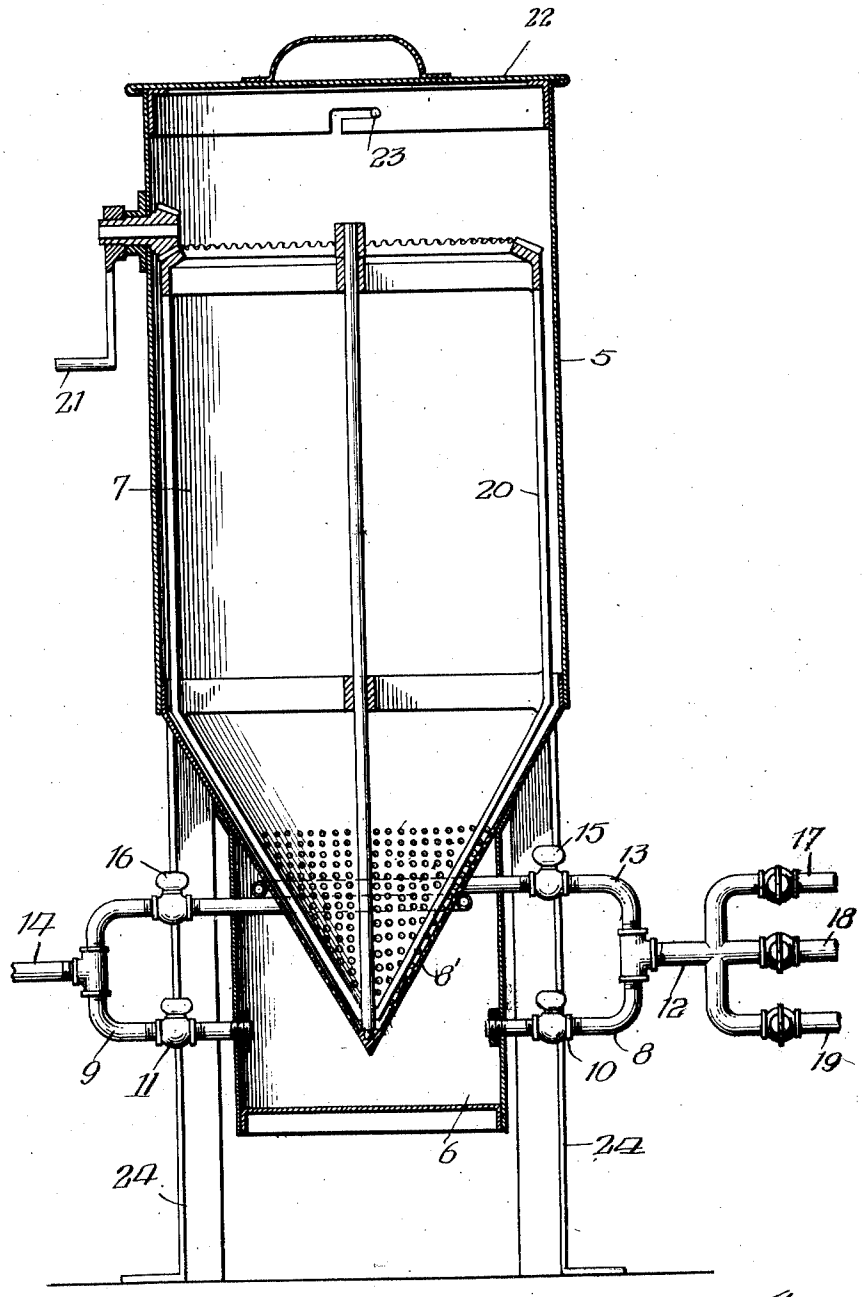
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SOAP SOLUTION DEVICE.

APPLICATION FILED MAY 10, 1920.

1,372,102. Patented Mar. 22, 1921.



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SOAP-SOLUTION DEVICE.

1,372,102. Specification of Letters Patent. Patented Mar. 22, 1921.

Application filed May 10, 1920. Serial No. 380,305.

To all whom it may concern:

Be it known that I, PAUL SPORER, a citizen of the Republic of Jugo-Slavia, residing at Chicago, in the county of Cook, in the State of Illinois, have invented certain new and useful Improvements in Soap-Solution Devices, of which the following is a specification.

This invention relates to soap solution devices and has for its object to provide a means for uniformly adding soap or any other cleaning compound to water.

In laundries at the present time it is generally the custom to mix the soap and other chemicals in the proper proportions in a receptacle and to then empty this receptacle into a tank of hot water to be drawn therefrom to the various washing machines. This method is not only slow but it is unsatisfactory in operation.

In the present invention a receptacle is provided into which soap paste, chips or other form of cleaning compound may be placed and while therein be subjected to contact with a supply of either hot or cold water which gradually dissolves the soap, and the soap solution is conducted therefrom to the washing machines or any other devices in which the soap solution is to be used. If other than soap is to be added to the water, the desired ingredients may be put in the receptacle and thoroughly mixed before the flow of water is started. In order to soften the soap or other contents of the receptacle I have provided means for applying heat preferably adjacent to the portion of such receptacle where the water contacts with the contents. While this structure is particularly advantageous for use in connection with laundry machinery and the like, it will be readily appreciated that the soap solution may be used in fountain brushes or similar devices for the cleaning of automobiles, windows and the like, and in a very large number of other ways which will be readily evident.

