(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) **EP 1 930 253 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
16.02.2011 Bulletin 2011/07

(51) Int Cl.:
B65D 77/20 *(2006.01)*

(21) Application number: **07254735.9**

(22) Date of filing: **06.12.2007**

(54) Container and method

Behälter und Verfahren

Récipient et procédé

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR

(30) Priority: **06.12.2006 GB 0624343**

(43) Date of publication of application:
11.06.2008 Bulletin 2008/24

(73) Proprietor: **Pregis Rigid Packaging Limited**
Tanfield Lea South Industrial Estate
Tanfield Lea, Stanley DH9 9XH (GB)

(72) Inventors:
- **McCourt, Kevin**
  Blaydon
  Tyne & Wear NE21 4BX (GB)
- **Petrie, Carl**
  Sunniside, Newcastle-upon-Tyne NE16 5XH (GB)

(74) Representative: **Watson, Craig Simon**
Murgitroyd & Company
Scotland House
165-169 Scotland Street
Glasgow G5 8PL (GB)

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Description

[0001] The present invention relates to a container and a method of manufacturing the container. In particular, although not exclusively, the invention relates to containers for foodstuff. [0002] Typically, foodstuff needs to be stored in a container that maintains a satisfactory level of freshness, prevents contamination and provides evidence of tamper resistance. Some known containers are made with a separate or hinged thermoformed lid that can be closed over a base in order to store the food within the container. Thermoformed lids are typically semi-rigid and are therefore allow stacking of containers. These lids can also be replaced over the base. However, a thermoformed lid does not provide an airtight seal.

[0002] FR 2618411 discloses a container according to the preamble of claim 1.

[0003] Alternatively, lidding film can be heat sealed over the base of a container.

[0004] A heat sealable lidding film has the advantage that it can be airtight to enable a longer shelf life of the foodstuff within the container and also allows the container to be gas flushed prior to sealing to further prolong the life of the foodstuff. Lidding film has a lower relative thickness than a thermoformed lid, which can therefore reduce the cost of each container because less material is required. However, one disadvantage of lidding film is that if the contents of the container need to be heated by microwave for example, the lidding film must be pierced prior to heating. Another disadvantage is that once the lidding film is removed from a container it cannot be easily replaced over the container to reseal or cover any foodstuff that remains within.

[0005] According to a first aspect of the invention, there is provided a container as claimed in claim 1.

[0006] The rim portion can have a greater rigidity relative to the lid portion.

[0007] The base portion can be shaped to define a container portion. The container portion can be suitable for containing a foodstuff.

[0008] The base portion can have an opening adapted to be selectively closed by the lid portion. The opening can provide access to the container portion.

[0009] Optionally, the lid portion can be adapted to close the opening such that the lid portion provides a substantially fluid tight seal around the container portion.

[0010] The rim portion can circumscribe at least a part of the opening of the base portion.

[0011] The rim portion and the base portion can be made from the same material. The rim portion and the base portion can be semi-rigid.

[0012] The rim portion and the base portion can be formed as a one-piece item. The rim portion and the base portion can be thermoformed.

[0013] Typically, the frangible connection represents a weak part of the container that is more easily disrupted than other parts of the container.

[0014] The perforations can have the dual function of providing a plurality of air vents allowing ventilation of the container portion. This is advantageous for example, during use of the container in a microwave as the lid portion does not have to be separately pierced.

[0015] The lid portion can be flexible. The lid portion can be heat sealable to the rim portion.

[0016] The lid portion can have a lower relative thickness than the base or the rim portions. The lid portion can be a film.

[0017] The lid portion can be coupled to rim portion at a first sealing area. The lid portion can be coupled to the base portion at a second sealing area. The first and second sealing areas can be separable by the frangible connection.

[0018] The second sealing area can be provided within the region surrounded by the first sealing area. The second sealing area can be provided within the region surrounded by the frangible connection.

[0019] A fluid tight seal can be provided at the first sealing area between the lid portion and the rim portion. A fluid tight seal can be provided at the second sealing area between the lid portion and the base portion.

[0020] The lid portion can be peelable at least in the region of the second sealing area.

[0021] A reinforced part can be provided proximate the frangible connection. The reinforced part can be provided on at least one of the base portion and the rim portion.

[0022] The reinforced part can be provided between the first and second sealing areas. The reinforced part can comprise a channel member formed as part of the rim portion.

[0023] The frangible connection can be more easily disrupted than the coupling between the lid portion and the rim portion.

[0024] The coupling between the rim portion and the lid portion can require a greater separation force in a particular direction than the frangible connection, such that in normal use, the frangible connection is disrupted to facilitate separation of the rim portion from the base portion rather than separation of the lid portion and the rim portion.

[0025] Alternatively, or additionally, the relative location of the coupling between the lid portion and the rim portion can be such that the coupling is less easily separated than the frangible connection between the rim portion and the base portion. Thus, it can be more difficult for a user to gain a purchase on the lid portion in order to separate this from the rim portion.

[0026] At least one of the rim portion and the base portion can be provided with clips for reattaching the rim portion and the base portion following disruption of the frangible connection.

[0027] The clips can comprise at least two radial indents on the rim portion and an undercut on the base portion, such that the radial indents can be located in the undercut, thereby to clip the rim portion and the base portion.

[0028] At least one of the first and second sealing areas

can be covered with an adhesive to facilitate resealing of the lid portion over the base portion following disruption of the frangible connection.

[0029] The rim portion can be provided with a first sealing surface. The base portion can be provided with a second sealing surface. A lid portion can be provided for sealing to the first sealing surface. The lid portion can also seal to the second sealing surface.

[0030] The first and second sealing surfaces can be separated by the frangible connection. The first and second sealing surfaces can be separated by a reinforcing part.

[0031] The base and the rim portions and the frangible connection can also include any features previously described with reference to the first aspect of the invention.

[0032] According to a second aspect of the invention, there is provided a method of manufacturing a container as claimed in claim 32.

[0033] The rim portion can have a greater rigidity relative to the lid portion.

[0034] The method can include the step of forming the rim portion and the base portion as a one-piece item.

[0035] The method can include heat-sealing the lid portion on at least one of the base portion and the rim portion. The method can include heat sealing the lid portion on at least one of the base portion and the rim portion in order to form a fluid tight seal.

[0036] Embodiments of the invention will now be described with reference to and as shown in the accompanying drawings in which:-

Fig. 1 is a side view of a base portion;
Fig. 2 is a plan view of the base portion of Fig. 1;
Fig. 3 is a perspective view of a lid portion over the base portion of
Fig. 2;
Fig. 4 is a detailed sectional view of part of the base portion and the lid portion of
Fig. 3;
Fig. 5 is a detailed perspective view of part of the base portion and the lid portion of Fig. 3;
Fig. 6 is a perspective view of the lid portion and a rim portion being removed from the base portion;
Fig. 7 is a detailed sectional view of part of the lid portion being removed from the base portion;
Fig. 8 is a detailed perspective view of part of a lid portion removed from the base portion;
Fig. 9 is a plan view of a base portion according to an alternative embodiment of the invention;
Fig. 10 is a side view of a container formed from the base portion of
Fig. 9;
Fig. 11 is a plan view of a base portion according to another alternative embodiment of the invention;
Fig. 12 is a side view of a container formed from the base portion of
Fig. 11; and
Fig. 13 is a plan view of a container according to another alternative embodiment of the invention;
Fig. 14 is a plan view of a base of the container of Fig. 13 following disruption of the frangible connection;
Fig. 15 is a plan view of a rim and lid of the container of Fig. 13 following disruption of the frangible connection; and
Fig. 16 is a plan view of the container of Fig. 13 with the rim and the lid clipped to the base following disruption of the frangible connection.

[0037] A base 20 of a container is shown in Figs. 1 and 2. According to the present embodiment, the base 20 has a lower face 20f that is reinforced by a recess 20r provided therein. A sidewall 20s extends upwardly from the lower face 20f. The inner surface of the lower face 20f and the sidewall 20s define a receptacle portion 22 that is suitable for containing a foodstuff. A reinforcing collar 20c is formed towards an upper end of the sidewall 20s and a lip 20l extends radially outward therefrom in a direction parallel to the lower face 20f. The lip 20l is formed at an acute angle relative to the reinforcing collar 20c to enhance the strength of the base 20 in this region and allow stacking of several containers during transit. An upper surface of the lip 20l defines a base sealing surface 24. An inner perimeter of the lip 20l defines an opening 26 through which foodstuff can be inserted into the receptacle portion 22 of the base 20.

[0038] A rim 30 is attached to an outer perimeter of the lip 20l by means of a frangible connection 40 in the form of a plurality of perforations. The rim 30 extends radially outward in the same plane as the lip 20l and is provided with a reinforcing means in the form of an annular channel 32 to improve the strength of the rim 30. A rim sealing surface 34 is provided on an upper surface of the rim 30 and parallel to (and in the same plane as) the base sealing surface 24 provided on the base 20.

[0039] The base 20 and the rim 30 are initially thermoformed as a one-piece item and the frangible connection 40 is subsequently effected by punching or cutting perforations between the rim 30 and the base 20 to thereby define these separate portions of the container. Suitable methods of forming the frangible connection will be well known, and kiss cutting is one example of another suitable method of forming the frangible connection.

[0040] A lid comprising a lidding film is shown at 50 in Fig. 3. The lidding film 50 has an outer profile approximately matching the outer edge of the rim 30. The lidding film 50 is a peelable film. Together, the lidding film 50 and the base 20 form a container 10.

[0041] The present embodiment is adapted to provide an airtight seal over the receptacle portion 22. The lidding film 50 is heat sealed to the rim 30 at the rim sealing surface 34 and to the base 20 at the base sealing surface 24, thereby creating two seals 35, 25 respectively. Since the base seal 25 sealing the lidding film 50 to the base 20 is located between the perforations of the frangible connection 40 and the opening 26, the base seal 25 pro-

vides an airtight seal to prevent fluid ingress/egress from the receptacle portion 22. This arrangement also allows gas flushing of the sealable receptacle portion 22 prior to sealing, to maintain greater longevity and freshness of the foodstuff within the receptacle portion 22.

