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(54) **Container for cheese portions**

Behälter für Käseportionen

Récipient pour portions de fromage

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(73) Proprietor: **Kraft Foods R & D, Inc.**
Deerfield, IL 60015 (US)

(72) Inventors:
- **Frömberg, Julian**
  21075, Hamburg (DE)
- **Demmer, Thomas**
  85570, Markt Schwaben (DE)
- **Fritsch, Heiko**
  81541, Munich (DE)
- **Gustav, Thorsten**
  81369, Munich (DE)

(74) Representative: **Hoffmann Eitle**
Patent- und Rechtsanwälte PartmbB
Arabellastraße 30
81925 München (DE)

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Description

FIELD

[0001] This invention relates generally to a food packaging, and more particularly, to a single-use food packaging for cheese portions. The invention relates to a container according to the preamble of claim 1 and to a method of opening a container and accessing a food product.

BACKGROUND

[0002] Food products sold in single serve packaging to help retain the freshness of the products stored therein are known in the art. Single-serve packaging typically provides consumers with a conveniently sized portion of packaged food. The various characteristics of the portioned food will affect the type of package used. The qualities of the stored food product such as shelf life, size, fragility, texture, processing, and storage requirements, among others, affect the particulars of the food packaging. For example, a food product having an easily deformable shape may require protection such that the food product does not become deformed during shipping and handling.

[0003] One common approach to packaging food products is the individually wrapped product. For example, a food product, such as a processed or unprocessed cheese, is formed into cheese sections and packaged separately, wrapped in foil. By one approach, the cheese having been formed into bricks, blocks, or wedges is wrapped in a thin, fragile, aluminum wrapper. The thin aluminum wrapper may have a reinforced opening strip that may be grasped to pull back portions of the aluminum wrapper, which may then be peeled away from the cheese.

[0004] The aluminum wrapper can be difficult for a user to handle or remove from the cheese for a number of reasons. For example, the opening strip may become separated from the aluminum wrapper such that the remainder of the wrapper sticks to the cheese while the strip has separated from the wrapper and the cheese. Oftentimes, despite removal of the opening strip, portions or slivers of the aluminum wrapper remain stuck to the cheese portions. These slivers can be difficult to remove from the cheese. In such situations, the user may struggle to remove the slivers of wrapper stuck to the cheese to finish unwrapping the cheese. The thin aluminum wrapper also may not fully protect the integrity of the cheese from deformation, such as during shipping and handling. Further, the thin aluminum foil can be difficult for those with limited manual dexterity to easily manipulate even with the aid of the opening strip.

US 3,580,484, which accords to the preamble of claim 1, discloses a pie plate with a flat bottom, a side extending upwardly and outwardly from said bottom and a horizontally disposed rim. Lines of weakening are spaced around the circumference of the side to define a corresponding number of segmental side sections. A hinge develops along a straight chord line extended between the lines of weakening that have permitted separation of the side so as to free a section for revolvement. The chord area then acts as a lever that lifts and bends the bottom at the hinge, thereby inducing a separation of the bottom and a pie portion for easy extraction of said portion.

SUMMARY

[0005] The invention is defined by a container having the technical features of claim 1 and by a method of opening a container and accessing a food product as defined in claim 12. A frangible container for containing a food product, such as cheese, is provided that promotes product protection and product freshness, while permitting convenient elution of the portioned food product. The container includes a generally rigid base and an upstanding sidewall to form an interior having an opening opposite the base. A flange extends outwardly from the sidewall to provide a continuous sealing surface for attachment of a flexible film to cover the opening and enclose the interior. The frangible container has areas of weakness or score lines located in the sidewall and the flange of the base to allow the sidewalls to be broken into one or more segmented portions. Further, some of the segmented portions are hingedly attached to the base to permit the segments to pivot outwardly, away from the base, to allow increased access to the food product. The frangible container thereby permits convenient elution of the food product from the container, while the rigid base promotes protection of the food product and the base in combination with the film promotes product freshness.

[0006] To open the container and access a food product disposed in an interior of a base having an upstanding sidewall extending about its periphery, a film covering the opening of the base can be removed to expose the food product. Next, a segment of the sidewall can be separated from adjacent portions of the sidewall and pivoted outwardly relative to the base to facilitate access to the food product disposed on the base.

[0007] The container may be formed of plastic material such as a high density polyethylene. Depending on the materials chosen for the container, the cheese will have reduced adherence to the walls of the container. Further, the container material may have a non-stick property or may have a coating to provide a non-stick characteristic. By another approach, the food product may be formulated such as to cleanly separate from the walls of the container and not adhere thereto. The plastic frangible containers provide stable, generally rigid packaging that protects the food product during shipping and handling. In addition, the user is easily able to manipulate the packaging to gain increased access to the food product.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008]

FIG. 1 is a top perspective view of a single-use container for cheese portions;
FIG. 2 is a bottom perspective view of the container of FIG. 1;
FIG. 3 is a bottom plan view of the container of FIG. 1;
FIG. 4 is a front elevation view of the container of FIG. 1;
FIG. 5 is a side elevation view of the container of FIG. 1;
FIG. 6 is a rear elevation view of the container of FIG. 1;
FIG. 7 is a cross section view of one of the sidewalls of the container taken along line 7-7 of FIG. 3;
FIG. 8 is a cross section view of another one of the sidewalls taken along line 8-8 of FIG. 3;
FIG. 9 is a top perspective view of the container of FIG. 1, illustrated without a cheese portion therein, having one sidewall pivoted outwardly away from the base; and
FIG. 10 is a top perspective view of the container of FIG. 1, illustrated with a cheese portion therein, having two sidewalls pivoted outwardly to provide for increased access to the cheese portion.

DETAILED DESCRIPTION

[0009] A container for a food product is described herein and depicted in FIGS. 1-9 which provides for increased access to the food product while also promoting product protection and freshness. More specifically, the carton 10 has a generally rigid base 16 with a compartment 12 for containing a food product 14, such as a processed or unprocessed cheese portion, which is sealed within the compartment using a flexible film 26. The generally rigid base 16 protects the food product and the flexible film 26 in combination with the base 16 promotes product freshness by enclosing the food product. The base 16 is adapted to separate into one or more different segments to facilitate access to the food product, as will be described in greater detail herein.

[0010] Turning to more details of the base 16, an upstanding sidewall 18 extends about the periphery of the bottom of the base 16. A flange 20 extends outwardly from an upper edge 22 of the sidewall 18, opposite of the bottom of the base 16, to provide a continuous sealing surface 24 for attachment of a film 26. The sidewall 18 and the flange 20 have aligned areas of weakness 28 located therein to permit segments or sections of the sidewall 18 and the flange 20 to separate from other adjacent portions, thereby dividing the sidewall 18 and the flange 20 into segments 30. Further, the container 10 has hinges 32 located between the base 16 and certain segmented sections 30 to permit the segment 30 to pivot downwardly and outwardly from the bottom of the base 16 when the areas of weakness 28 are ruptured or broken, thereby facilitating access to the interior of the container 10, having the food product 14 stored therein.

[0011] The flange 20 includes a notch 34 directed toward the area of weakness 28 located in the flange 20 and the sidewall 18. The notch 34 facilitates separation of the flange 20 and the sidewall 18 into segmented sections 30. An underside 36 of the flange 20 may further include gripping surfaces 38 that allow the user to more easily manually grasp and pull the flanges 20 apart from one another, which thereby divides the sidewall 18 and the flange 20 into segmented sections 30.

