Sept. 20, 1955 J. C. NOTAR ET AL 2,718,334

COFFEE MEASURING FAUCET

Filed June 21, 1951

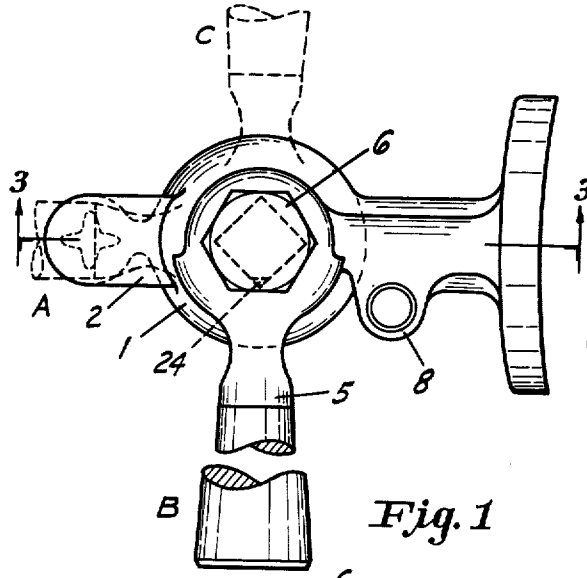


Fig. 1

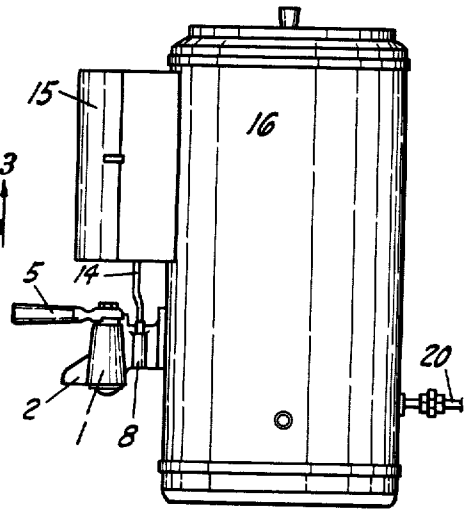


Fig. 2

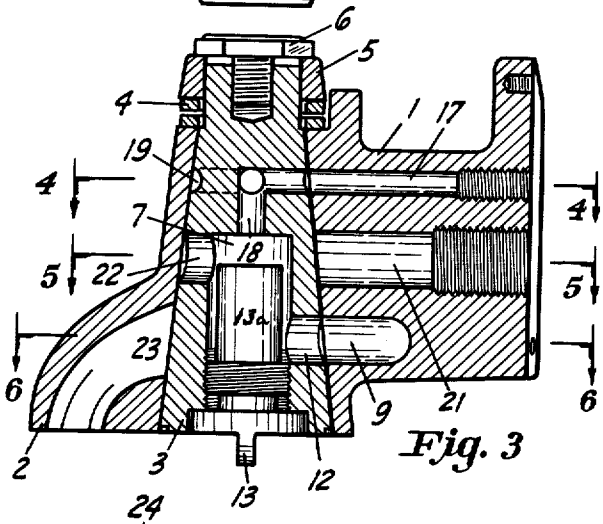


Fig. 3

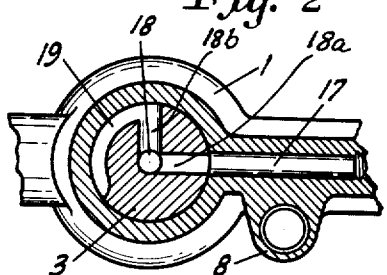


Fig. 4

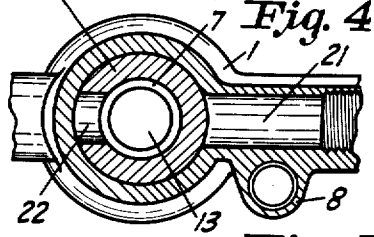


Fig. 5

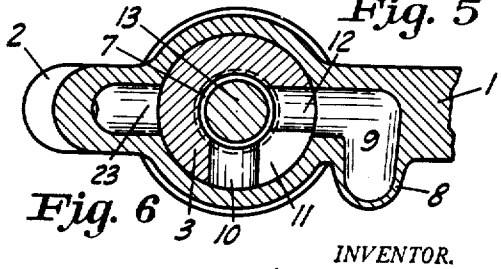


Fig. 6

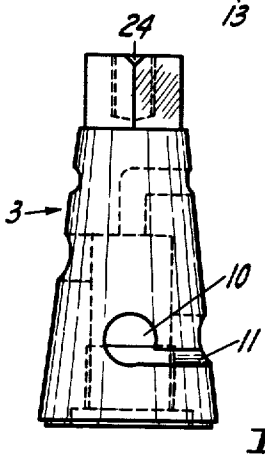


Fig. 7

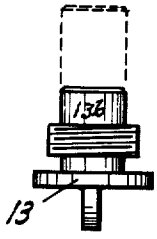


Fig. 8

INVENTOR.
J. C. NOTAR
L. W. WOOLFOLK
BY
Merrell M. Blackburn.
ATTORNEY

United States Patent Office 2,718,334 Patented Sept. 20, 1955

2,718,334

COFFEE MEASURING FAUCET

Joseph C. Notar and Louis W. Woolfolk, Cedar Rapids, Iowa, said Notar assignor to said Woolfolk

