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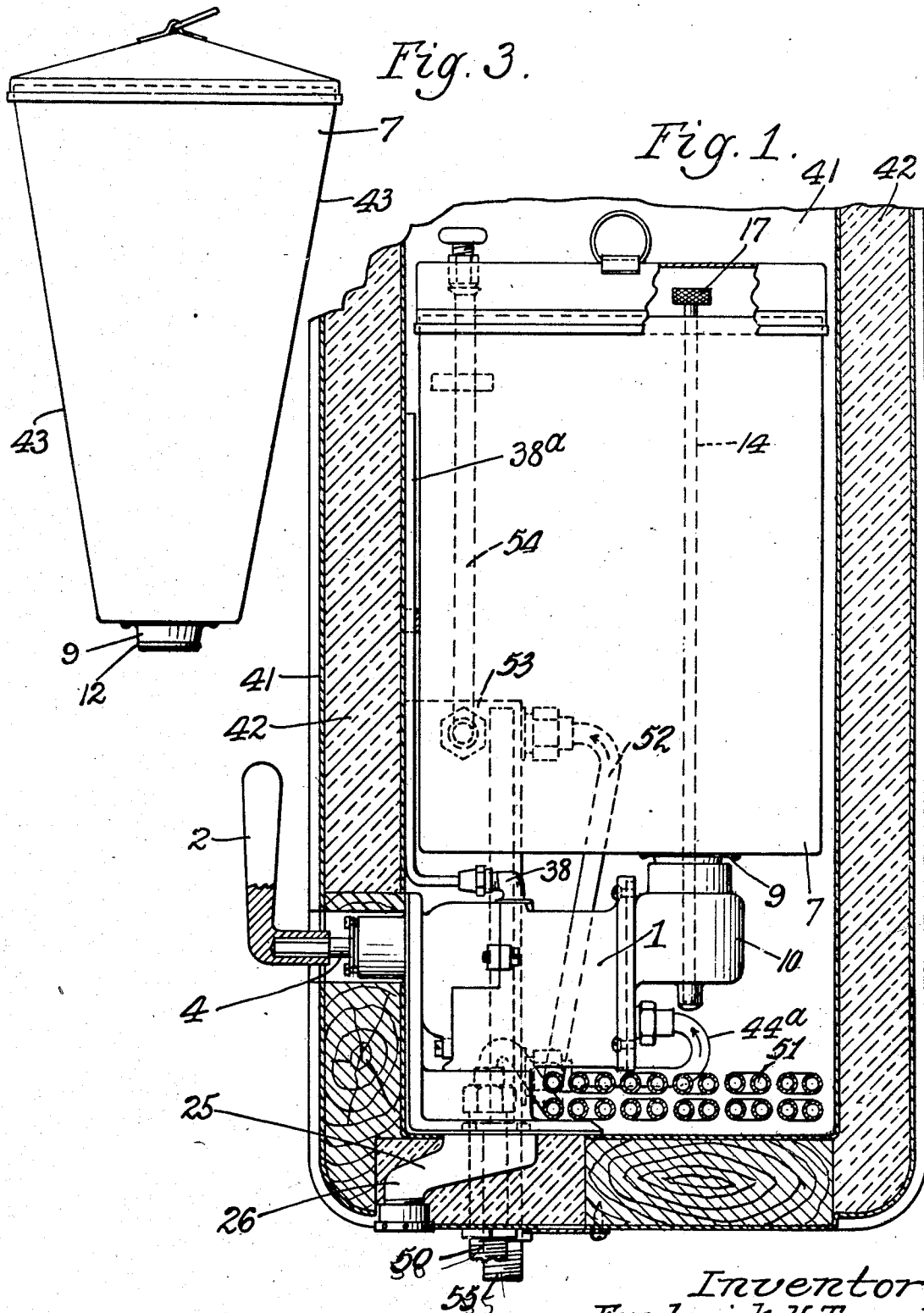
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2,148,662

DRAFT ARM ASSEMBLY FOR DISPENSING LIQUIDS

Filed July 28, 1934

2 Sheets-Sheet 1



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Fig. 4.

