assembly are fastened to a bottom part or base of a container.

[004] Still other users experience problems with prior art containers that are inadequate for use in circumstances where the ambient air pressure external to the container changes drastically so as to create a significant pressure differential between the sealed interior space of the container and the external, ambient atmosphere. For example, when a container is packaged at a facility at sea-level pressure, and then shipped to consumers located at higher altitudes, the container will have a higher internal pressure, which creates a pressure differential that can be significant. If the pressure differential is large enough, the container may become distended, making it difficult to stack and store, and may even experience a breach, leading to contaminated and wasted product. The opposite situation can occur when containers that are filled and sealed at a higher altitude are shipped to lower altitude users. Upon opening, ambient air can rush into the interior space of the container and contaminate the contents.

[005] When a container having a pressure differential is opened, the contents may again spill due to the very rapid pressure equalization ejecting a cloud of powdered or other type of product contents. Attempts to overcome these disadvantages have included thicker walled containers, which increases weight and material costs, as well as round and cylindrical containers that may have higher hoop stress strength, but which are less efficient and convenient to stack and store on a shelf.

[006] A container is needed that addresses the many issues surrounding prior art containers, and which most importantly offers new and innovative ways to prevent and/or minimize contamination, spillage, and waste of product contained in such containers. A more durable container is needed that incorporates improved rigidity and strength characteristics that can expand the range of acceptable dimensional tolerances and that can adapt to and more readily accommodate unexpected mis-shaped container component profiles.

Summary

[007] Embodiments of ~~T~~the present application ~~describes~~ provide a container for use in packaging, such as for example, a container suitable for use in holding powder infant formula.

~~[008] In an exemplary embodiment, a container has a collar, a lid and a seal. The container includes walls which define an interior space and an opening to the interior space. The~~

[008] According to a first aspect of the present invention, there is provided a container comprising: walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space; a collar attached to the upper portion; a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position; a latch attached to an outer surface of the lid, the latch having an actuator rotatable in two directions relative to the lid and detachably engaged to a catch, the catch protruding from an outside surface of the collar; and a cooperatively shaped engagement block to limit a rotation of a top portion of the actuator in a direction toward the lid.

[008a] According to a second aspect of the present invention, there is provided a container comprising: walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space; a collar attached to the upper portion; a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position; a first protrusion attached to an outer surface of the lid, the first protrusion having an actuator detachably engaged to a second protrusion from an outside surface of the lid; a flexible gasket positioned to extend from an interior surface of the collar to removably rest against the sealing flange and arranged to remain biased against the sealing flange when the lid is in an open position, the flexible gasket having a vertical portion separated from an inwardly protruding portion by a trough.

[008b] According to a third aspect of the present invention, there is provided a container comprising: walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space; a collar attached to the upper portion; a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position; and a latch attached to an outer surface of the lid, the latch having an actuator rotatable in two directions relative to the lid and detachably engaged to a catch, the catch protruding from an outside surface of the collar.

~~collar is attached to the walls. The lid is attached to the collar for positioning between an open position and a closed position, and is adapted to cover the opening while in the closed position. A latching assembly is attached to an outer surface of the container and offers precise user control features which permit the lid is be easily engaged to and disengaged from the collar. The latch assembly may be comprised of two protrusions, one on the lid and one on the collar or container.~~

[009] Further features and advantages of the invention will become apparent from the following detailed description made with reference to the accompanying drawings.

Brief Description of the Drawings

[010] Features and advantages of the general inventive concepts will become apparent from the following detailed description made with reference to the accompanying drawings.

[011] Figure 1 is a front perspective view of a container;

[012] Figure 2 is a front perspective view of the container of Figure 1, shown with a lid of the container in an open position;

[013] Figure 3 is a rear perspective view of the container of Figure 1, shown with a lid of the container in an open position;

[014] Figure 4 is an assembly view of the container of Figure 1, shown with a lid of the container in an open position;

[015] Figure 5 is a bottom perspective view of the lid and collar of Figure 1, shown with the lid of the container in a closed position and a scoop installed;

[016] Figure 6 is a bottom perspective view of the lid of Figure 1;

[017] Figure 7 is a top view of the lid and collar of Figure 1, shown with a lid of the container in an open position;

[018] Figure 8 is a bottom view of the lid and collar of Figure 1, shown with a lid of the container in an open position;

[019] Figure 9 is an enlarged perspective view of the designated circular area of Figure 1;

[020] Figure 10 is an enlarged perspective view of the designated circular area of Figure 2;

What is claimed is:

1. A container comprising:

walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space;

a collar attached to the upper portion;

a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position; and

a latch attached to an outer surface of the lid, the latch having an actuator rotatable in two directions relative to the lid and detachably engaged to a catch, the catch protruding from an outside surface of the collar.

2. The container of claim 1, wherein a top portion of the actuator is rotatable in either direction about a horizontal axis.

3. The container of claim 1, wherein a tooth protrudes from an inside surface of the actuator.

4. The container of claim 3, wherein movement of the tooth in a downward direction beyond the catch produces an audible engagement.

5. The container of claim 1, wherein a rotation of a top portion of the actuator in a direction toward the lid combined with upward lifting of a bottom portion of the actuator disengages the actuator from the catch.

6. The container of claim 1, wherein a rotation of a bottom portion of the actuator in a direction away from the lid disengages the actuator from the catch.

7. The container of claim 1, wherein an inside surface of the actuator in the closed position is remotely disposed from each of an outside surface of the lid and an outside surface of the collar.

8. The container of claim 7, wherein a top portion of the actuator in the closed position is rotatable in either direction relative the lid.

