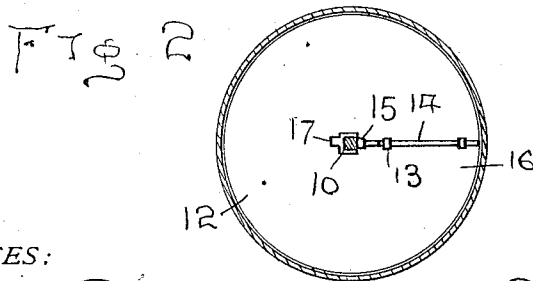
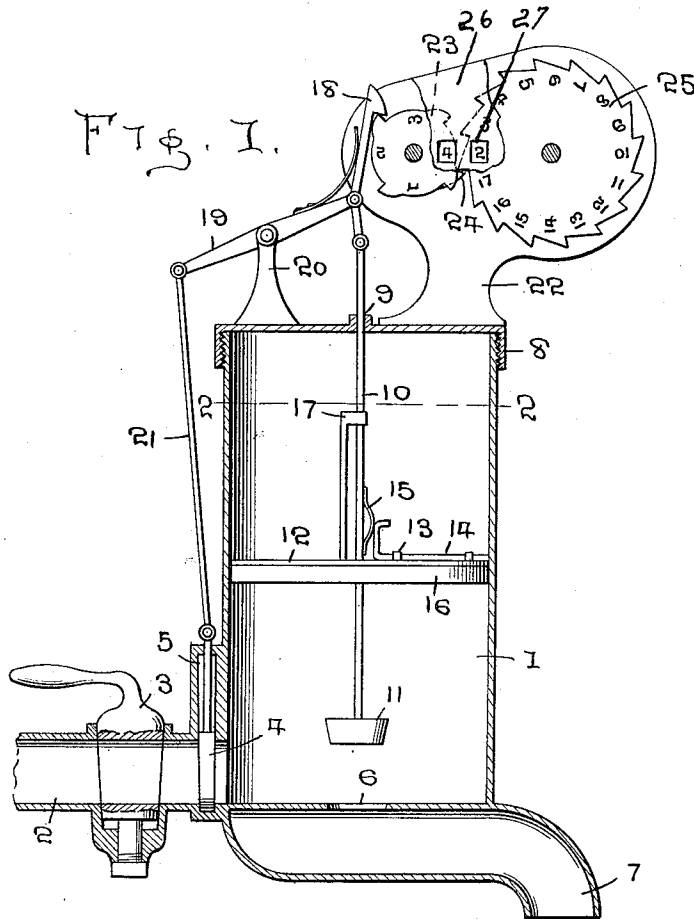


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UNITED STATES PATENT OFFICE.

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FAUCET.

1,013,142.

Specification of Letters Patent.

Patented Jan. 2, 1912.

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To all whom it may concern:

Be it known that I, OTTO ENGBERG, a citizen of the United States, residing at Detroit, in the county of Becker and State of Minnesota, have invented certain new and useful Improvements in Faucets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in measuring devices, and more particularly to automatic measuring faucets.

The object of my invention is to provide a faucet which will automatically measure the quantity of liquid dispensed and which will indicate the total quantity of the liquid remaining in the tank.

In the accompanying drawing, I have shown the preferred form which my invention may take.

In said drawing, Figure 1 is a vertical central sectional view through the faucet, and, Fig. 2 is a horizontal sectional view taken on the line 2—2 of Fig. 1, showing only the barrel of the faucet and a part of the operating mechanism therein contained.

In said drawing, 1 indicates the barrel of the measuring device which may be of any desired size. The lower end of the barrel is provided with an inlet tube 2, which may be secured in the liquid-containing tank from which the liquid is to be dispensed. The tube 2 is provided with a hand cut-off 3. Between the cut-off 3 and the barrel 1, I provide a gate cut-off 4, which is adapted to be moved in a gateway 5, as will be hereinafter more clearly set forth. The bottom of the barrel 1 is provided with an opening 6 through which the liquid is automatically permitted to flow after being measured, as will be hereinafter more clearly set forth. The bottom of the barrel 1 is provided with an outlet spout 7. The upper end of the barrel is adapted to be normally closed by means of a cap member 8, which is secured in place in any desired manner, as by the barrel and the cap being screw-threaded. The cap 8 is provided with a centrally disposed aperture 9 through which extends a rod 10. The lower end of the rod 10 is provided with a valve 11 for a purpose to be hereinafter more clearly set forth. Snugly fit-

ting within the barrel 1, is a plunger or weight 12, which surrounds the rod 10, said rod being movable longitudinally through said plunger. The plunger 12 is provided upon its upper surface with straps 13 through which extends a locking member 14. Secured to the rod 10 is a spring 15 which, when the plunger is forced upward, forces the member 14 against the barrel 1 and loosely connects the rod and plunger together in the position shown in the drawing. A float 16 is also loose on the rod 10 and rises and falls with the rise and fall of the liquid in the barrel 1.

