

Nov. 2, 1965

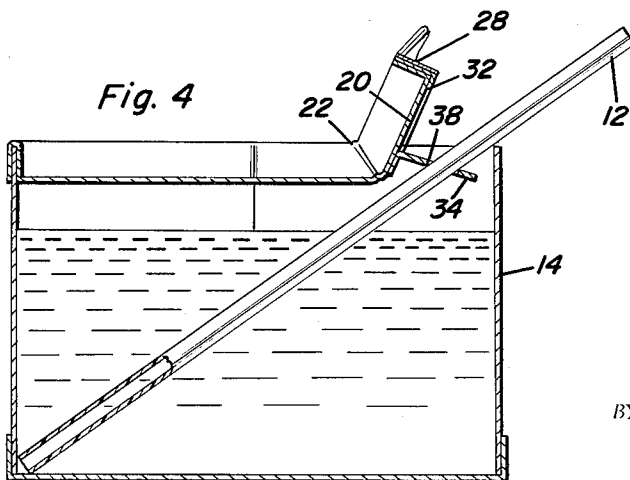
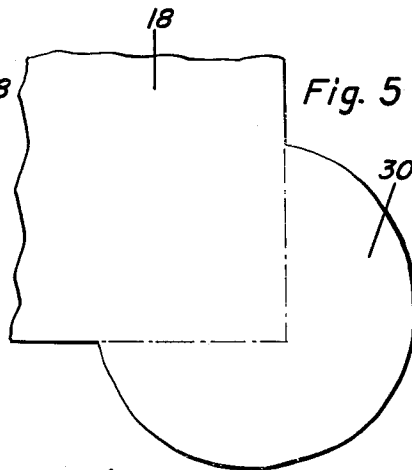
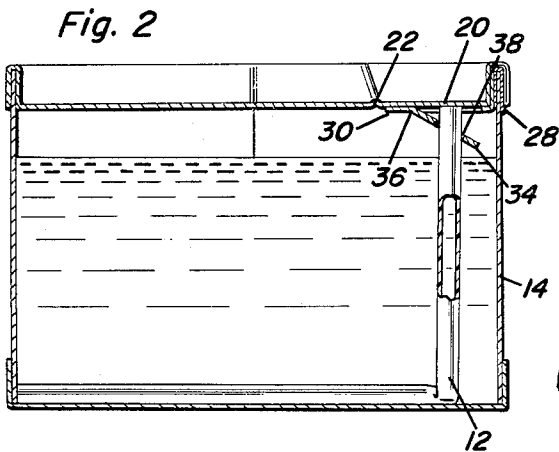
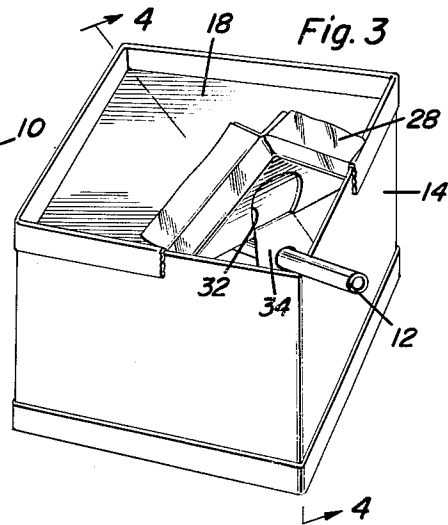
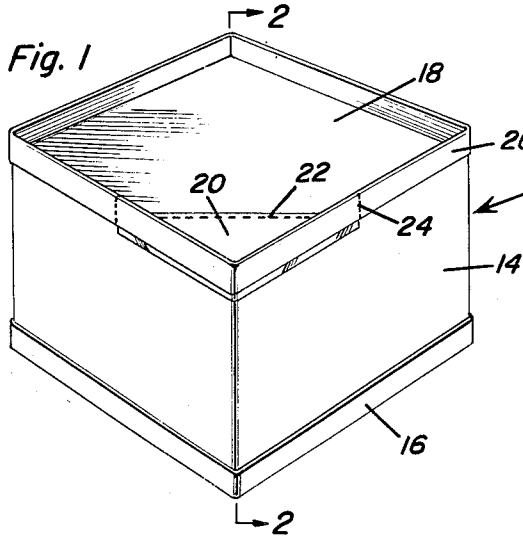
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3,215,329

