J. ZELLER.

WASHING MACHINES.

No. 181,121. Patented Aug. 15, 1876.

Fig. 1

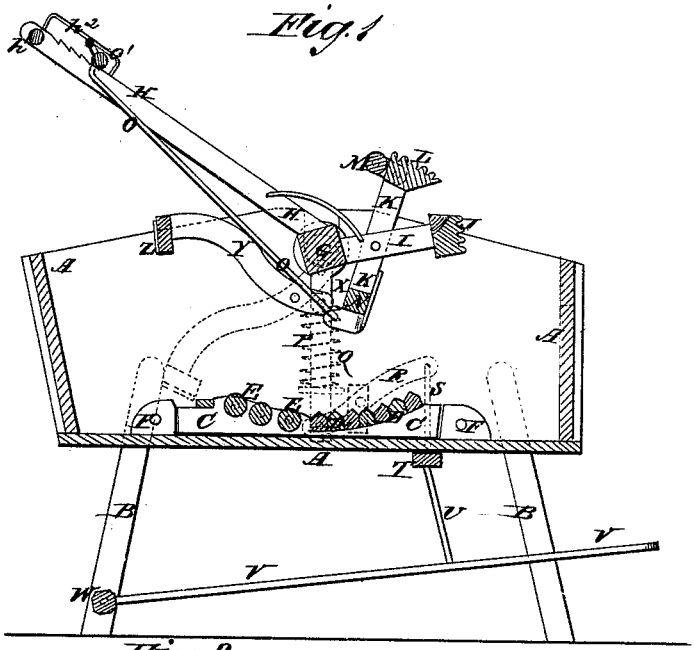
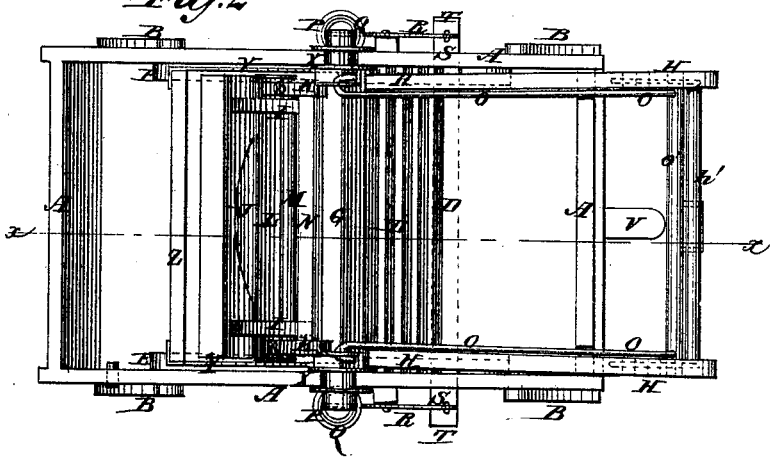


Fig. 2



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JOHN ZELLER, OF STOUCHSBURG, PENNSYLVANIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **181,121**, dated August 15, 1876; application filed July 11, 1876.

To all whom it may concern:

Be it known that I, JOHN ZELLER, of Stouchsburg, in the county of Berks and State of Pennsylvania, have invented a new and useful Improvement in Clothes-Washing Machines, of which the following is a specification:

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

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine for washing clothes which shall be so constructed as to rub the clothes in a manner analogous to hand-rubbing, will enable soiled parts to be rubbed longer than the cleaner parts, and will not injure the clothes, and which shall be simple in construction, and easily operated.

The invention consists in the combination of the shaft, the levers, the rigid arms and their corrugated block, the pivoted arms and their corrugated block and roller, the cross-bar, and the rods, with each other, and with the suds-box and the stationary rubber, in the combination of the spiral springs, the hanging rods, the levers, the connecting rods, the cross-bar, the connecting-rod, and the foot-lever, with each other, and with the suds-box, and the shaft that carries the oscillating rubber; and in the combination of the eye-straps, the pivoted levers, and the cross-bar, with the suds-box, the stationary rubber, and the shaft that carries the oscillating rubber, as hereinafter fully described.

A is the suds-box, which is made with a flat bottom, vertical sides, and slightly-flaring ends. The suds-box A is supported upon legs B, of such a length as to raise the machine to a convenient height. C D E is the stationary rubber, of which C are the side pieces or bars. The upper sides of the side bars C are concaved, and to their forward parts are attached the ends of a number of cross-cleats, D, the upper sides of which are made V-shaped, or are rounded off. To and between the rear parts of the side bars C are pivoted the ends of a number of rollers, E. The rubber C D E is placed upon the middle part of the bottom of the suds-box A, and is kept in place by stop-blocks F, attached to said suds-box in the angles between its bottom and sides.

