

April 13, 1965

F. WELTY ET AL

3,178,062

DISPENSING APPARATUS FOR PRE-MIXED BEVERAGES

Filed April 26, 1960

4 Sheets-Sheet 1

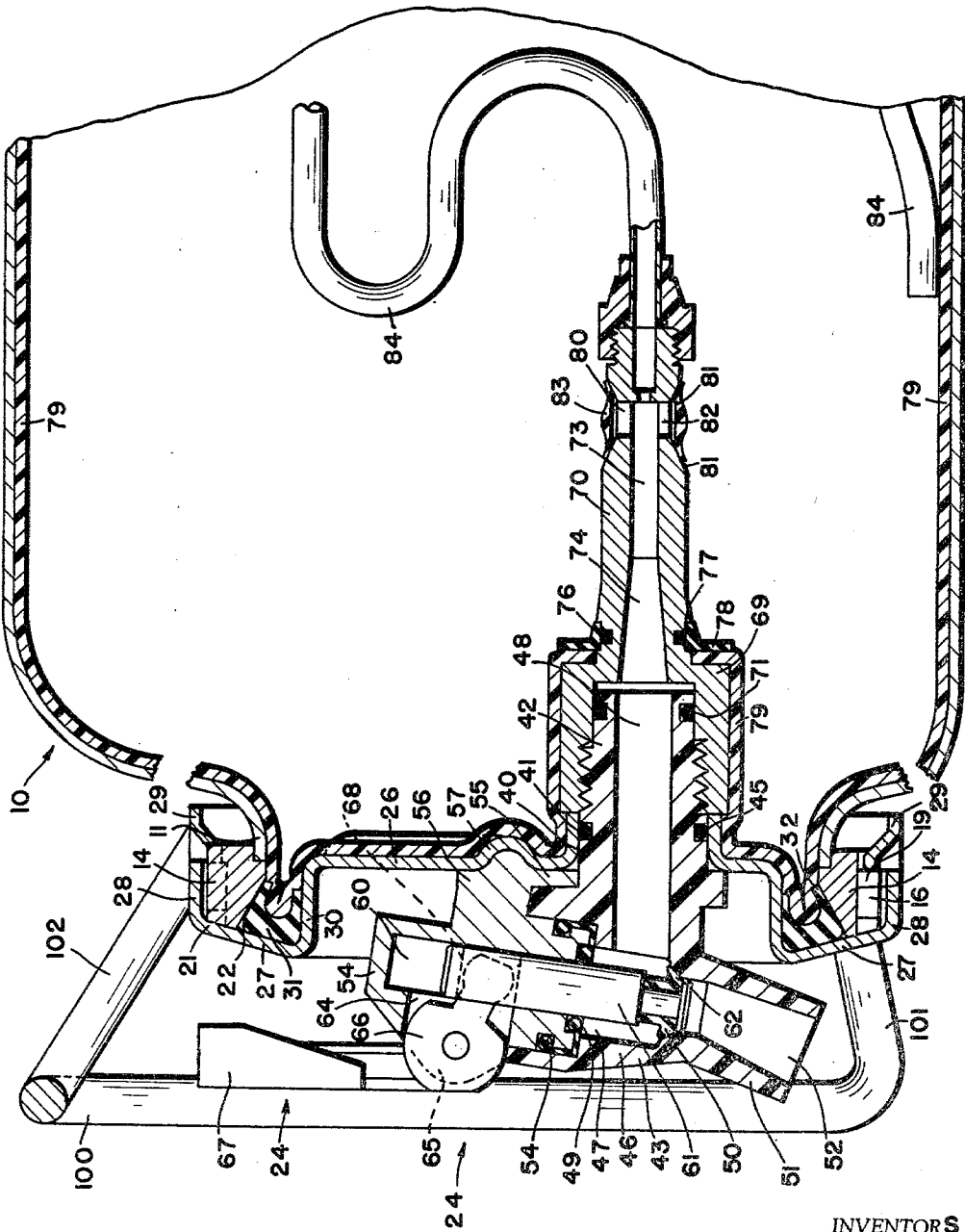


FIG. 1

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4 Sheets-Sheet 2

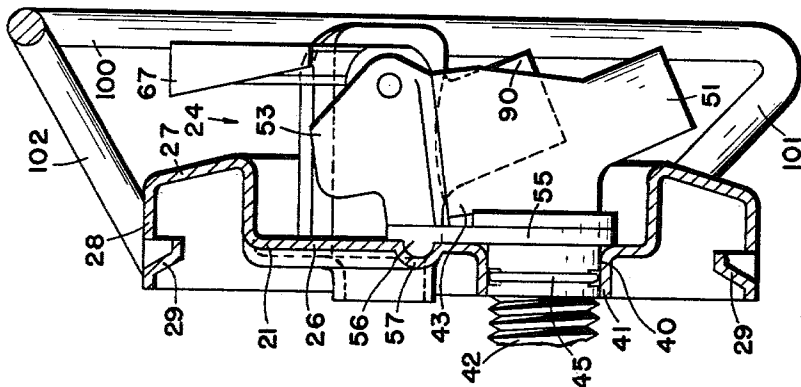


FIG. 3

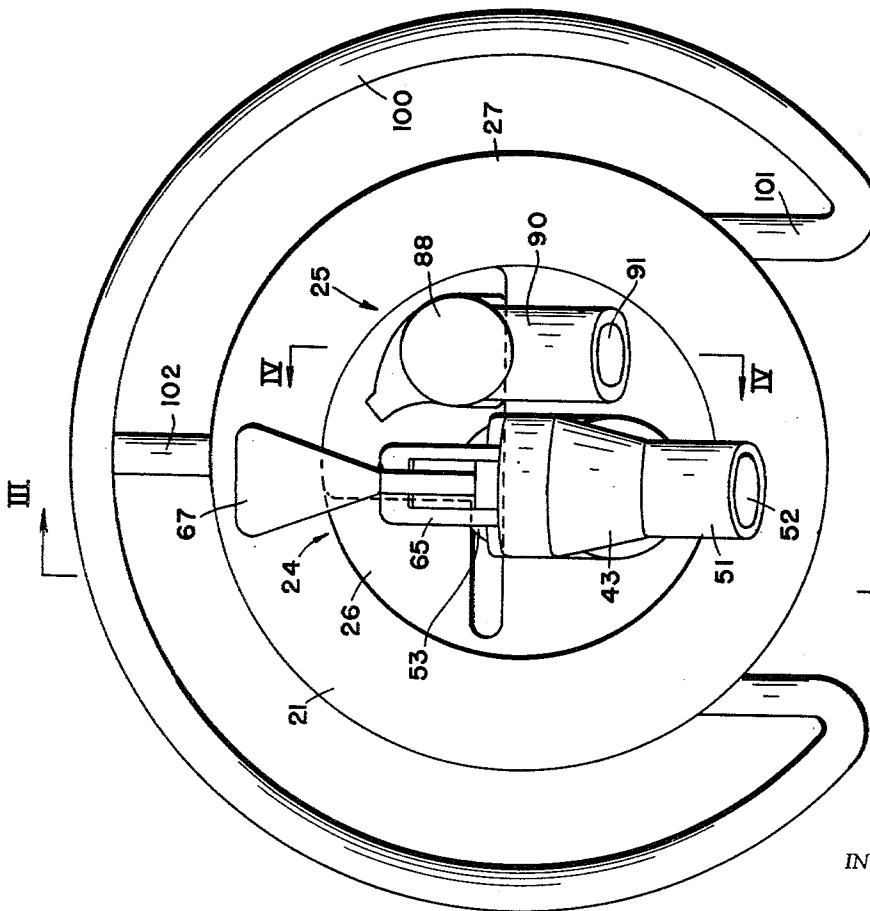


FIG. 2

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4 Sheets-Sheet 3

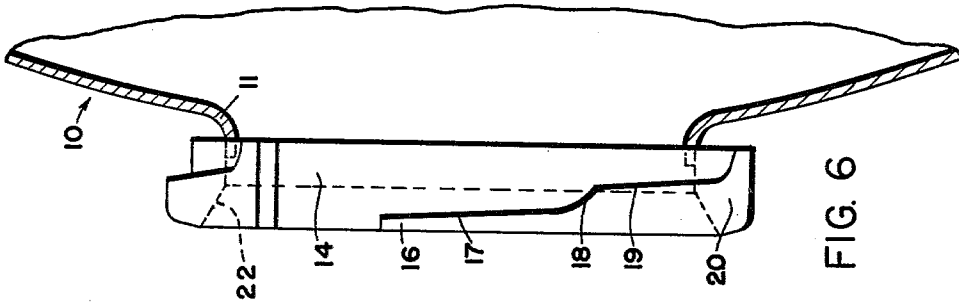


FIG. 6

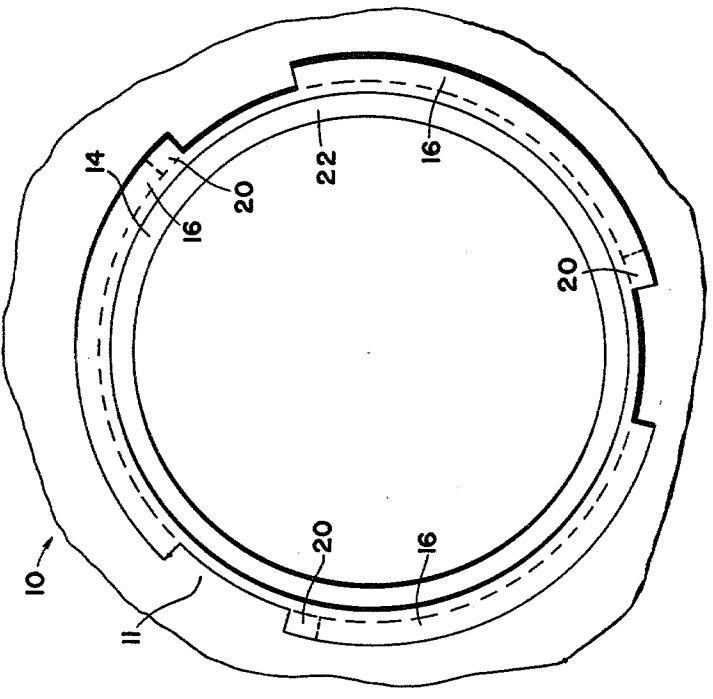


FIG. 5

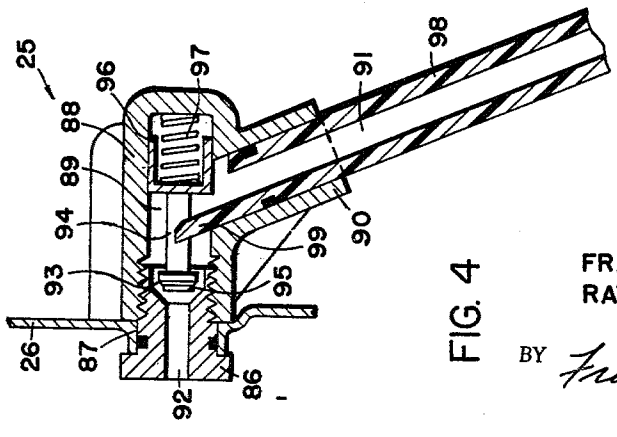


FIG. 4

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4 Sheets-Sheet 4

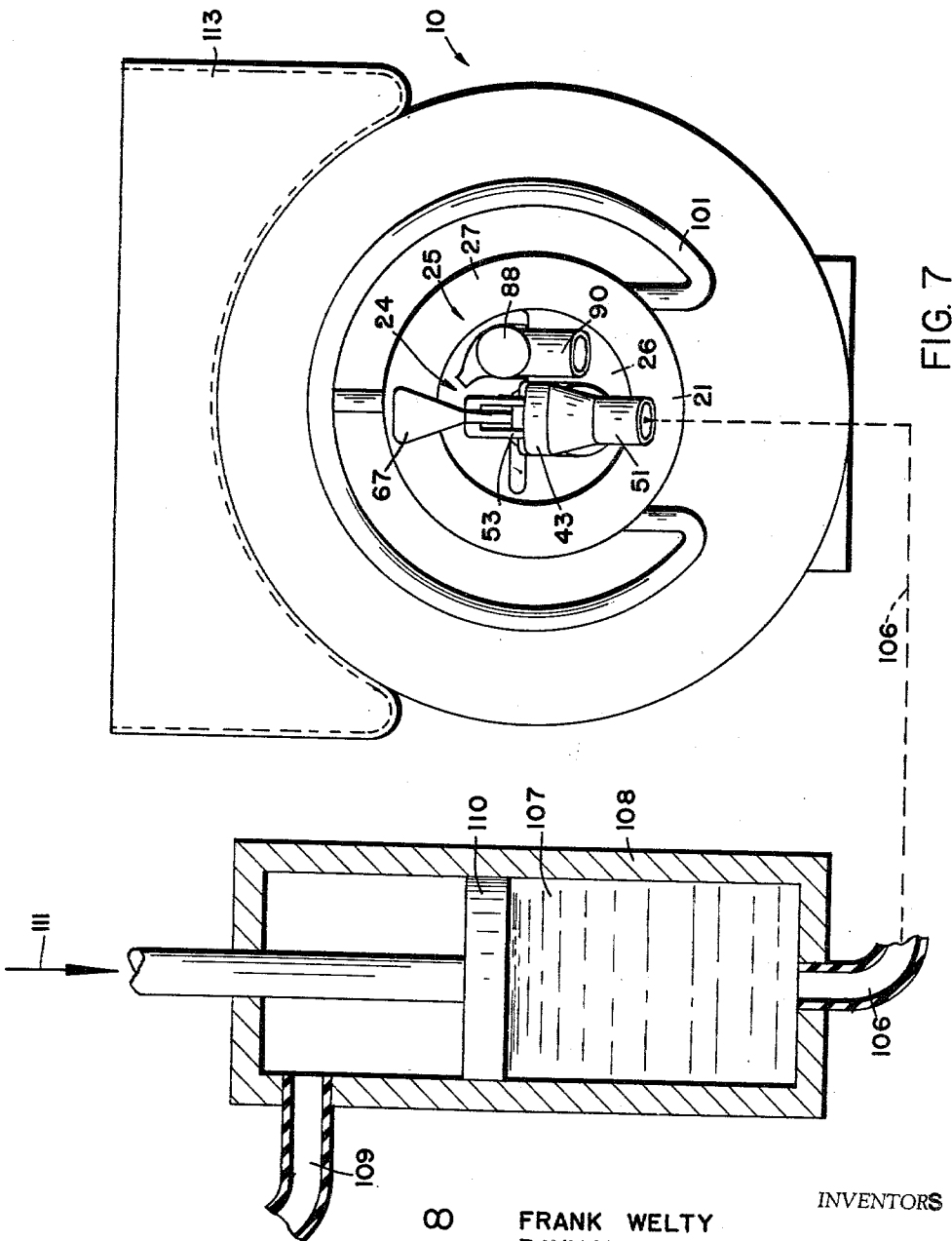


FIG. 8

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3,178,062
DISPENSING APPARATUS FOR PRE-MIXED
BEVERAGES

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Filed Apr. 26, 1960, Ser. No. 24,833
5 Claims. (Cl. 222-95)

The present invention relates generally to the dispensing art and more particularly to the provision of improved apparatus for dispensing pre-mixed beverages.

In accordance with prior art practice it is well known to package a pre-mixed beverage, such as beer or a carbonated fruit drink, for example, in a wooden or metal keg or other suitable dispensing container. Such a container is shipped to the point of use and is connected into a dispensing system which usually comprises a dispensing faucet and a source of expellant for discharging the beverage through the dispensing faucet. The use of kegs or other suitable containers filled with a pre-mixed beverage has been limited to installations—such as taverns, for example—where the beverage is consumed in a relatively short time. This is due to the very substantial problem of maintaining the beverage fresh and palatable for any appreciable time after container has been tapped or otherwise opened. Also, the dispensing system—comprising the source of pressurized expellant and the dispensing faucet—has been quite expensive and completely unadapted for other markets, such as home use. For the home market the beverages are usually packaged in bottles which are sold in cases or cartons through distributors to the ultimate consumers. The bottling of the beverages is relatively expensive and thus, bottled beverages cost appreciably more than beverages packaged in bulk containers.

