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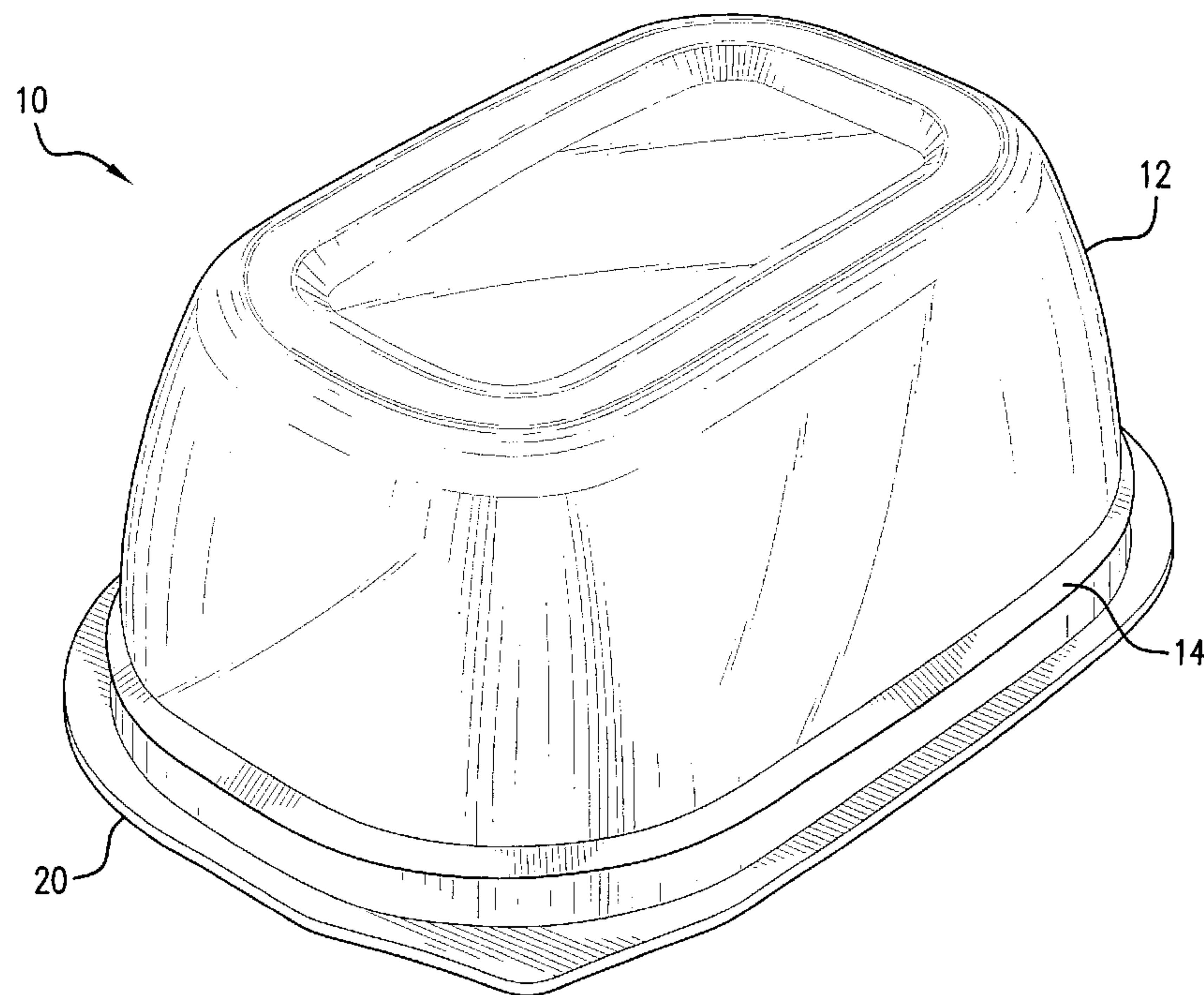


FIG. 1

(57) **Abrégé/Abstract:**

A container adapted for holding shrink wrap in place without the use of adhesives. The shrink wrap is held in place by at least one protuberance on the sides or bottom of the container. The protuberance has a particular design in relationship to the sides or bottom of the container that prevents slippage of the shrink wrap. Also disclosed is a container system for consumable products, comprising the aforementioned container, at least one lid, and a shrink wrap.



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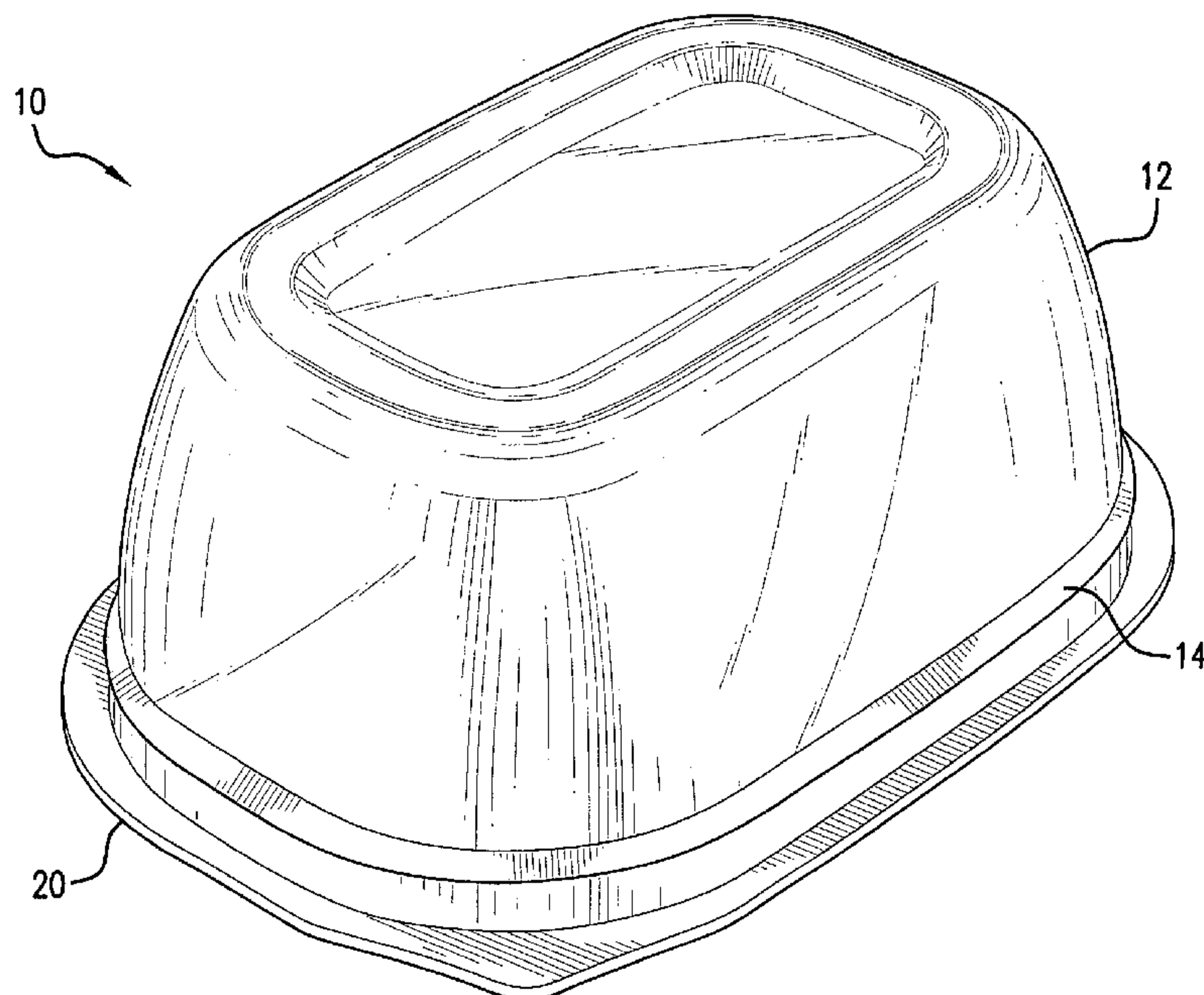


FIG. 1

(57) Abstract: A container adapted for holding shrink wrap in place without the use of adhesives. The shrink wrap is held in place by at least one protuberance on the sides or bottom of the container. The protuberance has a particular design in relationship to the sides or bottom of the container that prevents slippage of the shrink wrap. Also disclosed is a container system for consumable products, comprising the aforementioned container, at least one lid, and a shrink wrap.

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## CONTAINER FOR RETENTION OF SHRINK WRAP

## CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Application Serial No. 61/403599 filed September 17, 2010, the disclosure of which is incorporated herein by this reference.

## BACKGROUND OF THE INVENTION

## Field of the Invention

[0002] The present invention relates generally to containers and particularly to containers designed to retain in place a shrink wrap positioned on the body of the container.

## Description of Related Art

[0003] Many consumable items are sold in convenient containers that will enhance the shelf life of the product and allow for space-efficient storage and reuse of the container if the entire item is not consumed. For example, US20080187631 shows a stackable pet food container made from a transparent thermoformed plastic. The container has a peelable lid for hermetic sealing that can be used to reseal the container. After the container is filled with a food, it is retorted to sterilize the product and then a shrink wrap is positioned over the sides of the container. Heat is applied to shrink the shrink wrap to the container. Adhesive is used to hold the shrink wrap in place on the container.

[0004] However, due to the design of many such containers, *e.g.*, containers having tapered sides and/or bottom rounded corners, shrink wraps often fail to stay in place on the container and an adhesive must be applied to the shrink wrap to firmly hold it in place. The use and application of an adhesive is cumbersome and is the source of problems in production of the container. There is, therefore, a need for new containers and methods for holding shrink wrap in place on containers without the use of adhesives.

## SUMMARY OF THE INVENTION

[0005] It is an object of this invention to provide containers adapted to hold a shrink wrap in place without the use of adhesives.