[0012] An illustrative container 10 having a compartment 12 with food product 14 disposed therein is shown in FIG. 1. The film 26 seals the food product 14 within the container 10. More particularly, the film 26 adheres to a continuous sealing surface 24 located on the flange 20. The sealing arrangement between the film 26 and the sealing surface 24 provides for the container 10 to be hermetically sealed. Further, after the container 10 is filled, the film 26 may be adhered to the flange 20 under a vacuum to extend the shelf life of the food product 14. Gas flushing may also be used alone or in conjunction with the vacuum.

[0013] Turning now to FIG. 2, illustrating the base 16, the sidewall 18, and the flange 20 of the container 10 from a bottom perspective view. As mentioned, the frangible container 10 has areas of weakness 28 that may be torn or broken to provide additional access to the food product 14. The frangible container 10 may further include a notch 34 directed toward the areas of weakness 28. The notch 34 may provide a separation initiation feature and a visual indication of where to begin separating the container 10 into the segments 30. The notches 34 may be any of a variety of sizes and that a single container 10 may include notches 34 of different sizes and locations, as shown in FIG. 3.

[0014] The container 10 also may include gripping surfaces 38, which can be located on a side of the flange 20 opposite the sealing surface 24. The gripping surfaces 38 facilitate manually grasping of the flange 20 by a user. For instance, after the film 26 has been removed, the user may grasp the gripping surfaces 28 on opposite flanges 20 and then tear or pull the flanges 20 apart, thereby permitting the flanges 20 and sidewall 18 to be separated into segmented portions 30. In one example, the gripping surfaces 38 are positioned proximate to the notches 34 that direct the user to the areas of weakness 28 that can be broken to provide further access to the food product 14 in the container 10. The gripping surfaces 38 may be a plurality of raised or elevated ribs 50 projecting from the flange 20. As shown in FIG. 2, the gripping surface 38 may include two parallel raised ribs 50 and a parallel groove 54.

[0015] The container 10 further includes reinforcing ribs 40 located adjacent the areas of weakness 28. By one approach, the areas of weakness 28 comprise a score line or thinned area, such as a groove or a notch, that permit the user to more easily break or tear the frangible joints of the container 10. To strengthen the sidewall 18 around the area of weakness 28, the reinforcing ribs 40 flank the score line, groove, or notch. The reinforcing

ribs 40 may provide for a clean, straight break or tear of the area of weakness 28. The reinforcing ribs 40 extend from the upper edge 22 of the sidewall 18 to just above a bottom edge 23. Thus, the lower portion of the reinforcing rib 40 does not interfere with the stacking of the containers 10 and may assist with stacking by engaging an inner rim or lip 48 of the compartment 12.

[0016] As mentioned, the container 10 may include a hinge 32 located between the base 16 and some of the segmented sections 30. The hinge 32 may permit the segments 30 to pivot downwardly and outwardly from the base 16. In one illustrative embodiment, the hinge 32 is a groove 44 that extends along portions of the base 16 as shown in FIG. 3. The hinge 32 is located along the base 16, adjacent two segments 30 of the sidewall 18 that are relatively straight. By one approach, the sidewall 18 has three areas of weakness 26 and two relatively straight segments 30, which can pivot relative to the base 16 once the areas of weakness 26 have ruptured. Thus, after removal of the film 26 and separation of at least two areas of weakness 28 (though it is contemplated that the container 10 may have more than two areas of weakness 28) to create a segment 30, the hinge 32 permits the segment 30 to pivot outwardly and away from the base 16 thereby facilitating increased access to the interior of the container. FIG. 7 is a cross section along line 7-7 shown in FIG. 3 and illustrates the groove 44 in the base 16 that provides the hinge 32. The groove 44 may be positioned slightly inward from the outer edge of the base 16.

[0017] In one embodiment of the container 10, the base 16, the sidewalls 18, and flange 20 are configured in a wedge shape such that two sidewalls are substantially straight and equal in length and another sidewall has an arcuate shape. As shown in FIG. 3, the base 16 has a generally triangular or wedge shaped perimeter with three corners or joints. The wedge shaped perimeter includes two edges that are relatively equal in length and a third edge with a curved profile. The wedge shaped container 10 has three frangible joints 56 between the three sidewall portions 18 and each of the frangible joints 56 has an area of weakness 26. The areas of weakness 26 are proximate the joints or corners of the container 10. The areas of weakness 26 permit the sidewalls 18 and the flange 20 to be sectioned into segments 30. The container 10 may include three areas of weakness 28 and may be sectioned into three segments including two straight segments 30a and an arcuate segment 30b. Further, as illustrated in FIG. 3, the base 16 may include grooves 44 adjacent the two straight segments 30a to facilitate hinged movement of the two straight segments 30a relative to the base 16. The arcuate segment 30b does not have a groove 44 along the base 16 and, therefore, the movement between the arcuate or curved segment 30b of the sidewall 18 and the flange is limited relative to the base 16.

[0018] To access the food product disposed in the interior of the container, the user opens the food packaging by first removing the film 26 from the container 10. After removal of the film 26, the user then breaks or tears one of the areas of weakness 28 after which another area of weakness 28 may be ruptured. After rupturing two of the areas of weakness 28 in the container 10, one of the segments 30 is pivotable such that it may be pivoted outwardly from the remainder of the container 10, as illustrated in FIG. 9. Such pivoting of the segment 30 provides increased access to the food product; however, for further access to the food product another area of weakness 28 may be ruptured to segment the sidewall 18 and the flange 20 into two additional segments 30 such that the sidewall 18 and flange 20 now comprises three segments 30 as illustrated in FIG. 10.

[0019] As shown in FIGS. 4-7, a plurality of feet 46 may be positioned along the base 16 of the container 10. The feet 46 may assist in the stacking of the containers atop one another. More particularly, the feet 46 on the bottom of one container may engage with an inner rim or lip 48 of the compartment 12 of another container 10. By one approach, as shown in FIG. 2, the feet 46 extend along the outside edge of the base 16 without extending to the corners or joints of the base 16 thereby permitting the hinged movement of the segments 30 and avoiding interference of the feet 46 with one another.

[0020] The frangible container 10 also may include stacking ribs 42. As illustrated in FIGS. 4 and 5, the stacking ribs 42 may be a thin rib of material located on the sidewall 18 of the container 10. In one embodiment, the stacking rib 42 begins at a slight distance away from the upper edge 22 and terminates a slight distance away from the lower edge 23 on the sidewall 18. The stacking ribs 42 may be located along the sidewall 18 at a variety of locations. The stacking ribs 42 and reinforcing ribs 40 permit the containers 10 to be stacked in an organized manner such as during various manufacturing processes or transportation of the containers 10. Further, the stacking ribs 42 also may provide a strengthening characteristic such that the sidewalls 18 are provided with addition rigidity.

[0021] Turning now to the materials of the container, the base 16, the sidewall 18, and the flange 20 may be comprised of a variety of different rigid or semi-rigid materials (referred to herein as rigid or generally rigid), such as a relatively stiff material including a high density polyethylene. The base 16, the sidewall 18, and the flange 20 are comprised of plastic materials suitable for injection molding. Optionally, the material of the base 16 and sidewall 18 are such that the food product 14 will not adhere to the inner surfaces of the container 10. While some materials may exhibit the non-stick characteristic, other materials may require an additive or a surface coating to provide such a non-stick property to the surfaces.

