United States Patent [19]

Bateman

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[54] **LOCKING SAFETY SCREW CLOSURE**

[76] Inventor: **Charles G. Bateman,** 1407 Newport Place, Lutherville, Md. 21093

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[52] **U.S. Cl.** **215/9**

[51] **Int. Cl.** **B65d 55/02**

[58] **Field of Search** 215/9, 47, 95

[56] **References Cited**

UNITED STATES PATENTS

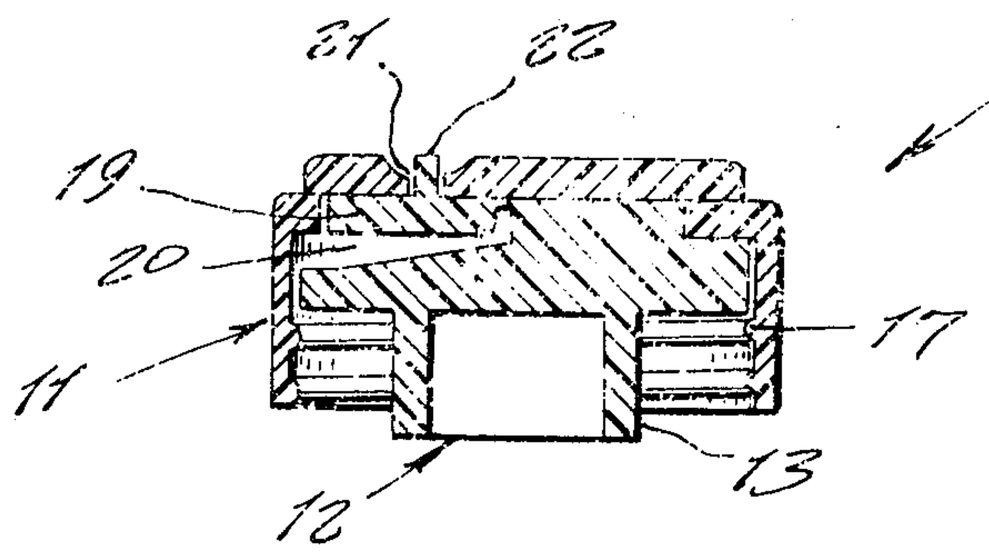
3,499,568 3/1970 Riera 215/97

Primary Examiner—George T. Hall

[57] **ABSTRACT**

A locking closure for a container such as a bottle, the closure being designed particularly to prevent children to gain access to dangerous material within the container, the device comprising a plug that is molded into a neck of the bottle and a rotatable threaded ring for threadingly engaging the outer side of the bottle neck, the ring having a depressable lever of the plug engaging it when in a locked position, the lock lever when depressed thus disengaging with the ring and permitting the ring to be unscrewed off for access to the bottle content.