[0006] It is another object of the invention to provide container systems having containers adapted to hold a shrink wrap in place without the use of adhesives.

[0007] It is a further object of the invention to provide products based upon containers adapted to hold a shrink wrap in place without the use of adhesives and one or more materials contained in the containers.

[0008] It is another object of the invention to provide methods for making containers adapted to hold a shrink wrap in place without the use of adhesives.

[0009] These and other objects of the invention are achieved using novel containers and container systems having incorporated into the container one or more protuberances that function to anchor a shrink wrap in place on the container.

[0010] Other and further objects, features, and advantages of the invention will be readily apparent to those skilled in the art.

#### BRIEF DESCRIPTION OF THE DRAWINGS

[0011] FIG.1 is a perspective view of an embodiment of a container (shown upside-down) comprising tapered sides, wherein the protuberance comprises a ridge encircling the container that can also serve a stacking purpose.

[0012] FIGS. 2A – 2F show perspective views of representative embodiments of containers, with different types of protuberances: (FIG. 2A) knob or spine; (FIG. 2B) discontinuous ridges in different planes; (FIG. 2C) discontinuous ridges in the same plane; (FIG. 2D) dual discontinuous ridges, each in the same plane (FIG. 2E) continuous ridge in one plane; (FIG. 2F) zig-zag or wavy ridge.

[0013] FIGS. 3A - 3D show cross section views of the tapered side of a prior art container without a protuberance, showing shoulder that is insufficient to hold shrink wrap in place (FIG. 3A), as compared with cross section views of embodiments of containers of the invention, showing a protuberance in a container with a shoulder (FIG. 3B) and without a shoulder (FIG. 3C, FIG. 3D).

[0014] FIGS. 4A and 4B are schematic views showing the range of protuberance for a container having tapered sides (FIG. 4A) and for a container having straight sides (FIG. 4B).

[0015] FIG. 5 is cross section view of showing the range of protuberance for a particular embodiment, comprising a container having tapered sides.

## DETAILED DESCRIPTION OF THE INVENTION

## Definitions

[0016] Ranges are used herein in shorthand to avoid having to list and describe each and every value within the range. Any appropriate value within the range can be selected, where appropriate, as the upper value, lower value, or the terminus of the range.

[0017] As used herein, the singular form of a word includes the plural, and vice versa, unless the context clearly dictates otherwise. Thus, the references “a”, “an”, and “the” are generally inclusive of the plurals of the respective terms. Likewise the terms “include”, “including” and “or” should all be construed to be inclusive, unless such a construction is clearly prohibited from the context. Similarly, the term “examples,” particularly when followed by a listing of terms, is merely exemplary and illustrative and should not be deemed to be exclusive or comprehensive.

[0018] The term “comprising” is intended to include embodiments encompassed by the terms “consisting essentially of” and “consisting of”. Similarly, the term “consisting essentially of” is intended to include embodiments encompassed by the term “consisting of”.

[0019] The articles of manufacture, methods and other advances disclosed herein are not limited to particular equipment or processes described herein because, as the skilled artisan will appreciate, they may vary. Further, the terminology used herein is for the purpose of describing particular embodiments only, and is not intended to, and does not, limit the scope of that which is disclosed or claimed.

[0020] Unless defined otherwise, all technical and scientific terms, terms of art, and acronyms used herein have the meanings commonly understood by one of ordinary skill in the art in the field(s) of the invention, or in the field(s) where the term is used. Although any compositions, methods, articles of manufacture, or other means or materials similar or equivalent to those described herein can be used in the practice of the present invention, the preferred compositions, methods, articles of manufacture, or other means or materials are described herein.

[0021] All patents, patent applications, publications, technical and/or scholarly articles, and other references cited or referred to herein are in their entirety incorporated herein by reference to the extent allowed by law. The discussion of those references is intended merely to summarize the assertions made therein. No admission is made that any such patents, patent applications, publications or references, or any portion thereof, are relevant, material, or prior

art. The right to challenge the accuracy and pertinence of any assertion of such patents, patent applications, publications, and other references as relevant, material, or prior art is specifically reserved.

#### The Invention

[0022] In one aspect, the invention provides containers adapted for holding a shrink wrap in place without adhesive. The containers comprise a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive.

[0023] Typical prior art containers require an adhesive to prevent slippage of the shrink wrap. The use of an adhesive necessitates an additional step in the process for the manufacturing containers and can cause complications in the process. The present invention features a container that is adapted to hold a shrink wrap in place without the use of for adhesives. This is accomplished by incorporating into the container one or more protuberances that function to anchor shrink wrap in place. Though an adhesive can still be used on the novel container, it is not required to hold the shrink wrap in place.

[0024] Currently available plastic containers are typically manufactured by a thermoforming process. The containers of the present invention preferably are manufactured by co-injection molding, compression molding or injection blow molding which enables the formation of containers that comprise shrink wrap-anchoring protuberances, as described in greater detail herein. The co-injection molded, compression molded, or injection blow molded thin-wall barrier containers preferred for use in the present invention are able to withstand standard retort processes equivalent to those tolerated by thermoformed containers. Advantageously, by comparison to thermoformed containers, this technology enables the production of containers capable of holding shrink wraps in place without the use of adhesives.

[0025] The fabrication of containers by co-injection molding is understood in the art. Briefly, as pertaining to its use in manufacturing containers of the present invention, an injection molding assembly is manufactured in multiple parts according to the specifications of the container including one or more protuberances positioned on the walls of the container. A void that defines the container with the protuberance shape and the position of the protuberance on the wall of the container is formed in the mold. In forming the container, the

mold is in a closed position and melted thermoplastic material is then pulsed into the mold to fill the voids in the mold. For multilayer laminate structures, multiple valves control pulses of materials that are injected into the mold to create a layer of each material of the structure. After forming and cooling, the mold assembly is opened and the container is released from the mold.

[0026] Any material amenable to formation of a container with protuberances may be used in connection with the present invention. In particular embodiments, the materials comprise plastics, polymers and other materials suitable for use in co-injection, compression molded, or injection blow molded molding. In some embodiments, the materials comprise barrier substances that substantially delay or prevent exposure to detrimental elements, such as light (including UV radiation), heat and/or oxygen.

[0027] The container of the invention can have any suitable shape, for example, multiple sides, such as in the form of a square, a rectangle, a triangle, an octagon and the like, a circular container, an oval container and having sides that are vertical to the bottom of the container or tapered to the bottom of the container.

[0028] The container can comprise one or more protuberances dispersed upon the walls of the container, on its sides or even on the bottom of the container. For instance, the protuberances may be in the form of knobs or spines. Alternatively, the protuberances may be in the form of ridges along the sides of the container. The ridges may be in the same plane or in different planes along the sides of the container. In another embodiment, the protuberance can be in the form of a single continuous ridge, or ring-like structure that encircles the sides of the container.

[0029] The protuberances may take on a wide range of sizes, as well as shapes, depending at least in part on the size and/or shape of the container. For example, for a straight-sided container, *i.e.*, wherein the side walls are substantially perpendicular to the top edge and the bottom of the container, the one or more protuberances can extend from the side walls to a distance defined by an angle from the top of the container along the side wall between 10° and 45° outward from the side of the container. Alternatively, for containers with tapered sides, *i.e.*, wherein the area defined by the top edge of the container is larger than the area of the bottom of the container and the side walls taper from the top edge to the bottom of the container at an angle  $\Phi$  defined by the side wall and a line perpendicular to a horizontal plane upon which the container is disposed, if  $\Phi$  is  $\leq 10^\circ$ , then the one or more protuberances can



extend from the side walls to a distance of  $\Phi$  to  $\Phi + 45^\circ$  beyond the perpendicular line. Alternatively in such a tapered-side container, if  $\Phi$  is  $\geq 10^\circ$ , then the one or more protuberances can extend from the side walls to a distance of  $\Phi - 10^\circ$  to  $\Phi + 45^\circ$  beyond the perpendicular line.

[0030] Referring now to the drawings, FIG. 1 shows one embodiment of a container 10 that is of a substantially curved rectangular shape with tapered side walls 12 and has a protuberance 14 comprising a single ridge that encircles the side walls 12 of the container 10. In this embodiment, container 10 comprises an optional lip 20 to hold a peelable and/or reclosable lid, such as a snap-on lid. In this embodiment, the protuberance 14 serves to hold shrink wrap in place, and also can facilitate stacking of multiple containers 10.

[0031] FIG. 2 shows embodiments of containers 10 comprising different shapes and types of protuberances 14. FIG. 2A shows a substantially cup-shaped container 10 with tapered side wall 12 comprising protuberances 14 that are knobs or spines. FIG. 2B shows a substantially cylindrical container 10 with a straight side wall 12 and protuberances 14 that are discontinuous ridges disposed in different planes of the side wall 12. FIG. 2C shows a substantially cylindrical container 10 with tapered side wall 12 comprising protuberances 14 that are discontinuous ridges on the same plane of the side wall 12. FIG. 2D shows a substantially rectangular container 10 comprising tapered side walls 12 comprising protuberances 14 which are two sets of parallel, discontinuous ridges. FIG. 2E shows an embodiment similar to that shown in FIG. 1 that is a substantially rectangular container 10 with tapered, curved side walls 12 and a protuberance 14 comprising a single ridge that encircles the container side walls 12. FIG. 2F shows a substantially cup-shaped container 10 with tapered side wall 12 and a protuberance 14 comprising a zig-zag or wavy ridge. It will be understood by the skilled artisan that the particular combinations of container shapes and protuberances shown in FIG. 2 are for illustrative purposes only, and that the container shapes and styles of protuberances can be combined in numerous different ways.

