W. H. NICHOLSON.
Washing-Machine.

No. 200,800. Patented Feb. 26, 1878.

Fig. 1

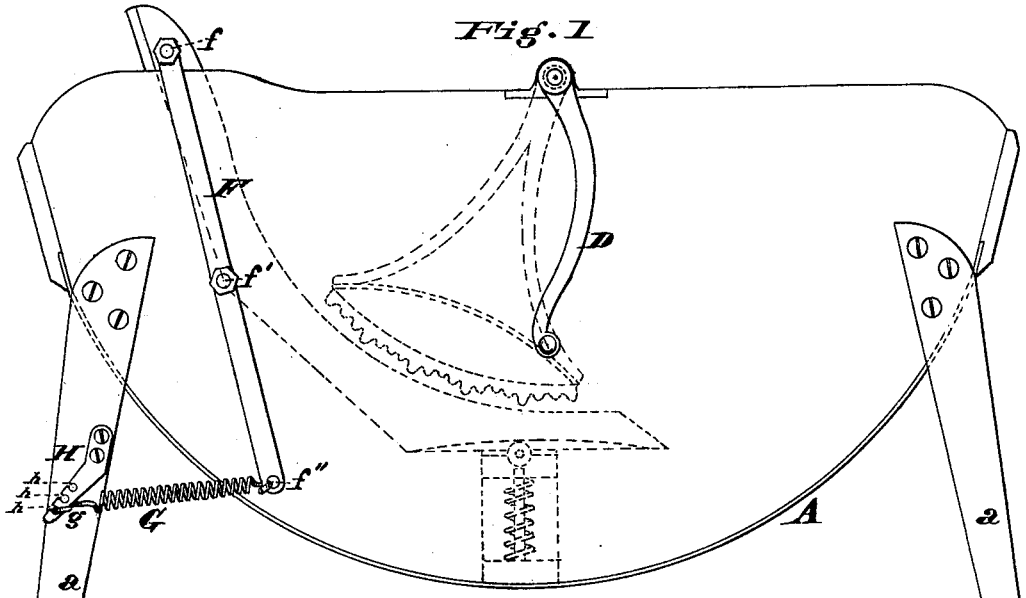
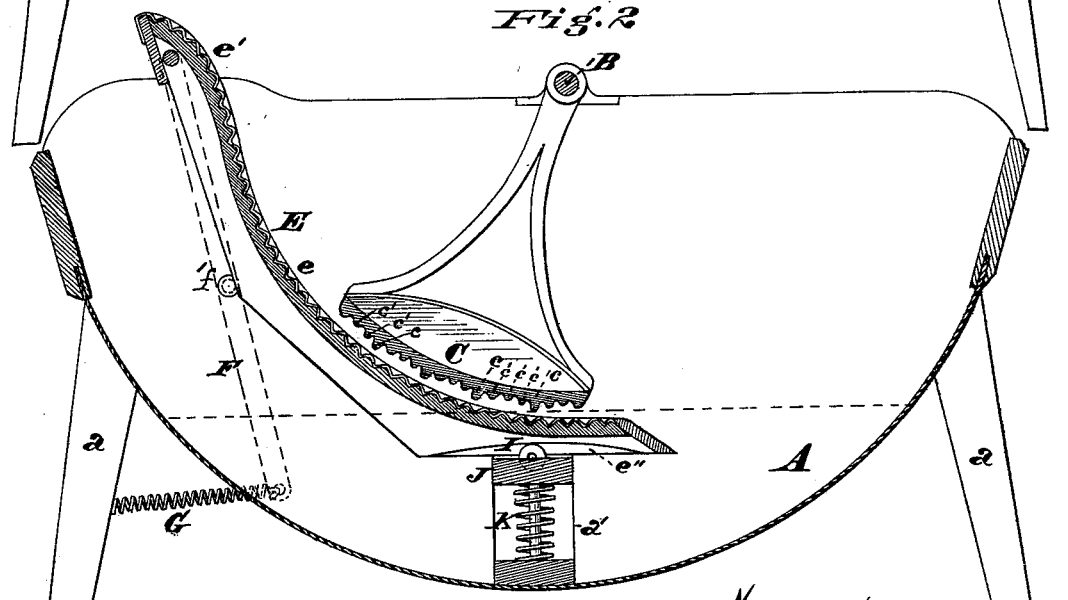


Fig. 2



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WILLIAM H. NICHOLSON, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND JOSEPH M. STEPHENS.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **200,800**, dated February 26, 1878; application filed September 22, 1877.

