June 17, 1930. J. KANTOR ET AL 1,763,971

DISPENSING DEVICE

Filed Oct. 21, 1927

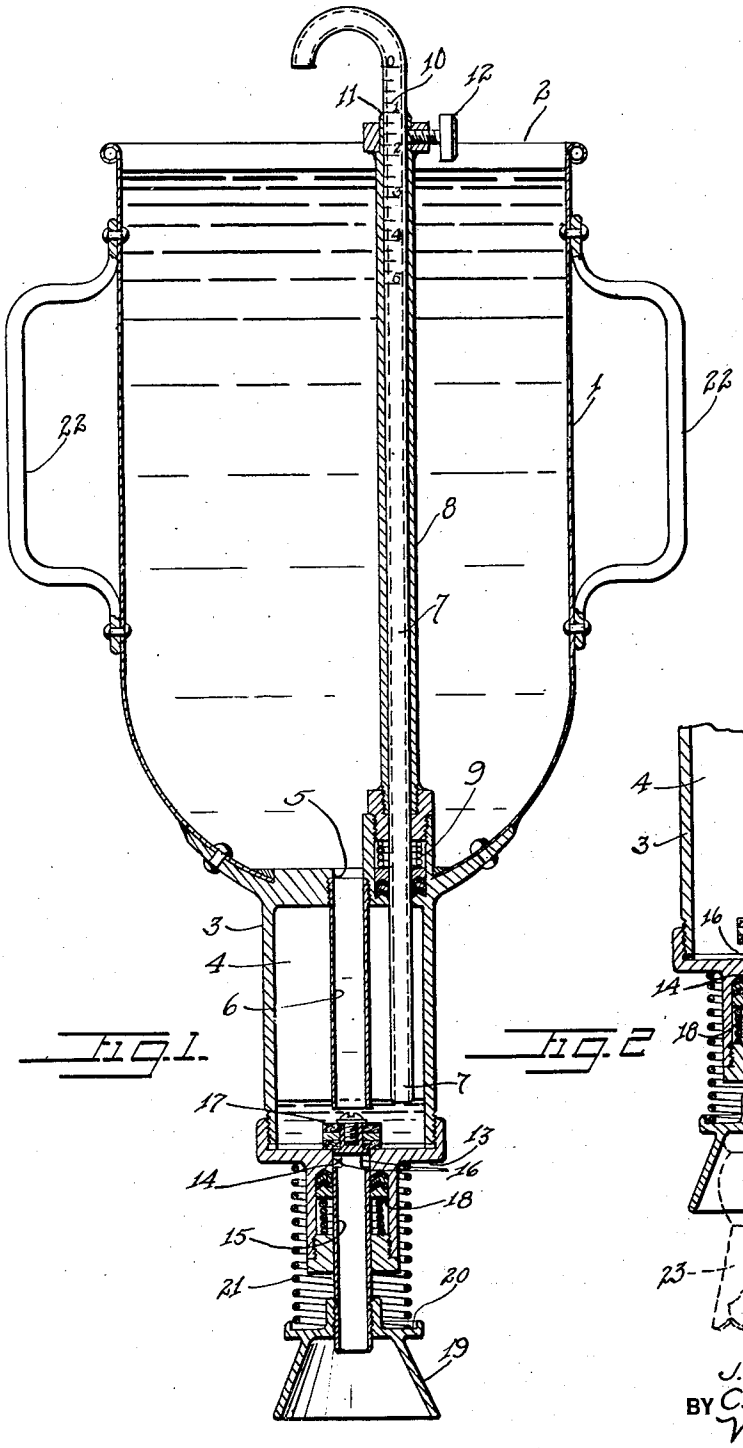


FIG. 1.

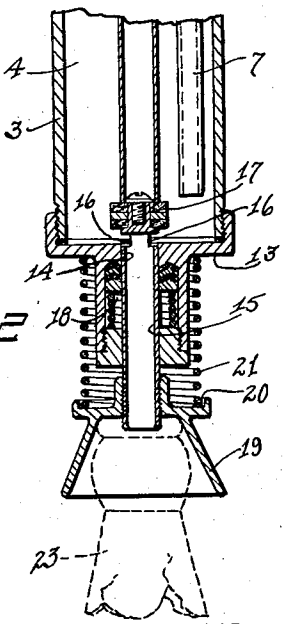


FIG. 2.

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UNITED STATES PATENT OFFICE

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DISPENSING DEVICE

Application filed October 21, 1927. Serial No. 227,717.

Our invention relates to improvements in dispensing devices, and it consists in the combinations, constructions, and arrangements herein described and claimed.

An object of our invention is to provide a dispensing device which is adapted to dispose in bottles predetermined amounts of liquid.

