

F. M. ELLIS.

Improvement in Washing-Machines.

No. 129,011.

Patented July 16, 1872.

Fig. 1.

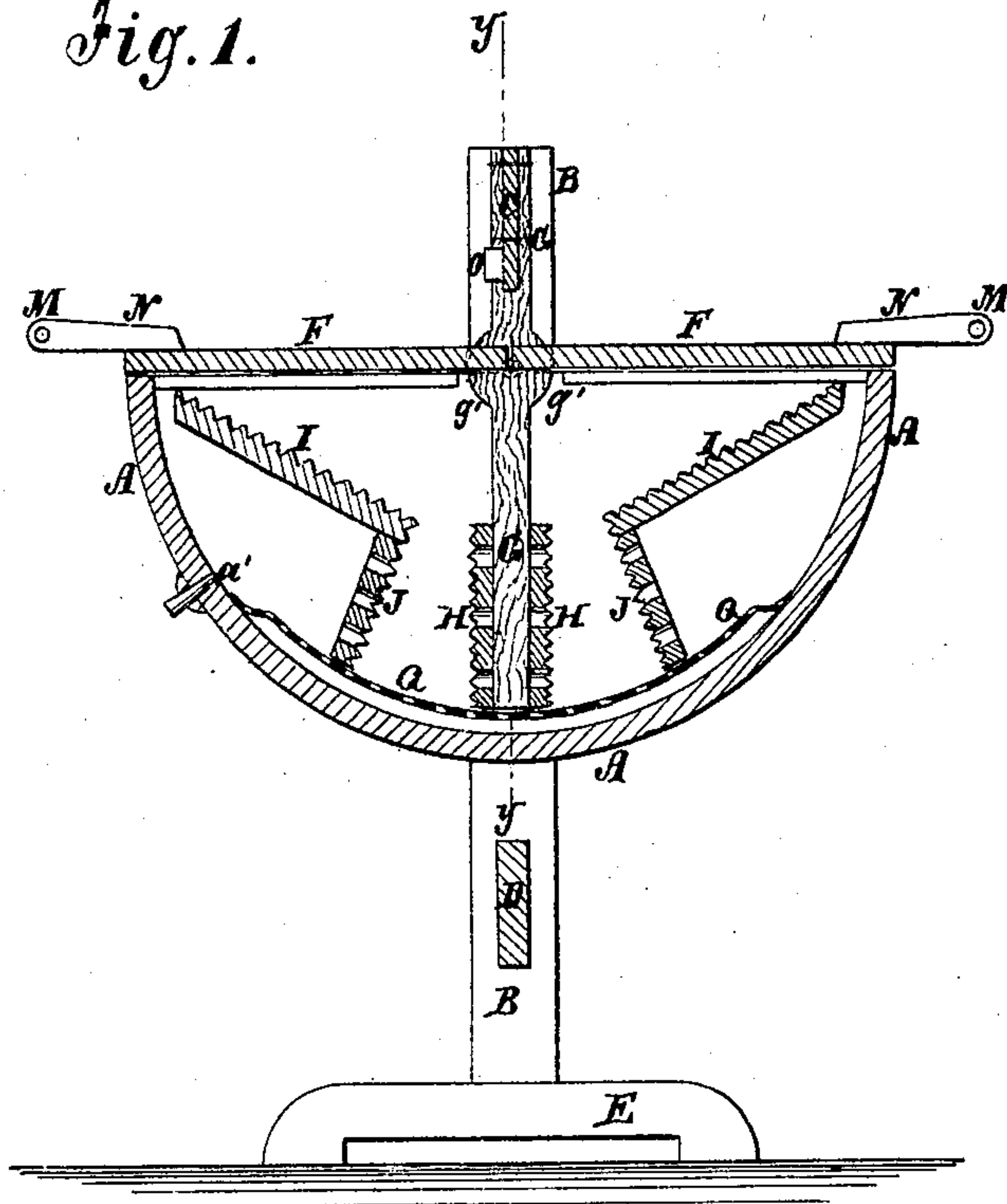
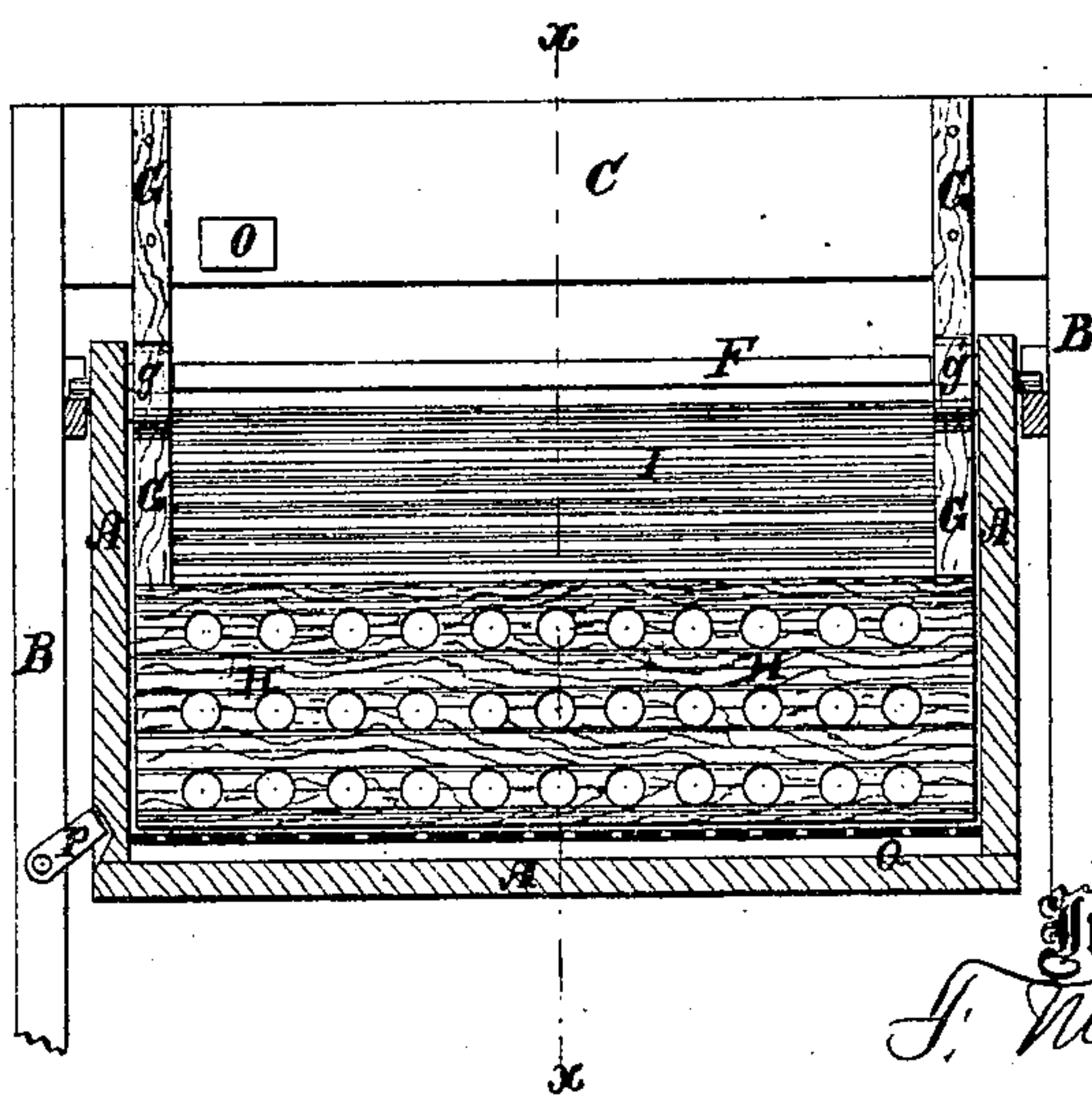


