

Food Containers

Field of the Invention

- 5 This invention relates to containers for take out food and refers particularly, though not exclusively, to such containers for carrying and dispensing fast food.

Definition

- 10 Throughout this specification a reference to a disposable container is a reference to a container intended for a single use, and then disposal. It does not include a container intended for multiple uses, with washing and drying of the container taking place between uses.

15 Background to the Invention

- Fast food is the term applied to food that members of the public purchase generally as "take out" food from any one of a number chain stores which is often eaten e.g. in cars when the customer is on a road trip, or at parties, picnics, picnics or
- 20 sporting events where formal "sit down" facilities are not available. Popular fast food items include potato chips, French fried unions and potatoes, beef jerke, hamburgers, hot dogs, soup, noodles, and so forth. The menu most always includes a beverage, for example, a soft drink, coffee, tea or milkshake.

- 25 Dispensing fast food has become a major industry. Chains of fast food stores have spread around the world. These chains are often operated as franchises wherein the corporate office supplies the franchisee with all kinds of tools and procedures for operating the franchise such as a standard menu.

- 30 As competition among the chains increases, each chain strives to include more and more variety and added attractions to the fare – novel and convenient ways to provide the beverage, inclusion of condiments, such as, for example, ketchup, mustard, soy sauce, oyster sauce, chopped onions, relishes, and so forth.

- 35 An important part of a successful operation includes provision of a carrier for food, beverage and utensils. Such a carrier has important requirements. It must be convenient to carry and, preferably, enable the user to eat his food in situation

where "sitting down at a dinner table" is not feasible. It must be so inexpensive that it is disposable.

5 The food containers that are presently available are generally limited in terms of the function that they perform. As the variety of items increases, the demand for convenience increases. The demand for convenience translates to demand for features of a food carrier that provide the user with additional items such as, for example, a napkin, condiments, utensils, and so forth.

10 Another important concern for the purveyor of fast food is "getting his message out to the public" – advertising. If his advertising is sufficiently clever (e.g., a humorous cartoon) the public can be enticed to buy the product simply to obtain the advertisement. This is especially true of themes attractive to children such as, for example, Mickey Mouse and Harry Potter.

15 Another desirable feature of packages for industries, such as the fast food industry, is that the packages be "stackable. That is, the empty packages (before use) should be storable as stacks of packages in order to reduce the requirement for storage space.

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Summary of the Invention

In accordance with a first preferred aspect there is provided a disposable container for food, the disposable container comprising an outer container having at least
25 one side wall, a base and an open top, the outer container side wall being tapered such that the base is smaller than the open top; and an inner container receivable in the outer container for closing the open top. The inner container comprises at least one tub for receiving a first food therein, the at least one tub having at least one wall and an integral base. The at least one wall and the integral base locate on
30 and against the at least side wall to locate and hold the at least one tub in a position relative to the at least one outer container, the position being determined by the integral base diameter.

The at least one wall and the at least one side wall may each have an angle of
35 taper that is the same.

In a second aspect, there is provided a disposable container for food, the disposable container comprising an outer container having at least one side wall, a base and an open top; and an inner container receivable in the outer container and having at least one wall and an integral base such that, in use, the inner container
5 is able to be supported by the at least one side wall of the outer container. The inner container closes the open top. The inner container comprises at least one tub for receiving a first food therein, the at least one tub having at least one wall and an integral base. There is also at least one gap between the at least one wall of the inner container and the at least one side wall of the outer container.

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In a third aspect there is provided an inner container for use with an outer container to form a disposable container for food. The outer container has at least one side wall, a base and an open top. The outer container side wall is tapered such that the base is smaller than the open top. The inner container is receivable in the outer
15 container for closing the open top. The inner container comprises a tub for receiving a first food therein, the tub having at least one wall and an integral base. The at least one wall and the integral base are for, in use, locating on and against the at least one side wall to locate and hold the tub in a position relative to the at least one outer container, the position being determined by the integral base
20 diameter.

The at least one wall of the at least one tub may have a plurality of vertically-extending corrugations. The plurality of vertically-extending corrugations may extend downwardly from a position intermediate the height of the at least one wall
25 and may extend into the integral base.

