

June 13, 1939.

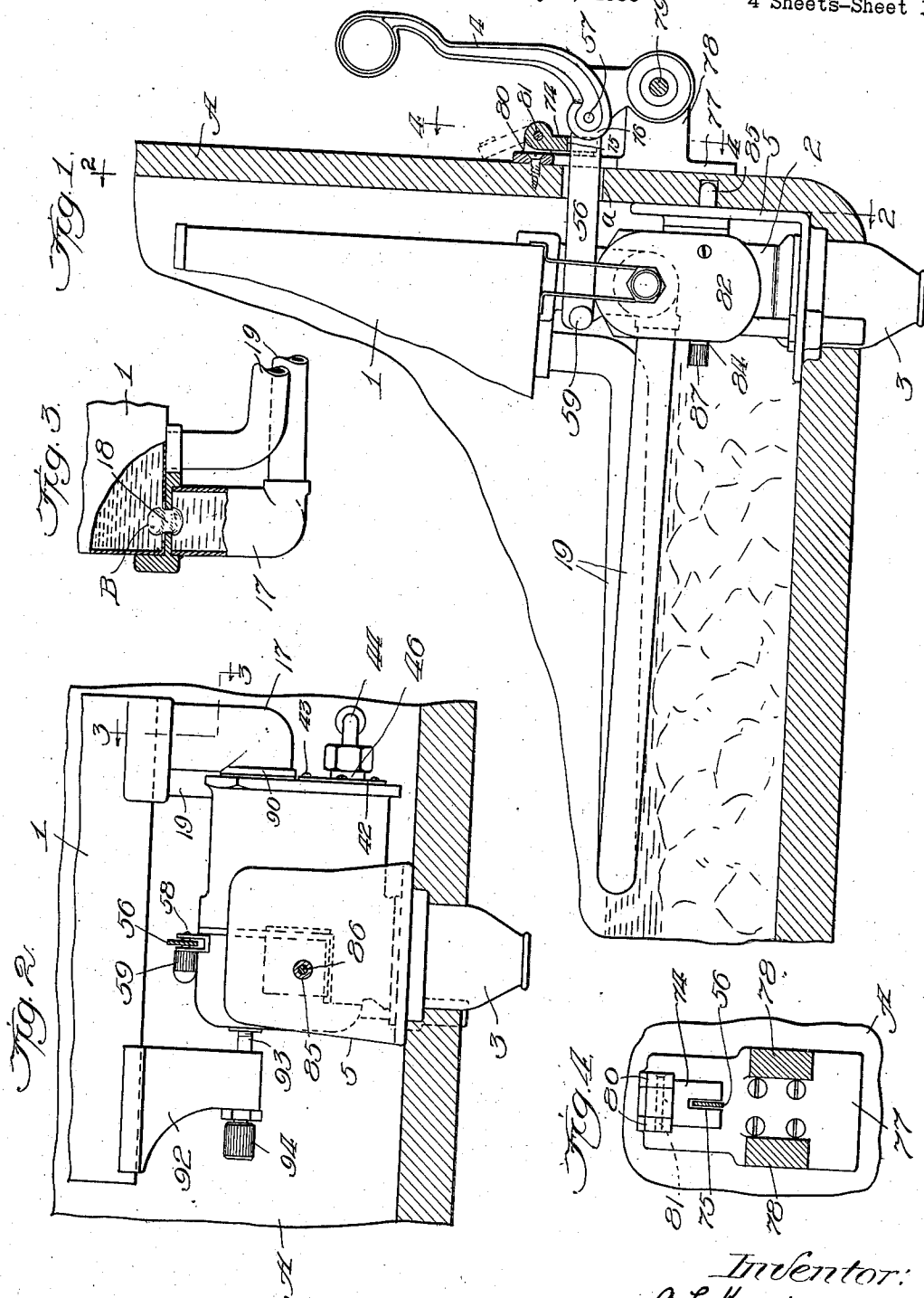
A. L. KOENIG

2,162,384

DRAFT ARM FOR DISPENSING BEVERAGES

Filed July 8, 1936

4 Sheets-Sheet 1



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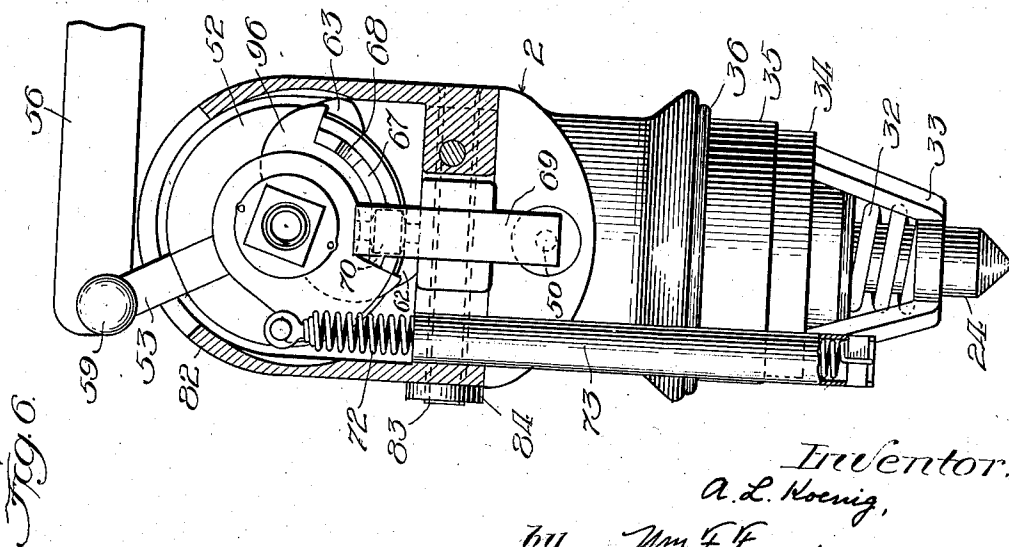
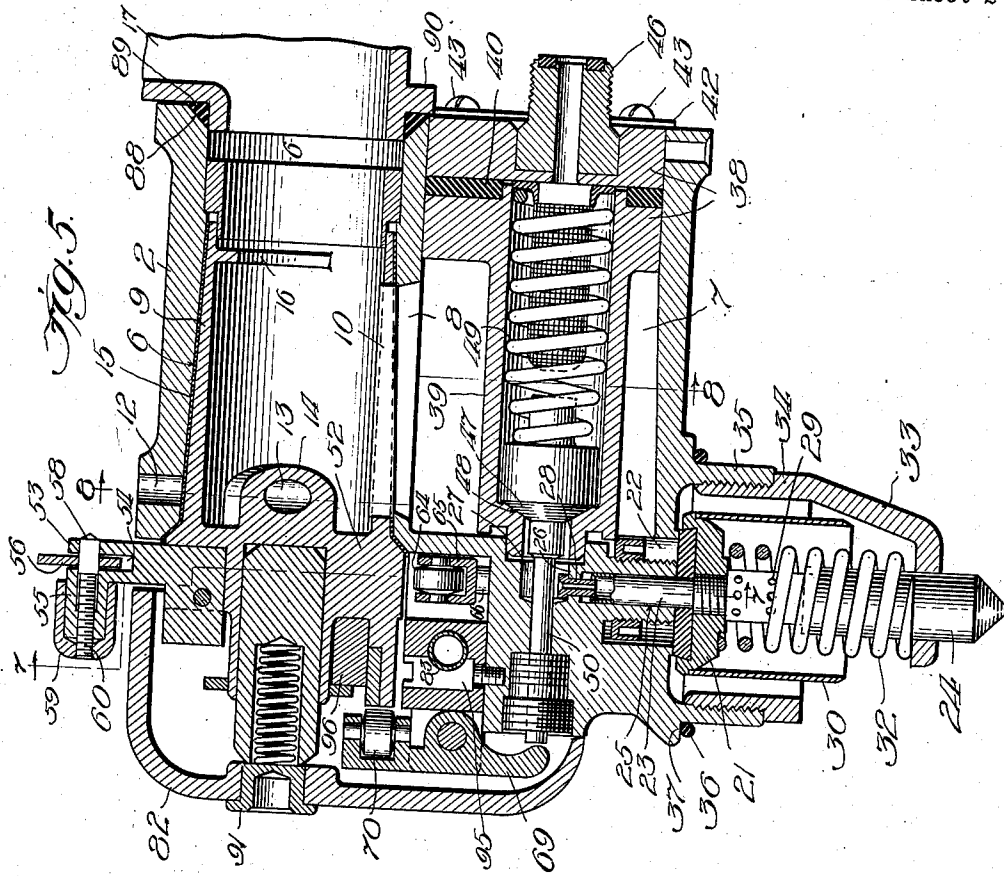
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DRAFT ARM FOR DISPENSING BEVERAGES

