Feb. 12, 1924. 1,483,545

T. EVERS

VALVE

Filed June 2, 1922

Fig. 1.

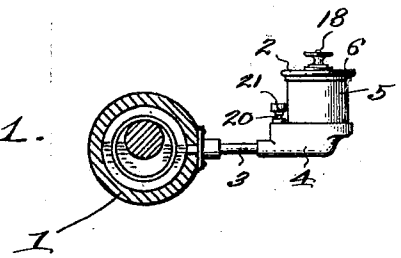


Fig. 3.

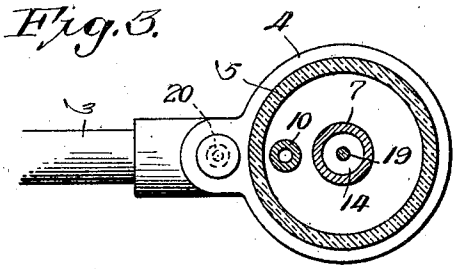


Fig. 5.

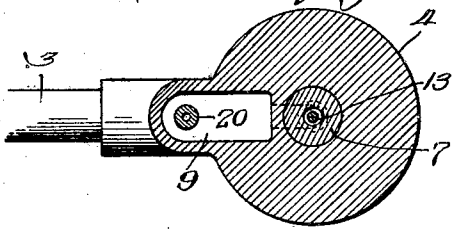


Fig. 2.

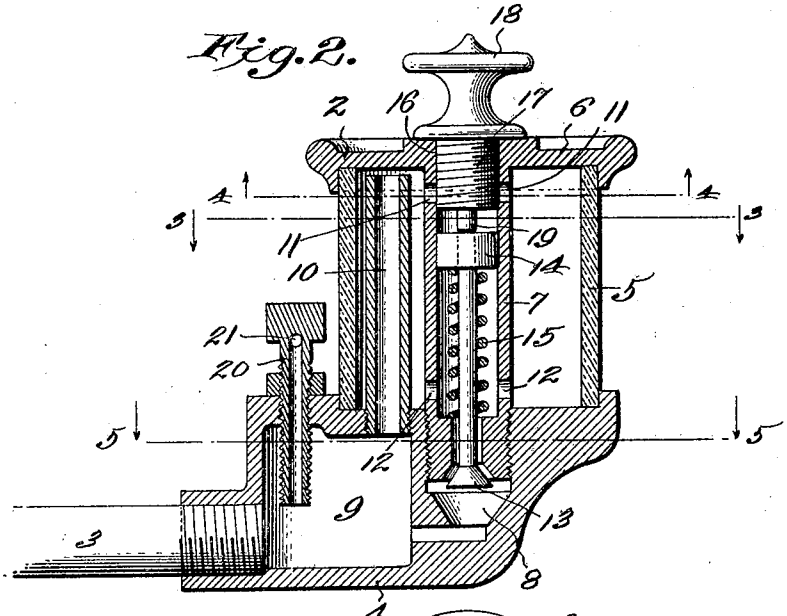
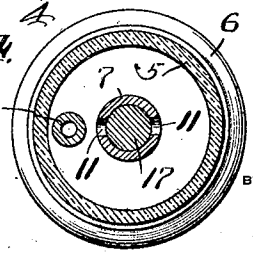


Fig. 4.



T. Evers

INVENTOR

BY Victor J. Evans

ATTORNEY

W. Mack Duvall

Joseph A. Nolan

WITNESSES

Patented Feb. 12, 1924. 1,483,545

UNITED STATES PATENT OFFICE.

THEODORE EVERS, OF ROCK ISLAND, ILLINOIS, ASSIGNOR OF ONE-HALF TO RICHARD S. SILVIS, OF ROCK ISLAND, ILLINOIS.

VALVE.

Application filed June 2, 1922. Serial No. 565,441.

To all whom it may concern:

Be it known that I, THEODORE EVERS, a citizen of the United States, residing at Rock Island, in the county of Rock Island and State of Illinois, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates to automatic fluid filling devices, the general object of the invention being to maintain the level of fluid at a constant level in a reservoir or other container.