The at least one side wall may be at a first angle of taper, and the at least one wall may be at a second angle of taper. The second angle of taper may be greater than the first angle of taper to form the gap.

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When the hole is in the peripheral lip, the gap may be for the passage therethrough of the straw.

The at least one tub may be of a height proportional to the height of the outer
35 container, the proportionality being in the range 10% to 33%, preferably 15% to 25%, more preferably 20%.

The disposable container may further comprise an insert container insertable into and closing the at least one tub. The at least one closure may be receivable in the at least one insert container. The insert container may be of a height less than half the height of the at least one tub. The insert container may have an insert top for
5 resting upon and being supported by the peripheral lip. A straw passage for a drinking straw may be provided in one of: the insert top, and the at least one closure.

The at least one wall may contact the at least one side wall for the full height of the
10 at least one wall. The at least one gap may be formed by the corrugations.

The second food may be filled to a second position, the second position being below the position, to form an air gap between the second food and the integral base, the air gap being for insulation.
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The at least one side wall may be transparent or translucent from the base to a second position, the second position being below the position. -

Brief Description of the Drawings

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In order that the invention may be fully understood and readily put into practical effect there shall now be described by way of non-limitative example only preferred embodiments of the present invention, the description being with reference to the accompanying illustrate drawings in which:

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Figure 1 shows a preferred embodiment of a food container (cover deleted);

Figure 2 is a vertical cross-section along the lines and in the direction of arrows 2-2 on Figure 1 (cover in place);

Figure 3 is a perspective view of a second embodiment;

30 Figure 4 is a vertical cross-sectional view along the lines and in the direction of arrows 4-4 in Figure 3;

Figure 5 is a view corresponding to Figure 3 but of a third embodiment;

Figure 6 is a view corresponding to Figure 4 but of a fourth embodiment;

Figure 7 is a perspective view of a fifth embodiment;

35 Figure 8 is a vertical cross-sectional view along the lines and in the direction of arrows 8-8 in Figure 7;

Figure 9 is a vertical cross-sectional view of a variation of the embodiment of Figures 7 and 8;

Figure 10 is a perspective view of a side container as shown in Figure 9; and

Figure 11 is a perspective view of a sixth embodiment.

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Detailed Description of Preferred Embodiments

To refer to Figures 1 and 2, there is show a disposable container 210 for take out food comprising an outer container 212 and an inner container 214. Outer
10 container 212 and inner container 214 may be of different materials, if required or desired. Materials used may be, for example, cardboard, paper, waterproof cardboard, waterproof paper, or a plastics material. By way of example, the outer container 212 may be made of cardboard or paper (including waterproof version of each) and inner container 214 may be made of a plastics material.

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The outer container 212 may be made of any suitable material such as, for example, cardboard, paper, plastics, or the like. It is preferably of a material intended for single use as container 210 is intended to be a disposable container for take out/take away/eat out food. The outer container 212 is a truncated, hollow
20 cone and has a side wall 216, a circular base 224 and an open top 226. The side wall 216 preferably tapers from top 226 to base 224 such that open top 226 is larger and wider than base 224, or base 224 is smaller than open top 226.

Although outer container 212 is shown as being conical, it may be of any suitable
25 shape including, but not limited to, round, elliptical, square, pentagonal, hexagonal, octagonal, and so forth.

The inner container 214 is intended to rest upon the top 226 of side wall 216 of outer container 212 and be supported thereby. The inner container 214 also forms
30 a closure or lid for the outer container. Inner container 214 is of a height significantly less than the height of outer container 212. Preferably, it is less than half the height of outer container 212. The inner container 214 may be of different heights for different food products to be placed therein. Preferably, the inner container 214 is of a height proportional to the height of the outer container 212.
35 That proportionality may be in the range 10% to 33%, preferably 15% to 25%, more preferably 20%.