[0042] Prior to use, the contents (not shown) such as foodstuffs are added to the receptacle portion 22 through the opening 26 of the container 10. The container 10 is then optionally flushed with an appropriate gas, and the lidding film 50 is then heat sealed to the base sealing surface 24 and the rim sealing surface 34 to create the seals 35, 25 (Figs. 4 and 5).

[0043] When access to the contents of receptacle portion 22 is required, a user can pull the rim 30 in a direction shown by an arrow 54 (Figs. 6, 7 and 8). Pulling the lidding film 50 upwardly away from the base 20 has the effect of disrupting the frangible connection 40. Thus, the rim 30 with the lidding film 50 attached at sealing area 35 is separated from the base 20. This action also causes the seal 25 to break and the lidding film 50 is peeled off the base sealing area 24, but remains attached to the rim 30.

[0044] The rim 30 and the lidding film 50 are thereby removed together to provide access to the contents of the container 10 within the receptacle portion 22. The channel 32 strengthens the rim 30, to substantially reduce flexing of the rim 30 and the base 20 when a user is removing the lidding film 50 from the container 10. This also helps the perforations of the frangible connection 40 to make a clean break between the base 20 and the rim 30.

[0045] In the above-described manner, the rim 30 is pulled away from the base 20 with the seal 35 between the lidding film 50 and the rim sealing area 34 intact. The lidding film 50 remains attached to the rim 30 and is therefore prevented from curling or folding in such a way that it cannot be replaced over the base 20. The rim 30 acts as a semi-rigid frame around the perimeter of the lidding film 50 to effectively retain the lidding film 50 in a planar configuration. As a result, the lidding film 50 and the attached outer rim 30 can be re-used to cover the container after opening and cover any remaining foodstuff within the container portion 22.

[0046] The present invention retains the benefits of a container 10 having an airtight lidding film 50 with the additional advantage that the base 20 can be re-covered once the container 10 has been opened.

[0047] According to a second embodiment, the lidding film 50 is heat sealed onto only the rim sealing area 34. No airtight seal is provided between the receptacle portion 22 and the ambient environment because air can diffuse through the perforations of the frangible connection 40. Such a container is suitable for foodstuff that is frozen prior to cooking, where an airtight seal is neither necessary nor appropriate. This also has a particular advantage where foodstuff within the container is to be cooked in a microwave because the perforations of the frangible connection 40 provide a plurality of vents so that no separate piercing of the lidding film 50 is required.

[0048] According to any of the embodiments, the lidding film 50 can be resealable such that following removal of the rim 30 and the lidding film 50, once the base 20 is re-covered a pressure applied to the lidding film 50 over the region of the base sealing area 24 that causes the lidding film 50 to make a temporary seal. The sealing areas can be formed from or covered with an adhesive or tacky material to facilitate this re-sealing if desired.

[0049] Figures 9 and 10 show a container according to a third embodiment of the invention, having a different shape to the container 10 of the first embodiment. Like components are denoted with identical reference numbers having a prefix "1".

[0050] A base 120 of the container is divided into four individual base compartments 120a, 120b, 120c, 120d. Each of these base compartments 120a, 120b, 120c, 120d defines a receptacle portion 122a, 122b, 122c, 122d suitable for containing a foodstuff. A lip 120l circumscribes the edge of each base compartment 120a, 120b, 120c, 120d and the upper surface of the lip 1201 provides a base sealing surface 124. A rim 130 surrounds the edge of the lip 1201 and is connected thereto by means of a frangible connection 140. A reinforcing U-shaped channel 132 strengthens the container between the rim 130 and the frangible connection 140. At one corner of the rim 130 a tab 160 is formed to allow a user to gain a purchase on the rim 130 in order to initiate disruption of the frangible connection 140.

[0051] A lidding film 50 is sealed against a sealing area 134 on the upper surface of the rim 130 and against the base sealing area 124 that surrounds the edge of each base compartments 120a, 120b, 120c, 120d. The fluid tight seal around the base compartments 120a, 120b, 120c, 120d, allows each receptacle portion 122a, 122b, 122c, 122d to be filled with a different foodstuff without the risk of any cross-contamination due to the fluid tight seal between the lidding film 150 and the base sealing area 124.

[0052] The container 110 is manufactured as described with reference to the first embodiment and the base 120 and rim 130 are thermoformed into the desired shape with the four separate base compartments 120a, 120b, 120c, 120d, before the frangible connection 140 is punched. Once foodstuff has been added to the receptacle portions 122a, 122b, 122c, 122d, the lidding film 150 is heat sealed onto the rim sealing area 134 and the base sealing area 124 to provide airtight seals to prolong the life of the foodstuffs contained in the receptacle portions 122a, 122b, 122c, 122d.

[0053] A user can access the foodstuff within the receptacle portions 122a, 122b, 122c, 122d by grasping the tab 160 and pulling the rim 130 away from the base 120 to disrupt the frangible connection 140 therebetween. Once the user has accessed the contents of the receptacle portions 122a, 122b, 122c, 122d, the rim 130 with the attached lid can be used to cover the base 120 to keep the remaining contents fresh.

[0054] Figures 11 and 12 show another alternative

shape of container 210. Like components have been denoted with similar reference numerals to Figures 9 and 10, using the prefix "2" instead of "1".

[0055] Figs. 13 to 16 show an alternative container 310 according to another embodiment of the invention. Like components have been denoted with similar reference numerals to Figures 9 and 10, using the prefix "3" instead of "1".

[0056] The base 320 is circular and has four indents 329 along the frangible connection 340 spaced at 90° relative to one another. The rim 330 has four corresponding protrusions 339 along the frangible connection 340 also spaced at 90° relative to one another.

[0057] The U-shaped reinforcing channel 332 is provided with four inwardly protruding radial indentations 337 spaced at 90° relative to one another and located vertically spaced from and beneath the protrusions 339. The indentations 337 extend radially inwardly beyond the general circumference of the frangible connection 340, other than in the region of the base indents 329.

[0058] When access is required to the contents of the receptacle portions 322a, 322b, 322c, 322d, the rim 330 is pulled upwards away from the base 320 in a manner described with reference to previous embodiments. Since the frangible connection 340 is the weakest part of the container 310, the connection between the base 320 and the rim 330 is disrupted and the rim 330 with the lidding film 350 sealed thereto can be removed to uncover the receptacle portions 322a, 322b, 322c, 322d. Following disruption of the frangible connection 340, a new perimeter 381 is created around an edge of the base 320 as shown in Figure 14. The perimeter 381 extends radially outwardly from the base 320 and thereby creates an undercut (not shown) between a top end of a sidewall (not shown) of the base 320 and an outer edge of the perimeter 381.

[0059] Should a user wish to re-cover the receptacle portions 322a, 322b, 322c, 322d, for example, to maintain foodstuff contained therein in a fresh condition and/or restrict contamination of the foodstuff within the receptacle portions 322a, 322b, 322c, 322d, a user can reattach the rim 330 to the base 320. In order to achieve this, a user aligns the protrusions 339 on the rim 330 with the indents 329 on the perimeter 381 of the base 320 so that the lidding film 350 covers the base 320. The user can then rotate the rim 330 relative to the base 320 (or the base 320 relative to the rim 330) by around 45° so that the protrusions 339 are positioned above the perimeter 381 and the radial indentations 337 of the rim 330 are located beneath the perimeter 381 of the base 320, as shown in Figure 16. In this manner, the rim 330 is clipped to the base 320 by means of the protrusions 339 above and the radial indentations 337 below the perimeter 381, thereby securing the rim 330 on either side of the base 320. The base sealing area 324 can be provided with an adhesive so that the lidding film 350 can be pressed against the sealing area 324 to reseal the lidding film 350 to the base 320.

[0060] The above embodiment has the advantage that the lidding film 350 can be temporarily reattached to the base 320 enabling the contents of the receptacle portions 322a, 322b, 322c, 322d to stay fresh. This temporary clipping of the base 320 and the rim 330 is more secure than simply replacing the lidding film 350 over the receptacle portions 322a, 322b, 322c, 322d to act as a loose cover. This embodiment is particularly suited to round or circular containers 310 because the rim 330 and the base 320 can be easily rotated relative to one another. Although, this embodiment with the clipping feature can also be applied to other shapes of container.

[0061] Modifications and improvements can be made without departing from the scope of the invention. For example, although some of the present embodiments are described with reference to a container having a circular cross-section, the invention is also appropriate for containers of any shape, such as those having rectangular, oval or square cross-section.

Claims

1. A container (10) comprising:

a base portion (20) having a rim portion (30), wherein the rim portion (30) is separable from the base portion (20) by means of a frangible connection (40);
a lid portion (50) coupled to the rim portion (30);
characterised by the rim portion (30) having the same thickness as the base portion (20), and the frangible connection (40) including perforations located between the rim portion (30) and the base portion (20).

2. A container (10) as claimed in claim 1, wherein the rim portion (30) has a greater rigidity relative to the lid portion (50).

3. A container as claimed in claim 1 or claim 2, wherein the base portion (20) is shaped to define a container portion suitable for containing a foodstuff.

4. A container as claimed in any preceding claim, wherein the base portion (20) has an opening (26) adapted to be selectively closed by the lid portion (50).

5. A container as claimed in claim 4, when dependent on claim 3, wherein the opening (26) provides access to the container portion.

6. A container as claimed in claim 4 or claim 5, wherein the lid portion (50) is adapted to close the opening (26) such that the lid portion (50) provides a substantially air tight seal around the container portion.

7. A container as claimed in any one of claims 4 to 6, wherein the rim portion (30) circumscribes at least a part of the opening (26) of the base portion (20).

8. A container as claimed in any preceding claim, wherein the rim portion (30) and the base portion (20) are semi-rigid.

9. A container as claimed in any preceding claim, wherein the rim portion (30) and the base portion (20) are formed as a one-piece item.

10. A container as claimed in claim 3, wherein the perforations (40) have the dual function of providing a plurality of air vents allowing ventilation of the container portion.

