Nov. 21, 1967 T. H. EYLES 3,353,707

NESTABLE CONTAINER

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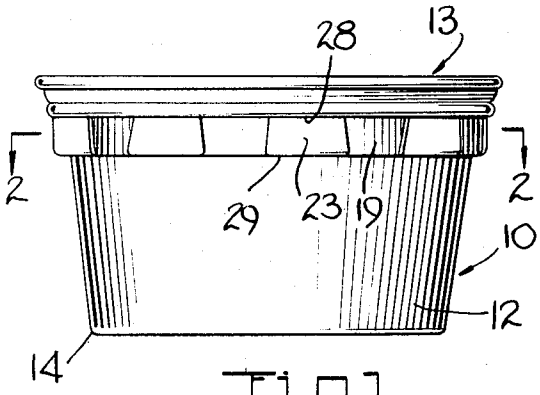


Fig. 1.

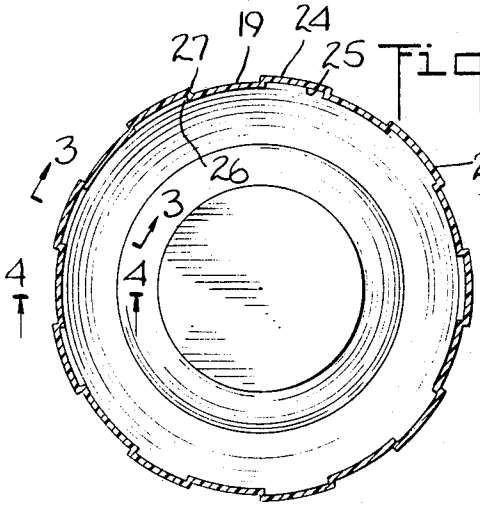


Fig. 2.

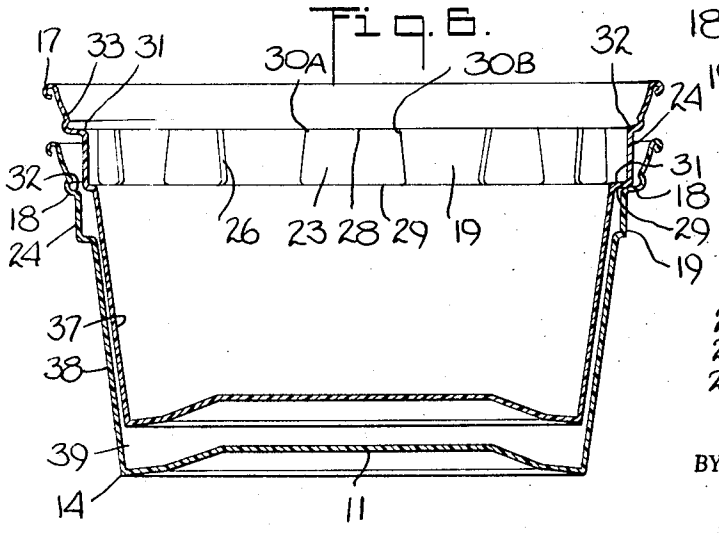


Fig. 6.

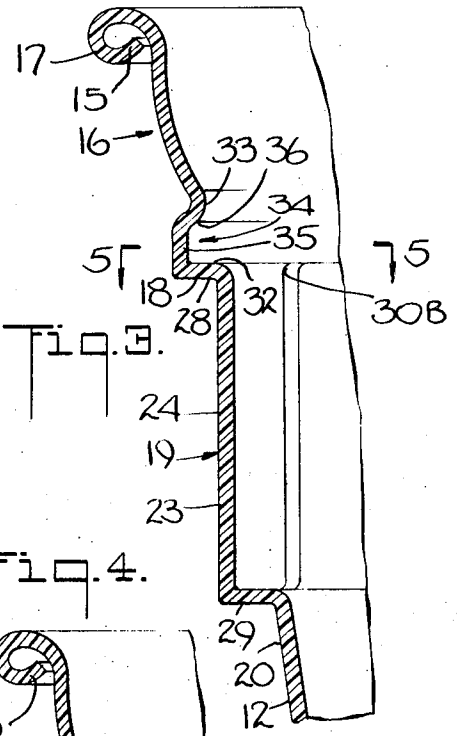


Fig. 3.

