

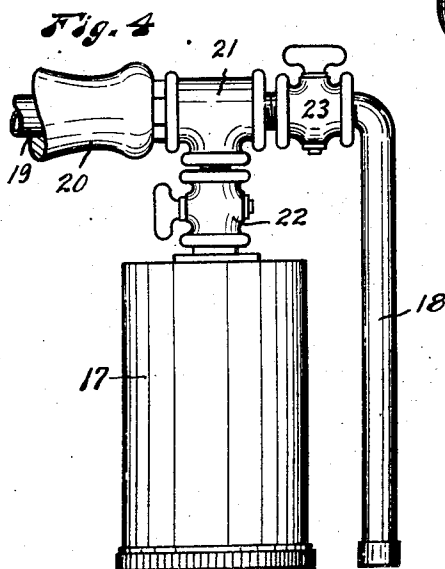
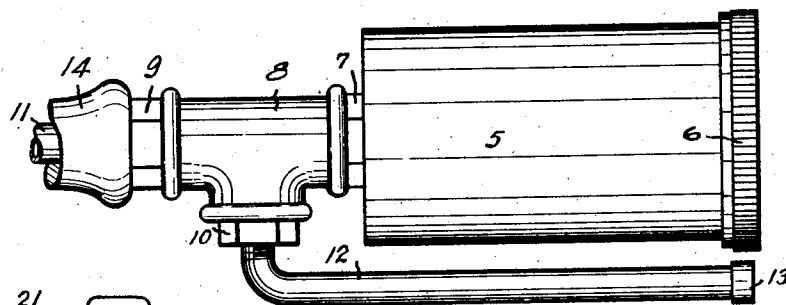
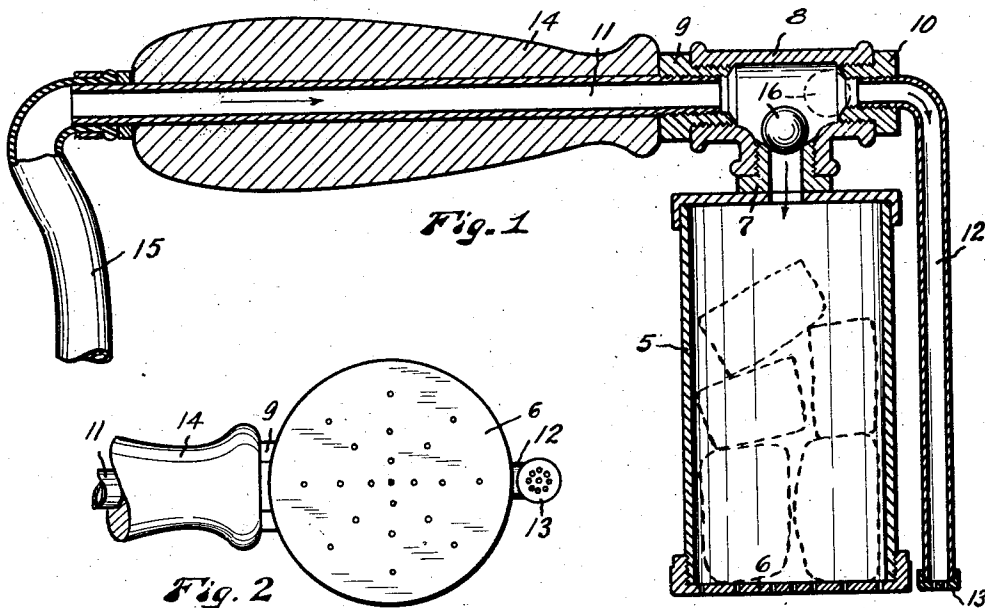
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SPRAY FORMING DEVICE

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SPRAY-FORMING DEVICE.

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Our invention relates to improvements in spray forming devices and the object of our invention is to provide a simple and efficient spray forming device that may be readily connected with a source of supply of water under pressure and used to selectively deliver either a spray of soapy water or a spray of clear water.

Another object of the invention is to provide a spray forming device of this nature having a floating or freely movable ball valve for selectively controlling the flow of water either through a soap holding compartment or through a clear water spray tube.

Another object is to provide a device of this nature embodying a soap container and a fresh water tube connected with a handle in a manner whereby gravity will always tend to cause them to hang in such a position that they will direct a spray of either clear or soapy water downwardly unless they are voluntarily turned so as to direct the spray in another direction, it having been found that this feature is of great value in preventing the inadvertent spraying of water onto walls, floors and like places when the device is used for washing dishes or washing clothes.

A further object is to provide a device of this nature in which the soap container and fresh water tube are reversible as to position so that they may be arranged at substantially right angles, or substantially in alignment with the handle of the device.

Other and more specific objects will be apparent from the following description taken in connection with the accompanying drawings.

In the drawings Figure 1 is a view in longitudinal midsection illustrating a preferred embodiment of our soap spray forming device.

Fig. 2 is a fragmentary view showing an end elevation of the soap container and clear water pipe.

Fig. 3 is a view in side elevation of the device with the handle broken away and showing the soap container and water spray pipe reversed in position as compared to Fig. 1 to bring said soap container and water spray pipe into substantial alignment with the handle instead of at substantially right angles to the handle as shown in Fig. 1.

Fig. 4 is a view in side elevation of a modified form of the invention in which two separate valves are used.