11. A container as claimed in any preceding claim, wherein the frangible connection (40) represents a weak part of the container (10) that is more easily disrupted than other parts of the container (10).

12. A container as claimed in any preceding claim, wherein the lid portion (50) is flexible.

13. A container as claimed in any preceding claim, wherein the lid portion (50) is heat sealable to the rim portion (30).

14. A container as claimed in any preceding claim, wherein the lid portion (50) has a lower relative thickness than the base portion (20) and the rim portion (30).

15. A container as claimed in any preceding claim, wherein the lid portion (50) is a film.

16. A container as claimed in any preceding claim, wherein the lid portion (50) is sealed against the rim portion (30) at a first sealing area and the lid portion (50) is sealed against the base portion (20) at a second sealing area.

17. A container as claimed in claim 16, wherein the frangible connection (40) is located between the first and second sealing areas.

18. A container as claimed in claim 16 or claim 17, wherein the second sealing area is located within an area surrounded by the first sealing area.

19. A container as claimed in any one of claims 16 to 18, wherein the second sealing area is located within an area surrounded by the frangible connection (40).

20. A container as claimed in any one of claims 16 to 19, wherein a fluid tight seal is provided at at least one of the first sealing area and second sealing areas.

21. A container as claimed in any one of claims 16 to 20, wherein the lid portion (50) is peelable in the region of the second sealing area.

22. A container as claimed in any preceding claim, wherein a reinforced part is provided proximate the frangible connection (40).

23. A container as claimed in claim 22, wherein the reinforced part is provided on at least one of the base portion (20) and the rim portion (30).

24. A container as claimed in claim 22 or claim 23, when dependent on claim 16, wherein the reinforced part is located between the first and second sealing areas.

25. A container as claimed in any one of claims 22 to 24, wherein the reinforced part comprises a channel member (132) formed as part of the rim portion (30).

26. A container as claimed in any preceding claim, wherein frangible connection (40) is more easily disrupted than the seal between the lid portion (50) and the rim portion (30).

27. A container as claimed in claim 26, wherein the seal between the rim portion (30) and the lid portion (50) requires a greater separation force in a particular direction than the frangible connection (40), such that in normal use, the frangible connection (40) is disrupted to facilitate separation of the rim portion (30) from the base portion (20) rather than separation of the lid portion (50) and the rim portion (30).

28. A container as claimed in claim 26 or claim 27, wherein the location of the seal between the lid portion (50) and the rim portion (30) is less accessible than the frangible connection (40) between the rim portion (30) and the base portion (20).

29. A container as claimed in any preceding claim, wherein the container (10) is a foodstuff container.

30. A container as claimed in any preceding claim wherein at least one of the rim portion (30) and the base portion (20) can be provided with a clip means (339) for attaching the rim portion (30) to the base portion (20) following disruption of the frangible connection (40).

31. A container as claimed in claim 30, wherein the clip means (339) comprise at least two radial indentations (337) on the rim portion (30) and an undercut on the base portion (20) such that the radial indentations (337) are locatable in the undercut thereby

to clip the rim portion (30) and the base portion (20).

32. A method of manufacturing a container (10) including the steps of:

providing base portion (20) having a rim portion (30);
frangibly connecting the base portion (20) and the rim portion (30); and coupling a lid portion (50) to the rim portion (30); **characterised by**:

including the step of thermoforming the rim portion (30) and the base portion (20) such that the rim portion (30) has the same thickness as the base portion (20) and; including the step of punching or cutting perforations between the rim portion (30) and the base portion (20) to form the frangible connection (40) therebetween.

33. A method according to claim 32, including the step of forming the rim portion (30) and the base portion (20) as a one-piece item.

34. A method according to any one of claims 32 to 33, including heat-sealing the lid portion (50) to at least one of the base portion (20) and the rim portion (30).

35. A method according to any one of claims 32 to 34, including heat sealing the lid portion (50) at least one of the base portion (20) and the rim portion (30) in order to form a fluid tight seal.

Patentansprüche

1. Ein Behälter (10), der Folgendes beinhaltet:

einen Basisabschnitt (20), der einen Randabschnitt (30) aufweist, wobei der Randabschnitt (30) durch eine zerbrechliche Verbindung (40) von dem Basisabschnitt (20) lösbar ist;
einen Deckelabschnitt (50), der an den Randabschnitt (30) gekoppelt ist, **dadurch gekennzeichnet, dass** der Randabschnitt (30) die gleiche Stärke wie der Basisabschnitt (20) aufweist und die zerbrechliche Verbindung (40) Perforationen umfasst, befindlich zwischen dem Randabschnitt (30) und dem Basisabschnitt (20).

2. Behälter (10) gemäß Anspruch 1, wobei der Randabschnitt (30) relativ zu dem Deckelabschnitt (50) eine größere Steifigkeit aufweist.

3. Behälter gemäß Anspruch 1 oder Anspruch 2, wobei der Basisabschnitt (20) geformt ist, um einen Behälterabschnitt zu definieren, der geeignet ist, um ein Nahrungsmittel zu enthalten.

4. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Basisabschnitt (20) eine Öffnung (26) aufweist, die angepasst ist, um durch den Deckelabschnitt (50) selektiv geschlossen zu werden.

5. Behälter gemäß Anspruch 4, wenn von Anspruch 3 abhängig, wobei die Öffnung (26) Zugang zu dem Behälterabschnitt bereitstellt.

6. Behälter gemäß Anspruch 4 oder Anspruch 5, wobei der Deckelabschnitt (50) angepasst ist, um die Öffnung (26) so zu schließen, dass der Deckelabschnitt (50) ein im Wesentlichen luftdichtes Siegel um den Behälterabschnitt bereitstellt.

7. Behälter gemäß einem der Ansprüche 4 bis 6, wobei der Randabschnitt (30) mindestens einen Teil der Öffnung (26) des Basisabschnitts (20) umgibt.

8. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Randabschnitt (30) und der Basisabschnitt (20) halbsteif sind.

9. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Randabschnitt (30) und der Basisabschnitt (20) als eine einteilige Einheit gebildet sind.

10. Behälter gemäß Anspruch 3, wobei die Perforationen (40) die duale Funktion des Bereitstellens einer Vielzahl von Lüftungsöffnungen, die die Lüftung des Behälterabschnitts ermöglichen, aufweist.

11. Behälter gemäß einem der vorhergehenden Ansprüche, wobei die zerbrechliche Verbindung (40) einen schwachen Teil des Behälters (10) darstellt, der leichter als andere Teile des Behälters (10) zerreißbar ist.

12. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Deckelabschnitt (50) biegsam ist.

13. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Deckelabschnitt (50) an den Randabschnitt (30) heißsiegelbar ist.

14. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Deckelabschnitt (50) eine geringere relative Stärke als der Basisabschnitt (20) und der Randabschnitt (30) aufweist.

15. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Deckelabschnitt (50) ein Film ist.

16. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Deckelabschnitt (50) an einem ersten Siegelbereich gegen den Randabschnitt (30) gesiegelt ist und der Deckelabschnitt an einem zweiten Siegelbereich gegen den Basisabschnitt (20) gesie-

gelt ist.

17. Behälter gemäß Anspruch 16, wobei sich die zerbrechliche Verbindung (40) zwischen dem ersten und dem zweiten Siegelbereich befindet.

18. Behälter gemäß Anspruch 16 oder Anspruch 17, wobei sich der zweite Siegelbereich innerhalb eines von dem ersten Siegelbereich umgebenen Bereichs befindet.

19. Behälter gemäß einem der Ansprüche 16 bis 18, wobei sich der zweite Siegelbereich innerhalb eines von der zerbrechlichen Verbindung (40) umgebenen Bereichs befindet.

20. Behälter gemäß einem der Ansprüche 16 bis 19, wobei an mindestens einem des ersten Siegelbereichs und des zweiten Siegelbereichs ein fluiddichtes Siegel bereitgestellt ist.

21. Behälter gemäß einem der Ansprüche 16 bis 20, wobei der Deckelabschnitt (50) in der Region des zweiten Siegelbereichs abziehbar ist.

22. Behälter gemäß einem der vorhergehenden Ansprüche, wobei nahe der zerbrechlichen Verbindung (40) ein verstärkter Teil bereitgestellt ist.

23. Behälter gemäß Anspruch 22, wobei der verstärkte Teil an mindestens einem von dem Basisabschnitt (20) und dem Randabschnitt (30) bereitgestellt ist.

24. Behälter gemäß Anspruch 22 oder Anspruch 23, wenn von Anspruch 16 abhängig, wobei sich der verstärkte Teil zwischen dem ersten und dem zweiten Siegelbereich befindet.

25. Behälter gemäß einem der Ansprüche 22 bis 24, wobei der verstärkte Teil ein als Teil des Randabschnitts (30) gebildetes Kanalelement (132) beinhaltet.

26. Behälter gemäß einem der vorhergehenden Ansprüche, wobei die zerbrechliche Verbindung (40) leichter zerrissen werden kann als das Siegel zwischen dem Deckelabschnitt (50) und dem Randabschnitt (30).

27. Behälter gemäß Anspruch 26, wobei das Siegel zwischen dem Randabschnitt (30) und dem Deckelabschnitt (50) in einer bestimmten Richtung eine größere Lösekraft erfordert als die zerbrechliche Verbindung (40), so dass die zerbrechliche Verbindung (40) bei normalem Gebrauch zerrissen wird, um die Lösung des Randabschnitts (30) von dem Basisabschnitt (20) statt die Lösung des Deckelabschnitts (50) und des Randabschnitts (30) zu erleichtern.

28. Behälter gemäß Anspruch 26 oder Anspruch 27, wobei die Stelle des Siegels zwischen dem Deckelabschnitt (50) und dem Randabschnitt (30) weniger zugänglich ist als die zerbrechliche Verbindung (40) zwischen dem Randabschnitt (30) und dem Basisabschnitt (20).