Application June 21, 1951, Serial No. 232,762

4 Claims. (Cl. 222—133)

The present invention pertains to a liquid dispensing apparatus and especially to the construction of a faucet whereby the dispensing of a plurality of fluids through one single faucet may be most efficiently accomplished. Among the objects of this invention are the provision of a device of the character indicated from which a plurality of fluids may be dispensed efficiently by means of a single faucet; the provision of a desirable device for the making of coffee from what is sold on the market as "liquid coffee concentrate"; the provision of an improved faucet for the dispensing of a plurality of different fluids; the provision of an improved faucet for the dispensing of liquid coffee concentrate and water for the making of a beverage; the provision of an improved faucet which is simple in construction and operation and yet is very efficient; the provision of a faucet of the character indicated which is automatically flushed; the provision of a faucet of the character indicated which is an improvement upon that shown in Patent No. 2,023,373; 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 regarded as 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 this faucet embodying our present invention, with the faucet handle shown in three different positions;

Fig. 2 is an elevation of a coffeemaker with a faucet applied thereto;

Fig. 3 is a longitudinal section of the faucet along the plane indicated by the line 3—3 in Fig. 1;

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

Fig. 7 is an elevation of the rotary valve member shown in section in Fig. 3; and

Fig. 8 is an elevation of a plug used for varying the amount of liquid coffee concentrate used per cup of completed product.

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 valve 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 together tightly and there will be substantially no leakage whatsoever, regardless of how long this apparatus may be used. A spring 4 rests on the top of the body 1 and surrounds the upper end of the rotary valve member 3. A handle 5 has an eye formed at one end which bears against the upper turn of the

spring and is pushed down to compress the spring by means of a screw 6 which has screw-threaded connection with the rotary valve member 3. A chamber 7 is shown within the rotary valve member 3, and a plurality of openings extend from this chamber to the outer convex face of the rotary valve member.

In Fig. 1 there are shown three positions of the handle, which are indicated, respectively, by the letters "A," "B," and "C." "A" is neutral position in which neither coffee nor water is allowed to flow. The "B" position is that in which coffee is allowed to flow, while "C" furnishes hot water.

Fig. 3 is a section taken with the handle 5 in the "B" position, and coffee goes down through the protuberance indicated by the numeral 8 in Fig. 2 and into the opening 9 in Fig. 3, from which it goes into the chamber 7. When the rotary valve member 3 is turned to the "A" position, the liquid coffee concentrate leaves the chamber 7 through the opening 10 which is connected by a slot 11 with a hole 12 in the lower part of the rotary valve member 3. This slot 11 serves as a connection between the openings 10 and 12. Extensions 13*a* and 13*b* of the plugs 13 are of different sizes for varying the capacity of the chamber 7, and about five or six of these plugs are preferably furnished with each faucet. It will be understood that, by varying the size of the plug, the coffee contents of the chamber 7 may be varied as desired. The supply of liquid coffee concentrate is sent through a tube 14 from a bottle in a container 15 supported on the side of a coffeemaker 16. This goes from the opening 9 through the opening 12 and, when the rotary valve member has been turned to the "A" position, it goes through opening 10 into the discharge opening 23. A vent opening 17 is connected with a vent pipe inside of the coffeemaker, as was true with the vent pipe 12 in the above identified patent, and the vent opening 17 communicates with a vertical passage or vent 18 in the valve member 3 through a radial passage 18*a*, when the parts are arranged as illustrated in Fig. 4, which is position "B." It is obvious that, when the rotary valve member 3 is turned from the "B" position to the "A" position, there is connection between the vent pipe and the vent 18, and, when the rotary valve member is turned from the "A" position to the "C" position, there is connection, due to the groove 19 in the rotary valve member, since the groove 19 is connected with the vent opening 17 during turning from the "A" position to the "C" position.

In other words, by virtue of the passage 18*a* and the groove 19, the upper end of the chamber 7 is at all times connected with the vent opening 17 of the coffee maker 16 and flow to and from the chamber 7 is controlled entirely by the valve member 3. As best shown in Fig. 2, the groove 19 communicates with the upper end of the vertical passage 18 by a radial passage 18*b*.

