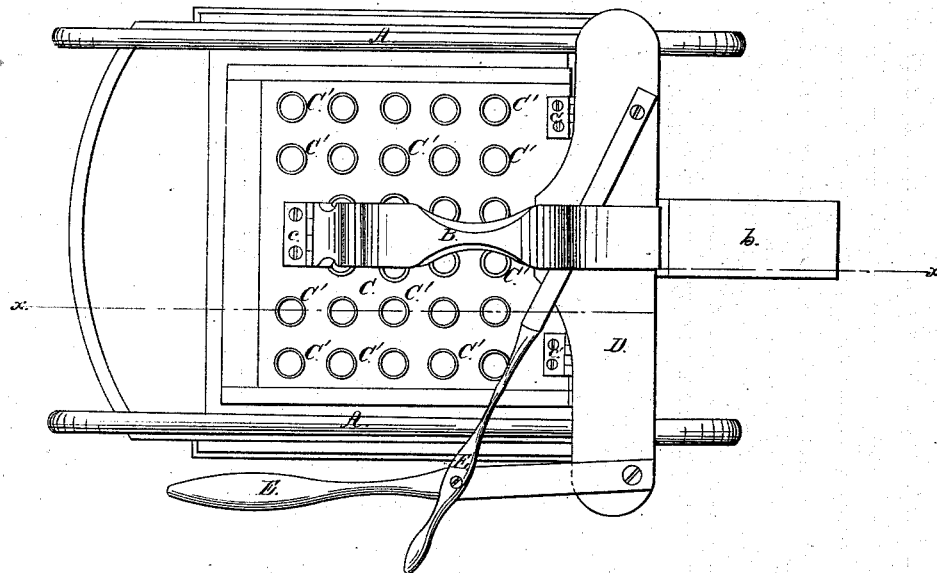


*J. T. Mudge,*  
*Washing Machine.*

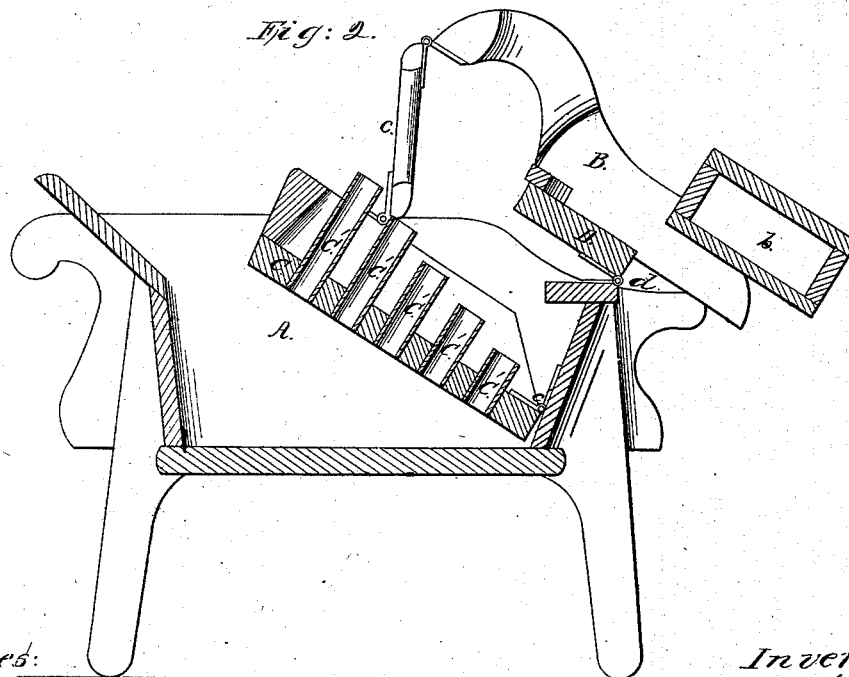
*N<sup>o</sup> 47,445*

*Patented Apr. 25, 1865.*

*Fig: 1.*



*Fig: 2.*



*Witnesses:*

*Samuel  
Wm. J. Moore*

*Inventor:*

*Jarvis T. Mudge*

# UNITED STATES PATENT OFFICE.

JARVIS T. MUDGE, OF CLEVELAND, OHIO.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 47,445, dated April 25, 1865.