Filed July 8, 1936

4 Sheets-Sheet 2



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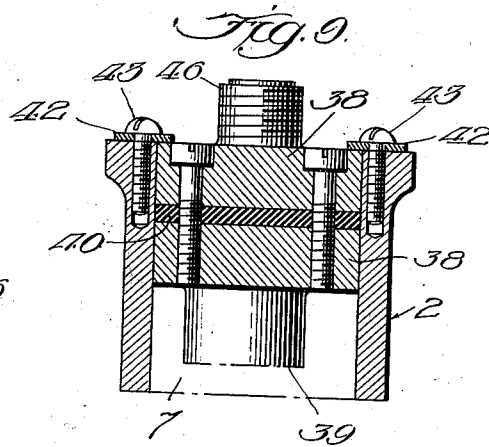
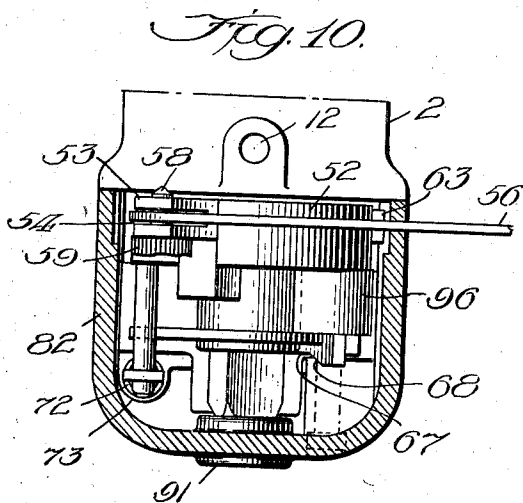
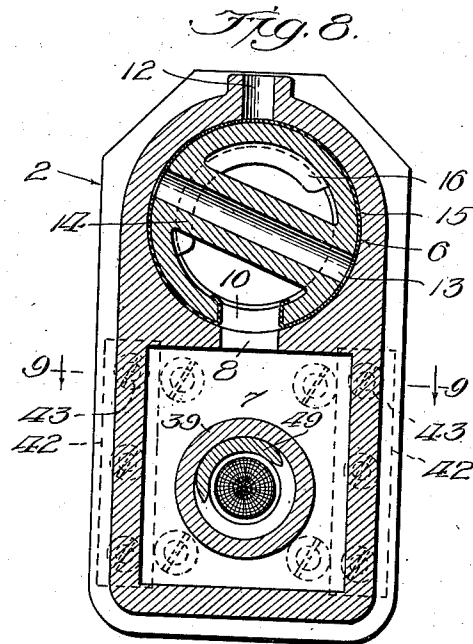
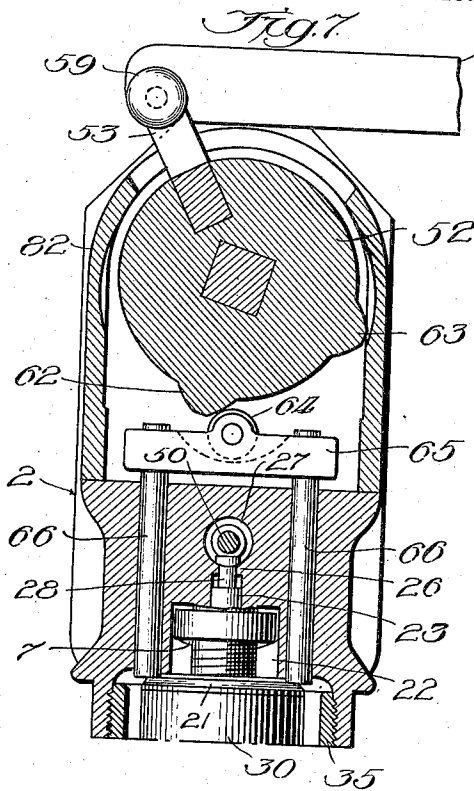
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DRAFT ARM FOR DISPENSING BEVERAGES