With the development and use of a thin collapsible bag in a bulk container it is possible to separate the pressurized expellant from the beverage whereby the beverage is maintained in a fresh and palatable condition at all times. The expellant may be packaged in the bulk container along with the beverage—being separated from the beverage by the collapsible bag. This arrangement is disclosed and claimed in our co-pending patent application Serial No. 786,422, filed January 12, 1959, entitled "Method and Apparatus for Packaging and Dispensing Beverages or the Like," which is assigned to the assignee of the present invention and is made of record for those desiring a more detailed description of the same.

It is the primary or ultimate object of the present invention to provide dispensing apparatus for pre-mixed beverages which, while not being limited thereto, is especially adapted for supplying beverages to the home market. The dispensing apparatus of the present invention comprises a container holding a relatively large amount of the beverage and a required amount of the expellant along with a dispensing faucet. The arrangement is such that the dispensing apparatus is self-contained and ready for immediate use but yet the beverage is always maintained in a fresh and palatable condition.

Another object of the present invention is to provide dispensing apparatus for pre-mixed beverages which comprises a suitable container having lockingly mounted thereon an improved closure cap which carries a dispensing faucet. The arrangement is such that when the closure cap is removed the interior of the container is exposed while the collapsible bag may be readily removed and the dispensing faucet can be easily cleaned.

Yet another object of the invention is to provide dispensing apparatus of the type above set forth that embodies means to very effectively protect the dispensing faucet, to facilitate handling of the dispensing apparatus and to permit stacking thereof. This means comprises a

chime ring that is mounted on the cover cap and completely protects the dispensing faucet from damage due to rough handling of the apparatus, etc.

Still another object of the invention is to provide dispensing apparatus for pre-mixed beverages employing highly improved and simplified means for charging the container with the expellant and/or exhausting the expellant from the dispensing container. An expellant filling and relief valve is mounted on the closure cap adjacent the dispensing faucet for this purpose and is protected by the chime ring.

A further object of the invention is to provide dispensing apparatus of the type above described which includes improved means for filling the container with the beverage to be dispensed. The beverage is pumped into the flexible and collapsible bag in the container through the dispensing faucet and a highly improved and simplified beverage bypass valve is employed. The beverage bypass valve allows the beverage to bypass the restriction means and to enter the collapsible valve at a high rate of flow.

A further object of the invention is to provide apparatus for filling such dispensing containers. This apparatus comprises a positive displacement piston type pump whereby each stroke of the piston thereof represents a predetermined quantity of the beverage.

A still further object of the invention is to provide dispensing apparatus for pre-mixed beverage having the characteristics above described which may be manufactured and used with a minimum of expense.

The above, as well as other objects and advantages, will become more readily apparent upon consideration of the following specification and claims wherein there is disclosed a preferred embodiment of the invention.

In the drawing:
FIGURE 1 is a fragmentary side sectional view showing dispensing apparatus for pre-mixed beverages constructed in accordance with the teachings of our invention;

FIGURE 2 is a front elevational view of the closure cap employed in the apparatus of FIGURE 1;

FIGURE 3 is a side sectional view of the closure cap of FIGURE 2 taken along the section lines III—III;

FIGURE 4 is a side sectional view taken along the section line IV—IV of FIGURE 2 showing the construction of the expellant filling and relief valve;

FIGURE 5 is a fragmentary front view of the dispensing container shown in FIGURE 1;

FIGURE 6 is a fragmentary side view, partially in section, of the dispensing container; and

FIGURE 7 is an end view of dispensing apparatus of the present invention embodying an ice chamber and depicting means for filling the dispensing container with a beverage.

Referring now to the drawing, the reference numeral 10 designates a dispensing container which is generally cylindrical and terminates at its forward extremity in an outwardly extending mouth portion 11 of reduced diameter. The dispensing container 10 is preferably formed from aluminum or other suitable light weight metal and is fluid tight with the exception of a large opening defined by the mouth portion. Rigidly attached to and received in nesting relation over the forward edge of the mouth portion 11 of the dispensing container is a locking ring 14 that is preferably cast or otherwise formed from a light weight and strong metal.

The outer peripheral surface of the locking ring 14 is provided with three radially projecting and circumferentially spaced segmental locking flanges 16. The locking flanges 16 each comprise a generally circumferentially extending portion 17, a steeply inclined portion 18, an elongated sloping portion 19 which is disposed in a plane substantially offset from the plane of the portion

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17 and a stop portion 20. The various portions 17-20 of the locking flanges 16 define, in effect, cam means for locking a closure cap 21 to the dispensing container 10 as will be hereinafter more fully apparent. It will be noted that the inner surface of the locking ring tapers outwardly to define a circular and tapering sealing surface 22 adjacent the forward end thereof.

The closure cap 21 for the dispensing container carries a dispensing faucet and an expellant filling and relief valve, generally designated by the reference numerals 24 and 25, respectively, and is adapted to be locked in fluid sealing relation on the locking ring 14 attached to the dispensing container. The closure cap is generally cylindrical and is formed, by stamping, for example, to provide a circular cup-shaped center portion 26, an annular and generally vertically extending flange portion 27 and a rearwardly projecting annular skirt portion 28. The outer extremity of the rearwardly projecting skirt portion 28 is punched inwardly at three equally spaced points about its circumference to define discontinuous and inwardly projecting the locking elements 29 which are adapted to cooperate with the locking flanges 16 of the locking ring in securing the closure cap to the dispensing container.