MILK CARTON WITH DRINKING STRAW

Original Filed Oct. 28, 1959

3 Sheets-Sheet 1



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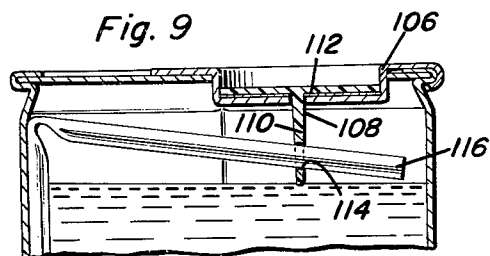
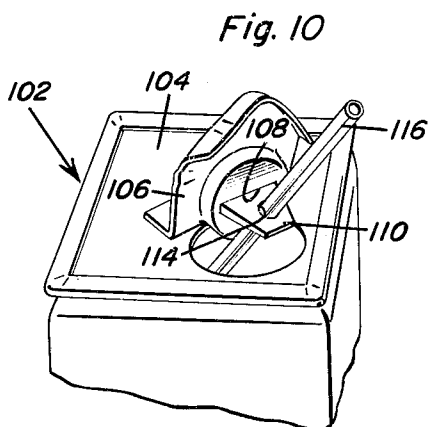
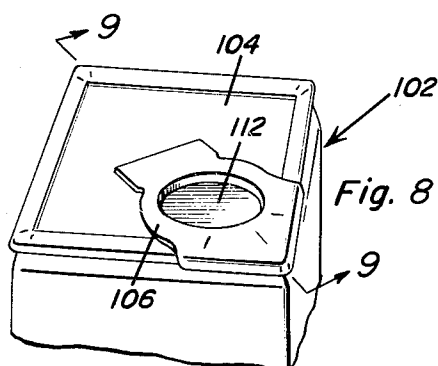
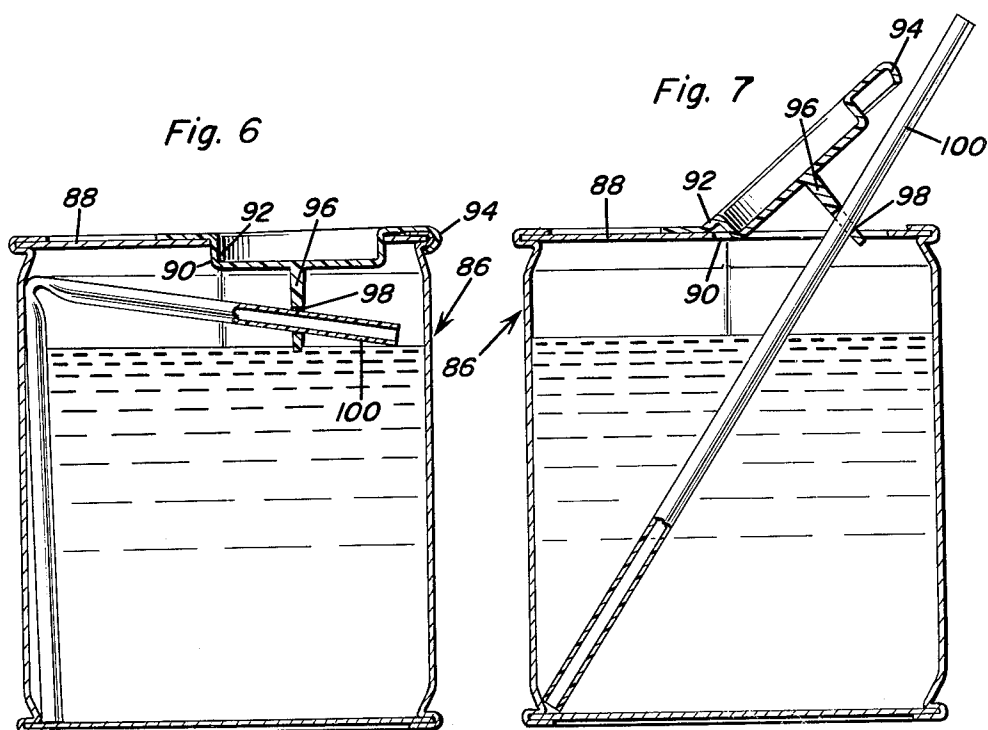
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3,215,329