29. Behälter gemäß einem der vorhergehenden Ansprüche, wobei der Behälter (10) ein Behälter für Nahrungsmittel ist.

30. Behälter gemäß einem der vorhergehenden Ansprüche, wobei mindestens einer von dem Randabschnitt (30) und dem Basisabschnitt (20) mit einem Klemmmittel (339) zum Anbringen des Randabschnitts (30) an dem Basisabschnitt (20) nach dem Zerreißen der zerbrechlichen Verbindung (40) bereitgestellt sein kann.

31. Behälter gemäß Anspruch 30, wobei das Klemmmittel (339) an dem Randabschnitt (30) mindestens zwei radiale Einkerbungen (337) und an dem Basisabschnitt (20) eine Aussparung beinhaltet, so dass die radialen Einkerbungen (337) in der Aussparung lokalisierbar sind, um dadurch den Randabschnitt (30) und den Basisabschnitt (20) zu klemmen.

32. Ein Verfahren zur Herstellung eines Behälters (10), das die folgenden Schritte umfasst:

Bereitstellen eines Basisabschnitts (20), der einen Randabschnitt (30) aufweist;
zerbrechliches Verbinden des Basisabschnitts (20) und des Randabschnitts (30) und
Koppeln eines Deckelabschnitts (50) an den Randabschnitt (30), **gekennzeichnet durch**:

Einschließen des Schritts des Thermoformens des Randabschnitts (30) und des Basisabschnitts (20), so dass der Randabschnitt (30) die gleiche Stärke wie der Basisabschnitt (20) aufweist, und Einschließen des Schritts des Stanzens oder Schneidens von Perforationen zwischen dem Randabschnitt (30) und dem Basisabschnitt (20), um die zerbrechliche Verbindung (40) zwischen diesen zu bilden.

33. Verfahren gemäß Anspruch 32, das den Schritt des Bildens des Randabschnitts (30) und des Basisabschnitts (20) als eine einteilige Einheit umfasst.

34. Verfahren gemäß einem der Ansprüche 32 bis 33, das das Heißsiegeln des Deckelabschnitts (50) an mindestens einen von dem Basisabschnitt (20) und dem Randabschnitt (30) umfasst.

35. Verfahren gemäß einem der Ansprüche 32 bis 34,

das das Heißsiegeln des Deckelabschnitts (50) an mindestens einen von dem Basisabschnitt (20) und dem Randabschnitt (30), um ein fluiddichtes Siegel zu bilden, umfasst.

Revendications

1. Un conteneur (10) comprenant :

une portion formant base (20) ayant une portion formant rebord (30), où la portion formant rebord (30) peut être séparée de la portion formant base (20) au moyen d'un raccord cassable (40) ;
une portion formant couvercle (50) couplée à la portion formant rebord (30) ;
caractérisé en ce que la portion formant rebord (30) présente la même épaisseur que la portion formant base (20), et le raccord cassable (40) inclut des perforations situées entre la portion formant rebord (30) et la portion formant base (20).

2. Un conteneur (10) tel que revendiqué dans la revendication 1, où la portion formant rebord (30) présente une plus grande rigidité relativement à la portion formant couvercle (50).

3. Un conteneur tel que revendiqué dans la revendication 1 ou la revendication 2, où la portion formant base (20) est configurée de façon à définir une portion formant conteneur convenant pour contenir une denrée alimentaire.

4. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant base (20) présente une ouverture (26) adaptée pour être fermée de façon sélective par la portion formant couvercle (50).

5. Un conteneur tel que revendiqué dans la revendication 4, lorsqu'elle dépend de la revendication 3, où l'ouverture (26) fournit un accès à la portion formant conteneur.

6. Un conteneur tel que revendiqué dans la revendication 4 ou la revendication 5, où la portion formant couvercle (50) est adaptée pour fermer l'ouverture (26) de façon à ce que la portion formant couvercle (50) fournisse un joint de scellement substantiellement hermétique à l'air autour de la portion formant conteneur.

7. Un conteneur tel que revendiqué dans n'importe laquelle des revendications 4 à 6, où la portion formant rebord (30) circonscrit au moins une partie de l'ouverture (26) de la portion formant base (20).

8. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant rebord (30) et la portion formant base (20) sont semi-rigides.

9. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant rebord (30) et la portion formant base (20) sont formées en un article d'une seule pièce.

10. Un conteneur tel que revendiqué dans la revendication 3, où les perforations (40) ont la double fonction de fournir une pluralité d'évents d'aération permettant la ventilation de la portion formant conteneur.

11. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où le raccord cassable (40) représente une partie faible du conteneur (10) qui est rompue avec plus de facilité que d'autres parties du conteneur (10).

12. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant couvercle (50) est flexible.

13. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant couvercle (50) peut être thermoscellée à la portion formant rebord (30).

14. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant rebord (50) présente une épaisseur relative inférieure à la portion formant base (20) et la portion formant rebord (30).

15. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant couvercle (50) est une pellicule.

16. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où la portion formant couvercle (50) est scellée contre la portion formant rebord (30) au niveau d'une première zone de scellement et la portion formant couvercle (50) est scellée contre la portion formant base (20) au niveau d'une deuxième zone de scellement.

17. Un conteneur tel que revendiqué dans la revendication 16, où le raccord cassable (40) est situé entre les première et deuxième zones de scellement.

18. Un conteneur tel que revendiqué dans la revendication 16 ou la revendication 17, où la deuxième zone de scellement est située au sein d'une zone entourée par la première zone de scellement.

19. Un conteneur tel que revendiqué dans n'importe la-

quelle des revendications 16 à 18, où la deuxième zone de scellement est située au sein d'une zone entourée par le raccord cassable (40).

20. Un conteneur tel que revendiqué dans n'importe laquelle des revendications 16 à 19, où un joint de scellement hermétique à du fluide est prévu au niveau au moins d'une zone parmi la première zone de scellement et la deuxième zone de scellement.

21. Un conteneur tel que revendiqué dans n'importe laquelle des revendications 16 à 20, où la portion formant couvercle (50) peut être décollée dans la région de la deuxième zone de scellement.

22. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où une partie renforcée est prévue à proximité du raccord cassable (40).

23. Un conteneur tel que revendiqué dans la revendication 22, où la partie renforcée est prévue sur au moins une portion parmi la portion formant base (20) et la portion formant rebord (30).

24. Un conteneur tel que revendiqué dans la revendication 22 ou la revendication 23, lorsqu'elle dépend de la revendication 16, où la partie renforcée est située entre les première et deuxième zones de scellement.

25. Un conteneur tel que revendiqué dans n'importe laquelle des revendications 22 à 24, où la partie renforcée comprend un élément formant canal (132) formé comme faisant partie de la portion formant rebord (30).

26. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où le raccord cassable (40) est rompu avec plus de facilité que le joint de scellement entre la portion formant couvercle (50) et la portion formant rebord (30).

27. Un conteneur tel que revendiqué dans la revendication 26, où le joint de scellement entre la portion formant rebord (30) et la portion formant couvercle (50) nécessite une force de séparation plus grande dans une direction particulière que le raccord cassable (40), de sorte que, à l'utilisation normale, le raccord cassable (40) est rompu pour faciliter la séparation de la portion formant rebord (30) de la portion formant base (20) plutôt que la séparation de la portion formant couvercle (50) et la portion formant rebord (30).

28. Un conteneur tel que revendiqué dans la revendication 26 ou la revendication 27, où l'emplacement du joint de scellement entre la portion formant couvercle (50) et la portion formant rebord (30) est moins accessible que le raccord cassable (40) entre la portion formant rebord (30) et la portion formant base (20).

29. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente, où le conteneur (10) est un conteneur pour denrées alimentaires.

30. Un conteneur tel que revendiqué dans n'importe quelle revendication précédente où au moins une portion parmi la portion formant rebord (30) et la portion formant base (20) peut être munie d'un moyen formant clip (339) destiné à attacher la portion formant rebord (30) à la portion formant base (20) suite à la rupture du raccord cassable (40).

31. Un conteneur tel que revendiqué dans la revendication 30, où le moyen formant clip (339) comprend au moins deux dentelures radiales (337) sur la portion formant rebord (30) et un évidement sur la portion formant base (20) de façon à ce que les dentelures radiales (337) puissent être situées dans l'évidement pour clipper de ce fait la portion formant rebord (30) et la portion formant base (20).

32. Une méthode de fabrication d'un conteneur (10) incluant les étapes consistant à :

fournir une portion formant base (20) présentant une portion formant rebord (30) ;
raccorder de façon cassable la portion formant base (20) et la portion formant rebord (30) ; et
accoupler une portion formant couvercle (50) à la portion formant rebord (30) ;
caractérisée en ce que :

l'étape consistant à thermosceller la portion formant rebord (30) et la portion formant base (20) de façon à ce que la portion formant rebord (30) présente la même épaisseur que la portion formant base (20) est incluse et, l'étape consistant à poinçonner ou découper des perforations entre la portion formant rebord (30) et la portion formant base (20) pour former le raccord cassable (40) entre celles-ci est incluse.

33. Une méthode selon la revendication 32, incluant l'étape consistant à former la portion formant rebord (30) et la portion formant base (20) en un article d'une seule pièce.

34. Une méthode selon n'importe laquelle des revendications 32 et 33, incluant le thermoscellage de la portion formant couvercle (50) à au moins une portion parmi la portion formant base (20) et la portion formant rebord (30).

35. Une méthode selon n'importe laquelle des revendi-

cations 32 à 34, incluant le thermoscellage de la portion formant couvercle (50) à au moins une portion parmi la portion formant base (20) et la portion formant rebord (30) afin de former un joint de scellement hermétique à du fluide.

