United States Patent

[11] 3,584,760

[72] Inventor **William A. Grinker**
4640 S. 14th St., Milwaukee, Wis. 53221

[21] Appl. No. **843,432**
[22] Filed **July 22, 1969**
[45] Patented **June 15, 1971**

[54] **SAFETY CAPS FOR CONTAINERS**
2 Claims, 4 Drawing Figs.

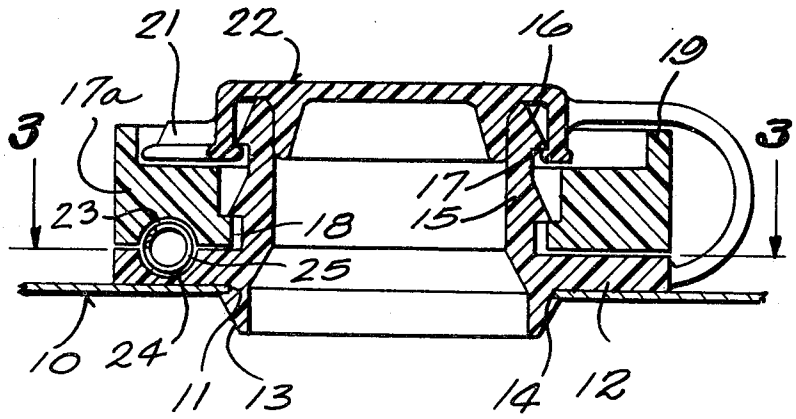
[52] **U.S. Cl.** **220/60,** 220/35, 215/9
[51] **Int. Cl.** **B65d, 43/10** B65d 43/6, B65d 51/16
[50] **Field of Search** 215/9, 95, 41; 220/60, 35

[56] **References Cited**
UNITED STATES PATENTS

3,393,816	7/1968	Frimm	215/9
3,458,084	7/1969	Laurizio	220/35

Primary Examiner—George T. Hall
Attorney—Gerald P. Welch

ABSTRACT: A safety cap assembly for containers of fluids with danger potential, including a cap with thumb piece lift normally blocked by a shoulder immediately thereunder, and an annular rim blocking frontal access, with means for manual temporary removal of said blockades.



