

[54] **BREAKAWAY NECK CONTAINER WITH INTEGRAL CAP**

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FOREIGN PATENTS OR APPLICATIONS

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[21] Appl. No.: **338,379**

[57] ABSTRACT

A container having a breakaway neck with an integral cap comprising frusto-conical end portions one of which is adjacent the end of the container prior to cap breakaway thereby to prevent the user's fingers from engaging the said end of the container from which the cap is being broken away, and the other frusto-conical end closing said end of the container when said cap is inverted.

[52] **U.S. Cl.**..... **215/32, 220/27, 222/541**

[51] **Int. Cl.**..... **B65d 1/08, B65d 17/24**

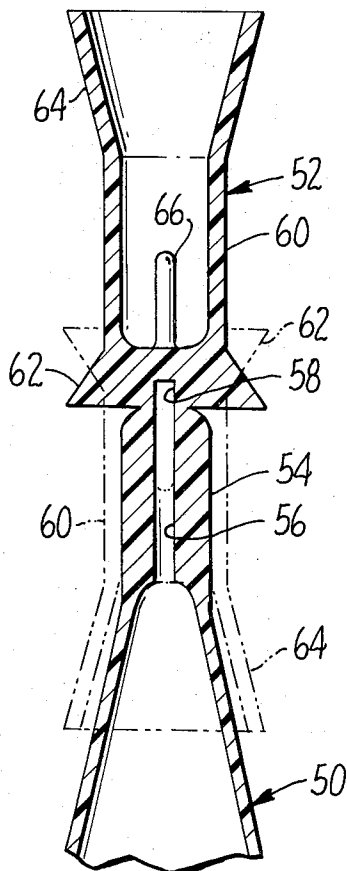
[58] **Field of Search**..... **215/32, 2, 73; 220/27; 222/541**

[56] References Cited

UNITED STATES PATENTS

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1 Claim, 4 Drawing Figures



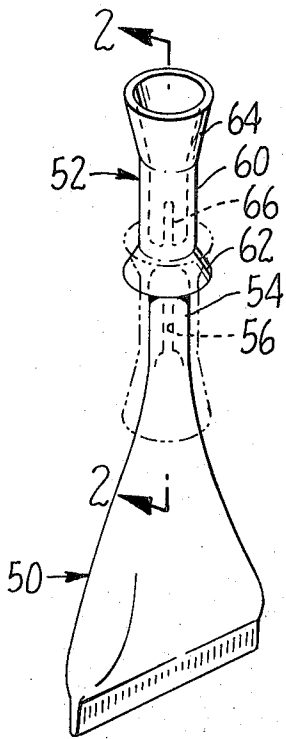


FIG. 1.

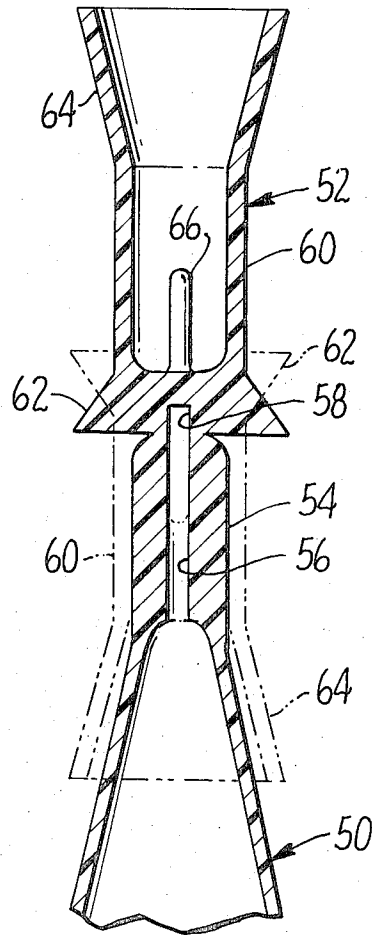


FIG. 2.

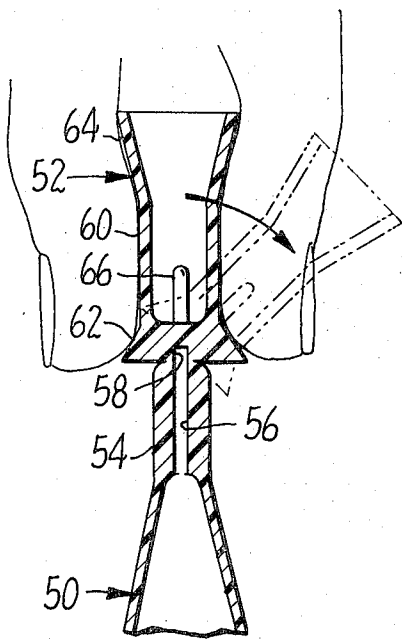


FIG. 3.

