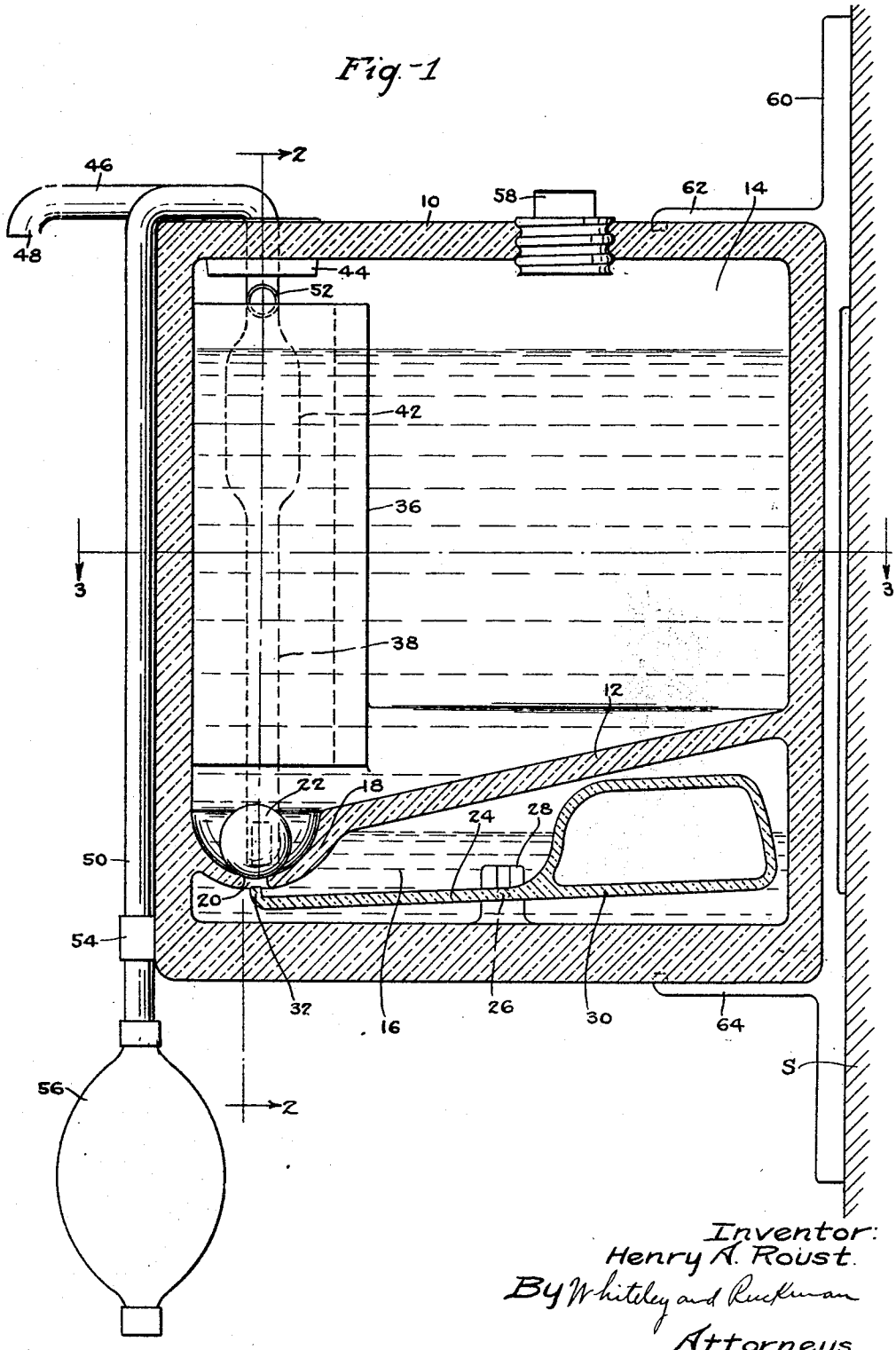
March 10, 1931. H. A. ROUST 1,796,165

SOAP LATHER DISPENSER

Filed Aug. 16, 1928 3 Sheets-Sheet 1

Fig. 1



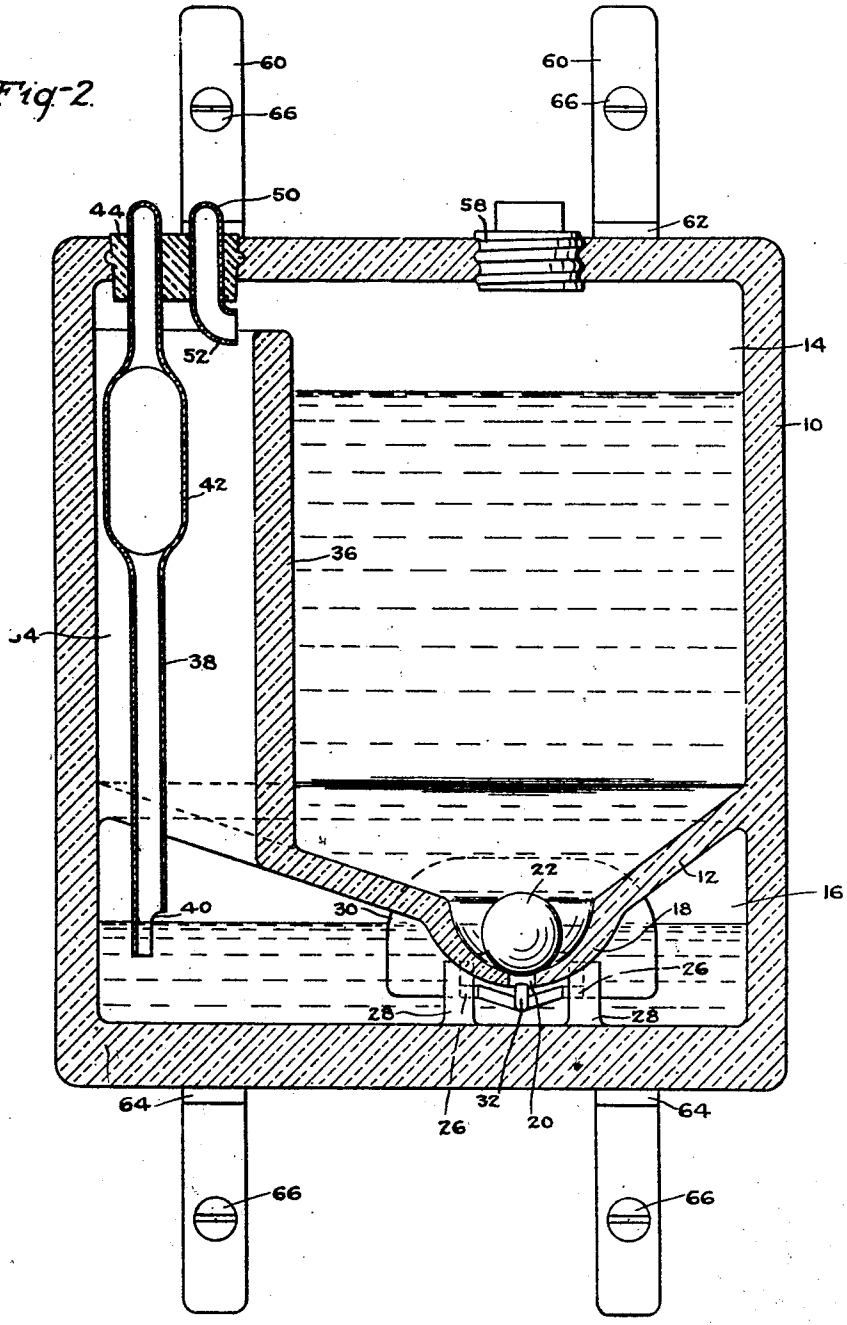

Inventor:
Henry A. Roust.
By Whiteley and Ruckman
Attorneys.

March 10, 1931. H. A. ROUST 1,796,165

SOAP LATHER DISPENSER

Filed Aug. 16, 1928 3 Sheets-Sheet 2

Fig-2.




Inventor
Henry A. Roust.
By Whiteley and Ruskman
Attorneys.

