

[54] DECORATIVE ROOM AIR TREATING
DEVICE

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Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 353,086, April 23,
1973, abandoned, which is a continuation-in-part of
Ser. No. 250,181, May 4, 1972, abandoned.

[52] U.S. Cl. 239/59, 239/60

[51] Int. Cl. B05b 1/30

[58] Field of Search 239/34, 57, 58, 59, 60

[56] References Cited

UNITED STATES PATENTS

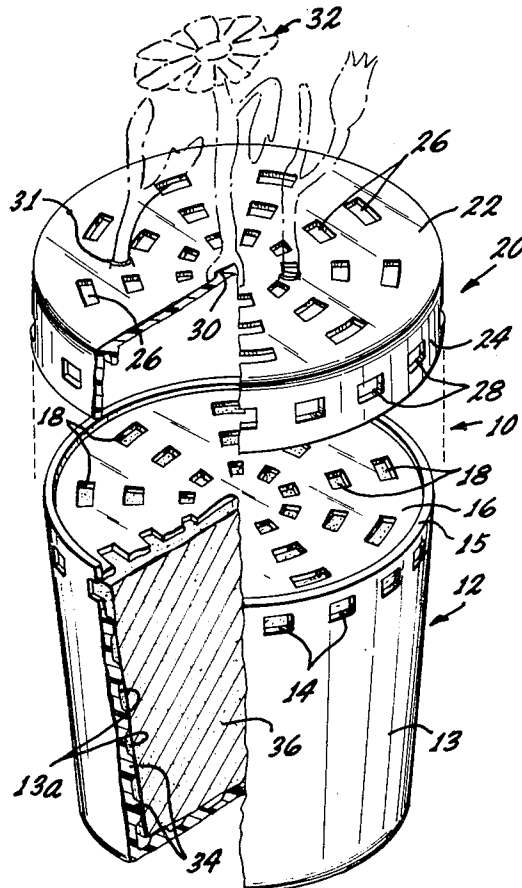
2,438,129	3/1948	Rich.....	239/59
2,657,090	10/1953	Meek.....	239/59 X
2,765,194	10/1956	Will.....	239/59
2,783,084	2/1957	Paxton.....	239/59