[0032] FIG. 3 shows cross-sectional views of side wall 12 of the prior art (FIG. 3A) as compared with side walls 12 comprising different types of protuberances 14 (FIGS. 3B-3D). In FIGS. 3A and 3B, side wall 12 comprises a shoulder 16. In FIG. 3A, illustrating the prior art, the side wall 12 contains no protuberance 14, and the shoulder 16 is insufficient to hold a shrink wrap in place, thus necessitating the use of an adhesive. By comparison, in FIG. 3B, a protuberance 14 is present at the shoulder of the side wall 12. In FIGS. 3C and 3D, the side

wall 12 contains no shoulder, but instead contains a protuberance 14. In the embodiments shown in FIG 3, the side wall 12 of the container 10 is terminated at the open end with a lip 20 for attachment of a lid (not shown). The protuberance 14 shown in FIG. 3 is a continuous ridge such as that shown in the container of FIG. 1. However, the type and location of protuberance 14 can also be a knob, spine or discontinuous ridge, as illustrated in FIG. 2.

[0033] FIG. 4A shows a schematic view of the protuberance 14 for a container 10 having tapered side walls 12, and the minimum and maximum size 14a-14b of the protuberance projecting from the side of the container 10. The protuberance extension beyond the side walls 12 is defined by the location and position on the side wall 12 and an angle range on either side of a perpendicular line 22 from the top edge of the side wall perpendicular to a horizontal plane 24 parallel to the bottom of the container 18. There is a taper angle ( $\Phi$ ) between the side wall 12 and the perpendicular line 22. In the event when the taper angle ( $\Phi$ )  $\geq 10^\circ$ , then the minimum and maximum protuberance extension 14a – 14b beyond the side wall 12 is angle ( $\Phi$ )  $-10^\circ$  to angle ( $\Phi$ )  $+45^\circ$  beyond the perpendicular line 22 and in the event angle ( $\Phi$ ) is  $\leq 10^\circ$  then the minimum and maximum protuberance extension 14a-14b is angle ( $\Phi$ ) to angle ( $\Phi$ )  $+45^\circ$  beyond the perpendicular line 22. FIG. 4B shows a container 10 having straight side walls 12, *i.e.*, perpendicular to the horizontal plane 24 that is parallel to the bottom 18 of the container 10. In this embodiment, since the sides do not taper, the taper angle ( $\Phi$ ) is  $0^\circ$ , and the minimum and maximum protuberance extension 14a-14b is an angle  $10^\circ$  to  $+45^\circ$  beyond the side wall 12.

[0034] FIG. 5 shows a cross section of a particular embodiment of the invention as partially illustrated in FIGS. 1 and 3D, showing tapered side wall 12, protuberance 14, and lip 20. The taper angle  $\Phi$  of the side wall 12 is greater than  $10^\circ$  and the preferred extension of the protuberance 14 is angle ( $\Phi$ )  $-10^\circ$  to angle ( $\Phi$ )  $+10^\circ$  beyond the perpendicular line 22, which by definition is  $90^\circ$  to the horizontal plane 24 that is parallel to the bottom 18 the container 10, *i.e.*,  $80^\circ$ - $100^\circ$  relative to the plane 24. More particularly, the protuberance 14 is angle ( $\Phi$ )  $-5^\circ$  to angle ( $\Phi$ )  $+5^\circ$  beyond the perpendicular line 22, *i.e.*,  $85^\circ$ - $95^\circ$  relative to horizontal plane 24.

[0035] The novel container can be used in a container system for various products such as foods, in particular pet foods. Thus, in another aspect, the invention provides a container system. The system comprises comprising a container comprising a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at

least one protuberance that projects sufficiently from the container to hold a shrink wrap in place without adhesive, as described in detail above, and further comprises one or more lids, and a shrink wrap positioned over at least a portion of the container. In one embodiment, the shrink wrap is positioned over at least a portion of the container and a portion of the lid. In various embodiments, the container, the lid, and/or the shrink wrap can be made of transparent, translucent or opaque material, and can have printed or graphic information contained thereon.

[0036] Shrink wrap and methods of applying shrink wrap to containers and other packages are well known in the art. Any type of shrink wrap and method of application is amenable to the container system of the present invention. By way of illustration, typical materials that can be used for the shrink wrap are as follows: thermo-softening polymers, such as, polyvinyl chloride, polyethylene, amorphous polyethylene terephthalate, nylon, ethylene vinyl alcohol and other shrink wrap materials known to those skilled in the art. Typically, the shrink wrap material is applied to the container heat is applied to cause shrinkage of the wrap about the container. As mentioned above, such wraps can be transparent, translucent or opaque, and can contain printed or graphic information thereon.

[0037] In various embodiments, the container system includes a lid, cap or other covering as well known in the art. Such lids, caps, coverings and the like are referred to collectively herein as "lids." Lids may include peelable lids, such as a peelable foil or plastic affixed to the container opening, *e.g.* to a lip or flange at the container opening, such as is illustrated in FIGS. 1, 3 and 5. Alternatively, or in addition to a peelable lid, the container system can include a replaceable lid, such as a snap-on or screw-on lid that can be used to reclose the container as needed.

[0038] In some embodiments, the container system is designed to contain a food, such as a pet food. In certain of these embodiments, the container system is made of materials suitable to withstand retort processing. By way of illustration of container systems for pet foods, such systems typically comprise a container that contains the food in a substantially airtight enclosure. A peelable lid, such as a plastic or foil seal, can be adhered to the opening of the container, as described above, and a snap-on, replaceable lid covers the peelable foil or plastic. The shrink wrap is applied such that it covers at least a portion of the container and is held in place by the one or more protuberances constructed in the container.

[0039] In another aspect, the invention provides products. The products comprise (1) a container comprising bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive and (2) a material contained within the container. The material is any material that is compatible with the container. In various embodiments, the material is a liquid or a solid material. In such embodiments, the material is a drink, detergent, cereal, grain, and the like. In a preferred embodiment, the material is a food composition. The food composition can be for consumption by humans or other animals. In various embodiments, the food composition is a pet food composition.

[0040] In another aspect, the invention provides methods for making containers adapted for holding a shrink wrap in place without adhesive. The methods comprise (1) providing containers comprising a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive and (2) applying shrink wrap onto the containers. In various embodiments, the methods further comprise inserting a material into the container, particularly a material as described herein. In preferred embodiments, the containers are filled with the materials. In certain embodiments, the material is a food composition, preferably a pet food composition. In various embodiments, the methods further comprise sealing the container after the materials have been inserted into the container. The containers can be sealed by any suitable means, *e.g.*, a lid, by sealing the seams, and the like. In various embodiments, the methods further comprise retorting the sealed containers.

[0041] In another aspect, the invention provides a means for communicating information about or instructions for one or more of (1) making containers of the invention, (2) making container systems of the invention, (3) using containers of the invention to avoid problems caused by shrink wrap not remaining in place on containers, and (4) using container systems of the invention to avoid problems caused by shrink wrap not remaining in place on containers. The means comprises a document, digital storage media, optical storage media, audio presentation, or visual display containing the information or instructions. In certain embodiments, the communication means is a displayed web site, visual display, kiosk, brochure, product label, package insert, advertisement, handout, public announcement,

audiotape, videotape, DVD, CD-ROM, computer readable chip, computer readable card, computer readable disk, computer memory, or combination thereof containing such information or instructions.

[0042] In another aspect, the invention provides multi-pack packages. The packages comprise a plurality of one or more containers, container systems, or products of the present invention arranged in an array and one or more devices for retaining the containers, container systems, or products in the array. In some embodiments, the package has one or more handles suitable for handling and transporting the package.

[0043] In various embodiments, the containers and the containers used in the containers systems are adapted to be stackable.

[0044] In the specification, there have been disclosed typical preferred embodiments of the invention and, although specific terms are employed, they are used in a generic and descriptive sense only and not for purposes of limitation. Obviously many modifications and variations of the invention are possible in light of the above teachings. It is therefore to be understood that the invention may be practiced otherwise than as specifically described, within the scope of the appended claims.

## CLAIMS

What is claimed is:

1. A container adapted for holding a shrink wrap in place without adhesive comprising a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive.
2. The container of claim 1 comprising one or more protuberances dispersed upon the sides of the container.
3. The container of claim 1 comprising one or more protuberances dispersed upon the bottom of the container.
4. The container of claim 1 wherein the protuberances are knobs or spines.
5. The container of claim 1 wherein the protuberances are ridges that encircle the container on its side walls.
6. The container of claim 5 wherein the protuberances comprise discontinuous ridges.
7. The container of claim 1 wherein the side walls are substantially perpendicular to the top edge and the bottom of the container, and the one or more protuberances extend from the side walls to a distance defined by an angle from the top of the container along the side wall between  $10^\circ$  and  $45^\circ$  outward from the side of the container.
8. The container of claim 1 wherein the area defined by the top edge of the container is larger than the area of the bottom of the container and the side walls taper from the top edge to the bottom of the container at an angle  $\Phi$  defined by the side wall and a line perpendicular to a horizontal plane upon which the container is disposed, wherein  $\Phi$  is  $\leq 10^\circ$ , and the one or more protuberances extend from the side walls to a distance of  $\Phi$  to  $\Phi + 45^\circ$  beyond the perpendicular line.
9. The container of claim 1 wherein the area defined by the top edge of the container is larger than the area of the bottom of the container and the side walls taper from the top edge to the bottom of the container at an angle  $\Phi$  defined by the side wall and a line perpendicular to a horizontal plane upon which the container is disposed, wherein  $\Phi$  is  $\geq 10^\circ$ , and the one or more protuberances extend from the side walls to a distance of  $\Phi - 10^\circ$  to  $\Phi + 45^\circ$  beyond the perpendicular line.

