W. HAAS.

Washing-Machine.

No. 203,031. Patented April 30, 1878.

Fig. 1.

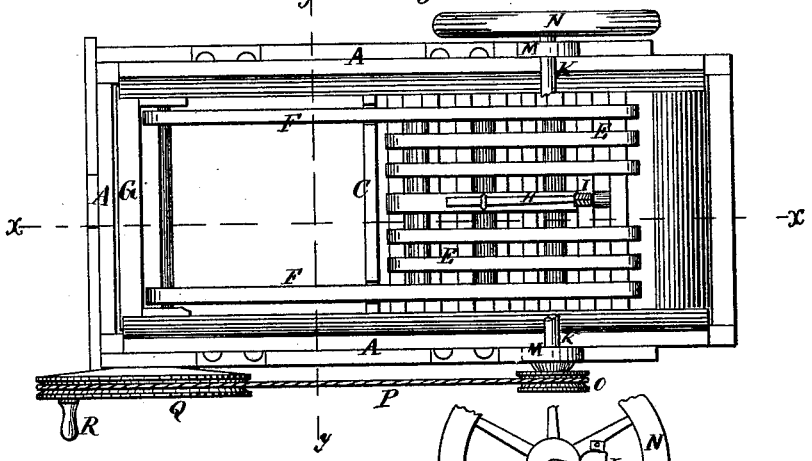


Fig. 2.

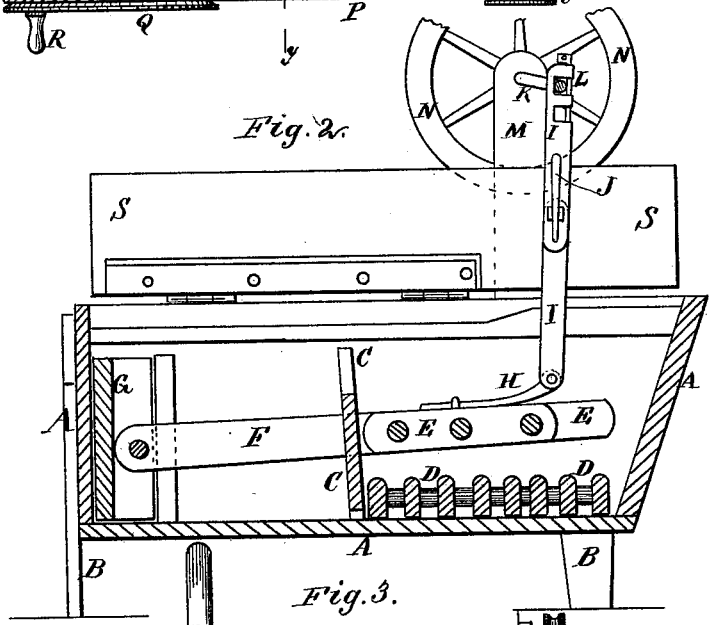
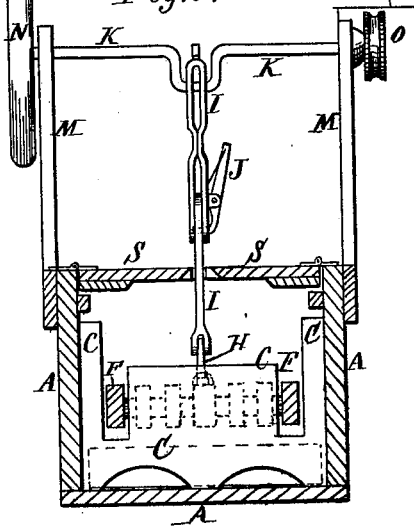


Fig. 3.



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WILLIAM HAAS, OF WALLA WALLA, WASHINGTON TERRITORY.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **203,031**, dated April 30, 1878; application filed March 20, 1878.