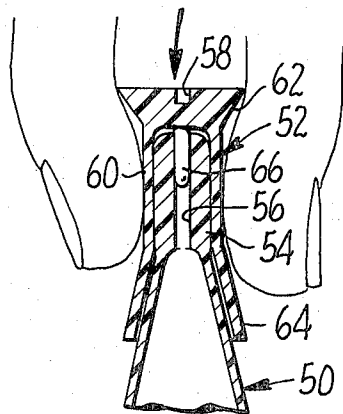


FIG. 4.

BREAKAWAY NECK CONTAINER WITH INTEGRAL CAP

RELATED APPLICATION

This joint application is directed to an improvement over the invention disclosed in the commonly owned and co-pending sole application of Lloyd S. Turner, Ser. No. 130,094, filed Apr. 1, 1971, for "Breakaway Neck Container With Integral Cap". The disclosure of said application comprising the drawings and specification thereof are referred to and incorporated herein by reference.

THE IMPROVEMENT OF THE INVENTION

In comparison with the disclosure of the above-identified parent application, the improvement described in the additional matter herein set forth comprises the provision of two frusto-conical end portions for the breakaway cap, the one located immediately adjacent the dropper end of the container prior to cap breakaway serving to prevent the user's fingers from coming into engagement with the dropper end of the container while the cap is being broken away from the container.

In the drawing,

FIG. 1 is a view in perspective of one of the containers of the invention;

FIG. 2 is an enlarged view in section taken along lines 2-2 of FIG. 1;

FIG. 3 is a reduced scale version of FIG. 2 illustrating the breakaway of the cap portion of the container; and

FIG. 4 is a view of the type of FIG. 3 illustrating the broken away inverted cap emplaced in sealing condition with respect to the dropper end and upper portion of the container.

Referring to the drawing, container 50 and cap 52 are initially integral. Container 50 is provided with a dropper-type end 54 having passageway 56 which, in the integrated condition of cap and container, preferably extends into the cap, as indicated at 58. Cap 52 is provided with an elongate, central finger engaging portion 60 and frusto-conical end portions 62 and 64, portion 62 being resistive to compression or deformation, i.e. being solid except for passageway extension 58, and portion 64 being hollow. The cap is provided with an internal projection 66.

The frusto-conical cap end 62 prevents the fingers of the user from accidentally slipping into engagement with the dropper end 54 of the container when the cap is being broken away or twisted free. When the cap has been subsequently inverted and placed in the sealing position shown in FIG. 4, cap end 62 serves to prevent the fingers from slipping along the elongate, central portion 60 of the cap when the cap is being withdrawn

for use of the container.

What is claimed is:

1. An article of the type described comprising a one-piece soft plastic container and sealing member, said container having a frusto-conical hollow upper end which has integral therewith an elongated cylindrical dropper tip, the tip having a central passageway extending therethrough, the passageway having a length which is several times that of the diameter of the tip, the tip having a rounded end surface suitable for eye dropper usage, a sealing member integral with the end of the tip having a breakaway connection with said tip which terminates radially inside of the rounded end surface, the sealing member comprising a frusto-conical lower part disposed with its wide end at the dropper tip, said wide end having a diametral dimension which is substantially greater than the diametral dimension of said dropper tip, the narrow upper end of the frusto-conical lower part of the sealing member being integral and co-diametral with an elongated hollow cylindrical intermediate part having an internal length of at least the length of said dropper tip and having an internal diameter substantially corresponding to the outside diameter of said dropper tip, the outer end of said intermediate part being integral with an inverted hollow frusto-conical part having an angle of generation which equals or exceeds that of the frusto-conical upper end of the container, there being integral with the narrow end of the frusto-conical lower part of the sealing member a central cylindrical elongated member which projects into the intermediate part of the sealing member and which has a diameter substantially corresponding to that of the passageway of the dropper tip, said sealing member having an overall length which is substantially greater than the length of said dropper tip, whereby said intermediate part serves as a grip for the application of force to effect the rupture of said breakaway connection and the removal of the sealing member from said container, and said frusto-conical lower part serves to prevent contact of the user's fingers with the dropper tip while said rupture and removal is being effected, and whereby said removed sealing member may then be turned end to end and emplaced in enclosing relation to the dropper tip and to an adjacent portion of said frusto-conical hollow upper end of the container, said elongated member then extending into the passageway of said tip and sealing the same, said intermediate part then housing said tip and forming a seal at the outer surface of said tip, and said hollow frusto-conical part then shielding said adjacent portion of said frusto-conical hollow upper end of the container against manual contact.

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