*To all whom it may concern:*

Be it known that I, JARVIS T. MUDGE, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of my improved washing-machine. Fig. 2 is a vertical section of the same in the line *x x*, Fig. 1, showing more clearly the interior construction thereof.

Similar letters of reference indicate corresponding parts in the two figures.

The principal object of my invention is to obtain great mechanical pressure for squeezing clothes, with the application of but very little strength on the part of the operative.

A further object is to adapt the plunger of a washing-machine to be retracted or elevated with greater facility by preventing its surface from being overspread with water when forced down upon the clothes, all as will be hereinafter fully explained.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe in detail its construction and operation.

In the accompanying drawings, A represents the vessel or tub to contain the water and clothes, which may be of any suitable form and construction. At one end of the tub A is an arm, B, which projects to about the center of the tub, where it is connected with the plunger C through the medium of the rod or link *c*. The end of the arm B is weighted at *b*, the weight serving to wholly or partially counterbalance the weight of the plunger C, and thus permit the latter to be easily turned up on the edge at which it is hinged, (*c' c'* representing the hinges,) preparatory to being forced down upon the clothes to squeeze or compress them between itself and the bottom of the tub A.

To adapt the weighted arm B to be vibrated, it is attached to a piece, D, which is hinged at *d d* to the tub A. A vibratory movement is given the arm and the plunger C raised and depressed by means of a lever, E, fastened to the hinged piece D and braced by the rod F. This lever enables the operator to vibrate the

arm B so as to raise the plunger with very slight exertion, the weight at the end *b* preponderating after the starting of the plunger, and completing the elevation of the same. When the lever E is depressed and the arm B vibrated so as to press the plunger down upon the clothes, the momentum of the weight insures an accumulation of force and the plunger is brought down with great power upon the clothes, thoroughly compressing them and squeezing out the water.

It is manifest that to increase the impinging power of the plunger the arm B may be weighted at both ends, and this I propose to do should it become advisable.

I do not claim to be the originator of the idea of employing weight or momentum to increase the efficiency of a washing medium, but confine my improvement to the use of weights in connection with plungers of the kind represented.

By the use of weights, as described, the effective pressure of the plunger when operated by one person may be increased to more than that which could be produced by the combined strength of several operatives.

In the plunger are a number of holes through which the water passes on being displaced by the descent of the plunger. Over and within these are tubes *C'*, whose purpose is to receive the water as it comes up through the perforations, and thus prevent it from overspreading the surface of the plunger. It is true that the perforations or holes would allow the water to return below the plunger, but it must necessarily consume time in doing so, and hence a quantity of the water would add its weight to that of the plunger during its elevation. The tubes not only prevent the water from overflowing the plunger, but cause its more speedy return to a position below the same.

The plunger with the tubes has no essential connection with the weighted arm B, and I intend to use in connection with such arm a plunger constructed in any of the known ways.

It is immaterial to the invention whether the tubes *C'* be made separately or in one piece with the plunger; but in practice it may be found preferable to employ simple holes or chambers of sufficient depth to contain the displaced water and prevent its overflowing the plunger, as explained.

Having thus described my invention, the following is what I claim as new herein and desire to secure by Letters Patent:

1. The plunger C, moving in a vertical plane upon the pivot or hinges *c'*, and operated by a system of levers, substantially as herein described.

2. The use of the tubes C', in connection

with the plunger C, to prevent the water from overflowing and adding weight to the latter, as explained.

JARVIS T. MUDGE.

Witnesses:

OCTAVIUS KNIGHT,

ALEXR. A. C. KLAUCKE.