March 10, 1931 H. A. ROUST 1,796,165

SOAP LATHER DISPENSER

Filed Aug. 16, 1928 3 Sheets-Sheet 3

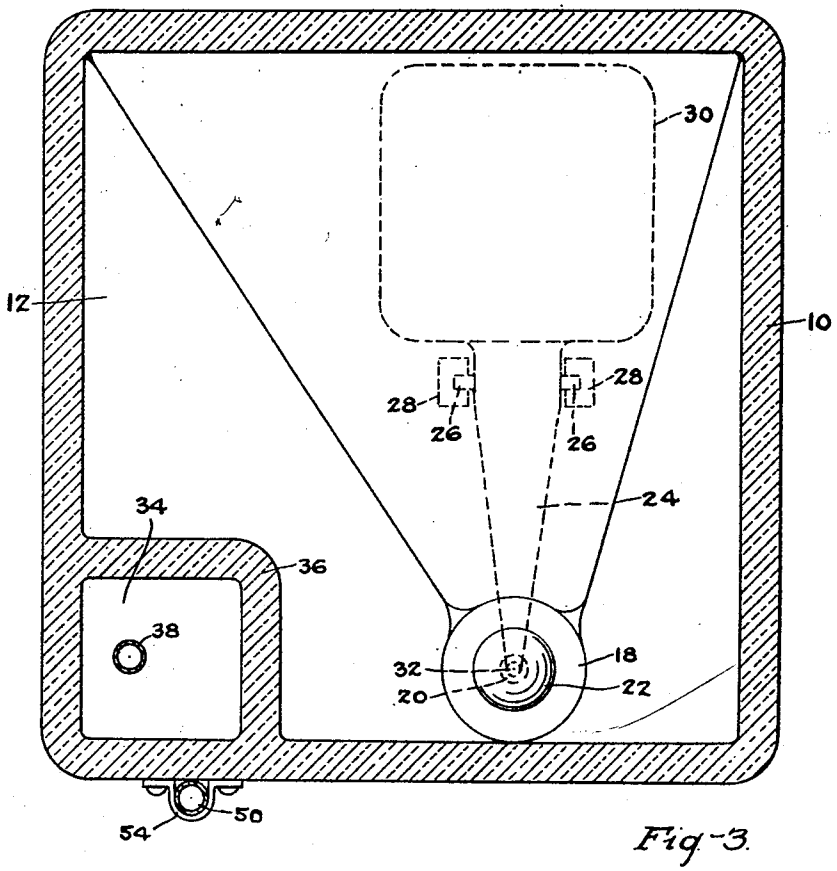



Fig-3.

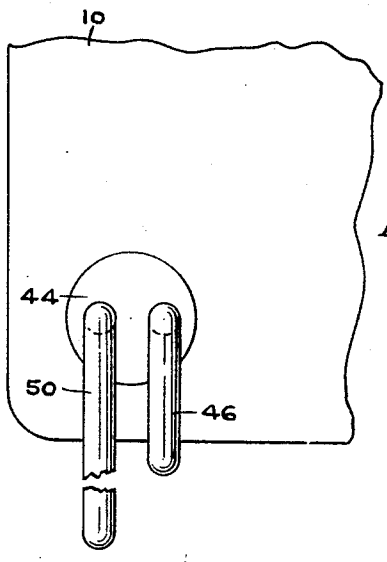



Fig-4

Inventor:
Henry A. Roust.
By Whiteley and Ruckman
Attorneys.

Patented Mar. 10, 1931

1,796,165

# UNITED STATES PATENT OFFICE

HENRY A. ROUST, OF MONTEVIDEO, MINNESOTA, ASSIGNOR OF ONE TWENTY-FIFTH TO C. RUDOLPH WENSTROM, OF ST. JAMES, MINNESOTA, AND ONE TWENTY-FIFTH TO GEORGE A. ANDERSON, OF MANKATO, MINNESOTA

## SOAP-LATHER DISPENSER

Application filed August 16, 1928. Serial No. 299,922.

