

E. DICKERMAN.  
Washing-Machines.

No. 138,235.

Patented April 29, 1873.

Fig. 2.

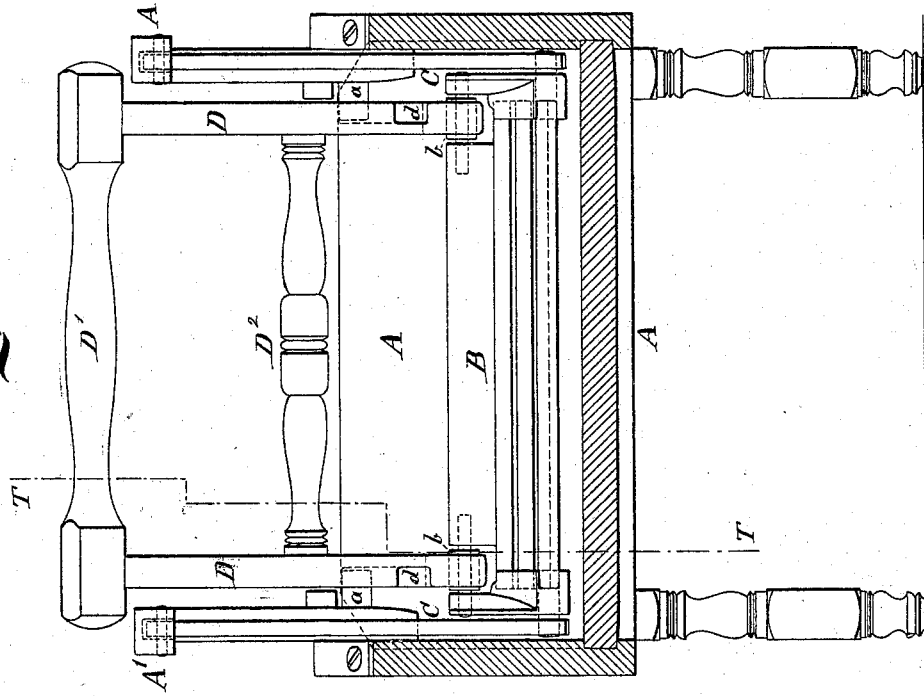
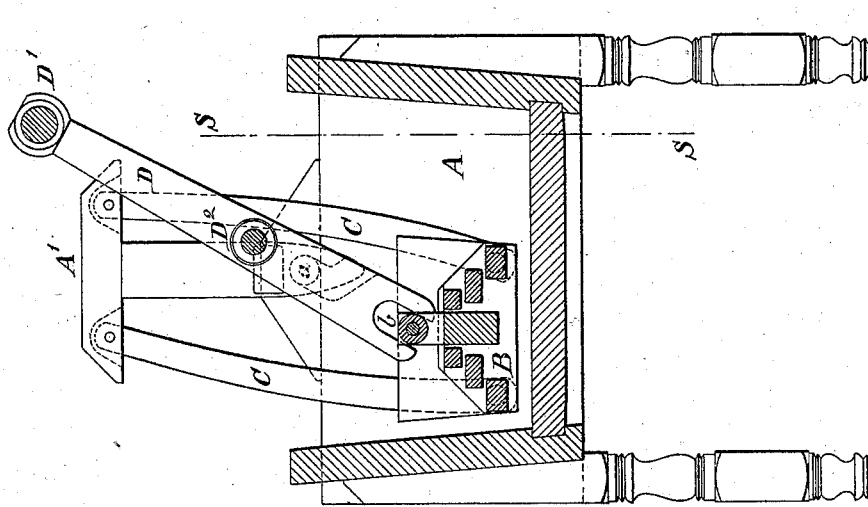


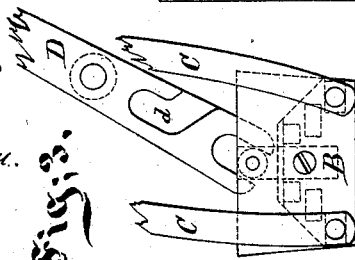
Fig. 1.



