ABSTRACT

An apparatus to ensure location and usage of the appropriate lid for every container.
NESTING CONTAINERS WITH MALE TO FEMALE LID TO CONTAINER ATTACHMENT

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application claims the benefit of U.S. Provisional application 60/522,404, filed on Oct. 6, 2004 which is incorporated herein, in its entirety, by reference.

BACKGROUND OF THE INVENTION

Field of the Invention

[0002] The present invention relates generally to nestable containers with lids.

BRIEF SUMMARY OF THE INVENTION

[0003] In an embodiment of the present invention a system of nestable containers comprising a plurality of containers each having a corresponding cover may be provided such that the containers are nestable when the corresponding cover is attached to a bottom of the corresponding container. In embodiments, the containers may be one of round, oval, square, or rectangular in shape, and the containers and the corresponding cover may be attached by at least one attaching element.

[0004] Additionally, in embodiments, the at least one attaching element may include a shaped recess on one of the container or the cover and a correspondingly shaped protrusion on the other of the container or the cover, and the shaped recess and protrusion may be one of a rectangle, square, circle, or triangle.

[0005] Further, in embodiments, the nestable may refer to the ability of a first of the plurality of containers to be placed inside a second of the plurality of containers such that at least 30% of a profile of the first container is within the second container, or such that substantially all of the first container is within the second container.

[0006] Additionally, in embodiments, the containers or lids may be at least one of durable, dishwasher safe, freezer safe, microwaveable, and made of metal, plastic, ceramic, or a combination thereof, and the covers may create a substantially air tight seal with the corresponding containers when the cover is placed on an opening of the corresponding container.

[0007] Also, in embodiments, the containers and lids may be interchangeable.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] Additional objects, features, and advantages of the present invention will become apparent from the following detailed description of embodiments of the invention in conjunction with the accompanying drawings where like reference numerals indicate like features, in which:

[0009] FIG. 1: Is a prespective view of the invention shown nesting inside one another for storage.

[0010] FIG. 2: Is an exploded prespective view showing all of the containers and their lids.

[0011] FIG. 2A: Is a cross section view taken along lines 2A-2A showing how the male to female attachment of the container and lid and the secure fit of the present invention.

[0012] FIG. 2B: Is a cross section of 2A exploded away for better understanding of the male to female container and lid and their secure fit.

[0013] FIG. 3: Is a perspective view showing the many containers with their lids attached in a typical fashion.

DETAILED DESCRIPTION OF EMBODIMENTS

[0014] Containers—each ideally made of hard plastic—are of a size and shape that with lid affixed to bottom of container, one nests easily inside the next largest container; 2. lid—made ideally of hard yet somewhat flexible plastic fits securely to the top of the container—has a “male” protrusion on the under side of the lid of a shape distinctive to that size (volume) container—lid affixes to base of container by affixing protrusion into “female” receptor having the corresponding shape of the “male” protrusion; 3. lid protrusion shape, height, length, width and diameter, corresponds to the container receptor shape, depth, length, width and diameter, such that only the lid of the appropriate corresponding container affixes to the base of such container and when affixed, remains with the appropriate container as it easily nests inside the next largest container.

[0015] The lid seals tightly to the top of its appropriate container; 2. The lid is removable and the under side of the lid affixes tightly to the outside bottom of the container by way of a male protrusion on the under side of the lid fitting tightly into a female receptor on the outside bottom of the container, thereby securing the lid to the container; and 3. Each lid has a separate distinctly shaped protrusion which corresponds to the shape of the appropriate container’s receptor such that only the appropriate lid can be affixed to the outside bottom of its corresponding container. 4. The height, length, width and diameter of each distinctively shaped protrusion shall correspond to the depth, length, width and diameter of the distinctively shaped receptor such that the lid is affixed and is secured to the outside bottom of only its appropriate container; and 5. The containers are of the same shape, but of different sizes such that when the lids are affixed to the outside bottom of each appropriate container, the containers nest—one inside the other—such that the smallest container fits easily into the next largest container.

[0016] The containers may be made of a material other than plastic; and 2. The various male protrubrances on the underside of each lid and the corresponding female receptors on the underside of each container could take any shape and size so long as, A. the height of the protrubrance and the corresponding depth of the receptor is sufficient to produce a relatively tight fixing of the lid to its appropriate container; and B. the shape, length, width and diameter dimensions of the protrubrance from one lid cannot be mistakenly affixed to the base of a non-corresponding container.