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4 Sheets-Sheet 3



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DRAFT ARM FOR DISPENSING BEVERAGES

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4 Sheets-Sheet 4

Fig. 11.

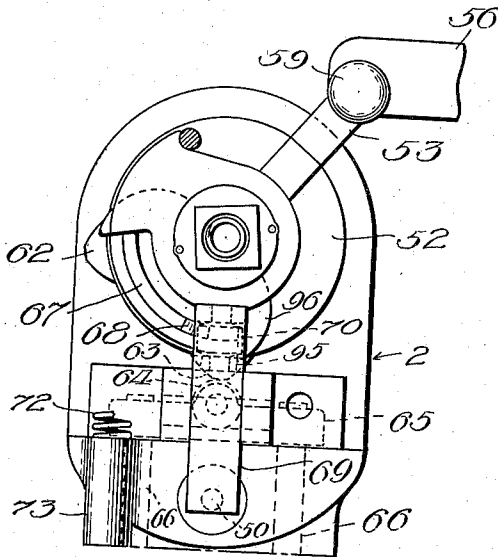


Fig. 12.

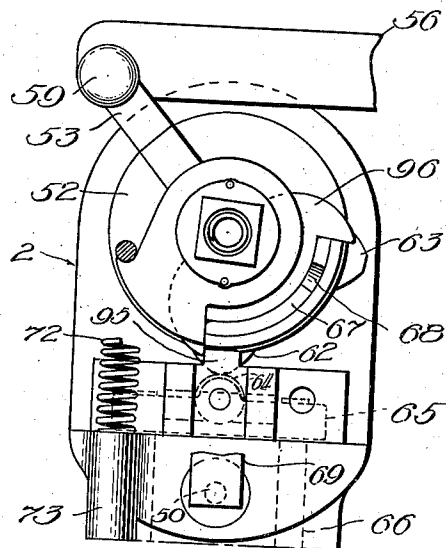


Fig. 13.

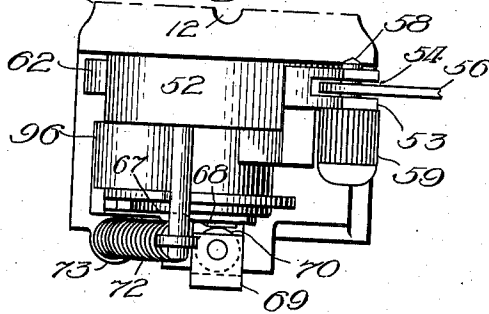


Fig. 14.

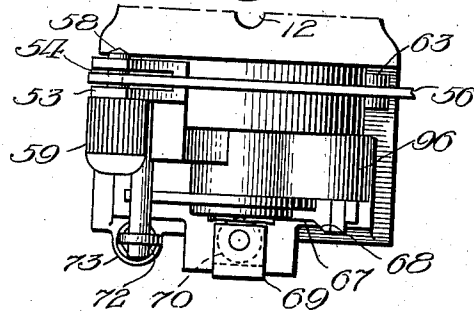


Fig. 15.

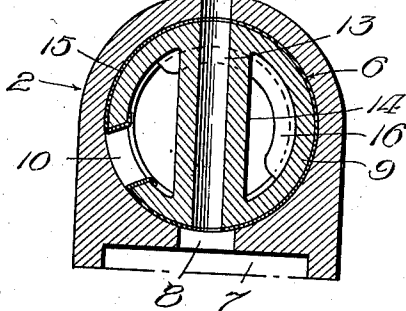
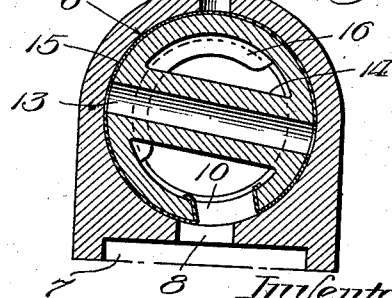


Fig. 16.