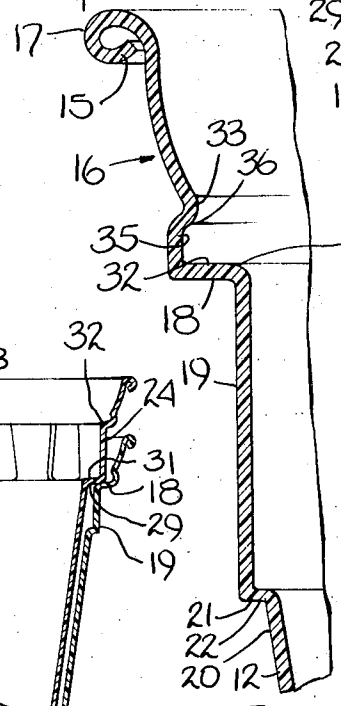


Fig. 4.

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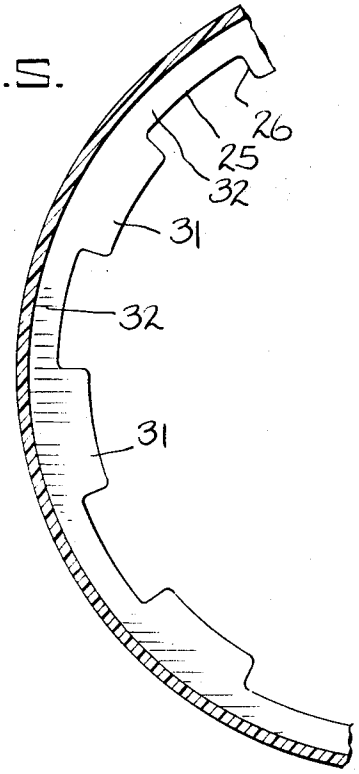
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Fig. 5.



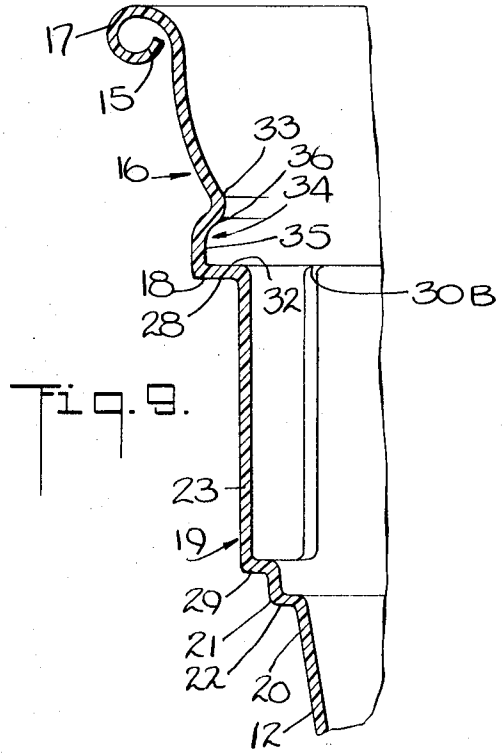


Fig. 9.

Fig. 7.

