June 4, 1929. A. G. O. HIX 1,715,922

DISPENSER

Filed Nov. 3, 1925

FIG. 1.

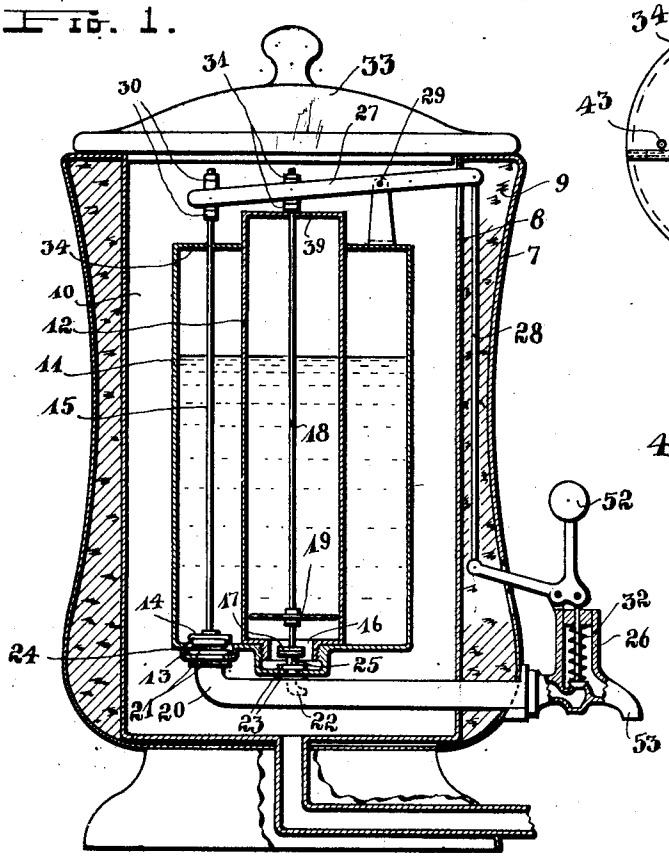


FIG. 2.

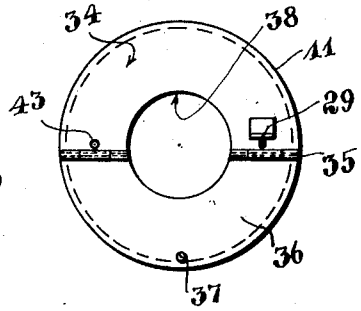


FIG. 3.

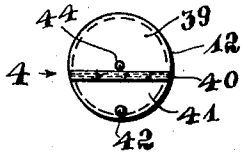


FIG. 4.

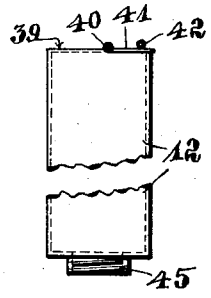


FIG. 5.

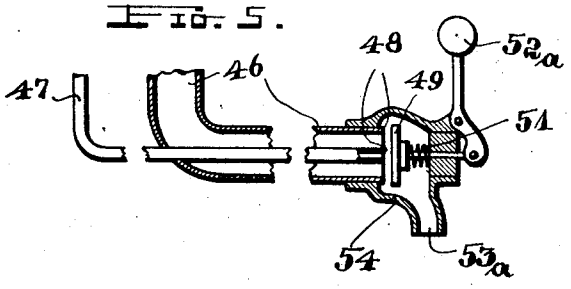
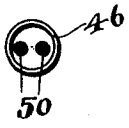


FIG. 6.



INVENTOR:
ALFRED G. O. HIX,
By: Otto H. Krueger,
his Atty.

Patented June 4, 1929. 1,715,922

UNITED STATES PATENT OFFICE.

ALFRED G. O. HIX, OF LOS ANGELES, CALIFORNIA.

DISPENSER.

Application filed November 3, 1925. Serial No. 66,562.

