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[54] **CHILDPROOF COVER FOR A DISPENSING CAN**
4 Claims, 4 Drawing Figs.

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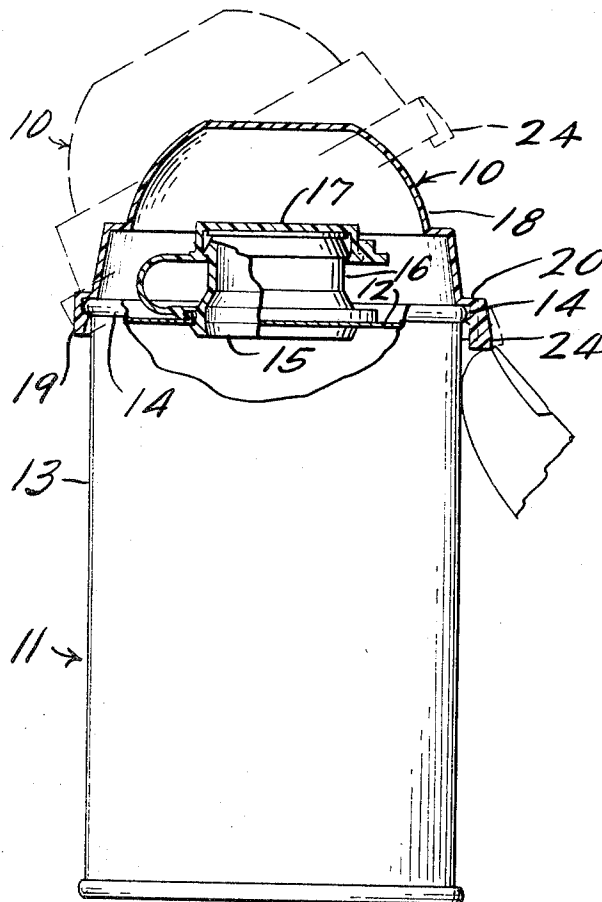
[50] Field of Search 222/562,
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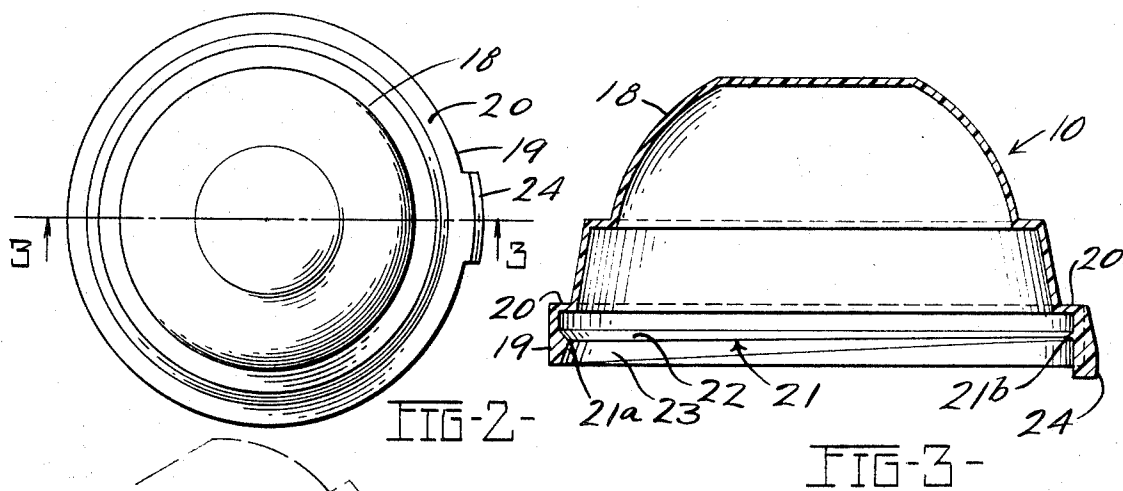
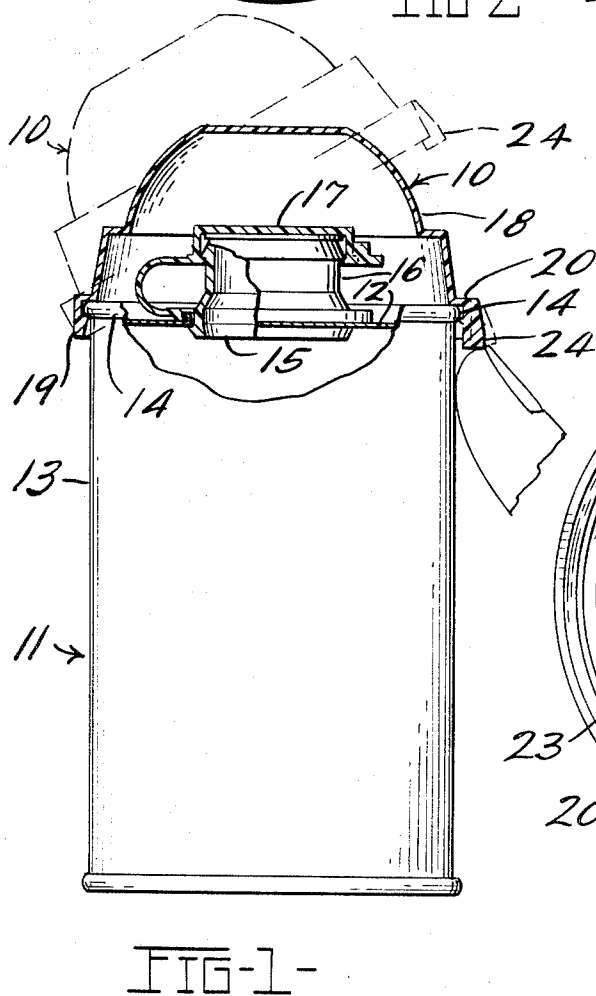
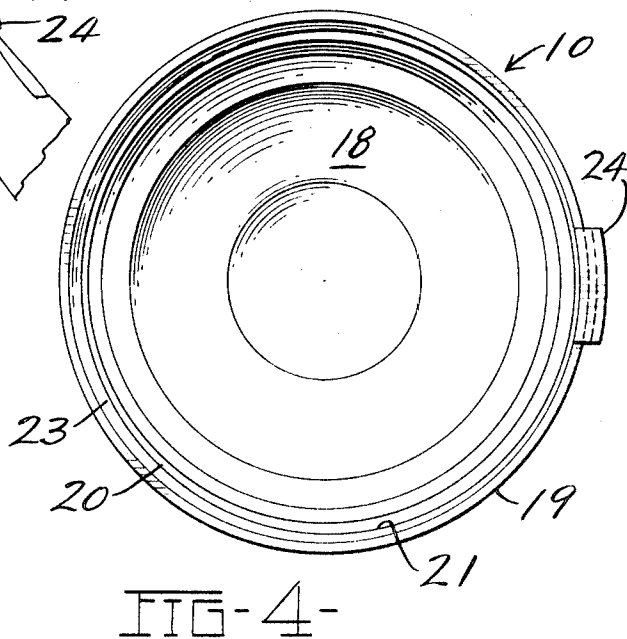
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ABSTRACT: A protective, childproof cover for a dispensing can. The can has an end seam where the top is joined to the sidewall and a dispensing opening in the top. The cover has an inverted cup-shaped body and an annular skirt which fits over the end seam. The inner side of the skirt has an inwardly extending lip of lesser diameter than the seam so that the cover snaps downwardly over the seam. The lip is eccentric relative to the skirt, protruding inwardly a greater distance beneath the seam at one side of the skirt than at the other. There is an annular shoulder joining the cup-shaped body to the skirt which shoulder engages the top of the seam when the cover is in place.





