Feb. 25, 1936. E. A. O'LEARY 2,032,095

APPARATUS FOR DISPENSING LIQUIDS

Filed April 8, 1935

Fig. 1.

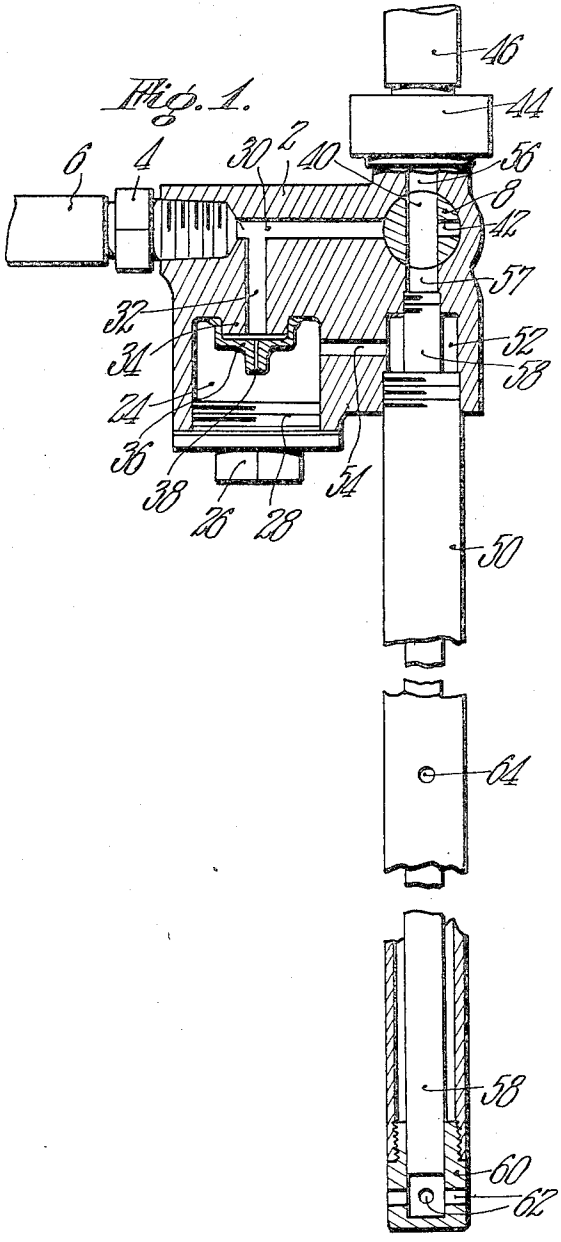
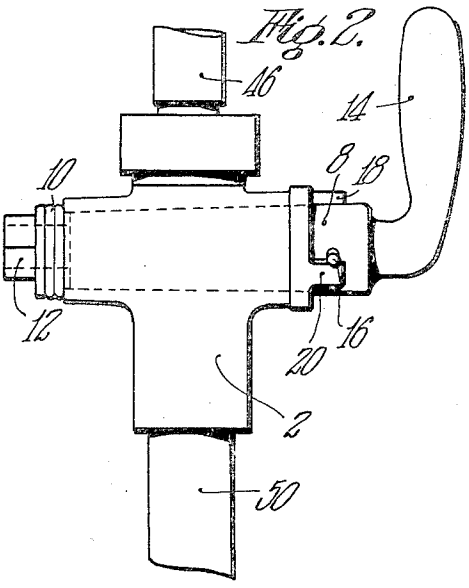


Fig. 2.



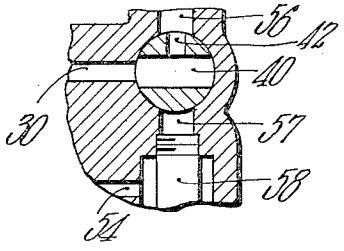


Fig. 3.

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APPARATUS FOR DISPENSING LIQUIDS

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3 Claims. (Cl. 225—3)

This invention relates to improvements in apparatus for dispensing liquids.

