Feb. 21, 1933. S. T. DARE 1,898,619

DRINK DISPENSING MACHINE

Filed Jan. 30, 1932

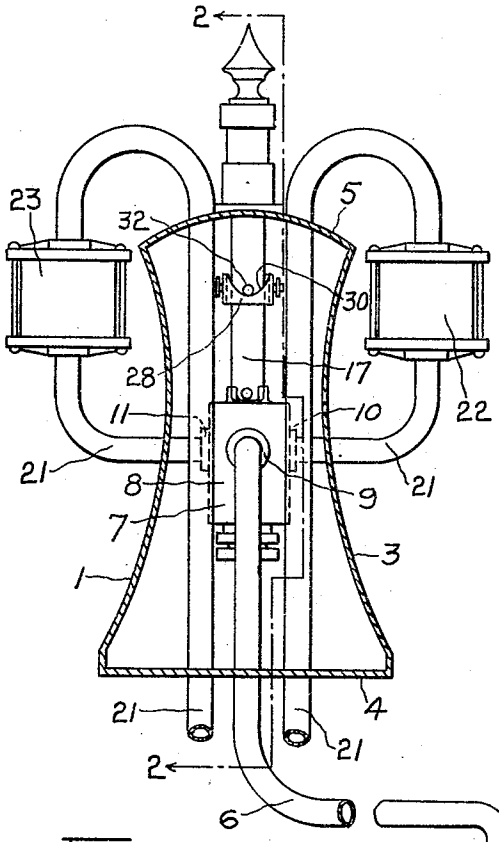


Fig. 1

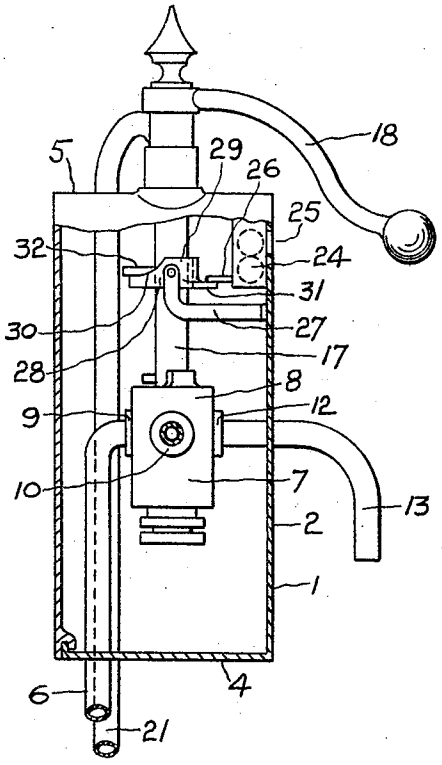
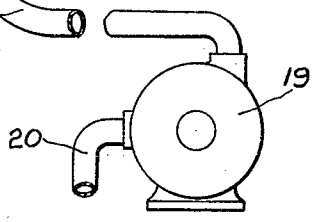


Fig. 2



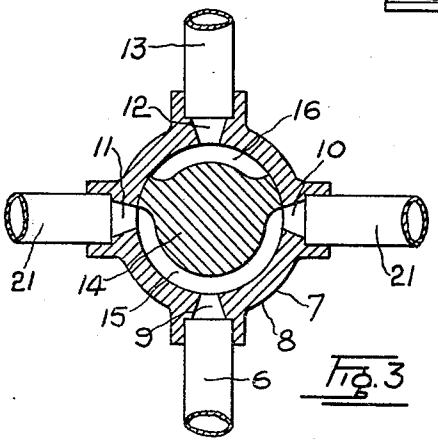


Fig. 3

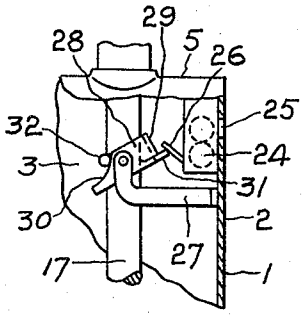


Fig. 4

INVENTOR
SAMUEL TILDEN DARE

BY Fetherstonhaugh & Co

ATTORNEYS

Patented Feb. 21, 1933 1,898,619

UNITED STATES PATENT OFFICE

SAMUEL TILDEN DARE, OF NEW WESTMINSTER, BRITISH COLUMBIA, CANADA, ASSIGNOR OF ONE-FOURTH TO MATTHEW J. PHILLIPS, ONE-FOURTH TO JAMES HENRY EDWARDS, AND ONE-FOURTH TO JOHN C. POPHAM, OF NEW WESTMINSTER, BRITISH COLUMBIA, CANADA

DRINK DISPENSING MACHINE

Application filed January 30, 1932. Serial No. 589,940.

My invention relates to improvements in drink dispensing machines which are particularly adapted for use in dispensing beverages having a pulp content or which are subject to sedimentation of some desirable component of the liquid.

The objects of the invention are to provide means whereby the liquid is under constant circulation through the dispenser; to provide means whereby the liquid dispensed is accurately measured, and to provide means whereby every drink dispensed is registered so that the total value of the commodity sold may be readily computed.

The invention consists of a circulatory system, including a pair of measuring cups and a valve capable of disrupting either cup from the circulatory system and discharging its contents, as will be more fully described in the following specification and shown in the accompanying drawing, in which:—

Fig. 1 is a rear view of the invention with the cover removed from the casing.

Fig. 2 is a sectional view of the invention taken on the line 2—2 of Figure 1.