My invention relates to soap-lather dispensers, and an object is to provide a device for lathering liquid soap and dispensing it for such purposes as washing and shaving. I am aware of the fact that it has been proposed to provide apparatus for beating soap lather and delivering the lather, and I am also aware of the fact that it has been proposed to provide apparatus for dispensing unlathered liquid soap from containers by air pressure. However, so far as I am aware, it was new at the time of my invention to deliver lathered liquid soap by air pressure.

The full objects and advantages of my invention will appear in connection with the detailed description of my invention, and the novel features of my inventive idea will be particularly pointed out in the claims.

In the accompanying drawings which illustrate a practical embodiment of my invention, Fig. 1 is a view of the device in vertical section. Fig. 2 is a view at right angles to Fig. 1 taken in section on the line 2—2 thereof. Fig. 3 is a view in horizontal section on the line 3—3 of Fig. 1. Fig. 4 is a fragmentary top plan view.

Referring to the construction shown in the drawings, the numeral 10 designates an air-tight container which may be made of any suitable material preferably glass. Toward the bottom of the container there is a sloping partition 12 which divides the container into a large upper chamber 14 and a smaller lower chamber 16. The partition 12 inclines downwardly to a well 18 at the bottom of which is a perforation 20 affording communication between the two chambers. A ball valve 22 is located in the well 18. An arm 24 is intermediately pivoted in the chamber 12 by means of pivots 26 which engage lugs 28 extending up from the bottom of the container. One end of the arm 24 carries a float 30 while the other end carries an upwardly extending finger 32 which moves up through the perforation 20 and lifts the valve 22 when the float 30 descends on account of the fall of the level of liquid soap in the chamber 16. A third chamber 34 is provided in one corner of the container by means of a vertical angular partition 36. The chamber 34 at its bottom opens directly into the chamber 16 while at its upper end it is in communication with the top of the chamber 14. This latter feature prevents the formation of a vacuum in the chamber 14 when the level of liquid soap therein falls. Extending vertically through the chamber 34 there is a tube 38 which at its lower end is cut away at one side as indicated at 40 in Fig. 2 so as to form a lip. While the tube 38 extends below the normal level of liquid in the chamber 16, the upper end of the cutaway portion 40 or the lip is above such level. The tube 38 toward its upper end is provided with an enlargement 42 and then continues on through a plug 44 fitted in an opening in the top of the container 10 outside of which this tube is bent to form a horizontal portion 46 which has a downturned delivery end 48. A tube 50 also extends through the plug 44, this latter tube having a laterally deflected end 52 terminating adjacent the top of the partition 36. The outer portion of the tube 50 is deflected downwardly along the outside of the container 10 and is shown secured thereto by a strap fastener 54. The lower end of the tube 50 may be provided with any suitable source of air pressure and, as shown in the drawings, a bulb 56 is provided for this purpose. The top of the container 10 is provided with a screw plug 58 in order that the chamber 14 may be filled to the desired extent with liquid soap. The receptacle 10 may be secured to any suitable support. As shown a pair of brackets 60 are provided which have upper and lower arms 62 and 64 engaging the top and bottom respectively of the container. The brackets are fastened to a vertical surface S by screws or similar fasteners 66.

In the use of the device, liquid soap is introduced into the chamber 14 upon removing the plug 58. The action of the float 30 keeps the level of the solution of soap in the chamber 16 at substantially the level shown in Fig. 2 since when the level falls, the valve 22 is lifted in the manner previously explained. When air is forced in through the tube 50, it puts pressure into the chamber 16 and this pressure is carried under the lip of the cutaway portion 40 of the tube 38. By capillary

attraction, a film of soap will already have moved up the inside of the tube 38 at this cut away portion. The rush of air through the tube 38 will carry with it this soap film and will force additional soap solution along and change it into a lather. The enlargement 42 catches drops of liquid soap which have not been sufficiently lathered and causes them to be further broken up and mixed with air and lather passing through the enlargement, thereby insuring that the liquid soap will be delivered from the outlet 48 in well-lathered condition.

I claim:

1. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, a float in said second chamber adapted to lift said valve when the level of liquid falls in said second chamber, a long narrow tube extending into said second chamber and having an orifice partly below and partly above the liquid level, said tube having a discharge end, and means for supplying air pressure to said second chamber.

2. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, an intermediately pivoted arm in said second chamber, a float on one end of said arm, a finger on the other end of said arm adapted to lift said valve, a long narrow tube extending into said second chamber and having an orifice partly below and partly above the liquid level, said tube having a discharge end, a tube for supplying air to said second chamber, and an air bulb on the outer end of said second tube.

3. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, an intermediately pivoted arm in said second chamber, a float on one end of said arm, a finger on the other end of said arm adapted to lift said valve, a long narrow tube extending into said second chamber, and having an orifice partly below and partly above the liquid level, the bore of said tube being enlarged in a portion of its length, said tube having an outer discharge end, a tube for supplying air to said second chamber, and an air bulb on the outer end of said second tube.

4. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, an intermediately pivoted arm in said second chamber, a float on one end of said arm, a finger on the other end of said arm adapted to lift said valve, a third chamber opening at its upper end into said first chamber and opening at its lower end into said second chamber, a long narrow tube extending through said third chamber into said second chamber and having an orifice partly below and partly above the liquid level, said tube having an outer discharge end, a second tube extending into said third chamber, and an air bulb on the outer end of said second tube.

5. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, an intermediately pivoted arm in said second chamber, a float on one end of said arm, a finger on the other end of said arm adapted to lift said valve, a third chamber opening at its upper end into said first chamber and opening at its lower end into said second chamber, a long narrow tube extending through said third chamber into said second chamber to a point below the liquid level therein, a lip on the lower end of said tube spaced above the liquid level, said tube having an outer discharge end, a second tube extending into said third chamber, and an air bulb on the outer end of said second tube.

6. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber communicating therewith through an opening, a downwardly closing valve for said opening, an intermediately pivoted arm in said second chamber, a float on one end of said arm, a finger on the other end of said arm adapted to lift said valve, a third chamber opening at its upper end into said first chamber and opening at its lower end into said second chamber, a long narrow tube extending through said third chamber into said second chamber to a point below the liquid level therein, a lip on the lower end of said tube, spaced above the liquid level, the bore of said tube being enlarged in a portion of its length, said tube having an outer discharge end, a second tube extending into said third chamber, and an air bulb on the outer end of said second tube.

7. A soap-lather dispenser comprising a main liquid soap chamber, a second chamber below said first chamber, and communicating therewith through an opening, a valve associated with said opening, a float in said second chamber adapted to acutate said valve and thereby control the liquid level in said second chamber, an outlet tube of small diameter extending into said second chamber and having an orifice partly below and partly above the liquid level therein, and means for supplying air pressure to said second chamber to cause liquid soap and air to pass through said tube of small diameter and to be delivered as soap lather therefrom.

8. A soap-lather dispensing device hav-

ing in combination a liquid soap supply chamber, a long narrow outlet passageway connected with said chamber, means for introducing soap from said liquid soap supply chamber into said outlet passageway and means for simultaneously introducing a stream of air into said passageway, and causing said air and film of liquid soap to be discharged through said passageway, said passageway being so shaped and proportioned as to cause said liquid soap and air to interact upon each other to produce lather during passage therethrough.

9. A soap-lather dispensing device having in combination a liquid soap supply chamber, an auxiliary soap chamber associated therewith, an outlet passageway connected with said auxiliary chamber, means for introducing liquid soap from said auxiliary chamber into said outlet passageway, and means for simultaneously introducing a stream of air into said passageway, and causing said air and film of liquid soap to be discharged through said passageway, said passageway being so shaped and proportioned as to cause said liquid soap and air to interact upon each other to produce lather during passage therethrough.

10. A soap-lather dispensing device having in combination a liquid soap supply chamber, an auxiliary soap chamber associated therewith, means for controlling the quantity of liquid soap admitted to said auxiliary chamber, an outlet passageway connected with said auxiliary chamber, means for introducing liquid soap from said auxiliary chamber into said outlet passageway, and means for simultaneously introducing a stream of air into said passageway, and causing said air and film of liquid soap to be discharged through said passageway, said passageway being so shaped and proportioned as to cause said liquid soap and air to interact upon each other to produce lather during passage therethrough.

In testimony whereof I hereunto affix my signature.

HENRY A. ROUST.