

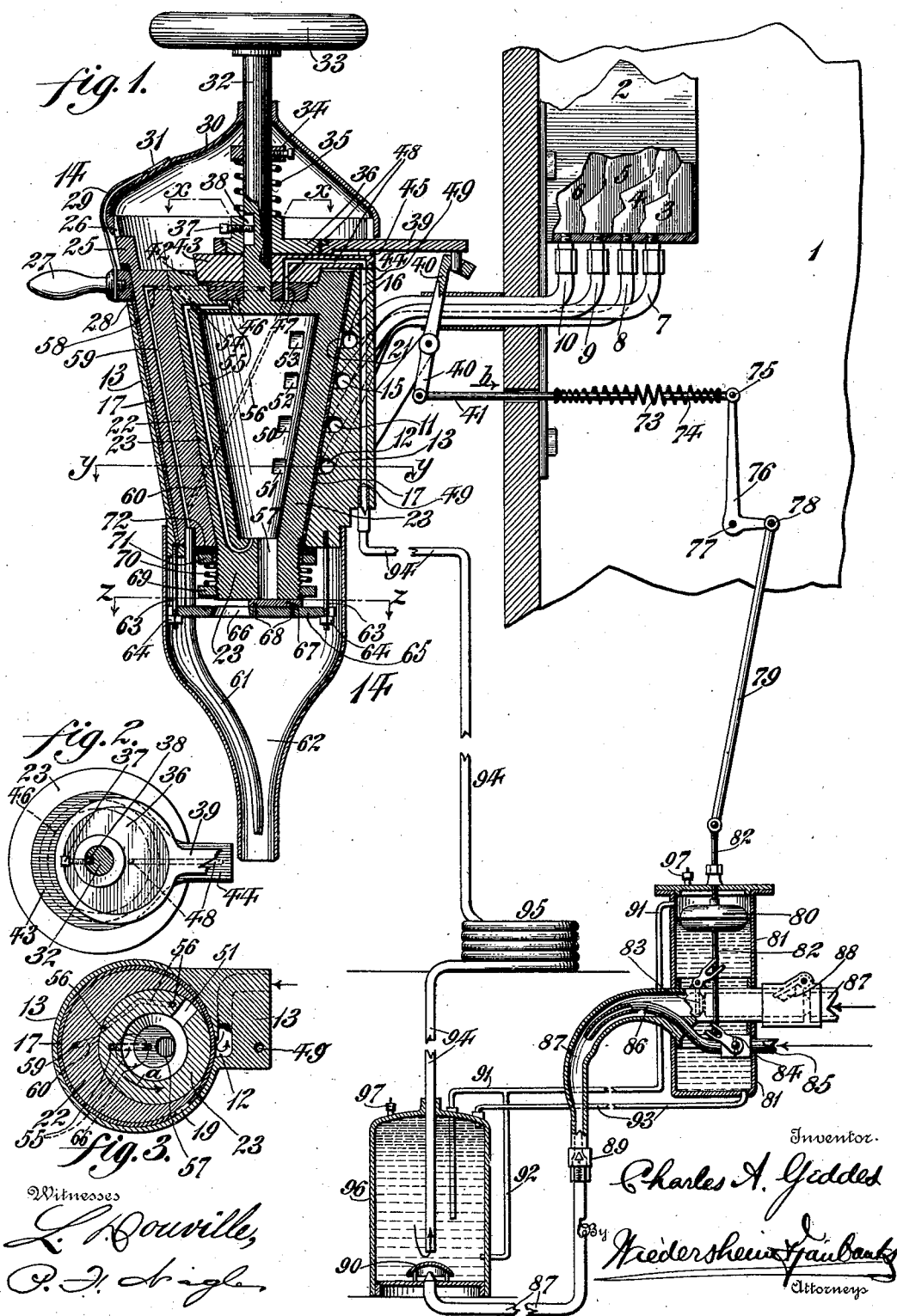
C. A. GEDDES.

DISPENSING APPARATUS FOR SODA WATER.

(Application filed Apr. 1, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

fig. 4.

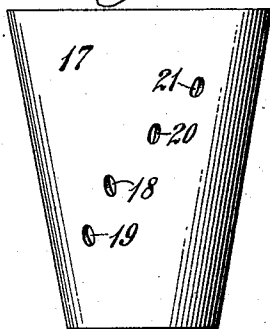


fig. 5.