[0022] A variety of films or foils are contemplated for use as film 26. For example, the film 26 may be an aluminum foil with optional printed indicia thereon. In yet another example, the film 26 may be a polymer film having optional characteristics of moisture resistance or gas

barrier properties, such as polyethylene or nylon. It is anticipated that the film 26 may be a single layer of homogenous plastic, a multi-layered laminate, or a co-extruded plastic or resin film. By one approach, the film 26 has a portion that is manually graspable, such as a corner or an outer edge portion of the film 26 that is not adhered to the sealing surface 24 of the flange 20. By another approach, the film 26 includes a tab or extension portion that may be easily grasped by a user. The manually graspable portion of the film 26 may be denoted with visual indicia such as instructions to pull or manipulate. Having a convenient, manually graspable portion can facilitate peeling of the film 26 from the container 10.

[0023] In packaging of the food product 14 in the container 10, the food product 14 such as flowable cheese may be poured into the compartment 12 of the container 10. Since the food product 14 may be returned to a solid state for shipping and delivery, once the user opens the container 10, such as by removing the film 26 and rupturing the areas of weakness 28, the food product 14 will retain the shape of the container 10 without adhering to the inner surface of the walls of the container 10. Further, one or more of the film 26, base 16, sidewall 18, and flange 20 may also include one or more additives to their respective materials useful for packaging function, such as, antiblocking agents, slip agents, flavorants, antimicrobial agents, cheese preservatives, antioxidants, fillers, light barriers, oxygen scavengers, and antistatic agents, and the like.

[0024] Returning now to FIG. 10, the two straight sidewall segments 30a have been pivoted outward to permit easy access to the food product 14 and then, the sidewall segments 30a have returned to a resting position at a position about 45° from their generally vertical orientation. Alternatively, the container 10 may be configured such that the straight sidewall segments 30a remain pushed outward and do not return upward to about 45° from their generally vertical orientation. By one approach, the hinge 32 located at the perimeter portions of the base 16 may be thinned such that the sidewall segment 30a may easily pivot outward more than 90° from its generally vertical position. In another example, the container feet 46 may be moved inward such that the sidewall segment 30a may pivot freely without interference. However, if the feet 46 do interfere with the pivoting of sidewall segment 30a, a deformation may be created in the base 16 such that removal of the food product is facilitated. Nonetheless, if the sidewall segment 30a is permitted to easily pivot more than 90° from the vertical orientation, it is contemplated that the resting position of that segment 30a may be nearly flat with the base 16 except for the accommodation of the flange 20 as it might interfere with the surface upon which the container is placed. Thus, the bottom of the feet 46 and outer portion of the flange 20 may be aligned.

Claims

1. A container (10) having an interior (12) for storing a food product (14), the container (10) comprising:

   a base (16);
   an upstanding sidewall (18) extending about the periphery of the base (16);
   a flange (20) extending outwardly from an edge portion (22) of the sidewall (18) opposite the base (16) to provide a continuous sealing surface (24) for attachment of a film (26) to enclose the container (10);
   at least two areas of weakness (28) in the sidewall (18) and the flange (20) defining a segment (30) of the sidewall (18); and
   a hinge (32) between the base (16) and the segment (30) to permit the segment (30) to pivot outwardly away from the base (16) when the areas of weakness (28) are broken to facilitate access to the interior (12) of the container (10), wherein the container (10) is in combination with a food product (14) disposed within the interior (12) of the container (10) and **characterized in that** a film (26) is sealed to the flange (20) to enclose the food product (14) within the container (10),
   wherein the seal between the film (26) and the flange (20) is hermetic, and
   the base (16), the sidewall (18) and the flange (20) are comprised of plastic materials and formed by injection molding.

2. The container (10) of claim 1, wherein the flange (20) includes a notch (34) directed toward the areas of weakness (28).

3. The container (10) of claim 1 or 2, wherein the flange (20) further includes a gripping surface (38) on the underside of the flange (20), wherein at least a portion of the gripping surface (38) is positioned proximate to the notch (34).

4. The container (10) of one of claims 1 to 3, wherein the hinge (32) comprises a thinned area of the base (16).

5. The container (10) of one of claims 1 to 4, wherein the base (16) has a wedge shaped perimeter such that two edges of the base (16) are linear and relatively equal in length and a third edge that is arcuate.

6. The container (10) of claim 5, wherein the sidewall (18) has a pair of substantially planar segments (30a) adjacent to the two linear edges of the base (16) and a curved segment (30b) adjacent the arcuate edge of the base (16) and the areas of weakness (28) are located at the joints (56) between the three sidewall

segments (30a, 30b).

7. The container (10) of claim 6, wherein the hinge (32) is positioned between the two substantially planar sidewall segments (30a) and the base (16) and movement between the third curved sidewall segment (30b) is limited relative to the base (16).

8. The container (10) of claim 6 or 7, wherein the flange (20) adjacent each of the pair of substantially planar sidewall segments (30a) has an arcuate region directed inwardly toward the sidewall segment (30a).

9. The container (10) of one of claims 6 to 8, wherein there is a thinned area between the substantially planar sidewall segments (30a) and the adjacent flange (20).

10. The container (10) of claim 1, wherein
the base (16) is a generally triangular base having three corners and the container (10) comprises
at least three areas of weakness (28) in the sidewall (18) positioned proximate each corner of the triangular base (16) and extending into the flange (20), the areas of weakness (28) being breakable to form three segments (30a, 30b) of the sidewall (18); and
hinges (32) between the base (16) and at least two of the segments (30a) to permit the segments (30a) to pivot outwardly away from the base (16) when the areas of weakness (28) have been separated to facilitate access to the interior (12) of the container (10).

11. The container (10) of claim 10, wherein a third segment (30b) of the sidewall (18) has a curved shape and does not have a hinge (32) at the base thereof such that the third segment (30b) has a limited range of movement relative to the base (16).

12. A method of opening a container (10) of one of claims 1 to 11 and accessing a food product (14) disposed in an interior (12) of a base (16) having an upstanding sidewall (18) extending about its periphery, the method comprising:

removing a film (26) covering the opening of the base (16) to expose the food product (14) in the interior (12) of the base (16);
separating a segment (30) of the sidewall (18) from adjacent portions of the sidewall (18);
pivoting the segment (30) of the sidewall (18) outwardly relative to the base (16) about a hinge (32) between the base (16) and the segment (30) to facilitate access to the food product (14) disposed on the base (16), wherein
the step of removing the film (26) from the sidewall (18) includes removing the film (26) from a flange (20) of the sidewall (18) extending about the sidewall (18) at an opposite edge (22) from the base (16); and
the step of separating a segment (30) of the sidewall (18) from the adjacent portions of the sidewall (18) includes separating the portion of the flange (20) adjacent the segment (30) from adjacent portions of the flange (20), wherein
a seal between the film (26) and the flange (20) is hermetic, and
the base (16), the sidewall (18) and the flange (20) are comprised of plastic materials and formed by injection molding.

13. The method of claim 12, wherein the step of separating the segment (30) of the sidewall (18) from the adjacent portions of the sidewall (18) includes breaking lines of weakness (28) positioned at opposite ends of the sidewall (18).

14. The method of claim 12 or 13, wherein the step of separating the portion of the flange (20) adjacent the segment (30) from adjacent portions of the flange (20) includes breaking lines of weakness (28) positioned at opposite ends of the portion of the flange (20).

