



US 20080277368A1

(19) **United States**(12) **Patent Application Publication**  
**Yeager**(10) **Pub. No.: US 2008/0277368 A1**(43) **Pub. Date: Nov. 13, 2008**(54) **PUSH-SQUEEZE-LIFT CHILD-RESISTANT  
CLOSURE AND CONTAINER SYSTEM****Publication Classification**(75) Inventor: **Don F. Yeager**, Millville, NJ (US)(51) **Int. Cl.**  
**B65D 55/02** (2006.01)  
**B65D 55/12** (2006.01)

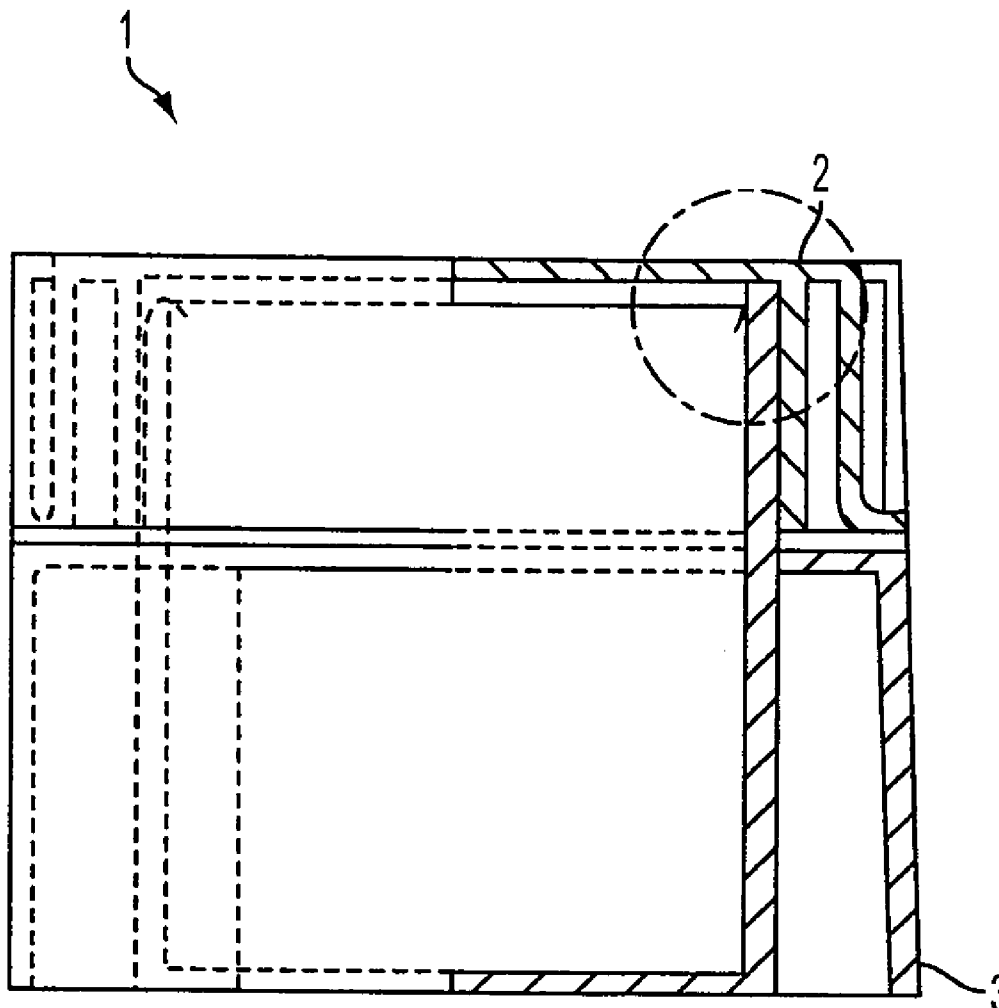
