Dec. 3, 1935. J. C. NOTAR ET AL 2,023,373

DISPENSING APPARATUS

Filed June 21, 1933 2 Sheets-Sheet 1

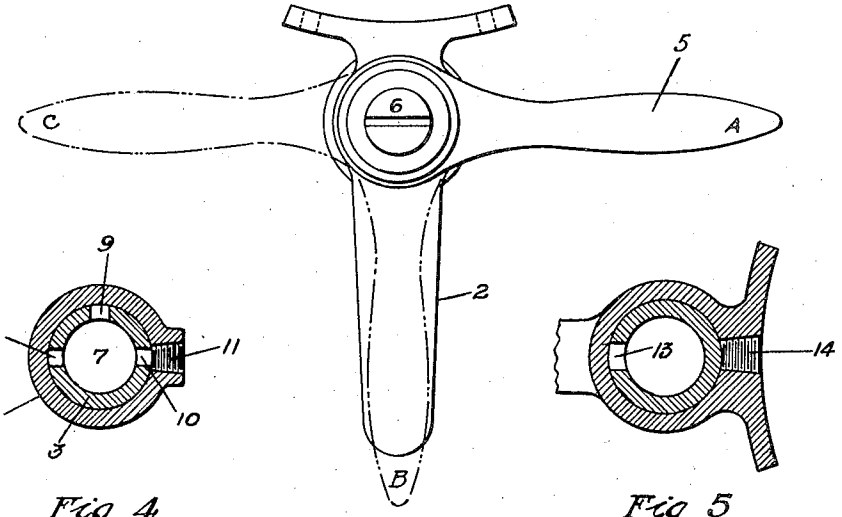


Fig 1

Fig 4

Fig 5

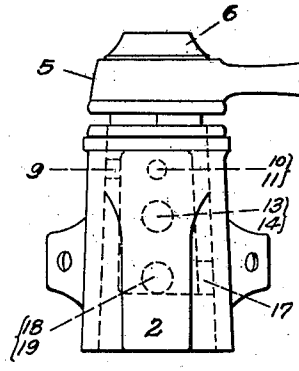


Fig 2

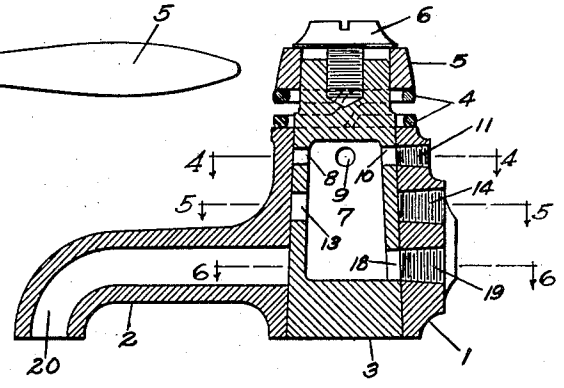


Fig 3

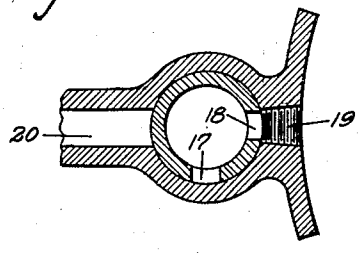


Fig 6

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DISPENSING APPARATUS

Filed June 21, 1933 2 Sheets-Sheet 2

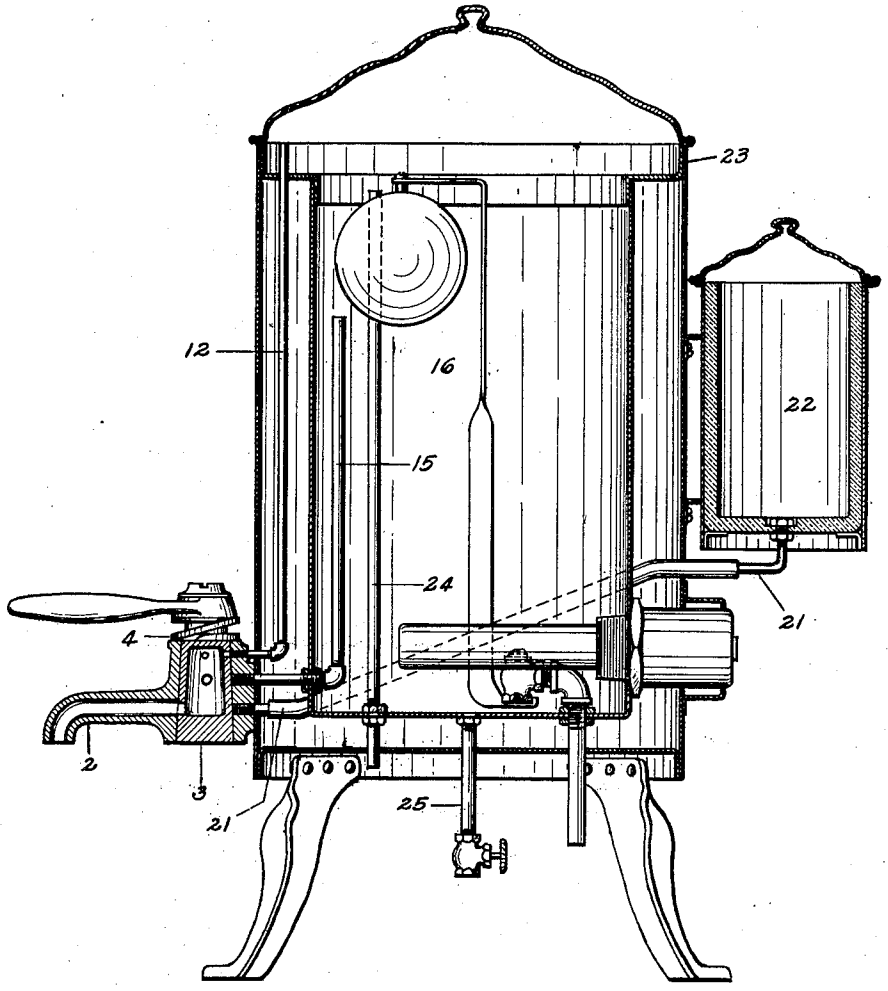


Fig 7

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UNITED STATES PATENT OFFICE

2,023,373

DISPENSING APPARATUS

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Application June 21, 1933, Serial No. 676,864

4 Claims. (Cl. 225—21)

The present invention pertains to liquid dispensing apparatus and more especially to the construction of a valve whereby the dispensing of a plurality of fluids through a single faucet may be most efficiently accomplished. Among the objects of this invention are to provide a device of the character illustrated from which a plurality of fluids may be dispensed efficiently by means of a single faucet; to provide a desirable structure for the making of coffee from what is sold upon the market as "liquid coffee"; to provide an improved valve for the dispensing of a plurality of different fluids; to provide an improved valve for the dispensing of liquid coffee and water for the making of a beverage; to provide an improved valve which is simple in construction and operation and yet is very efficient; to provide a valve of the character indicated which is automatically flushed; to provide a valve of the character indicated which is substantially leak-proof; and such further objects, advantages and capabilities as will hereafter appear and as are inherent in the construction disclosed herein. Our invention further resides in the combination, construction, and arrangement of parts illustrated in the accompanying drawings and, while we have shown therein what is now considered the preferred embodiment of this invention, we desire the same to be understood as illustrative only and not to be interpreted in a limiting sense.

In the drawings annexed hereto and forming a part hereof,

Fig. 1 is a plan view of a faucet embodying our present invention with the faucet handle shown in three different operative positions;

