



# United States Patent Office.

BENJAMIN F. STOVER, OF LADOGA, INDIANA.

*Letters Patent No. 73,667, dated January 21, 1868.*

## IMPROVED WASHING-MACHINE.

*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, BENJAMIN F. STOVER, of Ladoga, in the county of Montgomery, and State of Indiana, have invented a new and improved Washing-Machine; 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 part of this specification.

The drawing represents a transverse vertical section of my machine.

This invention refers to improvements in machines for washing clothes, and consists of an inclined plane and curved surface joined, over which a smooth roller is actuated, together with other parts perfecting the whole.

In the drawing, A is the box or body of the machine, having removable covers, B, C, and D. E are the legs supporting the same.

The important features of this invention consist of the circular surface F and the inclined plane G, united as shown, together with the heavy smooth roller H, and its jointed arms I J. These arms may be straight or curved, as shown in the figure. They are joined together by a horizontal round or rod, *a*. The arms I are pivoted to the uprights K, on the reduced end of the horizontal round or rod, *b*, as shown. The clothes are folded and placed on the bottoms G and F, the said clothes having been previously soaped.

Water is placed in the machine, and it naturally seeks the lowest level at *d*. The operator then stands at the square end, and grasping the round *a* with both hands, pushes the roller down the inclined plane G. The roller ascends a part of the curved surface F till its impulse and momentum are expended, then it returns by its own gravity, and partially ascends the inclined plane G, thus requiring but slight traction power on the part of the operator, to return it to its original starting-point, as shown in the figure.

The roller is smooth, and does not act as a rubbing-roller in cleansing the clothes, but it acts with direct pressure, passing over the clothes, and exerting its whole pressure on them at each successive point of its travel. The water is thus forced up through the fabric, and the dirt thus loosened and washed out. The action of the roller differs in this respect from those heretofore made, all of which latter operate wholly or partially with a rubbing friction effect. The water, after being forced through the fabric, again seeks the bottom point of the machine at *d*, to be again forced through at the succeeding passage of the roller. Thus a certain quantity of clothes can be cleansed in from eight to ten minutes, as has been determined by repeated experiments. Owing to the arrangement of the surfaces F and G, the roller can be operated with a small application of power, and is less tiresome than the washing-machines heretofore made and used. The finest gauze or lace articles can be washed without injury to their texture, as the simple rolling motion does not strain, twist, nor entangle the article, but merely presses smoothly upon it and forces the water through its texture. Being composed of few parts, and those simple and durable, it is a machine that is not likely to get out of repair. It is also of less cost than the majority of machines for the same purpose.

I am aware that fluted rollers have been actuated over clothes on a flat bottom; and do not claim such; but

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

The arms I and J and rods *a* and *b*, and uprights K, combined, substantially as shown, with the roller H and bottom surfaces F and G, all as set forth.

BENJAMIN F. STOVER.

Witnesses:

HENRY JOHNSON,

JAMES H. GEORGE.