To all whom it may concern:

Be it known that I, WILLIAM H. NICHOLSON, of Cincinnati, Hamilton county, State of Ohio, have invented an Improvement in Washing-Machines, of which the following is a specification:

My invention consists in certain new and improved constructions of the various parts of the washing-machine, as will be hereinafter explained, by which better results in washing are attained, and greater convenience in the manipulation of the clothes is afforded than heretofore.

In the accompanying drawings, Figure 1 is a side elevation of my machine. Fig. 2 is a longitudinal section of the same.

A is the tub, supported on legs *a*, and having journaled across it the shaft B. To this shaft, inside the tub, by means of side arms, as shown, is securely attached a rubber, C. This is operated by the handle or crank-arm D, and it is intended, in the operation of my machine, to give this rubber a vibratory motion, to rub the clothes, and also a rotary motion, to permit the clothes to turn over and fall to the bottom of the wash-board in a new position, the latter operation being effected in consequence of the peculiar configuration and position of the wash-board.

E is the wash-board. It has, as shown, both a concave surface, *e*, and a convex surface, *e'*, and is located so that the convex surface is at the top of the tub.

In operation, the clothes may be kept in the concave and rubbed as long as desired; or they may, as they are rubbed, be gradually fed up toward the convex part, the feeding being accomplished by causing the rubber to swing past the lower end of the wash-board before the return stroke. In addition to this operation, the turning over of the clothes is accomplished automatically by giving the rubber a rotary motion, as the clothes are thereby carried up onto the convex part, whose presence prevents them from falling over the upper edge of the wash-board, and whose shape causes the clothes to roll over and fall to the bottom of the wash-board, ready for the return sweep of the rubber.

The wash-board, which may be faced with zinc in any preferred way, is secured to two side stiffening-pieces, which, at the bottom *e''*, are rabbeted, to receive anti-friction rollers I, which are journaled in the block J, which slides in ways *a'* in the sides of the tub, and rests upon a spiral spring, K. This secures to the lower end of the wash-board a vertically-yielding support, and a horizontal movement on the rollers I.

The upper end of the wash-board is also adapted for backward and forward movement by the following device: On each side of the tub a lever, F, is pivoted at *f'*, whose upper end has a swiveling connection with the top of the wash-board at *f*. At *f''* springs G are attached, whose hooked outer ends engage over the notches *h* of the brackets H. The angularity of the bracket and the series of notches therein gives the means for increasing or diminishing the tension of the spring, and in this way the machine may be adapted for washing thick or thin fabrics.

The projecting cross-ribs of the rubber C are made in sets or groups, there being a series of prominent ribs, *c*, and between each pair of these a number of ribs, *c'*, of less projection. This configuration gives better results in washing than any heretofore attained.

I claim—

1. A washing-machine having a journaled rubber, adapted for both vibratory and rotary motion, and a localized wash-board, whose face presents both a concave and convex surface, substantially as and for the purpose specified.

2. The combination, substantially as specified, of the vibratory rubber, the wash-board, the vertically-yielding spring-frame supporting the lower forward end of the wash-board, and the pivoted vibratory spring-levers, to the upper arms of which the top of the wash-board is pivoted.

3. In combination with the levers F and springs G of the wash-board E, the notched inclined brackets H *h*, substantially as and for the purpose specified.

In testimony of which invention I hereunto set my hand.

WILLIAM H. NICHOLSON.

Witnesses:

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