

United States Patent

Holmes et al.

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[54] CONTAINER

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[51] Int. Cl. **A47f 3/14, A47f 3/06, A47b 88/00**

[58] Field of Search **312/105, 305, 126, 202, 284, 312/308; 108/91, 94**

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[57] ABSTRACT

A container especially for storing, displaying and, under some conditions, shipping food and other perishable products. Preferred embodiments feature a stepped post member each step of which mounts a separable rack or tray which may have dual function. This post member is separably related to a base mounting a cap-like enclosure for the post-tray assembly. In certain embodiments the base is designed to provide a storage receptacle for the separable trays.

9 Claims, 5 Drawing Figures

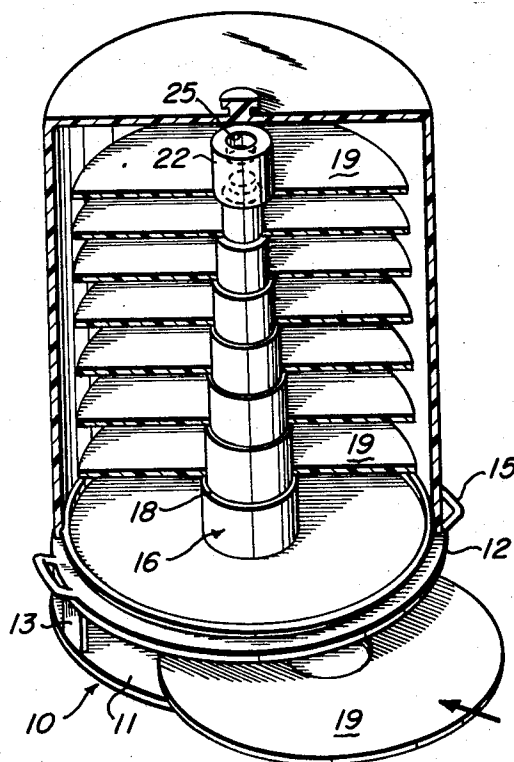


FIG-1

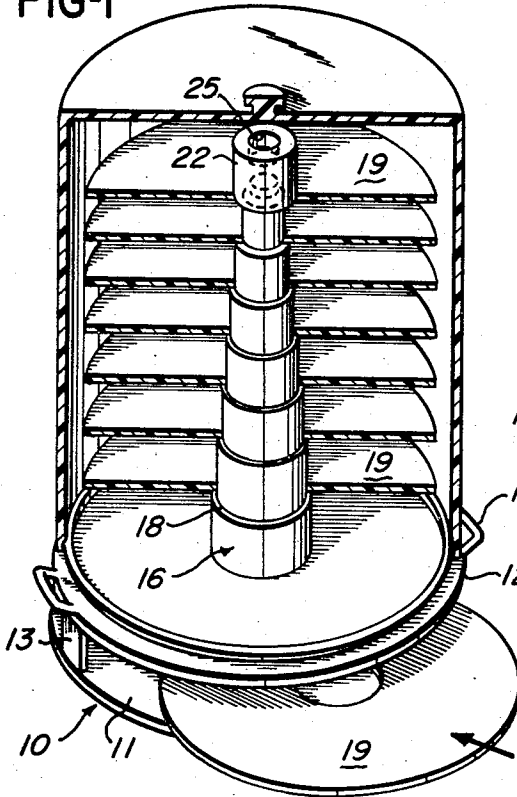


FIG-2

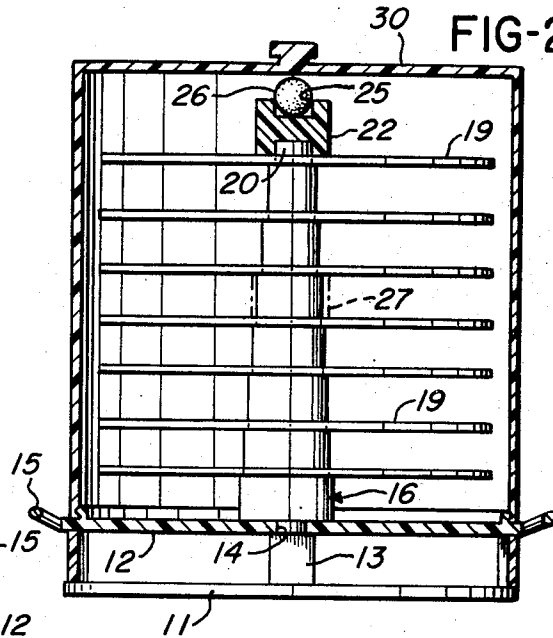


FIG-3

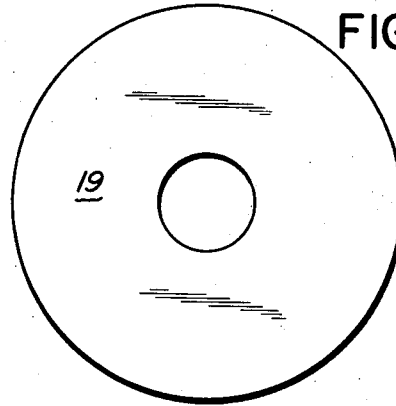


FIG-4

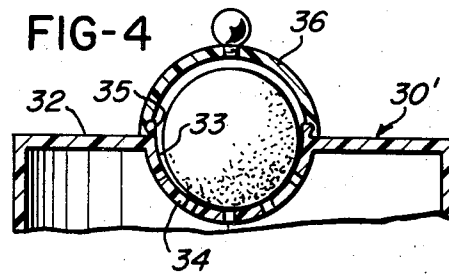
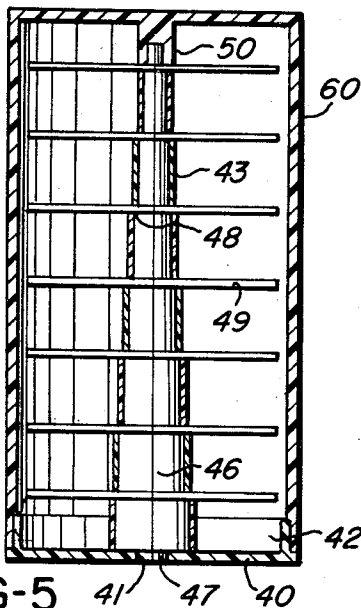


FIG-5



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CONTAINER

BACKGROUND OF THE INVENTION

This invention relates to a container concept particularly advantageous in creating container devices for storing and displaying perishable objects such as cookies, cupcakes, donuts and the like which require a relatively controlled environment. As heretofore known, devices of this class have generally comprised an integral tray unit or a simple platter having a deep cover shaped in the form of an inverted cup. The nature and character of these devices which have been previously available are such to make them unwieldy to use, difficult to store and of limited capacity and utility. They have been particularly disadvantageous for home use and certainly have not lent themselves, in any form of their embodiment to use in shipping perishable articles.

SUMMARY OF THE INVENTION

The present invention provides a container concept which overcomes the problems inherent in use of the prior art devices as above noted. In a preferred embodiment particularly adapted for home use, the invention provides an exceedingly simple knocked down construction the components of which consist of a base member, a separable post, separable trays and a slip fit cap-like enclosure for the assembly provided by the base, the post