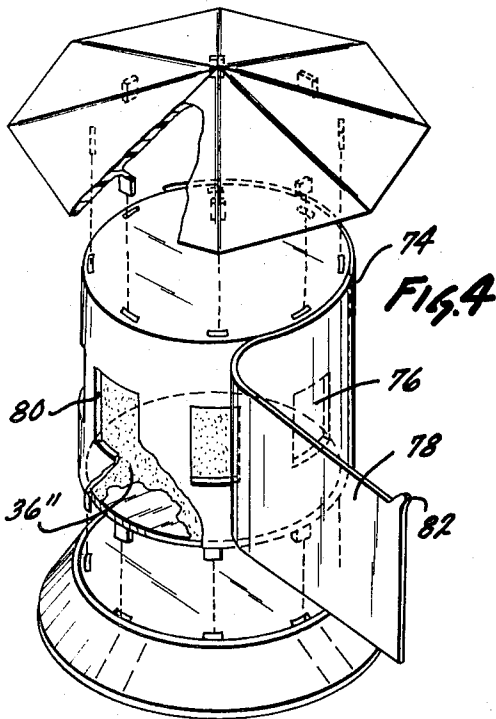
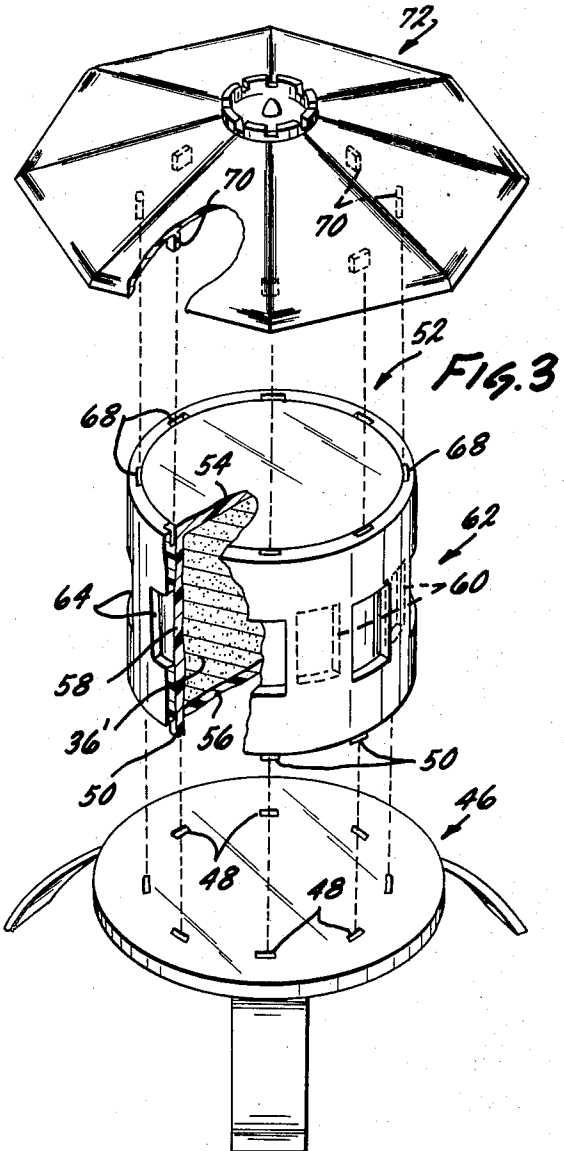
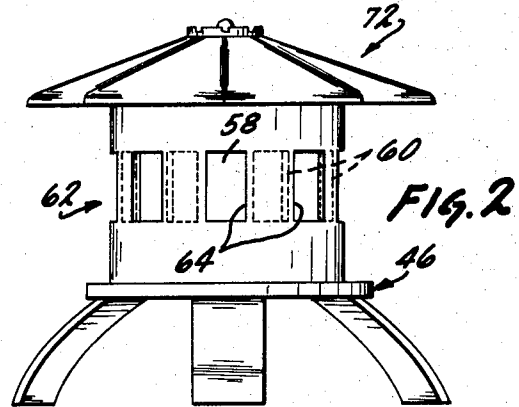
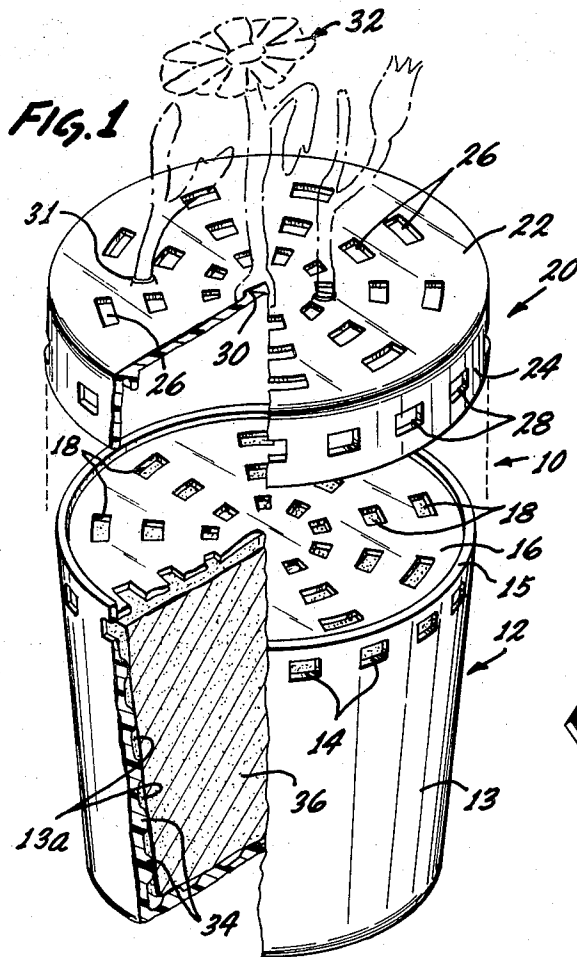
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[57] ABSTRACT

