Fig. 13

Fig. 14

Fig. 15

Fig. 16

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This invention relates to the general class of ornamentation and, more specifically, to Christmas tree ornaments, decorations, and accouterments generally found in association therewith.

One of the primary objects of this invention is to provide Christmas tree ornaments together with means for effecting movement thereof relative to a tree branch or other support to which the ornament is attached.

A further object of this invention is to provide expandable and contractible Christmas tree ornaments.

A still further object of this invention is to provide Christmas tree ornaments which include expandable and contractible transparent elements.

Still another object of this invention is to provide a Christmas tree ornament or decoration together with means for effecting rotary movement thereof.

This invention contemplates, as a still further object thereof, the provision of Christmas tree ornaments and accouterments of the type generally referred to supra, the same being inexpensive to manufacture and maintain, non-complex in construction and assembly, and durable in use.

Other and further objects and advantages of the instant invention will become more evident from a consideration of the following specification when read in conjunction with the annexed drawings, in which:

FIGURE 1 is a side elevational view of a Christmas tree ornament on which is supported a plurality of ornaments constructed in accordance with the instant invention and including a floor supported accessory thereof;

FIGURE 2 is an enlarged cross-sectional view illustrating the ornament shown in FIGURE 1;

FIGURE 3 is an enlarged cross-sectional view of the second embodiment of the ornamentation shown in FIGURE 1;

FIGURE 4 is a side elevational view of a third embodiment of the invention, FIGURE 4 showing the spinning or rotational means for the ornament in its collapsed position;

FIGURE 5 is an enlarged detail cross-sectional view of the ornament shown in FIGURE 4, FIGURE 5 being taken substantially on the vertical plane of line 5–5 of FIGURE 4, looking in the direction of the arrows;

FIGURE 6 is a side elevational view of the ornament and rotatable means shown in FIGURE 4, FIGURE 6 illustrating the means in its expanded form;

FIGURE 7 is an enlarged detail cross-sectional view of the ornament and its rotating means as shown in FIGURE 6, FIGURE 7 being taken substantially on the vertical plane of line 7–7 of FIGURE 6, looking in the direction of the arrows;

FIGURE 8 is a perspective view of a fourth embodiment of a Christmas tree ornament constructed in accordance with the instant invention, FIGURE 8 illustrating a bellows type operating means for effecting reciprocation of the Christmas tree ornament;

FIGURE 9 is an enlarged detail cross-sectional view of the ornament and reciprocating means shown in FIGURE 8, FIGURE 9 being taken substantially on the vertical plane of line 9–9 of FIGURE 8, looking in the direction of the arrows;

FIGURE 10 is an enlarged detail cross-sectional view of the ornament and bellows shown in FIGURE 8, FIGURE 10 illustrating the bellows means in its expanded condition;

FIGURE 11 illustrates in perspective a fifth embodiment of this invention;

FIGURE 12 is an enlarged detail cross-sectional view of the ornament shown in FIGURE 11, FIGURE 12 being taken substantially on the plane of line 12–12 of FIGURE 11, looking in the direction of the arrows;

FIGURE 13 is a perspective view of a header or manifold device for operating the several ornamental devices described above;

FIGURE 14 is an enlarged detail cross-sectional view of the header or manifold device shown in FIGURE 13;

FIGURE 15 illustrates a still further embodiment of this invention; and

FIGURE 16 is an enlarged fragmentary detail cross-sectional view of the embodiment of this invention shown in FIGURE 15, FIGURE 16 being taken substantially on the vertical plane of line 16–16 of FIGURE 15, looking in the direction of the arrows.

Referring now more specifically to the drawings, reference numeral 20 designates, in general, a Christmas tree, together with ornaments and accouterments therefor constructed in accordance with the teachings of the instant invention. Of the Christmas tree decorations shown in FIGURE 1, one of these adornments is clearly depicted in FIGURE 2 of the drawings.

The ornamental device shown in FIGURE 2 comprises, a substantially spherical type ornament 22 which includes a substantially hollow spherical casing 24 formed of a transparent or translucent material on which may be embossed or otherwise applied a representation of a conventional Santa Claus or St. Nicholas, or any other representation consistent with the theme of the Christmas season. Disposed within the casing 24 is white flocculent material 30 which when distributed within the confines of the casing 24 simulates snow which will gradually accumulate in the lower end of the sphere 22 under the force of gravity.

The upper end of the spherical ornament 22 is formed with an outwardly projecting substantially cylindrical neck 32 through which extends diverging arms 34 of a split ring hanger 36 of conventional design.