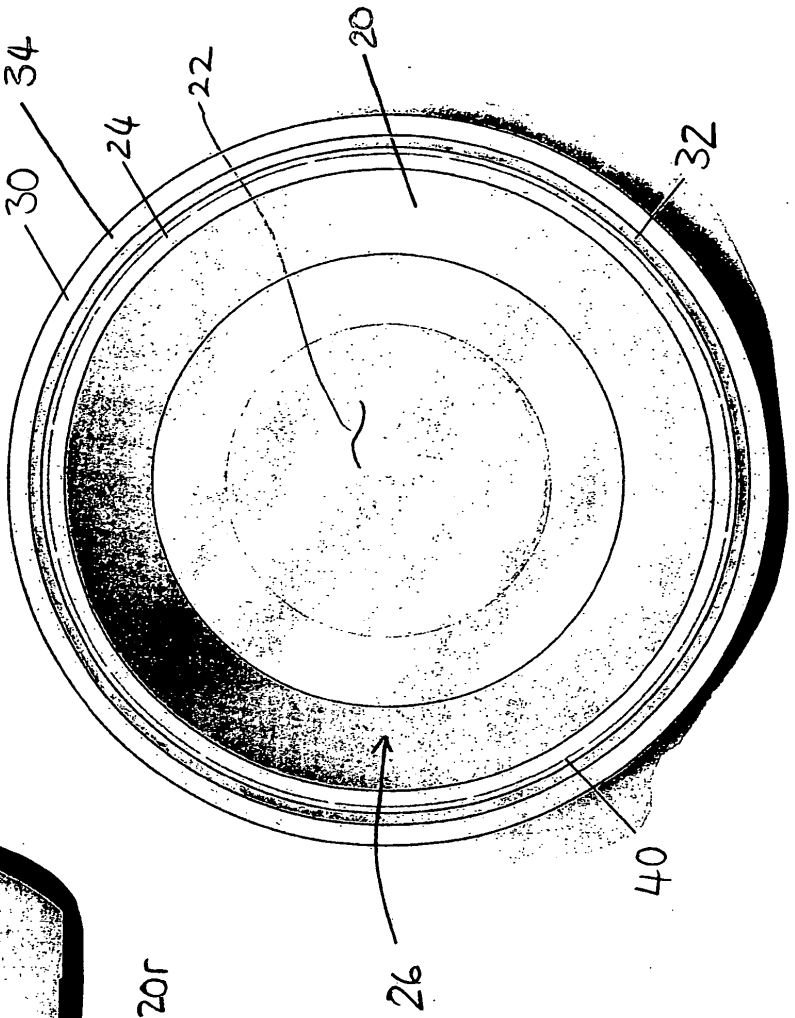


Figure 2

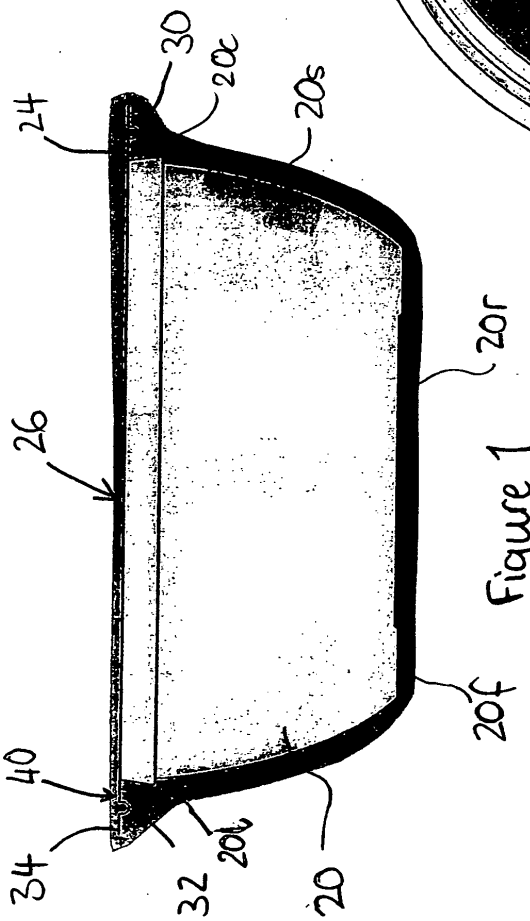


Figure 1

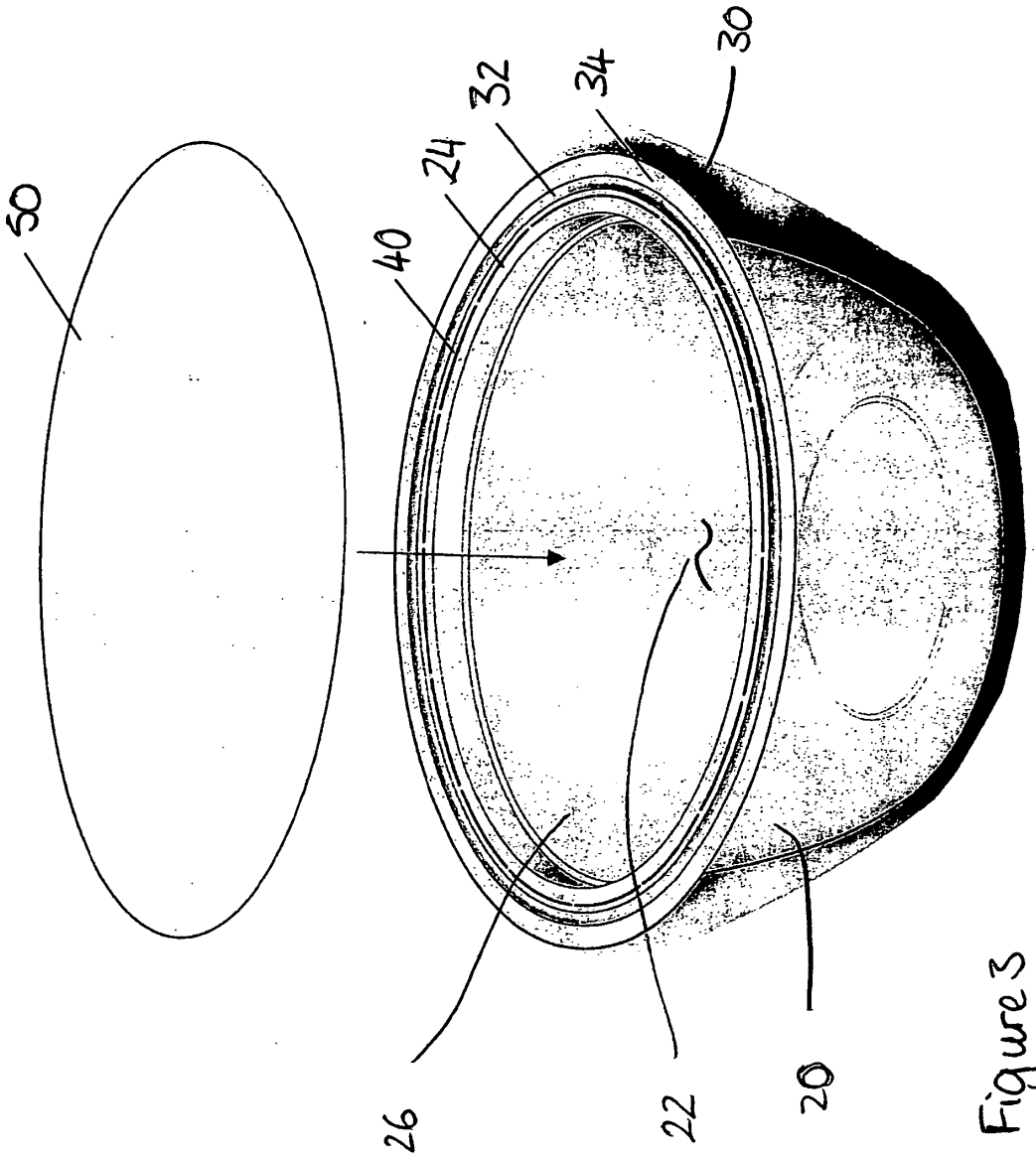


Figure 3

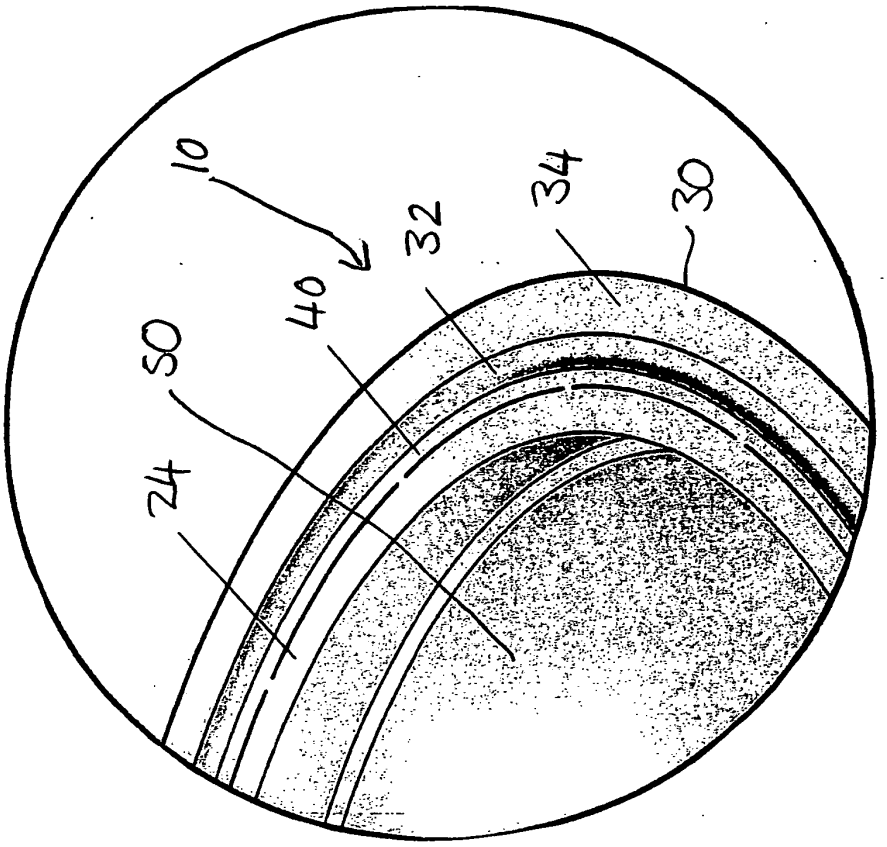


Figure 5