A decorative room air treating device in the shape of a flower pot or other aesthetically appealing container having a body portion with circular cross-sections, which might comprise a single-walled container capped by a fixed orificed circular disc and a coaxially rotatable disc having orifices which, in a certain angular disposition, may be brought into registry with the orifices in the fixed disc, alternatively, the device might comprise a pair of cylindrical containers dimensioned to fit closely, but rotatably one within the other. A cake of an air treating substance is disposed within the inner container and the side walls of the two containers are so orificed that in one rotational position relative to each other, none of the orifices of the two containers fall into registry, but in a second rotational position, they are disposed in registry. In positions intermediate the two extremes, the orifices of the two containers may be disposed in various degrees of registry. Means may be provided at opposite ends of the two containers to enable them to be rotated relative to each other.

5 Claims, 4 Drawing Figures





DECORATIVE ROOM AIR TREATING DEVICE

PRIOR RELATED APPLICATION

This application is a continuation-in-part of my prior application Ser. No. 353,086 filed Apr. 23, 1973, now abandoned and which, itself, was a continuation-in-part of my prior application Ser. No. 250,181 filed May 4, 1972, now abandoned. Another continuation-in-part application is filed concurrently herewith.

BACKGROUND OF THE INVENTION

This invention relates to room air treating devices in general, such as room deodorizers, and in particular to such devices as have sought to obtain their effectiveness through evaporation of a gel or liquid type deodorizer.

DESCRIPTION OF THE PRIOR ART

For a number of decades there have been offered to the public a number of different devices containing gels or liquids which, when exposed to the atmosphere, evaporate slowly into the environs and dissipate or counteract the presence of certain stale or otherwise offensive room odors. Examples of such devices which have been patented are illustrated and described in the following patents:

U.S. Patent No.	Date of Issue	Inventors
1,732,028	Oct. 15, 1929	H. M. Reiner
2,247,600	July 1, 1941	F. C. Brennan, et al.
2,412,326	Dec. 10, 1946	D. F. J. Dupuy
2,438,129	March 23, 1948	H. R. Rich
2,603,532	July 15, 1952	W. H. Wheeler, et al.
2,657,090	Oct. 27, 1953	George W. Meek
2,765,194	Oct. 2, 1956	T. Will
2,783,084	Feb. 26, 1957	W. Paxton
2,794,676	June 4, 1957	V. F. D'Agostino
2,878,060	March 17, 1959	A. D. Russo
2,927,055	March 1, 1960	Monroe Lanzet
3,400,890	Sept. 10, 1968	F. E. Gould
3,552,632	Jan. 5, 1971	N. E. Wilson
British Patent Number		
777,303	June 19, 1957	Charles Wasmer

A principal problem with all of such devices is that, despite efforts on the part of inventors, designers and manufacturers to provide the devices with an aesthetic appearance, they still look like cans, jars or other objects which are usually quite incompatible with the customary decor of a living room, den, bedroom or bathroom. Even the Gould patent device with its fragrance releasing simulated flower would seem to be quite artificial in its appearance.

While undoubtedly skilled designers could, if engaged specifically for this purpose, produce works-of-art embodiments of such devices, there are certain practical problems which have inhibited such efforts. In the first place, the device should be adjustable in order that one may vary the rate of evaporation of the deodorizing gel, depending upon the extent of the need therefor in the room or space in which the device is placed. Should there be little need therefor, the evaporation rate should be minimized in order to prolong the useful life of the device; but where the room may have been subject to heavy smoking or other offensive odor producing activities, it may be desirable to increase substantially, for at least a brief period, the evaporation

rate of the gel and the dispensation of the vapor into the room.