Fig. 3 is a sectional plan view of the valve.

Fig. 4 is a detail view of the registering mechanism, shown in operating position.

In the drawing like characters of reference indicate corresponding parts in each figure.

The numeral 1 indicates generally a casing having a front wall 2, side walls 3, a base 4 and a top wall 5. The casing is adapted to be mounted upon a suitable counter (not shown) convenient to a receptacle (not shown) containing the beverage to be dispensed.

Extending upwards through the base 4 is a suction pipe 6. Fitted to this pipe is a valve 7 consisting of a substantially cylindrical body 8 having an inlet port 9 connected with the pipe 6, two flow and return ports 10 and 11 and a discharge port 12 to which a discharge pipe 13 extends through the wall 2 to a convenient filling position in front of the casing.

Fitted within the valve body 8 is a rotatable core 14 having two elongated peripheral ported passages 15 and 16, the former being approximately 190 degrees in length and the latter approximately 100 degrees. The core is fitted with a vertical stem 17 from the upper extremity of which a downwardly turned operating lever 18 extends.

A continuously driven pump 19 is provided, which has a suction pipe 20 leading from the beverage receptacle and is connected on its discharge side to the pipe 6.

Pipes 21 lead from the ports 10 and 11 of the valve body 8 which extend upwardly and return through the casing 1 back to the beverage receptacle below the liquid level. These pipes preferably terminate at such a distance from the suction pipe 20 as to ensure a thorough circulation of the beverage. Intermediate the length of the pipes 21 and integral therewith are two glass cylinders 22 and 23, which serve as measuring vessels and enable the beverage circulated by the pump to be clearly seen.

Suitably mounted on the inside of the front wall 2 is a recorder 24 of any suitable type, which is so placed that the total recorded thereon may be seen through a viewing opening 25. The recorder is provided with a trip arm 26, which on being raised, increases the recorded total by one.

Pivotally mounted upon a bracket 27 attached to the front wall 2 is a rocker 28 consisting of a semi-cylindrical portion 29 which extends around the rear side of the stem 17 and is cut away in the form of a V to form a cam 30. To the front of the portion 29 a finger 31 extends into contact with the underside of the trip arm 26. Extending radially from the rear of the stem 17 is a pin 32 which normally lies in the crotch of the V (so that when the stem is turned by means of the operating lever 18, the pin 32 moving along either of the inclined sides of the V causes the rocker 28 to swing, raising the finger 31, which in turn raises the trip arm 26 to increase the total on the recorder 24. Obviously a turn of the stem in either direction will cause an upward movement to be imparted to the trip arm.

In operation the pump 19 is set in motion. This draws liquid from the beverage receptacle, passes it through the port 9 of the valve body 8, thence around the ported passage 15 in the core 14 in opposite directions and out-

wards through the ports 10 and 11 from whence it flows through the pipes 21, the glass cylinders 22 and 23 and back to the receptacle, thus keeping the glass cylinders full and maintaining a circulation of the liquid to prevent sedimentation.

When the lever 18 is turned to the right (as taken on Figure 3) to the limit of its throw, which is approximately 45 degrees from its normal central position, the ported passages 15 and 16 will be so disposed as to establish communication between the ports 9 and 11, that the flow from the pump will be from the pipe 6 through one pipe 21 and the glass cylinder 23 back to the beverage receptacle, and the ported passage 16 will be so disposed as to establish communication between the ports 10 and 12, so that the liquid contained in the glass cylinder 22 may flow outwards through the discharge pipe 13.

If the lever 18 is moved in the opposite direction, the circulation will be maintained through the cylinder 22 and the liquid from the cylinder 23 will be discharged through the pipe 13.

As soon as the lever is restored to normal position, circulation will take place through both cylinders and the trip arm 26 will be restored to normal position, so that the counter will be set for further operation.

What I claim as my invention is:

1. A drink dispensing device comprising a circulating circuit divided into two portions and leading from and to a source of supply, a pump within the circuit for circulating liquid through both portions of the circuit, and a valve communication with both portions by the operation of which the flow through one portion is unimpeded and the liquid contained in the other portion of the circuit may be withdrawn.

2. A drink dispensing device comprising a circulating circuit divided into two portions and leading from and to a source of supply, said circuit including a pump and a valve common to both circuits, said valve being normally set to permit a flow from the pump through both circuit portions back to the source of supply and adapted when operated to leave one circuit portion unimpeded and to open the other portion to discharge remote from the source of supply.

3. A drink dispensing device comprising a circulating circuit divided into two portions and leading from and to a source of supply, said circuit including a pump and a valve common to both portions, a measuring cylinder in communication with each portion, said valve having an inlet port, a pair of flow and return ports and a discharge port, said valve having an operating lever which when in normal position directs the liquid from the pump through the flow and return ports, through the measuring cylinders back to the source of supply and when moved into operating position directs the flow through one flow and return port and a measuring cylinder back to the source of supply and from the other measuring cylinder through the second flow and return port through the discharge port.

4. In a drink dispensing device having a valve and a pair of measuring cylinders through which liquid is normally being circulated back to its source of supply, a valve common to both measuring cylinders adapted when turned into open position to leave the circulation unimpeded through one measuring cylinder and to discharge the contents of the other through said valve, and means for recording the discharge from said cylinder.

Dated at New Westminster, B. C., this 9th day of January, 1932.

SAMUEL TILDEN DARE.