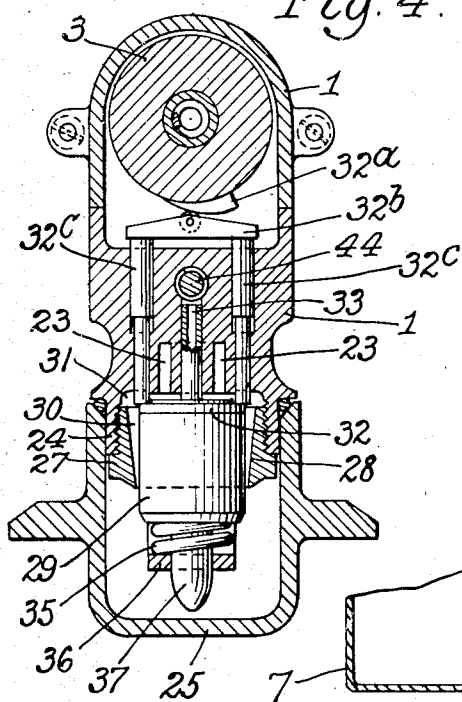
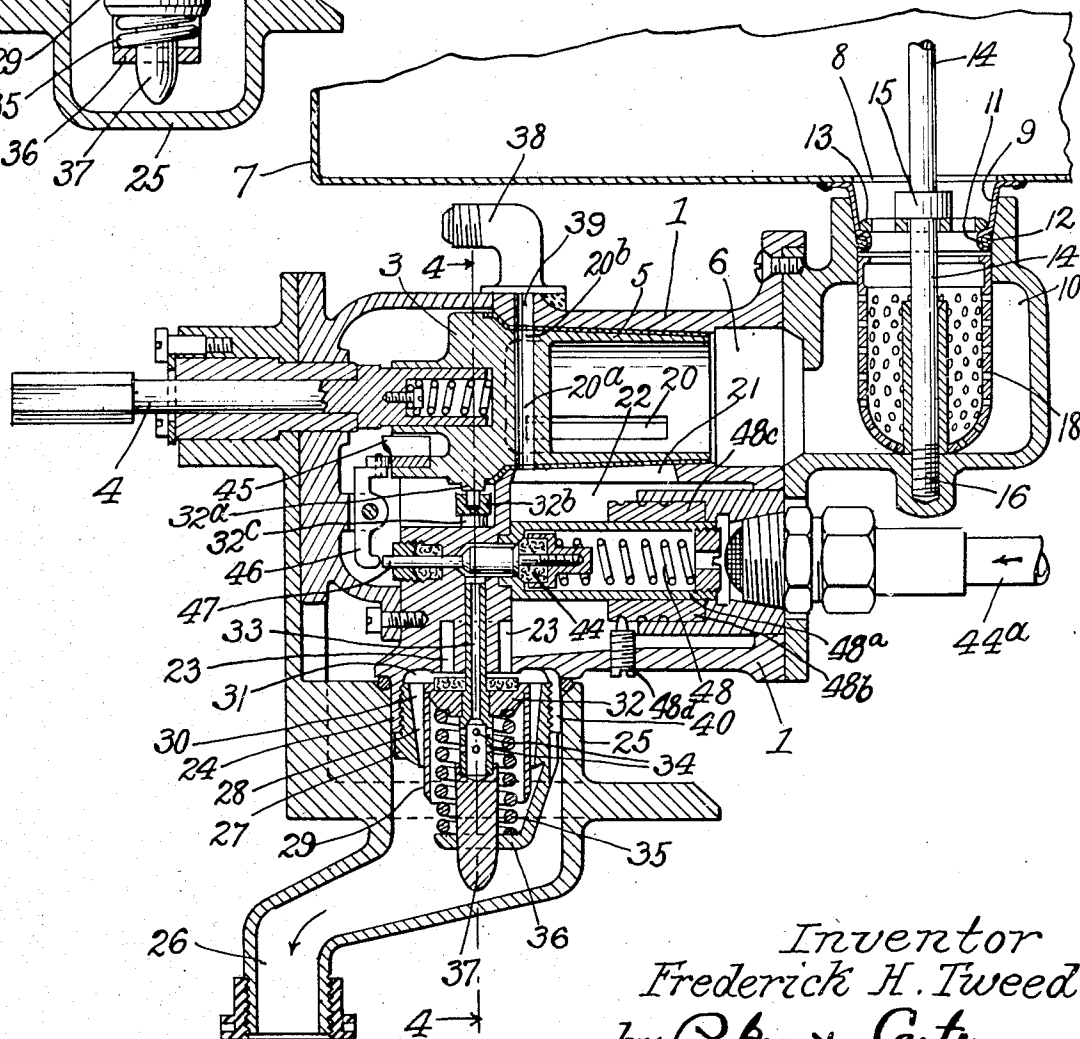


Fig. 2.



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UNITED STATES PATENT OFFICE

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DRAFT ARM ASSEMBLY FOR DISPENSING LIQUIDS

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6 Claims. (Cl. 225—1)

This invention relates to a draft arm assembly for dispensing liquids and has for its object to provide a new and improved device of this description. The invention has as a further object to provide a draft arm assembly which will meet efficiently the requirements of a device of this description. The invention has further objects which are more particularly pointed out in the accompanying description.

