June 4, 1929. H. P. SAUGMAN 1,715,429

DISPENSING DEVICE

Filed Nov. 13, 1926

Fig. 1.

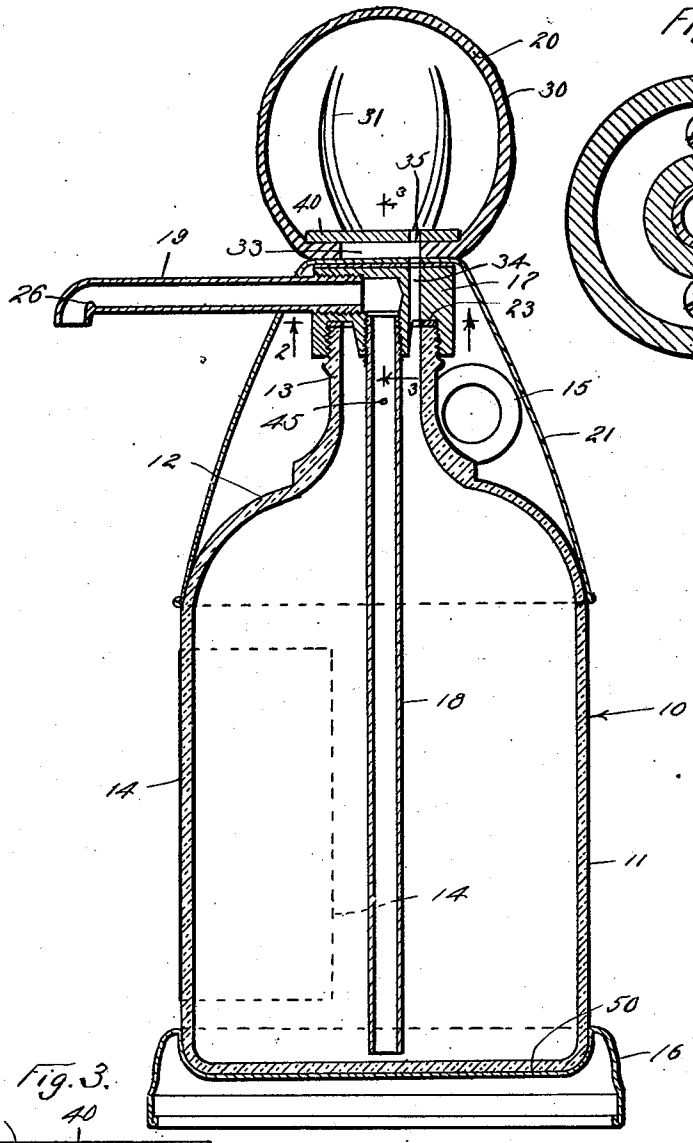


Fig. 2.

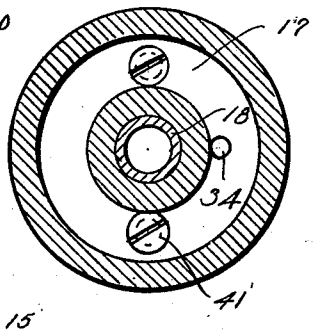
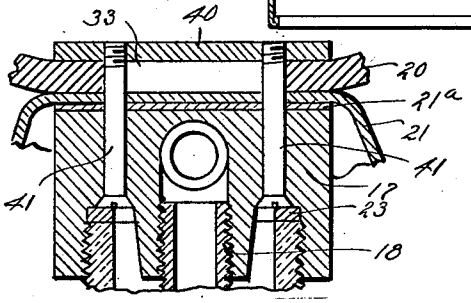


Fig. 3.



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Patented June 4, 1929. 1,715,429

UNITED STATES PATENT OFFICE.

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DISPENSING DEVICE.

Application filed November 13, 1926. Serial No. 148,129.

This invention has to do with a dispensing device, and it is an object of the invention to provide a simple, practical and improved device applicable to a container to dispense fluid therefrom.

Beverages and more particularly syrups or fruit juices, used in making beverages are commonly distributed to dealers or merchants in jugs or bottles. A manufacturer or producer will ordinarily employ a standard type and size of jug and will apply thereto, a label indicating the contents of the container. Heretofore, it has been customary for dealers or merchants, upon receiving beverages or beverage syrups, to empty them from the containers into ordinary dispensing pumps and the like commonly found at soda fountains. This practice is unsanitary, wasteful, inconvenient and it renders the labels applied to the containers by the manufacturer or producer practically useless, as they are never on display to the buying public.

It is an object of my present invention to provide a dispensing apparatus which employs or includes a standard or typical form of container for instance, a jug or bottle such as a manufacturer may use in distributing his product.

It is another object of this invention to provide a simple, effective device applicable to a container to dispense fluid therefrom.

A further object of this invention is to provide an attachment for a standard form of container which, together with the container, forms a sightly attractive and effective dispensing device, displaying the label bearing portion of the container and the contents.