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CHILDPROOF COVER FOR A DISPENSING CAN

BACKGROUND OF THE INVENTION

Many household chemical materials such as drain cleaners containing caustic soda, detergents, dishwasher soaps, powdered cleaners containing various salts and other substances are packaged in cans which have dispensing openings in their tops. These dispensing openings usually are closed by screw-on or snap-on lids and such lids usually are quite readily removed. This results in cans of such materials being dangerous and poisonous particularly when they are kept in places that are accessible to small children.

Many suggestions have been made for childproof closures, some of them even involving mechanisms as complex as combination locks, for the purpose of preventing small children from opening these containers and either eating or otherwise being harmed by their contents.

It is the principal object of the instant invention to provide a simple, protective and substantially childproof cover for a dispensing can which is inexpensive to manufacture, simple to assemble on the can during ordinary manufacturing and filling procedures and yet relatively difficult of removal by a small child.

It is yet another object of the instant invention to provide a protective closure for a dispensing can which readily can be removed by an adult or an older child but which successfully resists removal by a small child thus substantially eliminating the danger to small children which results where the contents of the can are easily accessible.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a fragmentary view, partly in elevation and partly in section, of a dispensing can equipped with a protective cover embodying the invention;

FIG. 2 is a plan view of a cover embodying the invention;

FIG. 3 is a transverse vertical sectional view taken along the line 3-3 of FIG. 2; and

FIG. 4 is a bottom view of the cover illustrated in FIGS. 2 and 3.

DESCRIPTION OF PREFERRED EMBODIMENT

A cover embodying the invention is generally indicated by the reference number 10 and is designed as a protective cover or closure for a can 11 having a top 12 and sidewall 13. The top 12 is joined to the sidewall 13 by an annular seam 14 and the top 12 also has a central dispensing opening 15 through which the contents may be emptied. The dispensing opening 15 is illustrated as being provided with a spout 16 and an easily removable cap 17. The spout 16 and cap 17 do not constitute a part of the instant invention and are shown in the drawings only as illustrative of one of many types of dispensing opening which may be employed for cans of this general nature.

The protective childproof cover 10 embodying the invention has an inverted cup-shaped body 18 of such height as to enclose the spout 16 and cap 17 and an annular depending skirt 19. The cup-shaped body 18 and the skirt 19 are joined to each other by an annular shoulder 20. The skirt 19 is of such diameter as to fit over the can seam 14 and has an inner, inwardly extending lip 21. The lip 21 is of a slightly lesser interior diameter than the outside diameter of the seam 14 and,

because the cover 10 is molded from a semiflexible material, the skirt 19 flexes outwardly when the cover 10 is forced downwardly over the seam 14, snapping the cover 10 in place on the can 11.

The lip 21 has an inclined upper surface 22 which snaps in place beneath the edge of the rim 14 as is best shown in FIG. 1 and the lip 21 is spaced below the inside surface of the shoulder 20 a distance such that the seam 14 positions between the upper inclined surface 22 of the lip 21 and the shoulder 20.

In a preferred embodiment of the cover 10 embodying the invention, the lip 21 is eccentric relative to the skirt 19 and protrudes inwardly a greater distance at one side than it does at the other. In FIG. 3 the lip 21 is illustrated as having a greater inward protrusion at the left side of the figure (as indicated by the reference number 21a) and a lesser distance at the right side of the figure (as indicated by the reference number 21b). In an actual cover fabricated according to the invention in which the outside diameter of the seam 14 is about 2½ inches, the larger portion 21a of the lip 21 has an inward protrusion to a distance of approximately 0.025 inch and the lesser inward extent at the point indicated by the reference number 21b is approximately 0.005 inch. The lip 21 also has a beveled lower surface 23 in order to force the skirt 19 outwardly as the cover 10 is pressed downwardly over the seam 14.

The skirt 19 is illustrated as being provided with a thumb tab 24 at one side of the cover 10, preferably at the side of the cover 10 where the lesser inward protrusion of the lip 21 exists. The tab 24 has only a short circumferential extent and functions as an access lever for forcing the side of the cover 10 upwardly off of the seam 14.

It will be appreciated that the suggested inward protrusion of the lip 21 as 0.025 inch at its greater inward extension and 0.005 inch at its lesser inward extension is merely one of several dimensional arrangements which may be made and the relative inward extent of the lip 21 determines the difficulty of removal of the cover 10 from the can 11. In experience with a cover 10 of the dimensions indicated it has been found that a small child, say 5 years old, has extreme difficulty in removing the cover 10 and thus is effectively prevented from opening the spout cap 17 with consequent harmful results.

What I claim is:

1. A cover for a dispensing can having a top with a dispensing opening, a sidewall and an annular seam joining said top to said sidewall, said cover having an inverted cup-shaped body and a depending skirt, said skirt having an internal inwardly extending lip near its lower edge, said lip having a diameter less than the external diameter of said seam and being adapted to engage beneath said seam for retaining said cover on said can, said lip being eccentric relative to said skirt and extending inwardly a greater distance at one side of said cover than at the other side of said cover.

2. In a cover according to claim 1, an outwardly extending shoulder joining the cup-shaped body and the skirt, said shoulder being adapted to seat against the seam when said cover is in place on the can.

3. A cover according to claim 1 and a thumb tab at one side of the outer side of said lip for facilitating removal of said cover.

4. A cover according to claim 3 in which the inwardly extending lip is of lesser inward extent adjacent the thumb tab.