10. A container system comprising:
  - a container comprising a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold a shrink wrap in place without adhesive;
  - one or more lids; and
  - a shrink wrap positioned over at least a portion of the container.
11. The container system of claim 10 wherein the container comprises one or more protuberances dispersed upon the bottom or sides of the container.
12. The container system of claim 10 wherein the container comprises protuberances in the form of one or more ridges that encircle the container on its side walls.
13. The container system of claim 10 wherein the container comprises side walls that are substantially perpendicular to the top edge and the bottom of the container, and the one or more protuberances extend from the side walls to a distance defined by an angle from the top of the container along the side wall between  $10^\circ$  and  $45^\circ$  outward from the side of the container.
14. The container system of claim 10 wherein the container is a container wherein the area defined by the top edge of the container is larger than the area of the bottom of the container and the side walls taper from the top edge to the bottom of the container at an angle  $\Phi$  defined by the side wall and a line perpendicular to a horizontal plane upon which the container is disposed, wherein  $\Phi$  is  $\leq 10^\circ$ , and the one or more protuberances extend from the side walls to a distance of  $\Phi$  to  $\Phi + 45^\circ$  beyond the perpendicular line.
15. The container system of claim 10 wherein the container is a container wherein the area defined by the top edge of the container is larger than the area of the bottom of the container and the side walls taper from the top edge to the bottom of the container at an angle  $\Phi$  defined by the side wall and a line perpendicular to a horizontal plane upon which the container is disposed, wherein  $\Phi$  is  $\geq 10^\circ$ , and the one or more protuberances extend from the side walls to a distance of  $\Phi - 10^\circ$  to  $\Phi + 45^\circ$  beyond the perpendicular line.
16. The container system of claim 10 wherein the lid is a peelable lid.
17. The container system of claim 10 wherein the lid is replaceable lid.
18. The container system of claim 10 wherein the lids are a peelable lid and a replaceable lid.

19. The container system of claim 10 wherein the container system is retortable.
20. The container system of claim 10 further comprising a food.
21. The container system of claim 20 wherein the food is a pet food.
22. A product comprising:  
a container adapted for holding a shrink wrap in place without adhesive, wherein the container comprises a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive; and one or more materials contained within the container.
23. The product of claim 22 wherein the material is a food composition.
24. The product of claim 23 wherein the food composition is a pet food composition.
25. A method for making a container adapted for holding a shrink wrap in place without adhesive comprising:  
providing a container comprising a bottom and one or more side walls defining a top edge, wherein at least one of the bottom or side walls comprises at least one protuberance that projects sufficiently from the container to hold the shrink wrap in place without adhesive; and  
applying shrink wrap onto the container.
26. The method of claim 25 further comprising inserting a material into the container.
27. The method of claim 26 wherein the material is a food composition.
28. The method of claim 26 wherein the food composition is a pet food composition.
29. The method of claim 26 further comprising sealing the container after the material has been inserted into the container.
30. The method of claim 29 further comprising retorting the sealed container.
31. A means for communicating information about or instructions for one or more of (1) making containers of the invention, (2) making container systems of the invention, (3) using containers of the invention to avoid problems caused by shrink wrap not remaining in place on containers, and (4) using container systems of the invention to avoid problems caused by shrink wrap not remaining in place on containers, the means comprising a document, digital storage media, optical storage media, audio presentation, or visual display containing the information or instructions.



32. The means of claim 31 selected from the group consisting of a displayed website, a visual display kiosk, a brochure, a product label, a package insert, an advertisement, a handout, a public announcement, an audiotape, a videotape, a DVD, a CD-ROM, a computer readable chip, a computer readable card, a computer readable disk, a USB device, a FireWire device, a computer memory, and any combination thereof.
33. A multi-pack package comprising a plurality of one or more of a container of claim 1, a container system of claim 10, and a product of claim 22 arranged in an array, and one or more devices for retaining the containers, container systems, or products in the array.
34. The package of claim 33 further comprising one or more handles.