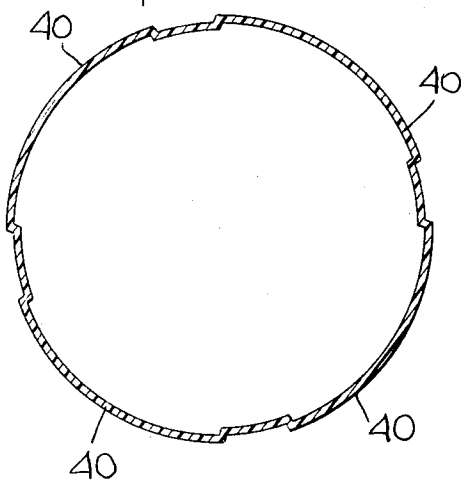
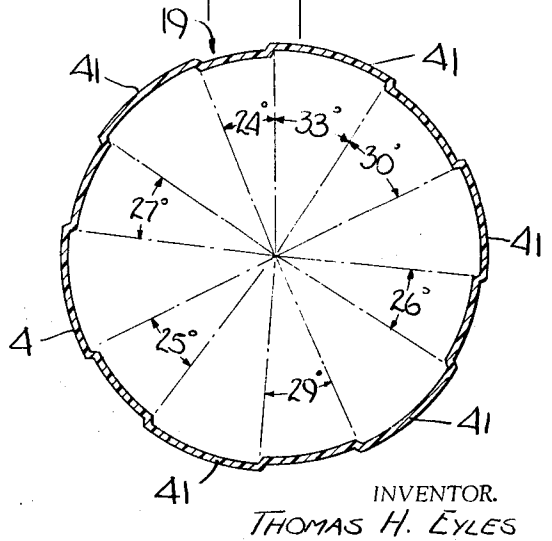


Fig. 8.



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3,353,707

NESTABLE CONTAINER

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Filed Nov. 27, 1964, Ser. No. 414,296
13 Claims. (Cl. 220—97)

ABSTRACT OF THE DISCLOSURE

The following disclosure pertains to a seamless plastic container which, when nested with like containers will not jam into an adjacent container. The container according to this disclosure is provided with a novel stacking skirt having a plurality of stacking lugs spaced around its circumference and offset radially outwardly. The lugs have top, bottom and face portions, and upwardly (towards the open end) converging side edges. The arc formed by the bottom of the lugs is greater than the arc formed by the top thereof. The particular construction provides a rigid jam-resistant nestable container which is easily separated from an adjacent container. A stack formed by the container has minimal tendency to lean away from the vertical when standing without lateral support.

This invention relates to nestable containers, and more particularly to nestable containers having improved stacking means therein preventing the telescopic wedging of adjacent containers when stacked one upon the other before use.

Expendable containers made of easily-shaped material, such as sheets of impregnated or coated paper, plastic and the like have found wide commercial use. For economy of storage, shipping and handling, such containers are often made with tapered sides and are stored, shipped and handled in a nested arrangement. Often they are dispensed at the time of use from a storage cylinder in which a large number of such containers are nested. It is desirable that an individual container may readily be separated from the next adjacent container against which it is nested without use of much force, and even, in some situations, merely by the pull of gravity against the weight of the container next in line for removal from the stack. It is also desirable that a stack of nested containers have the characteristic of maintaining a straight stacking axis without lateral support, i.e., a freely-standing stack should not tend to lean over. It is additionally desirable to minimize lateral movement of the nested containers.

One common drawback of nested tapered containers is that they tend to remain nested because of their becoming telescopically wedged together, particularly when dropped or subjected to rough handling, and also because of a relatively air-tight seal being formed between the adjacent nested containers which tends to prevent the admission of air between adjacent containers when they are separated.

This sometimes results in adjacent nested containers becoming jammed, causing resultant jamming of the handling equipment, or in two or more containers being removed simultaneously from a dispenser with a resultant diminution of efficiency of the dispensing operation and increase in cost either because of the fact that more than one container is thus used at a time or because of the additional labor required to separate the telescoped containers by hand and to clear the handling equipment.

Another deficiency in this general type of nestable container is the inherent lack of rigidity and consequent marked susceptibility to axial and radial distortion, and misalignment during handling in manual and automatic filling, sealing, packaging and transporting operation.

Some prior art attempts at solving the problem have

involved such complex designs that the use of split molds, etc., have been required and have thus far been found economically unfeasible as well as unsatisfactory for other reasons.

It is an object of the invention to provide a nestable container having intrinsic structural characteristics preventing telescoping thereof when nested with containers of like design.

Another object is to provide a container of the above type capable of being fabricated of plastic by conventional thermoforming processes.