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UNITED STATES PATENT OFFICE

2,162,384

DRAFT ARM FOR DISPENSING BEVERAGES

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Application July 8, 1936, Serial No. 89,535

14 Claims. (Cl. 225—3)

In my prior patent, No. 1,525,650, granted February 10, 1925, I disclosed a novel draft arm for dispensing beverages. The present invention has for its object to improve the draft arm of that patent.

One of the improvements contemplated by the present invention is to provide a novel construction and arrangement, whereby an operating handle that swings from and toward an operator standing in front of the dispenser may be utilized.

A further improvement is to provide a novel movable stop device for the operating handle to permit a different manipulation of the handle when the stop device is in one position than when it is in another position.

Another improvement is so to construct the apparatus that all of it, except the operating handle, may be mounted within the cooling receptacle for the liquid with which a syrup or the like is to be mixed; the parts of the draft arm being so organized that a simple straight discharge nozzle shall project through the bottom of the main receptacle of the dispenser close to the front wall thereof, so that the attendant can readily place a glass or cup under the nozzle and, without difficulty, observe the filling thereof.

Another improvement consists in simplifying what may be termed the casing of the body of the draft arm, including the nozzle, whereby the main part of the draft arm may be disconnected while the nozzle remains within the dispensing receptacle; whereby the nozzle serves as a support for the main portion of the draft arm and is adapted to be easily and quickly secured thereto or detached therefrom; and whereby access may readily be had to the working parts for inspection, cleaning and repair.

Another improvement consists in the delivery into what may be termed the dispensing chamber associated with the nozzle, at low pressure, of a liquid which is supplied at high pressure.

Still another improvement consists in so organizing the working parts that liquids may be permitted to flow freely from the syrup container, through the draft arm, and be discharged at the nozzle, for any desired length of time, for the purpose of draining the syrup container or flushing out and washing the latter and the draft arm as a whole.

Another improvement consists in providing for a rapid and effective cooling of syrup.

The various features of novelty whereby my invention is characterized including, among others, the improvements heretofore specifically

mentioned, will hereinafter be pointed out with particularity in the claims; but, for a full understanding of my invention and of its objects and advantages, some of which have already been enumerated, reference may be had to the following detailed description taken in connection with the accompanying drawings wherein:

Figure 1 is a view showing, in side elevation, one of my improved draft arms mounted in a conventionally shown dispensing receptacle which appears in section; Fig. 2 is a section taken on line 2—2 of Fig. 1; Fig. 3 is a view of a corner of the syrup container and fragments of its discharge conduit, the view being partly in elevation and partly in the form of a section on line 3—3 of Fig. 2; Fig. 4 is a section on line 4—4 of Fig. 1, illustrating a detail; Fig. 5 is a longitudinal section, on a larger scale than Figs. 1-4, through the main part of the draft arm which includes the valve mechanisms and measuring means; Fig. 6 is an end elevation of the structure shown in Fig. 5, excepting that a part of the casing has been omitted, thereby making the view partly a sectional view; Fig. 7 is a section taken approximately on line 7—7 of Fig. 5; Fig. 8 is a section taken approximately on line 8—8 of Fig. 5; Fig. 9 is a section taken approximately on line 9—9 of Fig. 8; Fig. 10 is a top plan view of one end of the main body of the draft arm, with a removable section of the casing omitted, and showing the parts in the same positions as occupied by them in Figs. 6-8; Figs. 11 and 12 are views similar to Fig. 6, illustrating with the latter figure, the three different positions of the operating lever; Figs. 13 and 14 are views similar to Fig. 10 but illustrating the operating lever as being in the position indicated in Figs. 11 and 12, respectively; and Figs. 15 and 16 are views similar to the upper half of Fig. 8, but showing the plug valve in the respective positions corresponding to those of the lever in Figs. 11 and 12.

In the drawings the draft arm apparatus is shown as comprising a container 1 for syrup, a casing 2 which houses the valve mechanisms and measuring means for liquids to be dispensed, and a nozzle 3 through which the liquids are discharged. This apparatus is housed within a suitable receptacle A, close to one wall of the latter, to which I shall refer as the front wall; and the nozzle extends through and projects somewhat below the bottom wall of the receptacle. The operation of the draft arm is controlled by a lever or handle 4 disposed on the outer side of the receptacle and adapted to swing in a vertical plane from and toward said front wall of the re-

ceptacle. The nozzle, which is separable from the casing 2, is shown as being provided with a wide, deep, vertical flange 5. The casing fits against the top of the nozzle proper and against the flange, so that the casing and the nozzle may be rigidly fastened together and, at the same time, be easily separated from each other. This arrangement permits the nozzle to be secured permanently in the receptacle, and the casing to be quickly and easily removed, without danger that the casing will not be properly positioned when again returned to the receptacle.

The casing, as in the aforesaid patent, contains a frusto-conical valve chamber or receiving chamber 6 whose major axis is horizontal, together with a measuring chamber 7 underlying the valve chamber. Communication between these two chambers, as best shown in Figs. 5, 8, 15 and 16, is through a long port 8 in the top wall of the measuring chamber, and extending lengthwise of the latter. Within the valve chamber is an elongated cup-shaped plug valve 9 having a wall thereof and a long port 10 which in some positions of the valve registers with the port 8. The valve chamber is also provided with an outlet 12 through the top thereof for the escape of air. Normally this outlet is closed by the plug valve. However, in one position of the valve, as shown in Fig. 15, this outlet is placed in communication with the port 8 by a passage 13 in a member 14 which extends diametrically across the interior of the plug valve; thereby placing the measuring chamber directly in communication with atmosphere.