MILK CARTON WITH DRINKING STRAW

Original Filed Oct. 28, 1959

3 Sheets-Sheet 2



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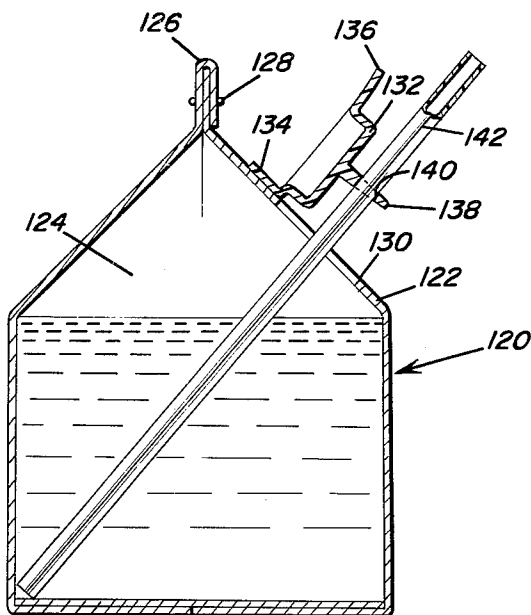
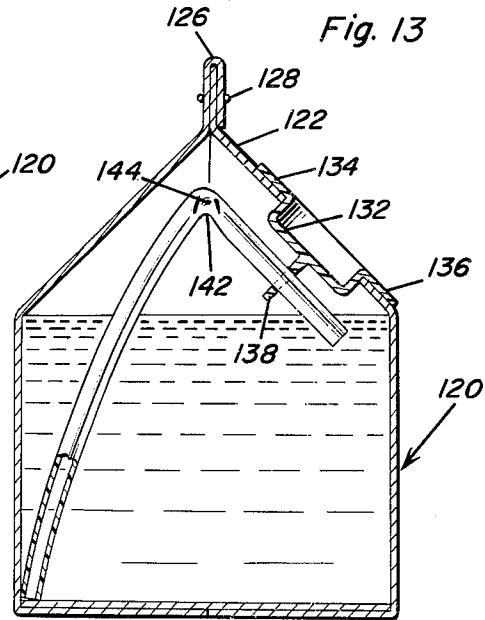
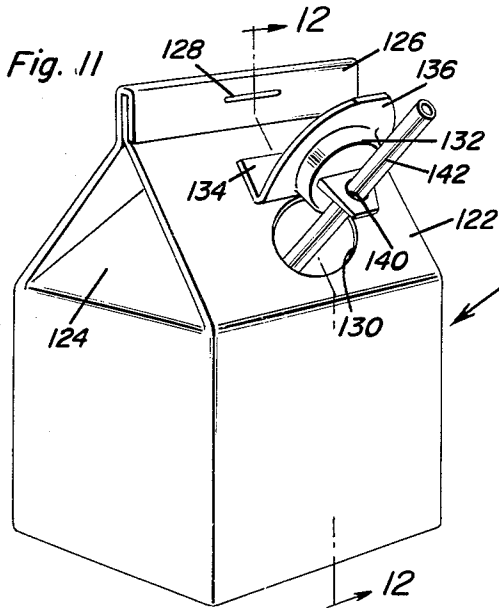
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3,215,329

MILK CARTON WITH DRINKING STRAW

Original Filed Oct. 28, 1959

3 Sheets-Sheet 3



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3,215,329

## MILK CARTON WITH DRINKING STRAW

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Original application Oct. 28, 1959, Ser. No. 849,334, now  
Patent No. 3,071,303. Divided and this application  
Nov. 29, 1962, Ser. No. 249,547

5 Claims. (Cl. 229—7)

This application is a division of copending application  
Serial No. 849,334, filed October 28, 1959, for Milk Car-  
ton With Drinking Straw, now Patent No. 3,071,303.

The present invention generally relates to novel and im-  
proved structural arrangements in beverage containers such  
as those normally employed for milk, fruit juices, car-  
bonated beverages and the like.

The primary object of the present invention is to pro-  
vide a container having incorporated into its construction  
a straw which is normally distorted from its straight line  
condition to a bent condition so that the straw will be  
completely enclosed within the interior of the container  
while the container is in sealed condition but which will  
immediately pop out to a straight line condition for im-  
mediate consumption of the liquid in the container when  
the container is opened in the usual manner.

