

[54] EXIT SLIT FOR BULK PACKAGE MOIST
TOWELS OR TISSUES

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[22] Filed: July 10, 1972

[21] Appl. No.: 270,559

[52] U.S. Cl. 225/106

[51] Int. Cl. B26f 3/00

[58] Field of Search 221/63, 33-35,
221/44-62; 206/57 R, 58; 225/106

[56] References Cited

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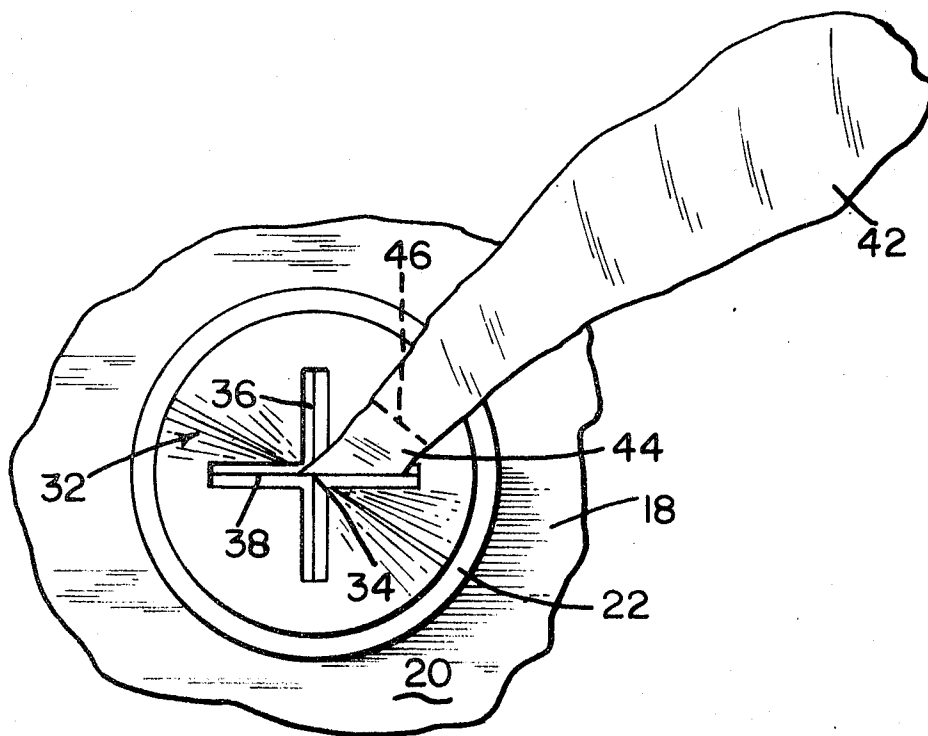
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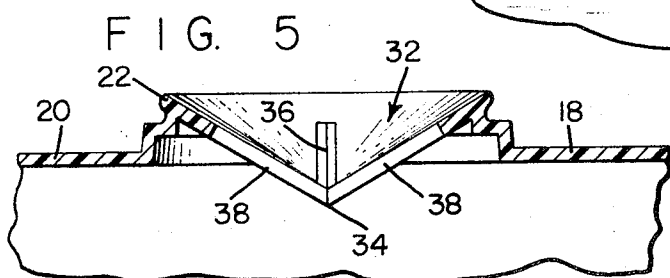
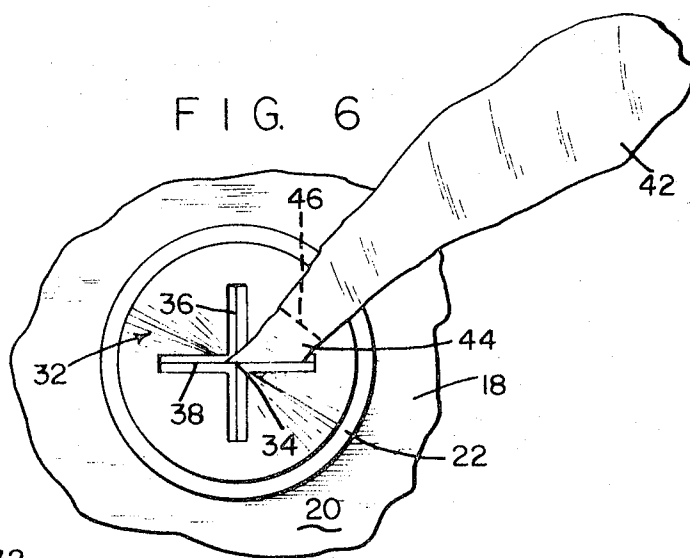
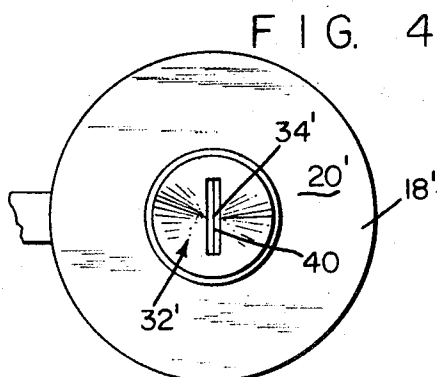
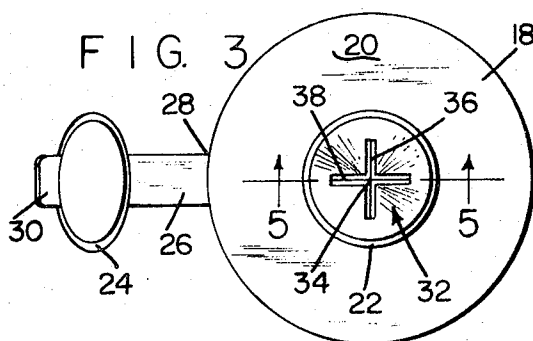
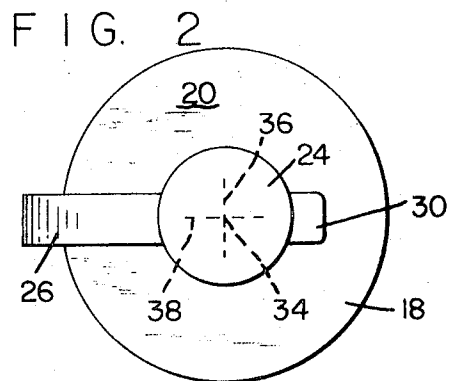
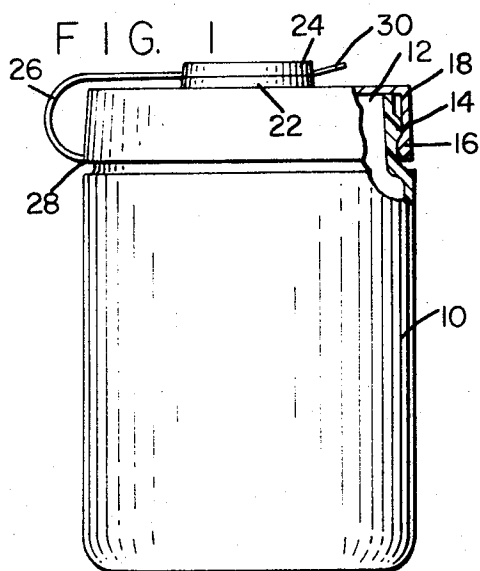
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[57] ABSTRACT