and the trays. As here contemplated, the post is formed to have one end thereof press fit into the center of the base and project perpendicular thereto. At locations spaced longitudinally thereof the post is successively reduced in dimension to form thereon a series of longitudinally spaced annular shoulders each of which provides an abutment to mount a separable annular tray. The central aperture in each tray member will differ in correspondence with that portion of the post about which it is designed to slip fit.

As an additional element of the invention concept, either the described post member or the cup-like enclosure for the post-tray assembly, may be designed to serve as a receptacle for a medium to assist in maintaining a favorable environment for the products to be mounted on the trays.

Invention embodiments offer a compact storage, display or shipping unit having considerable capacity for the purpose intended as well as occupying a minimal space. As will be further described, the trays will preferably be in a form to lend themselves for use as baking or eating utensils if such should be desired. This enables the trays to serve a dual function.

A primary object of the invention is to provide a simple and inexpensive means of displaying and for storing perishable goods, particularly baked products, confections and the like, in the home.

Another object of the invention is to provide a container for perishable items such as food products or the like capable of being readily assembled or disassembled so as to occupy a minimal space when not in use.

Another object of the invention is to provide a new and unique display device for cookies and like products wherein the displayed trays may dually function as baking sheets, enabling thereby that the trays may be taken directly from the oven to storage without handling of the baked products.

Another object of the invention is to provide a storage and display device for perishable products which may be readily disassembled for cleaning and storage and be available for re-use as and when required.

A further object of the invention is to provide a new and improved shipping container for fresh baked cookies and like perishable products.

An additional object of the invention is to provide a storage and container device possessing the advantageous structural features, the inherent meritorious characteristics and the means and mode of use herein described.

