

PATENT SPECIFICATION

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DRAWINGS ATTACHED

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(54) COMBINATION LIQUID FILLED CONTAINER AND DRINKING STRAW

(71) We, FIRST DYNAMICS, INC., a Corporation organised and existing under the Laws of the State of New York, United States of America, of, 1133, Broadway, New York, N.Y. 10010, United States of America, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to a combination liquid filled container and drinking straw, and is a modification of the invention of a co-pending application No. 13944/70 (Serial No. 1,253,195) entitled "Combination Food Container and Implement for Extracting the Contents."

Among objects of the invention are the provision of a sealed straw-receiving recess extending linearly, that is, in a straight line along a maximum dimension of a flat wall, uppermost in use, of a container, and the provision, as an alternative, of a non-linear recess which may be triangular in outline to receive a bent straw of relatively greater length, together with an access opening in said wall for insertion of the straw into the container, and a single or unitary tear strip sealing the straw in the recess and preventing ingress of air into the container through the opening. Although the only container illustrated herein is one having a rectangular cross-section, it is obvious that the invention is equally applicable to containers of other shapes such as, for example, those having circular or elliptical cross-sections.

According to the present invention, there is provided a combination of a liquid filled container and a drinking straw, which combination comprises a flat container wall uppermost in use; a depression formed in said wall and extending inwardly with respect to said container, said depression constituting a storage recess bounded by side walls and a base lying in a plane parallel with said container wall,

said recess permitting storage of said straw wholly within said recess, said recess having a depth at least equal to the external diameter of said straw, said container wall including an aperture permitting insertion of said straw into said container; and a tear strip adhered to the outer surface of said wall and dimensioned to seal said straw within the recess and to prevent ingress of air into the container through said aperture from outside said container.

The invention will now be described, by way of example only, with reference to the drawings wherein:—

Figure 1 is a perspective view of a container embodying features of the present invention, showing a circular hole in the cover for insertion of the straw and a straight or linear depression providing a recess in which a straight straw nests.

Figure 2 is a reduced sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a reproduction in part of Figure 2 and shows the straw of Figures 1 and 2 after removal from its recess and inserted through the hole in the cover for imbibing the container contents.

Figures 4, 5 and 6 are sectional views taken on the line 4—4 of Figure 3 except that they show various modifications in the outline of the opening for insertion of the straw.

Figure 7 is a view similar to Figure 4 except that it shows two intersecting slits or cuts in the cover to form tongues which bend downward upon application thereto of one end of the straw for insertion of the straw into the container.

Figure 8 is a fragmentary top view, with parts broken away, of a modified form wherein the straw-receiving recess is shown triangular in outline and the straw is bent to nest therein.

Fig. 9 is a sectional view taken on the line 9—9 of Fig. 8.

Referring in detail to the drawing, a container 10 containing a liquid to be drunk, is shown, by way of example, rectangular in

cross-sectional shape. The top wall, that is the wall uppermost in use, or cover 11, is flat and sealed on the container body, has a recess 12 shown linear and formed by a depression extending along a maximum dimension, or diagonal, of the cover. In the case of a cylindrical container such maximum dimension is a diameter of the cover, and in the case of a container elliptical in cross-section the maximum dimension is the longer axis of the ellipse. The cover additionally has an aperture constituted by an opening or hole 14 therein shown spaced from the recess 12. A straw 13 whose external diameter does not exceed the depth of the recess 12 nests in the recess for storage therein.

A unitary tear strip of whatever desired shape is shown at 15 and is adhered to the outer surface of the cover to cover the recess 12 and the hole 14 by overlapping them. An unadhered tip 16 is preferably provided on the tear strip for readily grasping it to tear off the strip 15. To facilitate grasping the straw, the recess 12 is shown having a widened portion 17 shown positioned intermediate its length but which may obviously be positioned at any point along the length of the recess.