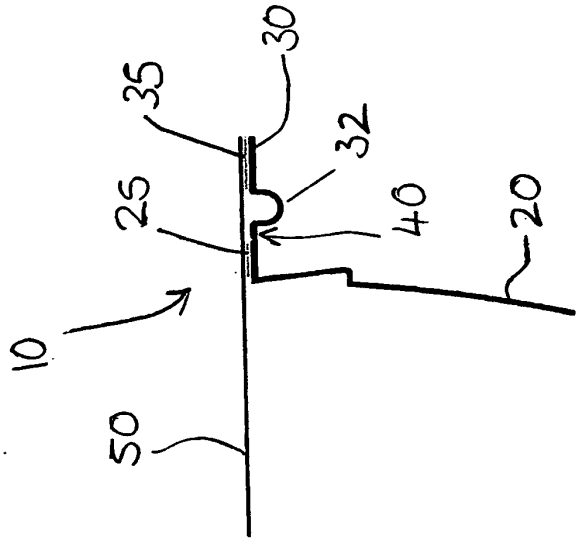


Figure 4

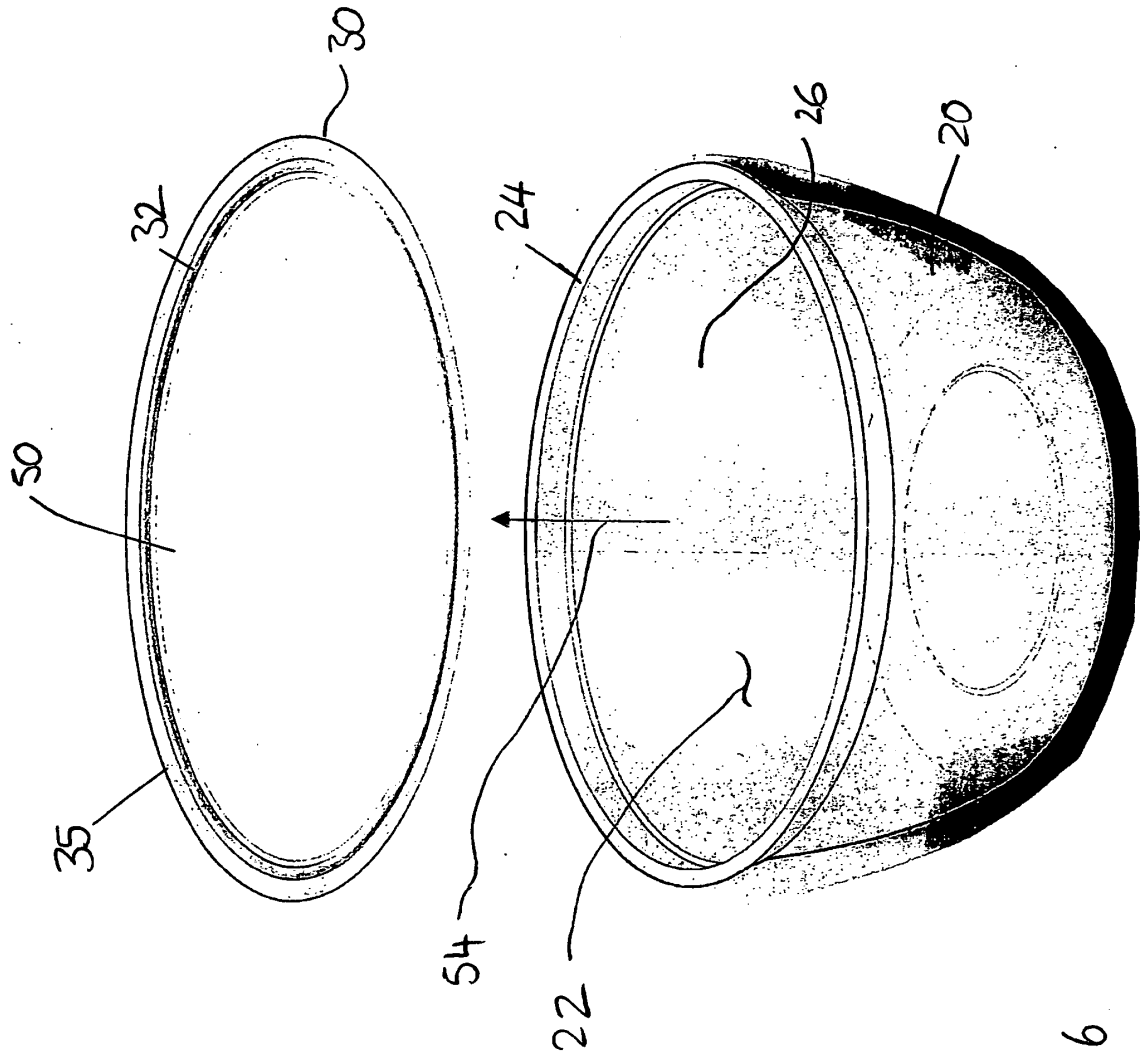


Figure 6

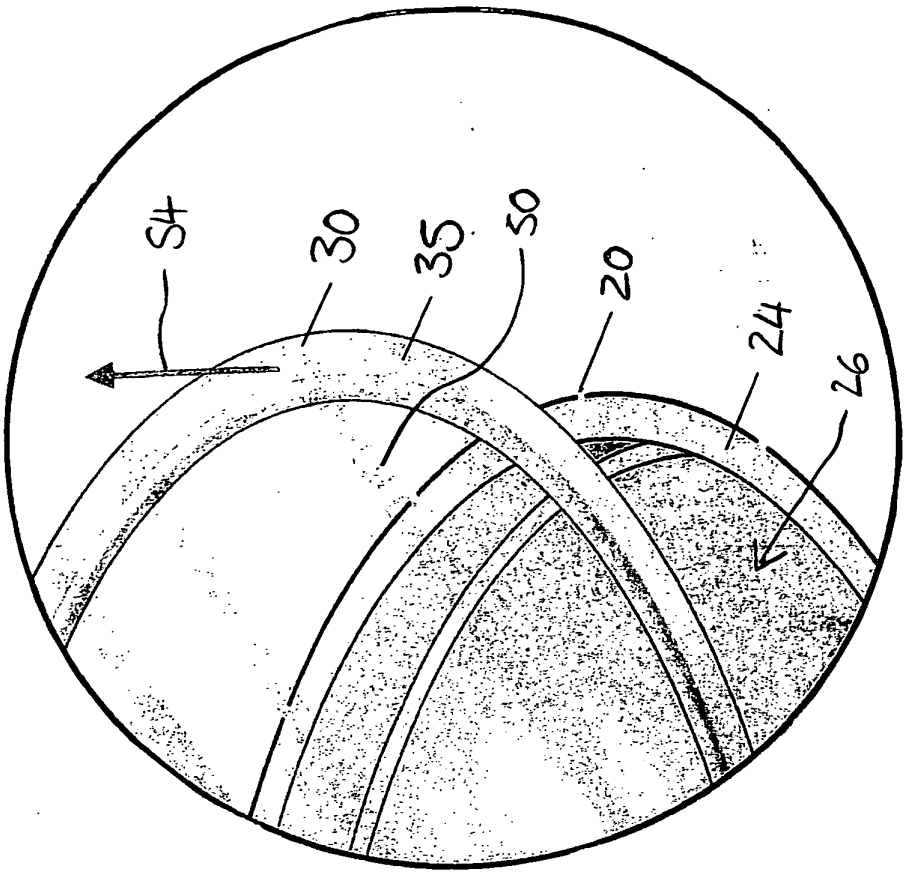


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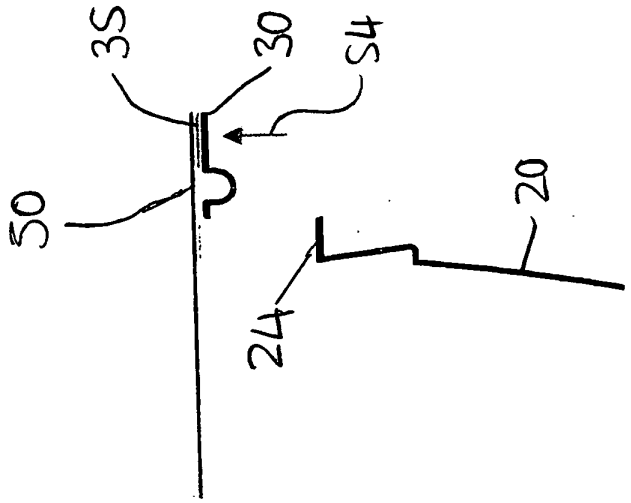