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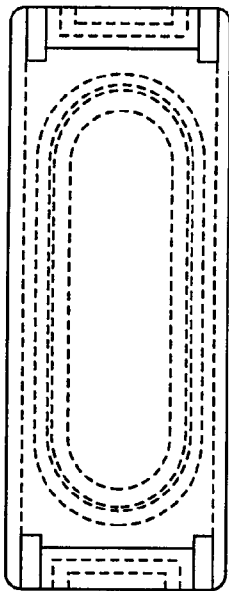
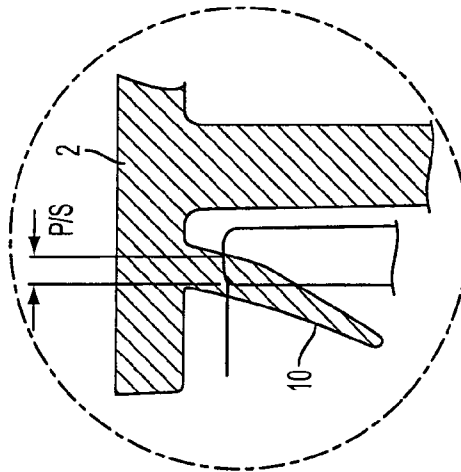
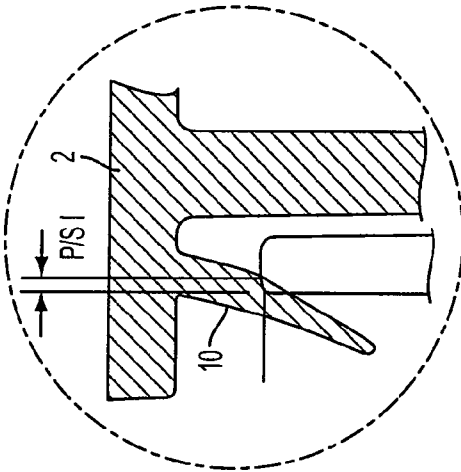
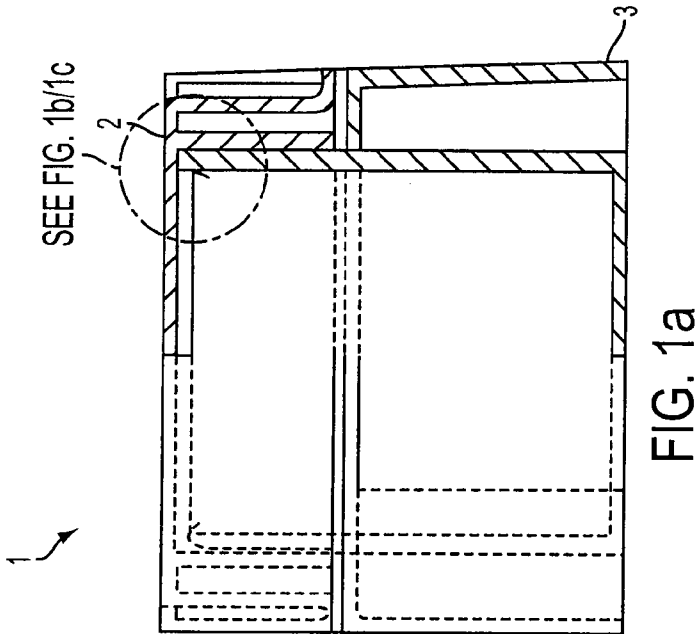
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(US)(57) **ABSTRACT**(21) Appl. No.: **12/117,768**(22) Filed: **May 9, 2008**

