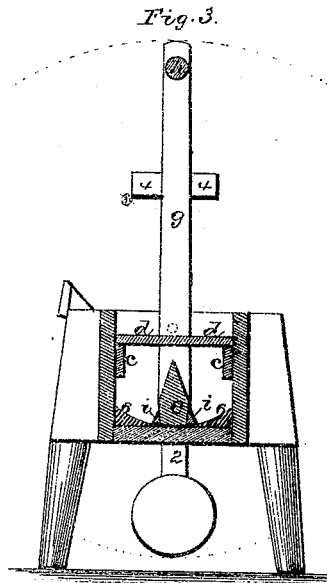
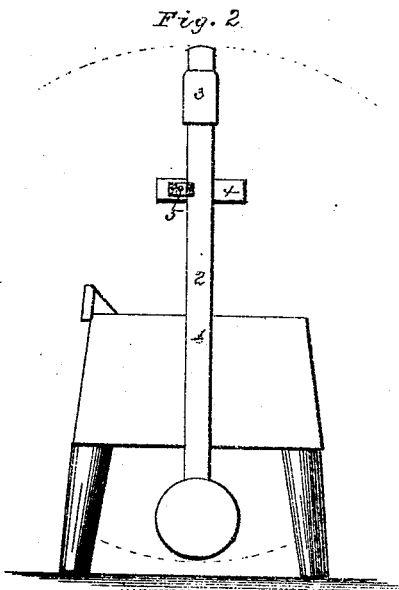
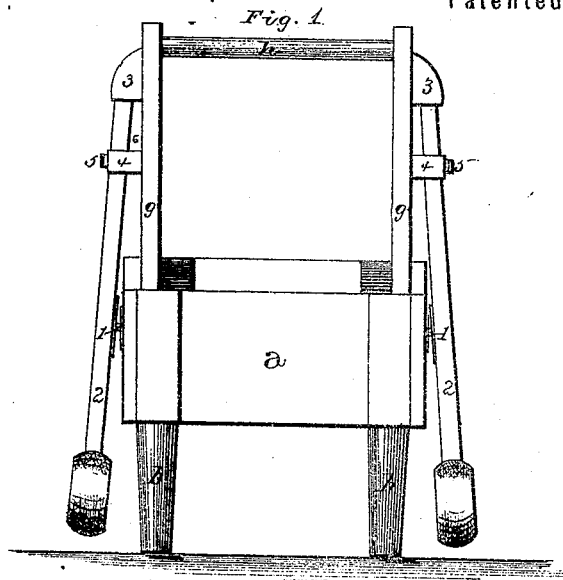


**A. E. WORDEN.**  
**Washing-Machine.**

No. 162,327.

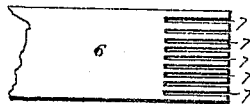
Patented April 20, 1875.



WITNESSES.

*J. W. Garner*  
*J. F. Lehmann*

Fig. 4



INVENTOR.

*A. E. Worden*  
*per*  
*F. A. Lehmann, Atty.*

# UNITED STATES PATENT OFFICE.

ASA E. WORDEN, OF SMYRNA, DELAWARE.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **162,327**, dated April 20, 1875; application filed October 31, 1874.

*To all whom it may concern:*

Be it known that I, ASA E. WORDEN, of Smyrna, in the county of Kent and State of Delaware, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in washing-machines; and it consists in the arrangement and combination of parts, which will be more fully described hereafter, whereby a simple, cheap, and efficient machine is produced.

The accompanying drawings represent my invention.

*a* represents the box, supported upon the legs *b*, having its bottom slightly raised on each side, so as to conform to the sweep of the washer, and having a slat, *c*, secured to each of its sides, upon the tops of which the cover *d* rests, and against the under sides of which the clothes are pressed by the washer *e*. This washer is secured between the lower ends of the two bars *g*, which are pivoted to the insides of the box, and have their upper ends joined together by the hand-rail *h*. To the lower edge of the washer and bars *g*, on each side, is secured a slat or strip, *i*, which project nearly down in contact with the bottom of the box, and serve to press up the clothes, as the washer is vibrated back and forth, against the under sides of the slats *c*, and thus force the hot suds through them,

by which operation the clothes are rapidly washed. Journaled upon the bearings 1, secured to the outside ends of the box, are the weighted levers 2, which have their upper ends fastened to the weights 3, secured to the outsides of the bars *g*, and which levers are secured in position, as shown, by the cross-pieces 4 and catches 5. By turning back the catches, and drawing the levers outward, they can be readily removed to make the box easier to handle. By means of the weights 3, attached to the upper ends of the bars, the washer is not only more easily operated, but with greater power.

In each of the ends of the slats 6 in the bottom of the box are cut a number of niches, slots, or perforations, 7, so that the water will, in emptying the tub, rush through them with great rapidity, and thus keep them thoroughly clear of all sediment and dirt. When the tub is not filled with water, these slits serve to air the box, and prevent any offensive smells in warm weather.

Having thus described my invention, I claim—

In a washing-machine, the combination of the levers 2, pivoted upon the end of the box *a*, and having a weight secured to each end, in combination with the arm *h*, bars *g*, and washer *e*, substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 30th day of October, 1874.

A. E. WORDEN.

Witnesses:

F. A. LEHMANN,  
T. F. LEHMANN.