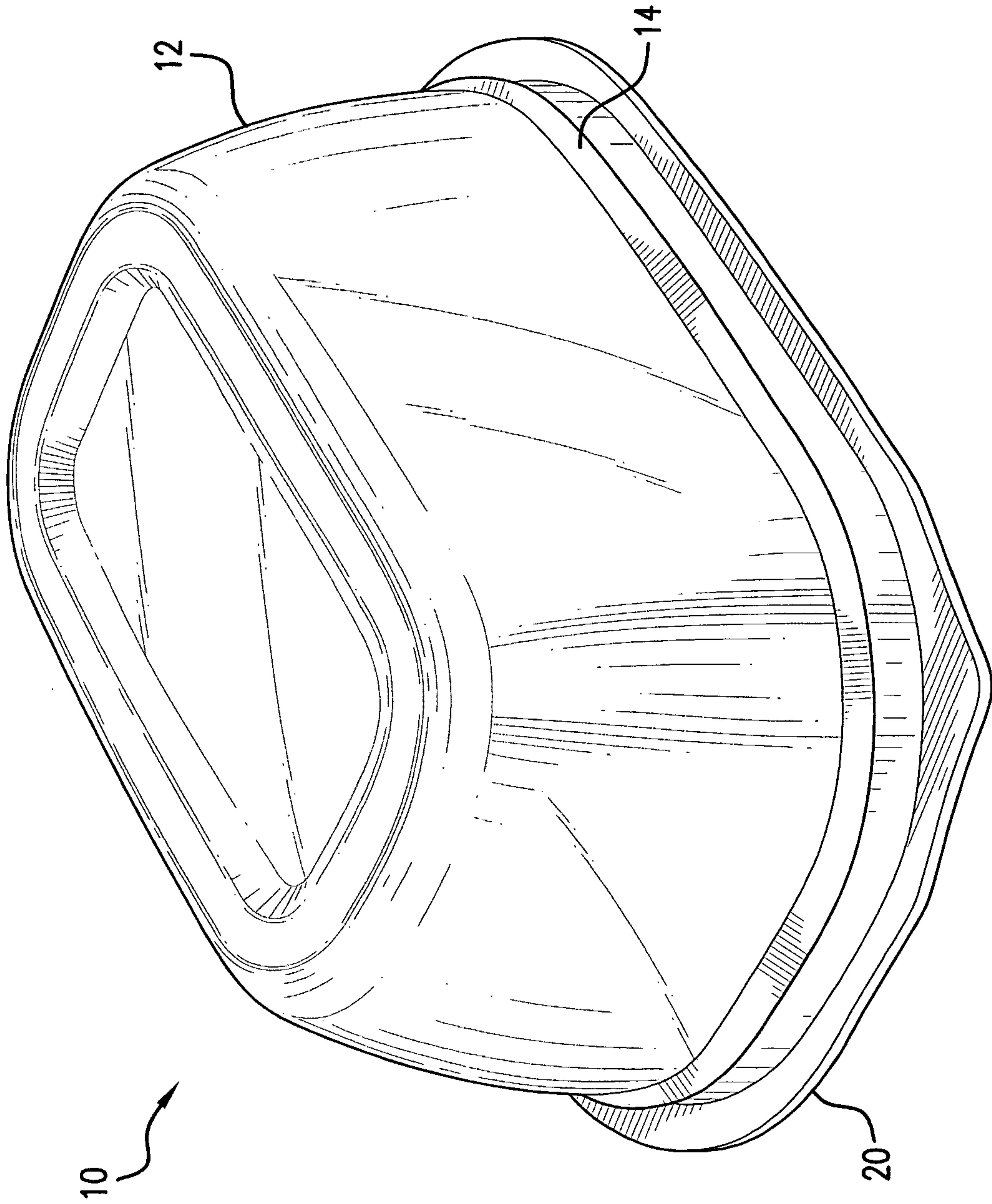


FIG. 1

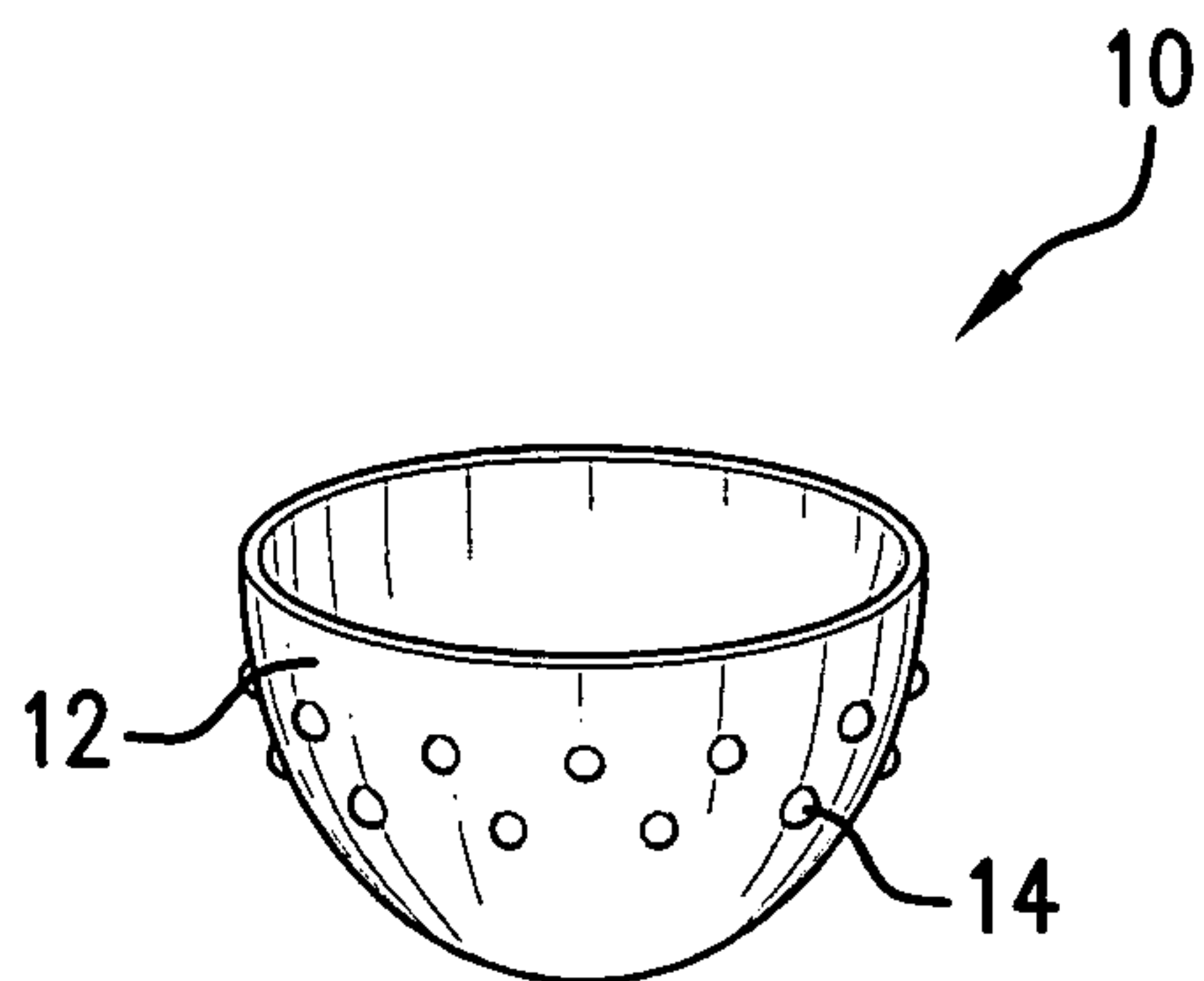


FIG. 2A

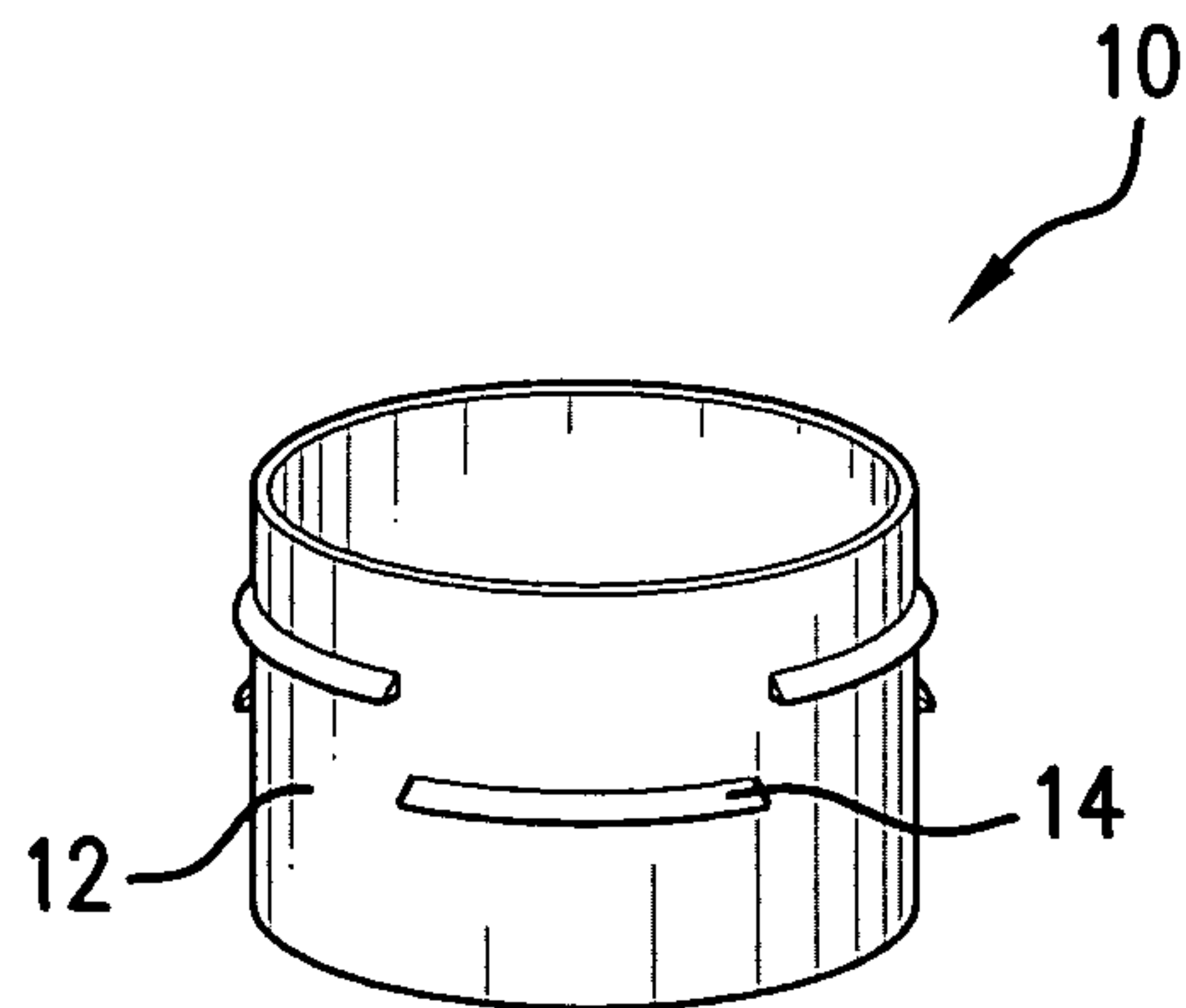


FIG. 2B