This invention relates to devices used for dispensing beverages, and more particularly for dispensing juice in the rather condensed form used at soda fountains to be mixed with water or the like diluting medium.

One of the objects of this invention is to provide separate containers for juice and for the diluting medium in connection with a common discharging faucet and embodying proportioning means.

Another object is to provide separate containers for the juice and for the diluting medium controllably interconnected and operative by a common discharging means.

Another object is to provide means for exchanging and removing the juice-holding container for cleaning and refilling purposes.

Another object is to provide means for stirring the juice by a discharging of juice.

Other objects will appear from the following description and appended claim as well as from the accompanying drawing, in which—

Fig. 1 is a vertical midsectional view of a dispensing device of a simple form embodying the invention.

Fig. 2 is a top plan view of the larger container normally used for holding the diluting medium, such as water, illustrating the closure for the container.

Fig. 3 is a top plan view of the smaller container normally used for the comparatively condensed juice, illustrating the closure for this container.

Fig. 4 is a fragmentary side elevation of the removable and exchangeable smaller container, as seen in the direction of the arrow 4 in Fig. 3.

Fig. 5 is a fragmentary longitudinal midsectional view of controlling means for different containers in a slightly modified form.

Fig. 6 is an end elevation of several small pipes within a larger pipe adapted to be used with the slightly modified form of controlling means illustrated in Fig. 5, the several pipe-ends forming valve seats to be controlled in common by the controlling means illustrated in Fig. 5.

In dispensing beverages in which a desired flavoring is added to a diluting medium, too much depends still on the judgment and will of the person mixing the drink, so that a storekeeper can not always be held responsible or even blamed for the condition or quality of the drink.

It is therefore one of the principal features of this invention to provide dispensing means whereby the quality of a drink is absolutely determined from the first to the last drop dispensed out of the whole device.

To maintain the beverage always ready for a drink, the whole device is preferably arranged in form of a cooler. The outer housing is therefore shown as comprised of a hollow body, consisting of the outer casing 7 and the inner casing 8, enclosing an insulating material, such as granulated cork, indicated at 9. The inner casing 8 forms the ice-holding compartment 10. Into this ice-holding compartment 10, the containers for holding the liquids are disposed.

Inasmuch as a flavoring is commonly added to a larger amount of diluting medium, for instance one part of flavoring to four parts of water, the larger container 11 is provided to hold the diluting medium, such as water; while the smaller container 12 is provided to hold the flavoring, such as juice-extract, or the like.

The larger container is provided with the discharging opening 13 in its bottom, controlled by the valve 14 on the stem 15.

The smaller container 12 is provided with the discharging opening 16, controlled by the valve 17 on the stem 18. A perforated stirring disc 19 is provided on the stem, by which the liquid in the container 12 is stirred whenever the valve 17 is operated.

The outlet pipe 20 is connected to the larger container 11 and held thereto by the nuts 21. A smaller pipe 22 is extended into the larger pipe 20, and this smaller pipe is secured to the smaller container by the nuts 23. The upper terminations 24 and 25 of these pipes 20 and 22 form valve seats for the valves 14 and 17.

Since the smaller pipe 22 discharges into the larger pipe 20, a common control valve 26 serves to check the flow from both pipes 20 and 22, and thereby from both of the containers 11 and 12; and both containers are practically interconnected whenever the valve 26 and incidentally the discharge openings 13 and 16 are opened so that the liquids in the interconnected containers may automatically maintain a common level.

The control valve 26 is connected to the top lever 27 through the connecting rod 28. The lever 27 is pivotally mounted at 29. The nuts 30 serve to adjustably control the valve 14 in relation to the movements of the lever 27; and the nuts 31 serve to adjustably control

the valve 17 in relation to the movements of the lever 27, so that the valves 14 and 17 can be adjusted to close the outlets from the containers 11 and 12 in agreement with the movements of the main control valve 26. The spring 32 in the main control valve serves thereby to control the movements of all three valves 14, 17 and 26.

