

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
21 June 2007 (21.06.2007)

PCT

(10) International Publication Number  
**WO 2007/070867 A2**

(51) International Patent Classification:  
**B65D 83/04** (2006.01)

(21) International Application Number:  
PCT/US2006/062152

(22) International Filing Date:  
15 December 2006 (15.12.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/751,080 16 December 2005 (16.12.2005) US

(71) Applicant (for all designated States except US): **MEAD-WESTVACO CORPORATION** [US/US]; 11013 West Broad Street, Glen Allen, Virginia 23060 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **GELARDI, John, A.** [US/US]; P.O. Box 714, Rocky Pasture Lane, Kennenbunkport, Maine 04046 (US). **MOWERY, Jeremy, D.** [US/US]; 6811 Crescent Moon Ct., Apt. 202, Raleigh, North Carolina 27606 (US).

(74) Agents: **KNOWLTON, Paul, E.** et al.; PARKS KNOWLTON LLC, 1117 Perimeter Center West, Suite E402, Atlanta, Georgia 30338 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

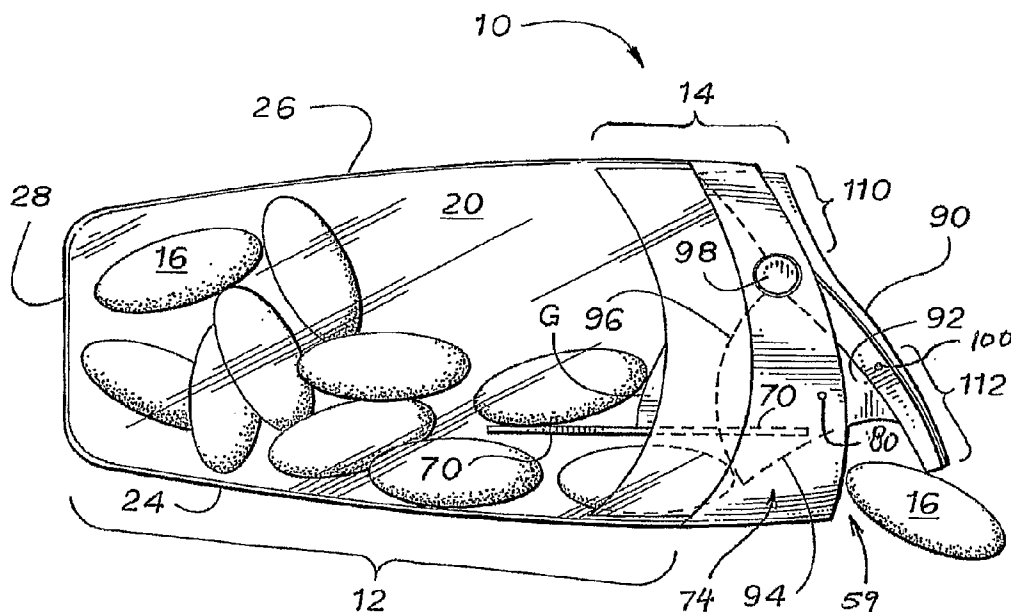
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

[Continued on next page]

(54) Title: CHILD RESISTANT DISPENSER



(57) Abstract: A dispenser (10) includes a container (12) and a dispensing cap (14) that is attached to an open end (30) of the container (12). The dispensing cap (14) includes a base portion (40) that defines a compartment (74) for receiving a quantity of items from the container (12) and a rotating portion (42) that includes an ejecting fin (92). The rotating portion (42) can rotate such that the ejecting fin (92) can contact a quantity of items in the compartment (74) so as to dispense the quantity of items through an open end of the compartment (74).

WO 2007/070867 A2



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## **CHILD RESISTANT DISPENSER**

### **CROSS REFERENCE TO RELATED APPLICATIONS**

- 5           This application claims priority to U.S. Provisional Application No. 60/751,080, filed December 16, 2005, the entirety of which is incorporated herein by reference.

### **TECHNICAL FIELD**

- 10           This invention relates generally to dispensers and, more specifically, to loose fill dispensers that include child safety features.

### **DESCRIPTION OF THE RELATED ART**

- 15           Loose fill dispensers are a convenient packaging format for many applications. For example, loose fill dispensers are useful for dispensing candy, mints, gumballs, and other loose fill items. Loose fill dispensers are also useful for users that get prescriptions filled since the dispensers are refillable and reusable.

- 20           However, in dispensing applications that include pills, tablets, and other medicaments, using loose fill dispensers presents a problem in that children can easily access the items contained within the dispenser. Thus, in such dispensing applications, it is desirable to have a loose fill dispenser that includes child resistant features.

- 25           Another problem associated with loose fill dispensers, for example, in prescription applications, is that the loose fill dispensers are not configured to provide a unit dose. Rather, the user is required to pour out a quantity of the items contained therein and return the excess amount to the container. Thus, it is desirable to have a loose fill dispenser that dispenses a unit dose.

What is needed is a loose fill dispenser that is easy to operate, includes child resistant features, and is configured to dispense a unit dose.

### BRIEF SUMMARY OF THE INVENTION

5           The various embodiments of the present invention overcome the shortcomings of the prior art by providing a dispenser that includes an improved dispensing cap. The improved dispensing cap is received in and attached to an open end of a container of loose fill items. The dispensing cap includes a measuring compartment that is configured to receive an item or quantity of items  
10       from the loose fill container of the dispenser. The dispensing cap also includes a moving or rotating portion with an attached fin or wedge element. This fin can be inserted into the measuring compartment to contact, isolate, and dispense the quantity of items. Further the fin blocks additional items from entering the measuring compartment.

15           According to an exemplary embodiment, a dispenser includes a dispensing cap that is secured to the open end of a container. The dispensing cap includes a base portion that defines a compartment or chamber in which an item or quantity of items from the container can be received. A rotating portion is pivotally attached to the base portion. The rotating portion includes an ejecting  
20       fin that is dimensioned and positioned to be inserted into the compartment, to contact and isolate an item that is received in the compartment, and to move the item toward or through an open end of the compartment.

          The rotating portion also includes a cover portion. The cover portion is positioned to cover, close, or obstruct the open end of the compartment as items  
25       are aligned in a path and urged into the compartment. The cover portion is removed from the open end of the compartment as the rotating portion is rotated to provide an opening through which the items in the compartment can exit the compartment. Since the cover portion and the ejecting fin are integral to the rotating portion, the ejecting fin is inserted into the compartment, the cover

portion is removed from the open end of the compartment, and the item or quantity of items is dispensed from the compartment in a single action.

The exemplary dispenser includes a safety feature or mechanism that prevents the rotating portion from freely rotating or otherwise fixes the position of the rotating portion. The exemplary safety feature is a cantilever that contacts an edge of the dispenser. To release the safety feature, the cantilever can be deflected inwardly to be displaced from the edge of the dispenser and thereafter the rotating portion can rotate and the dispenser can be operated.