It is another object of this invention to provide a bulb actuated dispensing device which operates to keep the fluid in the device effectively agitated.

Another object of my invention is to provide a dispensing device of the character mentioned from which fluid will not seep or discharge unless the device is deliberately operated.

The various objects and features of this invention will be best and more fully understood from the following detailed description of a typical preferred form of the invention throughout which description, reference is had to the accompanying drawings, in which:

Fig. 1, is a vertical detailed sectional view showing the construction provided by this invention;

Fig. 2, is an enlarged transverse sectional view, being a view taken as indicated by line 2—2 on Fig. 1; and

Fig. 3, is an enlarged detailed sectional view taken as indicated by line 3—3 on Fig. 1.

My present invention is designed to utilize a container such as a jug in whcih liquid can be sold, as a part of a dispenser, from which it can be dispensed as required for use. In describing my invention, I will refer to a simple, and typical form of container 10, such as is commonly used in distributing beverages, syrups and fruit juices for the making of beverages. In this connection, I have illustrated the container 10 in the form of a glass jug having a straight cylindrical body 11, an inwardly curved top part 12 terminating in a neck 13. In employing this form of container, a manufacturer or producer ordinarily applies a label 14 to the body part 11 indicating the nature or trade name of the product in the container. Further, this type of jug is commonly provided at its top part 12 with a handle 15, by which it can be conveniently handled. The neck 13 illustrated in the drawings, is externally screw threaded, and in practice, the manufacturer or producer seals the jug by screw threading a cap onto a neck. In accordance with my present invention the container 10 in which the liquid is originally filled, is utilized in and as a part of the dispensing apparatus, from which the liquid is used. In converting the container 10 into a part of the dispenser, I apply thereto, a closure 17 which carries a feed pipe 18, a spout 19, a bulb 20 and a hood 21. In addition to the parts just mentioned, I may provide a base 16 to receive the container 10 and form an effective support and holder therefor.

The closure 17 is in this case in the form of a cap and is made to tightly close the neck 13 of the container. To fit the neck shown in the drawings, the cap has an internally screw threaded part to co-operate with the screw threads on the neck in the manner illustrated in Fig. 1, of the drawings. To assure a tight connection between the cap and neck, I may arrange a washer 23 between these parts in the manner clearly shown in the drawings. It will be obvious that the closure

may be in the form of a plug or cork if the container used is suited for that form of closure.

The feed pipe 18 is carried by the cap 17 and extends downwardly therefrom into the container 10 to a point close to the bottom of the container. The lower end of the pipe 18 is open to receive liquid from the container while the upper end of the pipe communicates through the cap 17 with the spout 19.

The spout 19 is carried by the cap 17 and projects a suitable distance from one side of the cap. The spout is in communication with the feed pipe 18 through the cap 17 and is adapted to deliver fluid from the cap into a glass or other receptacle. The outer end of the spout is therefore open and downwardly turned as shown in Fig. 1, of the drawings. In accordance with my invention I provide a lip 26 in the outer end portion of the spout to prevent liquid left in the spout after operation of the device from dripping from the end of the spout.

The bulb 20 is mounted on top of or above the cap 17, and in practice I employ a bulb formed of rubber having its exterior 30 made to appear as a fruit for instance, if the device is to be used in dispensing orange juice, or a liquid from which an orange drink may be made, the exterior of the bulb is made to represent or appear as an orange. In this case, it is advantageous to form the bulb of orange colored rubber, and to make its outer surface irregular to correspond to that of an orange. In accordance with my invention, I make the bulb 20 so that it returns to its normal expanded position with considerable force, after having been collapsed or depressed. In practice, I do this by forming the bulb of the proper grade of rubber, and I may provide reinforcing ribs 31 on the interior of the bulb to materially aid this action. The advantages of having the bulb return to its expanded position with force, will be apparent from the following description:

The bulb is mounted on the top of the cap 17 and has an opening 33 which communicates with the interior of the container 10 through an opening or port 34 formed through the cap 17. In the construction shown in the drawings, I have mounted the bulb 20 by means of a small plate 40 arranged at the interior of the bulb and screws 41 which extend upwardly through the cap 17, through the opening in the bulb and into the plate to draw the plate toward the cap and thereby tightly hold the bulb. The plate 40 as shown covers the opening 33 in the bulb and therefore is provided with an opening 35 making the interior of the bulb open with the container.

The hood 21 is carried by the cap 17 and is preferably made to fit over and cover the top part 12 of the container 10. In the preferred construction, shown in the drawings, the hood 21 extends from the top of the cap downwardly and outwardly to extend over and cover the entire upper portion of the container. The hood is preferably formed of metal or other suitable material and in practice, may be effectively finished or decorated. In the preferred form of construction, the connection is made between the cap 17 and hood 21 by extending the hood over the cap or between the cap and bulb. In this case, the screws 41 extend through suitable openings in the hood and pass upwardly to the plate 40 and the screws when tight, and operate to effectively hold the hood as well as the bulb. A washer 21^a may be provided between the cap and hood assuring a tight joint.