The lid 33 covers the ice-holding compartment as well as the whole mechanism and containers disposed in the main housing of the whole device.

Each of the containers is provided with a separate closure. The larger container, as illustrated in Fig. 2, is provided with a stationary portion 34, to which a movable lid 36 is hingedly connected at 35, the movable lid being provided with a knob 37 by which the lid 36 can be handled. The combined stationary closure 34 and lid 36 are provided with an opening 38 through which the smaller container can be removably disposed. The smaller container, as illustrated in Figs. 3 and 4, is provided with a stationary part 39, having also a hinge-portion 40, by which the lid 41 is movably connected to the stationary part 39. This lid 41 is provided with the knob 42 by which it can be handled.

The stationary closure 34 of the larger container 11 is provided with an opening 43, through which the stem 15 of the valve 14 may extend into the container. The stationary closure 39 of the smaller container 12 is provided with a similar opening 44, by which the valve stem 18 may be passed into the container.

The smaller container is provided with a threaded end 45 at its lower end by which this container can be removably disposed in the larger container. Packing material may, of course be disposed between the two containers if found necessary, though no material pressure may exist between the containers to necesitate packing material. Smooth surfaces to face each other in the bottom of the larger container will normally be sufficient.

A slightly modified control valve and controlling means is illustrated in Figs. 5 and 6. Having any desired number of pipes connected to the outlets from different containers, depending on the number of containers required, the several pipes are in this slightly modified form united in such a manner that the several terminations of the pipes form valve seats in a common surface, as formed by the pipes 46 and 47 at 48, so that a single disc 49 may serve to close the several pipes. Any number of smaller pipes may in this manner be disposed within the larger pipe 46, one being indicated at 47 in Fig. 5, two being indicated at 50 in Fig. 6, and more may, of course, be used. The spring 51 controls the disc-valve 49 so that all the different pipes can be controlled by the simple action of the plain valve illustrated in Fig. 5.

Whether the control illustrated in Fig. 1 is used or the control illustrated in Fig. 5, the operation is very simple, since it merely requires a handling of the lever 52 or 52_a, to cause an opening or a closing of the different containers and a discharging from the faucet at 53 or 53_a. On releasing the lever 52 or 52_a, the spring 32 or spring 51 automatically shuts off the discharge of the main control valve at 53 or 53_a, and also shuts off the discharge from the different containers, so that no mixing of fluids is possible while the main control valve is not being operated.

Instant mixing is procured as soon and whenever the main control valve is being operated. In the form illustrated in Fig. 1, the fluid from the container 12 is discharged at 22 into the larger pipe 20, to mix with the fluid discharged from the container 11. In this form, the larger pipe 20 will always hold a certain amount of mixed fluid up to the main control valve 26 and the liquids in the several containers maintain a common level as long as the main control valve 26 is smaller than the combined areas of the individual orifices of these several containers. In the form illustrated in Fig. 5, a mixing of the different fluids is accomplished as the different fluids discharge at 48 from the several pipes whenever the valve-disc 49 is lifted from its closing position, the mixing of the fluids taking place within the housing 54 of the main control valve of this slightly modified form, and the liquids in the several containers maintain a common level as long as the main outlet 53_a is smaller in area than the combined areas of the orifices or tube ends controlled by the valve 49. In this form, the device may be out of service for any length of time, or, if no drink is drawn from the device when supplied with this form of control valve, a perfect mixing of fluids, and a freshly mixed drink is discharged every time that the main control valve is being operated.

Having thus described my invention, I claim:

In a dispenser, in combination with containers of different volumes arranged and interconnected to maintain a common level of fluids therein by gravity, individual controlling means for said containers, a common discharging means for said containers of less area than the combined areas of said individual controlling means with their axes disposed parallel to another, and a control mechanism for simultaneously shutting-off the said discharging means and individual controlling means.

In testimony that I claim the foregoing as my invention I have signed my name.

ALFRED G. O. HIX.