An additional object is to provide a plastic nestable container having an anti-telescoping configuration which also imparts stiffness and rigidity to the container thereby substantially increasing the geometric stability thereof.

Still another object is to provide a nestable container which has minimal tendencies to shift laterally when stacked.

A further object is to provide such a container capabale of being formed in a unitary mold and having a reliable, relatively fool-proof design of simple yet rugged configuration.

Another object is to provide a nestable container being structurally capable of nesting into other like containers in stacks of considerable height without damage or telescoping, such stacks having a minimal tendency to lean away from the vertical when standing without lateral support.

The nestable container of the invention comprises a seamless plastic container having a closed bottom, tapered sidewalls and an enlarged open upper end. The stacking means, formed integrally with the side wall and disposed between the ends of the container, comprises a peripheral stacking skirt having its outer surface disposed radially outwardly with respect to the tapered sidewall. The skirt carries a plurality of outwardly projecting stacking lugs. Although the lugs have a generally rectangular appearance when viewed in elevation, their side edges slope upwardly and inwardly, so that the arc encompassed by the bottom edge of a lug is greater in length than the arc encompassed by the top of such lug. The greater arc of the bottom edge inhibits jamming or telescoping of adjacent containers in a stack. In addition, this configuration provides greater structural rigidity in the container.

At the top of the skirt there is a bearing shoulder which projects radially outward. The tops of the skirt and the lugs merge into the bearing shoulder. The inside diameter of the bearing shoulder along such portions of it as are between the lugs is substantially less than the outside diameter of the outer bottom edges of the lugs, thereby affording substantial bearing surface for stacking engagement against the bottom edges of the lugs of a nested container of like configuration.

Furthermore, the provision of the lugs and the interrupted peripheral contour of the skirt allows for free air communication between adjacent nested containers, thus preventing the development of undesirable suction between stacked containers.

In a more specific embodiment, the container of the invention comprises an overall frusto-conical configuration in which the stacking means is disposed near the top (or open) end, and in which equally-dimensioned lugs are disposed around the stacking skirt, with the outer surfaces of the lugs being substantially concentric with the vertical axis of the container. The container includes a groove formed in the sidewall above the bearing shoulder. The upper portion of the groove terminates in a bead portion having an inside diameter only slightly greater than the outside diameter of the outer faces of the lugs, whereby a relatively close fit is maintained between the

lugs of one container and such bead of a second container into which the first is nested.

In another specific embodiment, the lugs are non-uniformly or unequally spaced around the circumference of the stacking skirt, i.e., the angles subtended by the axis of the top of the stacking skirt between the various lugs vary by a few degrees. This embodiment is rather desirable, because it considerably reduces the probability of the lugs of two adjacent nested containers becoming aligned.

Other objects and features will become apparent in the following description and claims, and in the drawings in which:

FIG. 1 is a side elevation of one embodiment of the present invention; and

FIG. 2 is a sectional plan view taken along line 2—2 of FIG. 1; and

FIG. 3 is an enlarged fragmentary section through a stacking lug taken along line 3—3 of FIG. 2; and

FIG. 4 is an enlarged fragmentary section through a portion of the stacking skirt between adjacent lugs taken along line 4—4 of FIG. 2; and

FIG. 5 is an enlarged fragmentary sectional view taken along line 5—5 of FIGURE 3; and

FIG. 6 is an enlarged sectional elevation of two nested containers; and

FIG. 7 is a sectional plan view, similar to FIG. 2, of another embodiment having four lugs subtending a greater angle than the arc between the lugs; and

FIG. 8 is a sectional plan view, similar to FIG. 2, of a third embodiment having six lugs wherein the angles subtended between the lugs are non-uniform; and

FIG. 9 is an enlarged fragmentary section illustrating an alternative configuration of a portion of FIG. 3.

