

146 of 172 DOCUMENTS

UNITED STATES PATENT AND TRADEMARK OFFICE PRE-GRANT
PUBLICATION

20030183548

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October 2, 2003

PACKING CAPSULE

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APPL-NO: 249360 (10)

FILED-DATE: April 2, 2003

LEGAL-REP: GREENBERG & LIEBERMAN - 314 PHILADELPHIA AVE., TAKOMA PARK, Maryland, 20912

PUB-TYPE: October 2, 2003 - Utility Patent Application Publication (A1)

PUB-COUNTRY: United States (US)

REL-DATA:

Provisional Application Ser. No. 60319164, April 2, 2002, PENDING

US-MAIN-CL: 206#503

CL: 206

IPC-MAIN-CL: [7] B65D 021#00

IPC-ADDL-CL: [7] B65D 085#62

ENGLISH-ABST:

A capsule having two halves and each half having a locking mechanism. Each half has an extended diameter at the edge to allow for the locking mechanism and to provide that each half can stack upon itself for easy shipping. The dome shape of each half of the capsule can be stacked on like halves for shipping in a straight stack. The extended diameter allows each half of the same type to stack with a friction point directly above the step on each half and allows the user to stack in a straight pile for shipping. Below each step on each half is an extended rim, and a locking mechanism. A user can place any small object such as a toy in the upper and lower half for vending or storage.

EXMPL-FIGURE: 1

NO-DRWNG-PP: 5

DETDESC:**CROSS REFERENCE TO RELATED APPLICATIONS**

Priority is claimed to application Ser. No. 60/319,164 filed on Apr. 2, 2002.

BACKGROUND OF INVENTION**1. Field of the Invention**

The present invention is a packing capsule for use in vending machines for toys or other novelty items, having two halves to a dome or sphere that are interlocking by ridges along the diameter.

2. Background of the Invention

Vending machines have been available in most convenience or super stores for vending candy, stamps, cleaning agents such as detergents, and children's toys, among other novelty items. There are also several different crane devices in place for children or their parents to attempt to grab the toy with the crane, and drop it in a receptacle for the child to receive the toy. Many of these vending machines require that the toy or other novelty item be enclosed in a capsule to keep the prize or toy intact while passing through the machinery or being grabbed by the crane device.

There are egg shaped devices available for holding the toys or other novelty items. The egg shaped devices normally have one half that has a smaller diameter on the rim than the second half so the egg can close together easily around an item. These devices are unlike the present invention because they do not have an extended diameter at the rim, and they do not have locking mechanisms on each half. Additionally, the egg shaped devices are elliptical in shape, not circular and they cannot stack in a stable manner for shipping due to the friction points of each curvature of each half having the same diameter and therefore needing to share the same physical space upon shipping.

There are also spherical capsules available which join in the same manner as the egg shaped devices. These capsules are unlike the present invention because they do not have locking mechanisms on each half, and they cannot easily be stacked for shipping.

U.S. Pat. No. 3,882,316 issued to Garris on May 6, 1975 shows a quality control monitor for medicinal capsule packaging apparatus. Garris' invention is unlike the present invention because it is a method for sending photoelectric rays through medicinal capsules to determine if the capsules are fit to hold medicine. It does not provide a means to create capsules for packaging, or capsule halves with friction points for ease in shipping or stacking. Additionally it does not provide locking mechanisms between capsule halves.

U.S. Pat. No. 4,201,300 issued to Klingaman, et al., on May 6, 1980 shows a capsule package. Klingaman's invention is unlike the present invention because it is a capsule for holding detergent, it is not spherical, and does not provide a frictional point for stacking capsule halves for shipping and the like.

European Patent no. 0 520 270 A1 issued to Hasleberg, on Jun. 13, 1992 shows a means for assembling a longitudinal body. Hasleberg's invention is unlike the present invention because it is shaped in a longitudinal cylindrical shape, it does not have two halves having a locking mechanism, and it does not provide a friction point on each half to allow for efficient shipping and storage.

U.S. Pat. No. 5,221,007 issued to Foos on Jun. 22, 1993, show a telescoping capsule package for supporting fragile article. Foos' invention is unlike the present invention because it is not a spherical

shipping or packaging body, and it does not provide a shipping container with frictional points to ease shipping of multiple empty containers.

U.S. Pat. No. 5,637,335 issued to Fond, et al., on Jun. 10, 1997 shows a capsule package containing roast or ground coffee. Fond's invention is unlike the present invention because it is a flow through package for brewing coffee, it could not be used for shipping in an enclosed and non-porous environment, and it is no spherical in shape.

Therefore a need has been established for a capsule, which is spherical in shape, has locking mechanisms on each half, and can be easily stacked for bulk shipping purposes.

SUMMARY OF INVENTION

The present invention is a capsule having two halves and each half having a locking mechanism. Each half has an extended diameter at the edge to allow for the locking mechanism and to provide that each half can stack upon itself for easy shipping. The dome shape of each half of the capsule can be stacked on like halves for shipping in a straight stack.