In slots or deep notches in the upper middle part of the sides of the suds-box A work the journals of the shaft G, to which, near its ends, are attached the ends of two levers, H, the outer ends of which are connected by a round, h^1. To the shaft G, near its ends, and at an angle with the levers H, are attached the ends of two arms, I, to the outer ends of which is attached a block, J. The face of the block J is corrugated to adapt it to serve as a rubber. To the arms I are pivoted two arms, K, to the outer ends of which is attached a block, L. The face of the block L is corrugated to adapt it to operate as a rubber, and its side edge next the block J is beveled off, so as to fit squarely and snugly against the edge of the said block J. The inner part of the edge of the block J next the block L is concaved, as shown in Fig. 1. To the outer edge of the block L is pivoted a roller, M, to smooth out the clothes, and to enable the rubber to move easily over the stationary rubber when shifting the clothes. The inner ends of the arms K are connected by a cross-bar, N, and to said ends or to eye-plates, attached to them, are attached the ends of two rods, O, the outer ends of which are attached to a round, o', that slides in keepers h^2, attached to the lower side of the outer parts of the levers H.

The end parts of the round o' are so formed as to catch upon ratchet-teeth formed upon the under side of the said levers H, or have plates attached to them to catch upon said teeth to fasten the blocks J L together when clamping the clothes. The shaft G is held down to cause the rubber L J to press down with the desired pressure upon the clothes by spiral springs P, coiled around the rods Q. The upper ends of the rods Q have eyes formed in them, or in plates attached to them, to receive and ride upon the outer ends of the journals of the shaft G. To the lower ends of the rods Q are pivoted the ends of the levers R, which are pivoted to blocks or studs attached to the sides of the suds-box A. To the other ends of the levers R are pivoted the upper ends of the rods

S, the lower ends of which are attached to the ends of a bar, T. The bar T passes across beneath the bottom of the suds-box A, and to its center is attached the upper end of the rod U, the lower end of which is attached to the foot-lever or treadle V. The inner end of the treadle V is attached to a round, W, pivoted to and between the rear legs B of the machine. The free end of the lever V projects at the front end of the machine, so that the person using the machine can readily operate it with his foot. Upon the inner parts of the journal of the shaft G are placed the eyes of two eye-plates, X, to the lower ends of which are pivoted the inner ends of two levers, Y. The levers Y are pivoted to the inner sides of the sides of the suds-box A, and to their outer ends is attached a cross-bar, Z. The outer arms of the levers Y are made of such a length that the bar Z, when swung down into the position shown in dotted lines in Fig. 1, may come in contact with the rear end of the stationary rubber C D E to clamp the clothes.

In using the machine, the rods O are pushed inward, which separates the blocks J L so that the clothes can be inserted between them. The rods O are then drawn outward, which brings the blocks J L together, clamping the clothes between them, and the levers H are operated to rub the clothes between the rubber J L and the rubber C D E. When this part of the clothes has been sufficiently rubbed, by a quick motion of the levers H it is thrown back over the rollers E. At the same time the treadle V is pressed downward, which lowers the cross-bar Z and grasps the said part of the clothes. The rods O are then pushed in a little, which separates the blocks J L, and the levers H are raised, which draws the clothes farther through and exposes another part to be rubbed. The rods O are drawn outward to again clamp the clothes, the treadle V is released, and the clothes are again rubbed, and so on, until all parts of the clothes have been sufficiently rubbed.

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

1. The combination of the shaft G, the levers H h^1, the arms I, the corrugated block J, the pivoted arms K, the corrugated block L, the roller M, the cross-bar N, and the rods O o', with each other, and with the suds-box A and the stationary rubber C D E, substantially as herein shown and described.

2. The combination of the spiral springs P, the hanging-rods Q, the levers R, the connecting-rods S, the cross-bar T, the connecting-rod U, and the treadle V, with each other and with the suds-box A and the shaft G, that carries the oscillating rubber, substantially as herein shown and described.

3. The combination of the eye-straps X, the pivoted levers Y, and the cross-bar Z, with the suds-box A, the stationary rubber C D E, and the shaft G, that carries the oscillating rubber, substantially as herein shown and described.

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