

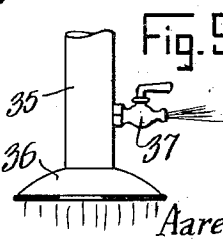
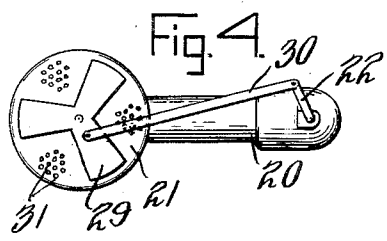
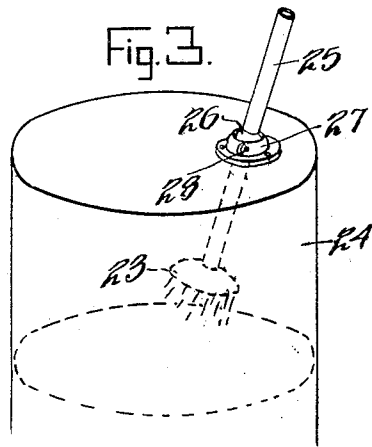
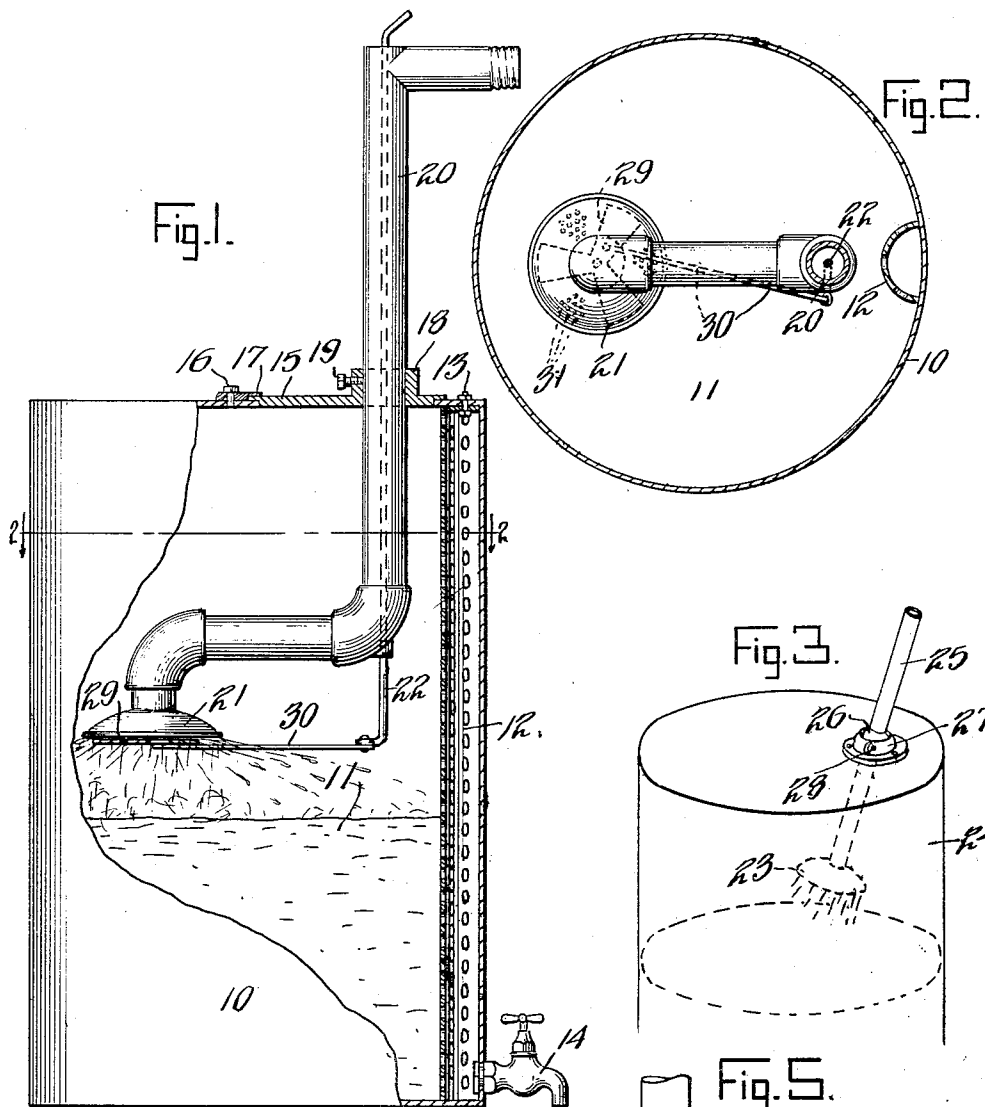
Oct. 31, 1933.