Fig. 2 is an elevation of the faucet shown in Fig. 1 and illustrating the solid line position of that figure;

Fig. 3 is a longitudinal vertical section of the structure shown in Figs. 1 and 2;

Figs. 4, 5 and 6 are transverse sections taken respectively substantially along the planes indicated by the lines 4—4, 5—5, and 6—6, Fig. 3;

Fig. 7 is a vertical substantially central section through an urn having our new faucet applied thereto for the dispensing of a plurality of liquids.

Reference will now be made in greater detail to the annexed drawings for a more complete description of this invention. The faucet body is denoted in general by the numeral 1, the spout by the numeral 2 and the rotary valve member by the numeral 3. This rotary member is slightly frusto-conical in form to fit within a similarly shaped opening in the body 1 so that the parts will always fit tightly and there will be substantially no leakage whatsoever, regardless of how long the apparatus may be used. A spring 4 rests upon the top of the body 1 and surrounds the upper end of the valve member 3. The handle 5 has an eye formed at one end which bears against the upper turn of this spring and is pushed down to compress the spring by means of a screw 6 which has screw-threaded connection with the valve member 3. A hollow 7 is shown within the body 3 and several openings extend from this hollow to the outer convex face of the member. In the plane of the line 4—4 there are shown three openings which may communicate, in different positions of the member 3, with the opening 11. These openings are designated, respectively, by the numerals 8, 9, and 10. Their purpose is to cooperate in various operative positions of the valve member 3 with the vent pipe 12, shown in Fig. 7. In the plane of the line 5—5 there is a single opening 13 which communicates through the opening 14 with the pipe 15 by means of which water is run from the tank 16 through the valve member 3. In the plane of the line 6—6 there are two openings 17 and 18 for communication with the opening 19 in the body 1 and the drain opening 20 of the spout 2. Through the opening 19 and pipe 21 connected therewith, communication is established between the hollow or compartment in valve member 3 and the interior of the container 22.

