

Dec. 15, 1931.

C. F. BLOOM

1,836,063

WASHING AND DRYING MACHINE

Filed Dec. 11, 1928

2 Sheets-Sheet 1

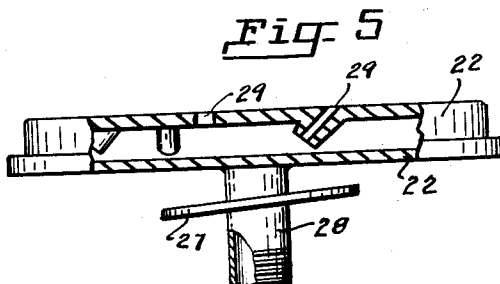
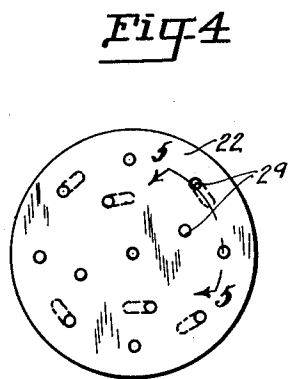
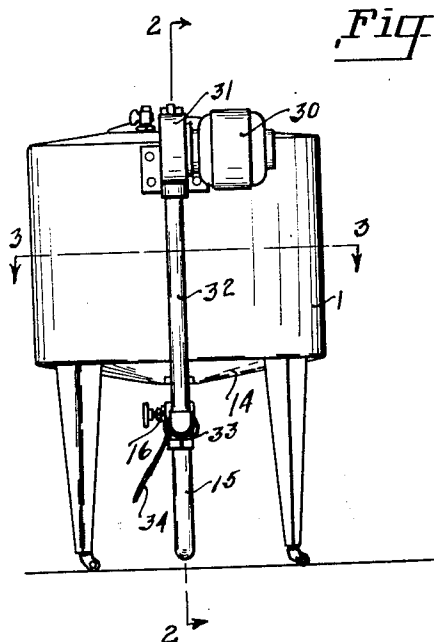


Fig 6

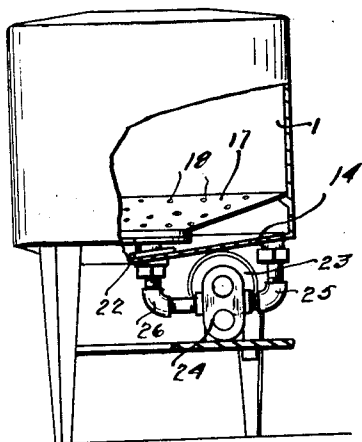
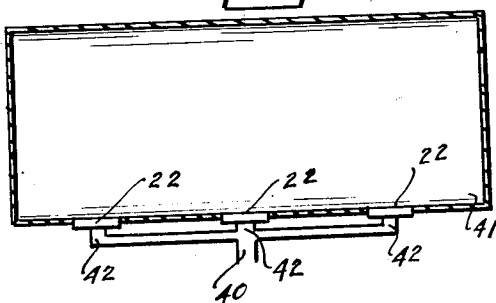