Referring to the drawings, throughout which like reference numerals designate like parts, 5 designates a soap receptacle or container provided at one end with a perforated cap 6 and at the other end with a suitable fitting 7 arranged to screw into a T member 8.

The T member 8 is also adapted for the reception of two reducing plugs 9 and 10 that are connected respectively with a water inlet pipe 11 and a clear water discharge or spray pipe 12. The water spray pipe 12 has a right angle bend formed therein so that it will extend parallel with and lie alongside of the soap container 5 when the device is assembled either in the manner shown in Fig. 1 or Fig. 3, and said water spray pipe is provided on its bottom end with a perforated cap 13 forming a spray nozzle for the same.

The water inlet pipe 11 has a handle 14 of suitable and convenient shape provided thereon and the outer end of said inlet pipe 11 is connected with a flexible tube or hose 15 by which connection with a faucet, or pipe, or any suitable source of supply of water under pressure may be made.

The ends of the fittings 7 and 10 are suitably shaped to form valve seats on which a ball valve 16 may seat to shut off the supply of water either to the soap container 5 or to the fresh water spray pipe 12. This ball valve forms a very quick and easy valve means for shifting from a spray of soap suds to a spray of clear water and vice versa, and also eliminates the necessity for using other valves to control the flow of water through the soap container 5 or clear water spray pipe 12.

When the device is to be used as a dish or clothes washer the soap container 5 and water spray pipe 12 will be connected as shown in Fig. 1 so that when the same is held in the hand the soap container 5 and water spray pipe 12 will tend to hang down due to gravity and water discharging therefrom in a spray will be directed downwardly into any receptacle, as a pan or sink, that may be below the device. We find that this is a very important feature in a dish washer of this nature and that it almost entirely eliminates the danger of inadvertently dis-

charging water in places where it is not wanted as on walls, floors and like places. Inexperienced operators are almost certain, with a device of this nature, to turn on the water without considering in what direction the device is pointed or absent mindedly lift the device as the water is being turned off thereby spraying water upon the walls or floors or upon themselves or other persons, thereby prejudicing such inexperienced operators against the device before they have learned how to handle it. Our arrangement as shown in Fig. 1 almost entirely eliminates this objection by providing a device that will always tend when held in the hands to assume a correct position and one in which no damage will be done by discharging water.

The arrangement shown in Fig. 1 is the preferred arrangement for use in washing dishes, clothes and the like but for some uses, as for washing vehicles or similar objects or for washing windows, it may be desirable to have the soap container 5 and water spray pipe 12 in substantial alignment with the handle and for this reason we have made said water spray pipe 12 and soap container 5 interchangeable so that they may be connected with the T fitting 8 in the manner shown in Fig. 3.

In Fig. 4 we have shown a modified form of the invention embodying a soap container 17, water spray pipe 18, water inlet pipe 19 and handle 20 all of substantially identical construction with the corresponding parts described in connection with Figs. 1, 2 and 3. The water inlet pipe 19 is connected directly with an ordinary T fitting 21 and the soap container 17 and water spray pipe 18 are connected through valves 22 and 23 respectively with the T fitting 21. In the operation of this device the valves 22 and 23 may be regulated separately to open either the passageway to the soap container 16 or to the clear water spray pipe 18 and to close the other passageway or to open both passageways or to close both passageways. The soap container 17 and fresh water spray pipe 18 are arranged at substantially right angles to the handle 20 in the disclosure of Fig. 4 for the purpose hereinbefore explained but may if desired be reversed as to position to bring them into substantial alignment with the handle 20 in a manner similar to that described in connection with Figs. 1 to 3.

In operation the cap is removed from the end of the soap container, pieces of soap

are placed therein, the cap is replaced and the device being connected with a source of supply of water, as with a faucet, is ready for use. If soap spray is to be produced the device is tilted to shift the ball valve 16 into the position shown by dotted lines. Fig. 1, and the faucet is opened thus causing the water to flow through the soap container and be discharged as a soapy spray from the perforated end of the same.

If a spray of clear water is desired the water is shut off temporarily, the ball valve 16 shifted back into the position shown by full lines and the water again turned on so as to discharge a spray of clear water from the pipe 12. When the ball valve 16 is in one position and water is flowing through the T member 8 the pressure of the water will prevent movement of the ball until the water is again shut off.

If desired, substances other than soap may be placed in receptacles 5 or 17 to form sprays for purposes other than washing.

The foregoing description and accompanying drawings clearly disclose a preferred embodiment of our invention but it will be understood that this disclosure is merely illustrative and that changes may be made within the scope of the following claim.

We claim:—

In a spray forming device of the class described a soap container, having perforations formed in one end, a T fitting having one branch connected with the other end of said soap container, a clear water supply pipe connected with another branch of said T fitting, means forming a handle on said water supply pipe, a clear water spray tube connected with a third branch of said T fitting, reducing means forming valve seats at the points of connection of said T fitting with said soap container and said clear water spray tube respectively, and a ball valve loosely disposed and freely movable within said T fitting for selectively seating upon either of said valve seats to control the flow of water to said soap container or to said clear water spray tube, said valve being adapted to roll from one seat to the other when it is not subjected to water pressure and to be held seated when it is subjected to water pressure.

Signed at Wenatchee, Wash., this 2nd day of Feb. 1924.

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