In the exemplary embodiment, the compartment is at least partially defined by a separation wall, which is offset from a side wall of the container and extends between front and back walls of the container. The exemplary separation wall extends into the container to define a path that precedes or leads to the compartment. In alternative embodiments, such as where the loose fill container has a wide shoulder or is a round bottle, the compartment may be at least partially defined by a plurality of separation walls. Further, a slot is disposed in the separation wall such that the fin can be inserted through the slot and into the compartment, as described above.

The foregoing has broadly outlined some of the aspects and features of the present invention, which should be construed to be merely illustrative of various potential applications of the invention. Other beneficial results can be obtained by applying the disclosed information in a different manner or by combining various aspects of the disclosed embodiments. Accordingly, other aspects and a more comprehensive understanding of the invention may be obtained by referring to the detailed description of the exemplary embodiments taken in conjunction with the accompanying drawings, in addition to the scope of the invention defined by the claims.

### BRIEF DESCRIPTION OF THE DRAWINGS

**FIG. 1** is a perspective view of an exemplary embodiment of a dispenser, the dispenser being in the closed position, according to the present invention.

**FIG. 2** is a side elevation view of the dispenser of **FIG. 1**, the dispenser being in the open position.

**FIG. 3** is an exploded side elevation view of the dispenser of **FIG. 1**.

**FIG. 4** is a plan view of a dispensing cap base of the dispenser of **FIG. 1**.

5 **FIG. 5** is a perspective view of the dispensing cap base of **FIG. 4**.

**FIG. 6** is an exploded sectional view of an alternative embodiment of a dispenser, according to the present invention.

**FIG. 7** is an exploded sectional view of a dispensing cap of the dispenser of **FIG. 6**.

10 **FIGs. 8** is a partially exploded perspective view of the dispensing cap of **FIG. 6**.

**FIG. 9** is a perspective views of the dispensing cap of **FIG. 6**.

#### DETAILED DESCRIPTION

15 As required, detailed embodiments of the present invention are disclosed herein. It must be understood that the disclosed embodiments are merely exemplary of the invention that may be embodied in various and alternative forms, and combinations thereof. As used herein, the word "exemplary" is used  
20 expansively to refer to embodiments that serve as an illustration, specimen, model or pattern. The figures are not necessarily to scale and some features may be exaggerated or minimized to show details of particular components. In other instances, well-known components, systems, materials or methods have not been described in detail in order to avoid obscuring the present invention. Therefore, specific structural and functional details disclosed herein are not to be  
25 interpreted as limiting, but merely as a basis for the claims and as a representative basis for teaching one skilled in the art to variously employ the present invention.

Referring now to the drawings, in which like numerals indicate like elements throughout the several views, the drawings illustrate certain of the various aspects of exemplary embodiments of a loose fill dispenser. Generally described, the dispenser includes a loose fill container and a dispensing cap.

5 The dispensing cap is arranged to measure and dispense or eject a quantity of the contents of the dispenser when operated. The dispensing cap further includes child resistant features such that a coordinated set of operations are required to operate the dispensing cap and dispense the contents.

Referring to **FIGs. 1-3**, an exemplary embodiment of a dispenser **10** includes an open-ended container **12** and a dispensing cap **14**. In the exemplary embodiment, the elements of the dispenser **10** are arranged or configured to dispense tablets **16** one at a time. The exemplary tablets **16** are substantially oval-shaped. It should be noted that, in alternative embodiments, the dispenser **10** can be arranged, scaled, or dimensioned to dispense items that have a different dimension or shape than that of the exemplary tablets **16** or to dispense more than one of the tablets **16** or of other items. For example, the dispenser **10** can be configured to dispense items that are round or spherical, elliptical, square, caplet-shaped, capsule-shaped, pill-shaped, combinations thereof, and the like.

The exemplary container **12** includes a tubular structure that is defined by a front wall **20**, a back wall **22**, and side walls **24**, **26**. One of the ends of the tubular structure is enclosed by a bottom wall **28** and the other of the ends is an open end **30** that includes an edge **E1**. Referring to **FIGs. 1** and **3**, the side walls **24**, **26** include apertures or recesses **32** that are disposed near the open end **30**. The recesses **32** are dimensioned and positioned to receive detents so as to provide means for securing, as described in further detail below.

The container **12** can be formed from any suitable material and by any suitable process. In the exemplary embodiment, the container **12** is formed from a transparent or translucent material such that the tablets **16** are viewable to facilitate the dispensing operation, as described in further detail below. However, in alternative embodiments, as an additional child resistance feature, the material from which the container **12** is formed can be opaque. It should be noted that the

container **12** can constrain the orientation of the contents of the dispenser **10** to aid in the dispensing operation. For example, the container **12** can be dimensioned such that the tablets **16** remain in sliding contact with the front and back walls **20**, **22**.

5 Referring to **FIGs. 3-5**, the dispensing cap **14** includes a base portion **40** and a rotating portion **42**. The base portion **40** includes elements that define a path through which the tablets **16** can exit the container **12**. Additionally, the base portion functionally receives the rotating portion **42**. The base portion **40** includes a tubular structure defined by a front wall **50**, a back wall **52**, and side  
10 walls **54**, **56**. The bottom end of the tubular structure of the base portion **40** includes an opening **57** and a bottom wall **58** that partially encloses the bottom end of the tubular structure. The top end of the tubular structure is an open end **60** that is defined by an edge **E3**.

In the illustrated embodiment, a lower portion **62** of the base portion **40** is  
15 dimensioned such that the lower portion **62** can be received in the open end **30** of the container **12**. An upper portion **64** of the base portion **40** is dimensioned such that the outer surface of the upper portion **64** is outwardly offset from the outer surface of the lower portion **62** and such that an edge **E2** is defined by the offset lower and upper portions **62**, **64**. The lower portion **62** of the side walls **54**, **56**  
20 include detents **68** that are dimensioned and positioned to be received in and engage the recesses **32** of the container **12**, as described in further detail below.

The base portion **40** further includes a separation wall **70** that is disposed between, and substantially parallel to, the side walls **54**, **56** so as to extend longitudinally through the tubular structure of the base portion **40**. The separation  
25 wall **70** extends between, and substantially perpendicular to, the front wall **50** and the back wall **52**. A lower end of the separation wall **70** extends from the bottom wall **58**. The separation wall **70** defines the border between the bottom wall **58** and the opening **57**. In alternative embodiments, such as a container **12** with an offset or wide shoulder at the open end **30** or a circular cross-section, the base  
30 portion **40** can include a plurality of separation walls **70**.