Witnesses:

*Arnold Hermann*  
*W. Westbrook*

Fig. 3.



Inventor:

*E. Dickerman*  
*his attorney*  
*J. L. Peterson*

# UNITED STATES PATENT OFFICE.

ELLIOT DICKERMAN, OF MIDDLEFIELD, CONNECTICUT.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **138,235**, dated April 29, 1873; application filed March 31, 1873.

*To all whom it may concern:*

Be it known that I, ELLIOT DICKERMAN, of Middlefield, Middlesex county, Connecticut, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification:

The machine acts by squeezing the clothes, the motion being communicated by a nearly horizontal movement of the hand. The action of operating is analogous to that of rowing a boat, which is one of the easiest for the muscles in proportion to the amount of energy expended. The clothes are squeezed in two lots by a squeezer, which is suspended on links so as to traverse nearly horizontally, but with a slight rising motion toward each end of its path. Means are provided for convenient shipping and unshipping the operating-lever.

The accompanying drawing forms a part of this specification, and represents what I consider the best means of carrying out the invention.

Figure 1 is a cross-section on the line T T in Fig. 2. Fig. 2 is a longitudinal section on the line S S in Fig. 1, and Fig. 3 shows certain parts detached.

Similar letters of reference indicate like parts in all the figures.

A is a rectangular box supported on legs at a convenient height, and A' A' are T-shaped frames rigidly mounted just within each end to form supports for the working parts. B is a squeezer. C C are links hinged to the squeezer B at their lower ends and to the T-frames A' at their upper ends, as shown. D D is a pair of levers connected by cross-bars D<sup>1</sup> D<sup>2</sup>. The lower cross-bar D<sup>2</sup> serves as a simple connection. The upper cross-bar D<sup>1</sup> is a handle, which is grasped by the hands of the operator, and by its means the levers D D and their attachments are caused to vibrate on the fixed pins *a*, which project inward from the frames A' at each end of the machine. The lower ends of the levers D D are forked and embrace rollers *b b*, which are mounted on axes in the squeezer B, as will be understood. The vibrating of the levers D causes the squeezer B to reciprocate, swinging on the links C, and thus squeezes the clothes on either side of the squeezer against the adjacent side of the interior of the box A. The outer faces of the levers D D are peculiarly

notched, as indicated by *d*, to receive the pins *a*. The lever-frame D *d* D *d* D<sup>1</sup> D<sup>2</sup> is disconnected at will and removed from the machine by first lifting it vertically a little way, and then removing it laterally. The reverse movement ships it again and puts the machine in condition for use.

The squeezer B is formed of open-work slats arranged in a stepped position, as shown. The stepped position causes the squeezing to be most violent at the bottom, and causes the clothes to roll a little or tumble inward after each squeeze. The open-work construction of the squeezer allows the water to freely circulate between the slats.

The operation of this machine is easier than any ordinary machine. The weight of the hand and arm is supported by the operating-lever. The action may be gentle, and the tension on the muscles is easy and varied. The friction of the parts is almost inappreciable. The suspension of the squeezer on long links gives a nearly horizontal movement, without friction or danger of injuring the clothes by rubbing them on any guides. The removal of the levers leaves the whole box conveniently accessible for wringing out and other ordinary treatment of the clothes. The open-work stepped construction of the squeezer B allows it to act on clothes on both sides, and to cause them to tumble and roll at each movement, and also allows a free circulation of the water during the washing operation, and of the air for drying the same after each operation.

I claim as my invention—

1. The box A, frames A', links C, and vibrating squeezer B, combined and arranged as and for the purposes specified.
2. The operating-frame D D D<sup>1</sup> D<sup>2</sup>, in combination with the vibrating squeezer B and suitable supporting and guiding means C, when the frame is connected by means of slots *d* and pins *a*, so as to be readily shipped and unshipped, as herein specified.

In testimony whereof I have hereunto set my hand this 24th day of March, 1873, in the presence of two subscribing witnesses.

ELLIOT DICKERMAN.

Witnesses:

LYMAN A. MILLS,  
WM. P. RICHARDSON.