In machines for disposing quantities of syrup within bottles, the measuring means consists of a cup and there is always about a gallon and a half of the syrup retained in the machine, this syrup being level with the upper edge of the measuring cup. A further object of our invention is to provide a device of the type described which is adapted to receive this syrup which has been retained in the filling machine and dispose the same in bottles.

A further object of our invention is to provide a device of the type described which has novel means for varying the amount disposed in the bottles.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly pointed out in the appended claims.

Our invention is illustrated in the accompanying drawings, forming part of this application, in which

Figure 1 is a longitudinal sectional view of the device, and

Figure 2 is a sectional view of a portion of the device shown applied to a bottle.

In carrying out our invention, we provide a receptacle 1 having an opened end 2 and the other end tapering inwardly and rigidly secured to a housing 3. The housing 3 is provided with a measuring chamber 4 and a central opening 5. A liquid outlet tube 6 is disposed in the chamber 4 and secured in the opening 5.

An air tube 7 is slidably disposed in a sleeve 8 and through a packing gland 9. The air tube 7 is provided with indicating lines 10 thereon which are arranged to be moved into registration with the upper edge 11 of the sleeve 8 for a purpose hereinafter described. A lock screw 12 is carried by the sleeve 8 and arranged to hold the air tube 7 in any adjusted position.

A valve retainer 13 is secured to the housing 3 and provided with a central opening 14 for receiving a valve tube 15. The valve tube 15 is provided with openings 16 arranged to be moved into and out of registration with the measuring chamber 4. The valve tube is provided with a seat 17 which is arranged to be moved into and out of registration with the outlet tube 6 as the openings 16 are moved into and out of registration with the measuring chamber 4. The valve tube 15 is slidably disposed in a packing gland 18.

A bell 19 is secured to the valve tube 15 and is provided with an integral flange 20. A compression spring 21 is disposed concentric with the valve retainer 13 and engages with the valve retainer and the flange 20 for normally holding the bell and the valve tube outwardly. Handles 22 are rigidly secured to the receptacle 1.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. The air tube 7 may be adjusted to allow any desired amount of liquid to pass from the receptacle. Let us assume that the operator wishes to deposit one ounce of the liquid in the bottle indicated at 23. The air tube, as shown in Figure 1, is set so that the marking for one ounce is in registration with the upper edge of the sleeve 8, as indicated at 11. The tube may be locked in this position by the locking screw 12.

By placing the liquid in the receptacle 1, the operator may grasp the handles 22 and place the valve tube 15 in registration with the neck of the bottle 23. So far the valve tube has remained in its lowermost position and a portion of the liquid is allowed to pass through the outlet tube 6 into the measuring chamber 4 until the liquid has reached the lower end of the air tube 7. In this manner, the air in the measuring chamber is prevented from passing outwardly through the air tube and an air cushion is formed in the measuring chamber, thus cutting off the further flow of the liquid into the measuring chamber. Therefore, the desired amount of

liquid has passed into the measuring chamber. By forcing downwardly upon the handles 22, the operator causes the entire device, with the exception of the bell 19 and the valve tube and seat, to move downwardly. This downward movement causes the outlet tube 6 to move into registration with the seat 17, thus cutting off the flow of the liquid into the measuring chamber. This downward movement also brings the measuring chamber into communication with the openings 16 of the valve tube 15, thus allowing the liquid in the measuring chamber to pass through the valve tube 15 into the bottle.

When the measured amount of liquid has passed into the bottle, the device may be raised allowing the valve tube 15 and the seat 17 to be moved to their normal positions by the force of the spring 21 against the bell 19. The liquid is again allowed to pass from the receptacle 1 through the outlet tube 6 and into the measuring chamber until it has reached the lower end of the air tube 7. This operation may be continued until the entire amount of the liquid has been deposited in the bottles. To change the amount of liquid, the tube may be raised or lowered within the sleeve for cutting off the passage of the liquid into the measuring chamber at predetermined levels.

As stated heretofore, the main object of our invention is to provide a device for receiving the remaining liquid of a syruping machine and disposing this liquid in measured quantities in bottles. However, it is obvious that the device may be used for bottling sample liquids which are placed in containers in small quantities.

We claim:

1. A device of the type described comprising a housing, a receptacle mounted upon said housing, said housing being provided with an inlet and an outlet opening, a tubular member disposed in said housing and in communication with said inlet opening for providing communication between said receptacle and said housing, a sleeve mounted upon said housing and extending through said receptacle, and means disposed in said sleeve and extending into said housing for varying the flow of a fluid into said housing.

2. A device of the type described comprising a housing, a receptacle mounted upon said housing, said housing being provided with an inlet and an outlet opening, a tubular member disposed in said housing and in communication with said inlet opening for providing communication between said receptacle and said housing, a sleeve mounted upon said housing and extending through said receptacle, means disposed in said sleeve and extending into said housing for varying the flow of a fluid into said housing, said means comprising an air tube, and means carried by said sleeve for holding said tube in adjusted position.

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