Fig 8



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Fig. 2

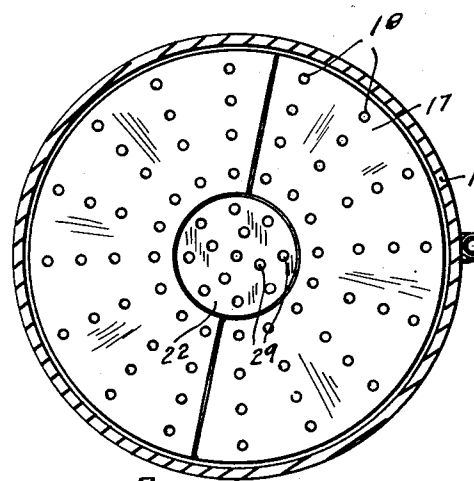
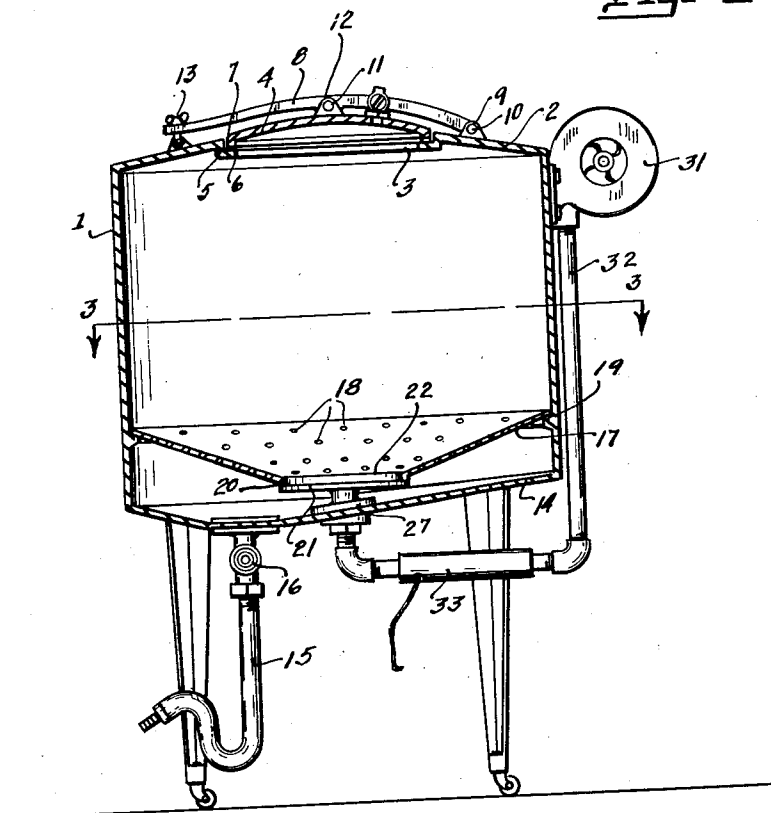


Fig. 3

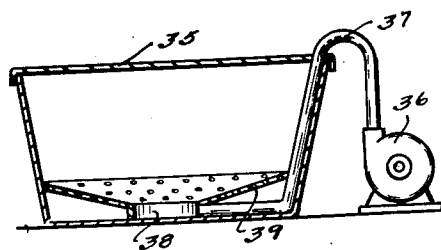


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UNITED STATES PATENT OFFICE

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WASHING AND DRYING MACHINE

Application filed December 11, 1928. Serial No. 325,330.

My invention relates to washing and drying machines and is primarily intended for domestic use, though the same may be used in a modified form for commercial purposes. The machine may be used for the washing and drying of dishes and other utensils.

The invention consists primarily of an enclosed chamber having a perforated diaphragm disposed in spaced relationship with the bottom of the chamber and having a spraying head associated with the diaphragm; means being provided for the circulating of the cleansing fluid by pumping and means being further provided for the heating or warming of the fluid medium.

One of the objects of my device consists in providing means for the laundering of products and their drying or partial drying within one chamber, these operations being done rapidly and with a saving in time and material. I also provide means whereby these results may be accomplished with a minimum of handling of the materials to be cleaned.

With these and incidental objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claim, and a preferred form of embodiment of which is hereinafter shown with reference to the drawings which accompany and form a part of this specification:

In the drawings:

Fig. 1 is a front elevation of the assembled device in preferred embodiment.

Fig. 2 is a sectional, side elevation of the assembled device, the same being taken on line 2—2 of Fig. 1, looking in the direction indicated.

Fig. 3 is a horizontal, sectional view of the assembled device, the same being taken on line 3—3 of Fig. 1, looking in the direction indicated.

Fig. 4 is a top, plan view, of the spraying head of the device.

Fig. 5 is a side view, partially in section, of the spraying head.

Fig. 6 is a side view of another preferred form of embodiment of my device, the same

being partially in section, to better illustrate the same.

Fig. 7 is still a further form of embodiment of my device illustrating the same in use with the ordinary wash tub.

Fig. 8 is a side elevation, of a commercial laundry cylinder, illustrating one of my devices in place and position to be used in conjunction with the same.

Like reference characters refer to like parts throughout the several views.