A push-squeeze-lift child resistant closure for a container having an unthreaded neck and a top shoulder having a top surface with at least one receptacle locking slot, the closure comprising a top having a spring inside the top and a sidewall having flexible panels, wherein each flexible panel includes at least one horizontal tab hook that engages a corresponding locking slot in the container, wherein the tab hook and corresponding locking slot prevents removal of the closure without first pushing downward on the closure and concurrently squeezing or depressing the flexible panel to disengage the hook and remove the closure.

**Related U.S. Application Data**

(60) Provisional application No. 60/917,463, filed on May 11, 2007.





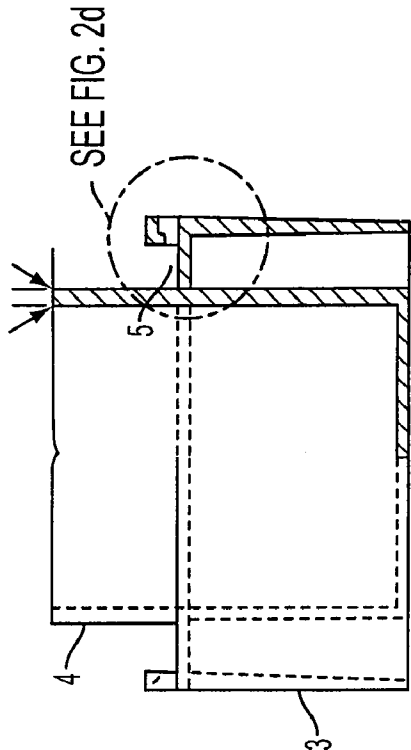


FIG. 2a

FIG. 2b

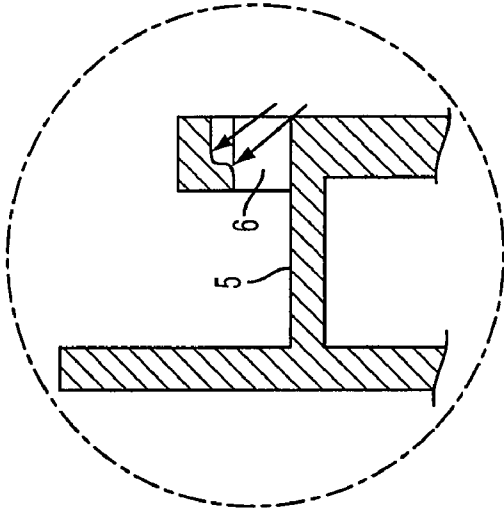
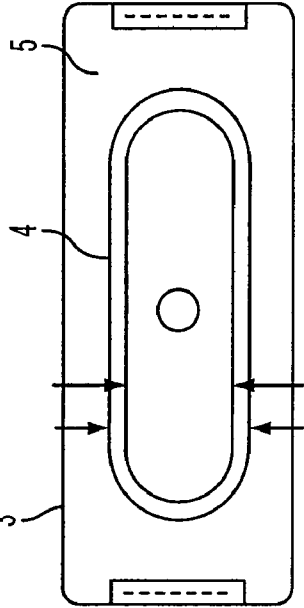
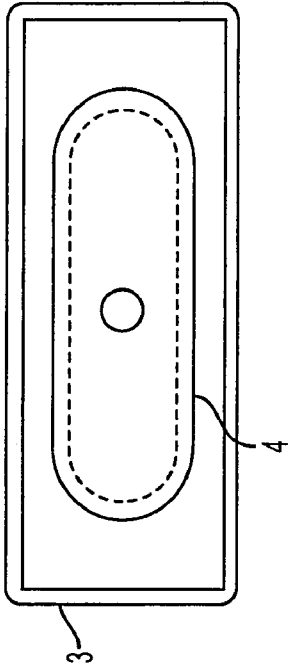


