E. M. BENEDICT.

SOAPER.

APPLICATION FILED DEC. 21, 1914.

1,176,126. Patented Mar. 21, 1916.

Fig. 1

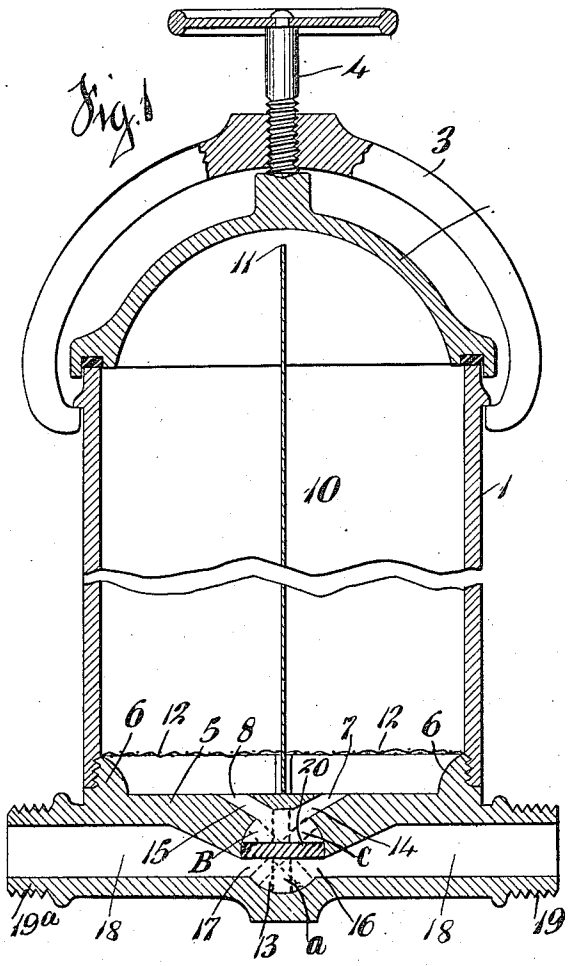
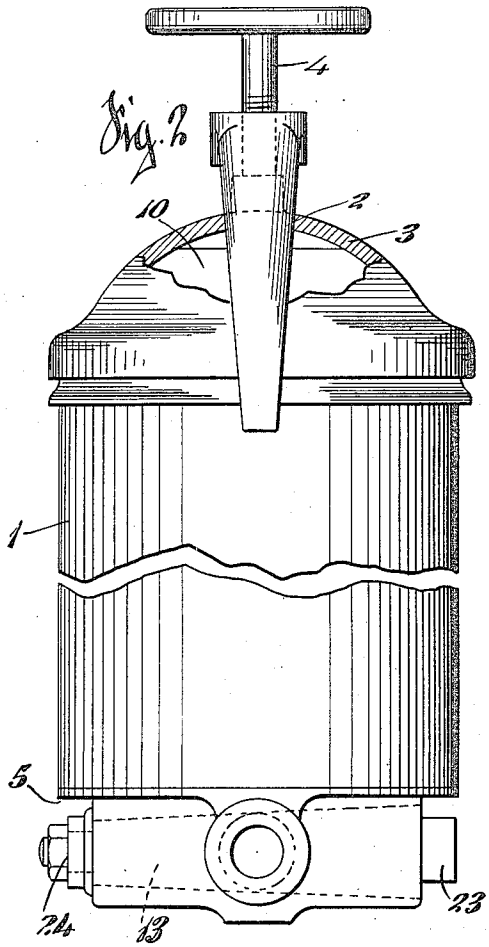


Fig. 2



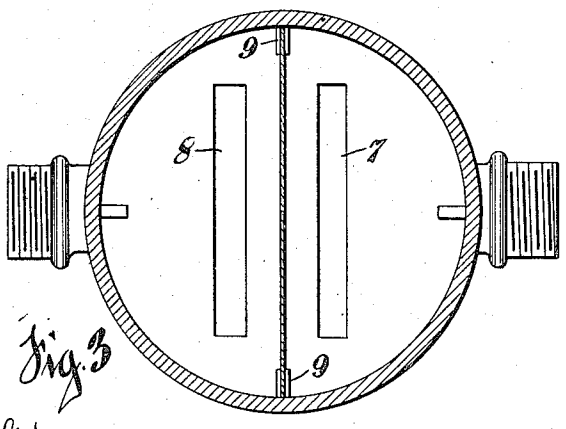


Fig. 3

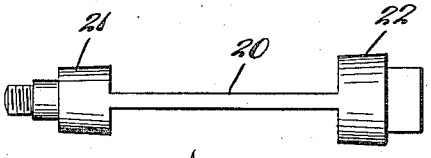


Fig. 4

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SOAPER.