While this device is more especially designed for the making of coffee from what is known commercially as "liquid coffee", it will be understood that it may have other uses and that we therefore do not wish, by reference to that particular use, to be limited thereto. In the description of the operation of the construction, it will be explained with particular reference to its operation in the making of coffee.

The three positions of the handle 5 and valve member 3 have been designated respectively by the letters A, B and C. The position B may be referred to as the discharging position, while the position A is the coffee filling position and position C is the water running position. Therefore, after a cup of coffee has been made, the handle 5 naturally finds itself in the B position. We will now assume that it is desired to make another cup of coffee. The handle 5 is therefore turned from the B position to the A position and it will be seen from Fig. 3 that the liquid coffee will run from the container 22 through pipe 21 and

opening 18 into the cavity 7 which will be filled. The air in this cavity will not be compressed as it will be forced out through the openings 10 and 11 and pipe 12 so as to be vented in the upper part of the jacket 23 of the water tank 16. When the compartment 7 is filled, the handle 5 is turned to the B position which brings opening 17 into registry with the opening 20 and the liquid coffee is discharged into the cup or other container. When it ceases to run, the handle is turned to the C position which brings opening 18 into registry with the opening 20 and opening 13 into registry with opening 14 with which pipe 15 communicates. Hot water is then drawn from the upper part of the tank through the pipe 15 and valve cavity 7 to flush out any liquid coffee remaining therein. When sufficient water has been drawn to fill the cup, the handle is turned from the C position to the B position which permits the water remaining in the valve to drain out through the opening 17, air taking its place by reason of the vent pipe 12 permitting passage thereof into the upper part of the chamber 7. It will therefore be seen from this that each time a cup of coffee is made the compartment 7 is flushed out with clear hot water so that nothing remains therein to cause a deposit upon the inner surface of the valve member.

Inasmuch as there is nothing of patentable novelty disclosed in the electric heater and the water inlet valve and its control means are disclosed in detail in a prior patent, it is considered that no further reference need be made thereto. A water overflow pipe 24 permits the draining off of excess water from the apparatus in event the water shut-off valve should fail to operate to shut off completely the inflow of water. A drain pipe 25 permits the draining of the water tank, in event such is deemed desirable.

It is of course understood that the specific description of structure set forth herein may be departed from without departing from the spirit of our invention as set forth herein and as claimed in the following claims.

Having now described our invention, we claim:

1. A faucet for the purpose indicated comprising a body member having a transversely extending concavity therein bounded laterally by a wall which is a surface of rotation, said concavity having an outlet and a plurality of inlets extending through the body member, two of said inlets serving to admit different liquids and another serving as a vent, a measuring unit in the concavity shaped externally to the concavity wall, said measuring unit having openings extending from its interior concavity through its lateral wall and adapted to communicate with said outlet and inlets, one of said measuring unit openings serving to admit liquid coffee to the interior of the unit in one position thereof and, in another position thereof, serving to discharge water therefrom, and another of said measuring unit openings serving to discharge liquid coffee from the interior of the measuring unit.

2. A coffee making apparatus comprising a water-heating compartment, a liquid coffee container mounted thereon, a measuring faucet mounted on the water-heating compartment, said faucet having a plurality of inlet openings and a single outlet extending through the wall thereof, a pipe connecting one of the inlet openings with the liquid coffee compartment, a second pipe connecting another inlet opening with the upper part of the water-heating compartment, and a vent pipe connected to a third inlet opening of the faucet and venting above the highest level reached by the water in the water-heating compartment, said faucet having a rotary valve member therein having a measuring compartment in its interior and various openings extending from this compartment through the lateral wall of the valve member to be connected in different combinations with the inlets and the outlet, said rotary member having imperforate ends.

3. A structure as defined by claim 2 in which the rotary valve member has the openings through its wall so arranged that in one operative position the vent pipe and the pipe leading from the liquid coffee container will be connected with the interior of the valve member, in another operative position the vent pipe and the outlet from the faucet will be connected with the interior of the valve member, and in a third position the water inlet and the outlet from the faucet will be connected through the interior of the valve member.

4. A faucet of the character described comprising a hollow body having a rotary, measuring core therein, said body and core each having a plurality of fluid-admission openings leading to the hollow of the core and adapted to be connected in different operative relationships upon rotation of the core, the core having three operative positions such that when it is turned from neutral to one operative position, the core will be filled with liquid coffee; when turned from this position to the initial position, the coffee will be discharged; when turned from coffee-discharging position to the third position, water will run through the faucet; and when returned to coffee-discharging position, any fluid contained will drain out.

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