15. The method of one of claims 12 to 14, wherein the method further includes the step of separating a second segment (30) of the sidewall (18) from adjacent portions of the sidewall (18) and pivoting the second segment (30) of the sidewall (18) outwardly relative to the base (16) to facilitate access to the food product (14) disposed on the base (16).

16. The method of claim 15, wherein the step of separating a second segment (30) of the sidewall (18) from adjacent portions of the sidewall (18) includes the step of breaking a line of weakness (28) joining the segment (30) and the second segment (30) of the sidewall (18).

Patentansprüche

1. Behälter (10) mit einem Innenraum (12) für die Aufbewahrung eines Lebensmittelprodukts (14), wobei der Behälter (10) Folgendes umfasst:

eine Grundfläche (16);
eine aufrechte Seitenwand (18), die sich um den Umfang der Grundfläche (16) erstreckt;
einen Flansch (20), der sich von einem Randabschnitt (22) der Seitenwand (18) gegenüber der Grundfläche (16) nach außen erstreckt, um eine kontinuierliche Dichtfläche (24) für die Befestigung einer Folie (26) bereitzustellen, um den Behälter (10) zu umschließen;
mindestens zwei Schwachpunkte (28) in der

Seitenwand (18) und dem Flansch (20), die ein Segment (30) der Seitenwand (18) definieren; und

ein Scharnier (32) zwischen der Grundfläche (16) und dem Segment (30), damit sich das Segment (30) weg von der Grundfläche (16) nach außen schwenken lässt, wenn die Schwachpunkte (28) beschädigt werden, um den Zugang zum Innenraum (12) des Behälters (10) zu erleichtern,

wobei der Behälter (10) in Kombination mit einem Lebensmittelprodukt (14) innerhalb des Innenraums (12) des Behälters (10) angeordnet ist; und

dadurch gekennzeichnet, dass eine Folie (26) am Flansch (20) versiegelt ist, um das Lebensmittelprodukt (14) innerhalb des Behälters (10) zu umschließen,

wobei die Dichtung zwischen der Folie (26) und dem Flansch (20) hermetisch ist, und

die Grundfläche (16), die Seitenwand (18) und der Flansch (20) aus Kunststoffmaterialien bestehen und mithilfe einer Spritzgusstechnik hergestellt werden.

2. Behälter (10) nach Anspruch 1, wobei der Flansch (20) eine Kerbe (34) umfasst, die in Richtung der Schwachpunkte (28) zeigt.

3. Behälter (10) nach Anspruch 1 oder 2, wobei der Flansch (20) ferner eine Grifffläche (38) auf der Unterseite des Flansches (20) umfasst, wobei mindestens ein Abschnitt der Grifffläche (38) in der Nähe der Kerbe (34) positioniert ist.

4. Behälter (10) nach einem der Ansprüche 1 bis 3, wobei das Scharnier (32) einen verschmälerten Bereich der Grundfläche (16) umfasst.

5. Behälter (10) nach einem der Ansprüche 1 bis 4, wobei die Grundfläche (16) einen keilförmigen Umfang aufweist, sodass zwei Kanten der Grundfläche (16) linear und relativ gleich lang sind und eine dritte Kante bogenförmig ist.

6. Behälter (10) nach Anspruch 5, wobei die Seitenwand (18) ein Paar von im Wesentlichen ebenen Segmenten (30a) aufweist, die an die beiden linearen Kanten der Grundfläche (16) angrenzen und ein gekrümmtes Segment (30b), das an die bogenförmige Kante der Grundfläche (16) angrenzt und wobei sich die Schwachpunkte (28) an den Verbindungen (56) zwischen den drei Seitenwandsegmenten (30a, 30b) befinden.

7. Behälter (10) nach Anspruch 6, wobei das Scharnier (32) zwischen den zwei im Wesentlichen ebenen Seitenwandsegmenten (30a) und der Grundfläche (16) positioniert ist und die Bewegung zwischen dem dritten gekrümmten Seitenwandsegment (30b) bezüglich der Grundfläche (16) begrenzt ist.

8. Behälter (10) nach Anspruch 6 oder 7, wobei der Flansch (20) neben jedem Paar der im Wesentlichen ebenen Seitenwandsegmente (30a) einen bogenförmigen Bereich aufweist, der nach innen in Richtung des Seitenwandsegments (30a) zeigt.

9. Behälter (10) nach einem der Ansprüche 6 bis 8, wobei sich ein verschmälerter Bereich zwischen den im Wesentlichen ebenen Seitenwandsegmenten (30a) und dem angrenzenden Flansch (20) befindet.

10. Behälter (10) nach Anspruch 1, wobei die Grundfläche (16) eine im Allgemeinen dreieckige Grundfläche mit drei Ecken ist und der Behälter (10) Folgendes umfasst:

mindestens drei Schwachpunkte (28) in der Seitenwand (18), die in der Nähe jeder Ecke der dreieckigen Grundfläche (16) positioniert sind und sich in den Flansch (20) erstrecken, wobei die Schwachpunkte (28) zerbrechlich sind, um drei Segmente (30a, 30b) der Seitenwand (18) zu bilden; und

Scharniere (32) zwischen der Grundfläche (16) und mindestens zwei der Segmente (30a), damit sich die Segmente (30a) weg von der Grundfläche (16) nach außen schwenken lassen, wenn die Schwachpunkte (28) getrennt wurden, um den Zugang zum Innenraum (12) des Behälters (10) zu erleichtern.

11. Behälter (10) nach Anspruch 10, wobei ein drittes Segment (30b) der Seitenwand (18) eine geschwungene Form aufweist und nicht über ein Scharnier (32) an der Grundfläche verfügt, sodass das dritte Segment (30b) einen begrenzten Bewegungsbereich bezüglich der Grundfläche (16) aufweist.

12. Verfahren zur Öffnung eines Behälters (10) nach einem der Ansprüche 1 bis 11 und für den Zugriff auf ein Lebensmittelprodukt (14), das in einem Innenraum (12) der Grundfläche (16) angeordnet ist und eine aufrechte Seitenwand (18) aufweist, die sich um den Umfang erstreckt, wobei das Verfahren Folgendes umfasst:

Entfernen einer Folie (26), die die Öffnung der Grundfläche (16) bedeckt, um das Lebensmittelprodukt (14) im Innenraum (12) der Grundfläche (16) freizulegen;

Trennen eines Segments (30) der Seitenwand (18) von angrenzenden Abschnitten der Seitenwand (18);

Schwenken des Segments (30) der Seitenwand

(18) nach außen bezüglich der Grundfläche (16) um ein Scharnier (32) zwischen der Grundfläche (16) und dem Segment (30), um den Zugriff auf das Lebensmittelprodukt (14), das auf der Grundfläche (16) angeordnet ist, zu erleichtern, wobei
der Schritt der Entfernung der Folie (26) von der Seitenwand (18) die Entfernung der Folie (26) von einem Flansch (20) der Seitenwand (18) umfasst, die sich um die Seitenwand (18) an einer gegenüberliegenden Kante (22) von der Grundfläche (16) erstreckt; und
der Schritt der Trennung eines Segments (30) der Seitenwand (18) von den angrenzenden Abschnitten der Seitenwand (18) die Trennung des Abschnitts des Flansches (20) neben dem Segment (30) von angrenzenden Abschnitten des Flansches (20) umfasst, wobei
eine Dichtung zwischen der Folie (26) und dem Flansch (20) hermetisch ist, und
die Grundfläche (16), die Seitenwand (18) und der Flansch (20) aus Kunststoffmaterialien bestehen und mithilfe einer Spritzgusstechnik hergestellt werden.