The principal objects of the invention are directed to the provision of an apparatus for dispensing liquids of all kinds and may be used advantageously for dispensing beverages such as beer or the like.

The apparatus is so constructed and arranged that it may be associated with a container and according to its novel construction air or other fluids may be delivered to the container to force the contents upwardly through the apparatus and system to which it is connected. Thus when it is desired to clean the apparatus, air or some other cleaning fluid may be passed through the said apparatus and system.

Various other novel features and advantages of the invention will be hereinafter referred to in connection with the accompanying description of the preferred form thereof, reference being had to the accompanying drawing wherein:

Fig. 1 is a partial elevational and sectional view of an apparatus embodying the novel features of the invention;

Fig. 2 is a side elevational view of the upper part of the apparatus shown in Fig. 1; and

Fig. 3 is a sectional view showing certain of the parts illustrated in Fig. 1 in a different position.

Referring now to the drawing more in detail the invention will be fully described.

A body is represented at 2 which is adapted to receive a coupling such as 4. To this coupling 4 may be attached a pipe or conduit 6 for conducting air, water, cleaning fluid or the like to the body 2.

A valve member 8 is rotatable in the body 2 and this is preferably in the form of a tapered valve which fits into tapering socket as shown in Fig. 2. A tension means in the form of a spring 10 may be disposed at one end of the plug 8 and a nut 12 is in threaded engagement with the end of the plug and arranged to bear on the spring so that the plug is urged into seating engagement with its bore. This tends to prevent leaks and at the same time permit oscillation of the plug.

A handle 14 associated with the plug 8 is provided and a stop pin 16 associated with the plug is adapted to be abutted by stops 18 and 20 provided on the body as the plug is rotated. In this way rotative movements of the plug may be limited.

There is a chamber 24 in the lower part of the body and this may be closed by a plug 26 having an internal screw-threaded portion 28. A horizontal passageway 30 in the body is provided to be in communication with a vertical passageway 32.

What may be called a boss 34 in the chamber carries a check-valve member 36. This member 36 is preferably of some resilient material such as rubber or the like which is adapted to snugly embrace the boss 34 and it has an opening or slot 38 therethrough which is adapted to be in communication with passageway 32.

Thus during the normal course of operation, as air or other fluid passes downwardly through passageway 32, it passes readily through the slot or opening 38 in the member 36. However, since the member 36 is formed of yieldable material the slot 38 is automatically closed should fluid or the like in the chamber exert pressure against the under side of said member 36.

An opening 40 extends transversely through the plug 8 and another opening 42 leads from one side of the plug to said opening 40, as shown in Fig. 1.

A coupling 44 is provided on the upper side of the body 2 and with this a conduit or delivery pipe 46 may be associated which may extend a considerable distance to the place where the liquid is to be dispensed, such as a bar. In the ordinary case there will be a faucet controlling the outlet of the conduit 46.

An outer tube member 50 extends downwardly from the body and a chamber 52 thereabove is in communication with chamber 24 by means of a passageway 54. Passageways 56 and 57 in the body which are more or less in alignment are disposed vertically and are adapted to be in communication with one another when the plug is in a certain position. An inner tube 58 extends downwardly within the outer tube 50 and is in communciation with passageway 57.

A cap member 60 is in screw-threaded engagement with the lower end of tube 50 as shown and it snugly receives the lower end of the tube 58. One or more openings such as 62 extend through the wall of the cap 60 and an opening 64 is provided in the wall of the tube 50 intermediate its ends which leads into the space between the tubes 50 and 58.

The apparatus may be employed for various purposes but it is particularly useful in connection with the dispensing of beverages or the like. In such a case, the tube 50 is inserted in the container of the beverage, such as a keg, so that the lower end of the tube or cap is adjacent the lower side of the container. As stated, the pipe 46 ex-

tends to the place where the beverage is to be dispensed and will have at its upper end a faucet or spigot to control the flow of the beverage.