Disposed between the annular and outwardly tapering sealing surface 22 of the locking ring 14 and a sealing surface 30 defined by the outer peripheral side wall of the cup-shaped center portion 26 is an annular sealing gasket 31. The annular sealing gasket 31 is of generally U-shaped construction and has a pair of tapering leg portions 32. The arrangement is such that the annular sealing gasket 31 provides fluid tight seals between the sealing surface 30 of the closure cap and the tapering sealing surface 22 of the locking ring when the discontinuous locking elements 29 on the skirt portion 28 of the closure cap engage the circumferentially spaced locking flanges 16. The various portions 17-20 of the locking flanges 16 are adapted to provide a positive fluid tight seal between the closure cap and the dispensing container and also to prevent the closure cap from being blown-off at any time during the use of the apparatus. This arrangement is more fully disclosed in our co-pending patent application Serial No. 765,590, filed October 6, 1958, entitled "Closure Means for Pressurized Syrup Tanks and the Like." The closure cap may be locked to or removed from the beverage container upon proper rotative movement thereof providing, of course, that at least the major portion of the expellant has been removed from the dispensing container.

Referring now to FIGURE 1 of the drawing, it will be observed that the cup-shaped center portion 26 of the closure cap is punched to define a circular opening 40 and a rearwardly projecting annular rim 41 through which extends the threaded mounting portion 42 of a lower body member 43 forming a portion of the dispensing faucet 24. The lower body member 43 is preferably molded from "nylon" plastic and has the integral externally threaded mounting portion 42 and a tubular portion 46 that projects forwardly of the cup-shaped center portion 26 of the closure cap. An annular groove in the periphery of the mounting portion 42 receives an O-ring 45 to provide a fluid tight seal between the mounting portion 42 and the annular rim 41. The tubular portion 46 provides an enlarged cavity 47 having connection with an elongated horizontal passage 48 in the mounting portion 42. The tubular portion 46 is suitably formed to provide an annular flange 49 adjacent the upper end thereof and is open at its top. In the bottom wall of the cavity formed by the tubular portion 46 is a tapered valve seat or land 50 and depending below this valve seat is an integral discharge nozzle 51 having a downwardly flaring interior passageway 52.

Secured to the top of the lower body member 43 is an upper body member 53 which is provided with a depending annular extension that fits within the tubular portion 46 and retains a sealing washer 54 in proper

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seated relation. The upper body member 53 comprises a downwardly depending semi-circular projection 55 which extends between the rear wall of the tubular portion 46 of the lower body member 43 and the outer face of the center portion 26 of the closure cap. The rear wall of the upper body member 53 has a curved and rearwardly projecting protuberance 56 which is received within a groove 57 formed in the center portion 26 of the closure cap. Screws, not shown, are employed to clamp the upper body member 53 and the lower body member 43 together while the projection 55 and protuberance 56 maintain the body members 43 and 53 in properly assembled relation with respect to each other and with respect to the closure cap.

The upper body member 53 has a vertical bore 60 therein which slidably receives and guides a valve stem 61. Mounted on the lower end of the valve stem 61 is an annular valving element 62, preferably made of synthetic rubber or other suitable resilient material, which coacts with the valve seat or land 50 of the lower body member 43 as shown. The sealing washer 49 is provided with an inner O-ring section that fits about the valve stem 61 to thereby seal off the top end of the enlarged cavity 47 while yet allowing the valve stem to have vertical sliding movement. The upward end of the upper body member 53 is formed with a forwardly opening slot 54 which communicates with the vertical bore 60 and pivotally mounted within this slot by means of a clevis 65 is a lever 66. The forward end of lever 66 is rigidly attached to a handle 67 while the rear end thereof is formed with a bulbous enlargement 68 that is received in a slot formed in the upper portion of valve stem 61. It should be obvious that upon forward and downward movement of the handle 67 the valve stem 61 will be raised to break the seal between the valving element 62 and the valve seat 50.

Threadably received on the rearwardly projecting mounting portion 42 of the lower body member 43 is an enlarged bell-shaped and internally threaded forward portion 69 of an elongated mounting shank 70. The forward edge of the mounting shank 70 engages the rear edge of the annular rim 41 whereby the dispensing faucet 24 is maintained in tightly clamped and assembled relation with respect to the closure cap. It will be noted that an O-ring 71 is received in a groove about the outer periphery and adjacent the end of the mounting portion 42 of the lower body member 43 to provide a fluid tight seal between this mounting portion and the mounting shank 70.

The rear portion of the mounting shank is of reduced diameter and comprises an initial entry passageway 73 and an intermediate tapering passageway 74 whose discharge end is substantially enlarged so that the beverage in transferring from the passageway 73 to the dispensing faucet 24 will be reduced in velocity sufficiently to enter the valve in a solid slow stream. Immediately to the rear of the bell-shaped forward portion 69 of the mounting shank 70 is a groove which receives O-ring 76 and an elongated annular groove 77 that is adapted to receive a sealing washer 78. The sealing washer 78 comprises a generally annular radially projecting body portion and a rearwardly extending neck portion and is preferably molded from a relatively rigid resilient plastic material. The internal opening in the neck portion tapers inwardly to the rear thereof whereby the annular washer may be slipped over the elongated and relatively small diametered rear portion of the mounting shank 70 into the position shown whereby the O-ring 76 provides a seal between this washer and the mounting shank 70. It will be observed that the washer 78 may be easily inserted over or removed from the mounting shank 70 but yet the annular groove 77 and the dimensions of the resilient washer firmly maintain the sealing washer in assembled and fluid tight relation with respect to the mounting shank.

