United States Patent

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[54] **CONTAINER BODY**
4 Claims, 5 Drawing Figs.

[52] **U.S. Cl.** ..... **150/52 R,** 215/11 C, 215/12 R
[51] **Int. Cl.** **B65d 23/08**
[50] **Field of Search** 215/11.3, 12, 13; 150/52

[56] **References Cited**

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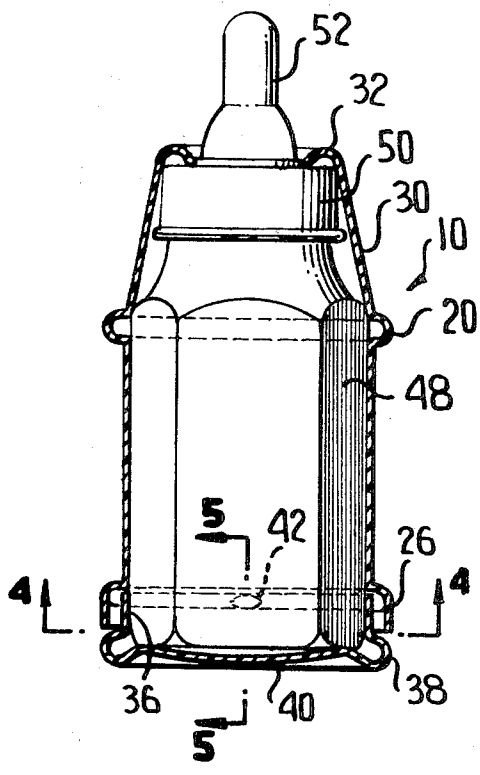
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ABSTRACT: A container body particularly adapted for containing frangible baby bottles and the like, the container body being comprised of two pieces of thermoplastic material manufactured by a novel method and including novel interconnecting means formed upon the two pieces of material.