Referring now to the drawings, Fig. 1 is a view showing one form of device embodying the invention;

Fig. 2 is a sectional view of the device illustrated in Fig. 1;

Fig. 3 is an elevation of the syrup container;

Fig. 4 is a sectional view taken on line 4—4 of Fig. 2.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawings, I have shown a body portion 1 which carries the draft arm assembly of the device. This draft arm assembly consists of a handle 2 and a valve operating member 3 connected therewith by the shaft 4. The valve operating member is connected to the syrup chamber valve in the form of a cylindrical portion 5 in a chamber 6 into which the syrup from the syrup receptacle 7 is received. The syrup receptacle has an opening 8 in the bottom through which the syrup passes. It also has a supporting member 9 which fits into the upper end of the strainer chamber 10. This support has a hollow inwardly projecting portion 11 which fits over a rounded portion 12 so as to give the syrup receptacle a free rocking supporting connection.

A fastening element 13 engages the part 11, see Fig. 2, and is held in place by the threaded member 14 which passes through an opening in it and which has a shoulder 15 engaging the fastening member 13. The threaded member 14 has a screw threaded end 16 which enters a screw threaded opening in the bottom of the strainer chamber 10. The member 14 projects through the syrup receptacle and is provided at the top with a thumb piece 17 for turning it to connect it or disconnect it from the strainer chamber. Within the strainer chamber is a strainer 18 which is also held in place by the threaded member 14. The syrup, after being strained, passes into the interior of the cylindrical part 5 of the valve. This valve has an opening 20 and the wall has no opening 21 so that when the draft arm is in its normal position the openings will register and permit syrup to pass into the chamber 22.

The bottom of the chamber 22 is provided with one or more discharge openings 23 therein which are tubular in shape and communicate with the chamber 22 so that the syrup from chamber 22 enters the openings 23 to be ready to be dis-

charged into the nozzle 25. The bottom also has a downwardly extending flange 24 for the nozzle 25 through which the material is discharged. This nozzle has an outwardly bent discharge end 26 which brings it out from under the body portion 1 so as to be within easy reach of the receptacles into which the mixture is discharged. Within the nozzle 25 is a control device for insuring the uniform discharge of the proper amount of material into the nozzle, regardless of the height of the syrup in the chamber 6. This control device consists of the member 27 which has a beveled or inclined inner wall 28. Within the member 27 is a cylindrical portion 29 between the outer wall of which and the inclined wall 28 is a receiving space 30, the cross sectional area of which decreases from the top toward the bottom. This receiving space 30 communicates with the chamber 31.

The valve operating member 3 is provided with a cam 32a which, when the handle 2 is rocked, engages the member 32b on the top of the pins 32c. These pins engage the valve 32, see Fig. 4. The cam 32a presses them downwardly so as to open the valve 32 to let the syrup into the nozzle through the openings 23. When the valve 32 is opened, as in Fig. 2, the syrup from the syrup receptacle passes into the chamber 31 through openings 23 which communicate with chamber 22, and into the space 30 and then down into the lower part of the nozzle. The cylinder 29 is closed at the top and the charged water passes down into it through the pipe 33, passing out through the openings 34. A spring 35 surrounds the lower end of the pipe 33, its lower end being supported on the member 36. This spring returns the valve 32 to its closed position when the pins 32c are released by the cam 32a by turning the handle back. It will be noted that the valve 32 closes the upper end of the cylinder 29 and that the cylinder 29 and the valve move together. The downward movement of the valve opens the openings 23 to let the syrup enter the nozzle and the downward movement of the cylinder 29 opens the bottom of the space 30 so as to let the syrup enter the nozzle and become mixed with the charged water. The member 37 passes through this member 36, as shown in Fig. 2. At the upper part of the body portion 1 is a connection 38 which communicates with the passageway 39, discharging atmospheric air into the chamber 22 to insure the proper discharge of the syrup therein.

When the draft arm is moved to open the valve 32, the cylindrical part 5 is moved so as to move the openings 20 and 21 out of register and close off the admission of the syrup into the chamber 22. In this position, the air passage 20a in the part 5 has its end 20b in communication with the air passageway 39 which extends

up through the connection 38 and to which is connected the pipe 38a extending up along the syrup receptacle 7, its end preferably being above the level of the syrup therein. The rotation of the valve operating member 3 to open the valve 32 also opens the valve 44 which admits the soda water from the pipe 44a into the passageway 33 and out through the openings 34 so as to mingle with the syrup. The soda water valve 44 is opened by a cam 45 which engages a pivoted arm 46, one end of which engages the stem 47 of the valve 44 so as to open said valve. A spring 48 returns the valve, when the handle 2 is moved, back to its initial position. The spring and valve are mounted in a cylindrical holder 48a which has one end projecting into a sleeve 48b provided on its exterior with a series of grooves 48c extending therearound. A screw 48d passes through the wall of the member 1 and has its end projecting into one of these grooves so as to hold the parts in position. When the syrup, upon opening the valve 32, passes from the opening 23 into the chamber 31 and passes down into the space 30, its movement is slowed down and the space between the edge of the part 27 and the part 29 is comparatively small so that the same amount of syrup will be discharged each time, regardless of the height of the syrup in the chamber 6. There is also an air passage 40 up through the nozzle to the top of the chamber 31 so that air can enter this chamber, thus permitting the proper flow of the syrup therefrom.