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The annular body portion of the sealing washer 78 has welded or otherwise attached thereto in fluid sealing relation the peripheral edge of an opening in a collapsible bag 79. The collapsible bag 79 is completely flexible and is of a capacity which is larger than the capacity of the dispensing container 10 whereby the bag completely fills and conforms to the shape of the dispensing container when filled with a beverage to be dispensed. The collapsible bag is fabricated from strong plastic material and is impermeable so that the same defines a removable and replaceable container for the beverage to be dispensed. Also, the collapsible bag 79 defines a barrier film or pressure exchange membrane which separates the beverage from the expellant. As will be more fully apparent, the beverage is contained in the bag while the expellant is adapted to be inserted between the collapsible bag and the dispensing container. A more complete description of the construction and utilization of the collapsible bag 79 is found in our above mentioned co-pending patent application Serial No. 786,422.

Adjacent the rear end of the elongated and relatively small diametered rear portion of the mounting shank 70 and received within the interior of the collapsible bag 79 there is a portion of reduced diameter 80 of relatively small length dimension which is joined to the other areas of the mounting shank by tapering end walls 81. A plurality of radial slots 82 extend from the passageway 73 to the outer periphery of the portion of reduced diameter 80. Surrounding the portion of reduced diameter 80 is an elongated and resilient annular band or sleeve 83 whose forward and rear ends engage the tapering end walls 81. As will be hereinafter more fully apparent, the resilient annular band or sleeve 83 and the slots 82 define a beverage bypass valve whereby the beverage may be forced into the interior of the collapsible bag 79 at a fast rate of flow.

Communicating with the rear end of the initial entry passageway 73 in the mounting shank 70 is a restriction conduit 84 of long length and of small cross sectional area. Conduit 84 has precise uniformity of internal cross sectional area and extends for an appreciable length although being completely received within the collapsible bag 79. The end of the conduit 84 terminates in the collapsible bag at the bottom of the dispensing container and may be held there by any suitable means whereby all of the beverage in the collapsible bag may be dispensed. It is the function of the restriction conduit 84 to reduce the pressure of the beverage substantially to atmospheric pressure in a gradual and quiescent manner to inhibit any "break-out" of gas particles entrapped in gas charged beverages. The use of the restricted passageway defined by the conduit 84 is fully explained in our co-pending patent application, Serial No. 826,958, filed July 14, 1959, and entitled "Dispensing System for Carbonated Beverages."

As mentioned previously, the expellant is placed in the dispensing container on the outside of the collapsible bag 79 and the filling and relief valve 25 is provided for charging the dispensing container with expellant and/or purging the expellant from the dispensing container after the beverage in the collapsible bag has been dispensed to allow removal of the closure cap. The expellant filling and relief valve, shown in FIGURE 4, comprises a generally T-shaped member 86 which is received within an aperture 87 formed in the center portion 26 of the closure cap. The enlarged end of the T-shaped member 86 abuts the rear edge of an annular rim encircling the aperture 87 and threadably received on the forwardly projecting and integrally threaded end of the T-shaped member 86 is a valve housing 88. The valve housing 88 is provided with an enlarged axial bore 89 and has a downwardly depending nozzle 90 whose opening 91 communicates with the axial bore 89. The T-shaped member 87 has a through aperture 92 therein and the upper end of this member is machined to provide a valving land or seat 93. Received within the

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axial bore 89 of the valve housing 88 is a valve stem 94 which mounts a resilient sealing ring 95 on one end and a cup-shaped member 96 on its other end. A compression coil spring 97 extends between the inner forward surface of the valve housing 88 and the cup-shaped member 96 to normally maintain the sealing ring 95 in fluid tight sealing relation with respect to the valving land 93.

When the sealing land 93 and sealing ring 95 cooperate to effect a fluid tight seal the rear end of the cup-shaped member 96 extends over but does not completely block the upper end of the opening 91 in the nozzle 90. The arrangement is such that a suitable expellant conduit 98 whose end 99 is tapered or cammed as shown may be inserted upwardly into the opening 91 to retract the cup-shaped member 96, valve stem 94 and sealing ring 95 against the force of the compression coil spring 97. It should be observed that insertion of the tapered or pointed end of the expellant conduit 98 automatically separates the sealing ring 95 from the valving land 93 while removal of this conduit effects automatic closure of the valve. If the dispensing container is being charged with expellant the expellant conduit 98 would be connected to a suitable source thereof which would be under pressure. However, if the dispensing container is being purged of the expellant the conduit 98 may lead to atmosphere or, preferably, to reclamation apparatus for recovering expellant. It will be noted that fluid tight O-ring seals are provided between the T-shaped member 86 and the annular rim encircling the aperture 87 as well as between the nozzle 90 and the removable expellant conduit 98.

In filling, transporting and using the beverage containers of the present invention it is to be expected that the same will be subjected to rough handling. The closure cap—including the dispensing faucet and the expellant filling and relief valve—may be damaged and to protect the same we provide a generally circular chime ring 100. As will be observed, the chime ring 100 extends almost completely about the closure cap and the main portion thereof lies in a plane which is disposed forwardly of the dispensing faucet and the expellant filling and relief valve as is clearly shown in FIGURES 1 and 3 of the drawing. The inturned ends 101 of the chime ring are attached by welding or other convenient attachment means to the flange portion 27 of the closure cap while a supporting brace 102 extends from the middle of the chime ring to the skirt portion 23 of the closure cap. In this manner the dispensing faucet and the expellant valve are completely protected at all times—even when the closure cap is removed—by the chime ring 100. The chime ring also serves another very important function in that the forward edge of the chime ring defines a flat plane which allows the dispensing containers to be stacked. This is particularly important in that transportation and storage of the dispensing containers is facilitated.

