S. LIPPSTADT.

PUMP FOR SOAP DISPENSERS.

APPLICATION FILED AUG. 4, 1908.

928,139. Patented July 13, 1909.

Fig. 1.

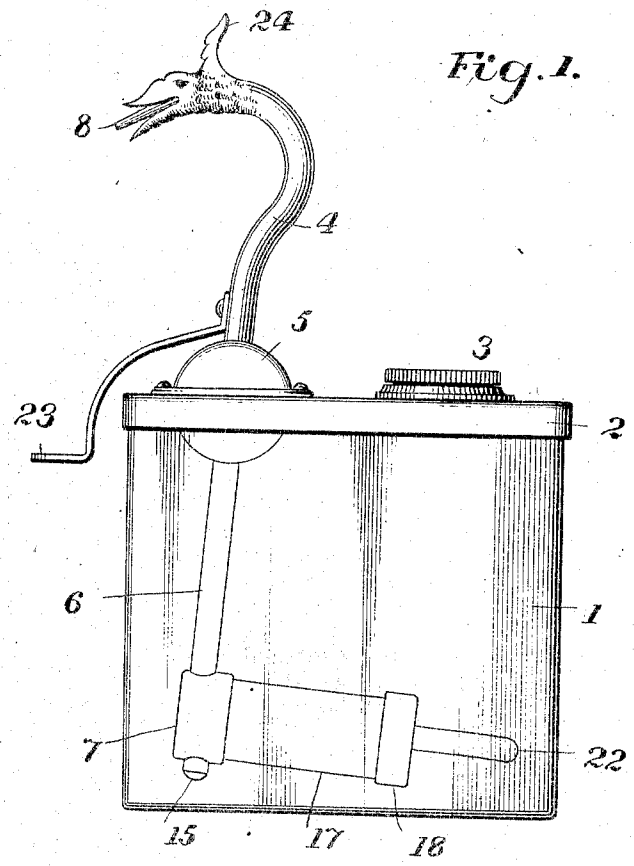
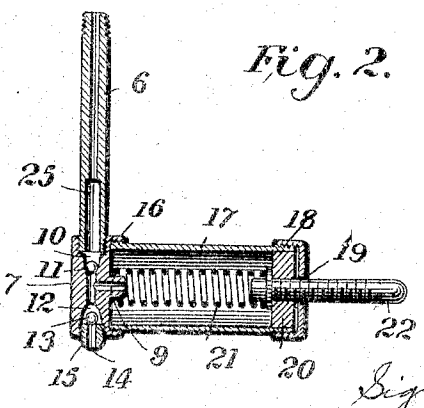


Fig. 2.



Witnesses

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SIGMUND LIPPSTADT, OF NEW YORK, N. Y.

PUMP FOR SOAP-DISPENSERS.

No. 928,139. Specification of Letters Patent. Patented July 13, 1909.

Application filed August 4, 1908. Serial No. 446,930.

To all whom it may concern:

Be it known that I, SIGMUND LIPPSTADT, a citizen of the United States, and resident of New York, in the county and State of New York, have invented certain new and useful Improvements in Pumps for Soap-Dispensers, of which the following is a specification.

This invention relates to liquid dispensers, and particularly to those used for dispensing liquid soap.

It is an improvement upon the device covered by my application Serial No. 437,939, filed June 11, 1908. Its objects are to provide a simple, effective and easily controlled means for discharging liquid soap from a receptacle upon the hands of the user.

The present improvement has particular reference to the pump used in forcing the liquid from the receptacle, and one of its principal features is to prevent the foaming of the liquid which is an incident to many forcing means.

The novel features will be understood from the following description taken in connection with the accompanying drawings.

In the drawings: Figure 1 is a side elevation showing my dispensing attachment applied to a receptacle; and Fig. 2 is a cross section through the pump and attached parts.

In the drawings, 1 represents an ordinary receptacle adapted to contain liquid soap or other material which is to be supplied. A cover 2 of any suitable material is applied to the top of this receptacle and is provided with a filling opening 3. A discharge pipe 4 is pivotally mounted at 5 in the top 2, and communicating therewith there is a pipe 6, extending down into the receptacle to a point near the bottom. Upon the lower end of the pipe 6 there is secured a coupling 7 which has an opening therethrough in line with the opening in the pipe 6, and it will thus appear that there is a continuous opening from the discharge end 8 through the pipes 4 and 6 and the coupling 7. The coupling 7 is provided with a lateral port 9, and above this port is provided with a tapering valve seat 10, upon which fits the check valve 11 which is preferably made in the shape of a ball as shown. Below the port 9 the coupling is provided with an enlarged opening 12 seating the check valve 13 which closes the outlet 14 in the plug 15. Surrounding the lateral opening 9 and secured to the flange 16 by screw threads is a closed cylinder 17, the outer end of which is preferably closed by a screw cap 18 having central opening 19. A piston 20 fits within this cylinder and is pressed outwardly toward the cap 18 by a spring 21, and this piston has secured thereto a piston rod 22 extending through the opening 19 and beyond the end of the cylinder.

It will be understood that the pipes 4 and 6 and attached parts are turned upon the pivot 5 by pressure on the arm 23 or by a pull on the hook 24, thus bringing the end of the piston rod 22 into contact with the wall of the receptacle and forcing the piston 20 to the left against the tension of the spring, and thus forcing any liquid contained in the cylinder 17 through the passage 9 into the coupling 7. When the liquid enters this coupling 7 the valve 13 will be closed and the pressure of the liquid will raise the valve 11 and thus the liquid will pass up through pipe 6 and pipe 4 and will be discharged at 8. The amount of the liquid discharged is of course controlled by the size of the cylinder and by the distance the piston 20 is forced into it. In order to prevent jamming and to provide a free movement of the valve 11 I have shown the lower end of the pipe 6 enlarged at 25. When the piston rod 22 is allowed to recede from the wall the spring 21 forces the piston outwardly and thus the valve 11 is closed and liquid is drawn in through the opening 14, raising the valve 13 as it enters. It will be observed that by the use of this form of pump no air is permitted to enter the pumping mechanism or the pipes, and hence the usual foaming due to the passage of air along with the liquid soap will not occur.

Having thus described the invention, what is claimed is:

1. In a device of the class described, the combination with a receptacle of an open ended pipe, extending into said receptacle a closed cylinder extending laterally from said pipe near its end and communicating with its interior, a check valve upon each side of the point of communication with said cylinder, a piston working in said cylinder, and a piston rod extending beyond the end of said cylinder within said receptacle.

2. In a device of the class described, the combination with a receptacle of a pipe extending into said receptacle a T-coupling secured to the end of said pipe having an opening therethrough in line with said pipe and having a lateral opening, check valves

in said coupling above and below said lateral opening, a closed cylinder surrounding said lateral opening, a piston in said cylinder, a piston rod connected to said piston and extending beyond the end of said cylinder within said receptacle, and a spring within the cylinder tending to force the piston outwardly.

3. In a device of the class described, the combination with a receptacle, of an open-ended pipe extending downwardly into said receptacle and movably mounted so that its end may be made to approach the wall of said receptacle, a closed cylinder extending laterally from said pipe near its lower end and communicating therewith, a check valve upon each side of said point of communication, a piston working in said cylinder, a piston rod connected to said piston and extending beyond the end of said cylinder toward the wall of the receptacle, and a spring tending to force said piston outwardly.

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

SIGMUND LIPPSTADT.

Witnesses:
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