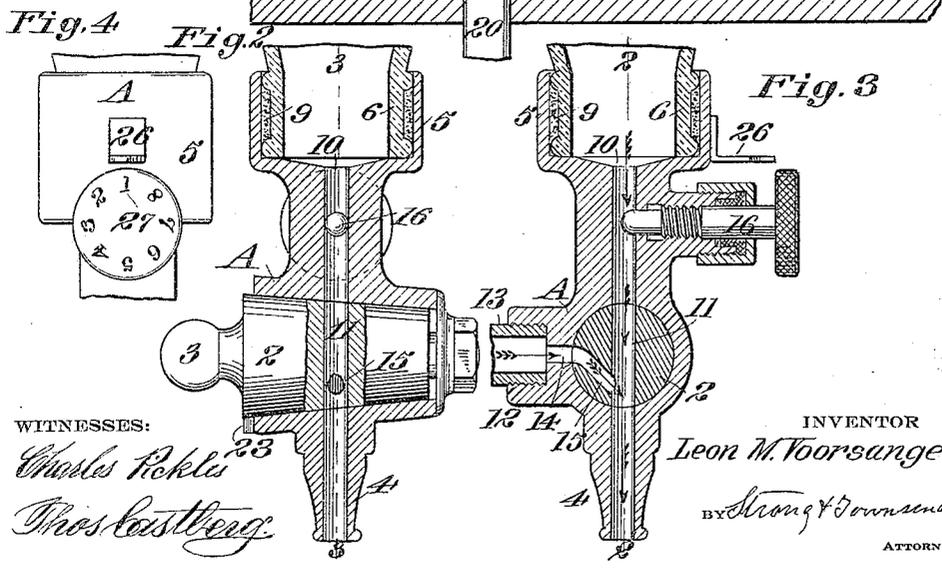
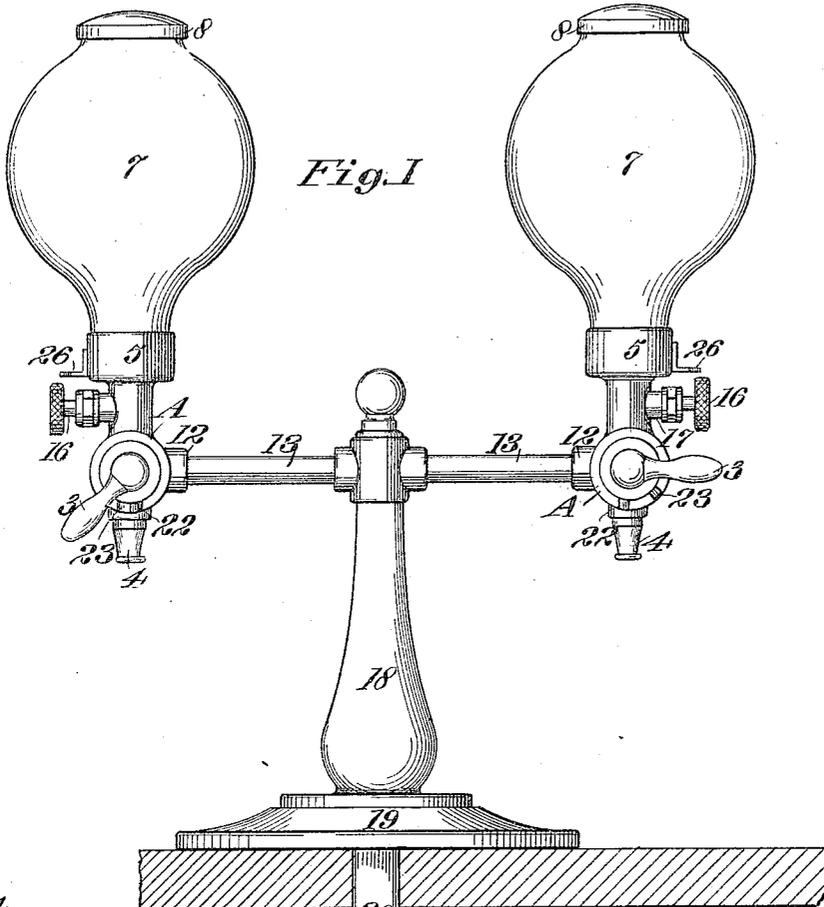


L. M. VOORSANGER.
DISPENSING AND MIXING DEVICE.
APPLICATION FILED NOV. 15, 1915.

1,210,022.

Patented Dec. 26, 1916.



WITNESSES:
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LEON M. VOORSANGER, OF SAN FRANCISCO, CALIFORNIA.

DISPENSING AND MIXING DEVICE.

1,210,022.

Specification of Letters Patent. Patented Dec. 26, 1916.

Application filed November 15, 1915. Serial No. 61,458.

To all whom it may concern:

Be it known that I, LEON M. VOORSANGER, a citizen of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Dispensing and Mixing Devices, of which the following is a specification.

This invention relates to a dispensing and mixing device.

One of the objects of the present invention is to provide a simple, substantial, cheaply manufactured dispensing and mixing device whereby soft drinks, such as carbonated water containing a flavoring syrup may be mixed and dispensed.

Another object of the invention is to provide means for varying the quantity of flavoring syrup delivered so that drinks of any strength or richness may be drawn.

Further objects will hereinafter appear.

The invention consists of the parts and the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a front view of the device. Fig. 2 is a vertical section of the mixing valve on line 2—2 of Fig. 3. Fig. 3 is a similar section on line 3—3 of Fig. 2. Fig. 4 is a detail view of the regulating screw.