The remaining parts and means of the dispensing apparatus for pre-mixed beverages of the present invention will perhaps best be understood when described in connection with the intended use thereof. It will be assumed that initially the collapsible bag 79 has been assembled with respect to the closure cap 21 by inserting the resilient sealing washer 78 over the small diametered rear portion of the mounting shank 70 with the restriction conduit 84 being completely received within the collapsible bag 79. The closure cap is now locked to the beverage container by first placing the collapsible bag 79 and the restriction conduit 84 in the dispensing container and then positioning the closure cap in such a manner that the discontinuous locking elements 29 are disposed between the circumferentially spaced locking flanges 16 of the locking ring 14. The closure cap is then rotated in the clockwise direction to draw the flange portion 27 of the closure cap into firm pressure contact with the upper surface area of the annular sealing gasket 31. The engagement between the closure

cap and the annular sealing gasket forces the leg portions 32 of the sealing gasket into initial sealing relation with respect to the generally circular sealing surfaces 30 and 22 of the closure cap and the locking ring. The closure cap is rotated until the discontinuous locking elements engage the stop portions 20 of the locking flanges and it will be noted that at this time the closure cap is very rigidly attached to the dispensing container in fluid sealing relation. The chime ring 100 may, of course, be used as a large hand wheel to facilitate turning of the closure cap.

To fill the dispensing container with a beverage a conduit, not shown, similar to the expellant conduit 98 is inserted in the opening 91 of the nozzle 90 to automatically open the expellant valve. This conduit is first connected to a source of pressurized fluid so that, when the dispensing faucet is open, any residual air in the collapsible bag will be forced out through the dispensing faucet. Then this conduit may be connected to suitable valve means, also not shown, whereby the entrapped fluid between the outer wall of the collapsible bag and the dispensing container may be exhausted during the beverage filling operation while yet maintaining a predetermined back pressure on the beverage.

The nozzle 51 of the dispensing faucet is now connected to a conduit 106 leading to the pumping chamber 107 of a positive displacement piston-type pump 108. The pumping chamber 107 is in communication with a conduit 109 leading to a source of the beverage, not shown, and this chamber is adapted to hold a predetermined quantity of the beverage when the pumping piston 110 is in its upper or retracted position. Suitable means, represented by the arrow 111 are provided for reciprocating the pumping piston 110 whereby upon downward pumping strokes thereof the beverage in the pumping chamber 107 is forced through the conduit 106 to the interior passageway 52 of the discharge nozzle 51 of the dispensing faucet. The beverage then travels past the valving land or seat 50, into the large cavity 47, along passageways 48, 74 and 73, through the radial slots 82 and about the expanded ends of the resilient band or sleeve 83 into the interior of the collapsible bag 79. It will be noted that the annular band 83 and radial slots 82 define a bypass valve whereby the beverage does not flow through the elongated restriction conduit 84 to allow rapid filling of the collapsible bag 79. The small cross sectional area and elongated length of the restriction conduit 84 would very seriously affect the rate at which the collapsible bag could be filled with the beverage if the bypass valve were not provided. It is contemplated that the pumping piston 110 will exert a pressure in the order of sixty pounds per square inch on the beverage in the pumping chamber whereby the resilient annular band 83 is expanded and the beverage enters the collapsible bag at a relatively high rate of flow. The use of a positive displacement piston-type pump is particularly advantageous since each downward stroke of the pumping piston represents a predetermined and known quantity of the beverage that is pumped to the beverage container. Thus, the pump may be so designed that a predetermined number of downward strokes by the pumping piston results in the dispensing container being automatically and completely filled with the beverage without the necessity of ancillary measuring apparatus.

When the collapsible bag 79 has been completely filled with the beverage the conduit 106 is removed from the nozzle of the dispensing faucet and this faucet is closed. The expellant conduit 98 is now inserted in the nozzle of the expellant valve to open the same and a predetermined quantity of expellant is forced through this valve into the dispensing container. The collapsible bag, as mentioned above, is larger than the interior of the dispensing container whereby the entire dispensing container is filled with the beverage. The expellant is preferably a gas that condenses substantially at the tempera-

ture and pressure at which the beverage is desired to be dispensed and the condensed or liquified expellant is injected through the expellant valve. The condensed expellant lies between the dispensing container and the outer surface of the collapsible bag and, as the beverage in the collapsible bag is dispensed, the expellant returns to its original gaseous state thereby maintaining a relatively constant expelling pressure. Any number of well known gases may be used according to the properties required for any given beverage, such as propane gas, sulfur dioxide, metal chloride, butane and the various Freon-type expellants, for example.

The expellant conduit is disconnected and the dispensing container is shipped to the point of ultimate use. The dispensing container may be so designed as to be received in the average home refrigerator and to dispense a drink it is only necessary to move the handle 67 downwardly. The expellant will cause the beverage to flow through the restriction conduit 84 and out the discharge opening 52 as is explained in our above mentioned application Serial No. 826,958. Since the beverage is at substantially atmospheric pressure when the same is adjacent the slots 82 the pressure of the beverage remaining in the collapsible bag and the expellant, along with the inherent resiliency of the resilient band 83, will maintain the beverage bypass valve closed at all times except during beverage filling operations. The pressure of the expellant and the beverage will also force the leg portions 32 of the annular sealing gasket 31 into very tight sealing relation with the contiguous sealing surfaces 30 and 22 on the closure cap and locking ring whereby the closure cap may not be removed. Since the expellant is never in direct contact with the beverage, the same always remains in a fresh and palatable condition regardless of how often the beverage is dispensed. This is particularly important in that it allows the beverage to be packaged in a bulk container as herein described for home and other uses with a minimum of expense and without the necessity of the complicated and expensive dispensing systems of the prior art.