The size of the opening **57** and the position of the separation wall **70**, including the distance that the separation wall **70** is offset from the side wall **58**, are design decisions that are at least partially based on the dimensions and shape of the tablets **16**. The portion of the separation wall **70** that extends within the tubular structure of the base portion **40** partitions the space inside the tubular structure into a measuring chamber or compartment **74** and a rotating space **76**. The illustrated measuring compartment **74** is at least partially defined by the separation wall **70**, the side wall **54**, portions of the front and back walls **50**, **52**, the opening **57**, and an open end **59**. The illustrated rotating space **76** is at least partially defined by the separation wall **70**, the bottom wall **58**, the side wall **56**, and portions of the front and back walls **50**, **52**.

The base portion **40** further includes elements that receive and rotatably engage the rotating portion **42**. The front and back walls **50**, **52** include apertures **78** that are dimensioned and positioned to receive axial protrusions and that are aligned along an axis about which the rotating portion **42** rotates, as described in further detail below. The front and back walls **50**, **52** further include retaining apertures **80** that are dimensioned and positioned to receive detents, as described in further detail below.

A vertical slot **84** is disposed in the separation wall **70**. Here the vertical slot **84** extends from the upper end of the separation wall **70** to a second point below the bottom wall **58**. A substantially horizontal slot **86** is disposed in the bottom wall **58**. The horizontal slot **86** extends from the separating wall **70** toward the side wall **56**. The horizontal slot **86** and the vertical slot **84** are substantially coplanar and intersect where the bottom wall **58** meets the separating wall **70**.

Referring to **FIGs. 1-3**, the rotating portion **42** includes a lever **90** that functions as a pivotal lid and a wedge element or ejecting fin **92** that extends from the bottom surface of the lever **90**. The ejecting fin **92** includes a first edge **94** and a second edge **96** that are designed to be operable as described in further detail below. The lever **90** includes axial protrusions **98** that are dimensioned and positioned to be received in the apertures **78**, and detents **100** that are

dimensioned and positioned to be received in the retaining apertures **80**. The lever **90** can include a contact portion **110** and a cover portion **112** that function as described in further detail below. The lever **90** further includes elements of a safety feature or mechanism. The exemplary safety feature is a safety cantilever  
5 **114** that is defined by cuts **116**, as described in further detail below.

The dispenser **10** can be assembled according to the following non-limiting method. The dispenser cap **14** can be assembled as the rotating portion **42** is received in the open end **60** of the base portion **40**. Specifically, the axial protrusions **98** are received in respective apertures **78**. Thereby, the rotating  
10 portion **42** is pivotally connected to the base portion **40**. The dispensing cap **14** can be assembled with the container **12** as the lower portion **62** of the base portion **40** is received in the open end **30** of the container **12**. The lower portion **62** of the base portion **40** is inserted into the open end **30** of the container **12** until the edge **E1** at the open end **30** of the container **12** contacts the edge **E2** of the  
15 base portion **40** and the detents **68** are received in the apertures **32**. The dispensing cap **14** is thereby secured to the container **12** to form the dispenser **10**.

In alternative embodiments various means for securing the dispensing cap **14** to the container **12** are contemplated, including, but is not limited to, screw  
20 caps, ring tops, push tops, mechanical fasteners, chemical bonding, glue or other adhesive, threaded ends, snap in mechanisms or structures, press fitting, combinations thereof, and the like. In other embodiments, at least a portion of the dispensing cap can be integral to the container.

Thereafter, the outside surfaces of the lower portion **62** of the walls **50**, **52**,  
25 **54**, **56** of the base portion **40** are adjacent to or in contact with the inside surfaces of the walls **20**, **22**, **24**, **26** of the container **12**, respectively. Further, the lower end of the separating wall **70** extends into the container **12** to define a path in which items are aligned prior to migrating or being urged into the measuring compartment **74**.

The ejecting fin **66** is coplanar with the slots **84**, **86** and can rotate from the rotating space **76** into the measuring compartment **74** or otherwise can be inserted into the measuring compartment **74**. Guides **G**, located proximate to where the slots **84**, **86** connect with one another, can be provided so as to extend  
5 from the bottom wall **58** of the base portion **40** to prevent tablets **16** in the container **12** from contacting the second edge **70** of the ejecting fin **92** as the ejecting fin **92** is disposed in the horizontal slot **86**.

The cover portion **112** of the lever **90** provides the means for opening and closing the dispensing open end **59** of the measuring compartment **74**.  
10 Specifically, when the lever **90** is in the closed position, the cover portion **112** closes, obstructs, or covers the dispensing open end **59** of the measuring compartment **74**. When the lever **90** is rotated, the cover portion **112** is displaced to uncover the dispensing open end **59** of the measuring compartment **74**.

Referring to **FIG. 1**, when the dispensing cap **14** is in the closed position,  
15 the rotating portion **42** is releasably locked in place by the safety feature or mechanism. Specifically, the free end of the safety cantilever **114** is obstructed by or contacts the edge **E3** of the open end **60** and the cover portion **112** is obstructed by a top edge of the separation wall **70** (best shown in **FIG. 2**). Thus, the rotating portion **42** is constrained or otherwise substantially unable to rotate  
20 relative to the base portion **40**. Further, in the closed position, the detents **100** are releasably engaged in respective retaining apertures **80** to additionally secure the rotating portion **42**. In the closed position, the ejecting fin **90** is disposed in the rotating space **76** and the lever **90** covers the open end **60** of the base portion **40**.

25 In the exemplary embodiment, the dispenser **10** is operable to measure and dispense the tablets **16** one at a time. Beginning with the dispensing cap **14** in the closed position, the dispenser **10** is rotated, operated, oriented or otherwise turned to align a tablet **16** from the container **12** in a path or chute that is at least partially defined by the lower end of the separation wall **70** that extends into the  
30 container **12**. The tablet **16** is urged along the path, through the opening **57**, and into the measuring compartment **74**.

The tablet **16** can then be dispensed by the dispenser **10** with a single pivotal action after the safety feature is released or operated. To release the safety feature, the safety cantilever **114** is deflected inwardly. While the safety cantilever **114** is deflected inwardly, the contact portion **110** is pressed into the rotating space **76** to dispense the tablet **16**. The rotating portion **42** is thereby rotated about the axis defined by the apertures **78** and axial protrusions **98** such that the cover portion **112** rotates from the open end **60** of the base portion **26** to form an opening through which the tablet **16** can exit the dispenser **10**.  
Simultaneously, the ejecting fin **92** rotates through the slots **84**, **86** and is inserted into the measuring compartment **74** such that first edge **94** of the ejecting fin **92** contacts and isolates the tablet **16**. The tablet **16** is thereafter dispensed from the measuring compartment **74** through the opening. The second edge **96** of the ejecting fin **92** obstructs additional tablets **16** from entering the measuring compartment **74** such that only the tablet **16** in the measuring compartment **74** is dispensed.

In the exemplary embodiment, the rotating portion **42** provides means for inserting the wedge element or ejecting fin **92** into the measuring compartment **74** such that the leading edge **94** of the ejecting fin **92** rotates into the measuring compartment **74**. In alternative embodiments, means for inserting the wedge element into the measuring compartment can include a moving portion such that the leading edge of the wedge element slides or translates into the measuring compartment.