Inner container 214 comprises a tub 242 and, optionally, a removable closure 282. The tub 242 has a radially outwardly directed top 240 that locates on side wall 216 and which contains a preformed hole 294 to allow a straw 292 to pass therethrough. The hole 294 is located radially between side wall 216 of outer container, and wall 248 of tub 242. Preferably, there is a gap 298 between wall 248 of tub 242 and side wall 216 of outer container 212. The gap 298 should be of sufficient size to easily allow straw 292 to pass through. The gap 298 maybe formed by walls 216 and 248 having differing angles of taper. Preferably, tub wall 248 has a higher angle of taper than outer container wall 216.

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In this way a food such as, for example, a beverage 208, may be placed in outer container 212. Inner container 214 can then be placed in outer container 212. Tub 242 of inner container 214 may contain a different food 206 such as, for example, ice cream, nachos, pop corn, candy, or the like. Straw 292 is then passed through hole 294. Straw 292 can be used to consume beverage 208. As such, container 210 can be held with one hand, and both foods 206, 208 consumed with relative ease, after removing closure 282 and insertion of straw 292. If the beverage 208 is cold, and the food 206 is cold, they both assist each other in maintaining their temperature as the cool food 206 assists in preventing the beverage 208 from quickly becoming warm as it provides a thermal barrier on top of the beverage 208. Similarly, the beverage 208 assists in keeping the food 206 cold as it also provides a thermal barrier for the food 206. The situation is the same if the food 206 and beverage 208 are both hot. If beverage 208 is hot, the hole 294 may be somewhat elliptical in shape to allow the beverage 208 to be consumed directly through hole 294 without use of a straw 294. An air bleed hole (not shown) may also be provided to assist such direct consumption, as is well known. The air bleed hole may be diagonally opposite hole 294.

The foods 206, 208 may both be liquid, or may both be solid. In the latter case, straw 292 may not be required. First food 208 may be solid or liquid; and second food 206 may be solid or liquid. First food 208 may be a beverage, and second food 206 may be an ice cream. Alternatively first food 208 may be a soup, and second food 206 biscuits for use with the soup; first food 208 may be a salad, and second food 206 a salad dressing; and so forth.

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Container 210 may be of any suitable or required size or shape including, but not limited to, round, square, rectangular, triangular, pentagonal, hexagonal, octagonal, and so forth.

- 5 Side walls 216 may have a curved lip 204 if desired or required. Top 240 may have a similar curved lip 202 so that it will locate over and engage with lip 204 to relatively securely yet releasably engage inner container 214 and outer container 212. Inner container 214 may also have corrugations 258, if desired or required. Corrugations 258 extend vertically downwardly from a position intermediate the
10 height of wall 248, preferably for half the height. Corrugations 258 may extend for substantially the full height of wall 248 or, as shown, for only a part of the height. The part is preferably the lower half. Corrugations 258 may extend partially into base 250. Corrugations 258 provide an increase in strength to wall 248 and base 250 and are generally equally-spaced along wall 248. Corrugations 258 also trap
15 air therein. In combination with the wall 248 and the wall 216 of outer container 212, this may create an effective insulation between the contents of inner container 214 and outer container 212 .

The embodiment of Figures 3 and 4 is similar to that of Figures 1 and 2 except that
20 the straw hole 294 is in a sleeve 295 integral with wall 248. Wall 248 has a recess 297 therein to accommodate the straw 292. In this way the radius of inner container 214 may be much closer to that of outer container 212 such that the walls 248, 216 are adjacent each other. The gap 298 will therefore be of minimal size, or may not exist, or may exist only due to corrugations 258.

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Also, an internal partition 299 may be provided in inner container 214. If the food 216 is, for example, French fries, a sachet of a suitable condiment may be held within the partition zone 293. If food 206 is ice cream, the partition zone 293 may be used to hold a scoop, ladle or spoon, or sachet of flavouring or sauce for the
30 contents of inner container 214.

Figure 5 shows a variation of the embodiment of Figures 3 and 4, where the partition 299 has been removed. In all other aspects, it is the same.

- 35 Figure 6 shows a variation of the embodiment of Figure 5 where inner container 214 is of a stepped shape to facilitate it being used to hold an ice cream cone of

similar shape. In this way the inner container 214 has an upper, wider portion, and a lower, narrower portion.