Referring now to the drawings, particularly FIGS. 1–6 inclusive, a seamless plastic container of uniform thickness exemplifying one embodiment of the invention is shown and designated generally by reference numeral **10**. The container **10** has a closed bottom **11** and a frusto-conical overall shape including sidewall **12** tapering outwardly and upwardly from bottom **11** toward open upper end or mouth **13**. Bottom **11** is generally concave so that the major portion of its bottom area lies above the outer bottom edge or junction **14** of the bottom **11** with sidewall **12**. The edge **15** of the flared upper end portion **16** of the container is rolled outwardly and under as shown to provide a more or less conventional rolled lip **17**.

Spaced beneath said lip **17** is an integrally formed outward projection or shoulder **18** and extending downwardly from said shoulder **18** is a stacking skirt **19** formed in the sidewall and of greater height than flared portion **16** and of greater diameter than the immediately adjacent portion **20** of said sidewall **12** lying beneath the skirt **19**. The lower edge **21** of the skirt **19** has a generally flat bottom surface **22** extending radially inwardly or back to join the sidewall **12**.

The skirt **19** includes a plurality of projections or lugs **23** spaced circumferentially around its periphery and offset radially outward from skirt **19**, each having substantially vertical and concentric outer and inner faces **24**, **25** respectively, and inner and outer edge surfaces **26**, **27** respectively inclined slightly inwardly relative to one another at an angle of 4° from the vertical (or upwardly as viewed in FIG. 1), and a top portion **28**. When viewed in elevation, the lugs present the shape of an isosceles trapezoid. The outer bottom surfaces **29** of the lugs **23** subtend a greater arc than the arc formed along the tops **30A**, **30B** of the inner edges of the lugs at the intersection of the lug tops and shoulder **18** by an amount greater than twice the thickness of the sidewall of the container, as a consequence of the inwardly and upwardly sloping lug edges **27**.

As shown in FIGS. 3, 4 and 5, the upper inside surface of shoulder **18** forms a stacking shelf having an interrupted peripheral contour with those portions of such surface between the lugs **23** formed by the termination of the skirt forming primary stacking surfaces **31** and those portions thereof formed by the termination of the lugs **23** forming secondary stacking surfaces **32**.

The sidewall of the container extends initially upwardly from the outer periphery of shoulder **18** for a short distance, and then is provided with an inwardly projecting peripheral bead **33**. Bead **33** and surfaces **31** and **32** form a groove **34** having an inner side **35** and a top **36** which terminates in bead **33** and which is adapted to receive a press fit lid (not shown). The inside diameter of bead **33** is only slightly greater, illustratively by not more than twice the thickness of the sidewall, than the inside diameter of outside lug surfaces **24**, and preferably in the range of only about 0.0005 to about 0.010 inch greater.

The container is presently fabricated from plastic such as moldable polystyrene, polyethylene, or polypropylene, and shaped by conventional techniques such as compression, injection molding, or thermoforming. The container is particularly adaptable to thermoforming operations. Normally the sidewall is of the order of about 0.020 inch thick and has a sidewall taper of any desired degree, e.g. about 3° to about 15°, more or less. The overall shape of the container may be pointed or conical, or in the shape of a polyhedron such as a trilon or pyramid. More usually the containers are in the form of a frustum of a hollow cone or polyhedron, preferably a frusto-conical shape.

When a plurality of containers of the above described type are stacked in nested relation to one another, as shown in FIG. 6, the outer bottom surface **29** of lugs **23** of the upper container **37** rest upon and are carried by the primary stacking surfaces **31** and secondary stacking surfaces **32**, particularly by the former, of lower container **38** to maintain the two containers in properly aligned relative position with the bottom **11** of the upper container **37** disposed at a spaced position from bottom **11** of the lower container **37**. Because of the close tolerance between the outer diameter of lug faces **24** and the inner diameter of bead **33**, the lower portions of outer lug faces **24** fit closely within the perimeter of bead **33**, thus tending to restrict the lateral movement of container **37** within lower container **38**. The communication or "bleeding" of air from the atmosphere into the space **39** between containers **37**, **38** is permitted past bead **33** and past the inside edge of secondary stacking surface **32** by means of the space between lugs **23**.