With the above and other incidental objects in view as will more fully appear in the specification, the invention intended to be protected by Letters Patent consists of the features of construction, the parts and combinations thereof, and the mode of operation as hereinafter described or illustrated in the accompanying drawings, or their equivalents.

Referring to the accompanying drawing wherein is shown one but obviously not necessarily the only form of embodiment of the invention,

FIG. 1 is a vertical view, in perspective, of a storage and display device in accordance with one embodiment of the invention, portions being shown in section for clarity of disclosure;

FIG. 2 is a vertical section of the device of FIG. 1;

FIG. 3 illustrates a tray device used in the invention embodiment;

FIG. 4 is a fragmentary view, in cross section, illustrating a modification of the device as shown in FIG. 1; and

FIG. 5 illustrates a further embodiment of the invention, especially adapted for use as a mailing carton.

Like parts are indicated by similar characters of reference throughout the several views.

Referring to the drawings, FIGS. 1-3 illustrate a display and storage device for cookies or the like constituting an illustrative embodiment of the invention. The device, as shown, comprises a base 10 consisting of a pair of plates 11 and 12 of disc-form connected by and held in a vertically spaced, substantially aligned, relation by three spacer elements 13. As seen in the drawings, the spacer elements 13 interconnect peripheral portions of the plates in positions to define an arc of approximately 180°. The base so constructed provides thereby for storage of trays of a nature and in a manner to be further described. Note should be taken that the upper plate 12 of the base 10 has formed in the center thereof an aperture 14 while connected with and projected outwardly from diametrically opposite outer peripheral positions thereof are loop-like handles 15.

Mounted on the plate 12 is a post member 16. Referring to FIG. 1, it may there be seen that one end of the post 16 providing the base thereof has formed integral therewith a short cylindrical stub adapted to be press fit into the aperture 14 of the plate 12. When this is done the post member 16 is frictionally held thereby to project perpendicular to the plate 12 and from the center of the base unit 10.

Referring further to FIG. 1 of the drawings, the post member 16 is generally cylindrical in form and stepped in dimension to have short longitudinally extended sections of successively smaller diameter in a sense

directed outwardly of the base plate 12. So stepped, at each of a series of equidistantly spaced positions, the post member 16 provides thereon an annular shoulder 18 formed in a plane perpendicular to its central axis. Releasably assembled to the post member 16 so provided are a series of centrally apertured plates 19, each of which defines a tray. No two plates will have their central apertures of the same dimension. Noting FIGS. 1 and 2, it will be seen that the lowermost of the plates 19 will have the largest central aperture and each succeeding plate 19 thereabove will have its central aperture successively reduced in dimension to slip fit about that segment of the post which approaches the shoulder forming the base therefor.

As shown, each of the trays 19 are perfectly flat but the invention does comprehend that the plates might, if desired, have upturned peripheral flanges. This last would be to form a peripheral enclosure for the products which are mounted to the tray.

Viewing the described apparatus in FIG. 1, the reduced upper extremity 20 of the post 16 nests frictionally in a complementary recess in one end of the cylindrical cap 22 the positioning of which contains the upper tray 19 in a fixed relation to the post segment. The vertically uppermost end of the cylindrical cap 22 has a recess 25 which may serve as a receptacle for orange segments 26 or a similar medium for insuring moisture and freshness in the invention container while perishable products such as cookies are stored on the trays 19 thereof. Attention is directed to the fact that if the assembly of the post and trays on the base 10 is to be subjected to any potential rough handling, it is contemplated that there may be positioned in immediately surrounding relation to each of the post segments between the trays 19 a sleeve 27. Such sleeves 27 can serve to more securely position the trays to the post shoulders which they abut.

Accordingly, the trays 19 may be easily slip fit to their respective positions as defined by the size of the central apertures and held securely in place. The spacing between the trays as defined by the spacing between the shoulders formed on the post segment 16 will depend on the particular application. In the embodiment of FIG. 1 which is primarily a showing of an invention embodiment for use in the home or in or on a showcase, the assembly of the post and trays is enclosed by a cover of an inverted cup shape. Where desired there may be defined on the plate 12 a projection for centering the cover or cap 30. Shown in an integrated relation to the top center of the cap 30 is a handle facilitating the removal thereof to provide access to the products on the trays 19.