The extended diameter allows each half of the same type to stack with a friction point directly above the step on each half and allows the user to stack in a straight pile for shipping. Below each step on each half is an extended rim, and a locking mechanism. The diameter at the rim of the lower half is slightly larger than the diameter at the rim of the upper half to allow the upper half's locking mechanism to fit below the locking mechanism of the lower half. A user can place any small object such as a toy in the upper and lower half for vending or storage.

BRIEF DESCRIPTION OF DRAWINGS

FIG. 1 shows a cut away view of many upper halves stacked on each other, as for shipping.

FIG. 2 shows a cut away view of many lower halves stacked on each other, as for shipping.

FIG. 3 shows a close up view of the locking mechanisms of the upper half and the lower half.

FIG. 4 shows a view of the upper half connected to the lower half.

DETAILED DESCRIPTION

The present invention is a spherical capsule to hold items for shipping or prior to purchase. The capsule has two halves, an upper and a lower half, that lock together for secure closure. The upper and lower halves each have steps at the rim, which provide a locking mechanism and an easy stacking means.

FIG. 1 shows many upper halves (10) stacked on each other, as for shipping. There is a step (40) on each side of the upper half (10). In an alternative embodiment, step (40) can entirely encircle the circumference of upper half (10). The step (40) extends the curvature of the upper half (10). The center (20) of the curvature extends in a downward angle to friction point (30). When stacked the upper halves (10) meet at the friction point (30) on each side. The step (40) allows the user to stack the upper halves (10) and provides a release from the friction point (30). The step (40) allows an extension of the curvature from the center (20) without the upper halves (10) having to share the same physical space upon stacking. The step (40) extends to the rim (50) of the upper half (10) and includes the locking mechanism, to be explained in detail later, for the upper half (10) and the lower half (FIG. 2, 100).

FIG. 2 shows many lower halves (100) stacked on each other as for shipping. There is a step (140) on each side of the lower half (100) for ease in stacking, and to extend the curvature of the half (100) from the center (120) to the rim (150). In an alternative embodiment, step (140) can entirely encircle the circumference of lower half (100). There is also

a friction point (130) created from stacking the lower halves (100), which keeps the stack even and from tilting from side to side during shipping. The step (140) allows an extension from the center (120) of the curvature through the friction point (130) so the lower halves (100) do not have to share the same physical space at the base. The step (140) extends to the rim (150) and includes the locking mechanism, to be explained in detail later, for the upper half (FIG. 1, 10) and the lower half (100).

FIG. 3 shows a close up view of the upper locking mechanism (55) of the upper half (10) as attached to the locking mechanism (155) of the lower half (100). The rim (50) of the upper half (10) extends in a horizontal manner to the locking mechanism (55) of the upper half (10). The rim (150) of the lower half (100) extends horizontally to the locking mechanism (155) of the lower half. The rim (150) of the lower half (100) is of a greater diameter than the rim (50) of the upper half (10), to allow the locking mechanism (55) of the upper half (10) to fit securely under the locking mechanism (155) of the lower half (100). FIG. 4 shows a complete view of the upper half (10) connected to the lower half (100).

In alternate embodiments of the spherical capsule, the curvature of the upper half (10) and lower half (100) can have indentations in a "V" shape at even points along the arc of the curve. In this embodiment the steps (40, 140) on the upper half (10) and lower half (100) are not needed to create the friction points (30, 130) for stackable shipping. The "V" indentations create a break in the arc at a certain point, and create a curvature in which the halves (10, 100) can be stacked on like halves for shipping purposes. Another embodiment of the spherical capsule has an elongated curvature for the lower half (100) of the capsule and a shortened curvature for the upper half (10). Any embodiment of the spherical capsule is feasible as long as the friction points (30, 130) can be attained when stacking like halves on each other.

The present invention is not limited to the sole embodiments described above, but encompasses any and all embodiments of the following claims.

ENGLISH-CLAIMS:

Return to Top of Patent

1. A stackable device, comprising: an upper dome, having a first section and a second section; at least one point disturbing the normal slope of said upper dome, wherein said at least one point divides said upper dome into said first section and said second section; and wherein said second section has a greater circumference than said first section.
2. A stackable device as in claim 1, wherein said upper dome is a hemisphere.
3. A stackable device as in claim 1, further comprising a lower dome removably communicating with said upper dome.
4. A stackable device as in claim 3, wherein the largest circumference of said lower dome is smaller than the largest circumference of said upper dome.
5. A stackable device as in claim 4, wherein said upper dome communicates with said lower dome via a locking mechanism.
6. A stackable device as in claim 1, wherein said upper dome can communicate with another identical upper dome via said at least one point.
7. A stackable device as in claim 3, wherein said lower dome has a lower first section and a lower second section; at least one lower point disturbing the normal slope of said lower dome, wherein said at least one lower point divides said lower dome into said lower first section and said lower second section; and wherein said lower second section has a greater circumference than said lower first section.

249360 (10) 20030183548 (Note: This is a Patent Application only.)

8. A stackable device as in claim 7, wherein said lower dome can communicate with another identical lower dome via said at least one lower point.

LOAD-DATE: April 11, 2006