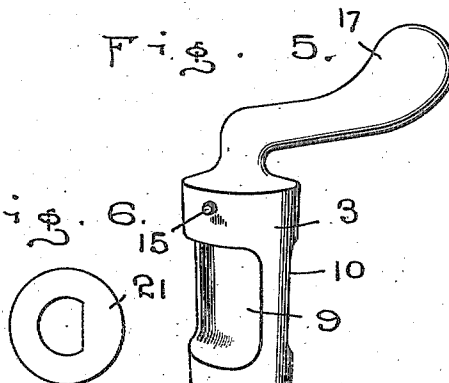
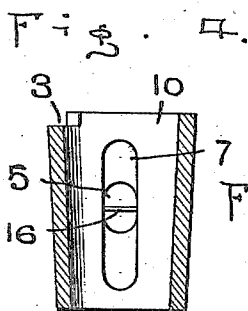
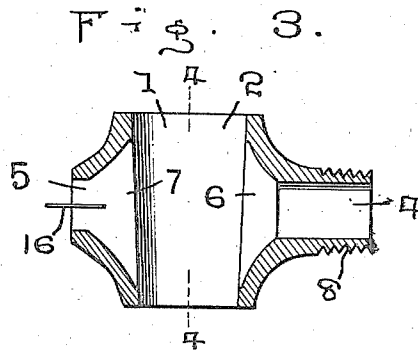
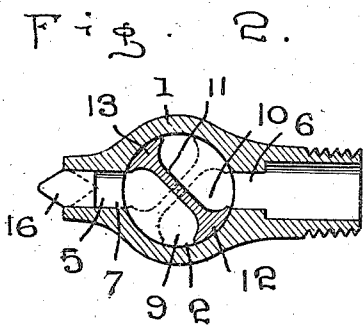
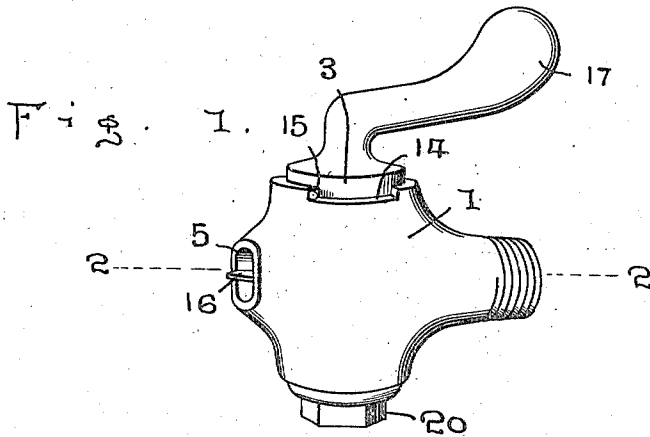


F. A. OSINCUP.
DISPENSING AND MEASURING VALVE.
APPLICATION FILED JULY 27, 1909.

951,511.

Patented Mar. 8, 1910.



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRANK A. OSINCUP, OF WAVERLY, IOWA.

DISPENSING AND MEASURING VALVE.

951,511.

Specification of Letters Patent.

Patented Mar. 8, 1910.

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To all whom it may concern:

Be it known that I, FRANK A. OSINCUP, a citizen of the United States, residing at Waverly, in the county of Bremer and State of Iowa, have invented certain new and useful Improvements in Dispensing and Measuring Valves; 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 new and useful improvements in dispensing or measuring valves and more particularly to that class adapted to be used for dispensing liquid soaps or similar articles and my object is to provide means for discharging a pre-determined quantity of the liquid at each operation of the valve stem.

A further object is to provide pockets or recesses on diametrically opposite sides of the valve stem and so arrange said pockets whereby the pockets will be brought into position to be filled or emptied by turning the stem a quadrant of a circle.

A further object is to provide suitable filling and discharging openings for the casing of the valve and a further object is to provide means for preventing bubbles forming in the discharge opening.

Other objects and advantages will be hereinafter referred to and more particularly pointed out in the claims.

In the accompanying drawings forming part of this application, Figure 1 is a perspective view of the valve complete. Fig. 2 is a transverse sectional view thereof as seen on line 2—2, Fig. 1. Fig. 3 is a vertical central sectional view through the valve casing. Fig. 4 is a sectional view through the casing as seen on line 4—4, Fig. 3. Fig. 5 is a perspective view of the stem of the valve removed, and, Fig. 6 is a plan view of the washer used in connection with said stem.

Referring to the drawings in which similar reference numerals designate corresponding parts throughout the several views, 1 indicates the casing of my improved valve, through the center of which extends a bore or socket 2, for the reception of the valve stem 3, said bore and stem being slightly tapered from end to end as is the usual practice.

Extending from diametrically opposite sides of the casing 1 and adjacent its longi-

tudinal center is an inlet and outlet port 4 and 5, respectively, the inner ends 6 and 7 of said ports being preferably oblong or flared upwardly or downwardly for a purpose to be hereinafter set forth. The portion of the casing through which the inlet port 4 is extended, is provided with threads 8, whereby the valve may be readily attached to any suitable form of pipe or other object.