Diametrically opposed from the open neck 32, the casing 24 is penetrated by an air inlet conduit 38 which terminates at points immediately adjacent the inner surface of the casing 24 in a plurality of conduit branches 40, the branches 40 being disposed at differing angles relative to each other in such a manner that air upon entering the conduit 38 will be discharged to the branches 40 against the flocculent material 30 to cause the same to rise and swirl about the inner side of the casing 24 to simulate falling and drifting snow.

The spherical ornament 22 is adapted to be releasably secured to a tree branch 42 of the tree 20 by means of a conventional hook 44, the lower end of which is releasably received within the split ring hanger 36.

A conventional source of air under pressure is connected to the conduit 38 to effect the suspension of the flocculent material 30, the air under pressure escaping from the casing 24 through the open neck 32.

FIGURE 3 illustrates another or second embodiment of this invention similar in some respects to the embodiment of the invention as is illustrated in FIGURE 2. In this latter case, a Christmas tree ornament is designated, in general, by the reference numeral 50 and comprises a substantially spherical type ornament having a casing 52 preferably formed of a transparent or translucent material. As in the preceding embodiment of this invention, the casing 52 is filled with flocculent material 54 and has a hollow tubular neck 55 communicating with the ambient atmosphere. A split ring hanger is indicated at 56, the hanger 56 including
diverging arms 59 which are encircled by a ring 60 intermediate the ends thereof, and from the ring 60 depends a plurality of stringers 62 formed of a sufiabile flexible material and which may be formed with contrasting colors.

The casing 52 at a point diametrically opposed to the neck 53 of the conduit 64 which terminates in a plurality of air branches 66 which, upon the connection of the conduit 64 with a source of air under pressure, will effect a disturbance of the flocculent material 54 and also cause a floating movement to be imparted to the stringers or strands 62.

The Christmas tree ornament 20 is adapted to be connected to one of the tree branches 42 by means of another conventional hook 44 which releasably receives the split ring hanger 56.

A third embodiment of this invention is illustrated in detail in FIGURES 4 to 7, inclusive. These figures illustrate a spinning or oscillating type of ornament denoted, in general, by reference numeral 70. The ornament 70 is formed of rubber or a similar type of resilient material and includes a bladder having a pair of opposed side walls 72, 74 having a substantially triangular configuration (see FIGURE 6) and a top wall 76 disposed at the base ends of the side walls 72, 74. The top wall 76, substantially centrally thereof, is formed with an air inlet opening defined by a neck 78 (see FIGURE 7) which is adapted to receive therein and be sealed to one end of an air conduit 80. The other end of the conduit 80 is connected with a source of air under pressure in a manner to be described infra. The lower ends or apices of the side walls 72, 74 are sealed at 82 and terminate in hook portions 84 which are adapted to releasably receive a split ring 86 of conventional design which, in turn, supports a spherical ornament 88.

As is seen in the drawings, and making specific reference to FIGURE 4 of the drawings, the side walls 72, 74 are folded along the fold line 90 and are reverted along the line 92. Thus, air entering through the conduit 80 will cause the side walls 72, 74 to expand and move away from each other and thereby force the bladder to expand and unfold about the several fold lines 90, 92 to assume the configuration shown in FIGURE 6.

FIGURES 8 to 10, inclusive, illustrate a fourth embodiment of this invention wherein the Christmas tree decoration or ornament is denoted by reference numeral 100. As is illustrated in these figures, it is seen that the ornament 100 includes the bellows 102 having a bottom wall 106 disposed opposite an oppositely disposed bottom wall 109. A conduit 108 extends through the top wall 104 and is in open communication with the interior of the bellows device 102. The conduit 108 is adapted for connection with a source of air under pressure in a manner to be described below.

The bottom wall 106 has secured thereto a hook member 110 which is adapted to releasably receive the split ring hanger device 112 of a conventional Christmas tree ornament 114.

It will be understood that as air is alternately supplied to and removed from the bellows 102, the same will expand and retract, and in so moving the ornament 114 will also move, in a corresponding direction. For obvious reasons, the conduit 108 is looped over another of the Christmas tree branches 80 so that the ornament 114 reciprocates in a substantially vertical path.

FIGURES 11 and 12 illustrate a fifth embodiment of this invention wherein the Christmas tree ornament is designated, in general, by the reference numeral 200. In this embodiment, the ornament 200 is seen to comprise a substantially cylindrical bottom wall 202 having a continuous circumferential flange 204 projecting laterally away from one side thereof. The bottom wall 202 is connected to the top wall 206 and the other side thereof a substantially cylindrical flange 208 disposed in concentric relation with respect to the aperture 206. The flange 208 is spaced outwardly from the aperture 206 to form a shoulder 210.