13. Verfahren nach Anspruch 12, wobei der Schritt der Trennung des Segments (30) der Seitenwand (18) von den angrenzenden Abschnitten der Seitenwand (18) brechende Schwachstellen (28) umfasst, die an gegenüberliegenden Enden der Seitenwand (18) positioniert sind.

14. Verfahren nach Anspruch 12 oder 13, wobei der Schritt der Trennung des Abschnitts des Flansches (20) neben dem Segment (30) von angrenzenden Abschnitten des Flansches (20) brechende Schwachstellen (28), die an gegenüberliegenden Enden des Abschnitts des Flansches (20) positioniert sind, umfasst.

15. Verfahren nach einem der Ansprüche 12 bis 14, wobei das Verfahren ferner den Schritt der Trennung eines zweiten Segments (30) der Seitenwand (18) von angrenzenden Abschnitten der Seitenwand (18) und das Schwenken des zweiten Segments (30) der Seitenwand (18) nach außen bezüglich der Grundfläche (16) umfasst, um den Zugriff auf das Lebensmittelprodukt (14), das auf der Grundfläche (16) angeordnet ist, umfasst.

16. Verfahren nach Anspruch 15, wobei der Schritt der Trennung eines zweiten Segments (30) der Seitenwand (18) von angrenzenden Abschnitten der Seitenwand (18) den Schritt des Brechens einer Schwachstelle (28), die das Segment (30) und das zweite Segment (30) der Seitenwand (18) verbindet, umfasst.

Revendications

1. Contenant (10) ayant un intérieur (12) pour stocker un produit alimentaire (14), le contenant (10) comprenant :

une base (16) ;
une paroi latérale verticale (18) s'étendant autour de la périphérie de la base (16) ;
un rebord (20) s'étendant vers l'extérieur depuis une partie de bord (22) de la paroi latérale (18) opposée à la base (16) afin de produire une surface d'étanchéité continue (24) pour la fixation d'un film (26) afin d'enserrer le récipient (10) ;
au moins deux zones de faiblesse (28) dans la paroi latérale (18) et le rebord (20) définissant un segment (30) de la paroi latérale (18) ; et
une articulation (32) entre la base (16) et le segment (30) afin de permettre au segment (30) de pivoter vers l'extérieur en s'éloignant de la base (16) lorsque les zones de faiblesse (28) sont rompues afin de faciliter l'accès à l'intérieur (12) du contenant (10),
dans lequel le contenant (10) est en combinaison avec un produit alimentaire (14) disposé dans l'intérieur (12) du contenant (10) et **caractérisé en ce qu'**un film (26) est scellé sur le rebord (20) afin d'enserrer le produit alimentaire (14) au sein du contenant (10),
dans lequel le joint entre le film (26) et le rebord (20) est hermétique et
la base (16), la paroi latérale (18) et le rebord (20) sont constitués de matières plastiques et formés par moulage par injection.

2. Contenant (10) selon la revendication 1, dans lequel le rebord (20) comprend une encoche (34) dirigée vers les zones de faiblesse (28).

3. Contenant (10) selon la revendication 1 ou 2, dans lequel le rebord (20) comprend en outre une surface de préhension (38) sur le côté inférieur du rebord (20), dans lequel au moins une partie de la surface de préhension (38) est positionnée à proximité de l'encoche (34).

4. Contenant (10) selon l'une des revendications 1 à 3, dans lequel l'articulation (32) comprend une zone affinée de la base (16).

5. Contenant (10) selon l'une des revendications 1 à 4, dans lequel la base (16) présente un périmètre en forme de coin, de sorte que deux bords de la base (16) soient linéaires et de longueur relativement égale et un troisième bord qui est arqué.

6. Contenant (10) selon la revendication 5, dans lequel la paroi latérale (18) a une paire de segments sen-

siblement plans (30a) adjacents aux deux bords linéaires de la base (16) et un segment incurvé (30b) adjacent au bord arqué de la base (16) et les zones de faiblesse (28) sont situées au niveau des joints (56) entre les trois segments de paroi latérale (30a, 30b).

7. Contenant (10) selon la revendication 6, dans lequel l'articulation (32) est positionnée entre les deux segments de paroi latérale (30a) sensiblement plans et la base (16) et le mouvement entre le troisième segment de paroi latérale (30b) incurvé est limité par rapport à la base (16).

8. Contenant (10) selon la revendication 6 ou 7, dans lequel le rebord (20) adjacent à chacun de la paire de segments de paroi latérale (30a) sensiblement plans a une région arquée dirigée vers l'intérieur vers le segment de paroi latérale (30a).

9. Contenant (10) selon l'une des revendications 6 à 8, dans lequel il existe une zone affinée entre les segments de paroi latérale (30a) sensiblement plans et le rebord adjacent (20).

10. Contenant (10) selon la revendication 1, dans lequel la base (16) est une base généralement triangulaire ayant trois coins et le contenant (10) comprend
au moins trois zones de faiblesse (28) dans la paroi latérale (18) positionnées à proximité de chaque coin de la base triangulaire (16) et s'étendant dans le rebord (20), les zones de faiblesse (28) pouvant être rompues afin de former trois segments (30a, 30b) de la paroi latérale (18) ; et
des articulations (32) entre la base (16) et au moins deux des segments (30a) afin de permettre aux segments (30a) de pivoter vers l'extérieur en s'éloignant de la base (16) lorsque les zones de faiblesse (28) ont été séparées afin de faciliter l'accès à l'intérieur (12) du contenant (10).

11. Contenant (10) selon la revendication 10, dans lequel un troisième segment (30b) de la paroi latérale (18) a une forme incurvée et n'a pas d'articulation (32) au niveau de sa base, de sorte que le troisième segment (30b) ait une plage limitée de mouvement par rapport à la base (16).

12. Procédé d'ouverture d'un contenant (10) selon l'une des revendications 1 à 11 et d'accès à un produit alimentaire (14) disposé dans un intérieur (12) d'une base (16) ayant une paroi latérale verticale (18) s'étendant autour de sa périphérie, le procédé comprenant :

le retrait d'un film (26) recouvrant l'ouverture de la base (16) afin d'exposer le produit alimentaire (14) dans l'intérieur (12) de la base (16) ;
la séparation d'un segment (30) de la paroi latérale (18) de parties adjacentes de la paroi latérale (18) ;
le pivotement du segment (30) de la paroi latérale (18) vers l'extérieur par rapport à la base (16) autour d'une articulation (32) entre la base (16) et le segment (30) afin de faciliter l'accès au produit alimentaire (14) disposé sur la base (16), dans lequel
l'étape de retrait du film (26) de la paroi latérale (18) comprend le retrait du film (26) d'un rebord (20) de la paroi latérale (18) s'étendant autour de la paroi latérale (18) au niveau d'un bord opposé (22) à la base (16) ; et
l'étape de séparation d'un segment (30) de la paroi latérale (18) de parties adjacentes de la paroi latérale (18) comprend la séparation de la partie du rebord (20) adjacente au segment (30) de parties adjacentes du rebord (20), dans lequel
un joint entre le film (26) et le rebord (20) est hermétique et
la base (16), la paroi latérale (18) et le rebord (20) sont constitués de matières plastiques et formés par moulage par injection.

