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M. LEFCORT

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COMPARTMENTED BEVERAGE CONTAINER

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FIG. 1.

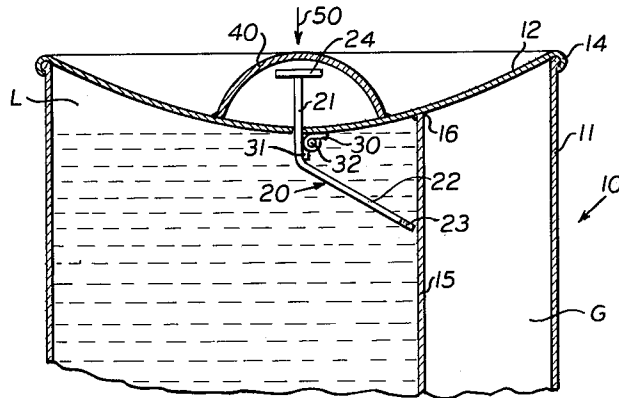


FIG. 2.

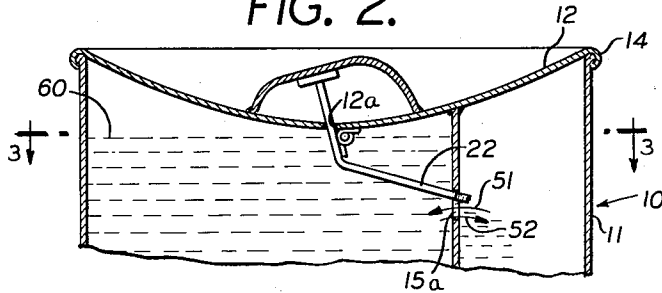


FIG. 3.

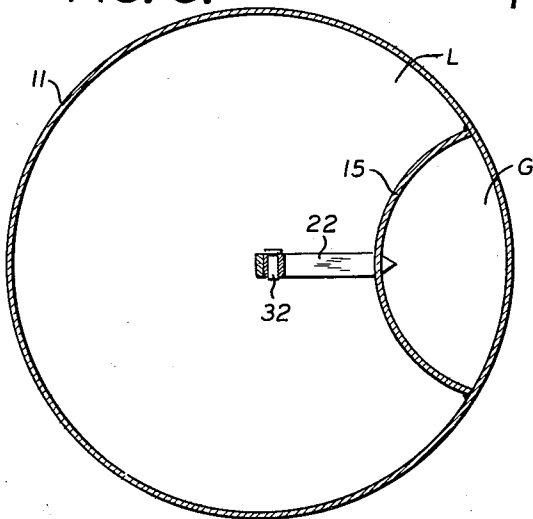
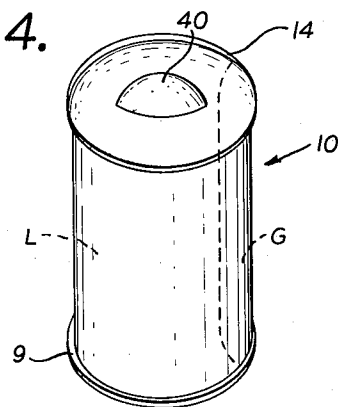


FIG. 4.



INVENTOR
MARTIN LEFCORT

BY *Blum, Moscovitz,
Friedman and Blum*

ATTORNEYS.

1

3,039,644

COMPARTMENTED BEVERAGE CONTAINER

Martin Lefcort, Kenilworth Road, Rye, N.Y.

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3 Claims. (Cl. 220-20)

This invention relates to an improved container for beverages intended to be consumed in carbonated form, and in particular relates to a container wherein the liquid beverage and the carbonating gas are maintained separate until the contents of the container are to be consumed.

One object of this invention is to provide a container of the above-described type made of metal and having separate compartments for a liquid beverage and for the carbonating gas, and having simple means for providing communication between the two compartments just before the container is to be opened and the contents thereof dispensed for use.

Another object of the invention is to provide such a container wherein the means for providing communication between the two compartments may be manipulated externally of the can, and wherein the inter-communication means do not involve the use of valves.

Without limitation thereto, the invention is particularly useful in the storage, shipment and dispensing of carbonated wines. The use of this invention makes it possible to ship the beverage in the form of a still wine with the gas shipped in a separate compartment of the container, and to provide simple means operable by the consumer to carbonate the beverage just prior to dispensing and use of the beverage. It has been found advantageous for commercial reasons to ship still wines in preference to carbonated wines, but the problem has been to find convenient means for manipulation by the consumer for carbonating the beverage before it is dispensed.

In accordance with a preferred embodiment of the invention, I provide a container for beverages comprising a can of metal or the like having an outer peripheral wall and upper and lower end walls. The can also has interior means including a piercable inner vertical wall extending to said upper wall dividing the can into gas and liquid compartments which extend to the upper wall. The gas compartment may contain carbon dioxide under pressure, by way of example, and the liquid compartment may contain the still beverage which is to be carbonated. The container also includes a lever which extends movably through an aperture in the can upper wall which communicates with the liquid compartment. The lever is pivotally mounted upon the top wall. The lever has a sharp piercing end within the liquid compartment normally adjacent the vertical wall and an enlarged head end above the outer wall.