Reference numeral 212 indicates a transparent substantially semi-spherical lens having an outwardly turned laterally projecting circumferential flange 214 which is adapted to seat against the shoulder 210.

A substantially hollow semi-circular light reflector is indicated by reference numeral 216 having a continuous peripheral flange 218 which is adapted to abut against the cylindrical flange 214. The two flanges are held in abutting relation by means of a centrally apertured nut 220 which is threaded on the cylindrical flange 208.

The apex of the light reflector 216 is formed to form a light socket 222 in which is threaded the base 224 of a conventional electric light 226. The light socket 222 is encompassed by the usual and conventional dielectric Christmas tree light base 228, and the light 226 is energized in the conventional manner by means of the electric cable 230. A Christmas tree mounting hook 232 has an arm 234 rigidly secured to the base 228.

Reference numeral 236 denotes a flexible diaphragm formed of a flexible plastic transparent or translucent material which may have, optionally, a design (not shown) embossed thereon. As is seen in FIGURE 12, the outer marginal rim 238 thereof is folded transversely along the apertures about the flange 204 and this is, in turn, tightly encompassed by the marginal edge of a substantially hollow semi-spherical shell 238 formed of a rigid transparent or translucent material and having a plurality of air vents 240 extending transversely therethrough.

Projecting laterally from the flange 204 is a hollow tubular element 242 that projects through the marginal edges of the diaphragm 236 and the shell 238 for connection with one end of an air conduit 244, the other end of which is connected with a source of air under pressure to be described.

Referring now to FIGURES 15 and 16, reference numeral 300 designates a still further embodiment of this invention. In this representation the invention is seen to comprise a simulated hollow house including oppositely disposed side walls 302, 304 and an inverted substantially V-shaped roof 306 having a centrally located opening 308 extending transversely therethrough on both sides of its apex. Disposed within this described structure is a simulated substantially solid rectangular and normally upright fireplace 310 having a continuous peripheral depending base flange 312. The fireplace 310 includes a substantially hollow rectangular chimney 314 which projects through a opening 308 and terminates at a point above the roof 306.

The fireplace 310 is provided with a vertical bore 316 which, at its upper end, is in open communication with the lower end of the chimney 314. The lower end of the bore 316 is necked down in diameter to form a passage 318 which, at the its lower end, opens into the plane of the base end 320 of the fireplace 310. The fireplace 310 is also formed, adjacent its upper end, with an air vent passegway 322 which intersects the bore 316. The upper end of the bore 316 is closed by a substantially cylindrical plug 334 having a centrally positioned transversely extending opening 326 formed therein.

Disposed within the lower end of the bore 316 is a bellows device 325 having a neck 330 communicating with the interior thereof and projecting through the base end 320 of the fireplace 310. A piston 332 is supported on the top of the bellows 330 and is connected to one end of a piston rod 334, the other end of the piston rod extending through the aperture 326 of the plug 334 and into the chimney 314 for threaded connection at 335 with an ornament 336 such as, for example, an ornament having the configuration of a Santa Claus, the ornament 336 being normally concealed within the chimney 314. One end of a length of tubing 338 is connected to the neck 330 and the other end thereof projects through the flange 312 for connection with one end of an elongated conduit 340, the other end of the conduit being connected with a source of air under pressure in a manner to be described.
The number of tubular members may vary depending upon the number of ornamental to be used in decorating the Christmas tree. The casing 402 and each of the aforementioned tubular members are formed with continuous passages 418 which are in open communication at their respective inner ends with the chamber 404. The outer terminal ends of the tubular members 408 terminate in enlarged frusto-conical heads 420. From one side of the casing 402 projects a resilient hook 422 which may be engaged with a tree branch 42 or other support means on the tree trunk 424.

As is seen in FIGURE 1, the manifolds 400 are connected together in series in two air pressure systems and are mounted in longitudinally alternately spaced relation vertically of the tree trunk 424. It should be understood, of course, that the manifolds may be arranged in any desired relation, one with respect to the other.

One of the series circuits includes an air conduit 500 having one of its ends connected with an intermittent air supply source, the other end thereof being detachably connected to the enlarged head 420 of a manifold member 406 of first manifold designated at 400'. Air under pressure escapes from the manifold 400' through the tubular member 412 to which one end of a conduit 502 is connected. The other end of the conduit 502 is connected to the manifold 406 of a second manifold 400' escapes therefrom through the tubular member 412, conduit 504, a conventional T-connector 506, conduit 508, to the manifold 500' via its tubular member 420.

