

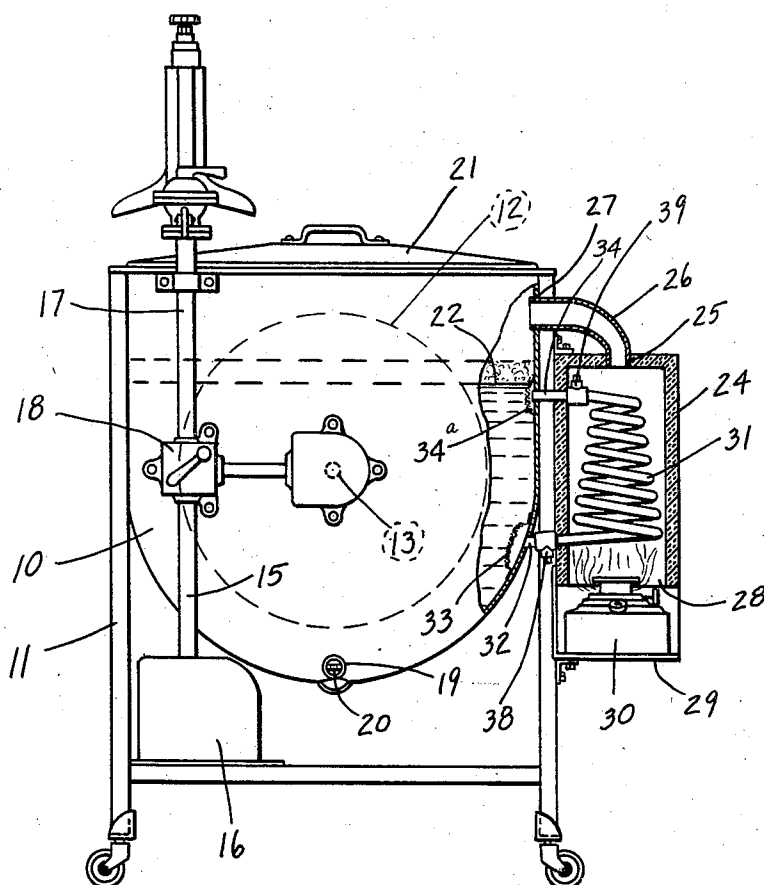
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LOCAL HEATED WASHING MACHINE AND THE LIKE

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LOCAL HEATED WASHING MACHINE AND
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2 Claims. (Cl. 68—15)

This invention relates to a self-contained water heating attachment for the heating of water and the like for a washing machine, to which the attachment may be applied.

5 The chief object of the invention is to provide a local heater for heating water in a washing machine, for example, such machine being of the hand operated or self-contained power operable type.

10 One object of the invention is to heat the water in such a machine to a temperature corresponding to the boiling temperature and at the same time prevent the formation of steam.

15 The chief feature of the invention consists in associating a water heater with a water utilizing device, such as a washer, whereby the water in such device may be heated without formation of excessive suds.

20 One feature of the invention in addition to the accomplishment of the foregoing object is in providing a construction that may be applied to individual devices, such as washing machines, and the like, and which are capable of operation without connection to a utility service.

25 The full nature of the invention will be understood from the accompanying drawing and the following description and claims.

30 In the drawing the figure is a central sectional view through a conventional form of a local power operable washing machine with the invention applied thereto.

35 In the drawing 10 indicates a conventional representation of a washing machine water containing chamber having the supporting frame work 11 and including a clothes washing attachment such as cylinder 12 therein mounted on a shaft 13 driven in any suitable manner by a power element 15, in turn driven by a gasoline or kerosene operable motor 16, the latter also driving a shaft 17 that is arranged for wringer operation. The mechanism diagrammatically indicated at 18 is a conventional control for selectively connecting or disconnecting the cylinder shaft 13 or the wringer driving shaft 17 to or from power shaft 15. The chamber 10 has a discharge 19 controlled by valve 20. So much of the aforesaid, including the removable cover 21, is intended to describe a conventional form of washing machine in which the upper water level is indicated by the numeral 22.

45 There is suitably secured to the machine an insulated jacket structure 24 having an aperture 25 at its upper end and which communicates by means of the conduit 26 with the interior of the

washing machine chamber 10 as at 27 and above the water level 22.