It should be noted that, in certain embodiments, before the tablet **16** is aligned in the path defined by the separation wall **70** or through the opening **57**, the tablet **16** must be properly oriented within the dispenser **10**.

Turning now to **FIGs. 6-9**, there is illustrated an alternative embodiment of the present invention. Where the elements introduced and described above are present and substantially similar to the elements present in this embodiment, the same element number has been used with the addition of the prefix "2" or the substitution of the prefix "3" for the prefix "1". For example, the container **12** shown in **FIG. 1** is substantially similar to the container **212** shown in **FIG. 6** and

the safety cantilever **114** shown in **FIG. 1** is substantially similar to the safety cantilever **314** shown in **FIG. 8**. Accordingly, the elements shown in the **FIGs. 6-9** embodiment will be introduced and only those features that warrant further discussion will be described.

5 Referring to **FIG. 6**, an alternative embodiment of a dispenser **210** is illustrated. The dispenser **210** includes a container **212** for holding a plurality of pills **216** and a dispensing cap **214** that is attached to an open end **230** of the container **210**. Generally described, the dispensing cap **214** functions to dispense the pills **216** in a unit dose fashion.

10 The illustrated container **212** has a substantially cylindrical shape, although the shape of the container **212** is merely a design decision, as described above. The dispensing cap **214** can be attached to the container **212** by a snap-on mechanism, threaded ends, press fitting, or other means for attaching described above.

15 Referring to **FIGs. 6-9**, the dispensing cap **214** includes a base portion **240**, a rotating portion **242**, and an indexing ring **244**. The base portion **240** includes a bottom wall **258** that obstructs pills **216** from exiting through the open end **230** of the container **212** and an opening **257** in the bottom wall **258** through which articles can enter a chamber, channel, throat, or compartment **274**. The  
20 base portion **240** is configured to receive the rotating portion **242** in an open end **260**. A slot **286** is disposed in the bottom wall **258** and/or a wall of the compartment **274**. The base portion **240** further includes apertures or recesses **278** that receive detents or protrusions.

The rotating portion **242** includes a lever **290** and axial protrusions **298**  
25 that are received and pivotally secured in the recesses **278** such that the lever can pivot about an axis defined by the axial protrusions **298**. The lever **290** includes a cover portion **312** that covers an outer open end **259** of the compartment **274** when the rotating portion **242** is rotated to a closed position or otherwise to cover the open end **260** of the base portion **240**. The lever **290**  
30 further includes a contact portion **310** that is pressed to rotate the rotating portion

**242** to an open position and thereby remove the cover portion **312** from covering the outer open end **259** of the compartment **274**. The rotating portion **242** further includes an ejecting fin or wedge element **292** that extends from the lever **290**. The wedge element **292** is dimensioned and positioned to be received in the slot **286** when the rotating portion **242** is in the closed position and to be inserted into the compartment **274** when the rotating portion **242** is in an open position. The wedge element **292** includes a first edge **294** that contacts and isolates one or more pills **216** as the wedge element **292** is inserted into the compartment **274** and a second edge **296** that prevents other pills **216** from entering the compartment **274** or otherwise obstructs the opening **257** when the wedge element **292** is inserted into the compartment **274**.

The base portion **242** is further configured to slideably receive the indexing ring **244**. The indexing ring **244** slides over the outside of a cylindrical side wall **266** of the base portion **242**. The dispensing cap **214** includes means for positioning the indexing ring **244** with respect to the base portion **240**. In the exemplary embodiment, means for positioning includes ribs **267** that extend outwardly from the cylindrical side wall **266** and recesses **269** that are disposed in the inside surface of the indexing ring **244**, which slideably contacts the cylindrical side wall **266**. The ribs **267** and recesses **269** are dimensioned and positioned to releasably engage one another so as to position the indexing ring **244** with respect to the base portion **242** at a variety of positions, as described in further detail below.

The dispensing cap **214** further includes means for releasably fixing the position of the indexing ring **244**. In the exemplary embodiment, the indexing ring **244** includes depressions **272** that are spaced around the perimeter of outside surface of the indexing ring **244**. The depressions **272** correspond to or at least partially define the positions of the indexing ring **244**. The rotating portion **242** includes a guard or locking structure **282** that extends downwardly from a distal end of the lever **290**, which is adjacent to the cover portion **312**, and is dimensioned and positioned to be received in a depression **272** when the rotating portion **242** is in the closed position. When the locking structure **282** is aligned

and received in one of the depressions **272**, the position of the indexing ring **244** is fixed.

The dispensing cap **214** further includes means for releasably fixing the position of the rotating portion **242** in the closed position. The lever **290** includes  
5 a safety cantilever **314** that is disposed adjacent to the contact portion **310**. A rib or detent **315** extends from the distal end of the safety cantilever **314** so as to contact an edge or surface of the base portion **240** when the rotating portion **242** is in the closed position. Thereby, the safety cantilever **314** obstructs movement of the rotating portion **242** toward the open position or otherwise fixes the position  
10 of the rotating portion **242**.

It should be understood that means for fixing the position of the rotating portion is not limited to the safety cantilever or to the arrangement of the safety cantilever. For example, a safety cantilever can be an element of the base portion and extend to contact the rotating portion.

15 An exemplary method of dispensing a pill **216** from the dispenser **210** is now described. The dispenser **210** is oriented or rotated to align, guide, navigate, and/or urge a pill **216** into the compartment **274**. Means for aligning can include a structure that defines a path or chute that leads into the compartment **274**, as described above, or the shape or dimensions of the  
20 compartment **274** itself such that pills **216** that are not properly oriented or aligned are obstructed from entering the compartment **274**. After a pill **216** is received in the compartment **274**, means for fixing the position of the rotating portion **242** is released. Specifically, the safety cantilever **314** is deflected inwardly such that the detent **315** is displaced from the edge or surface of the  
25 base portion **240**. Thereafter, a force can be applied to the contact portion **310** of the lever **290** to pivot the rotating portion **242** to an open position thereby inserting the wedge element **292** in the compartment **274** to contact and isolate the pill **216**, providing an opening through which the pill **216** can be dispensed from the compartment **274** by rotating the cover portion **312** from an open end  
30 **259** of the compartment **274**, and dispensing the pill **216** from the compartment **274**. In the exemplary embodiment, the inserting, opening, and dispensing steps

are completed in a single pivoting action. Further, as the wedge element **292** is inserted in the compartment **274**, the wedge element **292** provides means for obstructing or blocking pills **216** in the container **212** from migrating into the compartment **274**.