[0017] Plastic containers having the same shape but of differing volumes and, therefore, size; 2. Each plastic lid has its own distinct shape protruding from the underside of the lid (for example, a rectangle, a square, a circle, a triangle); 3. The height of the shape protrusion is approximately one-quarter of one inch, but can be slightly higher in order to assure it affixes securely into appropriate female receptor; 4. The distinct shape male protrusion on the underside of a lid snaps and affixes easily into the same shape female receptor on the underside of the corresponding container; 5. The length and width or diameter, respectively, of the distinct shapes should be such that it is not possible for a lid
having one shape to be affixed to a container having a different shape; and 6. With lid attached to underside of each container, the containers nest easily one inside the other—from smallest to next largest.

[0018] 10. is the invention shown in use.
[0019] 12. is the largest container.
[0020] 12a. is the largest containers matching lid.
[0021] 13. is the female recessed rectangle in container 12 that mates with 13a.
[0022] 13a. is the male protruding rectangle in lid 12a that mates with 13.
[0023] 14. is the second largest container.
[0024] 14a. is the second largest containers matching lid.
[0025] 15. is the female recessed circle in container 14 that mates with 15a.
[0026] 15a. is the male protruding circle in lid 14a that mates with 15.
[0027] 16. is the third largest container.
[0028] 16a. is the third largest containers matching lid.
[0029] 17. is the female recessed diamond in container 16 that mates with 17a.
[0030] 17a. is the male protruding diamond in lid 16a that mates with 17.
[0031] 18. is the smallest container.
[0032] 18a. is the smallest containers matching lid.
[0033] 19. is the female recessed triangle in container 18 that mates with 19a.
[0034] 19a. is the male protruding triangle in lid 18a that mates with 19.
[0035] Many alterations and modifications of the present invention will be comprehended by a person skilled in the art after having read the foregoing description. It is to be understood that the particular embodiments shown and described by way of illustration are in no way intended to be considered limiting. Therefore, references to details of particular embodiments are not intended to limit the scope of the claims, which in themselves recite only those features regarded as essential to the invention.
[0036] The embodiments described herein are intended to be illustrative of this invention. As will be recognized by those of ordinary skill in the art, various modifications and changes can be made to these embodiments and such variations and modifications would remain within the spirit and scope of the invention defined in the appended claims and their equivalents. Additional advantages and modifications will readily occur to those of ordinary skill in the art. Therefore, the invention in its broader aspects is not limited to the specific details and representative embodiments shown and described herein.

What is claimed is:
1. A plurality of nestable containers comprising:
a plurality of containers each having a corresponding cover;
wherein the containers are nestable when the corresponding cover is attached or fastened to a bottom of the corresponding container.
2. The containers of claim 1, wherein the containers are one of round, oval, square, or rectangular in shape.
3. The containers of claim 1, wherein the containers and the corresponding cover are attached by at least one attaching element.
4. The containers of claim 3, wherein the at least one attaching element includes a shaped recess on one of the container or the cover and a correspondingly shaped protrusion on the other of the container or the cover.
5. The containers of claim 4, wherein the shaped recess and protrusion is one of a rectangle, square, diamond, circle, or triangle.
6. The containers of claim 1, wherein nestable refers to the ability of a first of the plurality of containers to be placed inside a second of the plurality of containers such that at least 30% of a profile of the first container is within the second container.
7. The containers of claim 1, wherein nestable refers to the ability of a first of the plurality of containers to be placed inside a second of the plurality of containers such that substantially all of a profile of the first container is within the second container.
8. The containers of claim 1, wherein at least one of the containers and corresponding covers are at least one of durable, dishwasher safe, freezer safe, microwavable, and made of metal, plastic, ceramic, or a combination thereof.
9. The containers of claim 1, wherein the covers create a substantially air tight seal with the corresponding containers when the cover is placed on an opening of the corresponding container.
10. The containers of claim 1, wherein the containers and lids are interchangeable.
11. A system comprising:
at least two containers with corresponding covers;
wherein the containers are nestable when the corresponding cover is attached to the corresponding container.
12. The system of claim 11, wherein the containers are one of round, oval, square, or rectangular in shape.
13. The system of claim 11, wherein the containers and the corresponding cover are attached by an attaching element.
14. The system of claim 13, wherein the attaching element includes at least one shaped recess on one of the container or the cover and at least one correspondingly shaped protrusion on the other of the container or the cover.
15. The system of claim 14, wherein the shaped recess and protrusion is one of a rectangle, square, circle, or triangle.
16. The system of claim 11, wherein nestable refers to the ability of a first container to be placed inside a second container such that at least 30% of a profile of the first container is within the second container.
17. The system of claim 11, wherein nestable refers to the ability of a first container to be placed inside a second container such that substantially all of a profile of the first container is within the second container.
18. A method for nesting at least two containers, the method comprising:
attaching a corresponding cover to each of the two containers; and
19. The method of claim 12, wherein three or more containers are nested.

20. The method of claim 18, wherein the first container fits entirely within the second container.