Also in accordance with the preferred embodiment of the invention, I provide deformable sealing means, above the upper wall, enveloping the head and sealing engaging the upper wall in an annulus within which the upper wall aperture is located so as to prevent escape of liquid from the can. The sealing means for deformable against the head to permit a downward blow to be struck against the head so as to pivot the lever, the lever being shaped so that the piercing end thereby pierces the vertical wall to permit the gas to flow into the liquid compartment.

It will be apparent that the lever may readily be manipulated by means of a blow against the deformable sealing means and thereby against the head of the lever. Such blow may be struck with a hammer or other tool, or by engaging the can forcibly against a hard surface.

Other objects and advantages of this invention will become apparent from the following description, in con-

2

junction with the annexed drawing, in which a preferred embodiment of the invention is disclosed.

In the drawing:

FIG. 1 is a vertical section of my improved container, the bottom portion of the container being broken away for convenience of illustration. FIG. 1 shows the lever in its normal position in which its sharp piercing end is adjacent the vertical wall separating the liquid and gas compartments.

FIG. 2 is a view similar to FIG. 1, showing the lever moved to a position in which its piercing end has penetrated the vertical wall permitting communication between the two compartments.

FIG. 3 is a section on line 3-3 of FIG. 2.

FIG. 4 is a perspective view of the container.

Upon reference to the drawings in detail, it will be noted that they show a container for beverages comprising a can 10 which is preferably made of metal but which may be made of any other suitable material. Said can 10 has an outer peripheral wall 11 which is preferably cylindrical in shape and has an upper end wall 12 and a lower end wall 9. End wall 9 is similar to end wall 12 in overall formation and accordingly is not shown in detail. Said walls 12 and 9 are optionally dished inwardly vertically axially. Said walls 12 and 9 are connected to the peripheral wall 11 by any suitable means, such as end beads 14. As described so far, the can construction can optionally be substantially conventional except that optionally the can wall 12 may be dished somewhat more than usual so as to accommodate the operating moving parts in accordance with the invention.

Said can 10 has a piercable inner vertical wall 15, preferably made of the same material as the outer walls of the can. Said wall 15 preferably extends between the upper and lower walls 12 and 9, and the vertical edges of wall 15 are sealed to the peripheral wall 11. The sealing may be any suitable means, such as soldering, welding or brazing, as exemplified by the reference numeral 16. Said wall 15 divides can 10 into a liquid compartment L and a gas compartment G. Said compartments L and G extend the full height of can 10 and are separated from each other by the piercable wall 15. Optionally and preferably, the compartment L is substantially larger in volume than compartment G. Compartment G need only be large enough to contain the desired amount of gas, under the desired conditions of pressure, required for producing the desired extent of carbonation of the liquid in compartment L.

Compartment G may contain any suitable gas under pressure, such as carbon dioxide. Compartment L may contain any suitable liquid beverage which is to be carbonated by the gas in compartment G. The compartments may be filled by any suitable conventional means (not shown).

In accordance with the invention, I also provide an operating bent lever 20 having an upper portion 21 and a lower portion 22 angularly disposed with respect to upper portion 21. Said lever portion 21 extends vertically and transversely movably through an appropriate aperture 12a formed in top wall 12, preferably located in the center thereof, and communicating with liquid compartment L. Lever portion 21 is connected to top wall 12, optionally interiorly of wall 12, by any suitable pivot means. Such pivot means optionally takes the form of a hinge having a leaf 30 fixed to the underside of wall 12 and a leaf 31 fixed to the lower portion of lever portion 21, said leaves 30 and 31 being connected by a pivot pin 32 which extends generally horizontally and generally parallel to the portion of wall 15 which it directly opposes (FIG. 3).

In the normal position of the lever, lever portion 21 extends generally vertically and said lower lever por-

tion 22 is inclined so as to extend from the lower end of lever portion 21 towards wall 15 to a point adjacent thereto. Said lever portion 22 has a free sharp piercing end 23 adjacent said wall 15. Lever portion 21 has an upper enlarged head 24 located above wall 12 and preferably below the level of head 14.

Also in accordance with the preferred embodiment of the invention, I provide generally dome-shaped sealing means 40 above and centered upon aperture 12a and normally positioned above and spaced from head 24. Said deformable sealing means 40 may optionally be made of the same metal material as can 10, but alternatively can be made of any other suitable deforming and sealing material which may include a flexible plastic material. Said sealing dome 40 has a lower end which is sealed to upper wall 12 in an annulus within which aperture 12a is located. By annulus, I mean any suitable continuous path within which aperture 12a is located. Said sealing dome 40 serves to prevent the premature escape of liquid from can 10.