9. The container of claim 1, wherein the lid further comprises a cooperatively shaped engagement block to limit a rotation of a top portion of the actuator in a direction toward the lid.

10. The container of claim 9, wherein the collar further comprises an upwardly protruding flag, the flag positioned to nest behind the engagement block with the lid in the closed position.

11. The container of claim 1, wherein the lid further comprises a bumper on either side of the actuator, each bumper protruding outward from an outer surface of the lid.

12. The container of claim 1, wherein a top portion of the actuator is biased away from the lid when the lid is in the closed position.

13. The container of claim 1, wherein a top portion of the actuator is biased away from the lid when the lid is in the open position.

14. A container comprising:

walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space;

a collar attached to the upper portion;

a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position;

a first protrusion attached to an outer surface of the lid, the first protrusion having an actuator detachably engaged to a second protrusion from an outside surface of the lid;

a flexible gasket positioned to extend from an interior surface of the collar to removably rest against the sealing flange and arranged to remain biased against the sealing flange when the

lid is in an open position, the flexible gasket having a vertical portion separated from an inwardly protruding portion by a trough.

15. The container of claim 14, wherein the vertical portion of the flexible gasket extends to an upper seat surface around a circumference of the collar.

16. The container of claim 14, wherein the flexible gasket projects inwardly to extend beyond the internal edge of the sealing flange.

17. The container of claim 14, further comprising a removable seal extending across the opening and attaching to the sealing flange beneath the flexible gasket, wherein the flexible gasket flexes to enable removal of the removable seal and thereafter flexes back to rest against the sealing flange.

What is claimed is:

1. A container comprising:

walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space;

a collar attached to the upper portion;

a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position;

a latch attached to an outer surface of the lid, the latch having an actuator rotatable in two directions relative to the lid and detachably engaged to a catch, the catch protruding from an outside surface of the collar; and

a cooperatively shaped engagement block to limit a rotation of a top portion of the actuator in a direction toward the lid.

2. The container of claim 1, wherein a top portion of the actuator is rotatable in either direction about a horizontal axis.

3. The container of claim 1, wherein a tooth protrudes from an inside surface of the actuator.

4. The container of claim 3, wherein movement of the tooth in a downward direction beyond the catch produces an audible engagement.

5. The container of claim 1, wherein a rotation of a top portion of the actuator in a direction toward the lid combined with upward lifting of a bottom portion of the actuator disengages the actuator from the catch.

6. The container of claim 1, wherein a rotation of a bottom portion of the actuator in a direction away from the lid disengages the actuator from the catch.

7. The container of claim 1, wherein an inside surface of the actuator in the closed position is remotely disposed from each of an outside surface of the lid and an outside surface of the collar.

8. The container of claim 7, wherein a top portion of the actuator in the closed position is rotatable in either direction relative the lid.

9. The container of claim 1, wherein the collar further comprises an upwardly protruding flag, the flag positioned to nest behind the engagement block with the lid in the closed position.

10. The container of claim 1, wherein the lid further comprises a bumper on either side of the actuator, each bumper protruding outward from an outer surface of the lid.

11. The container of claim 1, wherein a top portion of the actuator is biased away from the lid when the lid is in the closed position.

12. The container of claim 1, wherein a top portion of the actuator is biased away from the lid when the lid is in the open position.

13. A container comprising:

walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space;

a collar attached to the upper portion;

a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position;

a first protrusion attached to an outer surface of the lid, the first protrusion having an actuator detachably engaged to a second protrusion from an outside surface of the lid;

a flexible gasket positioned to extend from an interior surface of the collar to removably rest against the sealing flange and arranged to remain biased against the sealing flange when the

lid is in an open position, the flexible gasket having a vertical portion separated from an inwardly protruding portion by a trough.

14. The container of claim 13, wherein the vertical portion of the flexible gasket extends to an upper seat surface around a circumference of the collar.

15. The container of claim 13, wherein the flexible gasket projects inwardly to extend beyond the internal edge of the sealing flange.

16. The container of claim 13, further comprising a removable seal extending across the opening and attaching to the sealing flange beneath the flexible gasket, wherein the flexible gasket flexes to enable removal of the removable seal and thereafter flexes back to rest against the sealing flange.

17. A container comprising:

walls defining an interior space and an upper portion, the upper portion defining a sealing flange having an internal edge which defines an opening to the interior space;

a collar attached to the upper portion;

a lid attached to the collar for positioning between an open position and a closed position, and adapted to cover the opening while in the closed position; and

a latch attached to an outer surface of the lid, the latch having an actuator rotatable in two directions relative to the lid and detachably engaged to a catch, the catch protruding from an outside surface of the collar.

18. The container of claim 17, wherein a rotation of a top portion of the actuator in a direction toward the lid combined with upward lifting of a bottom portion of the actuator disengages the actuator from the catch.

19. The container of claim 17, wherein a rotation of a bottom portion of the actuator in a direction away from the lid disengages the actuator from the catch.

20. The container of claim 17, wherein an inside surface of the actuator in the closed position is remotely disposed from each of an outside surface of the lid and an outside surface of the collar.

21. The container of claim 17, wherein the lid further comprises a cooperatively shaped engagement block to limit a rotation of a top portion of the actuator in a direction toward the lid.

22. The container of claim 21, wherein the collar further comprises an upwardly protruding flag, the flag positioned to nest behind the engagement block with the lid in the closed position.

23. The container of claim 17, wherein the lid further comprises a bumper on either side of the actuator, each bumper protruding outward from an outer surface of the lid.

24. The container of claim 17, wherein a top portion of the actuator is biased away from the lid when the lid is in the closed position.

25. The container of claim 17, wherein a top portion of the actuator is biased away from the lid when the lid is in the open position.