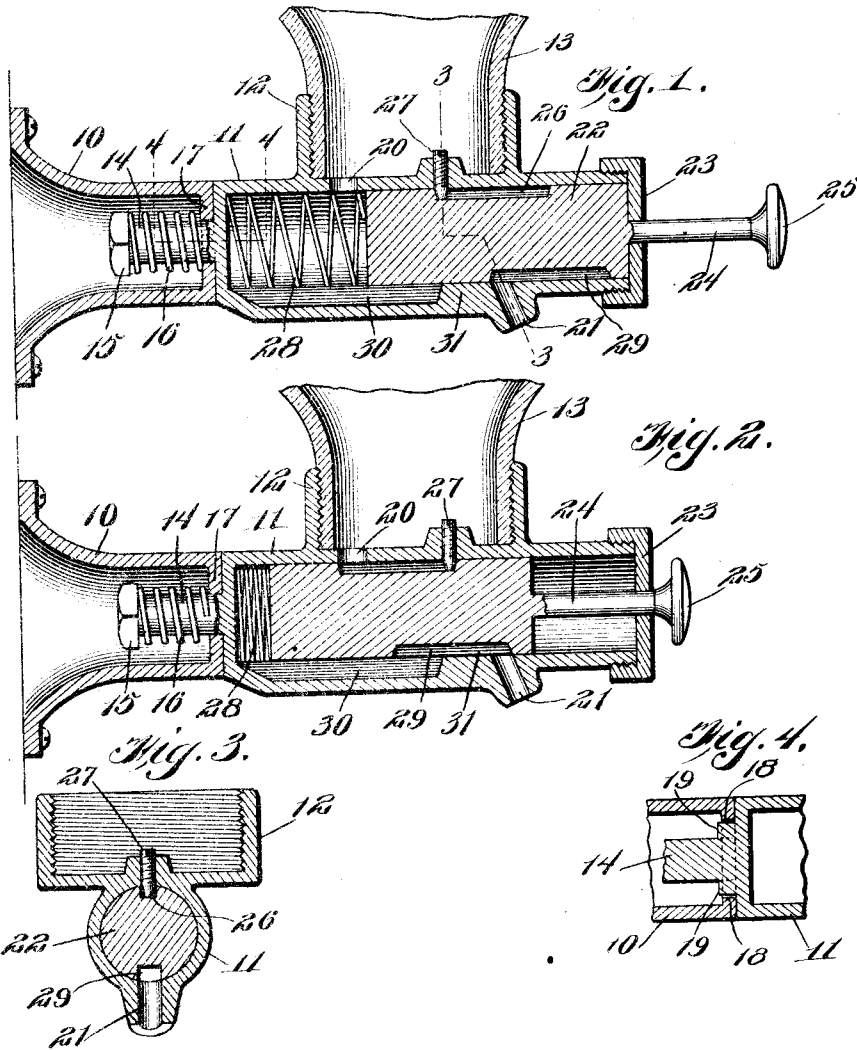


W. G. HOLLINGSWORTH.
 LIQUID DISPENSING MACHINE.
 APPLICATION FILED FEB. 15, 1913.

1,187,474.

Patented June 13, 1916.



Inventor
William G. Hollingsworth

Witnesses
Francis R. Heinrichs
A. A. Hoster

By *Victor J. Evans*
 Attorney

UNITED STATES PATENT OFFICE.

WILLIAM G. HOLLINGSWORTH, OF SHEBOYGAN, WISCONSIN, ASSIGNOR TO THE REXINE COMPANY, OF SHEBOYGAN, WISCONSIN.

LIQUID-DISPENSING MACHINE.

1,187,474.

Specification of Letters Patent. Patented June 13, 1916.

Application filed February 15, 1913. Serial No. 748,659.

To all whom it may concern:

Be it known that I, WILLIAM G. HOLLINGSWORTH, an American-born citizen of the United States, residing at Sheboygan, in the county of Sheboygan and State of Wisconsin, have invented new and useful Improvements in Liquid-Dispensing Machines, of which the following is a specification.

The invention relates to dispensing machines, and has for an object to provide a machine for dispensing liquids, particularly fluid soap and the like, and embodies various improvements over a patent granted to me on a liquid dispensing machine, January 23, 1912, No. 1,015,680.

The invention resides, more particularly, in a machine which is preferably used in wash rooms and suitably mounted over the usual basin to take the place of the ordinary cake of soap, and whereby, when the hand is held beneath the machine and pressure is applied to a knob forming a part of the machine, a quantity of the liquid soap is received in the palm of the hand, thus not only providing a sanitary structure but presenting a device in which a quantity of fluid soap is delivered which is sufficient to permit of properly washing the hands so that there will be no waste of the soap in the use of the same, as is usually the case when a cake of soap is employed in public wash rooms and the like.

In the further disclosure of the invention reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which:

Figure 1 is a vertical sectional view of the device, showing the plunger in initial position; Fig. 2 is a similar view showing the plunger in final position to discharge fluid soap from the casing; Fig. 3 is a vertical transverse sectional view taken through the plunger on the line 3-3 in Fig. 1; Fig. 4 is a horizontal sectional view taken on the line 4-4 in Fig. 1.