In use, it is possible to strike a blow against sealing dome 40 and head 24, in the vertically downward direction as indicated by arrow 50, so as to force head 24 downwardly from its position of FIG. 1 to its position of FIG. 2. FIG. 2 illustratively shows the resulting deformed position of sealing dome 40, in which it has been pressed downwardly against head 24. However, it will be understood that it is within the scope of the invention for the sealing dome to be resilient and to spring back to its normal shape after the force thereon is released. In any event, the result of the downward force on head 24 is to move lever portion 21 downwardly through aperture 12a and to pivot lever 20 about the axis of pin 32. The further result is to move head 24 to the left, as viewed in FIGS. 1 and 2, and to move piercing point 23 to the right, as viewed in FIGS. 1 and 2, so that said point 23 pierces wall 15 and forms a hole 15a therein. The vertically elongated condition of hole 15a (FIG. 2) results from the fact that the point 23 is moved upwardly as well as to the right.

As the result of the formation of hole 15a, gas can move from compartment G through hole 15a in the direction of arrow 51, into the liquid 60 in compartment L. Similarly, liquid 60 can also move in the opposite direction, as indicated by arrow 52, into compartment G. In any event, the liquid 60 is carbonated by the gas. It is then possible to make dispensing openings (not shown) in either of the end walls of the can, in the usual manner, so as to dispense the carbonated liquid therefrom.

It will be apparent that the dispensing openings may be located in any desired arrangement so as to permit complete dispensing of the contents of both compartments. It will also be apparent that the lever may be shaped so as to locate the hole 15a more closely adjacent wall 12 than is shown in the drawing, if this be desired.

It will be apparent that the necessary blow upon the lever, so as to provide for the formation of the communication hole 15a may be made by any suitable means. For example, the sealing member and hence the head may be struck with a hammer. Alternately, the can may be thrust forcibly against a surface so as to produce the desired movement of the lever.

The invention is particularly applicable to a throw-away can, since it is possible to eliminate the use of valves, and since it is a simple matter for the consumer to punch the hole 15a just prior to dispensing of the liquid from the can.

While I have disclosed a preferred embodiment of the invention, and have indicated various changes, omissions and additions which may be made therein it will be apparent that various other changes, omissions and additions may be made in the invention without departing from the scope and spirit thereof.

I claim:

1. A container for beverages comprising an outer

peripheral wall, upper and lower end walls, an internal piercable vertical wall extending between said upper and lower end walls to divide said container into two compartments, one of said two container compartments being adapted to contain a liquid and the other of said two container compartments being adapted to contain a gas under pressure, a lever provided with an upper end and a sharp piercing lower end pivotally depending from the inner surface of said upper end wall, said lever being normally positioned with its said upper end extending through and above said upper end wall and its said sharp piercing lower end adjacent to said vertical wall, and a deformable sealing means sealingly mounted upon the outer surface of said upper end wall and encasing said lever upper end, said sealing means being deformable to permit a blow to be struck against said encased lever upper end, said lever being positioned and adapted to pivot upon receiving said blow whereby said sharp piercing end pierces said piercable vertical wall to permit gas to flow into said liquid compartment, said deformable sealing means preventing the escape of the contents of said container.

2. A container for beverages comprising an outer peripheral wall, an upper end wall provided with an aperture, a lower end wall, an internal piercable vertical wall extending between said upper and lower end walls to divide said container into two compartments, one of said two container compartments being adapted to contain a liquid and the other of said two container compartments being adapted to contain a gas under pressure, a lever provided with an upper end and a sharp piercing lower end pivotally depending from the inner surface of said upper end wall, said lever being normally positioned with its said upper end extending through said upper end wall aperture and its said sharp piercing lower end adjacent to said vertical wall, and a deformable sealing means sealingly mounted upon the outer surface of said upper end wall and spacedly beyond said aperture and encasing said lever upper end, said sealing means being deformable to permit a blow to be struck against said encased lever upper end, said lever being positioned and adapted to move through said aperture and to pivot upon receiving said blow whereby said sharp piercing end pierces said piercable vertical wall to permit gas to flow into said liquid compartment, said deformable sealing means preventing the escape of the contents of said container.

3. Container for beverages comprising a can of metal and the like having an outer peripheral wall and upper and lower end walls, said can also having interior means including a piercable inner vertical wall extending to said upper wall dividing said can into gas and liquid compartments, said gas compartment being adapted to contain a gas under pressure, said liquid compartment being adapted to contain a liquid, a lever, said upper wall having an aperture communicating with said liquid compartment, said lever extending movably through said aperture, means pivotally connecting said lever to said top wall, said lever having a sharp piercing end within said liquid compartment normally adjacent said vertical wall and an enlarged head end above said upper wall, and deformable sealing means above said upper wall enveloping said head and sealingly engaging said upper wall in an annulus within which said aperture is located so as to prevent escape of liquid from said can, said sealing means being deformable against said head to permit a downward blow to be struck against said head to pivot said lever, said lever being shaped so that said sharp piercing end thereby pierces said vertical wall to permit gas to flow into said liquid compartment.

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