In carrying out my invention I provide a small opening 45 near the upper end of the feed pipe 18 which opening allows passage of air between the interior of the pipe 18 and the interior of the container 10 above the liquid therein but does not allow any substantial amount of liquid to escape when the device is operated. This small hole 45 is a very important feature of the device, for if it were not for this opening or hole, pressure developing in the bulb and in the container above the liquid due to heat or any other cause would cause the liquid to rise in the tube 18 and possibly discharge through the spout 19 when not desired.

The base 16 which can be used at the will of the operator is preferably in the form of an ornamental plate having a central depression 50 to receive the bottom of the container 10. By this arrangement a container is effectively supported by the base and the base hides the bottom or lower portion of the container so that only the cylindrical body part of the container is visible, the top portion 12 of the container being covered by the hood 21.

In operation a container 10 of liquid upon being received is mounted in the base 10 and after its original cap is removed, the cap 17 is applied to its neck so that the feed pipe 18 extends into the container to a point close to the bottom thereof while the hood 21 extends over the upper part of the container concealing the neck, handle and upper part 12. When the cap 17 is tightly applied to the neck of the container, the device is ready for use. In operating position the cylindrical body part of the container is the only portion of the container visible. The label 14 originally applied to the body part is visible and operates as a label for the entire dispensing device. To dispense liquid from the container the operator applies pressure to the exterior of the bulb to depress or collapse it, thus expelling the air from within the bulb, forcing it through the opening 34 in the cap and into the container above the liquid therein. This results in an increased pressure on the liquid in the container and causes the liquid to rise in the feed pipe 18

and discharge from the spout 19. In practice, the bulb 20 is quickly collapsed so that the pressure in the feed pipe and that on the liquid in the container does not have time to equalize by a passage of air through the small opening 45. When the bulb is released it immediately returns to its normal expanded position and because of the formation and construction of the bulb, it returns quickly and forcefully, thus forming a vacuum in the container or quickly reducing the pressure on the liquid in the container causing any liquid then in the spout and feed pipe to quickly return to the container, and draw air with it to discharge from the lower end of the feed pipe in a manner to effectively agitate the liquid in the container. Because of the manner in which liquid left in the feed pipe and spout and the air following, this liquid returns to the container to agitate the liquid therein, occasional operation of the device will keep the liquid in the container effectively agitated or mixed. The air discharged into the bottom of the container bubbles up through the liquid in the container and is very effective in agitating the liquid. When the device is not in operation, the small hole 45 in the feed pipe 18 keeps the pressure in the feed pipe and that on the fluid in the container equalized so that the fluid will not creep up in the feed pipe and discharge through the spout when not desired.

In accordance with my invention, the feed pipe 18 is adjustable to extend various distances from the plug to accommodate containers of different depths. In the case shown in the drawings the pipe is screw threaded to the closure and is therefore adjustable by rotation. The particular form of adjusting means used will depend somewhat upon the range of adjustment necessary.

A feature of my present invention is the provision of a device in the form of a unit applicable to a container to form a complete effective and practical fluid display dispenser. Another important feature of my invention apparent from the foregoing description is the arrangement whereby a typical or an ordinary container may be incorporated in a dispenser so that it is not apparent to an ordinary observation that an ordinary container is used as a part of the dispenser.

Having described only a typical preferred form of my invention I do not wish to limit myself to the specific details set forth, but wish to reserve to myself any changes or variations that may appear to those skilled in the art or fall within the scope of the following claims.

Having thus described my invention, I claim:

1. An attachment for a container having a neck with an opening including a closure for the opening, a hood engaging the top of the closure and of substantial size to conceal the neck of the container, a bulb engaging the top of the hood and having communication with the container through the hood and closure, a fluid conduit extending from the interior of the container through the closure to the exterior of the container, and a screw extending between and connecting the closure hood and bulb.

2. An attachment for a container having a neck with an opening including a hood extending downwardly over the neck, a closure carried in the hood to close the opening, a fluid conduit extending from the interior of the container through the closure to the exterior of the container, and a bulb mounted directly on the hood having communication with the interior of the container for applying pressure to the container.

3. An attachment for a vertical container having a body and a neck with a single opening including a closure for the opening, a fluid conduit for conducting fluid from the container and extending from the bottom of the container and through the closure, means for applying pressure to the fluid in the container to discharge it through the conduit, and a hood carried by the closure extending over and covering the neck of the container, the hood being of sufficient length to extend to the body of the container, the fluid conduit extending through the hood.

In witness that I claim the foregoing I have hereunto subscribed my name this 5th day of November, 1926.

HARTVIG P. SAUGMAN.