2 Claims, 3 Drawing Figures



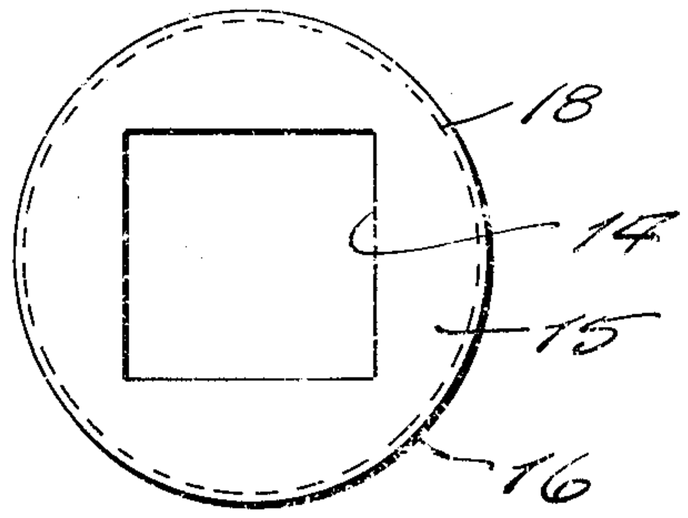


FIG. 1

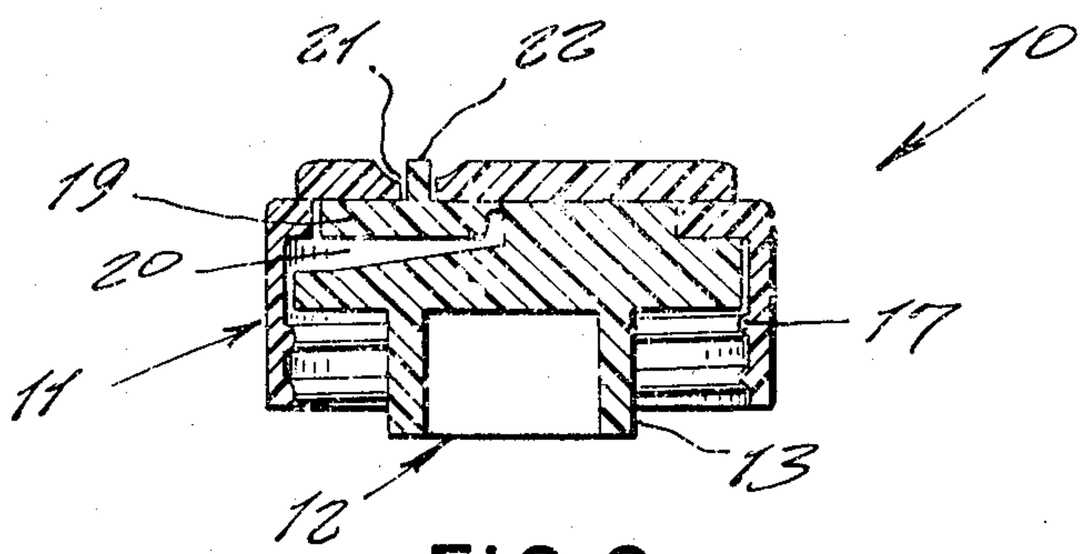


FIG. 2

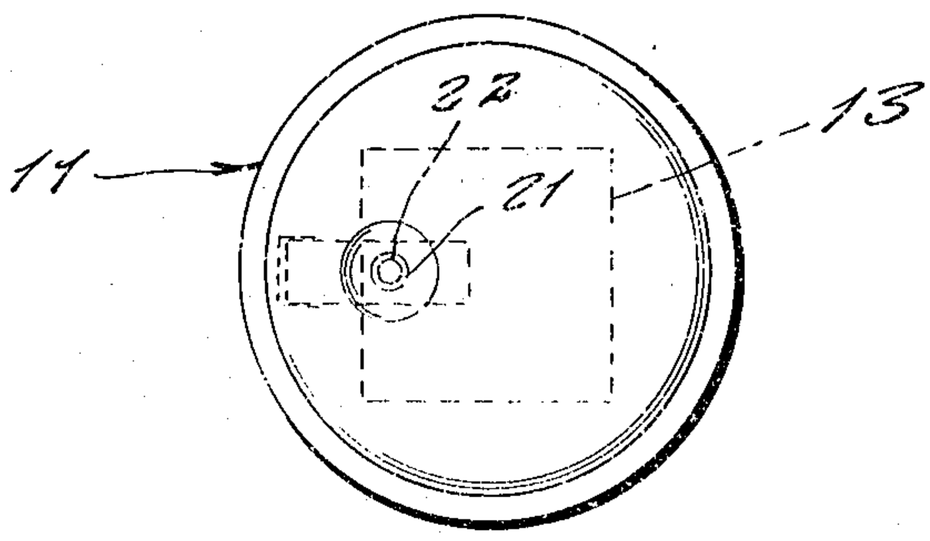


FIG. 3

INVENTOR
Charles G. Bateman

LOCKING SAFETY SCREW CLOSURE

This invention relates generally to safety closures.

A principal object of the present invention is to provide a safety locking closure which may be used on any container having a screw type closing, and which is particularly designed so to prevent small children to gain access to hazardous or otherwise dangerous materials within a container.

Other objects of the present invention are to provide a lock safety screw closure which does not require any great physical strength to be operated.

Still another object of the present invention is to provide a locking safety screw closure which can be used for wet or dry material.

Still another object of the present invention is to provide a locking safety screw closure which would discourage the use of the containers for other than the material originally packed in them.

Other objects of the present invention are to provide a locking safety screw closure which is simple in design, inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident, upon a study of the following specification and the accompanying drawing wherein:

FIG. **1** is a top plan view of bottle,

FIG. **2** is a side cross-sectional view of the present invention, and

FIG. **3** is a top plan view thereof.

Referring now to the drawing in detail, the reference numeral **10** represents a locking safety screw closure according to the present invention wherein the same consists of two major parts, one of which comprises an outer threaded ring **11** and the other of which comprises a keyed plug locking insert **12.**

The plug **12,** an example illustrated in the drawing, is provided with a generally square neck **13** which fits within a corresponding square opening **14** provided in a top **15** of a bottle **16** so that the plug is not rotatable but can be removed by being upwardly lifted so to pull the plug neck **13** outwardly of the bottle opening **14.**

The ring **11** comprises a cap member that is provided with internal threads **17** that threadingly engage corresponding threads **18** around the neck of the bottle **16.**

The upper end of the ring **11** fits over the top of the

plug **12** so that the plug cannot be removed unless the ring is first unscrewed off the bottle.

To prevent this being accomplished by small children and other unauthorized persons lacking comprehension, there is formed a locking lever **19** integrally with the plug **12,** the lever **19** being depressable downwardly into a cut-out area **20** formed there below.

The ring **11** is provided with a detent opening **21** upon the upper side thereof and into which a protrusion **22** formed upon the lever **19** can readily snap, thereby preventing the free rotation of the ring.

In operative use, access to the container material can be simply obtained by simple depressing the protrusion **22** downwardly so that it clears the detent opening **21** and at the same time thus allowing the threaded ring **11** to be rotated so as to unscrew the ring from the top of the bottle.

The screw thread may be such that one full turn will remove the ring from the bottle. Upon a full rotation, the ring can then be removed from the bottle after which the plug **12** is simply lifted off the bottle so to provide access to the bottle opening **14,** and to the bottle content.

Thus there is provided a simple safety locking closure.

The materials used for this device may be comprised of rigid plastic material such as urea for the outer threaded ring and a seim-rigid, high flexible plastic such as polyrepylene for the keyed insert plug.

What I now claim is:

1. The combination of a rotatable cap ring and a shaped, keyed downward extension of said cap ring wherein a downwardly depressable locking lever is housed in said shaped keyed extension and formed integral therewith, said lever being manually depressable into a cut-out of said lever in said housing and extension thereof permitting free rotation of said rotatable ring, when said lever clears said detent in said top wall of said ring, thus committing said ring to be unscrewed from a container.

2. The combination set forth in claim **1** wherein said ring is made of a rigid plastic material and said lever, housing and extension are made of semi-rigid, highly flexible plastic.

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