FIG. 2c

FIG. 2d



SEE FIG. 2d

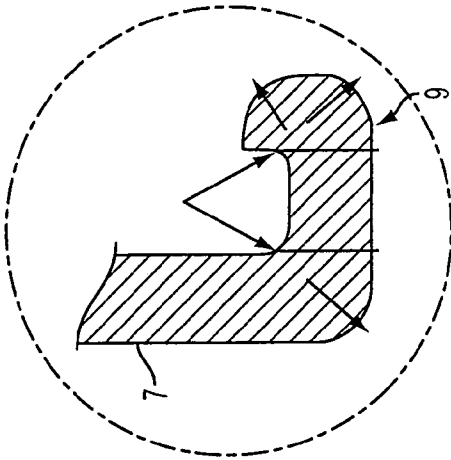
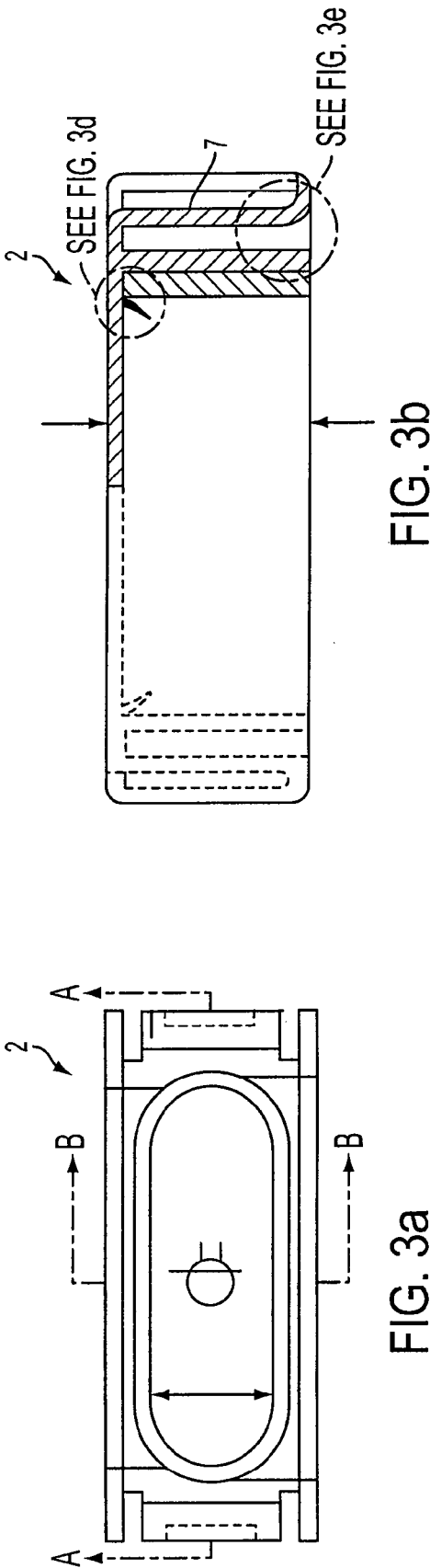


FIG. 3c

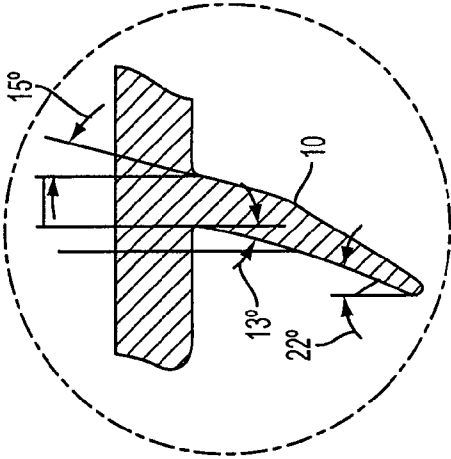


FIG. 3d

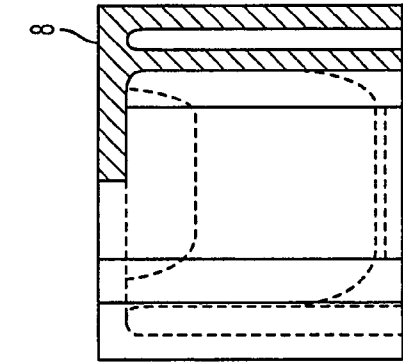


FIG. 3e

## PUSH-SQUEEZE-LIFT CHILD-RESISTANT CLOSURE AND CONTAINER SYSTEM

### FIELD OF THE INVENTION

[0001] Illustrative aspects of the invention relate to child resistant packages such as for pharmaceuticals.

### BACKGROUND

[0002] There is a need for a child-resistant closure and container system for a non-screwing or non-rotating package. There is a further need for a child-resistant closure and container system for a package with a non-round opening.

### SUMMARY

[0003] Aspects of the invention are directed to a child-resistant package with a non-round opening and easy-open senior-friendly child-resistant package with a non-round opening.

[0004] One aspect includes a push-squeeze-lift child resistant closure for a container.

[0005] Another aspect includes a child resistant package comprising a container and a push-squeeze-lift child resistant closure.

### BRIEF DESCRIPTION OF THE DRAWINGS

[0006] FIG. 1a illustrates aspects of a child-resistant closure and container with details of the closure thereof. FIGS. 1b and 1c illustrate detail x circled in FIG. 1a. FIG. 1d illustrates the top of the container and package.

[0007] FIGS. 2a-2c illustrate aspects of the top, side, and bottom views of a container for use with the closure of FIG. 1. FIG. 2d illustrates detail B circled in FIG. 2b.

