B. F. CADY.

Washing-Machine.

No. 214,239. Patented April 15, 1879.

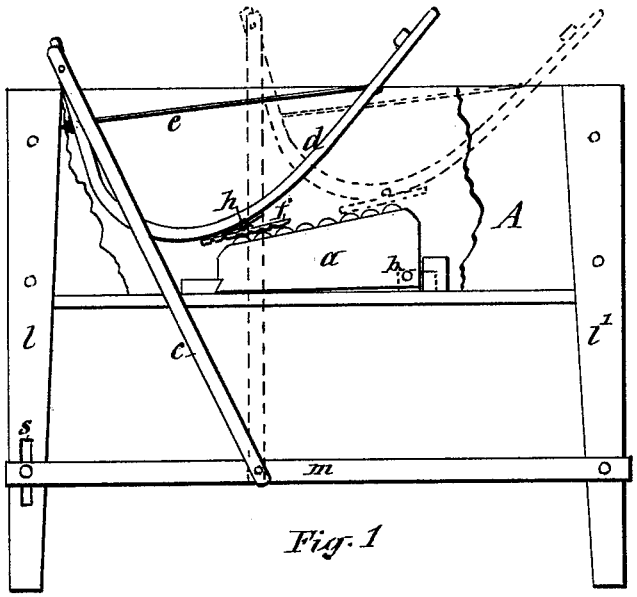

Fig. 1

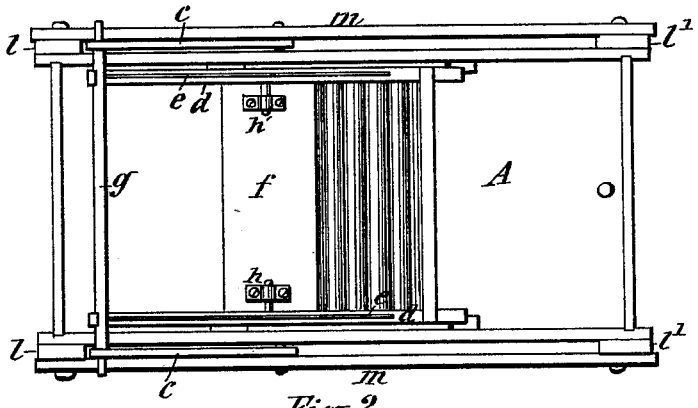

Fig. 2

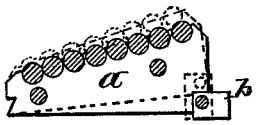

Fig. 3

WITNESSES:

A. Bell

C. Bendixen.

INVENTOR:

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per E. Laass, his Atty.

UNITED STATES PATENT OFFICE.

BENJAMIN F. CADY, OF SYRACUSE, NEW YORK.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **214,239**, dated April 15, 1879; application filed September 13, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN F. CADY, of the city of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Washing-Machines, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improvements in that class of washing-machines in which a rub-board is arranged to be vibrated upon rollers in the vat or tub by means of levers connected to the rub-board and to a rock-shaft mounted on oscillating links or side arms.

The invention consists, first, in the combination and arrangement, with a washing-machine having a rub-board carried by levers connected at one end to a rock-shaft mounted on the end of oscillating side arms or links, of a bar extended from leg to leg at the sides of the machine, and connected to said legs adjustably relative to its distance from the vat, and the oscillating side arms pivoted to said bar in such relative position as to prevent them from being carried past a perpendicular position by the rearward movement of the rub-board, by which improvement the movement of the levers or handles of the rub-board can be regulated to accommodate the operator, and the operation of the machine is rendered easier and more effective.

It furthermore consists in the combination, with a rub-board carried by levers connected with oscillating arms or links, of a wash-board or roller-frame having pivoted to one end eccentric rectangular legs, whereby the angle of its inclination can be varied, and thus the movement of the levers carrying the rub-board regulated to accommodate the operator of the machine, all constructed and arranged substantially as hereinafter more fully described.

In the accompanying drawings, Figure 1 is a side view of a washing-machine with a portion of the side of the vat broken away to illustrate my improvements; Fig. 2, a top view of same; and Fig. 3, a longitudinal section of the wash-board or roller-frame detached.

Similar letters of reference indicate corresponding parts.

A is the vat to contain the water and clothes, generally elongated or of rectangular form, and mounted on legs *l l'*. Upon each of the two long sides of the machine I pivot to the hind leg, *l'*, a bar, *m*, and connect it to the forward leg, *l*, by a bolt passing through a vertical slot, *s*, in the leg, so as to admit of raising and lowering that end of the bar.

c is the oscillating link or side arm, upon the upper end of which the rock-shaft *g* is mounted. This side arm has heretofore been pivoted to a fixed point on the leg of the machine, the result of which was that in drawing the rub-board rearward the side arm was brought into an acute angle with the line of the wash-board or roller-frame, and the rear end of the levers or handles *d* carried up too high for convenience and efficiency of the operator, and required extra power to force them forward, and the forward motion of the links or side arms had a tendency to lift the rub-board off the wash-board.

To obviate these defects and render the operation of the machine more perfect generally, I pivot the side arms, *c*, to the adjustable bar *m* at such relative position as to prevent the rearward movement of the rub-board from carrying the said side arms past a perpendicular position, and further regulate the line of motion of the levers *d* by raising or lowering the bar *m* on the leg of the machine.

In order to admit of varying the form of the levers *d* to suit the operator, and at the same time render them light, strong, and durable, I construct them of light flexible strips of wood, bent into the form desired, and secure them in their shape by a tie-rod, *e*, extended across the bow.

To obtain a uniform bearing of the vibrating rub-board upon the stationary wash-board or roller-frame throughout the length of the stroke, I connect the rub-board to the levers *d* by a hinge, *h*, which allows the rub-board to conform to the variations in the relative angle of the wash-board.

a is the wash-board or roller-frame, placed stationary on the bottom of the vat A, and which, by my arrangement of the actuating mechanism connected with the rub-board, I am allowed to give the forward inclination essential to an easy and perfect washing process.

The angle of inclination I make adjustable by pivoting to the rear end of the roller-frame *a* a rectangular leg, *b*, having the pivot in one

of the corners thereof, so that, by turning the said leg on its pivot, three sides variously distant from the pivot can be brought in use and the end of the roller-frame raised accordingly.

I do not claim, broadly, the combination of the links, rock-shaft, and levers with the rub-board and wash-board or roller-frame, as I am aware the same is not new; but

What I do claim is—

1. The combination and arrangement, with the levers *d*, carrying the rub-board *f*, and connected at one end to rock-shaft *g*, of the bar *m*, pivoted at one end to the leg *l'* and connected at the opposite end to the leg *l* by a bolt through vertical slot *s* in said leg, and the oscillating arm *c*, pivoted to the bar *m* at such relative position as to prevent the said arm from being carried past a perpendicular position by the backward movement of the rub-board, substantially as described.

2. The combination, with the wash-board or roller-frame *a*, of the rectangular leg *b*, pivoted in one of its corners to the end of said wash-board, substantially as described and shown, for the purpose set forth.

BENJ. F. CADY.

Witnesses:
A. BELL,
C. BENDIXEN.