After tearing off the strip 15 and removing the straw the latter may be inserted through the hole 14 as shown in Fig. 3 to drink the contents. Since such straws are usually flexible and resilient to an extent, whether made of thin plastics or other suitable material, the hole in the cover through which the straw is inserted need not necessarily be circular in outline. Moreover, in order to be able to maintain the straw substantially or approximately upright in the case of a circular hole, a very close fit between the straw and the hole would be required. To insure close fitting as a result of partial clamping of the straw by the circumferential wall of the hole, a number of examples of non-circular holes are illustrated in Figs. 4-6.

In Fig. 4 the hole 14a is shown with its surrounding wall shaped in simulation of a figure "8." Here the straw 13 is inserted by first squeezing its lower end and then pushing the straw downward, whence its surrounding wall will be frictionally engaged at least by two opposed inwards projections 23. In fact, a deformed outline otherwise similar to the figure "8" shown but which has only one such projection 23, would also serve to provide frictional engagement between the straw and the hole. In either case the straw may be maintained upright or it may be tilted to a degree.

In Fig. 5 the hole 14b is shown triangular in configuration and the straw 13 has its surrounding wall deformed and, when inserted, in engagement with the three sides of the triangle. In Fig. 6 the hole 14c is shown elliptical and its function is obvious in frictionally engaging the straw. All of the various holes for insertion of the straw permit a degree of swinging of the straw out of upright position.

Fig. 7 shows the equivalent of a hole for insertion of the straw through the cover except that instead of normally being an open hole two intersecting cross-cuts or slits 20, 21 are provided in the cover 11 thus forming four tongues 22 which are normally co-planar with the cover. Upon pressing an end of the straw downward upon these tongues the latter will bend or pivot downward on their bases which are represented in the drawing by phantom lines 24. When the straw is thus inserted the resilience of the tongues will cause them to hold the straw frictionally in position. Of course any number of slits 21 starting with at least three may be substituted for the slits shown.

Except for the circular hole 14 of Figs. 1-3 all of the modified forms shown in Figs. 4-7 are non-circular in outline. Broadly speaking, such non-circular holes have at least one dimension measured between opposed walls thereof smaller than the external diameter of the straw to provide frictional engagement of the straw, and such engagement additionally prevents the straw from falling out of the hole.

In Figs. 8 and 9 is shown only a fragment of a modified container cover 11a for containers where it is desired to provide a relatively longer straw as, for example, for use by persons in reclining position whence it is advantageous to have a straw which may be bent in the direction of the person's mouth while the container is being held in a manner to prevent spilling of its contents through the hole. Such a feature is particularly desirable in hospitals. Here a non-linear recess 12a is shown provided in the form of a triangular depression having the floor 18 and the surrounding walls 19 which extend at an angle to each other. The elongated straw is shown bent and substantially at its middle to form two arms 13b nested in the recess 12a with the said arms resiliently urged against at least two of the side walls 19, or at least confined between such two side walls. A hole 14d which may be circular or noncircular, is again provided through the cover for insertion of the straw into the container. A tear strip 15a which is of suitable shape and dimensions to cover both the recess 12a and the hole 14d, is adhered to the cover and is also preferably provided with an unadhered tab 16a.

Although the container shown in the drawing has its top wall or cover overhanging the side walls thereof, it is obvious that such overhang is not essential to the invention.

WHAT WE CLAIM IS:—

1. A combination of a liquid filled container and a drinking straw, which combination comprises a flat container wall uppermost in use; a depression formed in said wall and extending inwardly with respect to said container, said depression constituting a storage recess bounded by side walls and a base lying in a plane parallel with said container wall, said recess

cross-sectional shape. The top wall, that is the wall uppermost in use, or cover 11, is flat and sealed on the container body, has a recess 12 shown linear and formed by a depression extending along a maximum dimension, or diagonal, of the cover. In the case of a cylindrical container such maximum dimension is a diameter of the cover, and in the case of a container elliptical in cross-section the maximum dimension is the longer axis of the ellipse. The cover additionally has an aperture constituted by an opening or hole 14 therein shown spaced from the recess 12. A straw 13 whose external diameter does not exceed the depth of the recess 12 nests in the recess for storage therein.

