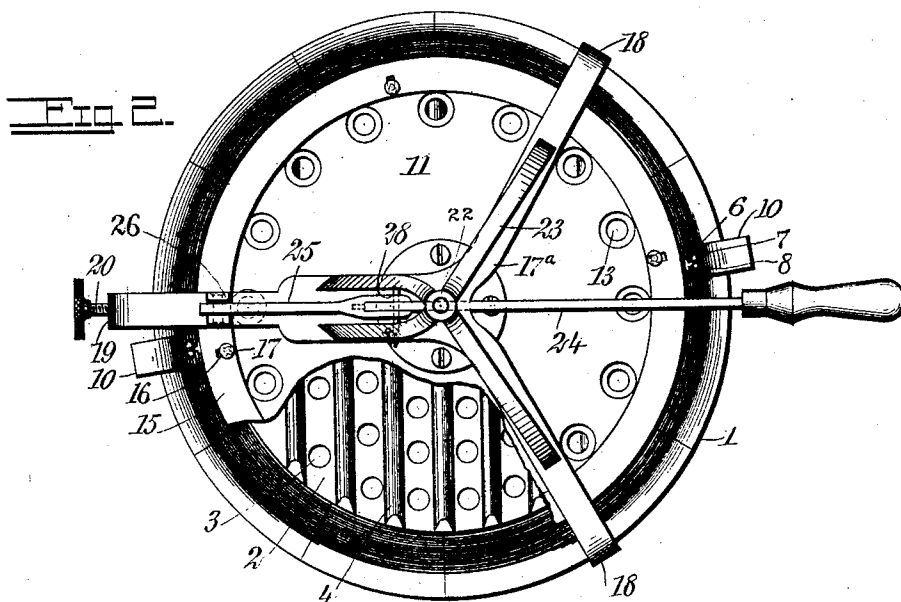
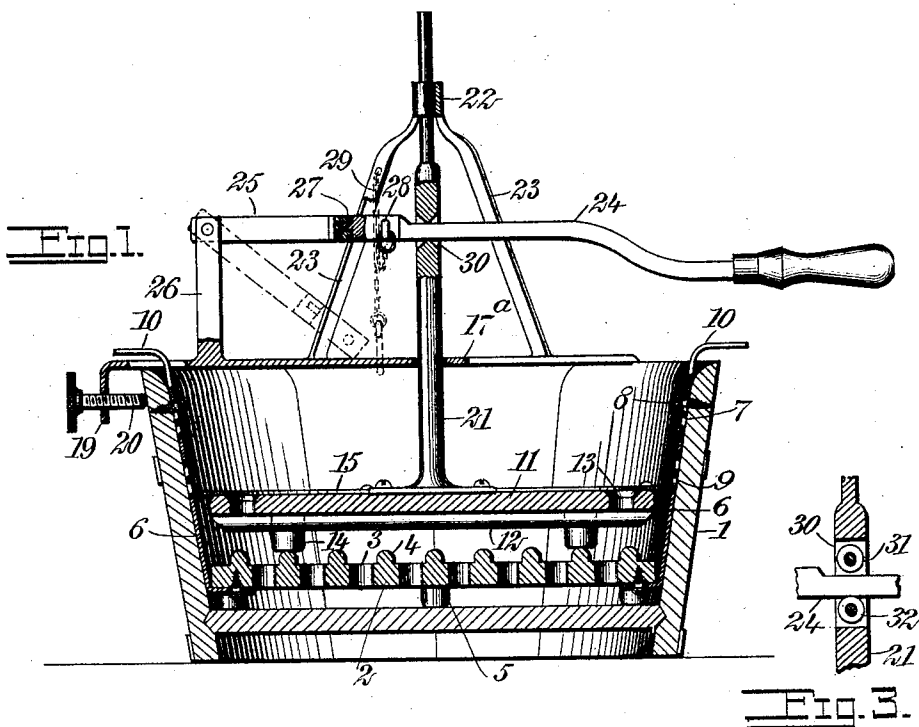


No. 823,323.

PATENTED JUNE 12, 1906.

G. W. DUNGAN.
WASHING MACHINE.
APPLICATION FILED MAY 9, 1905.



WITNESSES:

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GEORGE W. DUNGAN, OF SHENANDOAH, PENNSYLVANIA.

WASHING-MACHINE.

No. 823,323.

Specification of Letters Patent.

Patented June 12, 1906.

Application filed May 9, 1905. Serial No. 259,523.

To all whom it may concern:

Be it known that I, GEORGE W. DUNGAN, a citizen of the United States, and a resident of Shenandoah, in the county of Schuylkill and State of Pennsylvania, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

This invention relates to improvements in machines for washing clothing, the object being to provide a washing-machine of simple and novel construction that may be of comparatively small size, yet capable of rapidly and thoroughly cleansing the clothing.

Other objects of the invention will appear in the general description.

I will describe a washing-machine embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional elevation of a washing-machine embodying my invention. Fig. 2 is a plan thereof, and Fig. 3 is a sectional detail of the bearing for the actuating-lever.