Although the nine lugs **23** of FIGURES 1–6 are on a 40° spacing, and subtend an angle of about 20°, the number and spacing of the lugs may be varied. FIG. 7 illustrates in sectional plan view a container having four lugs **40** equally spaced around the perimeter of a container and subtending an angle of about 70°. FIGURE 8 illustrates in sectional plan view a container having six lugs **41** each subtending about a 33° angle but not equally spaced around the perimeter, the angles subtended by the portions of the skirt **19** between lugs **41** varying by one or two angular degrees. Alternatively, such angles all may be equal, and the widths of (and accordingly the angles subtended by) the lugs may be varied. The two foregoing variants may be combined in an embodiment where both the angles subtended by the lugs and the angles subtended by the portions of the stacking skirt between the lugs are varied.

An asymmetrical design, having non-uniform angles or unequal spacing of lugs around the perimeter as aforesaid, is advantageous. This is because in an asymmetrical design there is only one position during a full 360° rotation of one nested container above another in which the lugs of the two adjacent containers are in precise alignment. On the other hand, if the lug spacing and angles are fully symmetrical, the number of such positions during one rotation is the same as the number of equally

spaced lugs on a container, for example, four or nine. Thus, the probability of all the lugs of adjacent nested containers becoming aligned, which is when the risk of undesirable jamming is greatest, is considerably reduced in an asymmetrical design.

Considerable flexibility is possible in designing the stacking skirt and lugs, provided that the number of and width of the lugs provides sufficient bearing surface to carry the load without undue stress in view of the wall thickness and material from which the containers are made. Any plural number of lugs may be used, preferably three or four or more. The angular disposition of the lug edges **26, 27** from the vertical may be any degree as desired, usually in the range of about 2° to about 8°, preferably in the range of about 3° to about 4½°. Selection of the lug edge angle depends in part on the forming equipment used, and the characteristics and thickness of the material used to make the containers. The lugs may subtend the same angle, or varying angles, and the portions of the skirt between two lugs may subtend uniform or varying angles, as referred to previously.

In FIGURES 3 and 4, the bottom portion **29** of lugs **23** lies in the same plane as the bottom portion of skirt **19**. FIGURE 9 shows a modified embodiment wherein the horizontal plane of lug bottom edge **29** lies above the plane of the bottom of skirt **19**, forming a double-stepped shoulder.

In describing the invention, horizontal distances passing through the vertical axis of the container have been referred to as diameters. It is to be understood that in a tapered polyhedron embodiment, such distances would be referred to as widths.

It can thus be seen that a nestable container has been provided by the present invention eliminating the deficiencies of the prior art and fulfilling all of the above stated objects of the invention. Greater freedom from jamming, telescopic wedging or canting of nested containers is provided, as well as greater upper and lower bearing surfaces of adjacently nested containers. The bead above the groove and the lug sides cooperation to reduce the lateral movement or leaning of stacked cups, the bead acting as a restraining ring to hold the containers in concentric relationship.

While only a few embodiments of the invention have been shown and described, it is to be understood that changes and additions may be made to the described embodiment without departing from the scope and spirit of the invention.

Having thus described the invention, I claim:

1. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

2. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into a circumferential bead formed in said sidewall near the open end of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

3. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into a bead having an inner diameter in the range of about 0.0005 to about 0.01 inch greater than the outer diameter of the face portions of said lugs; said bead merging into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

4. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said lugs having the shape of an isosceles trapezoid when viewed in elevation; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

5. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt

formed in said sidewall portion; said stacking skirt including a plurality of circumferentially unequally spaced stacking lugs off-set radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

6. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a substantially vertical face portion bounded by a top portion, a bottom portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

7. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said stacking lugs and the portions of said stacking skirt therebetween having an asymmetrical configuration; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

8. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in a substantially horizontal outwardly extending upper stacking shelf; said stacking shelf comprising primary stacking surfaces formed by the termination of the skirt, each of said primary stacking surfaces subtending an arc extending from adjacent top inner edges of adjacent lugs; and secondary stacking surfaces formed by the termination of the upper ends of the lugs; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

9. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said lugs having the shape of an isosceles trapezoid when viewed in elevation; said skirt and said stacking lugs terminating at their upper ends in a substantially horizontal outwardly extending upper stacking shelf; said stacking shelf comprising primary stacking surfaces formed by the termination of the skirt, each of said primary stacking surfaces subtending an arc extending from adjacent top inner edges of adjacent lugs; and secondary stacking surfaces formed by the termination of the upper ends of the lugs; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

10. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom, said sidewall terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially non-uniformly spaced stacking lugs offset radially outwardly from said skirt; each of said stacking lugs having a top portion, a bottom portion, a face portion, and edge portions which converge upwardly relative to each other; said skirt and said stacking lugs terminating at their upper ends in a substantially horizontal outwardly extending upper stacking shelf; said stacking shelf comprising primary stacking surfaces formed by the termination of the skirt, each of said primary stacking surfaces subtending an arc extending from adjacent top inner edges of adjacent lugs; and secondary stacking surfaces former by the termination of the upper ends of the lugs; said stacking shelf forming the bottom portion of a groove adapted to receive the bead of a press fit lid; said groove also including a side portion, and a top portion which merges into the open end portion of the container; the outer surface of the bottom portions of the stacking lugs being greater in

length than the distance beween the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of the container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another.

11. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom and terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs radially outwardly offset from said skirt; said stacking lugs each having a face portion bounded by a top portion, a bottom portion, and upwardly converging edge portions; said skirt and said stacking lugs terminating at their upper ends in a substantially horizontal outwardly extending upper stacking shelf; said stacking shelf comprising primary stacking surfaces formed by the termination of the skirt, each of said primary stacking surfaces subtending an arc extending from adjacent top inner edges of adjacent lugs; and secondary stacking surfaces former by the termination of the upper ends of the lugs; the outside diameter of the face portions of the stacking lugs being greater than the inside diameter of the secondary stacking surface by at least twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of a given container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another; the primary and secondary stacking surfaces inhibiting any tendency of the outside bottom portions of the stacking lugs of the top container to slip past the stacking shelf of the lower container when containers are in nested relation to one another.

12. A nestable seamless container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom and terminating in an open end portion; a stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs radially outwardly offset from said skirt; said stacking lugs each having a substantially vertical face portion bounded by a top portion, a bottom portion and upwardly converging edge portions; said skirt and said stacking lugs terminating at their upper ends in a substantially horizontal outwardly extending upper stacking shelf; said stacking shelf comprising primary stacking surfaces formed by the termination of the skirt, each of said primary stacking surfaces subtending an arc extending from adjacent top inner edges of adjacent lugs; and secondary stacking surfaces formed by the termination of the upper ends of the lugs; the outside diameter of the face portions of the stacking lugs being greater than the inside diameter of the secondary stacking surface by at least twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of a given container being adapted to rest on the stacking shelf of a next lower container when the containers are in nested relation with respect to one another; the primary and secondary stacking surfaces inhibiting any tendency of the outside bottom portions of the stacking lugs of the upper container to slip past the stacking shelf of the lower container when containers are in nested relation to one another.

13. A nestable seamless plastic container of substantially uniform thickness comprising: a bottom; a sidewall portion extending upwardly from said bottom in an open end portion; a substantially vertical stacking skirt formed in said sidewall portion; said stacking skirt including a plurality of circumferentially spaced stacking lugs radially outwardly offset from said skirt; said stacking lugs each having a face portion bounded by a top portion, a bottom portion, and upwardly converging edge portions; said skirt and said stacking lugs terminating at their upper ends in an outwardly extending upper stacking shelf; the outer surface of the bottom portions of the stacking lugs being greater in length than the distance between the tops of the inner edges thereof by more than twice the thickness of the sidewall of the container; said bottom portions of the stacking lugs of a given container being adapted to rest on the stacking shelf of the next lower container when the containers are in nested relation with respect to one another; the upper stacking shelf inhibiting any tendency of the offset bottom portions of the stacking lugs of the upper container to slip past the stacking shelf of the lower container when the containers are in nested relation to one another.

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