The draft arm assembly and the syrup tank when in use, are located in a tank 41 which has walls of insulating material 42. Means are provided for cooling the syrup tank and draft arm assembly. The syrup receptacle has inclined walls 43 which converge towards the bottom so that ice placed in the tank 41 can easily fall down to the bottom. It will be seen that this ice or cold water, or whatever cooling medium is used, surrounds the draft arm assembly so as to cool the syrup therein, and thus the first draft of material will be sure to be cooled. In the prior devices as now in use the draft arm assembly is outside of the cooling tank. By this construction it is placed in the cooling tank and the handle for controlling the draft arm assembly is outside and the nozzle is bent outwardly so as to make it easy to place the receptacle, in which the mixed syrup and charged water is discharged, under the nozzle, so as to make the device practical for commercial use in dispensing beverages. The carbonated water to be used in connection with the syrup passes from the source of its supply through the pipe 50 to the coil 51, where it is cooled, and it then passes through pipe 52 to the cooling tank 53 which extends down to the bottom of the receptacle 41. From the bottom of this receptacle the carbonated water passes through pipe 44a into the body portion 1. Tank 53 has an air vent 54 and the cooling receptacle has drain pipe 55.

I claim:

1. A device of the kind described comprising a body portion, a syrup receptacle, a supporting member connected therewith, a rocking connection between said syrup receptacle and said body portion, and a removable fastening device extending through said syrup receptacle for fastening the syrup receptacle in position, and a strainer beneath said syrup receptacle separate therefrom through which said fastening device passes.

2. A device of the kind described comprising

a body portion, a draft arm assembly carried thereby having a hollow valve member, a syrup receptacle, means for delivering syrup from said syrup receptacle into said hollow valve member, a receptacle in said body portion into which said syrup is discharged when the hollow valve member is rotated, a discharge nozzle connected with said body portion, and means associated therewith for retarding the discharge of the syrup into the nozzle.

3. A device of the kind described comprising a body portion, a syrup chamber therein, a draft arm assembly carried thereby having a hollow valve member, a syrup receptacle, means for delivering syrup from said syrup receptacle into said hollow valve member, a receptacle in said body portion into which said syrup is discharged when the hollow valve member is rotated, a discharge nozzle connected with said body portion, a charged water delivery device for delivering charged water into said nozzle, and means surrounding said charged water delivery device for securing the discharge of a uniform stream of syrup into said nozzle independent of the height of the syrup in the syrup chamber in said body portion.

4. A device of the kind described comprising a body portion, a syrup chamber therein, a draft arm assembly carried thereby having a hollow valve member, means for delivering syrup from said syrup chamber into said hollow valve member, a receptacle in said body portion into which said syrup is discharged when the hollow valve member is rotated, a discharge nozzle connected with said body portion, and means for securing the discharge of a uniform stream of syrup into said nozzle independent of the height of the syrup in the syrup chamber in said body portion, said means comprising an outer member and an inner member having converging walls which form a space between them decreasing in cross sectional area from the top toward the bottom and into which the syrup passes.

5. A device of the kind described comprising a body portion, a syrup chamber therein, a draft arm assembly carried thereby having a hollow valve member, means for delivering syrup from said syrup chamber into said hollow valve member, a receptacle in said body portion into which said syrup is discharged when the hollow valve member is rotated, a discharge nozzle connected with said body portion, and means for securing the discharge of a uniform stream of syrup into said nozzle independent of the height of the syrup in said body portion, said means comprising an outer member and an inner member having converging walls which form a space between them decreasing in cross sectional area from the top toward the bottom and into which the syrup passes, and means for admitting air to the top of said space.

6. A device of the kind described comprising a body portion, a syrup receptacle which discharges syrup into said body portion, a valve in said body portion through which the syrup passes, a syrup chamber in said body portion for the syrup passing from said valve, a cooling tank in which said body portion is received so that the syrup in the valve and in the chamber therein will be cooled by the cooling material in the tank, and a controlling arm outside of the tank, and a connection between said controlling arm and the valve.

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