In accordance with the invention, as applied as a cookie or cake storage device, it is contemplated that the plates 19 be in the form of baking sheets, preferably Teflon coated. Thus, in making cookies, for example, the fresh dough may be placed on the trays 19 and inserted in an oven. When the baking is completed, one can then take the trays of cookies, without touching the cookies at all, and place them on a post member 16 as mounted to a base 10. As is self-evident, the trays can be readily identified as to their position by the differences in their apertures. Thus, one may successively slip the trays, according to the size of the central apertures, over the top of the post member 16 to seat to the

appropriate shoulder and about the appropriate portion of the post. Once the cap 22 is applied to the top of the post, one can then apply the cover 30 and establish the freshly baked cookies in a relatively sealed condition so as to enable their freshness and flavor to be preserved. Of course, with a transparent cover 30, one can see the contents. It is contemplated that there may be different cakes or cookies on the various trays and with the transparent cover one need only lift the cover to the level to expose the tray to which access is desired. Once the appropriate cakes or cookies are removed, the cover may be readily set back into place.

As will be obvious, the placement of the spacers 13 in the base unit enables ready insertion and storage of the trays when not in use. Since the post, the trays and the base are so readily separable, they may be reduced to a compact package when storage is desired.

Referring to FIG. 4, there shown is an alternate means for containing the food freshener which one may desire to expose to the interior of the container described. Here, the container for food freshener is made part of the cover and in this instance the device 22 of FIG. 1 of the drawings may be a simple cap to top off the post and the series of trays or plates 19. As shown in FIG. 4, the cover 30' is structurally similar to the cover 30 and has a like purpose. In the top plate portion 32 thereof, however, there is formed a central depression assuming the configuration of one-half a spherical shell 34. The depressed portion 34 is provided with perforations and rimmed at the top of the cover by a cylindrical projection 35. A cap-element 36 of hemi-spherical configuration is frictionally coupled to the projection 35 to define with the recessed portion 34 a hollowed chamber 33. Within this chamber food freshening mediums may be applied, such as an orange or segments thereof, to provide means for moisturizing and maintaining the environment of the invention structure satisfactory to insuring freshness of the contained products. The cover 30' may be readily lifted with the fingers or may have a suitable handle or handles affixed thereto for such purpose in any manner desired. The details thereof are not shown since in and of themselves they form no pertinent part of the present invention.

Looking now to FIG. 5 of the drawings, there shown is the invention concept adapted to an embodiment for use in shipping perishable products such as cookies and articles of like configuration. In this case we have a container wherein one end is formed by a disc-like plate 40 having a small central aperture 41 and spaced inwardly from the outer rim thereof a short cylindrical projection 42. Applied perpendicular to the base 40 is a post member 46 having a stepped configuration corresponding to that of the post member 16 and projecting from the one or base end thereof a stub-like element 47 adapted to be pressed into a friction fit with the plate 40 by insertion in its central aperture 41. Other than the central aperture 41, the plate 40 is designed to be imperforate.

The post member 46, as noted, is cylindrically stepped to have segments of successively reduced dimension spaced outwardly from the plate 40 to form thereon longitudinally spaced annular shoulders 48. These shoulders lie in equidistantly spaced planes at right angles to the longitudinal axis of the post. Each of

the shoulders 48 so defined serve to mount an annular or centrally apertured tray 49 of a nature identical to the plates or trays 19 in the embodiment first described. In this case, superposed over the inner peripheral portion of each plate or tray 49, as it seats to its base shoulder 48, is a sleeve 43. The sleeves 43 so provided extend between successively positioned trays in slip fit relation to the post segments between the successive trays. In this instance as in the previous instance the trays have a generally identical outer peripheral dimension. Note, however, that in this modification of the invention which is adapted for shipping purposes that the shoulders are much more closely spaced so that as one tray is superposed over the other, it, in effect, serves to contain the products on the tray therebelow. The uppermost tray is contained by a cap 50 which may be in connection with the base of an elongate cup-like sleeve 60. As the sleeve 60 is applied, it will have its open end seat to the base 40 centered thereon by the projected circular flange. The cup-like device 60 is of course an elongate form to closely fit about the outer peripheral portions of the trays or plates 49 which mount the cookies or like articles thereon. It is contemplated that a suitable sealing tape be applied to join the sleeve-like cover 60 to the base 40. There is provided thereby an optimally formed shipping container for perishable articles having the advantages and utilities ascribed to the first described embodiment. Similarly, as in the case of the embodiment first described, provision may be made for a freshener or preservative to insure that the contained articles will be maintained in optimal condition until a time and point of use.

As is self-evident, the outer peripheral edges of the plates 49 may be flanged to form a peripheral enclosure for the articles mounted on the trays. The resulting structure is a completely closed unit in which normally readily fresh materials are positively supported on separate trays in an optimally protected condition. The construction is such that whether it be made of paper, plastic or metal the components will offer a highly reinforced mailing device optimally suited for the application indicated. When the device is made in paper form, it will be readily obvious that while substantial utility is present, the device may nevertheless be fabricated in a highly economical manner and of extremely inexpensive materials.