The ornaments 70, 100 and 200 being suspended on the tree limbs in the desired arrangement, are connected through their respective conduits 89, 108 and 244 with a selected one of the manifolds 400 through any one of the tubular members not employed in the above described series circuit arrangement. Should there be fewer ornaments to be connected to any given manifold 400 the same are plugged by conventional means not shown to prevent the escape of air under pressure.

It will now be understood that as air under pressure is admitted to the bladder portion of the ornament 70 will spin and unwind in the directions of the arrows shown in FIGURE 4. As the air is withdrawn, the bladder of the ornament 70 will reverse its direction and return to its normal position shown in FIGURE 4. Thus, the globe or spherical element 88 will also turn in corresponding directions.

The pulsating or intermittent air supply will cause the bellows 102 of the ornaments 100 to alternately expand and contract thereby imparting a vertical reciprocating movement to the ornament 114.

The conduit 344 is also connected to the intermittent air supply, and as a consequence thereof, the bellows 328 will expand and contract and in so moving will effect reciprocation vertically of the piston rod 334. As the bellows 328 expands the rod 334 moves upwardly and, of course, causes the ornament 336 to move upwardly and to come into view. Upon release of air pressure within the bellows 328 the same will collapse moving the piston rod 334 downwardly and simultaneously returning the element 336 into concealment in the chimney 314.

The diaphragm 236 of the ornament 200 is also caused to fluctuate towards and away from the rigid shell 238 due to the intermittent air pressure admitted behind the diaphragm through conduit 244.

Reference numeral 600 designates a conduit having one of its ends connected to a source of air under constant pressure or, optionally, to an air pressure source which is periodically interrupted. The other end of the conduit 600 is connected to the tubular member 406 of a fourth manifold 404, and the tubular member 412 of the latter is connected through conduit 602 with the tubular member 406 of a fifth manifold 408.

The tubular members 408, 410, 414 and 416 are connected through the conduits 38 and 64 of the ornaments 22 and 50, respectively. The air is distributed within these ornaments by the branches 40, 66 and causes the floucculent material 30 and 54 to swirl around the interiors of the casings 24, 52. The air, of course, escapes from within the casings 24, 52 through the open necks 32, 55.

With respect to that embodiment of this invention as is illustrated in FIGURE 3, the air discharge from the branches 66 will cause the strings or strands 62 to oscillate and wave as the compressed air escapes from within the casing 52.

The intermittent or pulsating air supply and the constant pressure air supply are all of conventional construction.

Having described and illustrated several embodiments of this invention in detail, it will be understood that the same is offered merely by way of example, and that this invention is to be limited only by the scope of the appended claims.

What is claimed is:

1. A Christmas tree ornament comprising a substantially hollow cylindrical wall and a continuous cylindrical flange at the outer marginal edge thereof, said bottom wall being centrally apertured, a substantially semi-spherical flexible diaphragm formed of a substantially transparent plastic material, a light source disposed within said aperture and supported from said bottom wall, said diaphragm having the peripheral marginal edge thereof engaging about the outer side of said flange, a substantially hollow semi-spherical shell formed of a transparent material, said shell having its peripheral marginal edge engaging against said marginal edge of said diaphragm and connecting with said flange to tightly clamp said peripheral edge of said diaphragm therewithin in an air tight seal, and means for connecting the chamber formed between said flexible diaphragm and said bottom wall with an intermittent or pulsating source of air under pressure.

2. A Christmas tree ornament comprising a bottom wall provided with an aperture, a hollow shell formed of transparent material disposed upon said bottom wall with the open end engaging and seated upon said bottom wall, a light source disposed within said aperture and supported from said bottom wall, a flexible diaphragm formed of a substantially transparent material positioned within said shell and having its perimeter attached to said bottom wall, and means for connecting the chamber formed between said flexible diaphragm and said bottom wall with an intermittent or pulsating source of air under pressure.

3. A Christmas tree ornament comprising a bottom wall provided with an aperture, a hollow shell formed of transparent material disposed upon said bottom wall with the open end engaging and seated upon said bottom wall, a lens projecting through said aperture and supported from said bottom wall, a light source disposed beneath said lens and supported from said bottom wall, a flexible diaphragm formed of a substantially transparent material positioned within said shell and having its perimeter attached to said bottom wall, and means for connecting the chamber formed between said flexible diaphragm and said bottom wall with an intermittent or pulsating source of air under pressure.

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