To all whom it may concern:

Be it known that I, WILLIAM HAAS, of Walla Walla, in the county of Walla Walla, Washington Territory, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification:

Figure 1 is a top view of my improved machine, the covers being raised, and part being broken away to show the construction. Fig. 2 is a vertical longitudinal section of the same, taken through the line *x x*, Fig. 1. Fig. 3 is a vertical cross-section of the same, taken through the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved washing-machine which shall be simple in construction, inexpensive in manufacture, convenient in use, easily operated, and effective in operation, washing the clothes quickly, thoroughly, and without injuring them.

The invention consists in the combination of the notched and slotted partition, the stationary beater, the upper beater provided with the pivoted bars, and the sliding board with each other and with the suds-box; and in the combination of the spring-bar, the jointed connecting-rod and its lever-catch, the crank-shaft, the fly-wheel, and the driving-gearing with each other and with the pivoted beater, as hereinafter fully described.

A is the suds-box, which is made rectangular in form, with vertical sides and rear end, and an inclined or flaring forward end, and which is supported upon legs B of such a length as to raise the machine to a convenient height.

Across the middle part of the machine is secured a partition, C, the lower edge of which is recessed to allow the water to pass through freely, and to allow the dirt washed from the clothes to pass through and settle in the rear part of the suds-box A away from the clothes.

D is the lower beater, which fits into the space between the partition C and the forward end of the suds-box A, and which is formed of a number of parallel cross-bars placed at a little distance apart, and connected by rounds.

E is the upper or movable beater, which is placed in the forward part of the suds-box A above the stationary beater D, and is formed of a number of longitudinal parallel bars, placed at a little distance apart, and connected by rounds. The side bars F, attached to the beater E, extend to the rearward, pass through vertical slots in the end parts of the partition C, and their rear ends are pivoted to the board G, that slides up and down in ways or grooves at the rear end of the suds-box A.

To the middle bar of the beater E is attached the end of a spring-bar, H, to the free end of which is pivoted the lower end of the connecting-bar I. The connecting-bar I is jointed, and is locked in place, when its parts are in line with each other, by the lever J, pivoted to one of said parts, and the end of which is bent inward to pass through holes in the two parts, and thus make the bar rigid. The lever J is held in place by a spring.

The upper end of the connecting-bar I is notched to receive the crank formed upon the middle part of the shaft K, where it is secured in place by a detachable pin, L. Several notches are formed in the connecting-bar I to receive the crank, to enable the said connecting-rod to be shortened or lengthened, as more or less clothes are to be operated upon at a time.

The crank-shaft K revolves in bearings in the upper ends of two standards, M, the lower ends of which are attached to the forward parts of the sides of the suds-box A.

To one end of the crank-shaft K is attached a fly-wheel, N, to give steadiness of motion to the machine, and to its other end is attached a small pulley, O, around which passes an endless band, P. The band P also passes around a larger pulley, Q, which is pivoted to the rear part of the suds-box A, and which has a crank-pin, R, attached to it, to serve as a handle in operating the machine.

S is the cover of the machine, which is made in two equal parts, hinged at their outer edges to the top edges of the sides of the suds-box A.

To raise the upper beater E, the operator releases the spring-catch J, draws the joint of the connecting-bar to the rearward, and raises the upper beater E into an upright position. This brings the parts of the connecting-bar I

into line with each other in a horizontal position, where they are held in place by the lever-catch J, so that the clothes may be conveniently put in, rearranged, and taken out, as may be required. The lever-catch J is then withdrawn, and the beater E is allowed to drop into place.

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

1. The combination of the notched and slotted partition C, the lower stationary beater D, the upper beater E, provided with the pivoted bars F, and the sliding board G with each other and with the suds-box A, substantially as herein shown and described.

2. The combination of the spring-bar H, the jointed connecting-rod I and its lever-catch J, crank-shaft K, the fly-wheel N, and the driving-gearing O P Q with each other and with the pivoted beater E, substantially as herein shown and described.

WILLIAM HAAS.

Witnesses:
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