Secondly, the device should be adapted to fit in with the decor of any of the rooms in which it is to be placed, e.g., bathroom, bedroom, den, living room, dining room, kitchen or family room. Whatever design is adopted, therefore, must have a rather universal adaptability to many different room decors.

Thirdly, the container for the gel must be able to be fabricated and sold so cheaply that when the useful life of the gel has ended, the householder may afford to throw the container away. Alternatively, it might be desirable to provide a container in which a new cake of gel could conveniently be inserted to replace the one which has evaporated.

In addition, despite the desirability of extreme economy in manufacture, a device of the type herein contemplated must be carefully and specially designed to be easily operated by the average householder and to avoid leakage of the gel and sticking of rotatable parts.

These objectives have not hitherto been attained by any prior room deodorizing device.

SUMMARY OF THE INVENTION

The present invention provides a room air treating device which may be in the form of an attractive flower pot from which protrudes a plastic flower, such as a daisy, with or without additional greenery, or other aesthetically appealing container. The device may be constructed as a double-walled vessel with an inner wall portion or vessel which fits closely but rotatably within the outer-walled vessel. The inner-walled vessel serves as a container for a cake of deodorizer gel and is orificed at a plurality of locations about its cylindrical side. The outer-walled vessel is so orificed that in one angular position of the inner-walled vessel relative to the outer walls, none of its orifices falls into registry with any of the orifices in the inner-walled vessel; but in other positions, such registry occurs in varying degrees up to complete registry of all orifices of both the inner and outer vessels.

The top of the inner vessel may be closed by a transverse wall which may or may not be removable. Decorative means may be provided at each end of the pair of containers whereby by gripping such means and twisting them in opposite directions the orifices of the two containers may be moved into or out of registry. All components of the deodorizer container may be readily molded of a plastic material such as polystyrene or high-impact polyethylene, at a minimum of expense.

In another embodiment of the invention, a single-walled pot or vessel may be employed with a double transverse walled capping, one of which cappings is fixed and the other of which is rotatable relative to the fixed capping. Both walls of the capping preferably include a downwardly projecting flange wall and the transverse and the flange walls of both cappings may be orificed in such a way that in one angular disposition of the rotatable capping the orifices thereof will be in registry with the orifices in the fixed capping, but in another angular disposition, the orifices will be out of registry.

Thus, the deodorizing substance is contained in a decorative simulated potted plant or other attractive container which may be placed appealingly anywhere

in the house, and deodorization may be effected by rotating the outer wall of the flower pot vessel or other form of container to a position relative to its inner wall wherein the orifices of both vessels are placed in the desired degree or registry.

When the deodorizer cake is completely evaporated, it may be replaced by simply removing the transverse top wall on the inner-walled vessel and dropping a new cake into the latter.

The room air treating device of the present invention may thus be seen to be both decorative and utilitarian in that the deodorizing cake may be fully contained or exposed for evaporation into the surrounding atmosphere to effect deodorization thereof.

BRIEF DESCRIPTION OF THE DRAWINGS

In the accompanying drawings,

FIG. 1 is a perspective view, partly in section, of the preferred embodiment of the invention.

FIG. 2 is a side elevation of another embodiment of the invention.

FIG. 3 is an exploded perspective view of the embodiment of the invention shown in FIG. 2.

FIG. 4 is an exploded perspective view of still another embodiment of the invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1 of the drawings, the decorative room treating device 10 may be comprised of a container 12, preferably frusto-conical in configuration as a flower pot, the sidewall 13 of which is orificed at 14 about its periphery just below its rim 15. A transverse wall 16 with radiating orifices 18 is seated within the rim 15 of the container 12. A cap 20, comprising a transverse wall 22 and a downwardly extending flange 24, is disposed rotatably on the rim 15 of the container 12. Both the transverse wall 22 and the flange 24 are orificed at 26 and 28 respectively with such orifices being so disposed that in one angular position relative to the transverse wall 16 and container rim 15, none of such orifices falls into registry with the orifices 14, 18, while in a second angular position such registry occurs.