A. E. GOODLOE

1,932,693

SOAP AND WATER MIXER

Filed Nov. 14, 1929



Inventor
Aareiel E. Goodloe

By

E. W. Buford
Attorney

UNITED STATES PATENT OFFICE

1,932,693

SOAP AND WATER MIXER

Aarciel E. Goodloe, Chattanooga, Tenn., assignor
to Ready-Sudz Company, Chattanooga, Tenn.,
a corporation of Tennessee

Application November 14, 1929
Serial No. 407,239

11 Claims. (Cl. 299—84)

My invention relates to a device for producing a soapy solution or a mixture of soap and water, and it is an object of the invention to provide a container for soap paste having means adjustable both vertically and horizontally for directing the flow of water upon the soap, for regulating the percentage of soap in the solution.

It is also an object of the invention to provide in a device of this character means for affording a free discharge of the solution from the container, all as will be hereinafter more particularly specified and claimed.

Referring to the accompanying drawing, which is made a part hereof and on which similar reference characters indicate similar parts,

Figure 1 is a part sectional part side elevational view, illustrating one application of my invention,

Figure 2, a section on the line 2—2 of Fig. 1,

Figure 3, a perspective view of a modified form of my invention,

Figure 4 is a view of the spray nozzle looking upward in Figure 1, and

Figure 5 shows a modified form of the fluid spray nozzle.

In the drawing, reference character 10 indicates a container or receptacle for soap 11, preferably of a pasty consistency, said container being provided at one side with a perforated partition member or screen 12, which extends through to the top of the container and which is held in position by means of a bolt 13. The screen maintains the soap out of contact with a faucet 14 through which the soapy solution may be discharged from the container.

The top of the soap receptacle is provided with a removable plate 15, held in position by means of bolts 16 and clips 17, and said plate is provided with an opening therethrough having an upstanding flange 18 about the same, provided with a set screw 19 for securing a water supply pipe 20 therein. The upstanding flange or collar 18 is mounted eccentrically of the removable plate 15, in order that the plate may be rotated for varying the horizontal position of the supply pipe in the receptacle 10. By this construction the supply pipe may be adjusted vertically by loosening the set screw and the pipe may be adjusted horizontally by rotation of the removable supporting plate.

The supply pipe 20 is provided with an off set spray nozzle 21, to which is pivoted a disk 29 having blades which may be rotated by means of a control rod 22 and a link 30 to position them beneath perforations 31 so that the water may be

directed laterally instead of directly downward on the top of the soap 11. The disk 29 obviously may be positioned so as to deflect only some of the streams issuing from the perforations and allowing others to be directed downwardly upon the surface of the soap.

In Figure 3 I have shown a simple spray 23, in a receptacle 24, having a supply pipe 25 provided with a compressible ball 26 through which it is slidable, which ball is housed in a split socket 27 having a clamping screw 28 for securing the ball on the pipe and preventing longitudinal movement of the pipe therein but at the same time permitting the rotation of the ball in its socket.

From the foregoing it will be readily understood that one of the important features of my invention is the provision of means affording vertical adjustment of the spray nozzle whereby the same may be raised and lowered in conformity with the supply of soap within the receptacle and at the same time may be moved in a horizontal plane around the receptacle to cause the water to be directed against the soap throughout its entire surface.

In Figure 5 is shown a modified form of means for directing water laterally in the container to lessen the force with which the water strikes the surface of the soap paste in the container. This consists of a valve 37 placed in the pipe 35 just in advance of the expanded nozzle 36 on the pipe. The flow of water through this valve may be controlled so as to decrease the pressure in the end of the pipe since some of the water may be directed laterally of the container. The volume of water delivered through the pipe as a whole will not be varied but the force with which it strikes the surface of the soap paste in the container will be lessened so that this will decrease the amount of soap that is taken up by the water. The valve may be used in addition to or in place of the bladed disk 29 shown in Figure 4. The invention is not limited to the particular type of valve shown, for any kind of valve having means to regulate the flow of water therethrough may be used.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention, and I, therefore, do not limit myself to what is shown in the drawing and described in the specification, but only as set forth in the appended claims.

