



# United States Patent Office.

C. A. CALAWAY, OF MADISON, OHIO.

Letters Patent No. 93,963, dated August 24, 1869.

## IMPROVEMENT IN WASHING-MACHINES.

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, C. A. CALAWAY, of Madison, in the county of Lake, and State of Ohio, have invented a new and useful Improvement in Washing-Machines; 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 drawings, forming part of this specification.

This invention relates to improvements in washing-machines, whereby it is designed to improve the efficiency of the same.

The invention consists in an improved-construction and arrangement of a concave grooved bed in the bottom of a case or tub, a pair of rollers pivoted to an oscillating frame, and a treadle-device for varying the pressure of the oscillating rollers upon the bed or the clothes thereon, all as hereinafter more fully specified.

Figure 1 represents a transverse section of my improved machine, and

Figure 2 represents a longitudinal sectional elevation of the same.

Similar letters of reference indicate corresponding parts.

A represents the case or tub, which is preferably of rectangular form.

B represents a concave rubbing-bed, composed of grooved bars secured to concave supports C, at some distance apart, so that spaces will be provided for a free circulation of the water between the bars.

D represents a pair of rollers, journalled in end bearings E, pivoted centrally to suspending-bars F, fixed to a roller, G, which is journalled in the upper ends of vertical-sliding supports H, pivoted at the bottom on the journalled ends of a spring, I, which is

supported on a foot-treadle, K, pivoted at L to the frame of the machine, and projecting in front of the machine at M.

The arms F are provided with one or more handles, N, whereby they are oscillated to produce the rubbing on the clothes, which are placed on the concave bed B, under the rollers D. These rollers being considerably separated, cause an intense action of the water between them, thereby increasing the effect on the clothes.

The concave bed B is made removable, to facilitate cleaning out the tub or case, and the arms F are so arranged, relatively to the height of the case, and to the vertically-moving supports H, that when the latter are raised up as high as they may be by the treadle, the rollers may be swung upward out of the tub, the said supports being turned out of the vertical line, for which slots are provided in the supports, so that they will turn over the curved guides O, which hold them up, to permit the removal of the rollers, and which also serve, together with the guides P, to hold the supports in a vertical position when the rollers are in the working-position.

Having thus described my invention,

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

The combination of the case A, concave bed B, rollers D, suspending-arms F, bearings E, oscillating shaft G, supports H, guides O and P, treadle K, and spring I, when all constructed and arranged substantially as specified.

C. A. CALAWAY.

Witnesses:

WM. T. FITCH,

WM. H. FLINT.