5           When the rotating portion **242** is in an open position, the guard or locking structure **282** is removed or displaced from a depression **272** of the indexing ring **244** such that the indexing ring **244** can be alternatively positioned, for example, to indicate that pill **216** has been dispensed. Accordingly, each position can be labeled to assist a user in following a prescribed schedule for dispensing the pills  
10 **216**. For example, when a pill **216** has been dispensed for a position labeled "Tuesday", the user can rotate or click the indexing ring **244** to a different position labeled "Wednesday" to indicate that the next time to dispense a pill **216** is "Wednesday".

          The law does not require and it is economically prohibitive to illustrate and  
15 teach every possible embodiment of the present claims. Hence, the above-described embodiments are merely exemplary illustrations of implementations set forth for a clear understanding of the principles of the invention. Variations, modifications, and combinations may be made to the above-described  
embodiments without departing from the scope of the claims. All such variations,  
20 modifications, and combinations are included herein by the scope of this disclosure and the following claims.

## CLAIMS

What is claimed is:

1. A dispenser (10), comprising:

a container (12);

a dispensing cap (14) attached to an open end (30) of the container (12), the dispensing cap (14) comprising:

a base portion (40) that defines a compartment (74) for receiving a quantity of items from the container (12); and

a rotating portion (42) that includes a wedge element (92), wherein the rotating portion (42) can insert the wedge element (92) into the compartment (74) to isolate and dispense at least one item through an open end (59) of the compartment (74).

2. The dispenser (10) of claim 1, the rotating portion (42) further comprising a cover portion (112) that can cover the open end (59) of the compartment (74).

3. The dispenser (10) of claim 1, wherein the rotating portion (42) is rotated by pressing a contact portion (110) of the rotating portion (42).

4. The dispenser (10) of claim 1, the rotating portion (42) including a safety cantilever (114) that contacts an edge (E3) of the dispenser (10) such that the position of the rotating portion (42) is fixed.

5. The dispenser (10) of claim 1, wherein the compartment (74) is at least partially defined by a separation wall (70) that is offset from at least one of the walls of the container (12).

6. The dispenser (10) of claim 5, wherein the separation wall (70) extends into the container (12) to define a path in which items are aligned prior to entering the compartment (74).
7. The dispenser (10) of claim 1, the ejecting fin (92) comprising a first edge (94) and a second edge (96), wherein the first edge (94) functions to contact a quantity of items in the compartment (74) to eject the items from the dispenser (10) and the second edge (96) functions to obstruct items remaining in the dispenser (10) from entering the compartment (74).
8. The dispenser (210) of claim 1, the dispensing cap (214) further comprising an indexing ring (244) that is slideably engaged with the base portion (240).
9. The dispenser (210) of claim 8, further comprising means for fixing the position of the indexing ring (244).
10. The dispenser (210) of claim 9, wherein means for fixing the position of the indexing ring (244) comprises at least one depression (272) formed in the dispensing ring (244) and a locking structure (282) that extends from the rotating portion (242), wherein the locking structure (282) can be lockably received in the at least one depression (272) as the indexing ring (244) is positioned such that the at least one depression (272) is aligned with the locking structure (282).
11. A method for dispensing an article from an article dispenser (10), the method comprising:
  - aligning a first tablet (16) in a path;
  - urging the first tablet (16) along the path into a compartment (74);

inserting a wedge element (92) into the compartment (74) to isolate the first tablet (16);

opening a cover (112) of a dispenser (10);

dispensing the first tablet (16) from the compartment (74).

12. The method of claim 11, further comprising the step of releasing a safety feature (114).

13. The method of claim 11, further comprising the step of blocking a second tablet (16) from migrating into the compartment (74).

14. The method of claim 13, further comprising the steps of closing the cover (112) of the dispenser (10), removing the wedge element (92) from the compartment (74), and urging said second tablet (16) into the compartment (74).

15. The method of claim 11, wherein the steps of inserting, opening, and dispensing are completed in a single pivotal action.

16. The method of claim 14, wherein the steps of removing and closing are completed in a single pivotal action.

17. The method of claim 11, further comprising the step of rotating an indexing ring from a first position to a second position.

18. A dispenser (10), comprising:

a container (12);

a dispensing cap (14) attached to an open end (30) of the container (12), the dispensing cap (14) comprising:

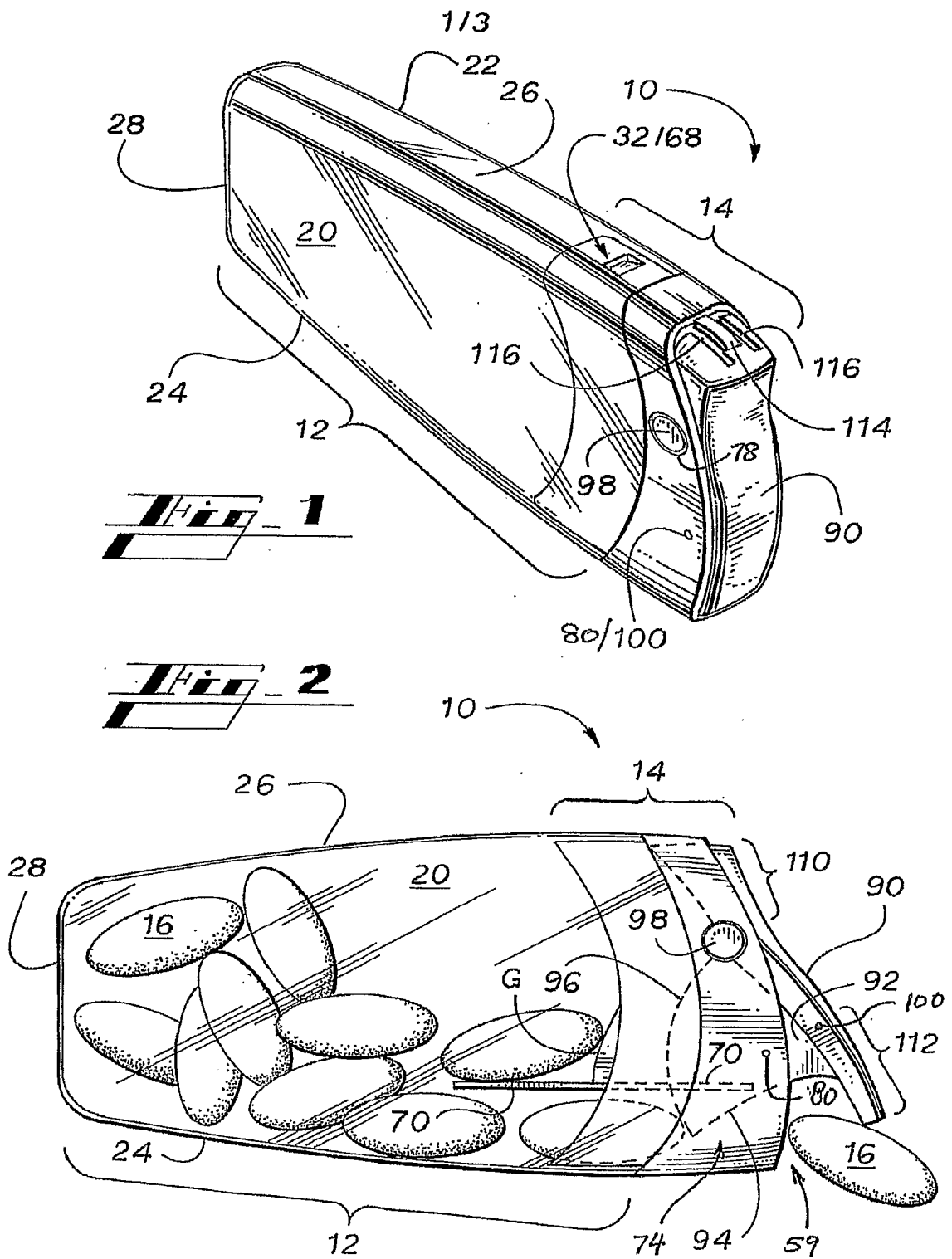
a compartment (74) for receiving a quantity of items from the container (12);