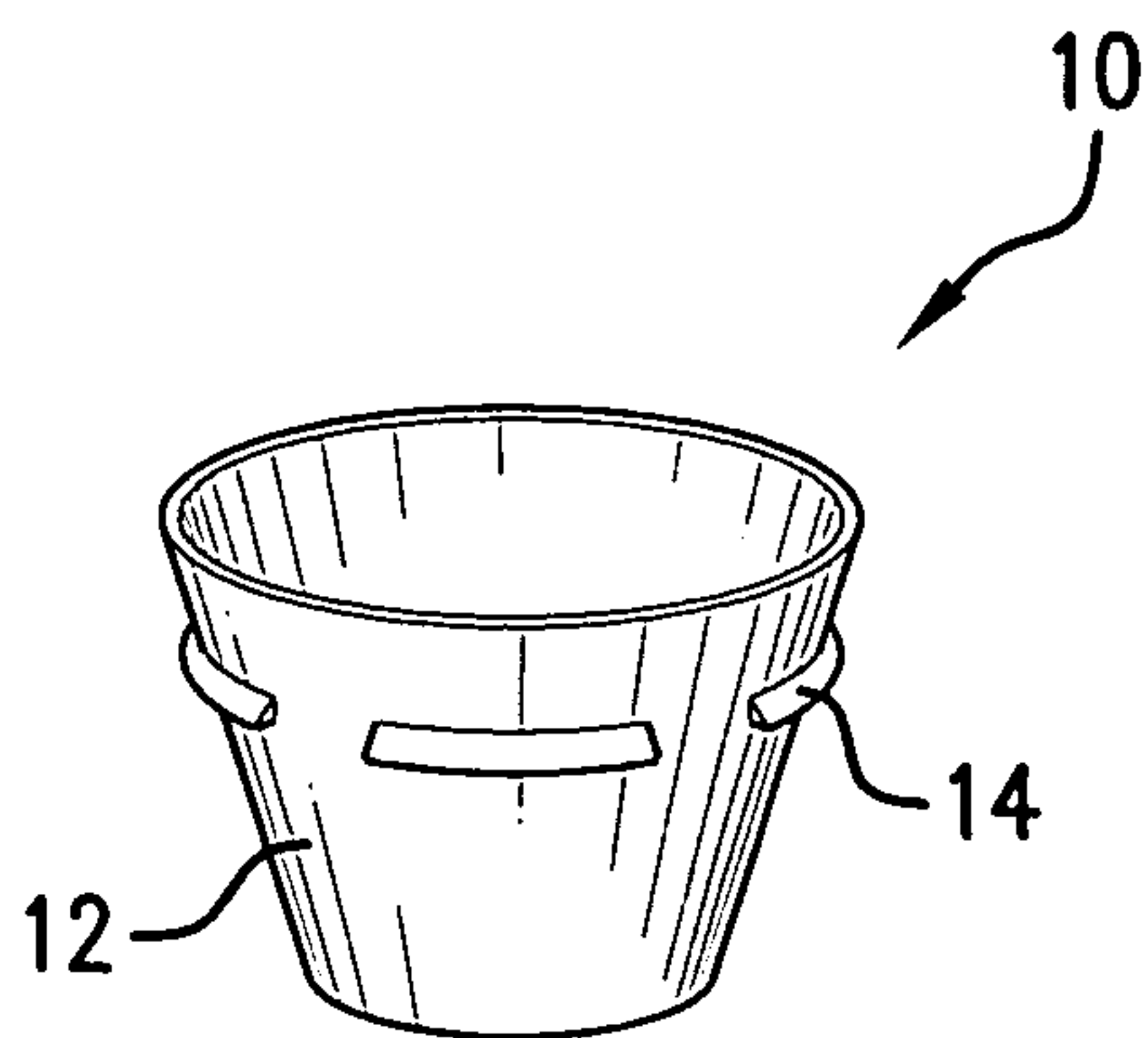


FIG. 2C

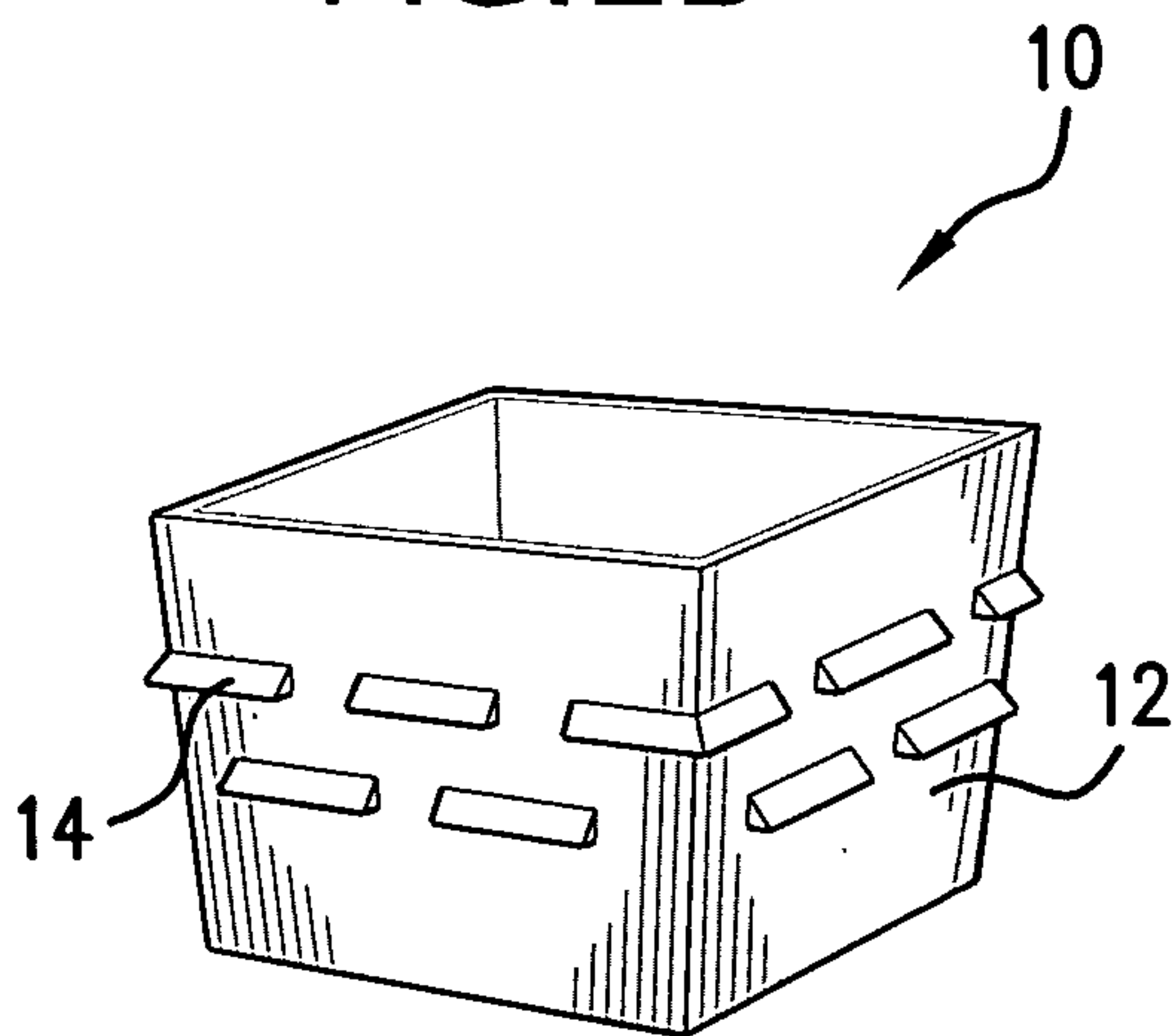


FIG. 2D

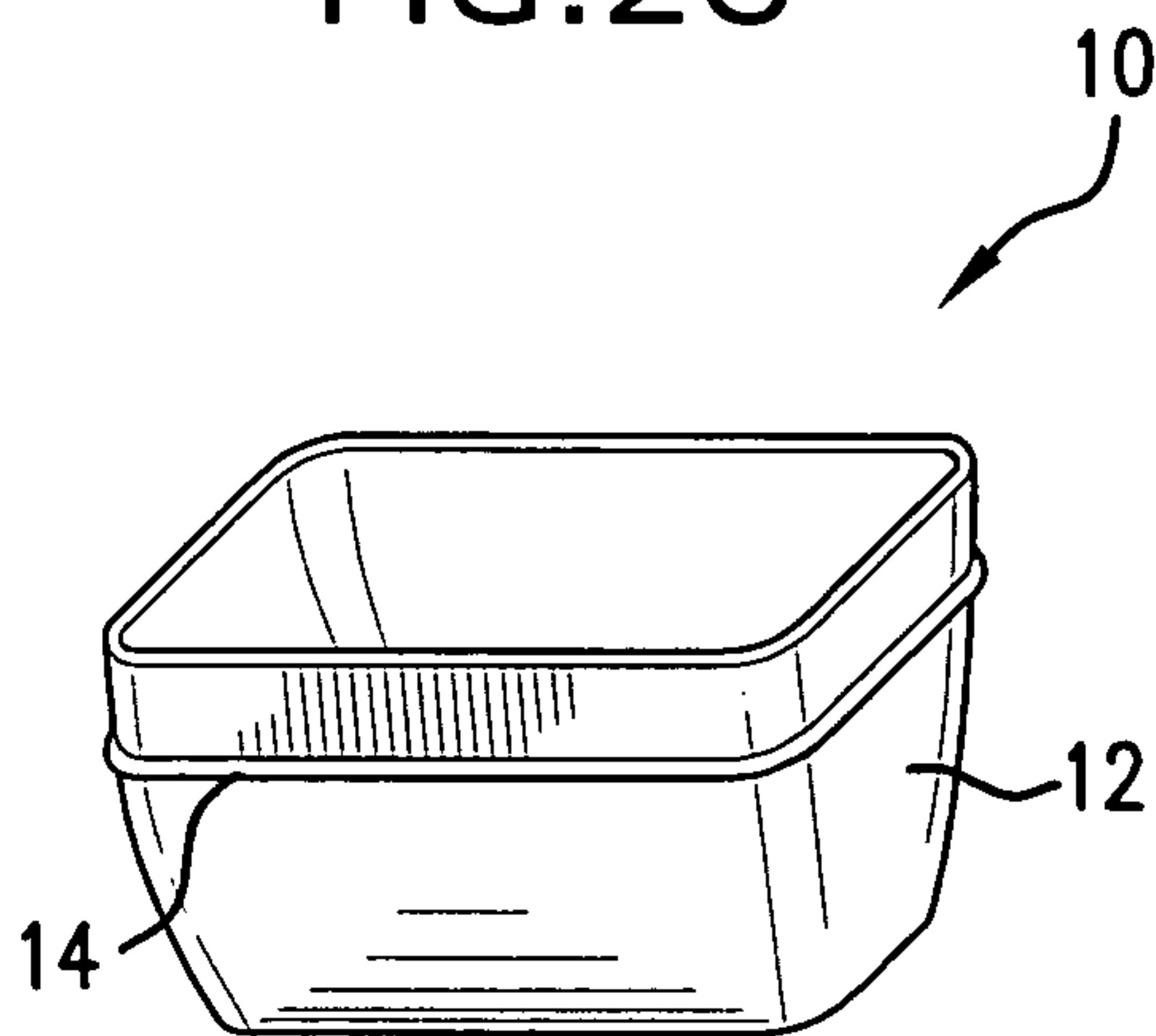


FIG. 2E