The plug valve is encased in a sheathing 15 so that the body of the valve may be made of any desired material and yet have the best possible bearing against the surrounding wall of the valve chamber.

In draft arms of this kind it is desirable to maintain an air cushion within the upper regions of the plug valve. In order to accomplish this in such a way that the air is not afforded an opportunity of leaking out through a joint, I provide the plug valve with an internal flange or lip 16 near the open end of the cup; this lip or flange being so disposed that it lies at the top when the valve is in its normal position which is that illustrated in Fig. 8; thereby forming with the wall at the closed end of the cup and a portion of the longitudinal wall of the cup a pocket the walls of which contain no joints.

A feature of the present invention has to do with the flow of air in one direction and syrup in the other direction, between the valve chamber and the syrup container. In the arrangement shown, the open end of the valve chamber is connected to the bottom of the syrup container by an elbow 17 of large diameter; the internal diameter of the elbow being preferably about the same as that of the valve chamber. One arm of the elbow, as best shown in Figs. 2 and 3, stands upright and communicates with the interior of the syrup container through an opening 18 in the bottom wall of the container; this opening being much smaller in diameter than the diameter of the elbow. In an actual commercial form of my draft arm, this opening is about three-eighths of an inch in diameter. When the plug valve is turned so as to place its port in registration with that in the top of the measuring chamber, assuming the measuring chamber at the time to be filled with air, syrup within the valve chamber flows down into the measuring chamber, displacing the air in the latter. The displaced air rises from

the measuring chamber into the valve chamber, and from there bubbles up through the elbow and into the syrup container. Syrup flowing down into the measuring chamber from the valve chamber is supplied through a conduit 19 connected at one end to the bottom of the syrup container. The other end of the conduit 19 is connected to the lowest point of the elbow 17, so that syrup can flow through the conduit into the bottom of the elbow. The internal diameter of the conduit 19 is preferably greater than the diameter of the opening 18. In actual practice, while the measuring chamber is being filled, the escaping air leaves in the form of bubbles, such as indicated at B in Fig. 3; each bubble of air being pushed upward by a corresponding quantity of syrup descending from the container through the conduit 19.

The conduit 19 serves not only to deliver syrup to the controlling and dispensing mechanism, but also as a cooler for the syrup. When the syrup container is first filled with syrup, the latter may be warm and require considerable time to become chilled while remaining in the container. I make the conduit 19 of considerable length so that it serves as a cooling coil whose contents are rapidly cooled by the refrigerant within the receptacle. Consequently, almost as soon as warm syrup is introduced into the container and flows down into the conduit or cooling coil to fill the latter, a substantial quantity of syrup becomes chilled and is ready to be dispensed.

It is the intent that when the operating handle of the draft arm is pulled forward or outward, the syrup shall be emptied from the measuring chamber, as in my aforesaid patent, and be mixed with soda water under pressure. It is desirable to permit the entire contents of the syrup container to be drained and the container and the remaining portions of the draft arm that come in contact with the syrup and other liquid to be flushed. I have accordingly provided means whereby, upon pushing the handle rearwardly beyond its neutral position, the valves which control the syrup are opened without disturbing the valve that controls the soda water.

In addition to the plug valve 9, there is a second valve 21 for controlling the syrup. The valve 21 is an upwardly-seating member below the measuring chamber and adapted when raised to close a large outlet 22 through the bottom wall of the measuring chamber. The valve has a tubular stem 23 extending entirely through the same; the upper end of the stem being open and the lower end having secured thereto and being closed by a solid downward extension 24. The upper part of the stem 23 is adapted to slide lengthwise in a bore or passage 25 in the wall of the casing 2, into the vicinity of a thin partition wall 26 that separates the passage 25 from an overlying, small receiving chamber 27 for soda water under high pressure. Extending through and fixed in this partition wall is a nozzle 28 of very small bore. When soda water under high pressure enters the chamber 27 it can escape only through the small nozzle 28 which acts as a pressure reducer. Therefore, the soda water that enters the passage 25 has a relatively low pressure. The nozzle 28 is coaxial with and extends into the tubular stem 23, so that soda water discharged from this nozzle passes down through the interior of the valve stem. That part of the valve stem 23 below the valve 21 is enlarged to form an expansion chamber. The soda water leaves this chamber 75

through small holes 29 in the cylindrical wall of the stem. The valve 21 has a deep, depending skirt 30 of large diameter, extending down below the level of the lowermost of the openings 29, so that the discharged soda water strikes the inner surfaces of this skirt and then flows downwardly along the same. While this is taking place, if the valve 21 is open, syrup flows down along the outer surfaces of the skirt and mingles with the soda water at the extreme lower edge of the skirt.

The valve 21 is normally held closed by a strong coil spring 32 surrounding the valve stem and the part 24 below the valve. The upper end of the spring engages with the under side of the valve, and the lower end of the spring rests on the horizontal arm of a bracket 33 fixed to the casing 2. The bracket is shown as depending from a short sleeve 34 screwed into a short nipple 35 of large internal diameter depending from and integral with the casing 2. This nipple, together with the bracket and the parts supported by the bracket extends down into the main nozzle 3 when the casing and the main nozzle are assembled as in Figs. 1 and 2; a liquid-tight joint between the casing and the main nozzle being obtained by employing a gasket 36 that underlies a flat surface 37 around the upper end of the nipple.

