(No Model.)

# T. CLARKE.

## WASHING MACHINE.

No. 434,699. Patented Aug. 19, 1890.

Fig. 1.

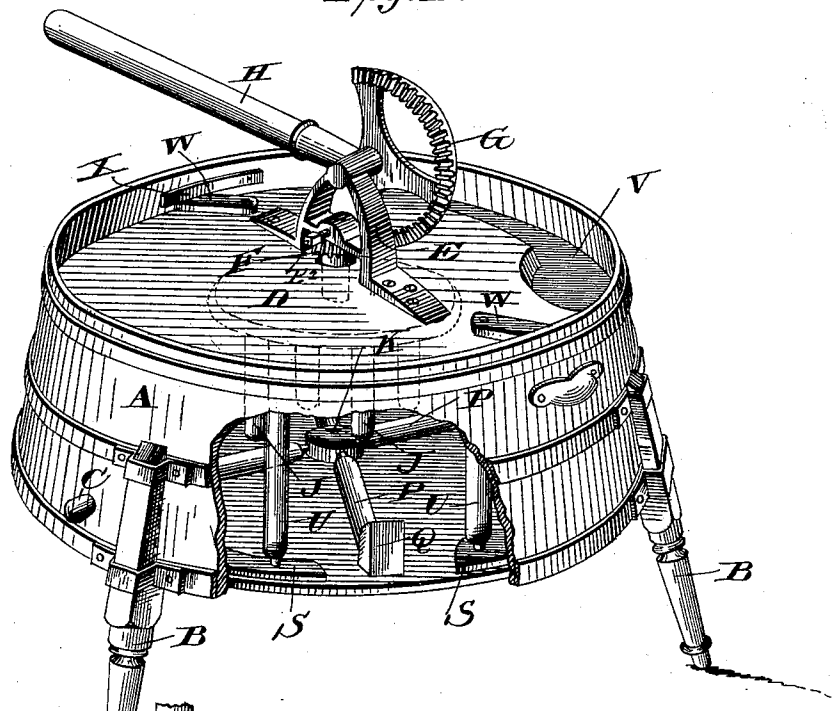



Fig. 2.

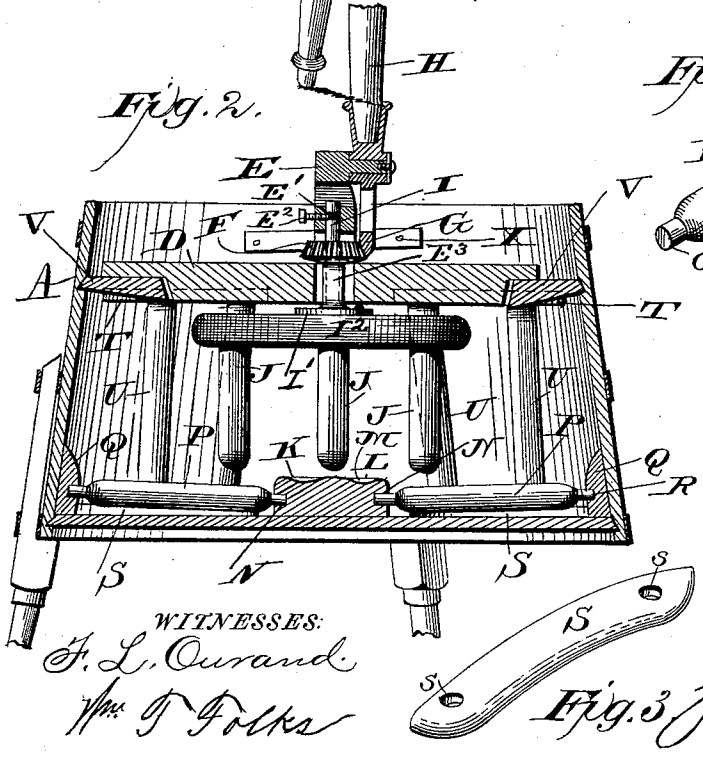



Fig. 4.

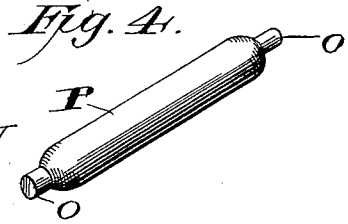



Fig. 5.

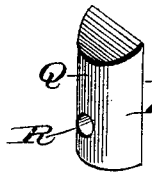



Fig. 3.




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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

# UNITED STATES PATENT OFFICE.

THOMAS CLARKE, OF WOLFVILLE, NOVA SCOTIA, CANADA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,689, dated August 19, 1890.

Application filed May 16, 1890. Serial No. 351,993. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS CLARKE, a subject of the Queen of Great Britain, and a resident of Wolfville, in the Province of Nova Scotia and Dominion of Canada, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved washing-machine with parts broken away to show the interior construction and arrangement. Fig. 2 is a sectional view through the vertical axis of the machine. Fig. 3 is a perspective detail view of one of the segmental roller-bearings removed from the machine; and Figs. 4 and 5 are detail views of certain other parts of the machine, which will be hereinafter more fully described.

Like letters of reference denote corresponding parts in all the figures.

My invention has relation to so-called "agitator" washing-machines, or machines of that type in which a stationary suds-box mounted in a horizontal position upon legs is provided with a central vertical shaft adapted to revolve and provided with a cross on its under side, from which pegs or so-called "stirrers" or "beaters" depend into the box, said beaters operating in conjunction with revolving rollers in the bottom and on the inner sides of the box; and my improvement consists in the novel construction and combination of certain parts of the machine, whereby I enhance its efficiency without adding to the cost of manufacture, substantially as will be hereinafter more fully described and claimed.

In the accompanying drawings, the letter A designates the suds-box or clothes-receptacle, which is supported at a suitable height upon legs B and provided near its bottom with an outlet closed by a plug or stopper C. The removable cover D has fastened upon it the operating mechanism common to this class of machines, which consists of the fixed bearings E, pinion F, cogged segment G, meshing with the pinion, and lever H for operating the segment.

The agitator-shaft I at its upper end is journaled in the bearing E, and is provided with an annular groove E′, with which engages the inner end of a set-screw $E^2$, which passes transversely through the bearing E. This construction permits shaft I to rotate, but prevents any vertical movement thereof. The lower end of shaft I is provided with a sleeve $E^3$, which may be shrunk or otherwise secured thereon. This sleeve is provided with an annular disk I′, to which the agitator-head $I^2$ may be secured by nails or screws. This head $I^2$ is provided with the usual downwardly-projecting agitator-pegs J.

In the center of the bottom of the suds-box is fastened a circular disk K, having a rounded upper edge L and annular top recess M. The sides of this disk are recessed at right angles to form bearings N, adapted to receive the tenons O of the bottom rollers P, Fig. 4, which radiate from the central disk-bearing and have the tenons at their outer ends journaled in bearings Q, consisting each of a short standard fastened on one side upon the inside of the suds-box near its bottom and having its inwardly-projecting side and top part rounded, as shown more clearly in the detail view, Fig. 5, while the lower part is recessed or bored through, as shown at R, to form a bearing for the outer end of its appropriate roller P. Fastened to the bottom of the suds-box between these short upright bearings Q is a series of four intermediate segments S, having rounded inner corners, which register or coincide with a corresponding number of similar segments T, fastened to and projecting from the inner sides of the suds-box near its top and having rounded ends and corners. These coinciding segments S and T are recessed, as shown at *s*, to form bearings for the upright rollers U, which are constructed precisely like the bottom rollers—*i. e.*, made of wood with rounded ends and integral with their projecting tenons or journals. These upright rollers are so arranged as to be equidistant from one another, and are arranged in pairs between the outer ends of the bottom rollers. By this construction and arrangement of the rollers, in conjunction with their peculiarly-constructed bearings, undue wear or tearing of the articles to be washed is absolutely prevented; and another important ad-

vantage resulting from this construction is the ease and facility with which the machine may be operated owing to the absence of excessive friction.

Around the inside of the suds-box and resting on the segments T is an annular dished flange V, which extends inwardly into the suds-box far enough to support the flanged cover D, which rests upon it. This dished flange V is set somewhat lower than the top edge of the sides of the suds-box, so that when the cover D is put on and the water splashes from the motion of the agitator it will not splash over the sides and on the floor, as it would be apt to do if the sides of the suds-box were flush with the flange; but the water which dashes up against the inside will, on account of the concaved or dished under side of the flange, be deflected back into the suds-box.

The cover is secured to the machine by means of buttons W, pivoted upon and at opposite sides of the cover and adapted to engage corresponding strips X, secured to the sides of the suds-box.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a washing-machine, the combination, with the suds-box, of the disk K secured therein, having rounded upper edge L and annular top recess M, the bearings Q, fastened to the sides of said box, the rollers P, journaled in the said bearings and disk, the segments S and T, and the vertical rollers U, journaled in said segments, substantially as described.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

THOMAS CLARKE.

Witnesses:

JOHN CLARKE,

THOMAS A. CLARKE.