A unitary tear strip of whatever desired shape is shown at 15 and is adhered to the outer surface of the cover to cover the recess 12 and the hole 14 by overlapping them. An unadhered tip 16 is preferably provided on the tear strip for readily grasping it to tear off the strip 15. To facilitate grasping the straw, the recess 12 is shown having a widened portion 17 shown positioned intermediate its length but which may obviously be positioned at any point along the length of the recess.

After tearing off the strip 15 and removing the straw the latter may be inserted through the hole 14 as shown in Fig. 3 to drink the contents. Since such straws are usually flexible and resilient to an extent, whether made of thin plastics or other suitable material, the hole in the cover through which the straw is inserted need not necessarily be circular in outline. Moreover, in order to be able to maintain the straw substantially or approximately upright in the case of a circular hole, a very close fit between the straw and the hole would be required. To insure close fitting as a result of partial clamping of the straw by the circumferential wall of the hole, a number of examples of non-circular holes are illustrated in Figs. 4—6.

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1. A combination of a liquid filled container and a drinking straw, which combination comprises a flat container wall uppermost in use; a depression formed in said wall and extending inwardly with respect to said container, said depression constituting a storage recess bounded by side walls and a base lying in a plane parallel with said container wall, said recess



- permitting storage of said straw wholly within said recess, said recess having a depth at least equal to the external diameter of said straw, said container wall including an aperture permitting insertion of said straw into said container; and a tear strip adhered to the outer surface of said wall and dimensioned to seal said straw within the recess and to prevent ingress of air into the container through said aperture from outside said container.
2. The combination as claimed in Claim 1, wherein said aperture is circular in outline and has a diameter at least equal to the external diameter of said straw.
3. The combination as claimed in Claim 1, wherein said aperture is non-circular in outline and has at least one transverse dimension between opposed walls thereof smaller than the external diameter of said straw.
4. The combination as claimed in Claim 3, wherein said non-circular aperture has approximately the outline of a figure "8."
5. The combination as claimed in Claim 3, wherein said non-circular aperture has the outline of a triangle.
6. The combination as claimed in Claim 3, wherein said non-circular aperture has the outline of an ellipse.
7. The combination according to Claim 3, wherein said non-circular aperture comprises at least two intersecting slits forming tongues depressible downward by one end of said straw.
8. The combination as claimed in any one of the preceding claims wherein said recess extends linearly along a diagonal of said container wall and said aperture is spaced from said recess.
9. The combination as claimed in Claim 8, wherein said recess includes a widened portion extending transversely of said straw stored therein for lifting said straw out of said recess with one's finger tips.
10. The combination as claimed in any one of Claims 1 to 7, wherein said recess is non-linear and said side walls thereof include two side walls positioned at an angle to each other, said straw being bent to form two arms, said arms engaging said two side walls.
11. The combination as claimed in Claim 10, wherein said aperture is spaced from said two side walls.
12. The combination as claimed in Claim 10 or Claim 11, wherein said recess is triangular in outline and said base extends between said side walls thereof, said straw being bent to form at least two arms, said arms of said straw engaging two of said sides.
13. The combination as claimed in Claim 12, wherein said aperture is positioned in said base.
14. The combination as claimed in any one of Claims 1 to 7, wherein said recess extends linearly along a maximum dimension of said container wall and said aperture is spaced from said recess.
15. The combination as claimed in any one of Claims 1 to 7, wherein said recess is non-linear in configuration and said straw is bent to conform to said non-linear configuration.
16. A combination of a liquid filled container and a drinking straw substantially as herein described with reference to, and as shown in, the accompanying drawings.
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