The soda water is delivered into the draft arm through a plug-like unit that is set into the measuring chamber 7. This unit embodies a head 38 and a tubular stem 39 much smaller in diameter than the corresponding dimensions of the head. The measuring chamber opens out through one side of the casing. The parts are so proportioned that when the plug-like unit is inserted, the head 38 fits in and closes the open end of this chamber. A fluid-tight joint between the head 38 and the surrounding wall of the measuring chamber is obtained through a radially expansible gasket 40. In order that this gasket shall not be required to serve as the means to hold the unit in place, I provide a pair of detachable metal strips or cleats 42 which, as best shown in Figs. 5, 8 and 9, are fastened to the outer face of the casing 2 beside the open end of the measuring chamber and in overlapping relation to the head 38, by means of screws 43. Any outward pressure upon the member 38 is therefore resisted by the strips or cleats 42.

The soda water enters the casing through a pipe 44, shown in Fig. 2, which is attached to a nipple 46 which opens into the space within the tubular stem 39. The inner end of the tubular stem is open and communicates with the chamber 27 so that, when free to do so, soda water entering through the nipple 46 passes through the tubular stem, into the chamber 27, and down through the nozzle 28. Normally, entrance to the chamber 27 is shut off by a valve 47 arranged within the tubular stem and normally held against its seat 48 by a coil spring 49. A valve stem 50 extends from the valve through the wall of the casing opposite that at which the nipple 46 is located.

The plug valve 9 is adapted to be turned and the valves 21 and 47 to be opened by manipulation of the handle 4 as will now be described.

Fixed to the thickened front wall 52 that closes one end of the plug valve 9 is a radial arm 53 having a slot 54 cut into the same through the upper edge, and provided with a laterally projecting boss 55. A link 56 has one end entered in the slot 54, extends forwardly through an open-

ing a in the front wall of the receptacle A, and is connected at its front end to the operating handle, as indicated at 57. The link 56 is a thin, wide bar-like element arranged on edge so that the opening a in the wall of the receptacle need be little more than a slit. The inner end of the link is fastened to the radial arm 53 by a pin 58 extending through the boss 55 and across the slot in the arm, as best shown in Fig. 5. The pin has on the forward end a head 59 which is in the form of a thimble fitting around the boss 55 and serving as a head by which the pin may be manipulated. The pin is smooth at the inner end thereof and is provided with a screw threaded section 60 at the head end. The external diameter of the threaded portion of the pin is no greater than the diameter of the smooth portion, and the parts are so proportioned that by turning the head on the pin the latter may be shifted from the working position shown in Fig. 1 to a release position in which it stands retracted clear of the slot 54, but cannot be completely unscrewed from the arm.

On the front end of the plug valve are two cam devices. As best shown in Fig. 7, one of these cam devices comprises a pair of lugs or projections 62 and 63 on the periphery of the wall 52 of the plug, these lugs or projections being on the under side of the valve. These lugs or cam elements are adapted to cooperate with a cam roller 64 on the cross bar 65 of a device by which the valve 21 is opened. This valve opening device may conveniently consist of the cross member 65 and two stiff rods 66 fixed thereto and extending down through a thickened part of the casing 2 into engagement with the top of the valve 21. With this arrangement, the valve 21 may be opened by shifting the operating handle either to an extreme forward position or into its rearmost position.

The second cam device is a face cam on the front face of the wall 52 of the plug; this face cam having a long flat section 67 arranged at right angles to the axis about which the plug valve turns and an inclined section 68 at one end of the flat section. This face cam is adapted to control the valve 47.

As best shown in Fig. 5, there is mounted on the front end of the body of the casing a rocking lever 69 whose lower end lies just in front of the front end of the valve stem 50 and whose upper end carries a cam roller 70 in position to engage the face cam on the plug valve. The parts are so proportioned that while the flat part of the face cam lies opposite the roller 70, the rocking lever does not touch the end of the valve stem 50, so that the valve 47 is held closed by its spring 49. When the cam roller rides up upon the inclined section 68 of the face cam, the lever 69 is rocked and its lower end forced rearwardly so as to push against the end of the valve stem 50 and force the valve 47 open.

There is a long coiled spring 72 fastened at one end to the front end of the plug valve 9, and at its other end to a fixed part of the casing which tends constantly to hold the plug valve at one limit of its rotary movement, which corresponds to the rearmost position of the operating handle 4. The greater portion of the spring 72 is housed within a stationary sleeve 73. Actually what the spring 72 does is normally to hold the plug valve in the angular position illustrated in Figs. 6 and 7, wherein the cam lug 62 engages with the cam roller 64. In other words, the tendency of the spring 72 is to turn the plug valve far enough to

cause the cam element 62 to force the cam roller 64 down and open the valve 21. However, the valve spring 32 is stronger than the spring 72 and therefore the cam roller 64 simply acts as a stop for the cam lug 62, and the valve 21 does not open. However, when the operating handle is pushed rearwardly from its neutral position, it assists the spring 72 to overcome the resistance of the valve spring 32, and therefore the valve 21 may be caused to open by pushing the operating handle back as far as it will go. This condition is illustrated in Fig. 12. When the operating handle is drawn forward as far as it will go, the cam lug 63 engages with and rides up on the cam roller 64, as illustrated in Fig. 11, and the valve 21 is opened. During this forward movement of the handle, the inclined portion 68 of the face cam engages with the cam roller 70 and rocks the lever 69 so that at the time the cam lug 63 forces the syrup valve 21 open, the cam section 68 causes the soda water valve 47 to be opened. In other words, when the operating handle is drawn into its forward position, both syrup and soda water will be delivered, whereas when the operating handle is pushed into its rearward position, only the syrup valve is opened, the soda water valve remaining closed.