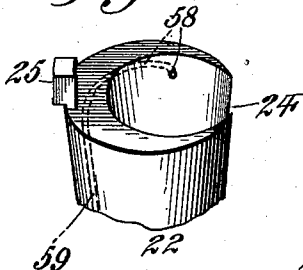


fig. 6.

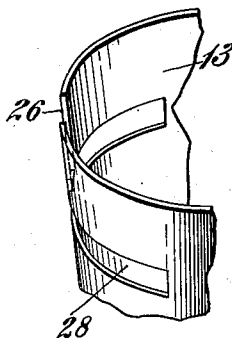


fig. 7.

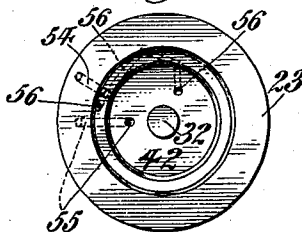


fig. 8.

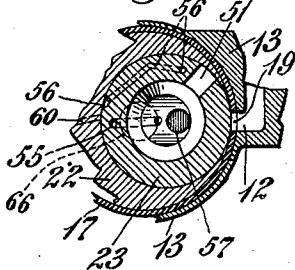


fig. 9.

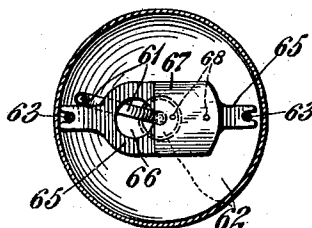
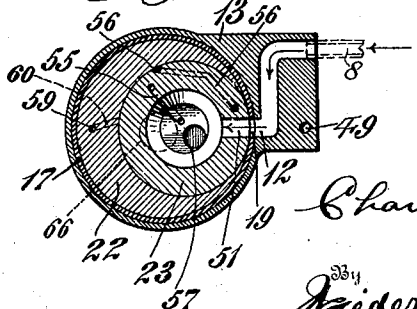


fig. 10.



Witnesses

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DISPENSING APPARATUS FOR SODA-WATER.

SPECIFICATION forming part of Letters Patent No. 712,292, dated October 28, 1902.

Application filed April 1, 1902. Serial No. 100,912. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GEDDES, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Dispensing Apparatus for Soda-Water, &c., of which the following is a specification.

My invention relates to improvements in dispensing apparatus for soda-water, gingerale, sarsaparilla, &c.; and it consists of means whereby various kinds of beverage may be drawn from the apparatus through a single spigot and without any liability of one flavor or kind of drink becoming mixed with another unless this be desired; and it further consists of means for producing carbonated liquid which may be used in connection with this apparatus and also means for measuring the quantity of syrup to be drawn for each drink that requires to be flavored with the same.

Figure 1 represents a partial vertical section and partial side elevation of the apparatus embodying my invention. Fig. 2 represents a horizontal section on line *xx*, Fig. 1. Fig. 3 represents a horizontal section on line *yy*, Fig. 1. Fig. 4 represents a side elevation of a thimble employed in connection with my invention. Fig. 5 represents a perspective view of a portion of a plug employed, the same being on a reduced scale. Fig. 6 represents a perspective view of a portion of the thimble seen in Fig. 4. Fig. 7 represents a plan view of a plug employed in connection with my invention. Fig. 8 represents a horizontal section on line *yy*, Fig. 1, with certain of the parts therein in different positions from those seen in Fig. 3. Fig. 9 represents a horizontal section on line *zz*, Fig. 1. Fig. 10 represents a horizontal section on line *yy*, Fig. 1, with certain of the parts therein in different positions from those seen in Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, 1 designates a beer or other box, within which is placed the box 2, which latter is provided with compartments 3, 4, 5, and 6, it being evident that, if desired, the compartments in the box 2 may be either increased or decreased in number, according to requirements. The compart-

ments 3, 4, 5, and 6 have connected therewith the pipes 7, 8, 9, and 10, respectively, it being noted that the pipe 7 leads from the compartment 3 to the passage 11 and that the pipe 8 leads from the compartment 4 to the passage 12, it being noted that said passages 11 and 12 are located in the casing 13 of the spigot 14 and that the pipe 9 leads from the compartment 5 to the passage 15, and that in like manner the pipe 10 leads from the compartment 6 to the passage 16, the object of all of which is hereinafter described, said passages 11, 12, 15, and 16 being in the same vertical plane.