13. Procédé selon la revendication 12, dans lequel l'étape de séparation du segment (30) de la paroi latérale (18) des parties adjacentes de la paroi latérale (18) comprend la rupture des lignes de faiblesse (28) positionnées au niveau d'extrémité opposées de la paroi latérale (18).

14. Procédé selon la revendication 12 ou 13, dans lequel l'étape de séparation de la partie de rebord (20) adjacente au segment (30) des parties adjacentes de rebord (20) comprend la rupture des lignes de faiblesse (28) positionnées au niveau d'extrémité opposées de la partie du rebord (20).

15. Procédé selon l'une des revendications 12 à 14, dans lequel le procédé comprend en outre l'étape de séparation d'un second segment (30) de la paroi latérale (18) de parties adjacentes de la paroi latérale (18) et le pivotement du second segment (30) de la paroi latérale (18) vers l'extérieur par rapport à la base (16) afin de faciliter l'accès au produit alimentaire (14) disposé sur la base (16).

16. Procédé selon la revendication 15, dans lequel l'étape de séparation d'un second segment (30) de la paroi latérale (18) des parties adjacentes de la paroi latérale (18) comprend l'étape de rupture d'une ligne de faiblesse (28) reliant le segment (30) et le second segment (30) de la paroi latérale (18).