Figure 7

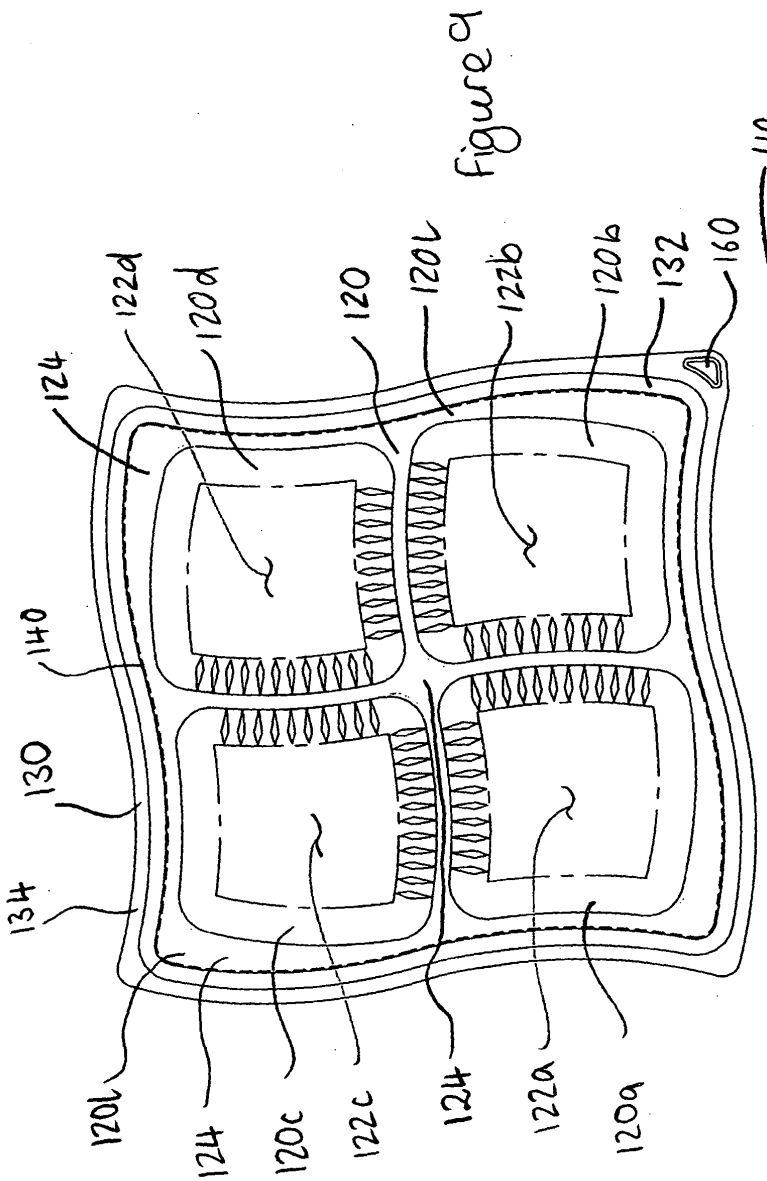


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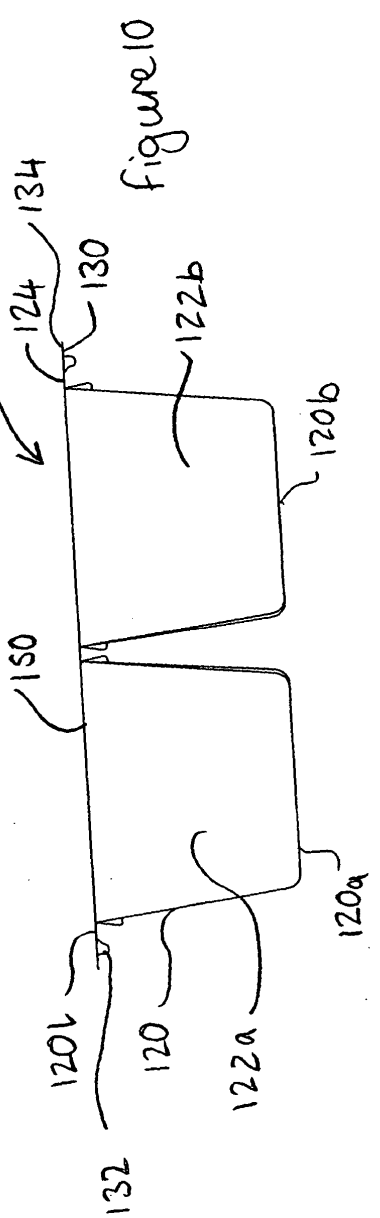