Located within the casing 13 is a thimble 17, provided with ports 18, 19, 20, and 21, (see more particularly Fig. 4,) it being noted that said thimble 17 occupies a position between the inner face of the wall of the casing 13 and the outer face of the plug 22 (see more particularly Figs. 3, 8, and 10) and that the inner face of said plug 22 fits closely against a portion only of the outer face of the revoluble plug 23, due to the opening 24 in said plug 22, (see Fig. 5,) it being understood that the opening 24 extends from top to bottom in the plug 22 for a purpose hereinafter described and is in the same vertical plane with the passages 11, 12, 15, and 16. The plug 22 is provided with a projection 25, which is adapted to engage an opening 26 in the casing 13 to prevent said plug 22 from turning when placed within said casing. (See Figs. 1, 5, and 6.)

The thimble 17 is provided with a handle 27, which works in a slot in the casing 13, thereby providing means to enable said thimble to be turned within the casing 13 when so desired. The handle 27 has projecting therefrom a finger 29, which serves as a pointer to indicate the degree of rotation to be imparted to the thimble 17 in order to obtain a predetermined flavor of syrup or kind of beverage, it being understood that in the present instance the lid 30 of the casing 13 is provided with characters 31, each of which corresponds to a particular flavor of syrup or a kind of beverage and is employed in connection with the finger or pointer 29, and that the characters 31 correspond in number to the several syrups and kinds of beverages.

The plug 23 is provided with a stem 32, having a handle 33 thereon, so as to enable said plug to be easily operated. The stem 32 has secured thereto a collar 34, against which
 5 abuts a spring 35, it being noted that said spring 35 bears against an eccentric 36, provided with a set-screw 37, which engages a groove 38 in the stem 32, whereby said eccentric 36 will follow the rotary motion imparted
 10 to said stem 32, and thus actuate the eccentric-rod 39 in order that the latter may impart motion to the lever 40 and rod 41 for a purpose hereinafter described.

The plug 23 is formed with a recessed portion 42, adapted to receive a plug 43, provided with an extension 44, which engages with the wall of an opening 45 in the casing 13, so as to interlock said plug 43 and casing 13, and thus prevent any relative movement of the
 20 two latter parts.

Interposed between the plugs 23 and 43 is a washer 46, provided with an opening 47, which registers with a passage 48 in the plug 43, it being noted that the passage 48 is in communication with a passage 49 in the casing 13, as seen in Fig. 1.

The plug 23 is provided with ports 50, 51, 52, and 53, which may be brought in alinement when so desired with the passages 11, 12, 15, and 16, respectively, it being noted that said plug 23 is also provided with passages 54, 55, 56, and 57, the object of all of which will hereinafter be described. (See more particularly Fig. 1.) The plug 22 is provided
 30 with the passages 58, 59, and 60, the latter intersecting passage 59. (See Figs. 1, 5, and 10.) Leading from the passage 59 is a discharge-pipe 61, the same being located within the nozzle 62 of the apparatus. (See Figs. 40 1 and 9.)

Projecting from the under side of the casing 13 are screw-threaded rods 63, which are provided with nuts 64, the latter supporting a plate 65, (see Figs. 1 and 9,) provided with
 45 an opening 66 therein for a purpose hereinafter described. Interposed between the plate 65 and the under side of the plug 23 is a washer 67, which may be secured to the plate 65 in any suitable manner—for instance, by pins
 50 68—so as to prevent said washer 67 from rotating when the plug 23 is turned.

The lower portion of the plug 23 is screw-threaded and has fitted thereon the nut 69, upon which rests a spring 70, that bears
 55 against a washer 71, preferably of metal, it being noted that said washer 71 bears against a washer 72, preferably of leather, and thus produces a tight joint between the plug 23 and the casing 13 and also a tight joint between the plugs 22 and 23.

It will be noted on referring to Fig. 1 that the rod 41 has secured thereto one end of a spring 73, whose opposite end is secured to a rod 74, which latter is pivoted at 75 to one
 65 end of a bell-crank lever 76, fulcrumed at 77, it being noted that the opposite end of said bell-crank lever 76 is pivoted, as at 78, to a