Figures 7 and 8 show a final embodiment where like numbers are used for like components, but with a prefix number "3". Here the outer container 312 is the same, but inner container 314 has a side wall 348 of a taper substantially the same as the taper of side wall 316 of outer container 312. Furthermore, side wall 348 has no top such as top 240, and no upper peripheral bead. Base 350 is of a diameter such that when inner container 314 is located within outer container 312, the base 350 contacts side wall 316 at the required height, with side wall 348 also contacting side wall 316 preferably for the full height of the side wall 348, such that inner container 314 is "jammed" within outer container 312 by action of base 350 and side wall 348 on side wall 316 of outer container 312. This will be at a height relative to the outer container 312 determined by the diameter of base 350. By having both the base 350 and the side wall 348 contact and "jam" with side wall 316, in general the base 350 will be substantially parallel with base 324.

As shown, the straw hole 394 is in a sleeve 395 integral with wall 348. Wall 348 has a recess 397 therein to accommodate the straw 392. In this way the radius of inner container 314 may be much closer to that of outer container 312 such that the walls 348, 316 are adjacent each other. The gap 398 will therefore be of minimal size, or may not exist, or may exist only due to corrugations 258 (if any).

However, the inner container 314 may not have the sleeve 395 and the straw hole may be in base 350, if desired or required. In that case, the straw 392 is preferably a tight or neat fit in hole 394 to prevent unwanted fluid conduction within the inner container 314. This is shown in Figure 9 and 11.

To allow the addition of condiments, sauces, or the like, to any food in either outer container 212/312 and inner container 214/314, any such condiments, sauces, or the like, may be attached using hooks 391, as is shown in Figure 9 and 10. Any number of hooks 391 may be used. The hooks 391 simply locate over side wall 316, and may or pass through a hole 383 in a sachet 387 or the tube, or as required or desired. A separate side container 389 having an integrated hook 385. The hook 385 may extend for all or part of the length of container 389. Preferably, container 389 and hook 385 are covered to substantially match the radius of area of side wall 316.

As shown in Figure 11, the side wall 316 may be transparent and translucent from base 324 to a second position represented by a line 383 just below base 350 of second container 314. The line 383 indicates a fill line for food/beverage 308 in first
5 container 312.

In this way, there is an air gap 381 between food/beverage 308, and base 350. Air gap 381 acts as an insulator. By having side wall transparent or translucent to line 383, the filling of container 383 is made easier. Side wall 316 above line 383 side
10 wall 316 may be painted, coated, or printed with desired advertising or other information.

Whilst there has been described in the foregoing description preferred embodiments of the present invention, it will be understood by those skilled in the technology that many variations or modifications in details of design, construction
15 or operation without departing from the present invention as defined in the claims.

The Claims

1. A disposable container for food, the disposable container comprising:
- 5 (a) an outer container having at least one side wall, a base and an open top, the outer container side wall being tapered such that the base is smaller than the open top;
- (b) an inner container receivable in the outer container for closing the open top;
- 10 (c) the inner container comprising a tub for receiving a first food therein, the tub having at least one wall and an integral base; and
- (d) the at least one wall and the integral base locating on and against the at least side wall to locate and hold the tub in a position relative to the at least one outer container, the position
- 15 being determined by the integral base diameter.
2. A disposable container for food as claimed in claim 1, wherein the at least one wall and the at least one side wall may each have an angle of taper that is the same.
- 20 3. A disposable container for food, the disposable container comprising:
- (a) an outer container having at least one side wall, a base and an open top;
- (b) an inner container receivable in the outer container and having
- 25 at least one wall and an integral base such that the inner container is, in use, able to be supported by the at least one side wall of the outer container, the inner container closing the open top;
- (c) the inner container comprising at least one tub for receiving a first food therein; at least one wall and an integral base; and
- 30 (d) at least one gap between the at least one wall of the inner container and the at least one side wall of the outer container.
4. A disposable container as claimed in any one of claims 1 to 3, wherein the
- 35 at least one wall of the at least one tub has a plurality of vertically-extending corrugations.