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To all whom it may concern:

Be it known that I, ERNEST M. BENEDICT, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Soapers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention has relation to soapers of the type adapted to provide a receptacle through which a stream of warm or hot water is to be passed for making the water soapy for washing and the like. Its object is to provide a receptacle of such nature that a flow of water through it will suffice to make the water soapy, and the access to which is controlled by a valve of four-way type which will admit a stream of water to flow in either direction through the receptacle, and will allow the water to flow by the receptacle without becoming soaped, and also will stop the flow from either direction, said device being adapted to be set into a single line of pipe, with all operations controlled from a single point. This object I accomplish by that certain construction and arrangement of parts to be hereinafter more specifically pointed out and claimed.

In the drawings, Figure 1 is a central vertical section of the soaper. Fig. 2 is a side elevation thereof. Fig. 3 is a horizontal section thereof. Fig. 4 is an elevation of the valve plug removed.

The receptacle 1, which is shown as a cylindrical barrel, has a top 2, which is clamped down over the barrel by a clamp 3 controlled by the screw 4. At the base of the vessel is a circular plate 5 having an annular flange 6 that is screw threaded to receive the barrel.

The base plate 5 has two elongated slots or ports 7, 8, which communicate with the valve chamber, to be hereinafter described, and supported in brackets 9, 9, in the base plate is a partition plate 10 which divides the receptacle into two compartments. This plate terminates at 11 near the top to permit the water when admitted through one of the ports 8 or 7 to flow up in the receptacle in the one compartment and back down the other compartment, and through the other slot. In the base of each compartment it is desired to have a screen 12, and the compartments are filled with soap chips or the like to make the water soapy as it passes through as above described.

The valve chamber and inflow and outflow pipes are preferably formed in the base plate as follows: Located between the ports 7 and 8 is a chamber 13, which opens into the ports through passageways 14, 15. These passageways are divergent and situated at the top of the chamber, and below the center of the chamber are passageways 16, 17. Opening into these last passageways are cylindrical conduits 18, 18, which terminate in the pipe couplings 19, 19ª, respectively.

The water line is connected up to the two couplings above mentioned and a valve is provided which directs the flow either through the soaper, or through the valve chamber alone. The valve chamber, as can be seen, is at right angles to the flow of water in the line.

The valve consists of a single plane or web 20 supported between plugs 21 and 22 to fit in either end of the valve chamber. The stem has a head 23 for operation, and is packed at its other end by a nut and washer 24, which nut also serves to draw the plugs tightly against their seats in the chamber.

With the valve in the position shown in section in Fig. 1, the water will not enter the soap receptacle but will flow through the chamber and out again, no matter what is the direction of flow. When it is at position *a*, the water will flow through the chamber and through the receptacle, becoming soaped in the process of so doing. When at the position B, no water can flow through the chamber from the conduit end 19ª; and when at C none can flow through the chamber from the end 19. Thus it can be seen that the soaper can be used for a flow of water from either direction, said flow to be cut off if desired and that water can be sent through the chamber without being soaped when such becomes necessary. The whole is adapted to be set into a single line of pipe, and is controlled from the valve head 23, a single point.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In a soaper, a receptacle for soap, two apertures in the receptacle to admit of flow of water in either direction through the same, and a valve mechanism comprising a revolubly mounted single web to direct or

stop a flow of water into either aperture and to allow a flow through the valve without passing into either aperture.

2. In a soaper, a receptacle for soap, two apertures in the receptacle to admit of flow of water in either direction through the same, a valve chamber having communication with each aperture, communication therefrom to an inflow and an outflow conduit, and a valve comprising a revolubly mounted single web to cut off and connect any aperture and conduit to another aperture or conduit.

3. In a soaper, a receptacle for soap, two apertures in the receptacle to admit of flow of water in either direction through the same, a valve chamber having passage ways to each aperture, passageways in said chamber to an inflow and an outflow conduit and a valve comprising a revolubly mounted single web to cut off and connect any passageway and conduit with any other passageway and conduit.

4. In a soaper, a receptacle for soap, two apertures in the receptacle to admit of flow of water in either direction through the same, a valve chamber having passageways to each aperture, passageways in said chamber to an inflow and an outflow conduit and a four-way valve comprising a revolubly mounted single web to cut off and connect any passageway and conduit with any other passageway and conduit.

5. In a soaper, a receptacle for soap, having two communicating compartments, an inlet port to each compartment, a valve chamber having ports communicating with an inlet and an outlet conduit, and a valve in said chamber comprising a revolubly mounted single web, to open and close each conduit port to an inlet port and to close both inlet ports from both conduit ports.

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Attest:

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