PATENTED JUN 15 1971

3,584,760

Fig. 1

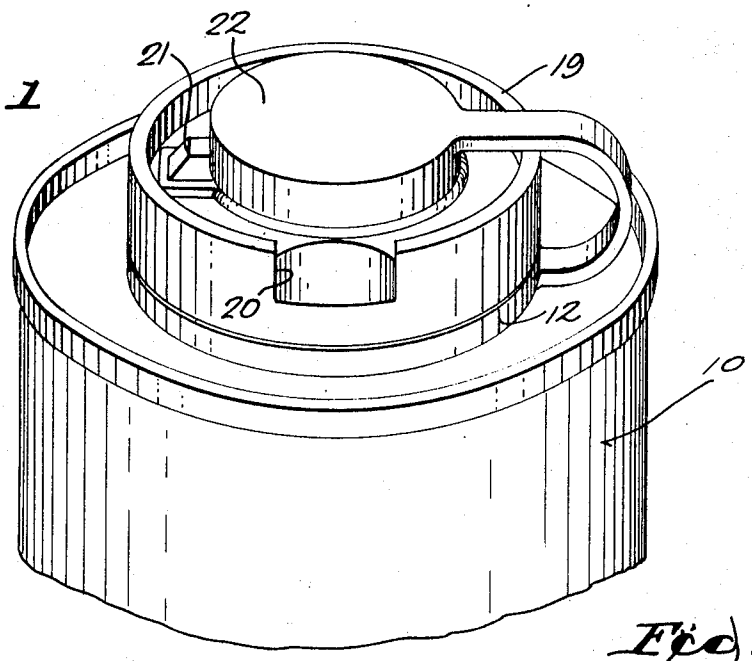


Fig. 2

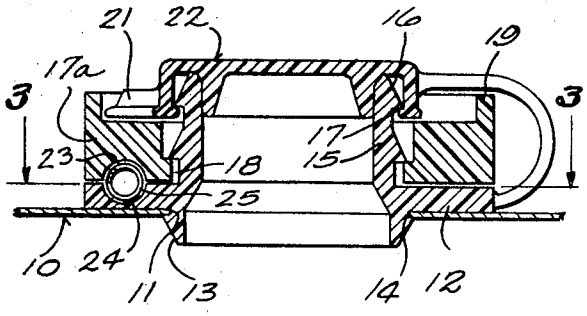


Fig. 3

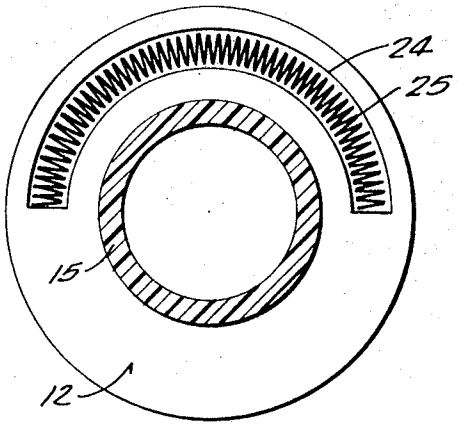
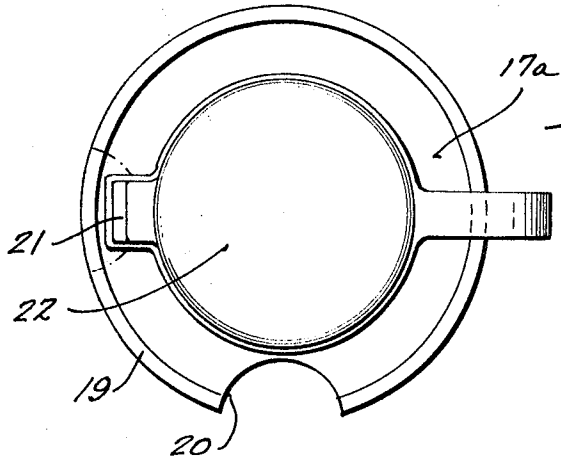


Fig. 4



INVENTOR
WILLIAM A. GRINKER

BY Gerald P. Welch
ATTORNEY

SAFETY CAPS FOR CONTAINERS

A number of containers which may be used in the home contain toxic preparations dangerous to children, and the cap presently in wide use on such containers may be opened with impunity by a relatively young child. It is an object of the present invention to environ such a cap with a dual safeguard which will effectively prevent a young child from gaining access to the contents of a container.

SUMMARY OF THE INVENTION

Containers of the type in present use have a cap of resilient material provided with a projecting thumb piece which may be pressed upwardly to dislodge said cap. In a short time a young child can learn how to open the cap and obtain access to the dangerous contents. In the present invention assembly the very young child would be unable to fathom the operation necessary to place the parts in position to permit removal of the cap.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a perspective view from above of the upper portion of a container equipped with a safety cap assembly embodying the invention.

FIG. 2 is a vertical sectional view.

FIG. 3 is a view taken on line 3–3 of FIG. 2.

FIG. 4 is a plan view in elevation.

DESCRIPTION OF THE PREFERRED EMBODIMENT

A conventional container **10** provided with a top central aperture at **11** permits the insertion and retention of the base portion **12** provided with a tapered portion at **13** and the annular external groove **14** to engage within said aperture **11**. Integral with the base **12** is a slightly reduced neck **15** provided with an external tapered portion at **16** presenting a bottom shoulder **17** to retain a ring member **17***a* provided with an inner flange at **18** and an upstanding vertical flange at **19** provided with a notch at **20** therein, to permit access of the thumb or finger under the thumbpiece **21** of the cap **22**, said notch extending downwardly through the ring **17***a* as shown.

The base **12** and the ring member **17***a* have facing and registering half-round grooves containing a normally elongated spiral spring. When the ring **17***a* is rotated to compress the spring until the notch therein underlies the thumbpiece **21**, lifting of the cap **22** by manual means may effected.

Having thus described the invention, what I claim and desire to be secured by Letters Patent of the United States, is:

1. A safety cap assembly of resilient construction including a base having an integral neck, a cap for said neck, a tie element connecting the base and said cap, a ring element freely rotatable surmounting said base, a circular shoulder and upstanding flange on the ring element normally blocking manual access to said cap, said ring element having a notch through the shoulder and the flange thereof, and spring means for returning the notched portion of said ring to a nonaccess position relative to said cap.

2. A safety cap assembly as in claim **1**, and a half round groove in the underside of the rotatable ring element registering with and facing a half-round groove in the base portion, both grooves being half a circle in length, a coil spring normally held within the grooves from end to end which when compressed will turn the ring element to normal position blocking manual access to the cap.