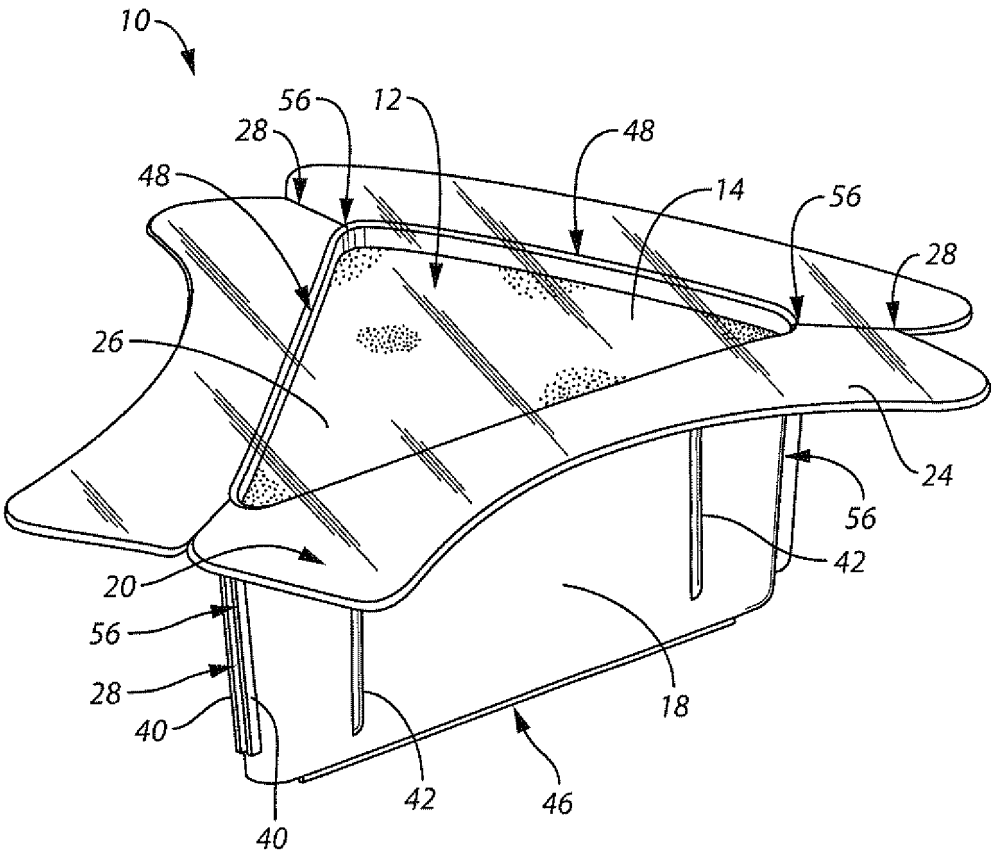


FIG. 1

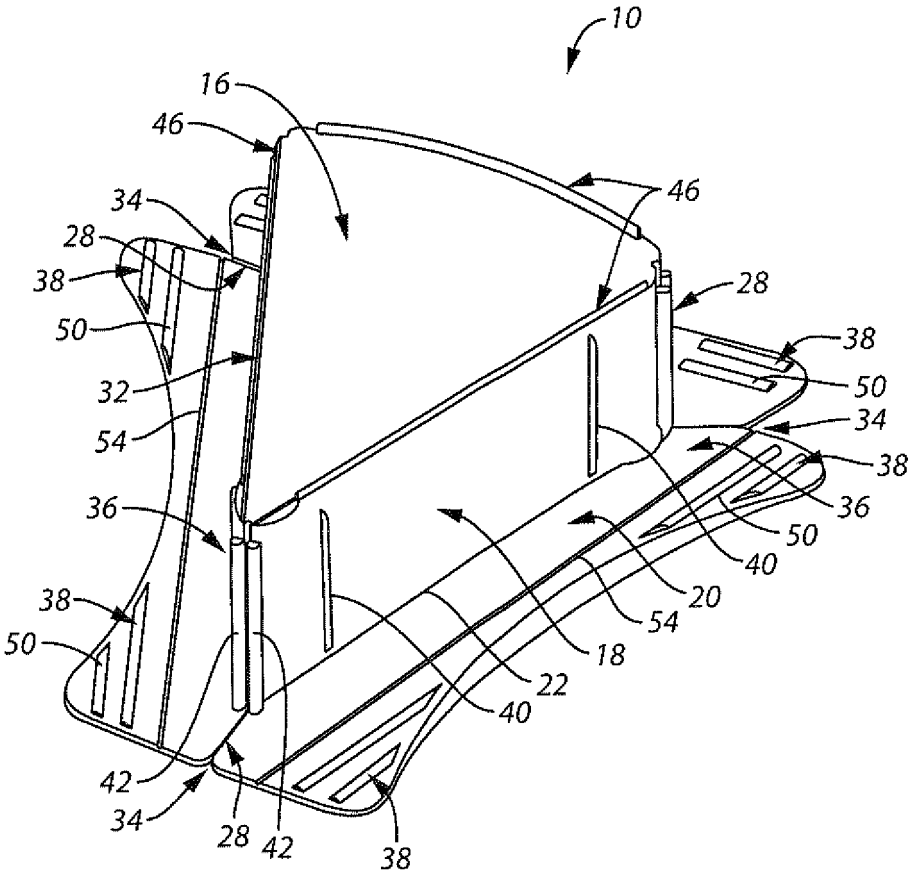

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FIG. 2

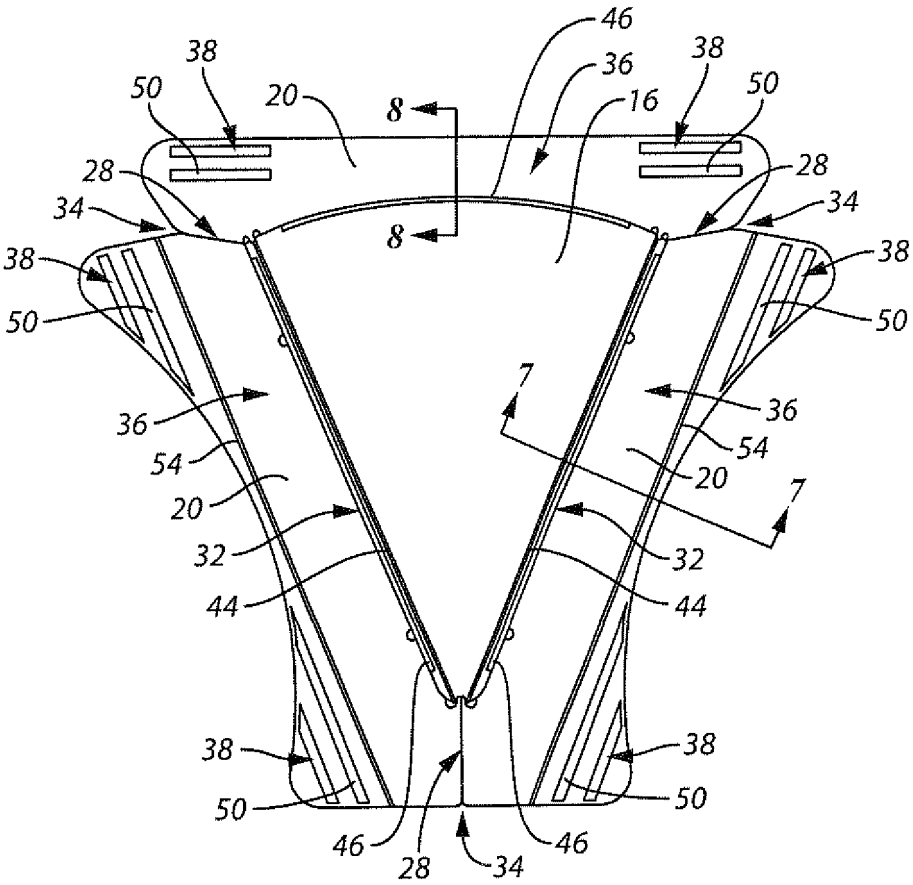

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FIG. 3

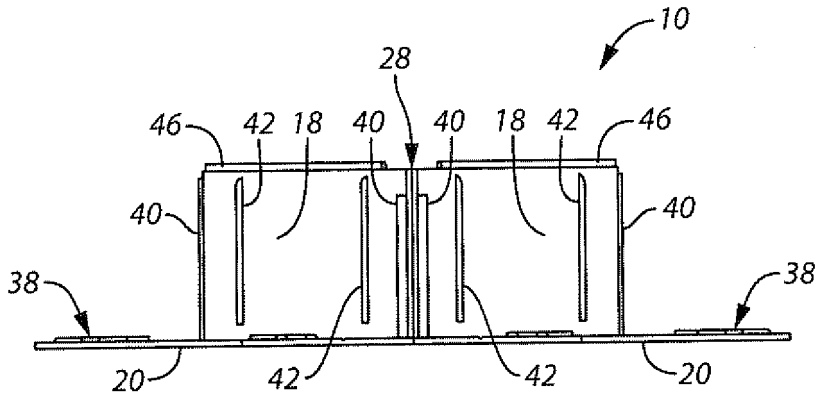

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FIG. 4

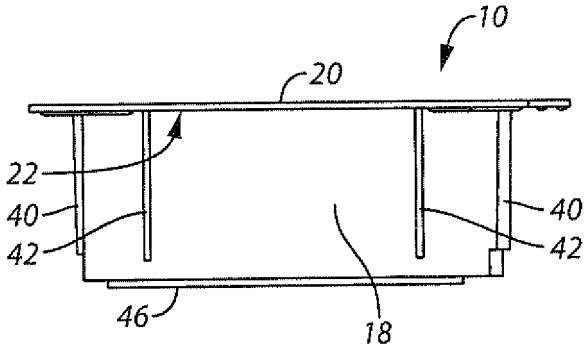