My device is primarily intended for use as a domestic laundry machine wherein the body portion 1, which may be made in any desirable form, has a cylinder terminating in a top closure 2. The top closure 2 has a cut out 3 centrally thereof so that a relatively tight lid 4, may be secured thereto. A depression 5, is formed in the top closure to form a horizontal rim 6, upon which the closure 4 may be made to rest. A gasket 7, in any desirable form, is disposed between the rim 6 and the closure 4, to form a relatively tight seal between the two. The closure 4 is actuated through the medium of a handle 8. The handle 8 is hingedly secured to the top closure 2, through a journal pin 9. The journal pin 9 is supported within a suitable bracket 10. The closure 4 is hinged relative to the handle 8 by a pin 11. The pin 11 is journaled within the upwardly extending lugs 12. In order to maintain a relatively tight connection between the closure and the lid, the handle 8 may be clamped relative to the lid by any suitable means, as by an adjusting thumb screw 13. Referring to Figs. 2 and 6, an inclined bottom 14, disposed upon the lower part of the body element drains the cleansing fluid to the discharge outlet 15. A valve 16 is disposed within the outlet for regulating the flow. A false bottom 17 composed of two sections, is disposed within the body element and is in spaced relationship with the primary bottom 14. The false bottom is preferably made with a downwardly sloping wall and with a relatively large number of perforations 18, disposed therein. The perforations permit a free circulation of the cleansing fluids. The false bottom 17 is removably disposed within the body element

and has the outer peripheral edges of the same resting upon a supporting ledge 19, disposed within the body element and the inner peripheral edge 20, resting upon a collar 21, disposed upon the spray head 22. The spray head 22 is illustrated somewhat in detail in Fig. 4 and in Fig. 5. A cleansing fluid, as a soapy solution, is circulated under substantial pressure through the head by the prime mover, as an electric motor 23 shown in Fig. 6. A suitable pumping unit 24 is driven by the prime mover for circulating the solution. A suitable piping connection 25 conducts the solution through the bottom 14 into the pump 24 and the piping connection 26 conducts the pumped solution to the distributor head 22. A collar 27 is disposed about the stem 28, disposed upon the lower side of the head, the purpose of which is to engage the bottom of the body. A plurality of openings 29 disposed in the head distribute the pumped solution that is under pressure. The outlets 29 are inclined to the horizontal to the main inlet conduit and discharge the solution at an angle to the surface of the head, the purpose of which is to raise and cause the material to rotate as it is being laundered within the body member. The partial raising and rotating of the materials being washed permits of a free draining of the pumped solution from the body 1. A second prime mover 30, may be placed upon the body member having a pressure blower 31, associated therewith and a conductor pipe 32 conducts the air past the heating elements inclosed in casing 33. The heating elements heat the air as it is driven through the head 22. A large amount of air is carried to the clothes in this manner after the clothes have been washed. When the valve 16 is closed, a substantial pressure is developed within the body member because the air is under pressure and enters a closed chamber. This squeezing pressure compresses the clothes and relieves the materials being laundered from water. The forcing of warmed air in substantial quantities through the clothes quickly dries and aerates the same. The heating of the air passing through the casing 33, may be accomplished in any suitable manner, as by passing an electric current through the conductor 34 and through a resistance coil placed within the casing 33. In certain fabrics the entire washing may be accomplished by the causing of agitation to the clothes by the circulating of air only through the washing solution by the mechanism illustrated in Fig. 2. Where a simple unit is required for small washings, the result may be accomplished, as illustrated in Fig. 7, wherein air is forced into the base of the tub 35 by a driven blower 36 having a piping connection 37 that delivers the air to the head 38. The head 38 rests upon the bottom of the tub 35 and the diaphragm 39 rests upon the head 38. A similar result may be accom-

plished as illustrated in Fig. 8, wherein air or water may be supplied to the distributor pipe 40 by any suitable means and be redistributed into the cylinder 41 by a plurality of outlets 42, this form of construction being used where the device is being used in a laundry and wherein the present cylinder equipment of the laundry is being used for laundry purposes.

While the form of mechanism herein shown and described is admirably adapted to fulfil the objects primarily stated, it is to be understood that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claim which follows.

What I claim is:

A device of the class described comprising a clothes holding receptacle having an opening disposed centrally of the bottom of the receptacle, a spray head within the receptacle and having a central inlet opening in registerable alignment with the opening in the receptacle, said spray head having a collar disposed about its outer periphery providing a shoulder and having openings through its surface inclined to said central opening for imparting angular motion to the fluids entering the receptacle through the spray head, a perforated concave diaphragm within the receptacle and detachably mounted upon said collar, a drain disposed through the bottom of the receptacle, a conduit connected with the spray head and a pump interposed in the conduit to direct fluid to the spray head.

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