5. A disposable container as claimed in claim 4, wherein the plurality of vertically-extending corrugations extend downwardly from a position intermediate the height of the at least one wall and into the integral base.
- 5 6. A disposable container as claimed in claim 4, wherein the plurality of vertically-extending corrugations extend downwardly from a position adjacent a top of the at least one tub, to the integral base.
- 10 7. A disposal container as claimed in any one of claims 1 to 6, wherein the at least one wall contacts the at least one side wall for the full height of the at least one wall.
8. A disposable container as claimed in any one of claims 4 to 7, wherein the at least one gap is formed by the corrugations.
- 15 9. A disposable container as claimed in any one of claims 1 to 8, wherein the at least one side wall is at a first angle of taper, and the at least one wall is at a second angle of taper, the second angle of taper being greater than the first angle of taper to form the gap.
- 20 10. A disposable container as claimed in any one of claims 1 to 9, further comprising at least one closure receivable in the at least one tub to close the at least one tub.
- 25 11. A disposable container as claimed in any one of claims 1 to 10, wherein a hole for a straw is in one of: the integral base, and the peripheral lip.
12. A disposable container as claimed in any one of claims 3 to 11, wherein the gap extends from the peripheral bead to the integral base.
- 30 13. A disposable container as claimed in any one of claims 1 to 12, wherein the at least one tub is of a height proportional to the height of the outer container, the proportionality being in the range 10% to 33%.
- 35 14. A disposable container as claimed in claim 11, wherein the hole is in the peripheral lip, the gap being for the passage therethrough of the straw.

15. A disposable container as claimed in any one of claims 1 to 14, wherein the gap is formed by a recess in the at least one wall.
- 5 16. A disposable container as claimed in any one of claims 11 to 15, further comprising a sleeve integral with the at least one side wall and through which the straw is able to pass.
- 10 17. A disposable container as claimed in any one of claims 1 to 16, wherein the tub comprises at least one internal partition.
18. A disposable container as claimed in any one of claims 1 to 17, wherein the at least one tub is stepped and has an upper, wider portion and a lower, narrower portion
- 15 19. A disposable container as claimed in any one of claims 1 to 18, wherein the outer container is for receiving therein a second food, the second food and the first food being one of: the same and different.
- 20 20. A disposable container as claimed in claim 19, wherein the first food and the second food create thermal barriers for each other.
21. A disposable container as claimed in claims 19 or 20, wherein the second food is filled to a second position, the second position being below the position, to form an air gap between the second food and the integral base, the air gap being for insulation.
- 25 22. A disposable container as claimed in claim 1 or claim 2, or any one of claims 4 to 19 when append to claim 1, wherein the at least one side wall is transparent or translucent from the base to a second position, the second position being below the position.
- 30 23. An inner container for use with an outer container to form a disposable container for food, wherein:
- 35 (a) the outer container has at least one side wall, a base and an open top, the outer container side wall being tapered such that the base is smaller than the open top;

- (b) the inner container being receivable in the outer container for closing the open top;
- (c) the inner container comprising a tub for receiving a first food therein, the tub having at least one wall and an integral base;
- 5 and
- (d) the at least one wall and the integral base being for, in use, locating on and against the at least one side wall to locate and hold the tub in a position relative to the at least one outer container, the position being determined by the integral base diameter.
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24. An inner container as claimed in claim 23, wherein the at least one wall and the at least one side wall may each have an angle of taper that is the same.
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25. An inner container as claimed in claim 23 or claim 24, wherein the at least one wall contacts the at least one side wall for the full height of the at least one wall.
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26. An inner container as claimed in any one of claims 23 to 25, further comprising a sleeve integral with the at least one wall having a hole therein and a passage therethrough for a straw.
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27. An inner container as claimed in any one of claims 23 to 26, wherein the tub comprises at least one internal partition.
28. An inner container as claimed in any one of claims 23 to 27, wherein the outer container is for receiving therein a second food, the second food and the first food being one of: the same and different.
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29. An inner container as claimed in claim 28, wherein the first food and the second food create thermal barriers for each other.
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30. An inner container as claimed in claim 28 or claim 29, wherein the second food is filled to a second position, the second position being below the position, to form an air gap between the second food and the integral base, the air gap being for insulation.

31. An inner container as claimed in any one of claims 23 to 30, wherein the at least one side wall is transparent or translucent from the base to a second position, the second position being below the position.