Conduit 6 may be connected to an air supply such as a compressor or the like. With the valve plug in the position shown in Figs. 1 and 2, it will be readily seen that the horizontal passageway 30 is cut off from the vertical passageways 56 and 57. In this way when air is delivered through conduit 6 it passes downwardly through passageway 32, past valve 36, inwardly through passageway 54 and then downwardly between the inner tube 58 and outer tube 50 to pass out the opening 64 in the tube 50.

With the air thus admitted into the container, the contents of the container are caused to be forced inwardly through the opening or openings 62 and upwardly through inner tube 58 and through passageways 57, 40 and 56 and into conduit 46 so that the fluid is forced through the system to the point where it is dispensed.

In the dispensing of beverages such as beer and the like, it is necessary to clean the system frequently and it is common practice to force air, water or other cleaning fluid through the system by disconnecting the conduit at the container. This has many disadvantages however in that the beverage in the system is wasted.

By use of the apparatus of this invention, however, it is possible to clean the system leading from the body 2 in a very short space of time and in a more economical and efficient manner.

This is accomplished by turning the plug 8 to the position shown in Fig. 3. In this position of the plug, it will be seen that when the air is delivered through the conduit 6 into passageway 30 of the body, the air passes into passageway 40 of the plug and upwardly through passageway 42 and then into the passageway 56 and into conduit 46.

As will be seen, when the plug is in the position shown in Fig. 3, the tube 58 is cut off from communication with the pipe 46. Thus the air delivered to the conduit 46 forces outwardly any beverage which may be in the conduit or the system to which it is connected so that the beverage may be saved and consumed. When the beverage has been eliminated from the system the air or cleaning fluid may then be utilized to blow out or cleanse the conduit and associated system.

While I have described the invention in great detail and with respect to a preferred form thereof, it is not desired to be limited thereto since many changes and modifications may be made therein without departing from the spirit and scope of the invention. What it is desired to claim and secure by Letters Patent of the United States is:

1. An apparatus for dispensing beverages comprising in combination, a body provided with an inlet and an outlet and having a chamber, a hollow outer tube member connected to said body for inserting in a container, separate passageways being provided between said chamber and said inlet and between said chamber and said outer tube member, an inner tube within said outer tube member, and a valve rotatable in said body, said valve being provided with passageways which are in communication with one another and arranged whereby the valve may be positioned to alternately provide communication between said inner tube and said outlet and between said inlet and said outlet.

2. An apparatus for dispensing beverages comprising in combination, a body provided with an inlet and an outlet and having a chamber therein, said body being provided with a horizontal passageway in communication with said inlet and a vertical passageway in communication with said inlet which leads into said chamber, an outer tube for inserting in a container extending downwardly from said body and in communication with said chamber, an inner tube within said outer tube, and a valve rotatable in said body, said body being provided with passageways which are in communication with and angularly disposed relative to one another, all adapted and arranged whereby the valve may be rotated between a position wherein fluid entering said inlet is directed through said horizontal passageway and into said passageways of the valve and out said outlet and a position wherein fluid entering said inlet is directed through said vertical passageway into said outer tube and is prevented from entering said outlet.

3. An apparatus for dispensing beverages comprising in combination, a body provided with an inlet and an outlet and having a chamber therein, said body being provided with a horizontal passageway in communication with said inlet and a vertical passageway in communication with said inlet which leads into said chamber, a check-valve in said chamber for preventing fluid in said chamber from entering said vertical passageway, an outer tube for inserting in a container extending downwardly from said body and in communication with said chamber, an inner tube within said outer tube, and a valve rotatable in said body, said body being provided with passageways which are in communication with and angularly disposed relative to one another, all adapted and arranged whereby the valve may be rotated between a position wherein fluid entering said inlet is directed through said horizontal passageway and into said passageways of the valve and out said outlet and a position wherein fluid entering said inlet is directed through said vertical passageway into said outer tube and is prevented from entering said outlet.

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