A knob 30 and receptacles 31 may be provided in the transverse wall 22 of the cap 20 to receive and hold some type of plastic floral display 32 shown in dotted lines. A cake 36 of an evaporative air treating substance is placed inside the container 12 prior to its being closed by the transverse wall 16.

In order to improve the air circulation around the cake 36 and hence to increase evaporation of the cake vapors into the area surrounding the deodorizer, the inside of the wall 13a may be provided with radially inwardly projecting ribs or projections 34 which support the cake 36 away from inner surface 13a of the wall 13.

When a FIG. 1 type room deodorizer is to be utilized, the cap 20 is simply rotated relative to the rim 15 of the container 12 to provide such degree of registry of the orifices 26, 28 of the cap with orifices 14, 18 as may be desired. When evaporation of the cake 36 is no longer required or desired, the cap 20 may be re-rotated to take all of the orifices out of registry.

Alternatively, the orifices 26, 28 of the cap may be placed only partly in registry with orifices 14, 18 to provide a lesser rate of evaporation and hence, deodor-

ization. When the gel cake 36 shall have been fully evaporated, it may be replaced simply by removing the transverse wall 16 and dropping a new cake into the bottom of the container 12.

All components of the device, with the exception of the gel cake, may be molded of plastic materials. The container 12, cap 20 and transverse wall 16 may be made of polystyrene or high-impact polyethylene, while the flower 32 may be molded of polyethylene.

In the embodiment of FIGS. 2 and 3, a different decorative design is employed. Here, the design is in the form of a Japanese lantern or tōrō. A tri-pod supported base 46 with a series of notch-like receptacles 48 disposed in a circle, receive mating projections 50 extending down from an inner cylindrical container 52 having top and bottom walls 54, 56, respectively, and housing an evaporative gel cake 36'. The sidewall 58 of the cylindrical container 52 is peripherally windowed at a plurality of locations 60. The container 52 is tightly but rotatably encased in an outer cylindrical shell 62 which is also windowed at a plurality of locations 64, such that in one rotational angular disposition windows of the windows 64 fall into registry with the windows 60 in the inner container, but in another such disposition, all of them do fall into registry. The rim 66 of the outer shell 62 may be notched thereabout at 68 to receive a series of projections 70 disposed matingly in a circle on the underside of a roof-like member 72. It will be appreciated, then, that when the roof-like member 72 is placed over the shell 62, housing the cylindrical container 52, with the projections 70 seated in the notches 68, and the container-shell combination 52-62 is placed on the base 46 so that the projections 50 are also seated in the receptacles 48, any rotation of the roof-like member relative to the base 46 will result in rotating the outer shell 62 relative to the cylindrical container 52. In this way, the windows 64 may be moved in or out of registry with the windows 60 of the container 52.

The embodiment of FIG. 4 resembles somewhat the configuration of that of FIGS. 2 and 3, but it does not provide for opening and closing of the windows by relative rotation of inner and outer containers. Instead, the gel cake 36'' is packed in a single walled cylindrical container 74, closed both top and bottom, and which container has a series of windows 76. These are closed by a tacky, preferably transparent mylar type flexible sheet 78, which is wrapped around the cylinder wall 80, and may be peeled therefrom starting with the tab 82, thus exposing the cake 36'' through all windows 76 simultaneously and fully. However, whenever a householder desires to reclose the windows 76 to prevent unnecessary evaporation of the cake 36'', she may simply re-wrap the tacky mylar sheet 78 around the wall 80 of the container 74 and place the decorative container wherever she desires for ready future use.