The construction 24 has an open lower end 28 and positioned therebeneath is a support 29 that supports a local heater 30 which may be kerosene or gasoline operable. The heater 30 discharges the products of combustion upwardly through the chamber 24 and the same enter the covered chamber 10 by way of conduit 26 and build up a pressure in the upper portion of the chamber above the water level in so far as the cover 21 closes the upper end of the chamber 10.

Positioned within the insulated housing 24 is a conical heating coil 31, the lower end of which as at 32 is in free communication with the interior of the chamber 10 and near the bottom thereof, such communication, however, being protected by the screen arrangement 33 so that soap particles and the like, will not be drawn in to the water heating coil 31. The upper or apex end of the heating coil 31 discharges at 34 to the interior of the chamber 10 and slightly below, for example about $\frac{1}{2}$ ", the level of the water therein, the same being indicated by the numeral 22.

25 The cycle of operation is as follows: For farm and suburban use where utility service is not available, the washing machine shown herein is filled with water to the desired level. The heater 30 is then lighted and by thermosyphon circulation, the water in the tank is gradually brought up to boiling temperature and without the formation of steam, or the like, because at the same time the products of combustion are discharged into the upper part of the chamber, thereby building up a back pressure in the chamber 10.

35 The screen 33 prevents circulation of any soap chips, and the like, from being freed from the side walls of the container and passing into the conical heating tube 31 and clogging the same. When the water has been sufficiently heated, the heating action is stopped by stopping heater 30 and then the motor 16 is started for washing purposes. Screen 34a may also be provided when desired.

45 The clothes to be washed are supplied to the washing drum 12 and then power is applied from the motor 16 to the drum, through the control 18. After the clothes have been sufficiently washed, the control 18 is energized to disconnect the cylinder 12 from the motor 16. The clothes then may be removed from the cylinder when the cover 21 is removed. At this time, control 18 is actuated to connect the shaft 17 of the power supply to the wringer mechanism to the motor 16 and the clothes then, as they are taken from

the cylinder 12, are supplied to the wringer for wringing purposes.

If desired, the invention disclosed herein is capable of operating for heating purposes while the cylinder is in operation and this may be of oscillating or rotary character. Such operation, of course, will if the water is supplied with the proper amount of soap, produce a considerable amount of suds. The heater if operated during such suds formation, will create a pressure upon the top of the suds layer and prevent undue formation of the same. It is the soap in solution which effects the cleaning and not the suds, these merely representing the fact the soap has been sufficiently dissolved in the water. If desired, the heater may be provided with the control valves 38 at the intake end and 39 at the discharge end, and such valve additions are auxiliary in character.

While the invention has been illustrated and described in great detail in the drawing and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. In combination a covered container adapted to contain suds forming liquid in an appreciable amount sufficient to fill more than half of the container and providing an air space above the liquid level and below the cover of the container, and a heating mechanism juxtapositioned relative to the container and having a liquid heating conduit communicating at opposite ends with the container for cycling the liquid therein in the heating thereof, said heating mechanism including a self-contained heating element com-

prising a discharge means for the products of combustion from said mechanism, said means communicating with the air chamber above the liquid level in the container for the restricted venting of the products of combustion, the heating mechanism products of combustion creating sufficient back pressure in the container above the liquid level therein to prevent the excessive formation of suds in the container, the liquid heating conduit discharging into the container below the normal liquid level thereof and adjacent that liquid level, the liquid discharge and combustion means discharge being substantially vertically aligned.

2. In combination a covered container adapted to contain suds forming liquid in an appreciable amount sufficient to fill more than half of the container and providing an air space above the liquid level and below the cover of the container, and a heating mechanism juxtapositioned relative to the container and having a liquid heating conduit communicating at opposite ends with the container for cycling the liquid therein in the heating thereof, said heating mechanism including a self-contained heating element comprising a discharge means for the products of combustion from said mechanism, said means communicating with the air chamber above the liquid level in the container for the restricted venting of the products of combustion, the heating mechanism products of combustion creating sufficient back pressure in the container above the liquid level therein to prevent the excessive formation of suds in the container, the liquid heating conduit discharging into the container below the normal liquid level thereof and adjacent that liquid level, the combustion discharge means discharging to the container approximately midway between the top thereof and the normal liquid level.

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