While the invention has been particularly described as having special utility in the storage and shipping of delicacies such as cookies, it will of course be obvious that the application of the invention is not so limited.

From the above description it will be apparent that there is thus provided a device of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form, proportions, detail construction and arrangement of parts without departing from the principle involved or sacrificing any of its advantages.

While in order to comply with the statute the invention has been described in language more or less specific as to structural features, it is to be understood that the invention is not limited to the specific features shown, but that the means and construction herein disclosed comprise but one of several modes of putting the

invention into effect and the invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the appended claims.

Having thus described our invention, we claim:

1. A container storage and/or display device, including a base, a post unit adapted to project perpendicularly of said base, a series of trays, said trays having through openings to releasably fit over the post unit, said post unit providing longitudinally spaced apart seats for individual trays, means for releasably and successively holding said trays to said seats, and means mounted on said base as an enclosure for said trays adapting said device for use as a shipping container with or without subsequent use for storage and display, said trays extending at their peripheries substantially into contacting relation to longitudinally extending side walls of the means defining said enclosure.

2. A container storage and/or display device, including a base, a post unit mounted on to project perpendicularly of said base, a series of trays in a stacked relation on said post unit, said trays having longitudinal through openings to fit over the post unit and said post unit and the openings in said trays having complementary configurations inherently to locate said trays in a longitudinally spaced relation along said post unit, the through openings in said trays being differentially sized to agree with the cross sectional dimensions of said post unit at different locations thereon providing seats for said trays so that the trays of said series are installed on said post unit in a determined order and are removed therefrom in a reverse order, said post unit being constructed to reduce in cross section progressively from said base outwardly thereof to define successive portions of decreased cross sectional dimensions, said portions at their opposite ends terminating in flanges forming said seats, the exterior of said post unit between said flanges being of uniform cross sectional dimensions substantially matching the size of a through opening in one only of said series of trays, and cover means for enclosing said post means and said trays.

3. A container storage and/or display device, including a base, a post unit mounted on to project perpendicularly of said base, a series of trays in a stacked relation on said post unit, said trays having longitudinal through openings to fit over the post unit and said post unit and the openings in said trays having complementary configurations inherently to locate said trays in a longitudinally spaced relation along said post unit, said post unit reducing in cross section in steps outwardly of said base to provide longitudinally spaced apart seats for said trays, said trays having a slip fit over said post unit to engage and rest on said seats, the through openings in said trays being differentially sized to agree with the cross sectional dimensions of said post unit at different respective seats so that the trays of said series are installed on said post unit in a determined order and are removed therefrom in a reverse order, and a cap member fitted on to said post unit in a following relation to the outermost one of said series of trays and positioning to hold said outermost tray to its seat on said post unit, and cover means seating about said post unit and said trays to form an enclosure therefore.

4. A device according to claim 3, characterized by other members sleeve-like in configuration one of which is fitted over said post unit in a following relation

to each installed tray between an innermost tray and said outermost tray, said other members being each abutted by an adjacent overlying tray to hold an adjacent underlying tray to a seat on said post unit.

5. A device according to claim 4, wherein the assembly comprising said base, said post unit, said series of trays, said cap member and said other members is comprised of individual separable parts, said post unit having protruding tips at its opposite ends, one being received into said base for mounting of the post unit to the base and the other having said cap member fitted thereto.

6. A device according to claim 3, wherein said base is laterally dimensioned to seat an inverted cup-like cover in enclosing relation to the assembly comprising said post unit and parts mounted thereon, said cap member having an outwardly facing recess to receive an additive having freshening or preserving effects within the enclosure defined by said cover.

7. A device according to claim 6, wherein said cap

member is a part recessed at opposite ends, said recessed ends being usable interchangeably to fit over said post unit and to receive said additive.

8. A device according to claim 2, wherein said post unit has a base end releasably seated to said base and a freely projecting end, characterized by a cover having an inverted cup-like form and seating on said base in a surrounding enclosing relation to the assembly comprising said post unit and said trays, said cover including a transverse outer portion mounting inwardly projected cap means recessed to interfit with the freely projecting end of said post unit.

9. A device according to claim 8, characterized by separable sleeve members corresponding in length substantially to the distance between the spaced apart seats on said post unit, said sleeve members being individually fitted over said post unit in following relation to respective trays and cooperating with said cap means in maintaining said trays positioned on said seats.

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