J. St. TONGE

WASHING-MACHINE.

No. 191,902. Patented June 12, 1877

Fig 1.

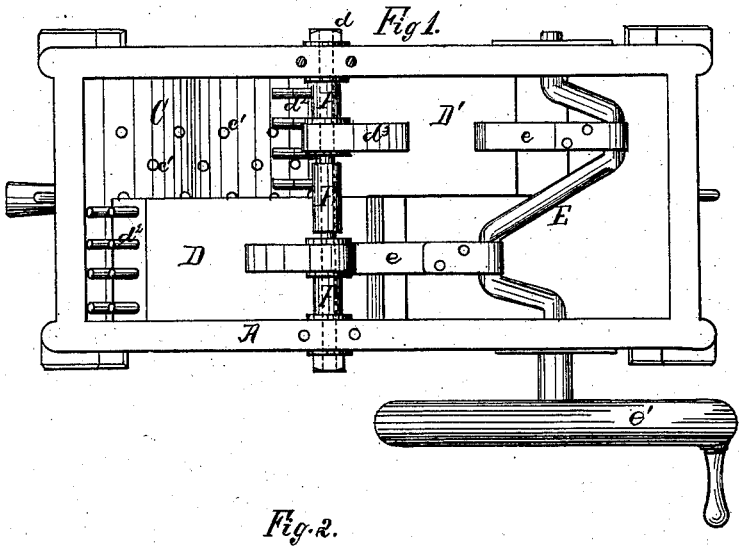


Fig. 2.

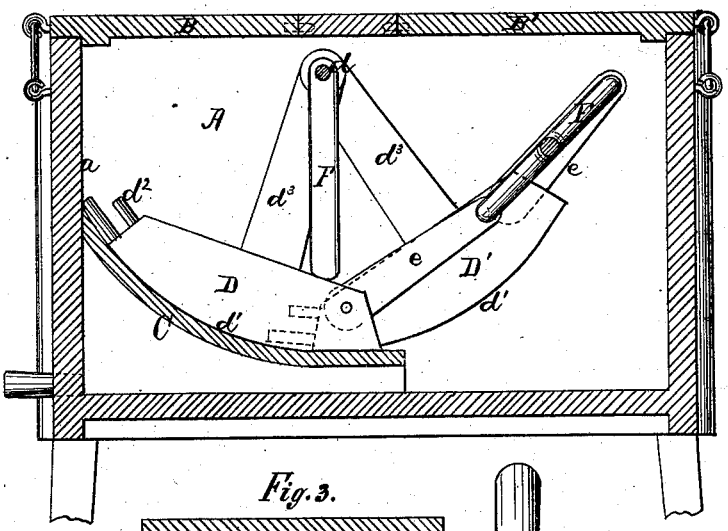
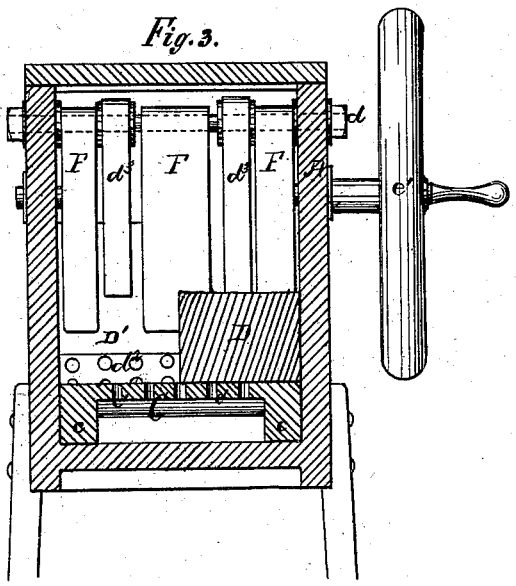


Fig. 3.



Witnesses:

Theodore Foster.

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UNITED STATES PATENT OFFICE.

JOHN ST. TONGE, OF WILLIAMSTOWN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF HIS RIGHT TO JOSEPH ST. TONGE, OF SAME PLACE.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **191,902**, dated June 12, 1877; application filed December 29, 1876.

To all whom it may concern:

Be it known that I, JOHN ST. TONGE, of Williamstown, county of Berkshire, in the State of Massachusetts, have invented an Improved Washing-Machine, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings forming part of this specification.

My invention relates to that class of washing-machines in which the clothes are pounded and squeezed by beaters or hammers, and caused to continually be turned over and about in the machine; and it consists in the combination of the parts hereinafter set forth and described and more particularly recited in the claim.

Figure 1 is a plan of a washing-machine embodying my invention, with the lids removed to disclose the contained mechanism. Fig. 2 is a longitudinal sectional view of the same, the lids being replaced. Fig. 3 is a vertical cross-section of the same.

A is the frame constituting the reservoir of the machine. This reservoir has the removable lids B B′, one upon either end, by which the machine may be either wholly or partially opened. In the bottom of the reservoir, at the end covered by lid B, is placed the upwardly-curved concave guideway or clothes-board C. This board is supported upon uprights *c*, and is raised above the bottom of the machine, so that the contained water will pass under it, and it is provided with vertical perforations *c′* through it, so that the water carried above it will be permitted to circulate downward into the reservoir. Over this board C, and near the lower end thereof, are suspended the hammers or beaters D D′, hinged upon the rod *d*, which is fixed in the frame A, as shown. These hammers are arranged to rest lightly upon the board C at their lower or under faces, and their said under faces are curved or convex, as seen at d^1, to conform to the curve or concavity of the board C. By this means, when the hammers are given their hereinafter-described motion, they are guided or caused to travel upward in a curved line toward the end wall *a* of the machine. Upon the face of the upper end of the hammers are set projecting pins or pegs d^2, which are blunt at their exterior ends, and are preferably arranged in two rows, with the lower row projecting somewhat farther from the hammers than the upper row, as seen in Fig. 2. By this means, when the hammers move across the board C the pins d^2 act to force the water continuously and effectively through the clothes placed upon the board C, and the upward movement of the hammers operates to squeeze, beat, and compress the clothes, and to continuously turn them backward upon the hammers, and thus cause them to be turned over and over upon the board C, and exposed or subjected in successive parts or portions to the action of the hammers carrying the pins d^2. The hammers D D′ are given alternately a reciprocating motion over the board C, by means of a double crank-shaft, E, to which the hammers are attached at their lower or rear ends by the connecting-rods *e*, the said shaft being operated by a crank fly-wheel, *e′*, arranged upon the exterior of the frame A. To prevent the clothes placed upon the board C from being carried or thrown by the hammers over and beyond the hammers, into the other end of the machine, I suspend the partition-pieces F upon the rod *d*, between the arms d^3 of the hammers, and between said arms and the walls of the tank upon either side. These pieces are hinged upon said rod *d* so that they will swing thereon, and thus increase the space for the clothes when the pressure upon them is great, and thus prevent the clothes from being mutilated or injured by too great friction or pressure upon them.

It is intended that the clothes to be washed shall be introduced through the opening covered by the lid B, while the opening covered by the lid B′ may be used to introduce water into the tank or to examine the contained mechanism.

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

In a washing-machine having the frame or tank A, the combination of the perforated upwardly-curved concave clothes-board and guideway C, the suspended alternately-reciprocating hammers or beaters D D′ having the curved or convex under faces d^1, and the pins or pegs d^2 set in the upper ends thereof, together with the hinged partition-pieces F, all arranged to operate as and for the purpose specified.

his
JOHN × ST. TONGE.
mark.

Witnesses:
E. C. KIELY,
WM. B. PYNE.