Figure 10

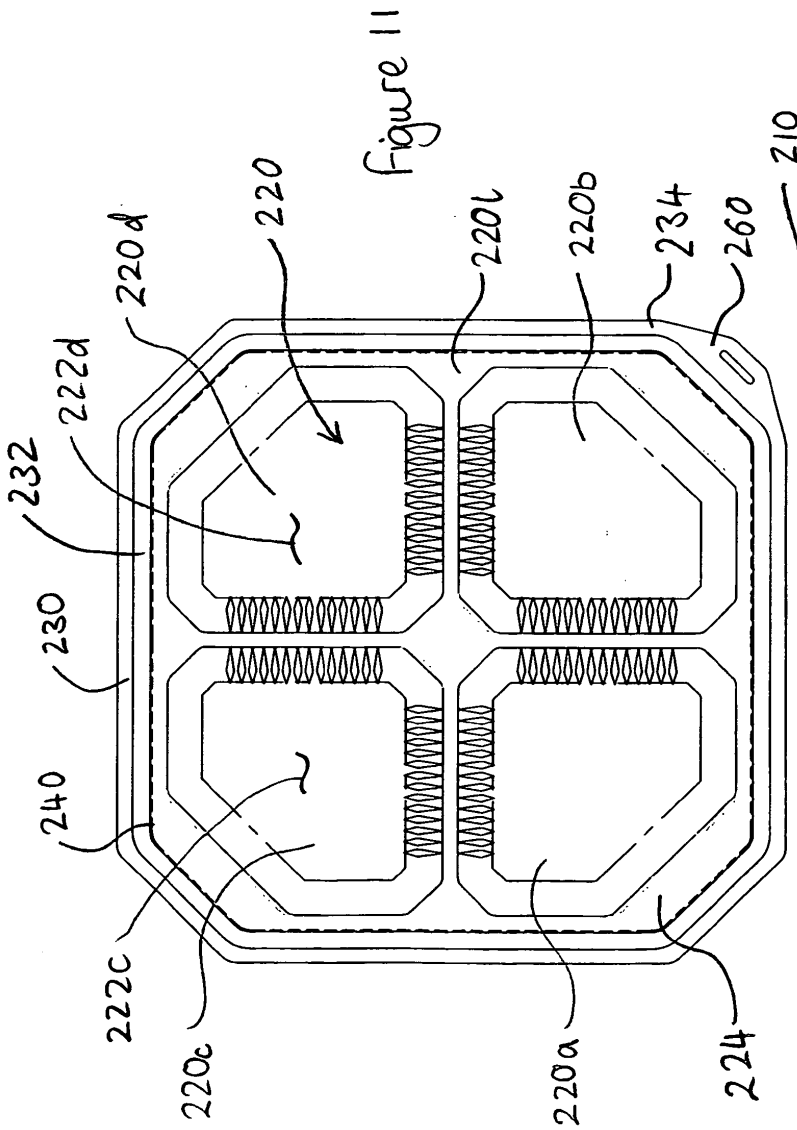


Figure 11

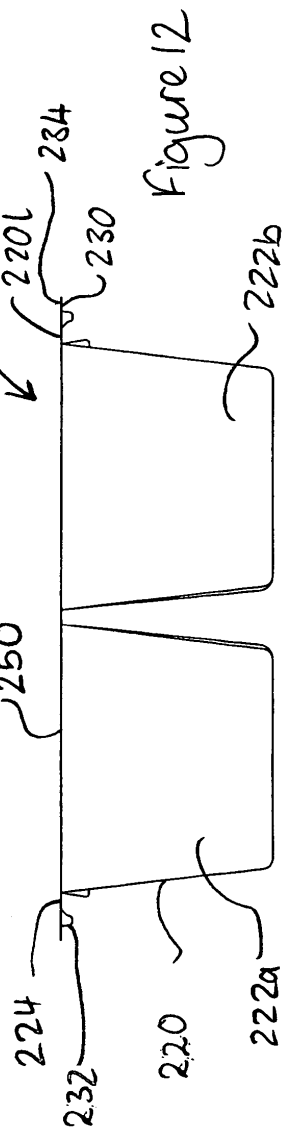


Figure 12

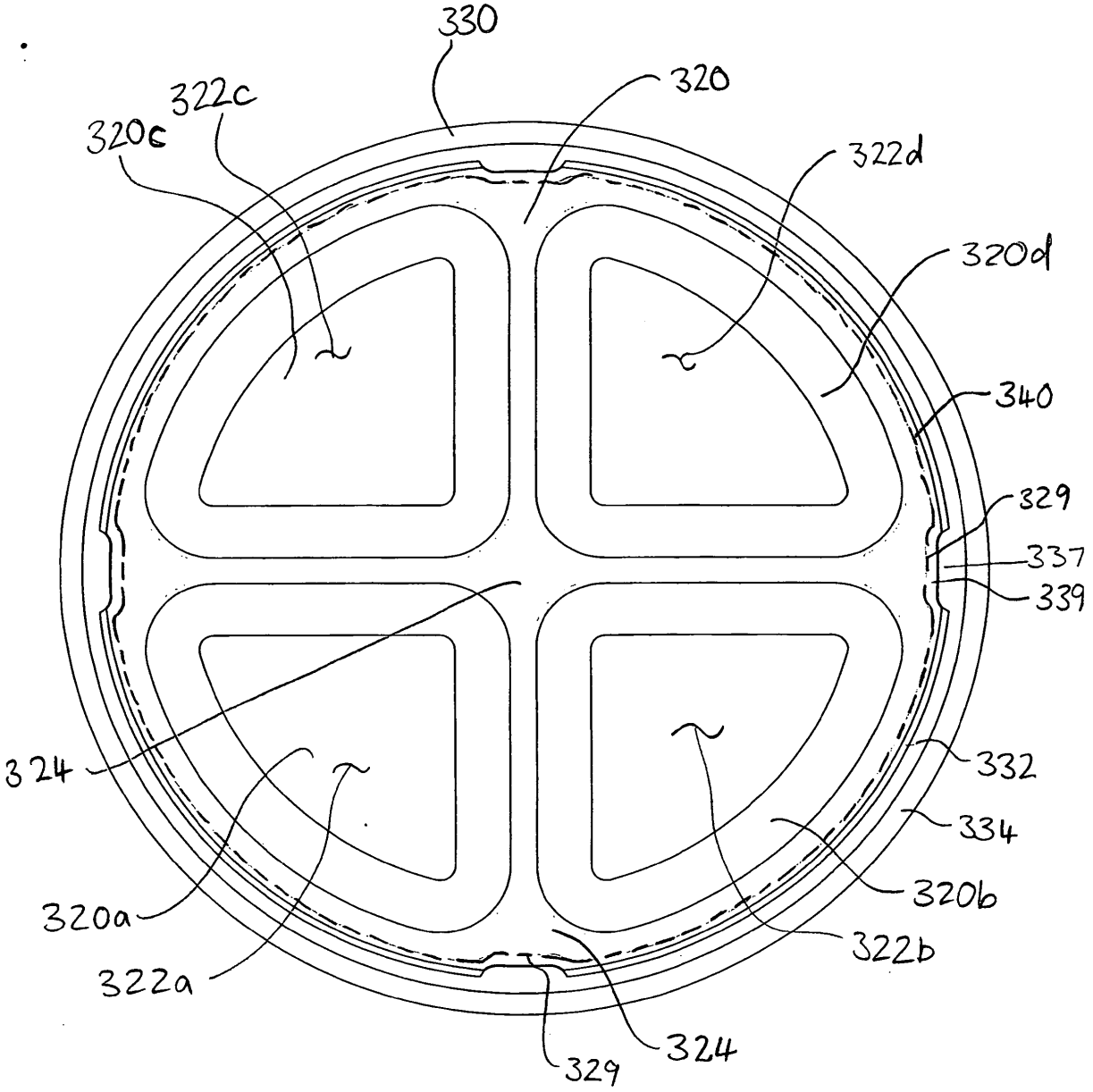

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Figure 13

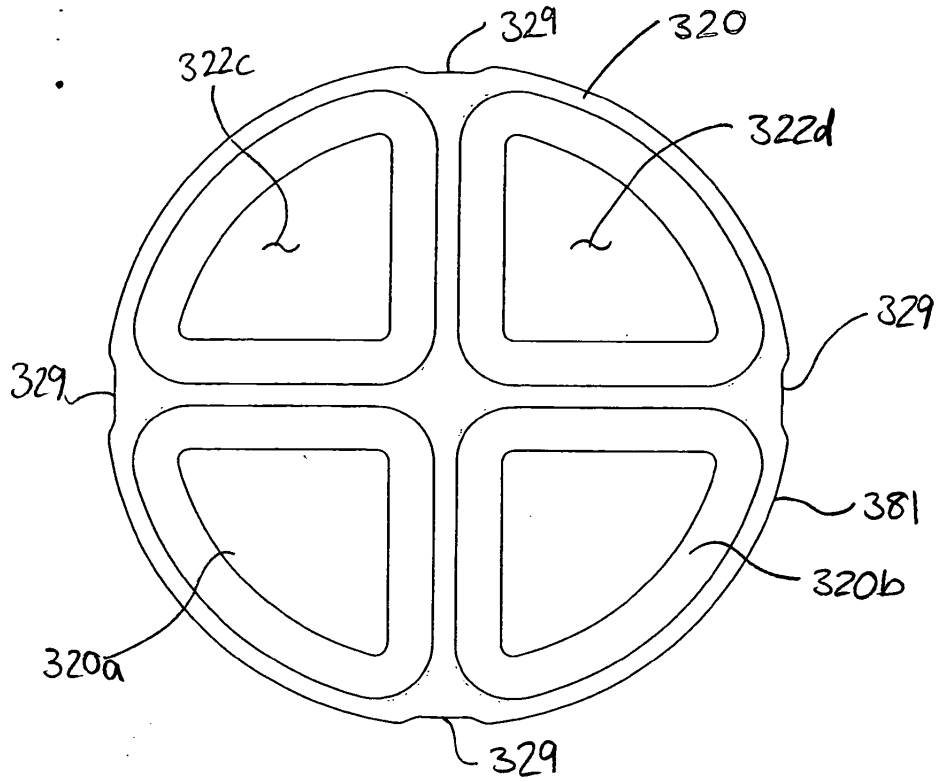


Figure 14

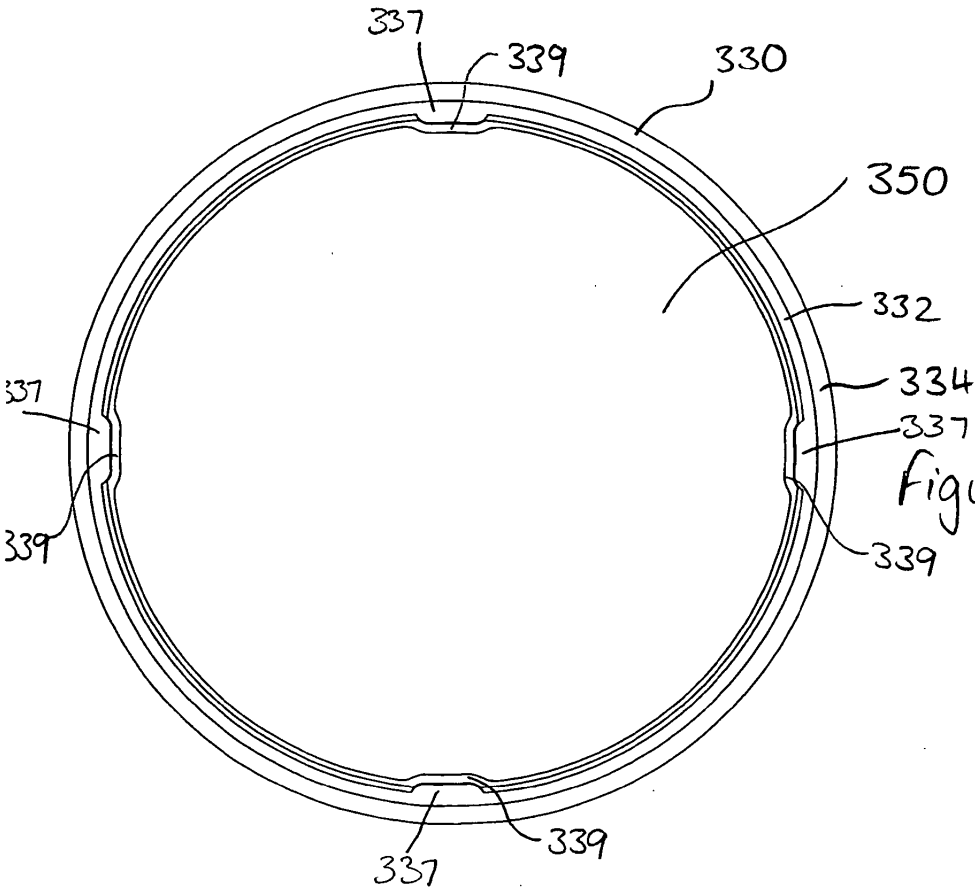


Figure 15

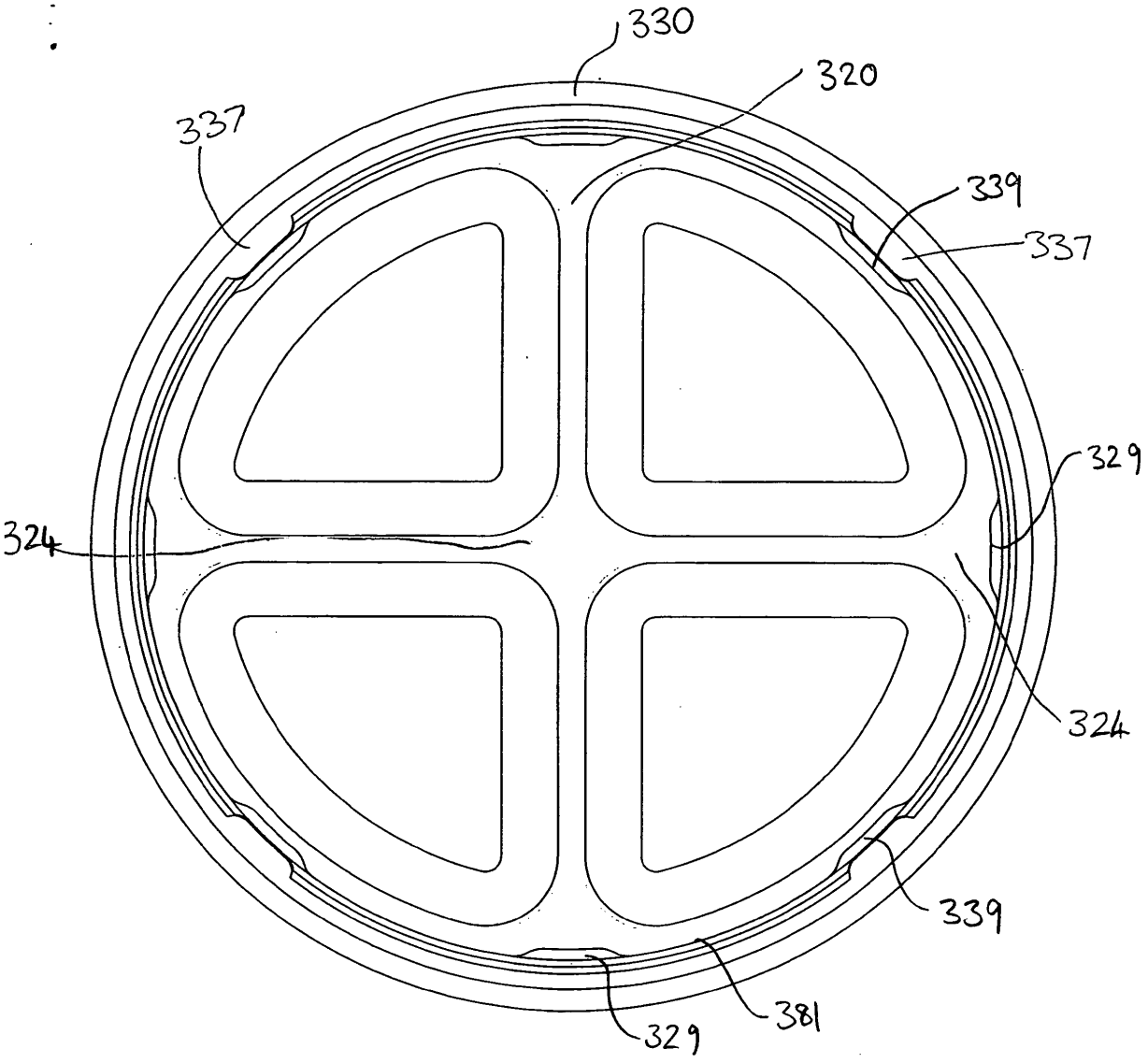


Figure 16

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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