Thus, the foregoing embodiments of the present invention not only provide very useful and functional deodorizing devices, but devices which, because they so resemble a flower pot with a blooming flower or other decorative device, are aesthetically attractive enough to fit with the decor of most rooms of the average house. Further, since the entire containing units may be fabricated of plastic, they may be made and sold at relatively low prices. In addition, since such devices need not be thrown away when their evaporative gel cakes have been dissipated, but each may be renewed with the insertion of a new gel cake, the present invention

will not only appeal to the economic housewife, but also to all persons who are interested in promoting ecology by decreasing the number of throw-away items which they use and must discard.

I claim:

1. A decorative room air treating device, said device comprising:

an inner container and an outer container, said containers both having sidewalls with circular cross-sections about a common axis, and, at least, one of said containers being closed by a transverse bottom wall, and both said containers being so dimensioned that the inner container fits closely but rotatably within the outer container, the side walls of each of said containers being provided with a plurality of orifices spaced thereabout, the orifices of the inner container being so disposed that in a first rotational angular position relative to the outer container, none of the orifices of the inner container falls in registry with any of the orifices in the outer container, and, in a second such relative rotational angular position, a plurality of the orifices of the inner container falls into registry with those of the outer container;

an evaporative air treating substance disposed within the walls of the inner container, a decorative base to support both said containers;

means to interlockingly engage the bottom of the sidewall of one of said containers with said base;

and a decorative capping to be placed coaxially over both said containers, said capping having means to interlockingly engage the top rim of the other of said two containers not so engaged with the said decorative base, whereby, when the capping is rotated about said axis relative to the base, the container interlockingly engaged with said capping will be correspondingly rotated relative to the other container interlockingly engaged with the base, thereby to dispose said inner container in either its said first or second rotational angular positions relative to the outer container, or in any position therebetween.

2. The decorative room air treating device described in claim 1 wherein the base is interlockingly engaged with the bottom of the sidewall of the inner container and the capping is interlockingly engaged with the rim of the sidewall of the outer container.

3. The decorative room air treating device as de-

scribed in claim 1 wherein the base is interlockingly engaged with the bottom of the sidewall of the outer container and the capping is interlockingly engaged with the rim of the sidewall of the inner container.

4. A decorative room air treating device comprising an aesthetically appealing container filled with a cake of air-treating substance, said container having top and bottom transverse walls and substantially vertical sidewalls housing the cake, said side walls having a plurality of orifices through which the cake may evaporate into the atmosphere, and a thin flexible peelably removable plastic sheet, said sheet being tacky on one side and being wrapped around the vertical sidewalls with the tacky side of the sheet being laid against said sidewalls, thereby providing an airtight covering over the orifices in said sidewalls until exposure of the cake to the atmosphere through said orifices is desired, whereupon said plastic sheet may be peeled or either wholly or partially removed from said side walls to uncover said orifices and expose the cake to the atmosphere through said orifices.

5. A room air treating device, said device comprising a container filled with an evaporative air treating substance in the form of a firm cake, said container having a sidewall of circular cross-sections about a common axis and a first transverse wall forming the bottom of the container and a second transverse circular wall being orificed in a first predetermined pattern radiating about said common axis; and a third transverse circular wall rotatably disposed upon the said second transverse wall, said third wall having orifices disposed in a second predetermined pattern radiating about said axis such that in a first angular disposition of said third wall in relation to the second wall, none of the orifices in said third wall registers with the orifices in the second wall, but in a second angular disposition of said third wall in relation to the second wall, a plurality of the orifices in the third wall fall into registry with the orifices in said second wall; and the inside of the circular cross-sectioned sidewall being provided with a plurality of radially inwardly extending projections, said projections serving to support said cake away from most of the inner side wall surface of the container, thereby exposing a greater area of the cake to the atmosphere for evaporation thereinto and passage through the orifices in the said second and third transverse walls when said orifices are disposed in registry.

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