FIG. 5

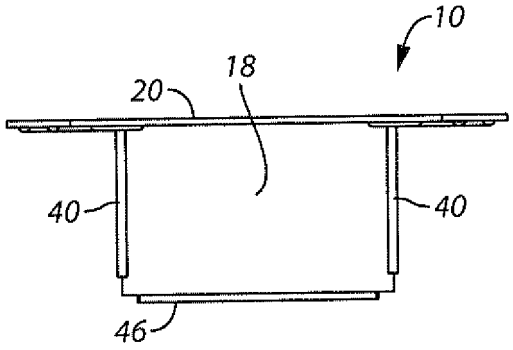


FIG. 6

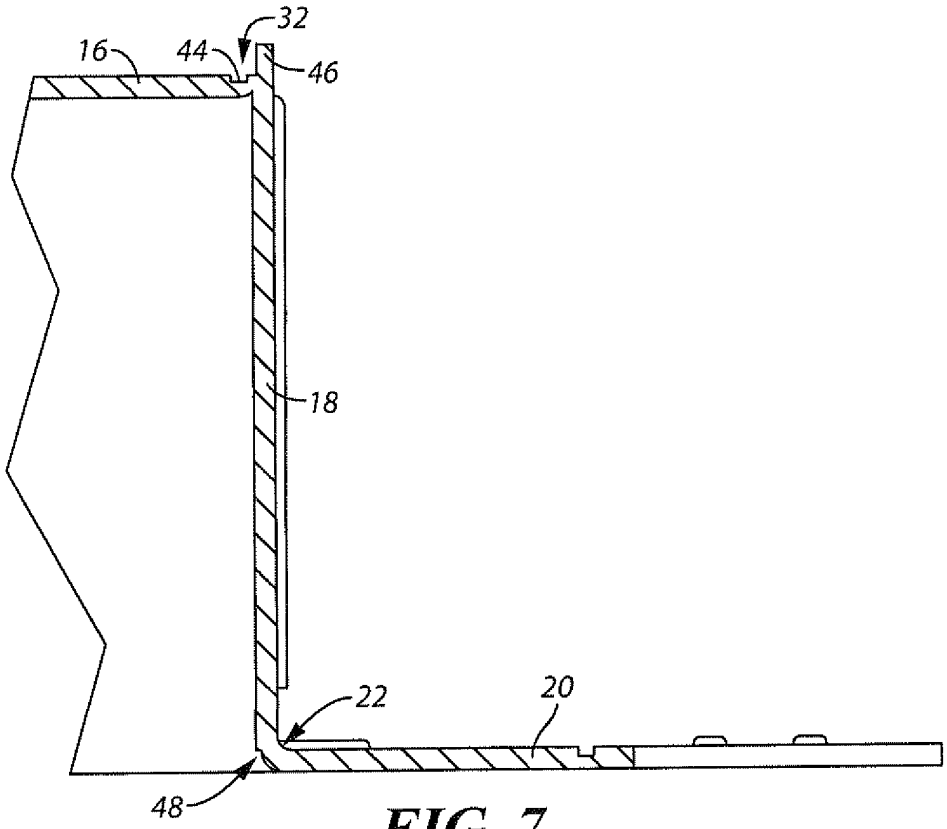


FIG. 7

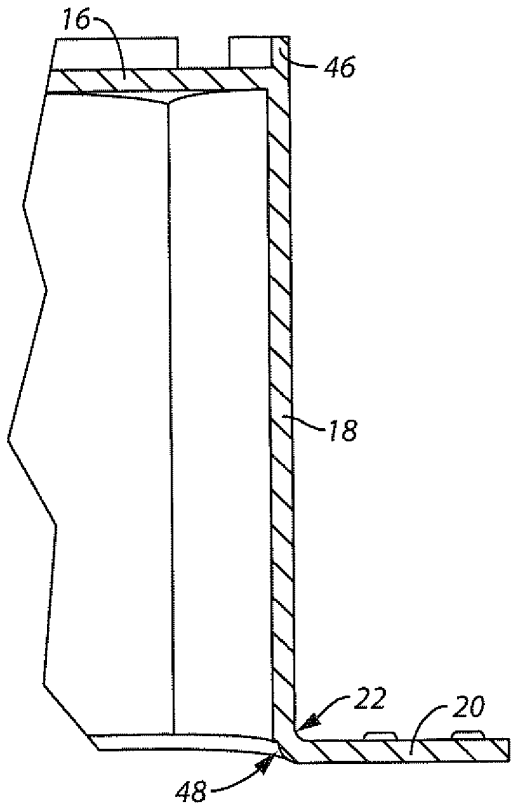


FIG. 8

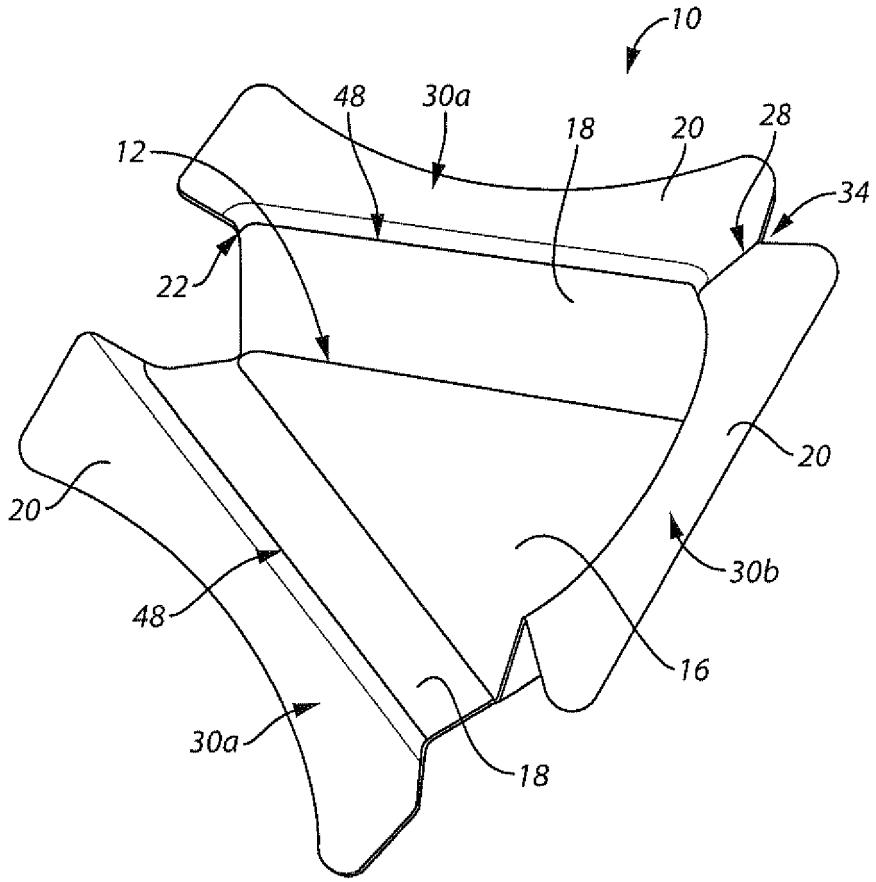


FIG. 9

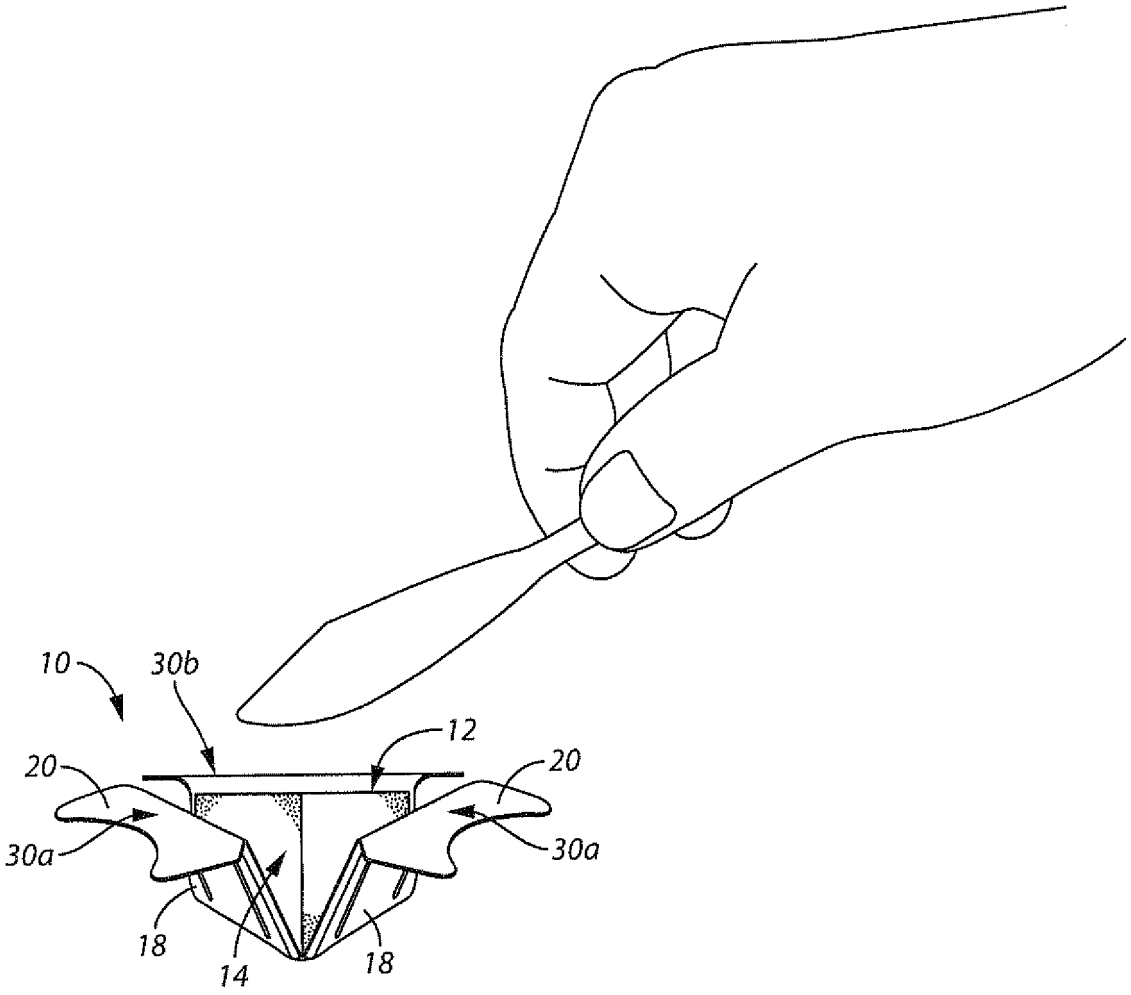


FIG. 10

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

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