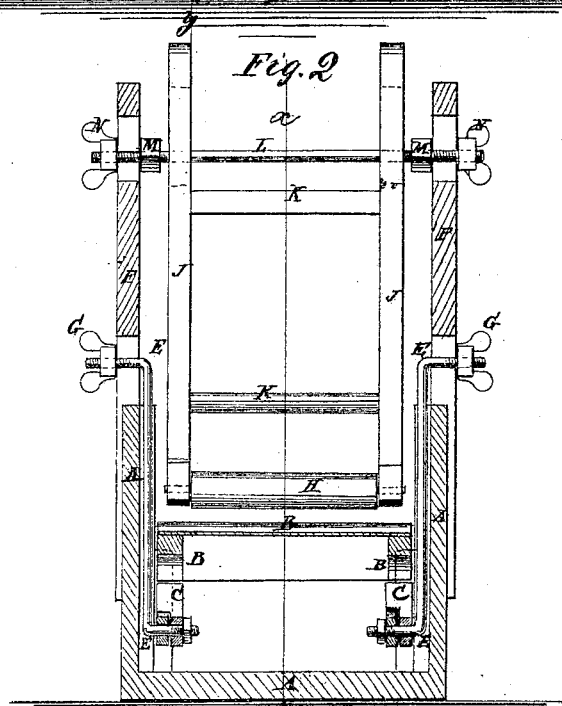
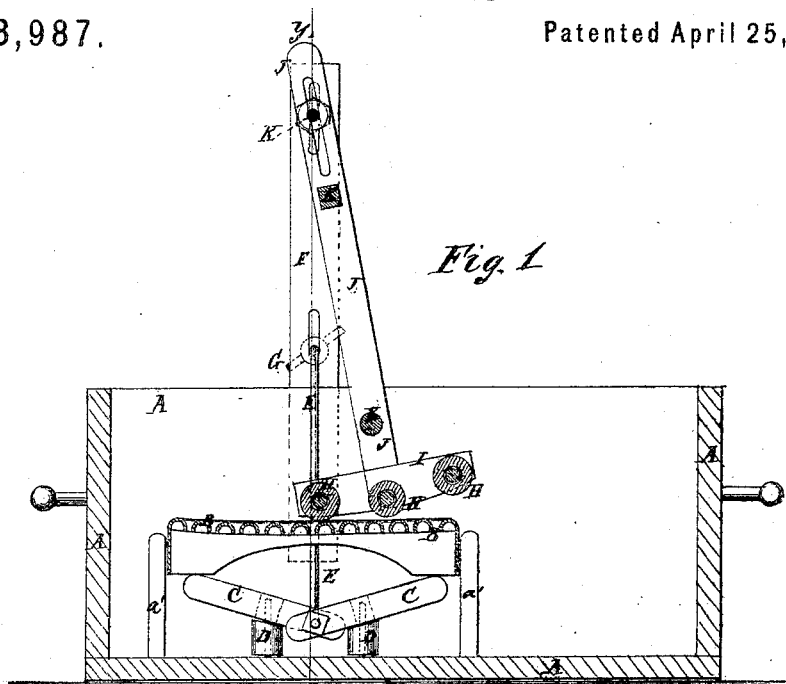


## Improvement in Washing-Machines.

Patented April 25, 1871.



Witnesses:  
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# United States Patent Office.

JOHN HILGER DOLL, OF ETNA, ILLINOIS.

Letters Patent No. 113,987, dated April 25, 1871.

## IMPROVEMENT IN WASHING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

### To all whom it may concern:

Be it known that I, JOHN HILGER DOLL, of Etna, in the county of Coles and State of Illinois, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a vertical longitudinal section of my improved machine taken through the line *x x*, fig. 2.

Figure 2 is a vertical cross-section of the same taken through the line *y y*, fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved washing-machine, simple in construction, conveniently operated, and effective in operation; and

It consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A is the box or tub of the machine.

B is the rubbing-board, which is formed by attaching small semi-cylindrical or angular ribs to two side pieces, as shown in figs. 1 and 2.

The middle parts of the lower edge of the side pieces of the rubbing-board are concaved, as shown in figs. 1 and 2, to give space for the levers C, upon which the said rubbing-board B rests, to operate.

The rubbing-board B is made of such a width as to fit into the tub A, and is kept in place by vertical cleats *a* attached to the sides of the tub A, and against which the ends of the rubbing-board B rest.

C are the levers upon which the side bars of the rubbing-board B rest, and two of which are used at each end of the said rubbing-board.

D are rubber-blocks, one of which is placed beneath each one of the levers C, and which are kept in place by pins attached to the bottom of the tub A, and which pass through the said rubber-blocks D and through slots in the levers C.

The inner ends of the levers C are halved, overlap each other, and are pivoted to the lower ends of the rods E, which pass up along vertical grooves formed for them in the sides of the tub A.

The upper ends of the rods E are bent outward, pass through vertical slots in the standards F attached to the sides of the tub A, and have screw-threads cut upon them to receive the hand-nuts G, by which they

are clamped to the said standards F. By this construction by loosening the nuts G the levers C may be adjusted to support the rubbing-board B at any desired elevation, according to the amount of water that may be in the tub, it being desirable that the rubbing-board be kept at the top of the water.

H are the rubber washing-rollers, three, more or less, of which are pivoted to cross-bars I attached to the lower ends of the bars J, which are connected and held in their proper relative position by the cross-bars K, the lower one of which serves as a handle for operating the washing-rollers.

The upper parts of the bars J are slotted to receive the rod L, so that the washing-rollers may adjust themselves to the varying thickness of the clothes being washed.

The rod L, which serves as a pivot to the bars of the washing-rollers, passes through slots in the upper ends of the standards F, and has screw-threads cut upon its end to receive the nuts M N.

The nuts M are screwed upon the ends of the rod L upon the inner sides of the standards F, and the nuts N upon the outer sides of the said standards F. By this construction by loosening the hand-nuts N the rod L may be raised or lowered to adjust it according to the adjustment of the rubbing-board B.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the rubbing-board B, levers C, rubber-blocks D, rods E, and hand-nuts G with each other and with the tub A and slotted standards F, substantially as herein shown and described and for the purpose set forth.

2. The combination of the washing-rollers H, three, more or less, cross-bars I, slotted bars J, cross-bars K, adjustable pivoting-rod L, and clamping-nuts M N with each other and with the rubbing-board B, levers C, rubber-blocks D, adjusting-rod E, nuts G, standards F, and tub A, substantially as herein shown and described and for the purpose set forth.

JOHN HILGER DOLL.

Witnesses:

ANA MARY <sup>her</sup> X OTTER,  
mark.

MARY CATREINE <sup>her</sup> X OTTER.  
mark.