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FIG.1

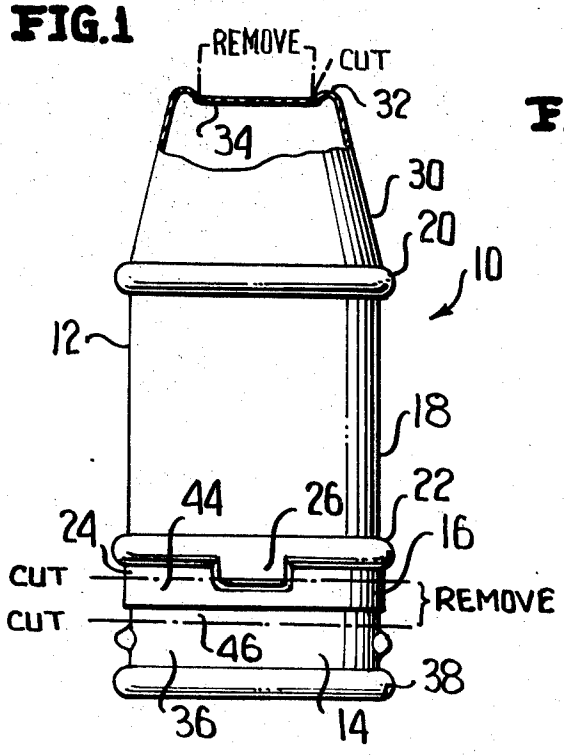


FIG.2

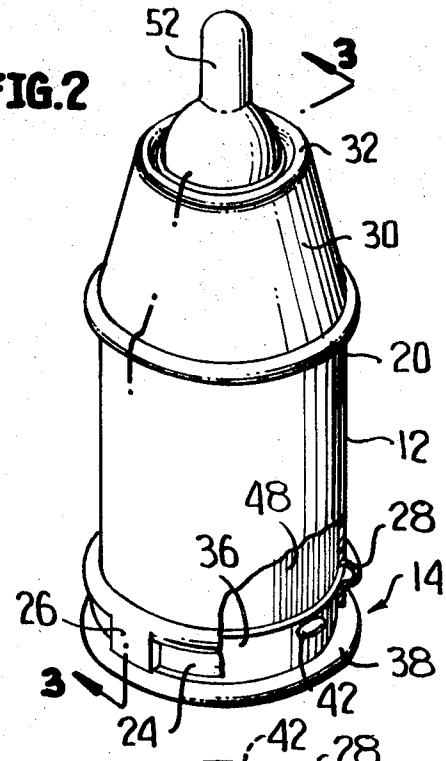


FIG.3

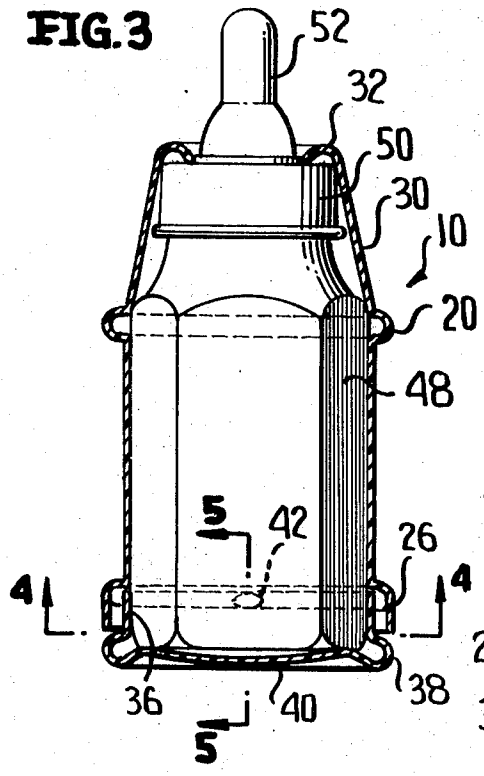


FIG.4

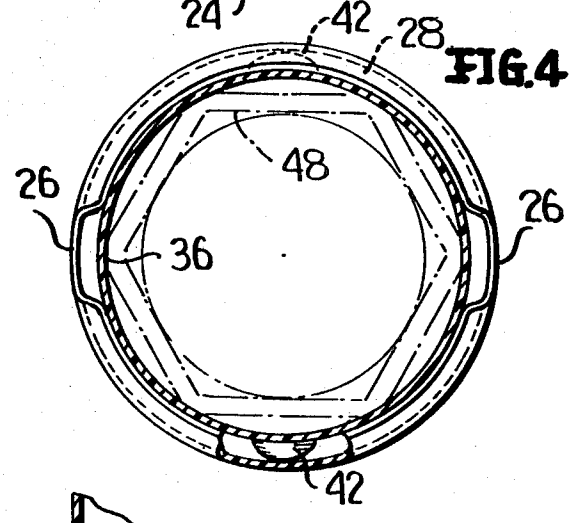
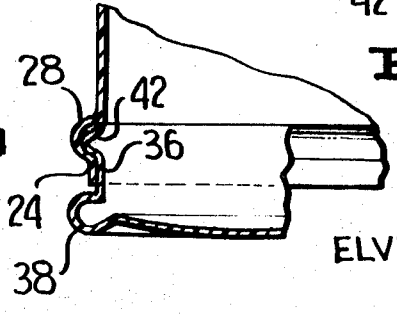


FIG.5



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CONTAINER BODY

BACKGROUND OF THE INVENTION

The presently preferred type of container used for infant feeding is a baby bottle made of glass. While plastic baby bottles are available these are not preferred for infants but rather for children who are old enough to have developed resistance to germs and various infections. For infants, glass baby bottles are preferred to plastic ones because of the ability to more properly sterilize the glass bottles.

SUMMARY OF THE INVENTION

The present invention relates to a protective container body particularly adapted for containing therein a conventional glass bottle for infant feedings.

The principal object of the invention is to prevent breakage of glass baby bottles either because of careless handling by adults or because the infant throws the bottle out of the baby crib. In the event that the glass bottle shatters, even with the protective container body, then the container body will retain the broken glass and keep it from being scattered.

Another object of the invention is to provide a novel method of making the aforementioned protective container body.

Another object of the invention is to provide a novel method of forming interlocking annular members including the steps of forming an annular tube such that first and second tubular portions are connected together by an integrally formed removable portion and are provided with first and second connection means respectively, such that upon removing the removable portion, the first and second tubular portions can be interlocked with the first and second connection means.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reverence to the following detailed description, the appended claimed subject matter and the several views illustrated in the accompanying drawing.

IN THE DRAWING:

FIG. 1 is an elevational view, partly in section, showing a molded one-piece container body blank and illustrates those portions of the blank which are removed subsequent to molding.

FIG. 2 is a perspective view, partly in section, and shows the finished container body enclosing a conventional infant feeding bottle.

FIG. 3 is an elevational view, partly in section, taken on the line 3—3 of FIG. 2.

FIG. 4 is an enlarged sectional view, taken on the line 4—4 of FIG. 3, and illustrates the connection means for attaching the cap member within a bottom portion of the tubular container body.