rod 79, which is operated by a float 80, located within a pressure-tank 81 for a purpose hereinafter described. The float 80 is secured to a rod or stem 82, which rises and lowers therewith, so as to operate the valves 83 and 84 for a purpose hereinafter described. The valve 83 is located within the pipe 87, which supplies the tank 96 with water from a street-main or other source of supply. The pipe 87
 75 has located therein the check-valves 88 and 89, and it is to be noted that the pipe 87 is adapted to discharge into the aerating-tank 96 and against a baffle-plate 90. The aerating-tank 96 has leading therefrom the pipe 91, which is in communication with the tank 81, it being noted that said pipe 91 is provided with a branch 92, which is in communication with the tank 96, and that a pipe 93
 85 leads from the upper portion of said tank 96 to the bottom of the tank 81. Leading from the tank 96 is a pipe 94, which is in communication with the passage 49 and has a portion thereof coiled, as at 95, it being understood
 90 that said coiled portion may be placed within a beer or other box, so that the contents of the pipe 94 may be kept cold by the ice in said box. The pipe 85 has a portion 86 thereof located within the pipe 87, so as to discharge
 95 the carbonic-acid gas conveyed by said pipe 85 into the pipe 87 when the valve 84 is open. The pipe 85 obtains its supply of carbonic-acid gas from any suitable source of supply.

The operation is as follows: The hand-wheel 33 is turned, whereupon the eccentric 36 will likewise be turned, and thus operate the eccentric-rod 39, the lever 40, the rods 41 and 74, the bell-crank lever 76, and the rod 79, so as to depress the rod or stem 82, thereby opening the valves 83 and 84, whereupon
 100 water from the street-main or other source of supply will flow through the pipe 87 and discharge into the tank 96, the carbonic-acid gas in the pipe 85 discharging through the
 110 portion 86 thereof into the pipe 87, it being evident that the gas and water will commingle in the pipe 87, thereby producing soda-water, which is forcibly ejected from the pipe 87 and against the baffle-plate 90, whereby the
 115 water becomes thoroughly impregnated with the gas from the pipe 85 when entering the tank 96. When it is desired to draw plain soda-water, the hand-wheel 33 is slightly turned in order to cause the passage 56 (see
 120 Fig. 1) to be brought in alinement with the passages 47, 48, and 60, whereupon the soda-water will flow from the tank 96, through the pipe 94, to and through the passages 49, 48, 47, 56, and 59, and finally through the
 125 nozzle 61 into a suitable receptacle. When it is desired to flavor the soda-water with a syrup the same is accomplished in the following manner: Assuming that a drink of soda-water is to be flavored with syrup from the
 130 compartment 6, the handle 27 is turned and carries with it the thimble 17, and when said port 21 in said thimble is in alinement with the passage 16 the handle 27 is let go, where-

upon a communication exists between the compartment 6 and port 21. The hand-wheel 33 is then turned, carrying with it the plug 23, and when the port 53 in said plug is in alinement with the port 21 the syrup from the compartment 6 will flow into the interior of the hollow plug 23 and fill the same, the air displaced from the interior of the plug 23 escaping through the vent or passage 54 into the passage 59, from which it escapes into the atmosphere through the nozzle 61. The handle 27 is then turned so as to bring a solid portion of the thimble between the passage 16 and the plug 23, whereupon the supply of syrup from the compartment 6 is shut off from the plug 23. The plug 23 is then turned so as to bring the passage 55 therein in alinement with the passages 47 and 48, and, furthermore, cause the passage 57 in the bottom of the plug 23 to register with the opening 66 in the plate 65 to permit the contents of the plug 23 to escape therefrom through the nozzle 62, it being evident that the force of the soda-water will thoroughly remove the syrup within the plug 23, and when a glass or other receptacle for the drink is nearly filled the plug 23 is turned so as to shut off the supply of soda-water to the interior of the plug 23 and also close the communication between the passage 57 and opening 66 and bring the passage 56 in communication with the passages 47, 48, and 60, whereupon a thin and powerful stream of soda-water will be caused to flow into the glass or other receptacle for the drink and put a "head" thereon. When the eccentric 36 is operated, due to the turning of the hand-wheel 33, said eccentric imparts a reciprocating motion to the rod 39, which latter will then transmit motion to the lever 40, causing the latter to turn on its pivot and impart motion to the rod 41. If the pressure within the tank 81 is in excess of the power of the spring 73, the latter yields or compresses when the rod 41 is moved in the direction indicated by the arrow *b* in Fig. 1 and imparts no motion to the rod 74 and its adjuncts. When, however, the pressure in the tank 81 is less than the power of the spring 73, the rod 74 and its adjuncts will have motion imparted thereto by the rod 41 and spring 73, whereupon the rod or stem 82 will be lowered when a drink is drawn and open the valves 83 and 84 and permit a supply of gas and water to enter the tank 96 to replace that which was withdrawn from said tank.