The drawing shows a central, vertical section of one embodiment of the device.

In the present embodiment the receptacle 5 is provided at its base with a mixing chamber 6 separated from the upper or supply chamber 7 by the perforated partition 8 preferably projecting into the chamber 6. Inlet and outlet pipes 8 and 9 respectively communicate with this chamber 6 and the flow of fluid therein is controlled by valves 10 and 11.

The inlet pipe 8 is connected to the main feed pipe 12 which likewise has connected to it by a T or other suitable form of joint, a by-pass pipe 13 which passes through the walls of the chamber 6 and in the present embodiment loops about the conical projecting wall 8 of the receptacle, passing out through the opposite wall of the chamber 6 without communicating with such chamber and being connected to the main outlet pipe 14, to which the outlet pipe 9 is also connected. This pipe 13 is provided with valves 15 and 16. While the connections to the pipe 12 would vary according to the use for which the device was intended, I have illustrated a three way valved connection in which one of the pipes 17 may be connected to steam under pressure and 18 and 19 respectively to hot and cold water.

A mixer 20 of any suitable pattern may be provided to permit the contents of the supply chamber to be agitated. This mixer is in the present case provided with handle 21 for manual operation. A cover 22 is preferably provided and in the present embodiment this cover is retained upon the receptacle by the well known pin and slot locking means 23.

In the operation of the device, water of the desired temperature is admitted to the chamber 6 through the pipe 12 by regulation of the valves in the pipes 18 and 19, the valves 15 and 16 being closed and the valves 10 and 11 open. This flowing water fills the chamber 6 and contacts with the soap in the chamber 7 through the perforations in the partition 8, causing the soap to be dissolved, and the soap solution passes out through the pipes 9 and 14.

When the device is being started after a lapse in the operation, the soap may have become slightly hardened and not mix sufficiently freely with the water at once. In order to obviate this I shut off the valves 10 and 11 and admit live steam through the pipe 17 and the by-pass 13, the valves 15 and 16 being opened and the valves 10 and 11 closed. This steam passes about the conical base 8 and into the pipe 14, heating the soap and causing the same to be softened. When sufficient steam has been applied, the valve in the pipe 17 and the valves 15 and 16 would be shut off and the flow of water started

through the chamber 6 in the manner described. It has been found that when this soap solution is piped over a considerable distance, an accumulation of soap forms in the pipes, particularly about valves or other obstructions and the passage of the steam through the pipe system dissolves this soap.

When it is desired to provide a supply of water without soap to the washing machine or other device for rinsing, the valves 10 and 11 would be closed, the valves 15 and 16 opened, and water admitted from the pipes 18 or 19 or both depending upon the temperature of water desired. No soap would thus be added to the water as there is no communication between the by-pass pipe 13 and the chamber 6, as has been described.

The size of the receptacle 5 would depend on the amount of soap to be dispensed and might vary from one to fifty gallons. In the present embodiment, this receptacle 5 is supported upon legs 24 but any other form of suitable mounting might be substituted therefor.

I am aware that a considerable number of changes in the construction and arrangement of parts might readily be made by anyone skilled in the art without departing from the scope of my invention and I do not care to be limited to the particular embodiment herein shown and described.

I claim:

1. In a device of the class described, a container comprising a soap supply chamber, a mixing chamber, a perforated partition between said chambers projecting into said mixing chamber to expose the contents of the supply chamber to the fluid in the mixing chamber, and inlet and outlet fluid carrying pipes communicating with said mixing chamber.

2. In a device of the class described, a soap supply receptacle having a perforated base, a fluid holding receptacle beneath said supply receptacle and communicating with said supply receptacle through the perforations in said base to expose the contents of said supply receptacle to the fluid in the fluid holding receptacle, and inlet and outlet pipes communicating with said mixing chamber.

3. In a device of the class described, a soap container provided with a substantially conical base having perforations therethrough, a mixing receptacle secured to the base of said container and communicating therewith through said perforations, and inlet and outlet pipes communicating with said mixing receptacle to cause a flow of water to pass through said receptacle to dissolve the contents of said container.

4. In a device of the class described, a container comprising a soap supply chamber, a fluid holding receptacle, a perforated partition between said chamber and said receptacle to expose the contents of said chamber to the fluid in said receptacle, means for applying heat to the contents of said supply chamber, and inlet and outlet pipes communicating with said receptacle.

5. In a device of the class described, a container comprising a supply chamber, a mixing chamber, a perforated partition between said chambers, inlet and outlet fluid carrying pipes communicating with said mixing chamber, a by-pass pipe connecting said inlet and said outlet pipes, and means for controlling the flow of fluid in said pipes.

6. In a device of the class described, a container comprising a soap supply receptacle, agitating means in said supply chamber, a fluid holding receptacle, a perforated partition between said receptacles to expose the contents of said soap receptacle to the fluid in the fluid receptacle, and inlet and outlet pipes communicating with said fluid receptacle.

7. In a device of the class described, a container comprising a soap supply chamber and a fluid holding receptacle, means for exposing the contents of said supply chamber to the fluid in said receptacle, and inlet and outlet fluid carrying pipes communicating with said receptacle.

PAUL SPORER.