Another object of the present invention is to provide a  
container in combination with a straw of resilient nature  
as set forth in the preceding object in which the openable  
top portion of the container is provided with means on  
the undersurface thereof for receiving the straw and for  
moving the straw to its straight line condition and other-  
wise facilitating the orientation of the straw while the  
contents are being consumed through the straw in the  
usual manner.

Another important feature of the present invention is  
to provide a container construction which is quite simple  
in construction and requiring very little modification to  
include the straw with the straw being inserted with a  
suitable type of straw dropping apparatus with the con-  
tainer being closed and sealed in the usual manner.

Yet another important object of the present invention  
is to provide a container and straw combination in which  
the openable portion of the lid of the container includes  
a depending rigid tongue or flexible plate slidably and  
closely receiving and retaining the straw in position and  
which is easy to use, effective for its particular purposes  
and generally inexpensive to manufacture.

These together with other objects and advantages which  
will become subsequently apparent reside in the details of  
construction and operation as more fully hereinafter de-  
scribed and claimed, reference being had to the accom-  
panying drawings forming a part hereof, wherein like  
numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of a container in which  
the present invention is embodied;

FIGURE 2 is a vertical sectional view taken substan-  
tially upon a plane passing along section line 2—2 of  
FIGURE 1 illustrating the container and the straw;

FIGURE 3 is a perspective view of the container similar  
to FIGURE 1 but with the container opened and the  
straw in position for use;

FIGURE 4 is a vertical sectional view taken substan-  
tially upon a plane passing along section line 4—4 of  
FIGURE 3 illustrating the structural arrangement of the  
container and straw when the straw is in position for use;

FIGURE 5 is a fragmental plan view of the lid illustrat-  
ing the material from which the straw engaging element is  
formed;

FIGURE 6 is a sectional view illustrating another form  
of the invention in closed condition;

FIGURE 7 is a sectional view similar to FIGURE 6  
but illustrating this form of the invention in open con-  
dition;

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FIGURE 8 is a perspective view of another form of  
the invention;

FIGURE 9 is a sectional view taken substantially upon  
a plane passing along section line 9—9 of FIGURE 8  
illustrating the details of construction of this form of  
the invention;

FIGURE 10 is a perspective view of the form of the  
invention illustrated in FIGURE 8 with the plug closure  
open and the straw in position for use;

FIGURE 11 is a perspective view of yet another form  
of the invention;

FIGURE 12 is a detailed sectional view taken substan-  
tially upon a plane passing along section line 12—12 of  
FIGURE 17 illustrating the relationship of the straw to  
the container; and

FIGURE 13 is a sectional view similar to FIGURE 12  
but with the container closed.

Referring now specifically to FIGURES 1—5 of the  
drawings, the numeral 10 generally designates the con-  
tainer of the present invention which has a drinking straw  
12 incorporated therein. The straw 12 preferably is of  
plastic material having sufficient resiliency to straighten  
out to a straight line condition from being bent in substan-  
tially an angular condition.

The container 10 includes a peripheral wall 14 which  
may be conveniently square, rectangular or round which  
is provided with a bottom 16 and a top or lid 18 all of  
which represent conventional construction. The top 18  
normally is provided with an openable closure member  
20 which is foldable along a fold line 22 and which is  
severable along a score line 24 extending across the de-  
pending flange 26 which connects the top or lid 18 to  
the peripheral wall 14. The outer periphery of the open-  
able closure 20 is sealed with a foil material of a metallic  
foil or the like designated by the numeral 28. Up to  
this point, the closure 20, as described, is conventional  
but it includes an extension 30 extending from the cor-  
ner thereof and which is folded against the undersurface  
of the closure portion 20 and is preferably heat sealed  
thereto or otherwise secured thereto so that the extension  
30 forms an underlying flap in relation to the closure  
portion 20 and is formed in the same shape. The carton  
is plastic coated both inside and outside to provide the  
necessary seal.

The portion of the flap 30 underlying the closure por-  
tion 20 is provided with a generally U-shaped cut-out  
portion 32 which forms a platform 34 hinged to the flap  
30 along a fold line 36 generally paralleling the fold  
line 22 with the platform 34 being freely swingable in  
relation to the flap 30.