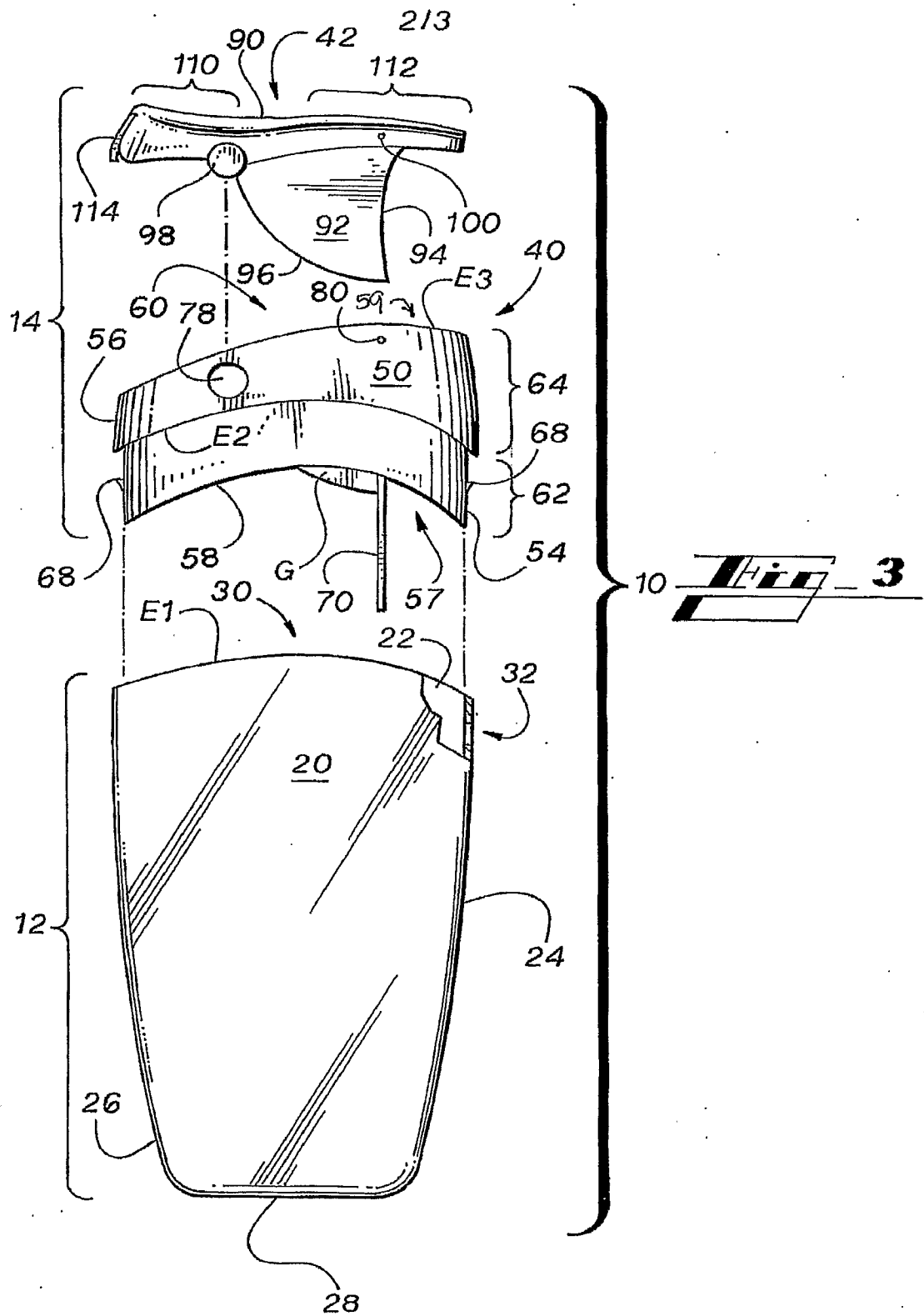
means for inserting a wedge element (92) into the compartment (74) to contact and isolate at least one item through an open end (59) of the compartment (74);