FIG. 5 is an enlarged sectional view, taken on the line 5—5 of FIG. 3, and illustrates rib means on the cap member nesting within a reinforcing groove on the tubular container body.

Referring to the drawing in detail, FIG. 1 shows a container body, generally indicated by the numeral 10, in the form of an annular tube comprising a first tubular portion 12, a second tubular portion 14 and a removable portion 16.

The first tubular portion 12 includes a central portion 18 terminating at an upper strengthening rib 20 and a lower strengthening rib 22. A lower portion of the first tubular portion 12 includes an enlarged skirt 24 slightly larger in internal diameter than central portion 18. The skirt 24 has a flared flange portion 26 which provides access to a groove 28 formed interiorly of the rib 22 for a purpose to be later described.

The first tubular portion 12 terminates at the upper end thereof in a conical portion 30 which includes an inwardly turned shoulder 32 and a removable panel portion 34.

The second tubular portion 14 is in the form of a cap member which includes a sleeve portion 36 which has an external diameter approximately equal to the internal diameter of enlarged skirt 24, while the bottom part of sleeve portion 36

terminates with a reinforcing rib 38 and an end panel 40. Sleeve portion 36 is provided with a pair of lugs 42 spaced about the periphery thereof and adapted to interfit within groove 28 in the rib 22 to provide connection means for detachably connecting the second tubular portion 14 to the first tubular portion 12.

The removable portion 16, as is shown in FIG. 1, is formed with a varied diameter wherein a first portion 44 is larger than a second portion 46. As a result of this difference in diameters, the portions 44 and 46 can be removed by cutting along the lines shown in FIG. 1 and the second tubular portion 14 can be telescoped within the first tubular portion 12 by first aligning lug 42 with the flared flange portion 26 and, after nesting, slight relative rotation of the first and second tubular portions places the lug 42 within the groove 28 thereby forming a hollow container which is particularly adaptable for protecting a frangible infant feeding bottle 48 therein.

Conventional bottle 48 is provided with a conventional screw-threaded cap 50 and a flexible nipple 52. As is shown in FIG. 1, the removable panel portion 34 is removed such that the nipple 52 can extend through the resultant opening and the inwardly turned shoulder 32 engages the cap 50 to hold the bottle 48 within the container body 10.

From the foregoing, it will be apparent that the invention, it its broadest aspects, relates to a method of forming interlocking annular members by providing a removable section during the initial forming operation such that after removal of the removable portion the two tubular portions can be interlocked by the provision of lugs and grooves which are formed during the initial manufacturing process. A particular embodiment of the invention is disclosed as comprising a container body which forms a protective jacket for frangible articles such as infant feeding bottles wherein the bottles are protected against breakage and/or scattering of fragments in the event that breakage does occur.

While preferred forms and arrangement of parts have been shown in illustrating the invention, it is to be clearly understood that various changes in the disclosed method and article may be made without departing from the spirit and scope of the invention.

I claim:

1. An article comprising a protective jacket for a glass bottle and the like including first and second tubular portions, an end member closing one end of one of said tubular portions, an opening formed in an end of the other one of said tubular portions, one of said tubular portions including a skirt and the other of said tubular portions including a sleeve portion, said skirt having an internal diameter and said sleeve portion having an external diameter which are approximately equal to each other, lug means integrally formed on said sleeve portion and extending radially outwardly therefrom, a rib formed contiguous with said skirt and extending radially outwardly therefrom and having a groove formed interiorly thereof, said skirt having flared flange portion means protruding outwardly therefrom and communicating with said groove for providing an access route for moving said lug means into said groove for interlocking said first and second tubular portions with each other.

2. An article as defined in claim 1 wherein said lug means comprise a pair of lugs circumferentially spaced about said sleeve portion, and said flared flange portion means comprise a pair of flange portions circumferentially spaced about said skirt with the spacing between said flange portions being equal to the spacing between said lugs.

3. An article comprising a protective jacket for a glass bottle and the like, said jacket including a tubular container body formed of thermoplastic material and being of sufficient height for containing therein substantially all of said bottle, reinforcing rib means formed in said tubular container body, said rib means including a groove means formed interiorly thereof, a cap member including a sleeve portion disposed within said container body, lug means on a surface of said sleeve portion, said lug means being located within said

groove means for interlocking said cap member and said container body and closing one end thereof.

4. An article as defined in claim 3 wherein the end of said container body remote from said cap member includes a tapered reduced portion terminating at inwardly turned shoulder means which define an annular opening, said shoulder means comprising means for engaging an end of said bottle for holding said bottle within said container body.