The platform 34 is provided with an opening 38 which  
receives the straw 12 and which will pull the straw up  
and generally guide it to an inclined position as illus-  
trated in FIGURE 4 from an angulated condition as il-  
lustrated in FIGURE 2.

In this form of the invention, the container 10 is  
opened in the usual manner, that is by prying up on the  
free corner of the closure member 20. When this is  
done, the straw 12 will naturally tend to straighten out  
and the lifting force on the upper end thereof by the  
side edges of the apertures 38 frictionally engaging the  
straw 12 as the platform 34 moves upwardly will cause  
the straw to straighten out and move through the aperture  
38 to the inclined position as illustrated in FIGURE 4  
whereby the straw is ready for use and will be held in  
this position during use by virtue of the platform 34.

Referring now to FIGURES 6 and 7, another form of  
the invention is generally designated by the numeral 84  
and this form of the invention includes a top 88 in which  
there is provided an opening 90 having a plug type  
closure 92 therein which is heat sealed or otherwise se-  
cured to the top 88 and is provided with a bendable

flange 94 engaging the edges of the container. The plug type closure 92 is molded of unitary construction such as plastic and is provided with a unitary depending shank 96 centrally disposed thereon which is rigid with the plug 92 and provided with an opening 98 receiving the flexible resilient straw 100 of plastic material. The entire plug 92 is of one-piece construction and is preferably of plastic material and when the plug 92 is moved from the closed to the open position as illustrated in FIGURE 7, the straw 100 will be straightened out and the free end thereof will move out through the aperture 98 to the position illustrated in FIGURE 7.

FIGURES 8-10 illustrate another form of the invention generally designated by the numeral 102 which includes a container having a top wall 104 with a plug type closure 106 mounted therein by suitable means such as heat sealing. In this form of the invention, the plug 106 is of waxed cardboard or the like and is provided with a sealed slit 108 therein for receiving a depending shank 110 on a circular plate or disk 112 disposed within the confines of the plug closure 106. The shank 110 is rigid with the disk 112 and the disk 112 may be adhesively secured to the plug 106 or secured thereto by heat sealing and the shank 110 is provided with an aperture 114 through which the drinking straw 116 extends substantially in the nature of the straw 100 in FIGURES 6 and 7. The aperture 114 in the shank 110 may be circular and may or may not have serrations. Thus, when the plug 106 is moved to the opened position as illustrated in FIGURE 10, the straw 116 will be moved to a straight line condition extending outwardly from the container for ease of consumption of the material within the container.

FIGURES 11-13 illustrate the present invention incorporated into a so-called "hip roof" container that is generally designated by the numeral 120 and which includes a pair of upwardly inclined side portions 122 and inwardly extending and folded gable ends 124 with the upper edges thereof being folded and sealed as at 126 and held in this position by a fastener such as a staple or brad 128.

The inclined side wall 122 is provided with an opening 130 which receives a closure plug 132 having a flange 134 heat sealed to the side wall portion 122. An opposite portion of the flange 134 is designated as a tab 136 by which the plug 132 may be pivoted upwardly to an open position.

The plug 132 is provided with a depending projection or shank 138 having an opening 140 therein which receives the flexible resilient straw 142. FIGURE 13 illustrates the position of the straw 142 when the plug 132 is in closed position while FIGURES 11 and 12 illustrate the orientation of the straw 142 when the plug 132 is moved to an open position. When the plug 132 is swung upwardly to an open position, the upper end of the straw 142 is pulled up through the opening 130 with the bend 144 in the straw being capable of movement towards and away from the wall opposite to the opening 130.

This type of carton may be made of waxed box board as is the conventional carton which is hot melt treated or it can be coated both on the inside and the outside by a plastic lamination. If this carton is made of waxed board, the periphery will not have the sealing foil as far as the closure plug is concerned. If the carton is plastic coated, the plug will have the foil or other suitable material for heat sealing thus providing a proper seal for the invention and maintaining the device relatively inexpensive to manufacture.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and

equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A consumable liquid container including a top wall, an openable closure lid forming a portion of the top wall and sealingly and releasably connected to the upper end of the container for enabling opening of the closure lid by lifting the free edge thereof upwardly, a bendable resilient straw disposed within the container and being completely free of the container, said straw being movable from a bent condition disposed within the confines of the container to a straight line diagonal condition with one end thereof projecting from the opening in the top wall of the container formed when the closure lid is pivoted upwardly thereby enabling the contents of the container to be consumed through the straw, and tongue means carried by said closure lid loosely engaging the straw for moving the straw towards a straight line condition during pivotal opening movement of the closure lid and for guiding and retaining the straw in its straight line condition during use thereby retaining the straw in position without requiring the use of a person's hand to hold the straw, said depending means including a depending tab having an aperture therein for receiving the straw, said tab being carried by a plug-type closure lid, said tab and closure lid being of one-piece construction.