The parts of the device are so designed that the force of the liquid entering the barrel 1 is sufficient to move the float and plunger upwardly, even after the member 14 is forced against the barrel 1 until the liquid is prevented from entering said barrel by the cut-off 4. The float 16 is provided with an upwardly extending member 17, which projects through an opening 12^a in the weight 12 and has an upper end which partially surrounds the rod 10 for a purpose hereinafter more clearly set forth. The upper end of the rod 10 is pivotally connected to the latch member 18, which in turn is connected to one end of a beam 19. The beam 19 is fulcrumed in an upwardly extending stand 20 secured to the cap 8. The other end of the beam 19 is pivotally connected to a rod 21 which in turn is pivotally connected to the gate 4. Also secured to the cap 8, is a supporting device 22, which forms a supporting frame for an indicating device adapted to indicate the quantity of liquid dispensed. The indicating device is composed of a ratchet wheel 23, pivotally secured to the support 22 and which is adapted to indicate the number of unit volumes of liquid dispensed. The ratchet device 23 has a lug 24 thereon arranged out of alignment with the ratchet teeth of said device and adapted to periodically engage and move an additional indicating device 25. As shown, the indicating device 25 is arranged to be set to indicate the number of large volumes of liquid held in the tank or container. In practice, I prefer to have the barrel 1 of such a size that it will measure quarts, and therefore the indicating device 23 is arranged with four ratchet teeth. Thus each rotation of the indicating

device 23 shows that four quarts, or one gallon of liquid has been removed from the container. One face of each of the indicating devices 23 and 25 is provided with consecutively arranged numerals corresponding in number to the number of ratchet teeth thereon.

It will be understood that a suitable cover 26 may be provided for the indicating devices, said cover preferably having two apertures 27 therein so that one numeral on each indicating device will appear in view.

When the container is filled, say with seventeen gallons, the indicating device 25 is rotated until the numeral 17 appears in view. When one gallon of liquid has been drawn off, the lug 24 on the indicating device 23, rotates the device 25 until the numeral 16 thereon appears in view, thus indicating that sixteen gallons of liquid still remain in the container.

In the drawing, the parts of the device are shown in the positions which they occupy at the moment the liquid starts to flow from the barrel 1. When the measuring device is not in use, the plunger 12 and the float 16 assume positions at the lower end of the barrel 1, the valve 11 closes the aperture 6, and the gate 4 is open.

When it is desired to dispense the liquid, the hand cut-off 3 is opened, thus permitting the liquid to flow from the container into the barrel 1. The liquid will continue to flow into the barrel 1 forcing the float 16 and the plunger 12 upwardly until the upwardly extending end of the member 14 engages the rod 10 along with the plunger 12, and also in loosely connecting the plunger 12 to the rod. The raising of the rod 10 results in raising the valve 11 from the aperture 6, and also in lowering the gate 4 to stop the flow of liquid from its container. The liquid in the barrel 1 is thus free to flow out through the spout 7. The float 16 rests upon the surface of the liquid and will lower in the barrel as the height of the liquid lowers therein. The plunger is maintained in its upward position, however, until nearly all the liquid has run out of the barrel. When practically all the liquid has run out, the end of the upwardly extending member 17 carried by the float 16 engages the upper surface of the plunger 12, and the weight of the float is sufficient to disengage the member 14 carried by said plunger from the spring 15. The plunger will then fall by gravity and rest upon the float and the two will rest upon the valve 11. As the liquid in the barrel all runs out, the weight of the plunger 12 and the float will move the valve into the aperture 6, at the same time drawing the rod 10 downwardly to operate the latch and indicating device 23, and to open the gate 4. The operation

above described will now be repeated, and continue to be repeated until the desired quantity of liquid has been drawn off, when the cut-off 3 should be closed.

It will be seen from the foregoing description, that I have provided an indicating faucet of very simple construction which will reliably measure the quantity of liquid dispensed.

What I claim is:

1. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float in said barrel adapted to be raised by the liquid when the valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened, and means to release said plunger.

2. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float in said barrel adapted to be raised by the liquid when the inlet valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened, and means carried by said float to release said plunger when the liquid flows out of said barrel whereby the outlet valve is closed, and the inlet valve opened.

3. A dispensing faucet comprising a measuring barrel, an inlet and an outlet located at the bottom thereof, valves to close the inlet and the outlet, means connecting said inlet and outlet valves whereby one of said valves is opened when the other is closed, a plunger and a float in said barrel adapted to be raised by the liquid when the inlet valve is open, means adapted to connect said plunger to said first mentioned means when said plunger reaches its upper position, whereby said inlet valve is closed and said outlet valve is opened and said plunger is held in its upper position, and means carried by said float to release said plunger when the liquid flows out of said barrel whereby the outlet valve is closed, and the inlet valve opened, means to indicate the amount of liquid dispensed, and means carried by said inlet and outlet valve-operating means for operating said indicating means.

4. A dispensing faucet comprising a measuring barrel, an inlet and an outlet therefor, valves to close the inlet and the

outlet, means connecting said inlet and outlet valves, a plunger and a float in said barrel, means adapted to hold said plunger in its uppermost position, and means controlled by the movement of said float when it approaches its lower limit of travel to release said plunger.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTTO ENGBERG.

Witnesses:

JEFF. H. IRISH,

JOHN P. ENGBERG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."