Referring more particularly to the views, I provide a bracket 10 adapted for attachment to a wall to support a casing 11 including an integral circular supporting flange 12, adapted to threadedly receive and support a vessel 13, preferably made of glass and adapted to contain fluid soap.

It will be seen by referring to Figs. 1 and 2 that the vessel 13 is normally in an inverted position so that the fluid soap will gravitate into the casing 11. Now in order to permit of filling the vessel 13 with a fluid soap, the casing 11 is mounted to turn on the bracket 10, and this is accomplished through the medium of a shank 14 extended from one end of the casing and having slidable connection with the bracket 10, the said shank being provided with a head 15, with an expansible spring 16 encircling the shank and abutting against the head 15, and a circular flange 17 of the bracket 10, thus normally retaining the casing in abutting position against the bracket. A plurality of oppositely arranged apertures 18 are provided in the flange 17, and locking lugs 19 project from the shank 14, the said locking lugs being adapted to fit into the apertures 18 to rigidly lock the casing in an upright position on the bracket, it being readily understood that when the casing is in this position the vessel 13 will be in an inverted position as shown in Figs. 1 and 2 and that by simply pulling outwardly on the casing against the action of the spring 16 the locking lugs 18 will be moved out of the apertures 18 and the casing including the vessel 13 can then be rotated on the bracket until the casing is in upright position so that the same can be readily unscrewed from the flange 12 for the purpose of filling the vessel.

The casing 11 is provided with an inlet 20 having communication with the vessel 13 and an outlet 21 leading to the exterior of the casing, and mounted to slide longitudinally within the casing is a plunger 22, a suitable closure 23 being arranged on one end of the casing to prevent the plunger from being withdrawn exteriorly thereof, with a stem 24 projecting from an end of the plunger and passing through an opening in the closure, the free end of the said stem having a knob 25 which, when pressed, will move the plunger longitudinally in the casing 11. The plunger is provided with a longitudinal groove 26 into which projects a screw 27 supported on the casing 11, thus preventing rotation of the plunger with respect to the casing and aiding substantially in guiding the plunger in its longitudinal movement in the casing, the inner end of the said plunger being engaged by an expansible spring 28 abutting against an end of the casing 11

and which normally retains the plunger 22 in initial position. The longitudinal movement of the plunger within the casing to normal position under the influence of the spring may be retarded by adjusting the screw 27 which movement regulates the quantity of fluid passing from the passage 30 through the passage 29 to the outlet 21 in the casing 11.

10 The plunger 22 is provided with a longitudinal passage 29 and similarly, the casing 11 is provided with a passage 30, the passage 29, however, being out of register with the passage 30 when the plunger 22 is in normal position. Now it will be apparent that the fluid in the vessel 13 will gravitate into the casing 11 and fill up the space around the spring 28 so that when the plunger is pressed against the action of the spring the inlet 20 will be closed by the plunger, as it advances in the casing, while at the same time the passage 29 will be moved into registration with the passage 30 and will also remain in communication with the outlet 21 so that the advancement of the plunger 22 in the casing 11 will press the fluid in the casing through the passage 30 into the passage 29 and thence outwardly through the outlet 21 in the lower end of the casing 11. The moment the pressure is released from the plunger the spring 28 will return the plunger to normal position, thus cutting off the exit of fluid from the casing, as will be readily seen, this being accomplished by a lateral projection 31 of the casing 11 and which separates the passage 30 from the passage 29.

As mentioned heretofore, when it is desired to fill the vessel 13 with a fluid, it is simply necessary to pull outwardly on the casing 11 to unlock the same from the bracket 10 and then impart a half turn to the casing until the vessel 13 is moved into an upright position so that the same can be conveniently unscrewed from the casing and filled with the desired fluid, after which the rotation of the casing is reversed until the vessel is in the position shown in Figs. 1

and 2, thus resulting in the locking lugs 19 returning into the apertures 18 and locking the casing 11 in an upright position with respect to the bracket 18.

It will be understood that various departures can be made from the disclosures therein without departing from the spirit of the invention; that the passage in the plunger and through which the fluid is forced from the casing through the outlet can be arranged to either extend through the plunger or formed on the surface or periphery thereof. I, therefore, do not limit myself to the particular construction disclosed, the scope of the invention being defined in the appended claim.

Having thus described my invention, I claim:

In a device of the class described, in combination, a substantially tubular bracket, said bracket being formed with a substantially flat wall, said wall being formed transversely with a substantially rectangular slot, a substantially tubular casing having a flat wall adapted to contact said flat wall of the bracket, a shank integrally formed concentrically upon said casing, a rectangular locking lug formed at the base of said shank and adapted to be received in said slot, a head upon the free end of said shank, a spring bearing at one end against said head and at the other end against said first named wall whereby to hold said flat walls in engagement, a liquid dispensing vessel having its mouth discharging into said casing, said casing having a delivery port, a valve reciprocating in said casing, a spring in said casing compressible by said valve when it moves in the direction of said first named spring, means whereby said valve may uncover said port, and a push rod carried by said valve.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM G. HOLLINGSWORTH.

Witnesses:

E. ANDERSEN,
FRED WILKE.