A new and improved exit slit for extracting a web from bulk moist tissue-like material from a container therefor, the tissue-like material being perforated at spaced intervals for severing at the slit as it is dispensed through the slit. The slit is substantially closed but has yielding edge portions imparting drag on the web to enable severing thereof into separate sheets as the web is pulled from the container, the slit being located at an angle with respect to the plane of the surface of the container in which the slit is located. This slit may be crossed or it may be single and straight; or a single V-shaped slit may be used.

17 Claims, 8 Drawing Figures





SHEET 2 OF 2

FIG. 7

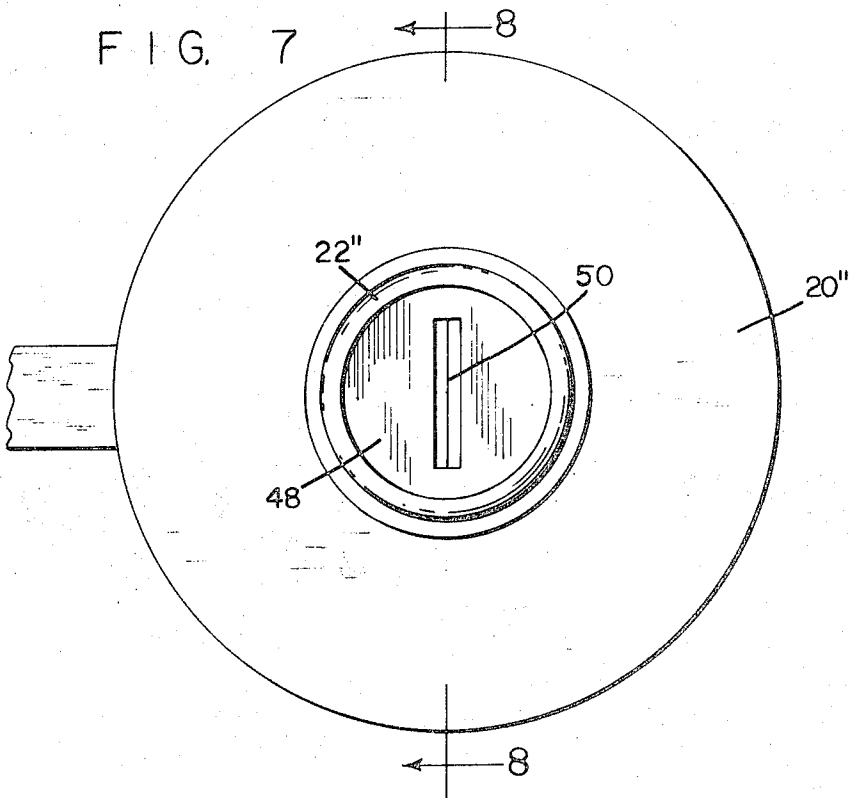
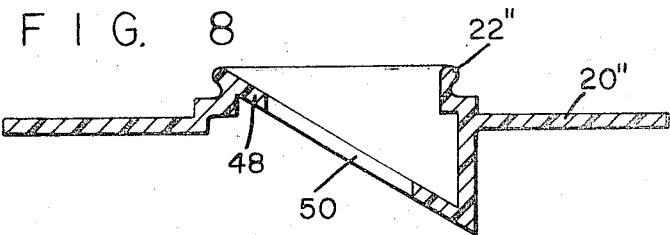