Referring to the drawings, 1 designates a tub, which may be of any suitable or desired size, and removably placed on the bottom thereof is a scrubbing-board 2, having perforations 3 and also having upwardly-extended ribs 4. The scrubber-board is provided on the lower side with lugs 5, which rest upon the bottom of the tub and support the board above the same, thus permitting of a free circulation of water. The scrubber-board is provided with means for elevating it and holding it in the tub for convenience in removing or rinsing the clothing. This means consists of metal straps 6, secured to the board and passing upward along the inner side of the tub. The straps are provided with slots 7 for receiving pins or lugs 8, arranged in the tub, when the said board is in its lowermost position. The straps are also provided with slots 9 for receiving said lugs 8 when the scrubber-board is elevated. The lugs 8, it will be noted, are headed, and the slots at the lower end are sufficiently large to permit the said heads to pass into the slots. The upper ends of the straps 6 are turned outward to form handles 10.

Coacting with the scrubber-board is a plunger 11, having ribs 12 on its under side and also provided with perforations 13,

through which water may circulate. On the under side the plunger is provided with legs 14, designed to engage the ribs on the scrubber-board and prevent the plunger from passing too far downward. The plunger is made of wood, and therefore is subject to expansion and contraction, and to adapt the plunger to tubs of different sizes I may employ a metal ring 15, which will extend outward beyond the periphery of the plunger, and this ring is provided with slots 16, through which pins 17 pass into the plunger, this construction allowing for the expansion and contraction of the plunger relatively to the ring.

Removably attached to the upper end of the tub is a spider 17^a, consisting of metal, two of its arms having downwardly-turned portions 18 for engaging the sides of the tub, and the other arm is provided with a downwardly-turned portion 19, having a threaded perforation through which a locking-screw 20 passes to impinge against the outer surface of the tub, thus holding the spider with the parts carried thereon rigidly in place and suitably centered.

Extended upward from the plunger 11 is a plunger-rod 21, passing through a central opening in the spider 17^a and also having its reduced upper end extended through a bearing-ring 22 on the upper end of uprights 23, attached to the arms of the spider. For moving the plunger up and down, or for giving it a reciprocating rotary motion, I employ a lever consisting of two parts 24 25, the part 25 being pivotally connected to a post 26, extended upward from one of the spider-arms. The inner end of the lever-section 25 is bifurcated to receive the end of the section 24, and the end of said section 24 is provided with an extension-lug 27 for engaging in a perforation in the end of the lever-section 25. The bifurcated members of the lever-section 25 are perforated, and the section 24 of the lever is also perforated in alinement with the perforations in the sections 25, these perforations being designed to receive a pin 28, which to prevent loss is conveniently attached to one of the uprights 23 by means of a chain 29. The extension-lug 27 by engaging in the perforations in the lever-sections 25 will prevent the section 24 from swinging on the pin 28. When the parts are thus engaged, up-and-down motion may be imparted to the plunger 11, as it will be noted that the section 24 of the actuating-lever passes through an opening 30 in the plunger-rod. If desired,

antifriction-rollers 31 32 may be placed in the opening for engaging the upper and lower sides of the lever, as indicated in Fig. 3.

When it is desired to give the plunger a reciprocating rotary motion on a horizontal plane, the section 24 of the actuating-lever is to be released from the section 25 after withdrawing the pin 28. It will be noted that the spider-arms between which the lever-section 24 is arranged are sufficiently wide apart to permit of a suitable rotary motion.

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

1. A washing-machine comprising a tub, a scrubber-board removably arranged in the lower portion thereof, a plunger coacting with the scrubber-board, and an extension-ring on the plunger, the said extension-ring having slots through which pins on the plunger pass permitting of expansion and contraction of the plunger-body relatively to the extension-ring.

2. A washing-machine comprising a tub, a scrubber-board arranged in the lower portion thereof, a plunger having an upwardly-extending rod, a spider removably attached to the upper end of the tub and having a central opening through which the plunger-rod passes, uprights mounted on said spider and having a bearing for the upper end of the plunger-rod, the said plunger-rod having a transverse opening, a post extended upward from the spider, and an actuating-lever pivoted to said post and passing through the transverse opening in the plunger-rod.

3. A washing-machine comprising a tub, a scrubber-board arranged in the lower portion thereof, a plunger coacting with the scrubber-board, a rod extended upward from the plunger and having a transverse opening, a spider seated on the upper end of the tub and having a central opening through which the plunger-rod passes, and an actuating-lever having

a portion extended through said opening in the rod, the said actuating-lever consisting of two detachable sections.

4. A washing-machine comprising a tub, a scrubber-board arranged in the lower portion thereof, a plunger coacting with the scrubber-board, a rod extended upward from the plunger, a spider detachably connected with the tub and having an opening through which the plunger-rod passes, uprights on the spider supporting a bearing for the upper end of the plunger-rod, a post extending upward from the spider, a lever having swinging connection with said post and having a portion passing through an opening in the plunger-rod, the said lever consisting of two sections, one section at its inner end being bifurcated to receive the adjacent end of the other section, the said bifurcated portions and the inserted end of the said other section of the lever being perforated, and a locking-pin for passing through said perforations.

5. A washing-machine comprising a tub, a scrubber-board arranged in the lower portion thereof, a plunger coacting with the scrubber-board, a rod extended upward from the plunger and having a transverse opening, a spider detachably connected to the tub, a post extended upward from the spider, a lever having swinging connection with the post and consisting of two sections, the inner end of one section being bifurcated to receive the adjacent end of the other section, the said bifurcated section having a perforation in its end, an extension-lug on said other section on the lever for engaging in said perforation, and a locking-pin for the two sections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. DUNGAN.

Witnesses:

EDWARD W. SHOEMAKER,
HARRY MELLET.