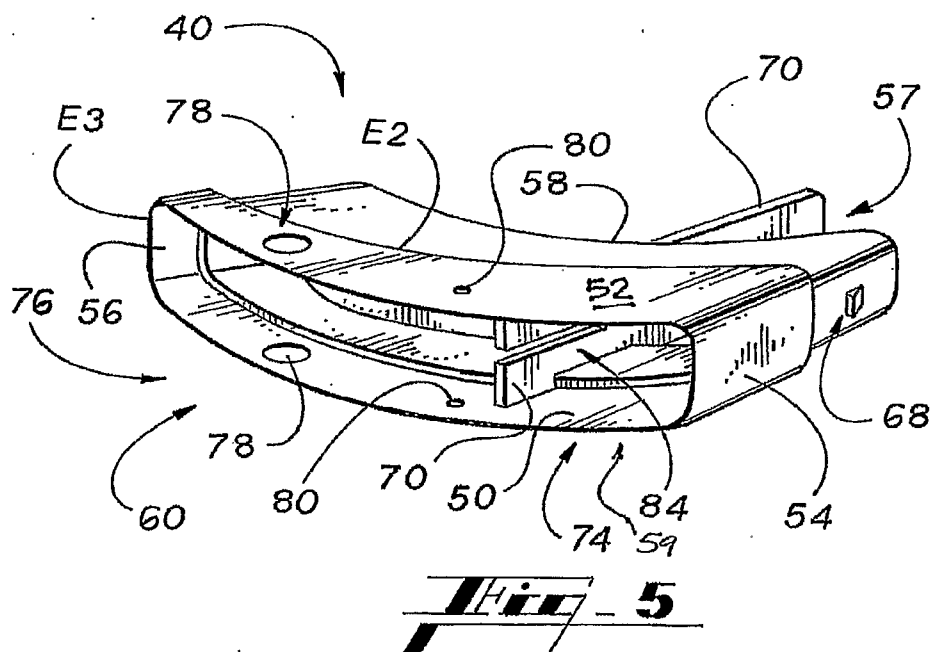
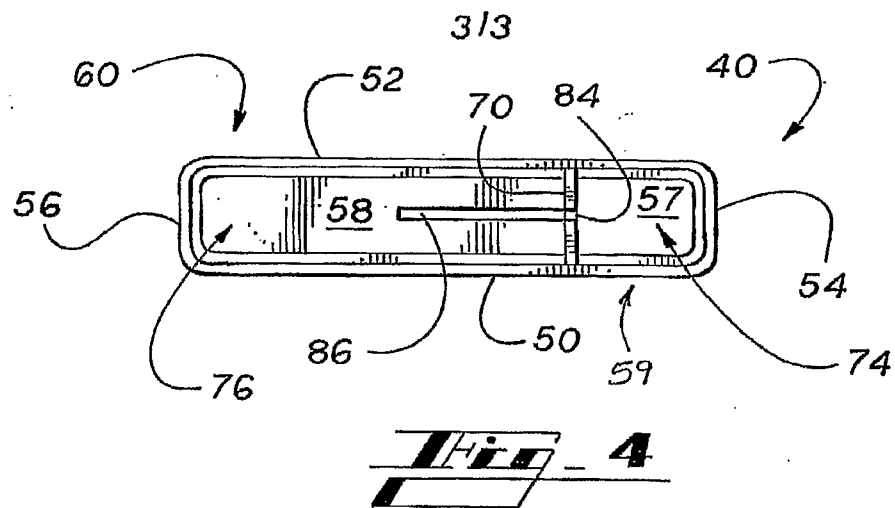
means for opening and closing the open end (59) of the compartment (74);

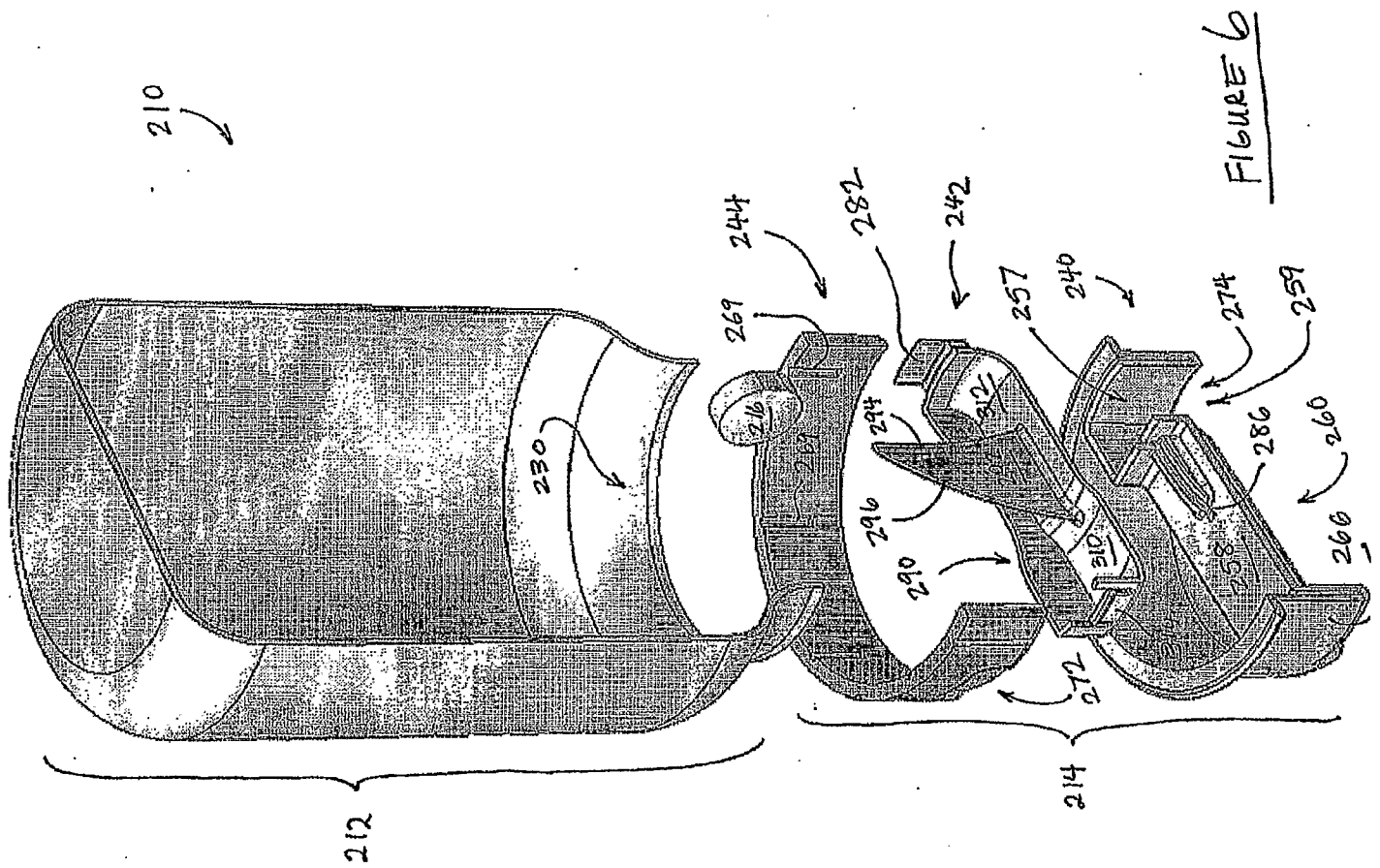
means for blocking an opening (57) between the container (12) and the compartment (75).