[0008] FIG. 3a illustrates a top view of the child-resistant closure. FIG. 3b illustrates a side view of a child-resistant closure taken along lines A-A of FIG. 3a. FIG. 3c illustrates a side view of a child-resistant closure taken along lines B-B of FIG. 3a. FIG. 3d illustrates detail C circled in FIG. 3b. FIG. 3e illustrates detail C circled in FIG. 3b.

### DETAILED DESCRIPTION

[0009] Illustrative aspects of the present invention will be described. These aspects merely provide examples of the invention, and it is needless to say that the aspects can be suitably modified without departing from the gist of the invention.

[0010] As shown in FIG. 1a, aspects of the invention include a child-resistant package 1 including a 1-piece snap-on push-squeeze-lift closure 2 of rigid and/or stiff material and a container 3 of rigid and/or stiff material. The child-resistant package has a container with an opening, such as a round or non-round opening. Typical the containers have a rectangular shape as shown in FIG. 1d.

[0011] As shown in FIG. 2b and 2d, the container 3 has a neck 4 without threads and a flange or top surface 5 with at least one locking slot 6.

[0012] As shown in FIG. 3a, the closure also has flexible panels or fingers 7 in the side wall 8. Each flexible panel or finger 7 includes a horizontal tab hook 9 that engages a corresponding locking slot 6 in the container flange, which prevents removal of the closure 2 without first pushing downward on the closure 2 and concurrently squeezing or depressing the panels or fingers 7 to disengage the spring loaded hooks. At that point the closure 2 can be lifted up and off of the container 3.

[0013] The locking hook 9 of the closure 2 is inter-engaged with the locking slot 6 of the container 3 upon snapping the closure 2 onto the container 3.

[0014] As shown in FIGS. 1b, 1c, and 3d, the closure 2 has a spring 10 in the inside top. This spring 10 also acts as a seal. Figure shows the engagement when the case is in the relaxed state. FIG. 1c shows the compressed state. The spring provides resistance to compression of the closure against the container to aid in maintaining the tab hook 9 in the locking slot 6.

[0015] The package may be used for any suitable means such as unit dose dispensers for tablets and holders for soluble strips.

[0016] While the various aspects of the invention have been described in conjunction with the example structures and methods described above, various alternatives, modifications, variations, improvements and/or substantial equivalents, whether known or may be presently unforeseen, may become apparent to those having at least ordinary skill in the art. Accordingly, the example structures and methods, as set forth above, are intended to be illustrative of the invention, not limiting it. Various changes may be made without departing from the spirit and scope of the invention. Therefore, the invention is intended to embrace all known or later developed alternatives, modifications, variations, improvements and/or substantial equivalents

1. A push-squeeze-lift child resistant closure for a container having an unthreaded neck and a top shoulder having a top surface with at least one receptacle locking slot, the closure comprising a top having a spring inside the top and a sidewall having flexible panels, wherein each flexible panel includes at least one horizontal tab hook that engages a corresponding locking slot in the container, wherein the tab hook and corresponding locking slot prevents removal of the closure without first pushing downward on the closure and concurrently squeezing or depressing the flexible panel to disengage the hook and remove the closure.

2. The closure of claim 1 further comprising at least two flexible panels.

3. The closure of claim 2 comprising two flexible panels located at opposite sides of the bottle.

4. The closure of claim 1 wherein the closure is a one-piece closure.

5. The closure of claim 1 wherein the spring provides resistance to compression of the closure against the container.

6. A child resistant package comprising a container and a push-squeeze-lift child resistant closure; the container having an unthreaded neck and a top shoulder having a top surface with at least one receptacle slots, the closure comprising a top having a spring inside the top and a sidewall having flexible panels, wherein each flexible panel includes at least one horizontal tab hook that engages a corresponding locking slot in the container, wherein the tab hook and corresponding locking slot prevents removal of the closure without first pushing downward on the closure and concurrently squeezing or depressing the flexible panel to disengage the hook and remove the closure.

7. The package of claim 6 wherein the closure further comprises at least two flexible panels.

8. The package of claim 7 wherein the closure further comprises two flexible panels located at opposite sides of the bottle.

9. The package of claim 6 wherein the closure is a one-piece closure.

10. The package of claim 1 wherein the spring provides resistance to compression of the closure against the container.