Fig. 2.



Witnesses:

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# UNITED STATES PATENT OFFICE.

FRANCIS M. ELLIS, OF GALVA, ILLINOIS.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 129,011, dated July 16, 1872.

Specification describing a new and useful Improvement in Washing-Machines, invented by FRANCIS M. ELLIS, of Galva, in the county of Henry and State of Illinois.

Figure 1 is a detail vertical section of my improved machine taken through the line *x x*, Fig. 2. Fig. 2 is a detail vertical section of the same taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of the washing-machine, for which Letters Patent No. 115,835 were granted to me June 13, 1871, so as to make it more convenient in use and more effective in operation; and it consists in the construction and combination of various parts of the machine, as hereinafter fully described.

A is the tub of the machine, which is made semi-cylindrical in form. The curved part of the tub A is made of zinc, or other suitable sheet metal, lined upon its inside with wood. This construction makes the tub perfectly water-tight, and at the same time keeps the clothes from being soiled or stained by the metal. To the ends of the tub A, at or near their upper edges, are attached gudgeons, which work in notches in bearings attached to the inner sides of the posts B. The posts B are connected at their upper ends by a cross-bar, C, and at their lower ends by the cross-bar D. The lower ends of the posts B are attached to foot-pieces E, of such a length as to support the machine firmly. The tub A is covered with a detachable cover, F, made in two equal parts, and the ends of which rest upon cleats attached to the ends of the said tub A. The adjacent edges of the parts of the cover F are notched or slotted near their ends to receive the bars G, the upper ends of which are slotted to receive the cross-bar C, to which they are securely bolted. To the sides of the part of the bars G that pass through the cover F, are attached semi-circular blocks *g'*, of such a size as to exactly fill the notches or slots in the cover F during the entire movement of the tub A, when the machine is being used, to prevent any water from spattering out through said notches or slots. To the opposite sides of the lower ends of the rigid bars or arms G are attached boards H, which are corrugated longitudinally and are perforated

with numerous holes to allow the water to pass through freely. In the side parts of the tub A are secured inclined aprons, I, one upon each side, to the lower edges of which are secured the upper edges of the boards J, the said aprons and boards being firmly secured in place. The upper surface of the inclined aprons I, in whole or in part, is corrugated to serve as a rubbing-board, or has a rubber-board attached to them for convenience in rubbing any parts of the clothes that may be very much soiled. The upper edges of the inclined aprons I do not extend quite to the sides of the tub, a space being left, as shown in Fig. 1, to allow the water to flow back into the lower part of the tub A. The boards J are arranged nearly upon radii from the axis of the tub A, so that when the said tub is oscillated, pressing the clothes between the boards J and the stationary boards H, the said boards J may be parallel with the said boards H, so as to press all parts of the said clothes equally. The boards J are corrugated upon their faces to enable them to act more effectively upon the clothes, and are perforated with numerous holes to allow the water to pass through freely. Q is a false bottom, perforated with numerous holes, and covering the part of the bottom of the tub that sweeps beneath the lower edges of the boards H, to allow the dirt to settle in the space between the said false bottom Q and the bottom of the tub A. M are bars or rods that serve as handles in operating the machine, and which are attached to the outer ends of the short arms N, the inner ends of which are attached to the ends of the tub A. To the cross-bar C is attached a box O, to hold the soap. The cross-bar C also serves for the attachment of a wringer when required. The tub A is held stationary, while putting in and taking out the clothes, by a button, P, pivoted to one of the posts B, and which enters a notch in the end of the tub A, as shown in Fig. 2. Other notches may be formed in the end of the tub A, so that the said tub may be conveniently secured in proper position for the water to flow out through the discharge-opening *a'*. The inner surface of the tub A should be somewhat recessed or depressed around the discharge-opening *a'*, a sufficient bearing being obtained for the faucet or stopper by a boss or projection formed upon or attached to the



outer surface of the tub A around said opening, so that all the water may flow out of the tub.

In using the machine the clothes are placed in the space between the stationary boards H and the boards J, upon one or both sides of the said boards H, and the tub is oscillated upon its pivots, pressing the clothes between the said boards J H, and then allowing them to fall back into the water to be again saturated, and so on until they are thoroughly cleansed.

The tub A may be detached from its supporting frame-work for storage and transportation, by raising its pivots from their bear-

ings and moving the tub to one side and downward beneath the boards H.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The tub A, provided with the perforated false bottom Q and the outlet *a'*, all constructed as and for the purpose specified.

2. The combination of the inclined perforated and corrugated boards J J with the double perforated and corrugated stationary dasher G H, as shown and described.

Witnesses: FRANCIS M. ELLIS.

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