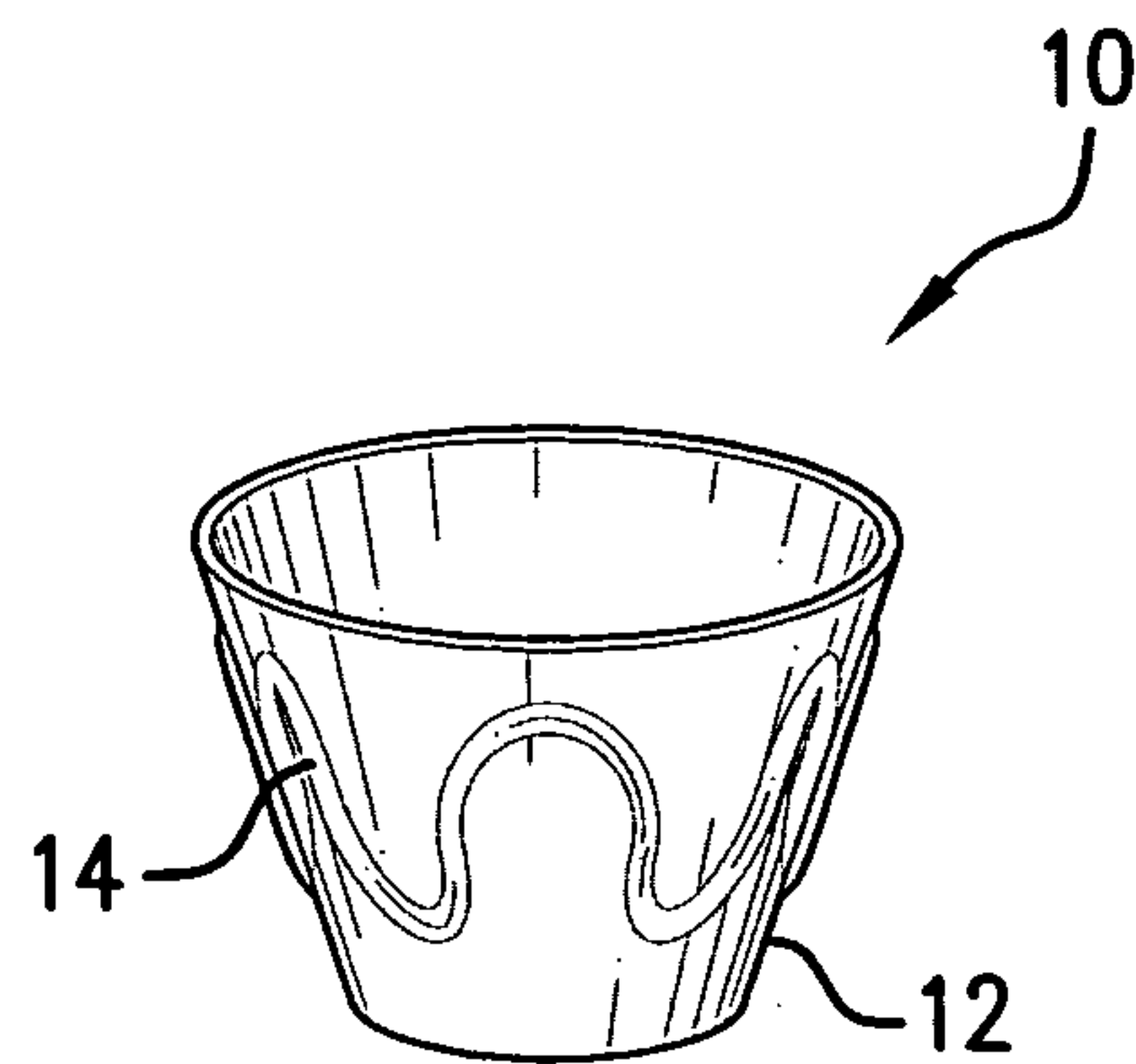


FIG. 2F

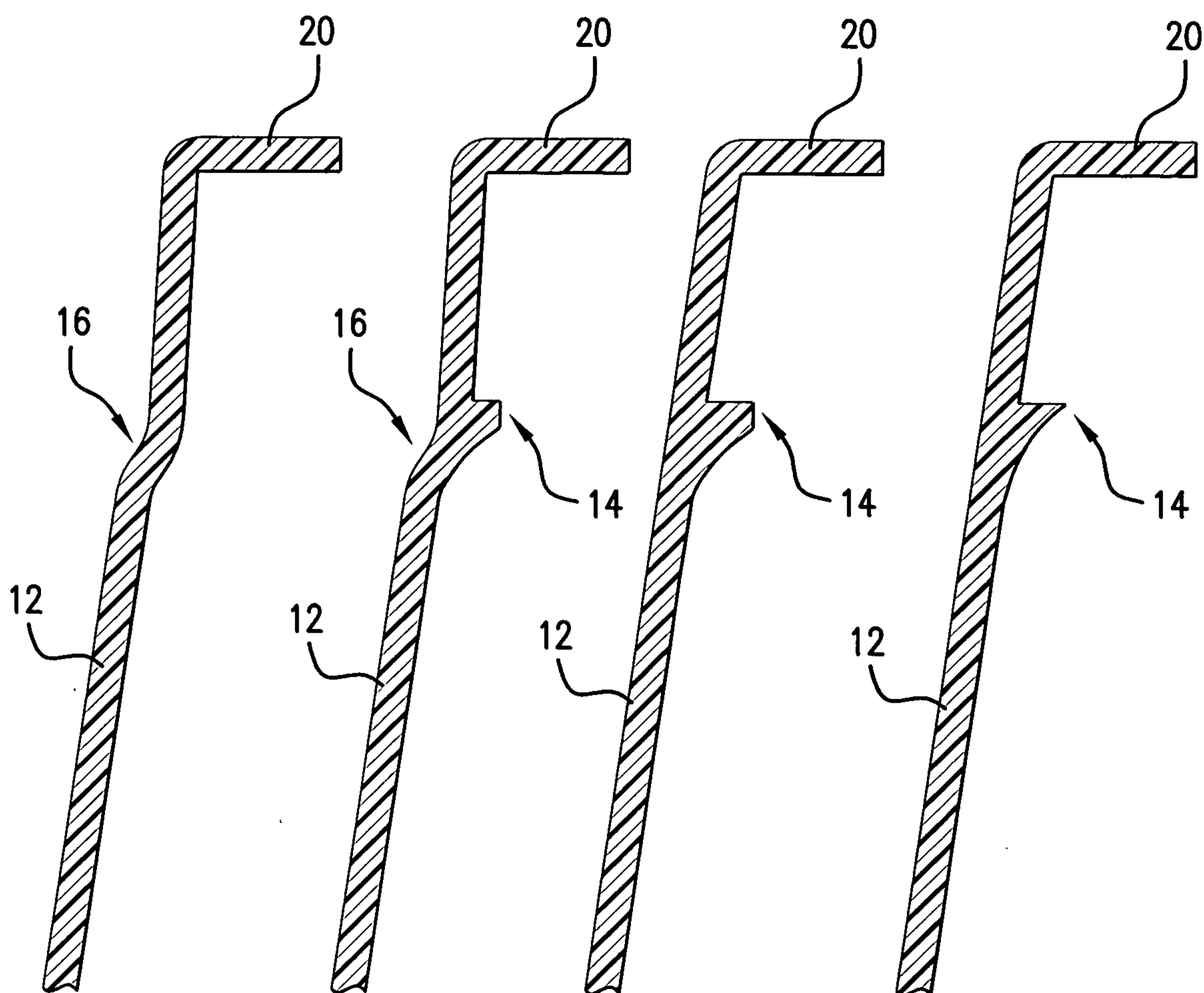


FIG.3A

FIG.3B

FIG.3C

FIG.3D

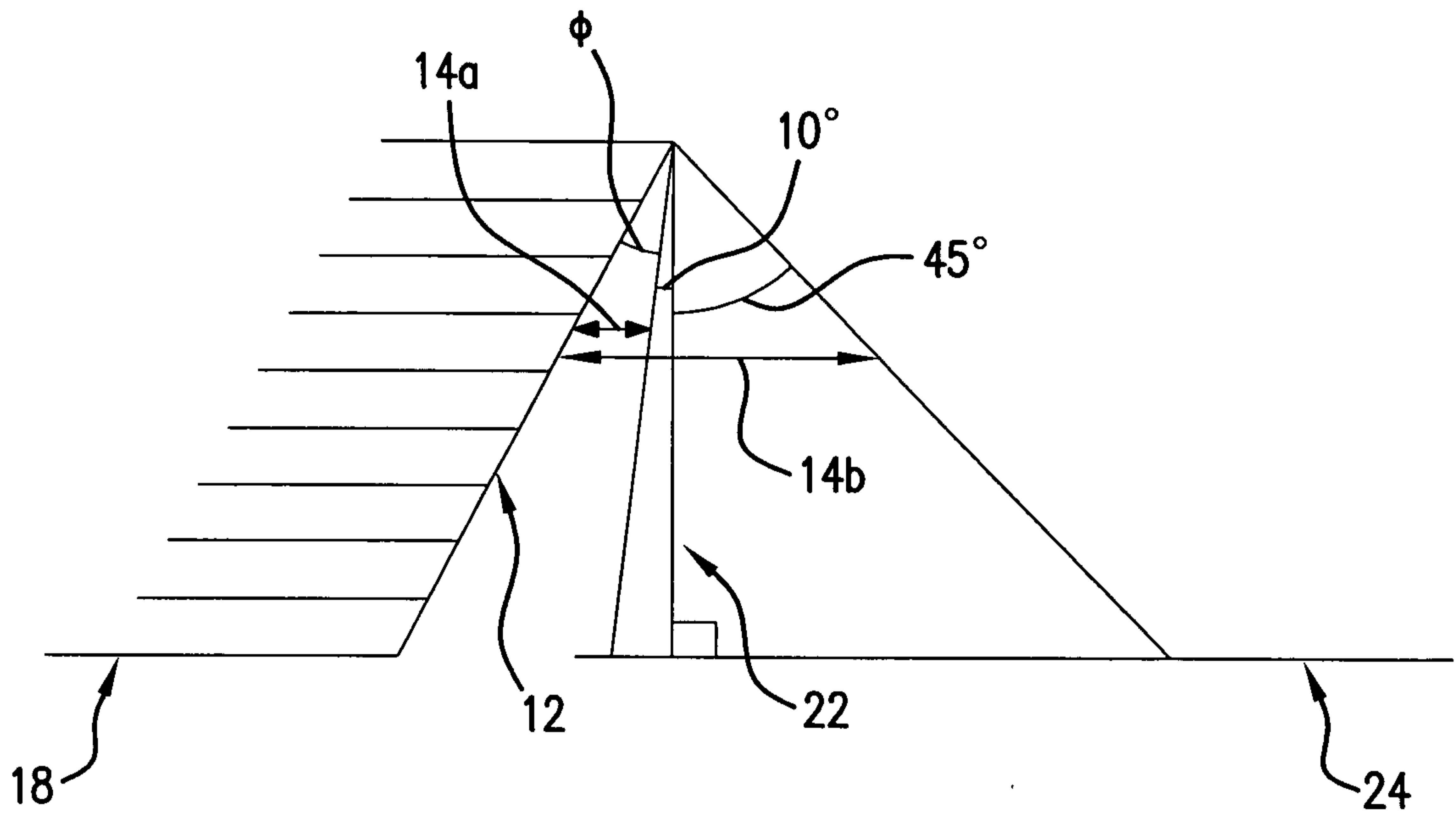