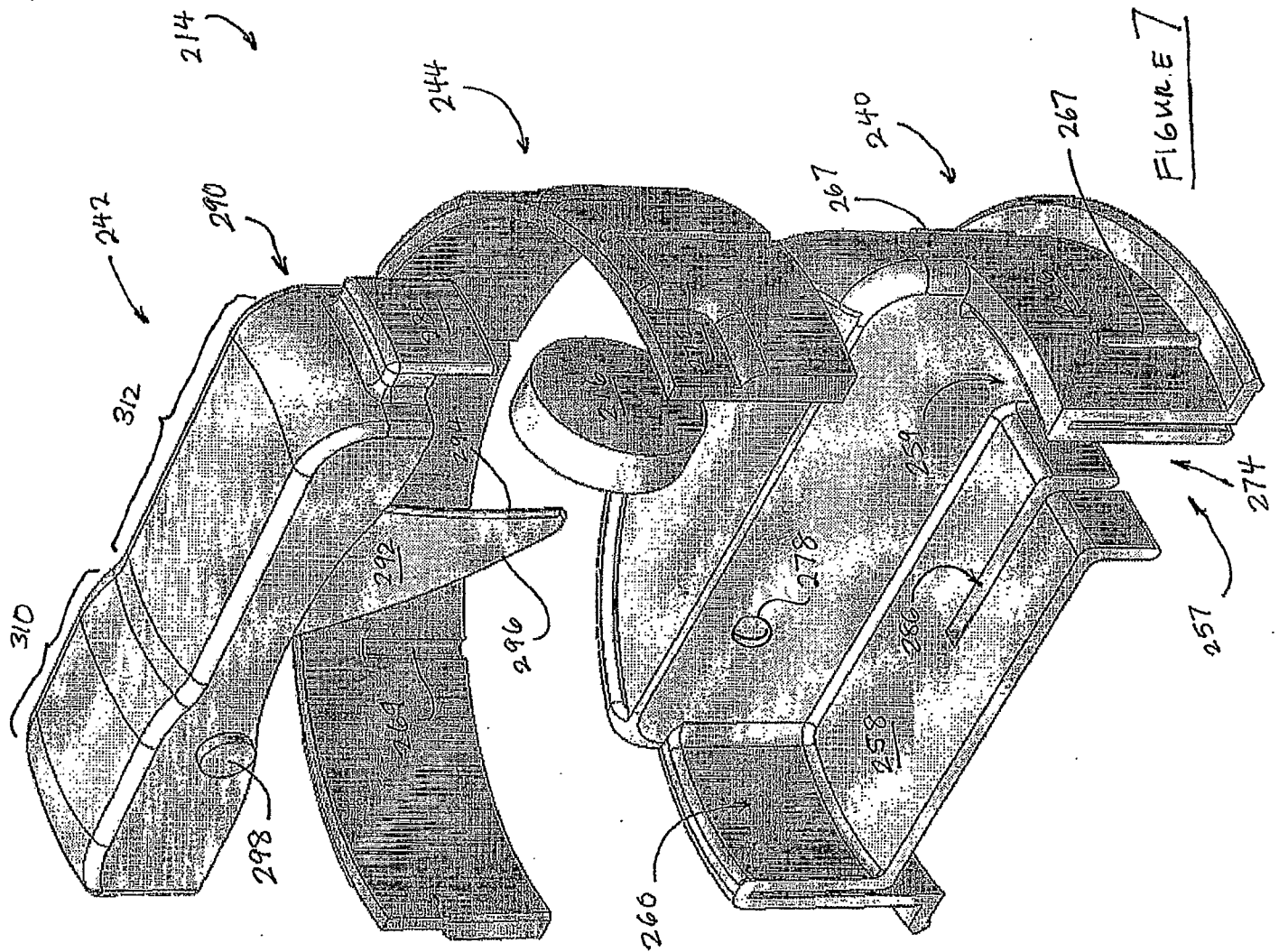
19. The dispenser (10) of claim 18, wherein means for inserting a wedge element (92) comprises a moving portion (42) of the dispensing cap (14) and the dispensing cap (14) further comprises means for fixing the position of the moving portion (42).











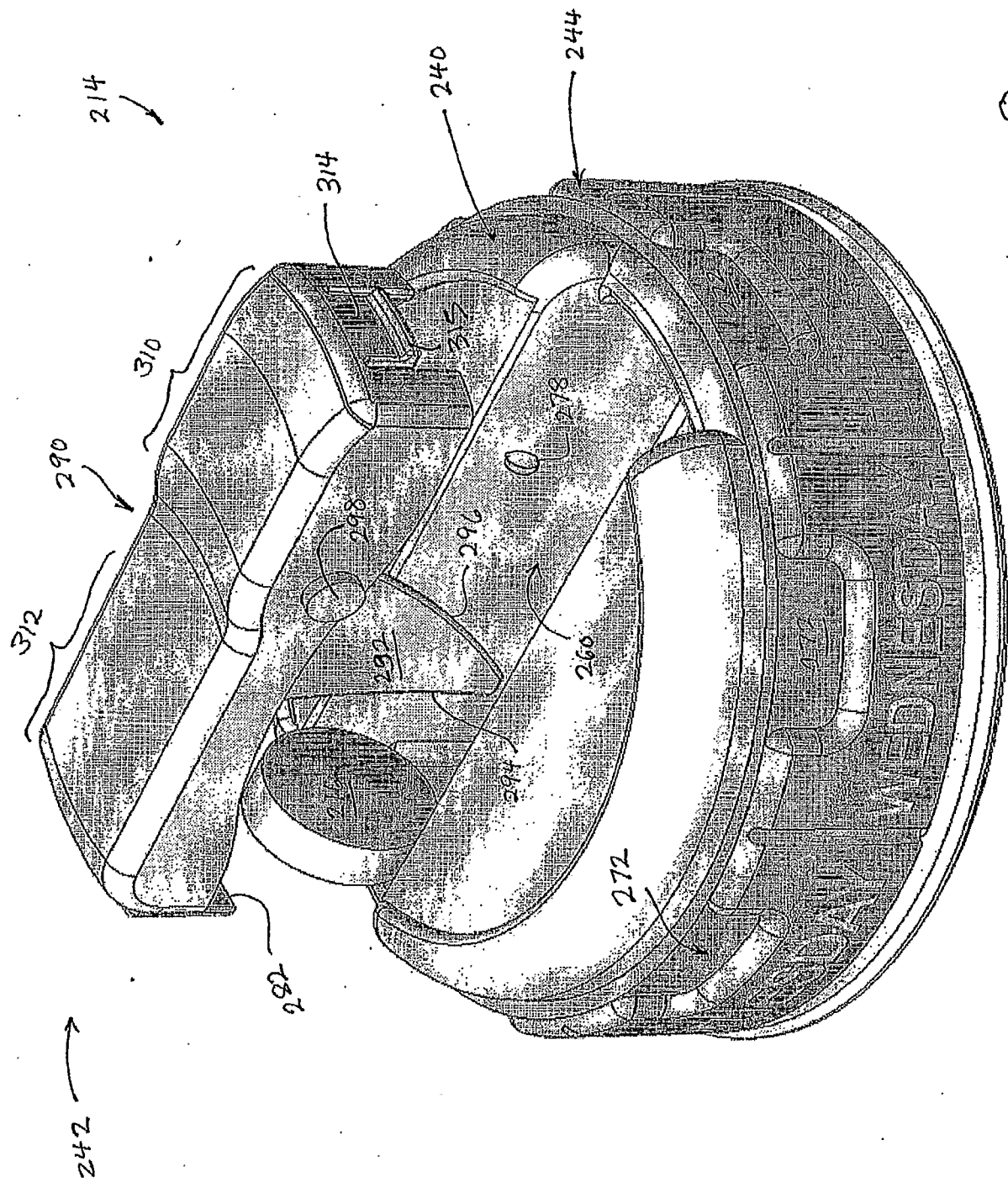


Figure 8