FIG. 8



EXIT SLIT FOR BULK PACKAGE MOIST TOWELS OR TISSUES

BACKGROUND OF THE INVENTION

Reference is made to pending application Ser. No. 222,882, filed Feb. 2, 1972 which describes the general background and purpose of the invention. In the construction shown in that application it has been found that in some instances it is difficult for the user to extract the tissue in such a way as to cause even separation of the web into single sheets for use.

The perforations in the web have to be strong enough so that the web does not break inopportunately. However the stronger perforated areas in the web create a separation problem at the slit. As the consumer uses this product, it tends to rope continuously unless special care is taken to position the web at the end of one slit by pulling it at an angle and snapping it or giving it a sharp tug. This has been found to be an unnatural consumer action because of the apparently well ingrained habit of pulling similar products straight up out of packages, e.g., dry tissues. If the consumer will pull on the web as it travels through the slit at an angle, this problem does not arise but it has been found difficult to teach the consumer to do this, and it is the general object of the present invention to overcome this problem by an improvement in the slit through which the web passes.

SUMMARY OF THE INVENTION

A substantially enclosed airtight container is provided, this container having a cap enclosing the contents, the cap being detachably mounted thereon in any way as by screw threads or snap fit, etc. The cap is provided with a generally flat top having centrally thereof an exit slit which is located at an angle to the general plane to the top of the cap. This is accomplished by forming the slit in the surface of an inverted cone or inclined plane which extends downwardly with respect to the top surface of the cap, and is preferably integral therewith. A single slit is used in the surface of the inclined plane and a cross or a single slit may be used in the surface of the cone.

When a cone construction is used, the base of the cone which appears at the outer surface of the top of the cap is slightly raised above the surface thereof and it is provided with a bead or an undercut, for the snap fit reception of a cover for the slit protecting the same and preventing moisture from escaping from the interior of the container. A similar bead construction is provided when the slit surface is in the form of an inclined plane. When both cap and the cover are secured the entire container is substantially sealed.

BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a view in elevation illustrating the invention, part being in section;

FIG. 2 is a top plan view of the cap with the cover in position;

FIG. 3 is a top plan view of one form of the cap with the cover open;

FIG. 4 is a similar view illustrating a modification;

FIG. 5 is an enlarged transverse section on line 5—5 of FIG. 3;

FIG. 6 is an enlarged plan view of a crossed slit illustrating the action of the web being extracted therefrom;

FIG. 7 is a plan view of a modification; and

FIG. 8 is a section on line 8—8 of FIG. 7.

PREFERRED EMBODIMENT OF THE INVENTION

Reference numeral 10 indicates a container preferably made in one piece, conveniently of plastic. At its top portion it has an open end 12 with a bead 14 thereon for the reception of a corresponding snap-in bead 16 on the cap 18 which closes the container 10. The cap however is manually removable for a purpose to be described, and may be otherwise attached for removal.

The cap 18 has a generally flat top area 20 and centrally thereof there is a raised annular portion which is undercut, this being indicated at 22, for the snap reception of a cover 24 made captive by strap 26, strap 26 being connected to the cap at 28. The cover 24 may have a lifting tab 30.

Within the undercut bead 22 there is a depending conical construction which is generally indicated at 32, having an apex as at 34.

As shown in FIG. 3 the conical portion 32 is provided with cross slits 36 and 38, these cross slits being reduced in thickness as shown in FIG. 5, and being substantially in contacting relationship as indicated in FIG. 6, to provide relatively sharp substantially contacting edges. This construction is all moldable.

As seen in FIG. 4 the cross slit need not be used but a single slit as at 40 can be utilized in the surface of the cone 32' in the top 20' of the cover 18'. In this case the apex of the cone is indicated at 34'.