Another object of the invention is to provide means for adjusting this level at any desired point.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing the invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a side elevation showing the invention applied to a container.

Figure 2 is an enlarged vertical sectional view taken through the invention.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is a sectional view taken on line 4—4 of Figure 2.

Figure 5 is a sectional view taken on line 5—5 of Figure 2.

In these views 1 indicates a reservoir which is to contain the liquid and may be in the nature of a bearing housing for ring bearings and the like. The reference numeral 2 indicates a cup which is connected with the reservoir by the pipe 3. This cup comprises a lower part 4 which is provided with a seat to receive the glass cylinder 5 and the numeral 6 indicates the cover for the cylinder 5. A tube 7 has its lower end screw threaded in the upper part of a chamber 8 formed in the part 4, this chamber being in communication with a large chamber 9 to which the pipe 3 is connected. A tube 10, carried by part 4, has its lower end in communication with the top of chamber 9 and its upper end extends within a short distance of the cover 6 of the cylinder 5 so that this tube connects the interior of the cylinder 5 with the chamber 9. The upper end of tube 7 is formed with or suitably connected to the cover 6 so that when the tube is screwed in the chamber 8 the parts will be held in assembled position. The upper part of the tube is provided with holes 11 and the lower part with holes 12 which connect the interior of the tube with the cylinder 5. A valve seat is formed at the bottom of the tube which is engaged by a valve 13, the stem of which is secured to a piston 14 which slides in the tube. A spring 15 in the tube tends to hold the valve upon its seat by exerting pressure against the piston and against a shoulder formed in the tube. The cover 6 is provided with a screw threaded filling opening 16 which connects with the upper end of the tube so that when liquid is poured through said opening it will flow through the holes 11 into the cylinder, this liquid being prevented from passing through the tube by the piston. This filling opening is closed by a screw threaded plug 17 which is provided with a handle 18 and which has a reduced lower end 19 for engaging the piston, the parts being so arranged that when the plug is screwed home its lower end engaging the piston will force the same downwardly and thus push the valve off its seat. This will permit the liquid in the cylinder to flow through the holes 12 in the lower part of the tube into chamber 8 and thus into chamber 9, through pipe 3 into the reservoir. When the cup is being filled the valve is closed so that the liquid remains in the cup and cannot flow into the reservoir unless the valve is pushed off its seat.

I provide an adjustable air vent for preventing a vacuum taking place in the cup, this vent consisting of a screw threaded tube 20 which passes through a screw threaded opening in the top of chamber 9 with its lower end extending into said chamber. The head of the tube is provided with a vent 21 which leads to the atmosphere. Air will flow into the chamber 9 and through the tube 10 into the cylinder 5 above the liquid therein so that said liquid can flow freely from the cylinder into the chamber 9 and thus pass to the reservoir. However, as soon as the liquid in the reservoir reaches a level where it

will back up in the chamber 9 and cover the end of the tube 20 the air will be prevented from entering said chamber 9 thus the flow of liquid from the cup to the reservoir will stop. As soon as the level of liquid drops below the end of the tube 20 the flow will commence again and thus the level of liquid in the reservoir will be maintained at a certain height. By turning the tube 20 to move the same longitudinally this liquid level can be adjusted as will be understood.

It is thought from the foregoing description that the advantages and novel features of the invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the combination and arrangement of the several parts, provided that such changes fall within the scope of the appended claim.

What I claim is:—

The combination with a liquid reservoir, a supply device connected therewith, and comprising a chambered lower part, a cylinder seated on the lower part, a cover for the cylinder and a tubular part connected with the cover and detachably secured with the lower part, said tubular part being in communication with the chamber in the lower part, a valve controlling such communication, a spring for normally holding the valve upon its seat, said cover part having a filling opening, a closing member for the opening having a part for moving the valve off its seat when the closing member is in closing position and an adjustable air vent extending into the chamber.

In testimony whereof I affix my signature.

THEODORE EVERS.