It is to be understood that the valve 88 is normally closed and will remain so as long as the pressure within the tank 96 is in excess of that in the water-main, and therefore no backflow of soda-water can pass beyond the valve 88 when the valves 83 and 84 are open.

It is evident that, if desired, the tanks 81 and 96 may be provided with safety-valves 97.

It is to be understood that when a drink is to be flavored with syrup from either of the compartments 3, 4, and 5 the operation will

be substantially the same as that described in connection with the compartment 6.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a dispensing apparatus a plurality of receptacles, a casing having a plurality of independent ports communicating with said receptacles, a rotatable thimble situated within said casing and having a plurality of ports to communicate with the casing-ports, a stationary plug situated within said thimble and open opposite the casing-ports, a passage between the upper and lower ends of said stationary plug, a hollow rotatable plug situated within said stationary plug and having a plurality of ports to communicate with said casing-ports, a passage leading from the exterior at the upper end of said rotatable plug to the interior at the lower end thereof, a passage leading from the upper end of said rotatable plug and adapted to communicate at its lower end with the passage through said stationary plug, a vent-port at the upper end of said rotatable plug, an outlet-port at the lower end of said rotatable plug, a nozzle secured to the lower end of said casing, a discharge-pipe situated within said nozzle and communicating with the lower end of the passage through said stationary plug, a valve controlling the outlet-port of said rotatable plug, a port in said casing adapted to communicate with the upper ends of the passages through said stationary and rotatable plugs and with a carbonating apparatus, the communication between said passage through the casing and with said other passages being controlled by the rotation of said rotary plug, and said carbonating apparatus being adapted to be operated by the rotation of said rotary plug.

2. In a dispensing apparatus, in combination with the means for mixing and controlling the liquid, a plurality of receptacles communicating therewith, a carbonating apparatus comprising communicating pipes leading from sources supplying gas and water, an aerating-receptacle, said communicating pipes terminating in a single pipe leading to said aerating-receptacle, a pressure-chamber communicating with the upper and lower ends of said aerating-chamber and having a stem connected with the valves controlling said communicating pipes, a float on said stem, and a connection between said stem and the means for operating the apparatus controlling the mixing and supply of the liquid, said aerating-chamber communicating with said apparatus for mixing and controlling the supply of the liquid.

3. In a dispensing apparatus, a plurality of syrup-receptacles, a mixing apparatus communicating therewith, a carbonating apparatus having an areating-chamber communicating with a source supplying gas and liquid, controlling means for regulating the supply of gas and liquid to said areating-chamber

and a connection between said mixing apparatus and controlling means whereby the latter is operated by reason of the operation of the former.

- 5 4. In a dispensing apparatus, a plurality of receptacles, a rotatable hollow plug having a plurality of ports adapted to communicate with the receptacles, said plug having a vent-port at its upper end and an outlet-port at its
10 lower end, and a passage through the walls of said plug extending from the exterior at its upper end to the interior at its lower end, and a carbonating apparatus communicating with the upper end of said passage extending
15 through said rotatable plug.
5. In a dispensing apparatus, a plurality of receptacles, a rotatable hollow plug having a plurality of ports adapted to communicate with the receptacles, said plug having a vent-
20 port at its upper end and an outlet-port at its lower end, and a passage through the walls of said plug extending from the exterior at its upper end to the interior at its lower end, the upper end of said passage communicating
25 with a source supplying a liquid and the lower end of said passage being deflected upwardly toward and communicating with the interior of said plug.

6. In a dispensing apparatus, a plurality of

receptacles, a casing having a nozzle at its 30 lower end and provided with ports to communicate with said plurality of receptacles, a thimble within said casing having ports to communicate with the casing-ports, a station- 35 ary plug within said thimble having a plurality of passages therethrough communicating at their lower ends with a common discharge situated within said nozzle, a rotatable hollow plug situated within the said station- 40 ary plug and having a passage adapted to communicate at its lower end with one of the passages through said stationary plug, a second passage through said rotary plug having its upper port on the exterior and its 45 lower port on the interior of said plug, a valved outlet for said rotary plug, ports in said rotary plug to communicate with the casing-ports, and a port in said casing communicating with a suitable source of supply, said last- 50 mentioned port being adapted to be brought into communication with the passages through the stationary and rotary plugs by reason of the rotation of the latter.

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