Figs. 8, 15 and 16 illustrate the three positions of the plug valve which correspond to the three positions of the operating handle just described. In Fig. 8 the plug valve is in the neutral position, corresponding to the positions of the parts in Fig. 7, at which time both the valve 21 and the valve 47 are closed. Now the ports 8 and 10 are in registration with each other, permitting syrup to flow down from the plug valve and fill the measuring chamber which is shut off from direct communication with atmosphere, so that the air in the measuring chamber which is displaced by the syrup must pass out through the plug valve as heretofore explained. When the operating handle is drawn forward into its dispensing position, illustrated in Fig. 11, the plug valve assumes the position shown in Fig. 15, wherein the port 10 is displaced angularly from the port 8, and the port 8 registers with the vent passage 13 which in turn registers with the vent outlet 12 in the casing. Thus, while syrup and soda water are being dispensed, air may enter the measuring chamber to displace the syrup.

When it is desired to drain or flush the apparatus and the operating handle is pushed back into its rearmost position, as in Fig. 12, the plug valve is shifted only slightly from the neutral position of Fig. 8 to assume the position illustrated in Fig. 16; the ports 8 and 10 being in partial registration with each other and the measuring chamber being shut off from the vent passage 13. Consequently, while the plug valve remains in this position, the syrup valve 21 being open, liquids can flow by gravity from the syrup container through the draft arm apparatus, and out through the main nozzle 3.

Since the draining or flushing of the apparatus will be carried out only occasionally, I provide means to prevent the operating handle from being accidentally moved into its draining and flushing position. This is accomplished by means of a little plate 74 hinged on the front wall of the receptacle A just above the link 56 and having a slot 75 cut into the same from the lower edge in the plane of this link. The parts are so proportioned that when the plate 74 is swung down as shown in Figs. 1 and 4, the slotted end of the plate straddles the link and forms a stop

directly behind the elbow 76 of the operating lever through which the hinge pin 57 extends; the plate therefore constituting a stop to prevent the operating lever from being moved back into the draining and flushing position. However, when it is desired to drain and flush the apparatus, the plate 74 is simply swung up into the release position illustrated in dotted lines in Fig. 1, leaving the operating lever free to be pushed back into its rearmost working position.

The operating lever and the stop plate 74 are preferably mounted on a suitable base plate 77 which may be attached to the wall of any receptacle, thereby bringing all of the parts of the draft arm into a single unit shaped and adapted to be assembled in and secured to any suitable dispensing receptacle. In the arrangement shown, the base plate 77 is provided with a pair of forwardly projecting parallel ears 78 between which the lower end of the operating lever lies. A horizontal hinge pin 79 extends through these ears and through the intervening portion of the operating lever. At the upper end of the base plate are a pair of smaller ears 80 between which the upper end of the stop plate 74 lies. The stop plate is connected to these ears by a horizontal hinge pin 81 paralleling the hinge pin 79.

The present invention contemplates also various more or less minor but very useful structural details. One of these has to do with the manner of securing together the casing 2 for the valve mechanism and the main nozzle. The casing has a detachable cover 82 over region in which the cams, cam rollers, and the ends of the plug valve and the stem for the soda water valve are located. This cover is held in place by a tubular bolt 83, best seen in Figs. 5 and 6; there being a nut 84 on one end of this bolt. When the casing is set on the nozzle 3, the tubular bolt registers with a screw-threaded opening that extends through the flange 5 of the nozzle and into a boss 85 projecting from the back side of the flange. A screw bolt 86 extends through the tubular bolt 83 and into the boss 85. On the outer end of the bolt 86 is a head or finger piece 87 by which it may be turned. Therefore, by taking out a single bolt, which may be turned without the use of tools, the casing may be released from the nozzle.

Another useful feature has to do with the securing together of the valve casing and the syrup container. The open end of the chamber 6 that contains the plug valve, as best shown in Fig. 5, has a frusto-conical seat 88 against which rests a rubber gasket 89 on the lower part of the elbow 17 which projects slightly into the said chamber. The elbow has thereon an annular flange 90 overlying the gasket and adapted to press the same against the seat 88 in the casing. In the cover member 82 is an outwardly opening socket 91 coaxial with the plug valve. Depending from the container 1, at a distance from the elbow 17 slightly greater than the length of the valve casing, is a bracket 92. This bracket carries a horizontal screw bolt 93 whose free end is adapted to be entered into the socket 91 in the casing after the lower arm of the elbow 17 has been inserted in the open end of the valve chamber 6. Then by tightening the screw bolt, the casing is clamped between the bolt and the elbow. The screw bolt has a finger piece or head 94 by which it may be turned. It will thus be seen that the valve casing and the syrup container may be fastened together or disconnected from each other by operating a single

screw bolt which may be turned by simply taking hold of the head in one's fingers.

Positive stops may be provided for limiting the turning movements of the plug valve in either direction and, therefore, the swinging movements of the operating handle. As best shown in Fig. 12, there is a stationary lug 95 below a crescent-shaped piece 96 fixed to the forward end of the plug valve in front of the cams 62 and 63. When the plug valve is in the draining or flushing position, as in Fig. 16, the lefthand horn of the crescent is in contact with the stop lug 95 as shown in Fig. 12. When the handle is pulled forward, the righthand horn of the crescent strikes the stop lug as is apparent from Fig. 11.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all forms and arrangements which come within the definitions of my invention constituting the appended claims.

