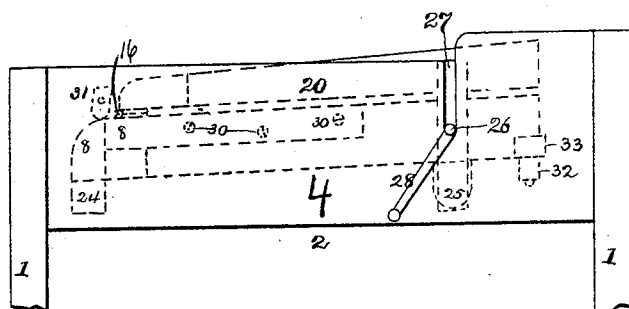
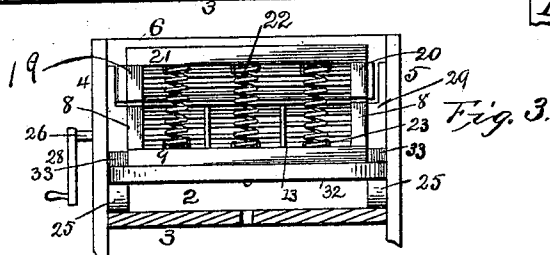
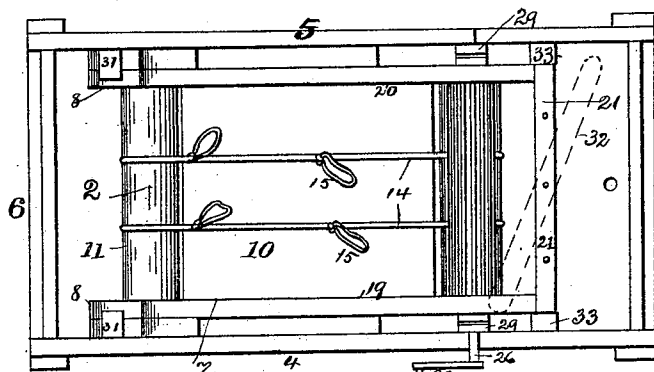


J. E. RATCLIFF.
WASHING MACHINE.

Patented Sept. 29, 1891.



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JAMES ELMORE RATCLIFF, OF DAWSON, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 460,446, dated September 29, 1891.

Application filed December 8, 1890. Serial No. 373,996. (Model.)

To all whom it may concern:

Be it known that I, JAMES ELMORE RATCLIFF, a citizen of the United States, residing at Dawson, county of Sangamon, State of Illinois, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention has relation to washing-machines; and it consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of the machine. Fig. 2 is a longitudinal section. Fig. 3 is an end view with the end of the box removed and the legs broken off. Fig. 4 is a side elevation with the interior parts attached to the box and the frames, outlines in dotted lines.

Like numerals of reference indicate the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by numerals, 1 1 indicate the legs which support a box 2, rectangular in shape and composed of a bottom 3, sides 4 5, and ends 6 6. This box answers the purpose of a tub, and the operative mechanism is located within it. A frame 7, consisting of side bars 8 8, end bar 9, and a connecting-board 10, supports two rollers—viz., a smooth roller 11, journaled in the side bars 8 beyond one end of the board 10, and a longitudinally-grooved roller 12, journaled in the sides beyond the other end of the board 10. These two rollers 11 and 12 are each provided with annular grooves 13, in which work cord or rope belts 14, carrying loops 15, by means of which the clothes to be washed are carried around these rollers and the board 10. Hinged to the frame 7 at 16 is another frame 17, which carries a longitudinally-grooved roll 18, journaled in the side bars 19 20, said side bars being secured together by an end bar 21, the roller 18 being located immediately above the roller 12 in frame 7 and the end bar 21 over the end bar 9 of frame 7. The rollers 18 and 12 are normally held in contact by springs 22, secured to the end bars 21 and

9 by means of staples 23 straddling the wires of the end coils of said springs and driven into the end bars 21 and 9. The two frames are elevated above the bottom 3 of the box 2 by means of legs 24, projecting downward from frame 7 at one end, and blocks 25, secured to the inside of the sides of the box 2 near the other end. The journals 26 of roller 12 project through slots 27 in the sides 4 and 5 of box 2, and a crank 28 is secured at one end, by means of which the roller may be rotated. Blocks 29 are secured outside the frame 7, which project upward just inside the slots 27 to prevent water splashing out through said slots. These blocks rest on blocks 25 on the sides of the box, as before described. The frame 7 has its sides made in two parts, which are secured together by screws 30, whereby they may be adjusted with relation to each other, thus lengthening and shortening the frame to keep the cord-belts taut.

Attached to the inside of the sides of the box are turn-buttons 31, which serve to lock the frame down at one end, while the other end is held down by means of a bar or long turn-button 32, pivoted to the under side of end bar 9 of frame 7, which is shown turned aside, so as to be inoperative, in dotted lines in Figs. 1 and 2, and in Fig. 3 in operative position, with its ends engaging under blocks 33, secured to the inside of the sides of the box.

The operation of my invention may be described as follows: A sufficient quantity of suds or soapy water having been placed in the box, the articles to be washed are secured in the loops 15 of the cord-belts 14. The roller 12 is then rotated by means of the crank, causing the clothing to be carried over board 10, through between the corrugated rolls 12 and 18, back under board 10, through the water up around roll 11, and again over board 10, and so on until they are thoroughly cleansed. The rolls, as before stated, are yieldingly held toward each other by the springs and will give to suit the thickness of material to pass through. The frames are held securely in the box, as described, but may be removed at will by simply disengaging the turn-buttons.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination, a frame having side bars and a connecting-board, a roller journaled in the side bars at the ends of the connecting-board and connected by belts which encircle
5 the connecting-board, a second frame pivoted to the first at one end and having a roller journaled in its side bars in position to engage the roller below it, and springs connecting and normally drawing the frames and
10 rolls toward each other, as set forth.

2. In combination, the frame carrying rollers and provided with legs 24, blocks 29, and pivoted bar 32, with the box 2, having turn-buttons 31, blocks 25, and blocks 33, the legs
15 24 serving to elevate the frame above the bottom of the box, the blocks 29 resting on blocks 25 for the same purpose, and the turn-buttons and blocks 33 serving to lock the frame in position in the box, as set forth.

20 3. In combination, the frame 7, having side bars 8, end bar 9, and connecting-bar 10, the

rollers 11 and 12, journaled in side bars 8 at the ends of the board 10 and connected by belts, the frame 17, hinged to frame 7 at 16 and provided with end bar 21, the roller 18,
25 journaled in frame 17 over roller 12, and the springs 22, serving to draw the frames toward each other, as set forth.

4. In combination with the pivoted frames 7 and 17, carrying rollers 12 and 18, one below the other, the lower one having its journal extended, the box having slots 27, through
30 which the journals pass, and the blocks 29, secured to the outside of the lower frame 7 and projecting upward between the rolls and
35 the slots 27 to prevent the escape of water through said slots, as set forth.

JAMES ELMORE RATCLIFF.

Witnesses:

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JOSEPH B. PERKINS, Jr.