Having thus fully described my said invention,

what I claim as new and desire to secure by Letters patent, is:

1. A device of the class described comprising a container for soap, an outlet for discharging soap and water solution from the lower portion of the container, a screen surrounding the outlet and extending up along the side of the container for preventing soap not in solution from obstructing the discharge passage, a supply pipe projecting into the container, a spray nozzle on the supply pipe within the container, and means for supporting the supply pipe in a manner to permit the spray nozzle to be moved about in a substantially horizontal plane within the container and to be lowered as the soap is used, substantially as set forth.
2. A soap and water mixer comprising a container for soap, a circular opening in the top of the container, a removable cover for said opening, and a supply pipe mounted eccentrically of said cover and movable longitudinally there-through, substantially as set forth.
3. A soap and water mixer comprising a container for soap paste, a discharge outlet from the container, a water supply nozzle projecting downwardly into the container, a disk on the said nozzle movable to direct water laterally of said container or downwardly directly upon the surface of the soap paste in the container, substantially as set forth.
4. A soap and water mixer comprising a container for soap, an outlet from said container, a screen positioned about said outlet, a supply pipe projecting into said container and having a plurality of perforations through which water may be sprayed into the container and a bladed disk pivoted upon said pipe and rotatable to position the blades opposite any number of said perforations to deflect the water laterally of said container, substantially as set forth.
5. A soap and water mixer comprising a single vessel adapted to contain soap, a movable spray device for projecting water into the container, a tube extending through the soap attached to the vessel and adjacent one side thereof and having perforations throughout its length and terminating in an outlet from said container for permitting the solution to flow out as fast as it is formed regardless of the level of the soap in the container, substantially as set forth.
6. A soap and water mixer comprising a single closed tank containing a soap paste, a nozzle for spraying water into the tank, comprising a disk having a plurality of perforations for directing a part of the water vertically upon the surface of the soap and a baffle plate movable to direct a part of it laterally of the tank, and a perforated outlet tube positioned adjacent the side of the tank communicating with an outlet from said tank for carrying off the formed solution as fast as formed so as to leave the surface of the soap free to the impact of the water at all times, substantially as set forth.

7. A soap and water mixer for forming suds comprising a single closed container for soap paste, a discharge outlet from the container having means for causing the flow of suds away as fast as formed, a water supply pipe projecting downwardly into the container, means on the pipe for directing water downwardly or laterally, and means for supporting said water supply pipe so that it may be lowered or moved sidewise as the soap is used, substantially as set forth.
8. A soap and water mixer comprising a container for soap paste, an inlet for water adapted to be moved to direct a stream of water at any desired surface of the soap paste to form soap suds and an outlet for said suds positioned along the side of the container and communicating with an outlet, said outlet comprising a tube perforated to permit suds to flow out as fast as formed but to prevent outflow of solid particles of soap, substantially as set forth.
9. A soap and water mixer comprising a container for soap paste, a water inlet projecting downwardly into said container, and an outlet for the suds comprising a tube positioned along the side of the container and connected to an outlet near the bottom of the container, said tube being perforated to permit the suds to flow out as fast as formed, substantially as set forth.
10. A soap and water mixer comprising a single closed container for soap paste, a water conduit projecting downwardly into the container and having a spray nozzle on its end and having a valved outlet projecting laterally therefrom within the container to relieve the pressure of the fluid passing out through the spray nozzles thereby reducing the velocity with which the water is directed against the surface of the soap paste, the container having a solution outlet to conduct the solution away as fast as formed, substantially as set forth.
11. A soap and water mixer comprising a closed vessel containing soap, a water supply means mounted on the vessel and movable at will to direct a spray of water against any part of the surface of the soap to form suds, and outlet means from the vessel adjacent the bottom which is at all times open to the suds forming space to conduct the suds formed by the spray out of the vessel as fast as formed, substantially as set forth.

AAREIEL E. GOODLOE,

30

135

35

140

70

145

75

150