I claim:

1. In a draft arm apparatus, a container for syrup, a casing below said container having therein a valve chamber and a measuring chamber below the valve chamber, a short conduit connecting the valve chamber with the bottom of the container, and a long cooling conduit for syrup connected at one end to the container and at the other end to the other conduit.

2. In a draft arm apparatus, a container for syrup, a casing below the container having therein a valve chamber and a measuring chamber below the valve chamber, a short upright conduit of large cross-sectional area opening at its lower end into the valve chamber and communicating at its upper end with the bottom of the container through a relatively small opening, and a long cooling conduit for syrup connected at one end to the container and at its other end to the lower part of the other conduit.

3. In a draft arm apparatus, a container for syrup, means below the container to mix syrup and another liquid and dispense the same, said means including a receiving chamber for syrup, a short conduit connecting the container to said receiving chamber, and a long cooling conduit for syrup connected at one end to said container and at its other end to the lower portion of the other conduit.

4. In a draft arm apparatus, a container for syrup, means below the container to mix syrup and another liquid and dispense the same, said means including a receiving chamber for syrup, a short elbow of large cross-sectional area connecting the container to said receiving chamber, and a long cooling conduit, for syrup, of smaller cross-sectional area than the elbow connected at one end to said container and at its other end to the lower part of the elbow, the opening from the elbow into the container being much smaller than the cross-sectional area of the main portion of the elbow.

5. In a draft arm apparatus, a container for syrup, a casing lying below said container and having therein a receiving chamber for syrup in the form of a frustum of a cone whose axis is horizontal, a cup-shaped plug valve fitted in said receiving chamber, connecting means between said casing and the container at the open end of the valve to admit syrup to and permit the escape of air from the receiving chamber, and means in the valve to trap air and retain it in the upper part of the space therein.

6. The combination with a draft arm apparatus including a syrup container, a casing containing a syrup-receiving chamber and a measuring chamber below the latter and valve devices to control communication between said chambers and the flow of syrup from the measuring chamber, of operating means to control said valve devices so as to permit liquid to flow for any desired length of time from the container through said chambers, to permit only enough liquid to flow into the measuring chamber to fill it or to close communication between said chambers and permit the measuring chamber to empty itself.

7. The combination with a draft arm apparatus including a syrup container, a casing containing a syrup-receiving chamber and a measuring chamber below the latter and valve devices to control communication between said chambers and the flow of syrup from the measuring chamber, of operating means to control said valve devices so as to permit liquid to be discharged continuously for any desired length of time from the container through said chambers, to permit only enough liquid to flow into the measuring chamber to fill it or to close communication between said chambers and permit the measuring chamber to empty itself, said operating means including a handle and a movable stop adapted to prevent the handle from being shifted into the position that permits the aforesaid continuous discharge of liquid from the container.

8. In a draft arm apparatus, a casing containing a chamber for receiving liquid at high pressure and a second chamber for mixing said liquid at low pressure with a second liquid, said chambers being separated by a wall, a nozzle of very small bore fixed in and extending through said wall, that part of the second chamber into which the nozzle projects being of small cross-sectional area and constituting a passage, a valve controlling the outlet end of said passage, a tubular valve stem extending from said valve through said passage to the nozzle, said stem having outlets through the sides near the valve, and means to operate the valve.

9. In a draft arm apparatus, a casing containing mixing and dispensing mechanism, a nozzle having a flange engaged with a side of the casing, and a quickly-separable connection between the casing and said flange whereby the nozzle may serve as a support for the casing and the casing be adapted to be removed while the nozzle remains attached to a receptacle or the like.

10. In a draft arm apparatus, a casing containing mixing and dispensing mechanism, a nozzle fitting against the bottom of the casing and having a large flange overlapping the casing, and a single bolt extending entirely through the casing and into the flange to secure the same together.

11. In a draft arm apparatus, a casing containing mixing and dispensing mechanism, a detachable cover forming a wall of the casing, a tubular fastening member extending from one side of the casing through said cover, through the interior of the casing and to the opposite side of the casing, a nozzle fitting against the bottom of the casing and having a deep flange engaged with the last-mentioned side of the casing, and a bolt extending through said tubular fastening member and into said flange.

12. In combination, a supporting wall, a draft arm apparatus of which the operating handle is mounted on one side of the wall and the remainder of the apparatus on the other side, said

- handle having swinging movements from and toward said wall, means in the apparatus to permit liquids to flow freely through the same, for washing or draining, when the handle is in its rear-
5 most position and to cause liquids to be dispensed when the handle is in its forward position, and a stop device movably mounted on said wall to prevent the handle from reaching its rear-
10 most position or permit the handle to move freely from one limit to the other, depending upon the position occupied by the stop device.
13. In combination, a syrup container, a casing enclosing mechanism for dispensing liquids including syrup supplied by the container, said cas-
15 ing having a large inlet opening, an elbow fixed to the container and having an end set against

the casing and projecting into said inlet opening, and a clamp device on the container on the opposite side of the casing from that in which said inlet opening is located and clamping the casing between the same and said elbow.

14. In a draft arm, valve mechanism including an oscillatory member to control the same, stop means to limit the angular movements of said member, a swinging operating handle connected to said member, and a removable stop to arrest
10 the swinging movement of the handle in one direction before said oscillatory member has been moved far enough in the corresponding direction to be arrested by its stop means.

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