While it is intended that the beverage container will be cooled by mechanical refrigeration means in most instances, such means are often unavailable and ice may be employed for cooling the beverage by providing an ice tray 113 as shown in FIGURE 7 of the drawing. The ice tray 113 extends about the upper peripheral surface of the beverage container and is filled with ice. This arrangement is particularly advantageous since an expellant of the type above described becomes an excellent heat exchange medium for cooling the entire volume of the beverage in the collapsible bag. Thus, the liquefied expellant lies near the bottom of the beverage container and as the same is heated it changes to a gaseous state and rises upwardly into the upper portion of the dispensing container. The gaseous expellant in the upper portion of the dispensing container adjacent the ice tray 113 is cooled by the ice until the same condenses or changes into the liquid state and falls back down into the bottom portion of the dispensing container. As the condensed expellant returns to the bottom of the dispensing container the entire mass of the beverage in the collapsible bag is cooled. The expellant provides a highly efficient and continuous heat exchange means for cooling the beverage.

After the beverage has been completely dispensed the container is returned to the plant where the expellant is purged from the interior of the container by the use of the expellant conduit 98. The expellant is preferably reclaimed for reuse. After purging the closure cap may be removed by turning the same in a counterclockwise direction and it should be noted that the portions 17-20 of the locking flanges 16 on the locking ring 14 prevent the closure cap from being blown off during the removal thereof. With the closure cap detached from the dispensing container the collapsible bag may be removed and the entire closure cap cleaned. The collapsible bag may also be cleaned or may be thrown away depending

upon the relative costs involved. A collapsible bag is assembled with respect to the closure cap, the closure cap is locked to the dispensing container and the dispensing container is again ready to be filled with a beverage.

It should thus be apparent that we have accomplished the objects initially set forth by providing highly improved and simplified dispensing apparatus for pre-mixed beverages. Although there has been disclosed an illustrated embodiment of the invention it should be understood that many changes may be made therein without departing from the true scope and intent of the invention. Accordingly, reference should be had to the following appended claims.

We claim:

1. Dispensing apparatus comprising a container, a collapsible bag received within said container and defining first and second expandable chambers separated by said collapsible bag, said first chamber being adapted to hold a fluid to be dispensed, said second chamber being adapted to hold a pressurized expellant, expellant valve means communicating with said second chamber, said expellant valve means comprising a housing, said housing having an axial bore therein, a radially projecting nozzle communicating with said axial bore, a valving land in said axial bore, a valve stem, said valve stem comprising a sealing land adapted to cooperate with said valving land to seal said axial passageway, means biasing said valve stem whereby said axial passageway is normally closed, said valve stem further comprising valve operating means normally overlying the gretaeer portion of said nozzle, and said valve stem being forced outwardly against said biasing means when a tapered expellant conduit is inserted into said nozzle and engages said operating means.

2. Apparatus for transporting and dispensing beverages comprising a container adapted to receive the beverage to be dispensed, said container having a wide-mouth opening therein, a quick-detachable closure cap for said opening having a recess in its centrally disposed portion, a dispensing faucet mounted on the bottom wall of said recess partially received within said recess and having an opening therethrough communicating with the space within said container, said faucet having a dispensing nozzle and an operating handle, a protective guard mounted on the exterior of said cap radially outward of said recess and projecting outwardly from said nozzle and said handle on either side thereof to uprotect the same, said dispensing faucet comprising a body member having a shouldered mounting shank, said bottom wall of said recess having an inwardly flanged opening therein to receive said shank, sealing means between said shank and said flange, and means positioned within said container and engaging the inner end portion of said shank to secure said shank in said flanged opening.

3. Apparatus according to claim 2 further characterized in that said bottom wall of said recess is provided with an indentation radially outward of said opening, and said body member of said faucet having a protuberance lying in said indentation to prevent rotation of said body member about the axis of said opening.

4. Apparatus according to claim 2 further characterized in that said means engaging the inner end of said shank comprises a tubular member having a longitudinal bore

therethrough, an annular groove in the outer surface of said tubular member, an aperture in the sidewall of said tubular member communicating with said groove, and a generally tubular resilient and yieldable sleeve lying in said groove and normally sealing off said aperture but operative to lift off the radially outer end of said aperture when fluid pressure in said bore exceeds fluid pressure surrounding said tubular member.

5. Apparatus for transporting and dispensing carbonated beverages comprising a container having a collapsible bag therein to receive the beverage and to provide a second chamber in the container to receive a gaseous expellant whereby the beverage may be maintained under pressure and be dispensed from said bag under pressure, a dispensing faucet carried by said container and having an operating handle and a dispensing nozzle positioned outside of said container and also having a mounting shank with a bore therethrough extending into said bag, a flexible elongated and small diametered tube positioned within said bag and connected at one end with the inlet end of the bore through said shank whereby the beverage may be conducted to said faucet and wherein the pressure of the beverage may be reduced substantially to atmospheric pressure as it flows through said elongated tube and to said dispensing faucet, said shank having an aperture in its side wall to provide direct communication between the bore in said shank and the space in said bag, a check valve for said aperture to allow passage of beverage directly from said bore into said space while restraining passage in the opposite direction, and means for charging beverage under pressure into said bag comprising a positive displacement pump and a conduit connecting the outlet of said pump with said nozzle, the arrangement being such that upon actuation of said pump and opening of said dispensing valve beverage may be conducted directly into said bore and through said check valve directly into said bag in bypassing relation with respect to said elongated tube.

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