FIG. 4A

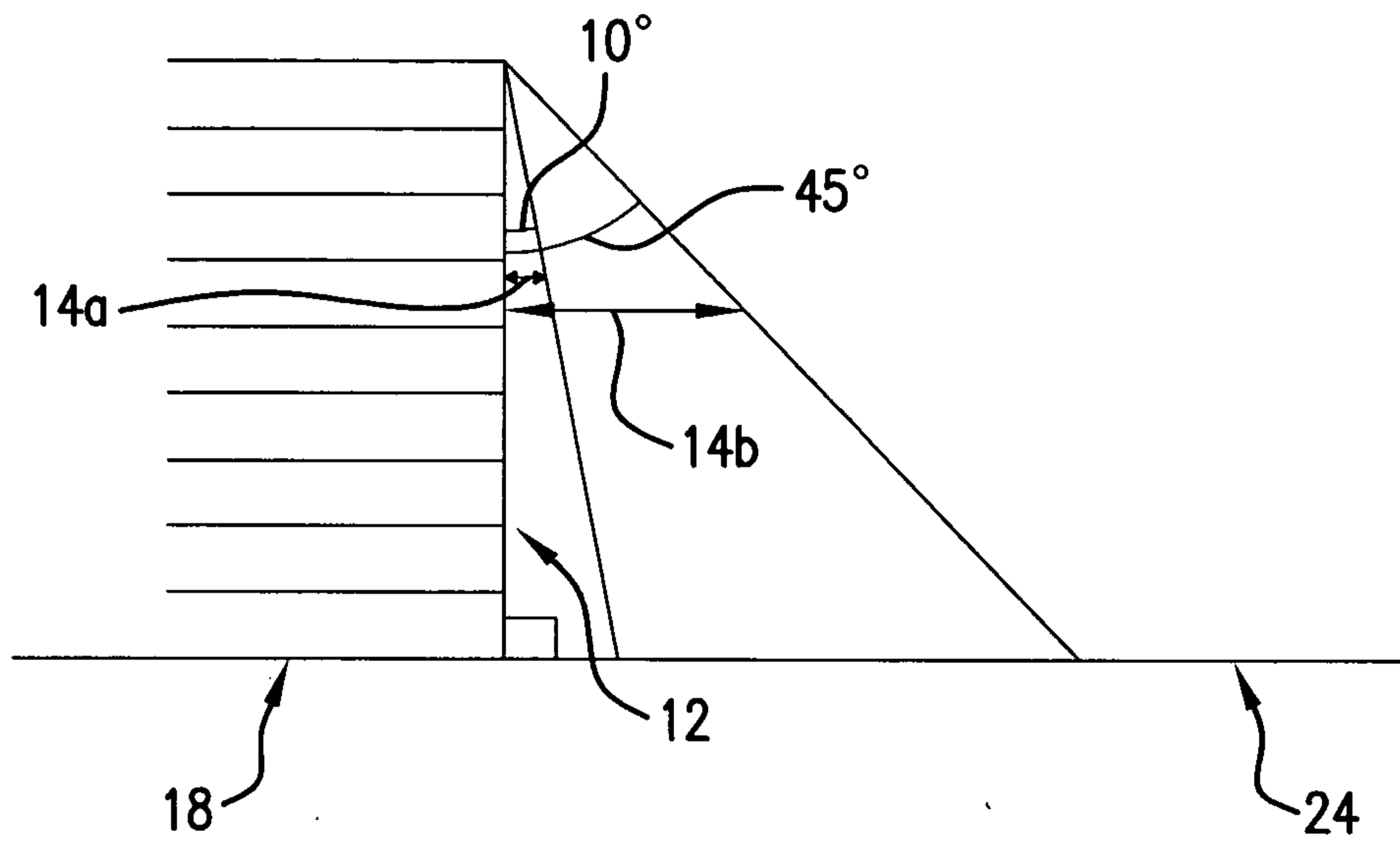


FIG.4B

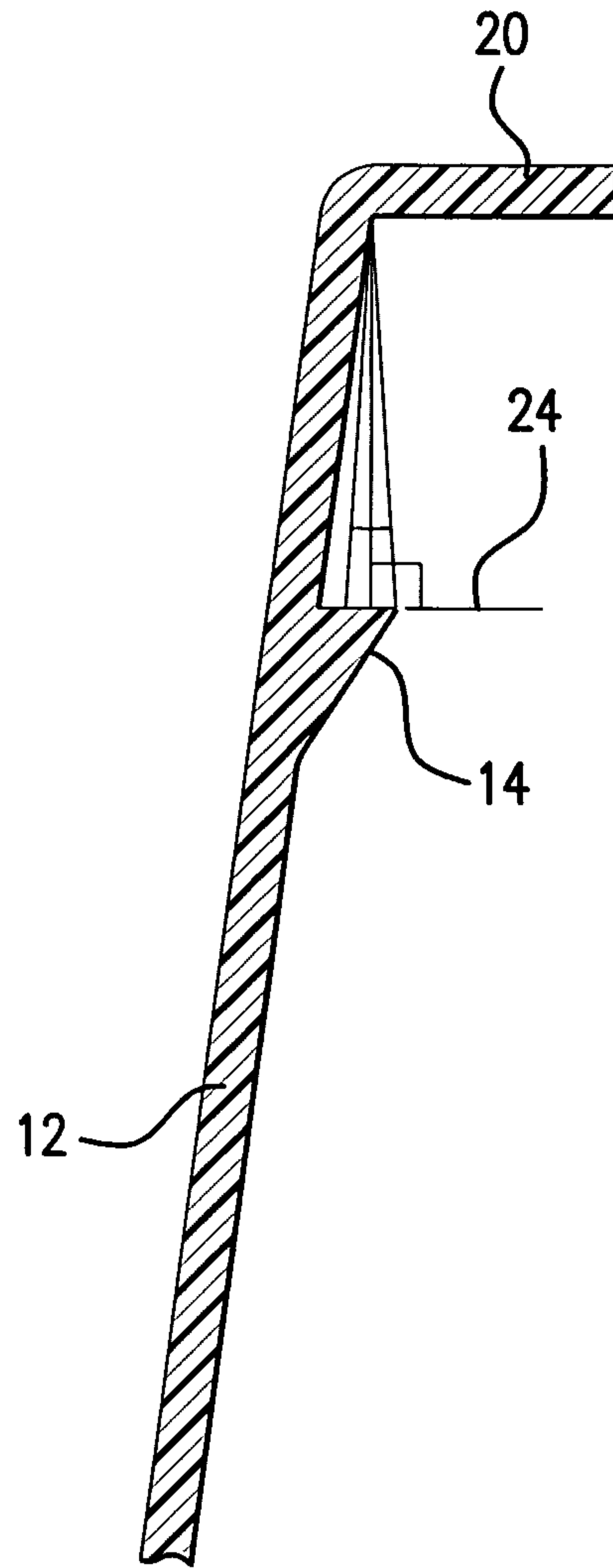


FIG.5

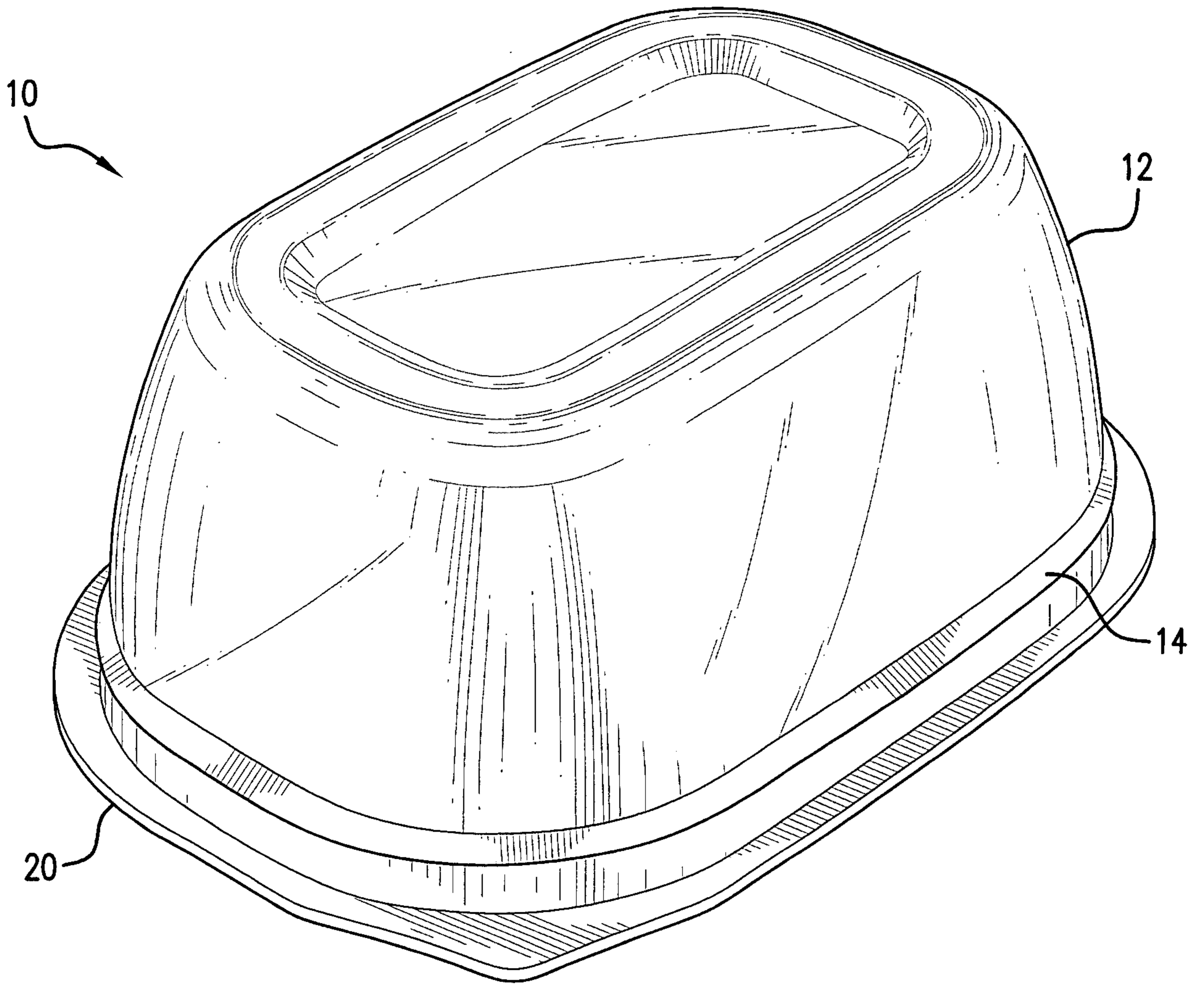


FIG. 1