from the collar, said side walls being interconnected along the length thereof by a plurality of transverse wall portions offset with respect to each other and alternately positioned on the bottom and top edges of said side walls, the space between said side walls and transverse wall portions forming a seat for said releasable mounting of the branches, one of said transverse wall portions being integral with said collar and extending beyond said side walls as strengthening ribs defined by converging opposite edges.

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UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

Patent No. 3,131,112 April 28, 1964

Abraham Abramson

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 3, lines 46 and 58, for "should", each occurrence, read -- shoulder --.

Signed and sealed this 11th day of August 1964.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents