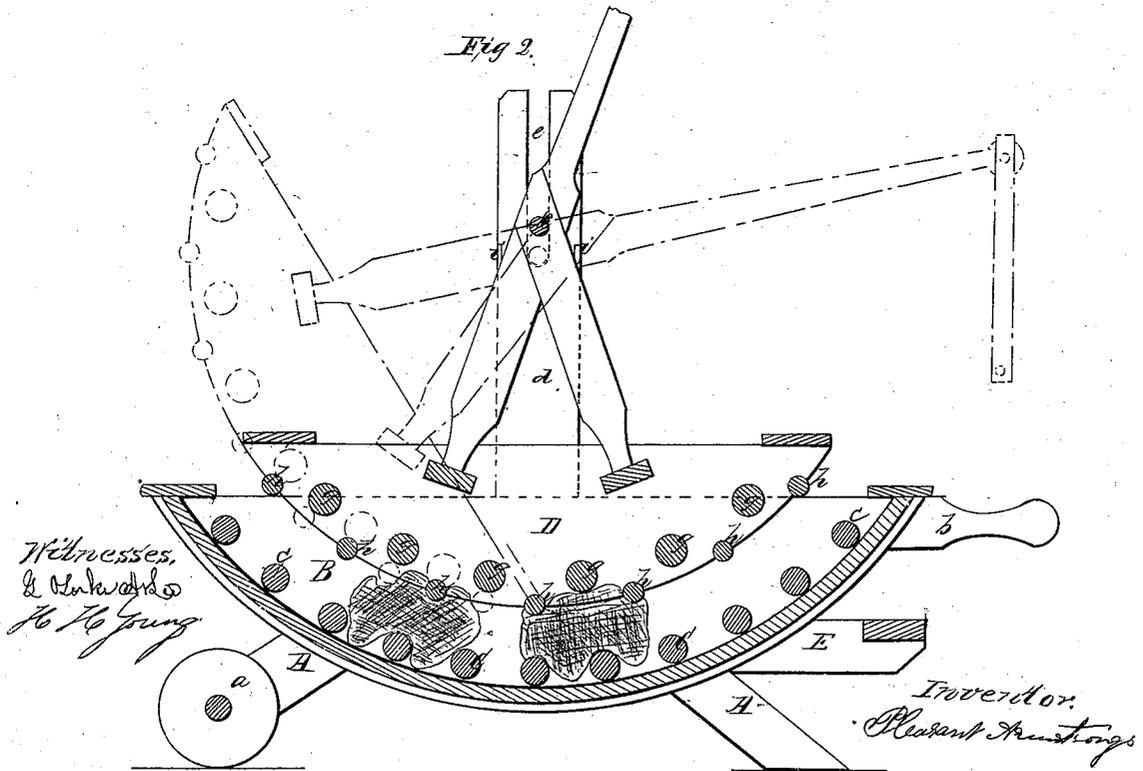
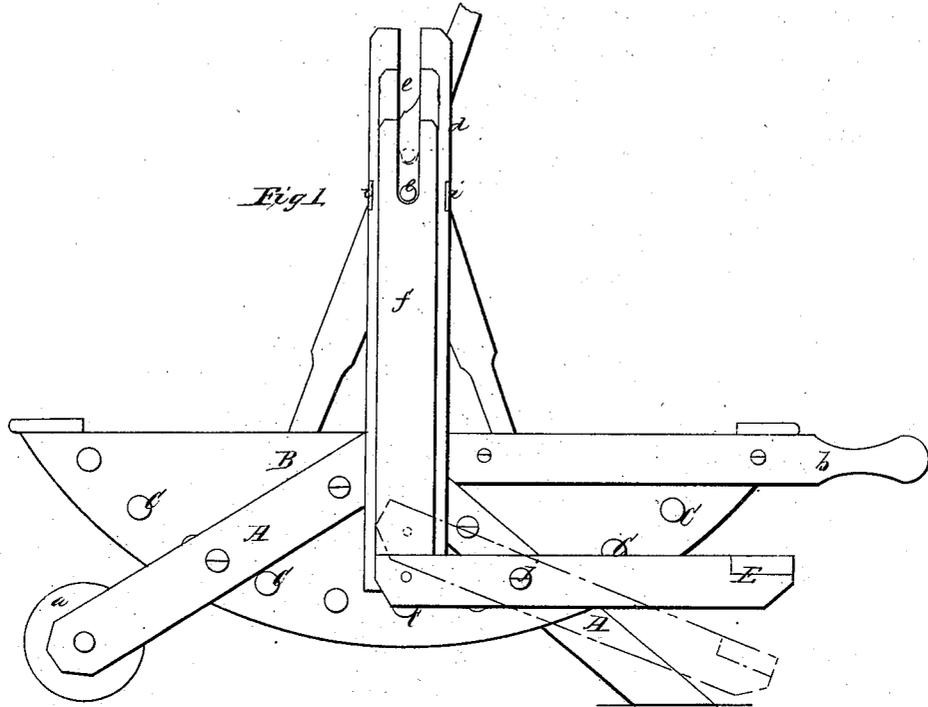


No. 24,363.

PATENTED JUNE 14, 1859.

P. ARMSTRONG.
WASHING MACHINE.



UNITED STATES PATENT OFFICE.

PLEASANT ARMSTRONG, OF CAMDEN, ALABAMA.

WASHING-MACHINE.

Specification of Letters Patent No. 24,363, dated June 14, 1859.

To all whom it may concern:

Be it known that I, PLEASANT ARMSTRONG, of Camden, in the county of Wilcox and State of Alabama, 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 of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1, is a side elevation of a washing machine constructed with my improvement. Fig. 2, is a vertical longitudinal section of the same.

Similar letters of reference, in both figures indicate corresponding parts.

The nature of my invention consists in the arrangement of the complete stationary rounds of the convex swing frame, on two semi-circular lines of different diameters, so that the rollers on the smallest semi-circle shall stand above and opposite the spaces between the rollers on the largest semi-circle, in combination with the arrangement of the stationary rounds of the concave, a greater distance apart than has heretofore been deemed practicable, and in relief from the bottom of the box or hub, all in the manner and for the purpose presently stated.

It consists, 2nd, in the arrangement of the journals of the shaft of the convex swing frame in slots of the main standard of the box or hub, and in slots of auxiliary perpendicularly sliding standards, which are arranged in guides against the outside of the main standards, and pivoted by their lower ends to a treadle which vibrates up and down.

By the first feature of my invention I avoid all sliding friction on the clothes, for by having the complete stationary rounds of the concave far apart and in relief from the bottom of the box, and the stationary rounds of the convex swing frame also far apart, and the spaces between them overhung by stop rounds, the clothes have a chance to work between the spaces of the concave and convex washing surfaces, in the same manner as an intermediate pinion gears with an upper and lower toothed rack in machinery, and also allows the water to run back into the tub when the swing frame is thrown partly out of the concave box.

By the second feature of my invention I am enabled, in case the clothes should, in taking the form necessary to gear with the

upper and lower washing surfaces, get too near one end of the concave washing surface, to elevate the swing frame so as to clear the roll of clothes, and then adjust and drop it upon the same in such a manner as to have them move an equal distance on either side of the center of the concave washing surface, and consequently they are, with the circular vibration of the swing frame, rolled back and forth between the washing surfaces, and as they roll subjected to a squeezing action by the gravity of the swing frame. I also obtain an advantageous result by having a hollow swing frame with open spaces between both semi-circles of rounds, for this construction allows a free passage of the water up into the hollow swing frame and thus avoids dead resistance of the water and the throwing of the same out of the tub, as the swing frame is vibrated back and forth.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation.

A, represents a wheel barrow shaped frame for supporting the concave box or tub B. This frame has a central propelling wheel *a*, on which the machine can be easily run from one position to another. The tub B, is furnished with two handles *b, b*, for the operator to lay hold of when he desires to move the machine.

C, C, are stationary rounds arranged in a semi-circle slightly above the inside surface of the bottom of the concave, and a sufficient distance apart to allow different portions of the article being washed to pass down between them as illustrated in blue color in Fig. 2. The ends of the rounds extend through the sides of the concave or box and thus the rounds with the aid of grooves on the inner sides of the box serve for holding the sides and bottom of the box or concave firmly together without the aid of nails.

D, is the hollow, convex swing frame; it is furnished with a shaft *e*, and is arranged to vibrate back and forth on slotted standards *d, d*, of the concave or box; the journals of the shaft passing through the slots *e, e* of the standards *d, d*, and fitting loosely in round holes of auxiliary standards *f, f*, for a purpose presently described. Around the lower curved portion of the swing frame, I arrange two semi-circles of stationary rounds *g, g, h, h*. The rounds *g, g*, form a smaller semi-circle than those *h, h*, and being placed

above and opposite the spaces between the rounds g, g , as shown. The distance between the rounds h, h , is sufficiently great to allow the clothes to pass up between them and come in contact with the strap rounds g, g , as illustrated in blue color in Fig. 2. It is by thus arranging the rounds of the largest semi-circle to stand opposite the spaces of the rounds of the smallest semi-circle or vice-versa, and the rounds of the concave washing surface above the box bottom, and a greater distance apart than commonly, that I am enabled to have the clothes gear with the upper and lower washing surfaces after the manner of an intermediate pinion gearing with an upper and lower rack in machinery, and secure a rolling instead of a sliding action of the clothes.

The auxiliary standards f, f , into which the journals of the swing frame pass loosely are arranged to slide up and down in guides i, i , of the main standards, and their lower ends attach by pivots to a treadle E , which has its fulcrum at j , and extends forward to the front end of the concave or box. This treadle occupies a position near the bottom of the legs of the wheel-barrow frame, so that the foot can conveniently be placed upon it. It is by this arrangement of auxiliary standards with the slotted standards and the treadle that I am enabled to elevate, without any bind, the convex swing frame, as illustrated in red in Fig. 1, so as to clear the clothes, in case they occupy the position shown in red color in Fig. 2, often taking

the form necessary to gear into the upper and lower washing surfaces, and then adjust it so as to have it descend upon the clothes in a manner to cause them to move an equal distance on either side of the center of the concave, as illustrated in blue color in Fig. 2. By examining Fig. 2, the utility of the open concave will also be evident, for it is when the convex swing frame is adjusted as shown in red, that the water which flowed into the open convex swing frame through the spaces between the rounds, while it was assuming this position, runs back through the spaces between the rounds into the box.

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

1. The arrangement of the complete stationary rounds of the convex swing frame, on two semi-circular lines of different diameters, so that the rollers on the smallest semi-circle shall stand above and opposite the spaces between the rollers on the largest semi-circle, in combination with the arrangement of the stationary rounds of the concave, substantially as and for the purposes set forth.

2. The arrangement of the auxiliary treadle standards with the main standards of the tub, in the manner herein described, and for the purposes set forth.

PLEASANT ARMSTRONG.

Witnesses:

G. YORKE AT LEE,
ROBT. W. FENWICK.