The stem 3 is provided on diametrically opposite sides with pockets or recesses 9 and 10, said pockets being separated by a partition 11, which partition is substantially fan shaped at its edges to form cut offs 12 and 13, which cut offs are adapted to cooperate, respectively, with the inlet and outlet portions 4 and 5, the width of said cut offs being slightly greater than the width of the inner ends 6 and 7 of the inlet and outlet ports, respectively.

The length of the pockets 9 and 10 are substantially equal in length to the inner ends 6 and 7 of the inlet and outlet ports, whereby when the pockets are brought into registration with said ports, the discharge and intake of the liquid passing through the valve will be quickly accomplished.

The extent of the pockets 9 and 10 is such that when the cut off valve is resting at one side of the inlet 4 a supply of the liquid will be deposited in the pocket 10, the cut off 13 will be positioned at the opposite side of the outlet port 5 and in position to discharge the contents of the pocket 9 as shown by full lines in Fig. 2 and by rotating the stem the quadrant of a circle, the cut offs 12 and 13 will be moved to opposite sides of their respective ports as shown by dotted lines in Fig. 2, thus bringing the pocket 9 to be filled through the inlet port and pocket 10 in position to discharge its contents through the outlet port 5, the movement of the stem being limited to the proper extent by providing a channel 14 in the upper end of the casing 1, in which travels a pin 15 carried by the stem 3, the longitudinal extent of said channel being such as to permit a quarter rotation of the stem. In this manner, a predetermined quantity of the liquid will be discharged with each operation of the valve stem and to guard against a greater amount of the liquid being discharged as the stem is being rotated, the cut offs will completely close their respec-

tive ports while said cut offs are being moved from side to side of their respective ports.

It has been found by experience that the dispensing valves for liquid soap will become inoperative by bubbles forming across the outlet port and it has been the practice heretofore to provide air vents to overcome this objectionable feature, but said air vents were found to be defective. To this end, therefore, I provide a plate 16, preferably of thin metal and positioned in the outer end of the outlet port 5, a portion of said plate extending into the outlet port and a portion thereof beyond the outlet port, the inner end of the plate preferably extending the full width of the port, while the outer end thereof is preferably tapered, although if desired, the inner end thereof may be likewise tapered as shown by dotted lines in Fig. 2, the formation of the plate and positioning the same substantially at the axial center of the outlet port and projecting it beyond or below the lower end of the outlet port will sever or destroy the bubbles as they are formed in the liquid running downwardly.

The upper end of the stem 3 terminates in a lever or handle 17, whereby the stem may be readily rotated when desired, while the lower end terminates in a shank 18, a portion of which is provided with threads 19 to receive a nut 20, while that portion of the shank adjacent the stem forms a bearing surface for a washer 21 and to cause the washer to rotate with the stem and likewise the nut to rotate with the washer and thus preventing loosening of the nut by turning the stem, the tank and washer are provided with cooperating flattened portions as shown in Figs. 5 and 6.

In operation, the valve is attached to any suitable form of shank or receptacle for holding the liquid, more especially, liquid soap, through the medium of pipes (not shown) or direct to the receptacle, said valves being preferably positioned over a wash basin and where a plurality of basins are arranged in juxtaposition to each other, a valve may be positioned over each of the basins and connected to one reservoir or receptacle through various pipe sections, thus obviating the necessity of providing a tank for each valve.

When it is desired to obtain the soap, supposing the stem to be positioned as shown by full lines in Fig. 2, the lever 7 is swung to the left until the pin 15 has traveled the full length of the channel 14, thus rotating the stem a quadrant of a circle and positioning the same as shown by dotted lines in Fig. 2.

This operation disposes the filled pocket 10 in position to discharge its contents through the outlet port 5 and brings the pocket 9 in position to be filled through the inlet port 4, and if a sufficient quantity of the soap is not obtained with one operation of the lever, said lever is again swung in the opposite direction and the supply contained in the pocket 9 discharged.

It will thus be seen that I have provided a very cheap and economical form of dispensing valve and one that will discharge a predetermined quantity of the liquid being dispensed and thus obviating the possibility of accidentally wasting the liquid.

It will further be seen that a number of the valves may be employed and connected to one source of supply and further that the supply of liquid can be obtained with but a slight movement of the stem of the valve.

It will further be seen that by forming the inner ends of the inlet and outlet ports oblong, the intake and discharge of the liquid will be facilitated and that by providing the plate in the outlet port, clogging of said port by bubbles forming in the liquid will be obviated.

It will be understood that when the device is placed in its operative position, the plate 16 will point downwardly.

What I claim is:

1. In a device of the character described, the combination with a valve having its plug member provided with a liquid receiving pocket and a casing for said plug having inlet and outlet ports, of means arranged substantially in the line of the axial center of the outlet port for utilizing the action of capillary attraction upon the discharging liquid.

2. A device of the character described, consisting of a valve having its casing provided with inlet and outlet ports, and provided with a partition arranged substantially the axial center of said outlet port, said partition projecting beyond the discharge end of said outlet.

3. A device of the character described, consisting of a valve provided with inlet and outlet ports and a partition arranged substantially in the axial center of the outlet port and projecting beyond the discharge end of said outlet port, the projecting end of said plate being tapered to a point.

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

FRANK A. OSINCUP.

Witnesses:

ISABELLE B. CAREY,
BURTON E. SWEET.