Referring in detail to the drawings, A indicates a valve casing of suitable shape and construction, through which extends a tapered plug valve 2, which is adapted to be turned by means of a handle 3. Formed on the lower end of the casing is a nozzle 4, and formed on the upper end of the casing is a socket 5 which is adapted to receive the neck 6 of a reservoir 7, of suitable shape and construction, which is provided with a removable cap 8. The neck 6 of the reservoir may be secured in any suitable manner but is preferably cemented in the socket, as indicated at 9.

10 indicates a vertically disposed passage which communicates with the neck of the reservoir at one end and passes through the nozzle 4 at the other end. This passage is adapted to be opened or closed by means of the plug valve 3 which has a similar passage 11 formed therein. Formed on one side of the casing, at right angles to the longitudinal axis of the valve 2, is an extension 12 which is entirely threaded to permit it to be connected with a pipe 13 which is connected

with a source of liquid supply, hereinafter to be described.

Formed in the extension 12 is a central passage 14 which opens into pipe 13, and formed in the plug valve is an angularly disposed passage 15 which communicates with the central passage 11, at one end, and with the passage 14, at the other end. Turning movement of the valve, by means of the handle 3, will bring passages 10 and 11 out of register and similarly passages 14 and 15 out of register, thereby cutting out communication between the reservoir 7 and the supply pipe 13.

Mounted on the upper end of the valve casing, a suitable distance below the socket 5, is a regulating screw 16. This screw passes through a stuffing box 17 and its inner end is adapted to partly open or close the central passage 10, or, in other words, regulate the amount of fluid which may pass from the reservoir through the valve 2.

In operation, referring to Fig. 1, a double arrangement of the device as a whole is shown. Each valve casing, with its connected reservoir 7, is carried by a pipe 13, which in turn passes through a pedestal 18 mounted on a base 19 of suitable construction. A pipe 20 passing through the pedestal connects with the pipes 13 and the connected valves, and the opposite end of pipe 20 may be connected with a tank containing carbonated water, either hot or cold.

The device as a whole is particularly constructed for dispensing soft drinks. The reservoirs 7 are, therefore, filled with syrups of different flavors. When it is desired to draw a glass, it is only necessary to turn the connected valve 3 until passages 10 and 11 and 14 and 15 register; this registry being assured by providing a pair of lugs 22 and 23. Turning of the valve until the lugs engage insures perfect register of the passages. The carbonated water under pressure entering through pipes 20 and 13 and passing through passages 14 and 15 discharges on an angle into the vertically disposed passages 10 and 11. The flavoring syrup from the reservoir will in this manner be permitted to pass by the regulating screw 16 and through the valve where it will be thoroughly mixed with the carbonated water as it discharges from the nozzle 4. An entraining action is produced by the angular discharge caused by the relative position of the passages 11 and 15.

From the foregoing it will be seen that the flavoring syrup is not only fed by gravity but also by the entraining or suction action produced. It is, therefore, possible to employ syrups of varying degrees of thickness or richness. The provision of the regulating screw 16 permits the quantity of syrup supplied to be varied, in this manner making it possible to serve drinks of any richness or strength desired. A pointer 26, secured on the socket and the numerals 27 stamped on the face of the regulating screw, indicate at all times the exact amount of flavoring syrup that is being discharged.

This device is simple, cheap to manufacture and is easily installed where required. The different passages in the valve and casing can be cleaned out at any time by merely turning the valve to a position where the upper end of passage 15 will register with the passage 10 and the lower end of passage 11 with passage 14. The carbonated water under pressure will in this manner flush up through passage, 10, by the regulating screw, and into the reservoir which can be thoroughly cleaned. The forcing of the water through the passages and by the regulating screw at the same time causes these to be thoroughly cleaned and reversing of the valve to the position shown in Fig. 3 permits the contents to be drawn out before the reservoir is again charged with flavoring syrup.

While the present dispensing device is shown as fitted with two reservoirs and mixing valves, it is possible that any suitable number of same may be used. Also I wish it understood that the device may be used for compounding liquids of any nature and that I do not wish to limit its application to the serving of beverages alone.

The materials and finish of the several parts of the apparatus are such as the experience and judgment of the manufacturer may dictate.

Having thus described my invention, what

I claim and desire to secure by Letters Patent is:—

1. In combination with a casing having a vertical passage extending through its top and bottom and a right-angular passage leading into said vertical passage and through a side of the casing, a syrup reservoir communicating with the upper end of the vertical passage, means to connect said right-angular passage to a source of pressure, and a valve at the intersection of said two passages, said valve having a substantially straight diametrical passage and an inclined passage leading from said diametrical passage through a side of the valve whereby in one position the inclined passage extends downwardly from the right-angular passage to convey fluid pressure to the lower end of the vertical casing passage, and in a second position extends upwardly from the right angular passage so as to convey fluid pressure to the upper end of the vertical casing passage and into the reservoir to cleanse the latter.

2. In a dispensing device, a casing having a vertical and a lateral passage which meet at a common point, a syrup reservoir connected to the upper end of the vertical passage and the lateral passage being for connection to a source of pressure, and a valve at said common point having passages which in one position communicate with each of the vertical and lateral passages to discharge from each and which in a second position establishes communication between the source of pressure and syrup reservoir to allow cleaning of the latter and closes the lower end of said vertical passage.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

LEON M. VOORSANGER.

Witnesses:

MAY TIEDEMANN,
ARTHUR SELLER.