Cold water is let into the coffeemaker by means of the pipe 20, and hot water is let out through the outlet 21 when the rotary valve member 3 is turned to the "C" position, at which time the outlet 22 is in alignment with the outlet 21, and the opening 12 connects the chamber 7 with the outlet 23 of the faucet. A part of the square end of the rotary valve member is filed off, as shown at 24, to indicate the front of the rotary valve member. There is some space left between the head of the screw 6 and the top of the rotary valve member which makes it possible to screw the screw 6 down somewhat and draw the rotary valve member up to make it fit tighter. Then the head of the screw 6 presses on the top of the handle 5.

It is of course understood that the specific description of structure set forth above may be departed from without departing from the spirit of this invention as disclosed in this specification and as defined by the appended claims.

Having now described our invention, we claim:

1. In a measuring faucet, a valve body having a substantially vertical opening which is frusto-conical and larger at the lower end than at the upper, a rotary valve member therein, said valve member being substantially frusto-conical and adapted to fit snugly in said opening, said valve member having an approximately cylindrical chamber positioned vertically in said valve member, the lower end portion of said cylindrical chamber being enlarged diametrically and the lower wall of said chamber, immediately above said enlarged portion, being screw-threaded, a capacity-varying plug comprising a part having a substantially cylindrical chamber-entering portion, a screw-threaded portion larger in diameter than said chamber-entering portion, a head portion larger diametrically than said screw-threaded portion, said head portion being adapted to seat in said enlarged portion of the valve chamber, and valve ports in said valve member above the screw-threaded wall portion of said valve member, said plug being one of a series of plugs having head and screw-threaded portions of identical dimensions and chamber-entering portions of different volumetric dimensions.

2. A faucet for a coffee urn comprising a body and a unit in which there is a measuring chamber, the body having three openings, one serving as an inlet for coffee extract, one serving as an inlet for water, and the third serving as both inlet and outlet for air, the measuring chamber having first, second, and third openings, the first mentioned openings being connectible to the openings in the measuring chamber, the first inlet for the chamber extending through one quadrant of the measuring unit, the second opening straight into the chamber at the top thereof, and the third opening downwardly into the chamber, the unit also having a pair of openings at a right angle and both communicating with the upper end of said third opening and with each other and said measuring unit having a groove extending from the radially outer end of one of said pair of openings around the exterior surface of the unit slightly in excess of one quadrant and communicating with the third opening of said faucet body in order to furnish a vent from the compartment through the full opening turn of the faucet.

3. A measuring faucet for a coffee urn comprising a frusto-conical member having a chamber extending into the bottom of said member for the reception of coffee extract, said member having an inlet near the bottom thereof, said member having an inlet into the chamber on the opposite side thereof spaced upwardly from the first inlet, said member having a third inlet farther up on the member, said last mentioned inlet extending to the midportion of the member where there is a longitudinal opening extending upwardly from the top of the chamber, the member having a second opening extending radially outwardly from the upper end of the longitudinal opening to the exterior of the member, a transverse groove extending slightly more than a quarter way around the member and serving as a continuation of said second opening from the chamber, said chamber having an outlet and an upper vent, and means placing said outlet in communication with said bottom inlet during that part of the movement of said member during which the transverse groove is in communication with said vent, the frusto-conical member, when turned to discharge coffee, being entirely washed out by the hot water running through the valve.

4. A faucet for a coffee urn comprising a body and a rotatable unit in which there is a measuring chamber, the body having three openings, one serving as an inlet for coffee extract, one serving as an inlet for water, and third serving as both inlet and outlet for air, the rotatable measuring chamber having first, second, and third openings connectible with the openings in the faucet body, the first opening in the rotatable measuring chamber extending through one quadrant of the latter, the second measuring chamber opening being adapted to communicate with the water inlet of the faucet body in one position of the measuring chamber, and a third chamber opening including a circumferentially extending groove and communicating with the third faucet body opening, said groove having a length and position such that communication between the third opening of the rotatable chamber and the third opening of the faucet body is maintained during the time that communication exists between the first opening of the faucet body and the first opening of the measuring chamber.

References Cited in the file of this patent

UNITED STATES PATENTS

880,256	Vocke	Feb. 25, 1908
1,496,287	Ayars	June 3, 1924
1,693,719	Lyons	Dec. 4, 1928
1,834,628	Marshall et al.	Dec. 1, 1931
1,977,610	Brody	Oct. 23, 1934
2,018,389	Wagner	Oct. 22, 1935
2,023,373	Notar et al.	Dec. 3, 1935
2,306,309	Hall	Dec. 22, 1942