The slit or slits are normally closed with the edges thereof in substantial contacting relationship due to resiliency of the material of which the cap is made. The container is therefore substantially airtight even when the cover to be described is not in position. Tissue, towel, or any suitable material which is moist and preferably wet impregnated with any material desired is located in the container, and may be in the form of a web, roll, or in bulk.

When the container is to be used for the first time the cap 18 is removed and the leading end of the material in the container is poked through the slit from the bottom, whether a cross slit or a single slit is provided, that is the end of the web is pushed upwardly through the slit or slits to the exterior of the cap, and a tip as at 44 is formed which may then be grasped and pulled as indicated in FIG. 6, the material being indicated at 42.

The drag of the lips defining the slit or slits is such that the perforations 46 yield under the pull shown by the arrow in FIG. 6, and thus severs the web while leaving a new tip 44 exteriorly of the cap 18 (in the cone) to be grasped for the next pull and severing action.

Referring to the modification of FIGS. 7 and 8, the top 20'' of the cap is provided with an inclined surface 48 extending down into the cap and a raised annular surrounding bead 22'' is provided for snap reception of the cover, as before. The surface 48 may be flat and has e.g., a single slit 50 in it, this slit being along the same inclination as surface 48.

It will be seen that even though the material or web 42 should be pulled straight upwardly as is the natural tendency for the user to do, the web in both forms of the invention is still at an angle with respect to the direction of pull thereof due to the inclination of the slit or slits. This is true whether there is a cross slit or a single slit utilized. Under these conditions it has been found that the severing action at the perforations is

greatly enhanced because the tendency is for the web to accumulate at the end of the slit and this provides a greater drag than would be the case otherwise.

Also of course the material 42 may be withdrawn at an inclination with respect to the flat surface of the cap and this is also shown in FIG. 6, the action being enhanced if the user pulls the web in this direction. This is also true of both forms of the invention.

Perforations 46 are indicated in FIG. 6 at about the point of severance of the web under the conditions stated leaving the next short tip 44 exposed for the next dispensing action. It is preferable for the cover 24 to be resnapped over the bead 22 to keep the moisture in the container and in the absorbent material from evaporating. The slits themselves being normally substantially closed perform this function but naturally it is enhanced with the cover closed as in FIG. 1 and 2.

It is pointed out that any type of configuration that provides a slanted or inclined slit may be used, the structures shown herein being illustrative.

I claim:

1. The combination with an enclosed substantially airtight container having an opening therein, of an elongated web of impregnated absorbent material in the container, a cap for closing the container, said cap including a top, a portion of said top being relatively inclined with respect to the major portion of the top, and there being a web exit slit in said inclined top portion, the web being adapted to be pulled through said slit.
2. The combination of claim 1 wherein said slit is a single slit.
3. The combination of claim 1 wherein said slit is a cross slit.
4. The combination of claim 1 including another top portion which is in turn inclined with respect to the first inclined portion, the slit being in the form of a V extending from a common point along the inclined portions.
5. The combination of claim 1 wherein the inclined top portion is in the form of a cone.
6. The combination of claim 1 wherein the inclined top portion is in the form of a cone and the slit is a straight slit directly across the cone including the apex

thereof.

7. The combination of claim 1 wherein the inclined top portion is in the form of an inclined plane.

8. The combination of claim 7 wherein the slit is also inclined relative to the top of the cap.

9. The combination of claim 1 wherein said inclined top portion is in the form of a cone, and a second slit crossed with respect to the first named slit, said slits intersecting adjacent the apex of the cone.

10. The combination with an enclosed substantially air-tight container with an elongated web of moist impregnated absorbent material therein, means forming a slit in a wall of the container, the material of said wall being substantially resilient and self sustaining, the web of absorbent material being capable of extraction from the container by being pulled out through the slit, the wall of the container including the slit having a portion at an inclination with respect to the general surface of said wall, the slit being at an inclination with respect to the general surface of said wall.

11. The combination of claim 10 wherein said slit has edges in substantial contact with each other, the inclined portion of said wall containing the edges of the slit being yieldable allowing extraction of the absorbent material, the edges of the slit tending to resist withdrawal of the web, the web being weakened at intervals and disrupting at these intervals under the tensions of the withdrawal pull against the relatively inclined slit, the latter being inclined relative to the direction of the pull on the web in the dispensing thereof.

12. The combination of claim 10 wherein the cap is removable and replaceable.

13. The combination of claim 10 wherein the portion of the wall containing the slit is generally flat.

14. The combination of claim 13 wherein the slit is single.

15. The combination of claim 10 wherein the portion of the wall containing the slit is generally conical.

16. The combination of claim 15 including a second slit crossing the first named slit.

17. The combination of claim 16 and the crossed slits intersect at the apex of the conical wall portion.

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