2. A container having a peripheral wall and a top, said top including a closure lid movable from a closed position to an open position whereby access to the interior of the container is facilitated, a bendable straw disposed in said container and having portions thereof disposed in angular relation to reduce the over-all length, one portion of the straw having an end thereof disposed adjacent the closure lid when in closed position and movable through the opening to a substantially diagonal position when the lid is opened, means attached to said lid and depending therefrom in encircling engagement with the straw for initially elevating the end of the straw through the opening and permitting the straw to slide therethrough to a full extended straight line condition whereby the free end of the straw will project outwardly beyond the confines of the container, said means including a depending tongue carried by the closure lid and spaced from the periphery of the lid, said tongue being of unitary construction with the closure lid and being rigid therewith, the lower end of the tongue having an opening therein receiving the end of said one portion of the straw.

3. A container having a peripheral wall and a top, said top including a closure lid movable from a closed position to an open position whereby access to the interior of the container is facilitated, a bendable straw disposed in said container and having portions thereof disposed in angular relation to reduce the over-all length, one portion of the straw having an end thereof disposed adjacent the closure lid when in closed position and movable through the opening to a substantially diagonal position when the lid is opened, means attached to said lid and depending therefrom in encircling engagement with the straw for initially elevating the end of the straw through the opening and then permitting the straw to slide therethrough to a full extended straight line condition whereby the free end of the straw will project outwardly beyond the confines of the container, said means including a depending tongue carried by the closure lid and spaced from the periphery of the lid, said tongue being integral with a plate extending perpendicularly thereto at the upper end thereof, said plate being secured to the upper surface of the lid with the tongue depending through the lid, the lower end of tongue having an aperture receiving the end of said one portion of the straw.

4. A container having a peripheral wall and a top, said top including a closure lid movable from a closed position to an open position whereby access to the in-

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terior of the container is facilitated, a bendable straw disposed in said container and having portions thereof disposed in angular relation to reduce the over-all length, one portion of the straw having an end thereof disposed adjacent the closure lid when in closed position and movable through the opening to a substantially diagonal position when the lid is opened, means attached to said lid and depending therefrom in encircling engagement with the straw for initially elevating the end of the straw through the opening and then permitting the straw to slide therethrough to a full extended straight line condition whereby the free end of the straw will project outwardly beyond the confines of the container, said means including a depending tongue carried by the closure lid and spaced from the periphery of the lid, said lid being mounted on an inclined top wall having an opening therein, said tongue being of unitary construction with the lid and being rigid therewith, said lid having an offset closure plug telescopically received in said opening in the inclined top, said tongue projecting inwardly in an inclined manner and having an opening therein for receiving the end of said one portion of the straw, said one portion of the straw being disposed generally in parallel relation to the inclined top of the container.

5. A container for a consumable liquid comprising a receptacle having a top thereon, said top including an openable closure member for providing access into the interior of the receptacle, said closure member normally forming a sealed closure for the receptacle, a bendable resilient straw loosely disposed in the receptacle and having a straight line length greater than the diagonal length

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of the receptacle and greater than the combined diagonal dimension of the receptacle and closure member when the closure member is in open condition whereby the upper end of the straw will be completely free of the receptacle and closure member for consuming the liquid therethrough, the end portions of the straw being disposed in angular relation to each other thereby decreasing the length between the ends of the straw whereby the straw may be retained in the receptacle when the closure member is closed and may be extended to a straight line diagonal condition when the closure member is moved to an open position, means depending from said closure member for receiving the upper end portion of the straw for moving the end portion out through the opening defined by the closure member when it is moved to its open position, said depending means enabling the straw to move longitudinally in relation thereto so that the upper end portion of the straw may move outwardly and upwardly in relation to the receptacle and closure member therefor when the closure member is moved to its open position.

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