JOB ROBINSON.

Improvement in Washing-Machines.

No. 114,715. Patented May 9, 1871.

Fig. 1.

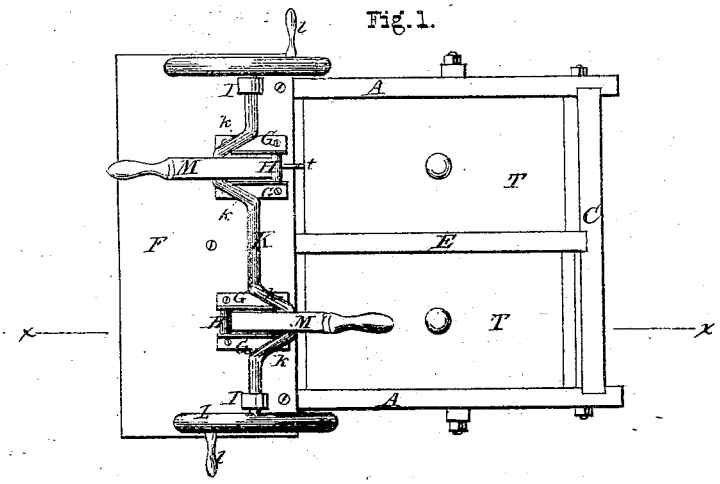


Fig. 3.

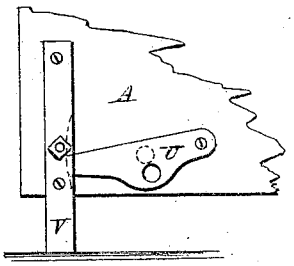


Fig. 2.

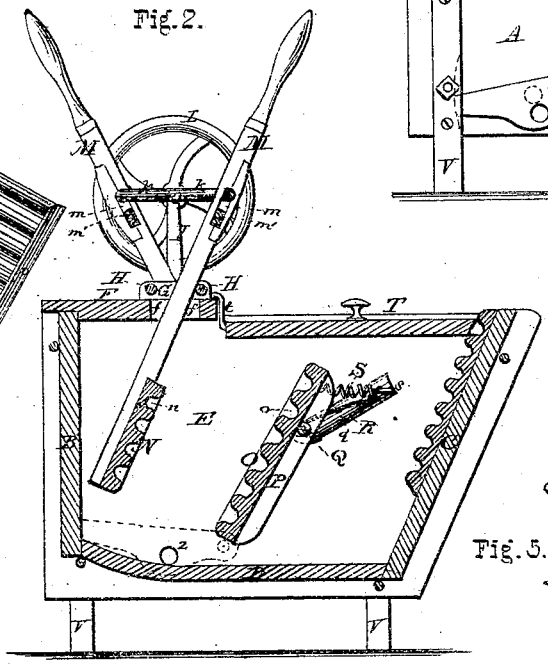


Fig. 6.

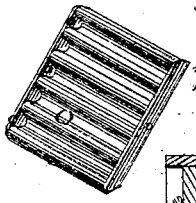
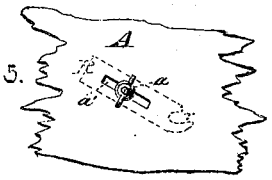


Fig. 4.

Fig. 5.



Witnesses.

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JOB ROBINSON, OF LAWRENCE, KANSAS.

Letters Patent No. 114,715, dated May 9, 1871.

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, JOB ROBINSON, of Lawrence, in the county of Douglas and in the State of Kansas, have invented certain new and useful Improvements in Washing-Machines; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a plan view of the upper side of my device;

Figure 2 is a vertical longitudinal section of the same on the line *x x* of fig. 1;

Figure 3 is a partial side elevation of the reservoir, showing the means employed for removing water therefrom;

Figure 4 is a side elevation of the adjustable bearing for the pivoted rubbers;

Figure 5 is a like view of a portion of one side of the reservoir, showing the means employed for rendering longitudinally adjustable said bearings; and

Figure 6 is a perspective view of the face of one of the pivoted rubbers.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon a similar device for which Letters Patent No. 102,972 were granted me on the 10th day of May, 1870; and

It consists, principally, in the means employed for attaching the pivoted rubbers to or upon the sides of the reservoir, so as thereby to render the same adjustable to or from the operating-rubbers, substantially as is hereinafter shown and described.

It finally consists in the construction of the reservoir, and the arrangement thereon of the covers, substantially as and for the purpose hereinafter shown and set forth.

In the annexed drawing—

A and A represent the sides of the reservoir, secured together at their ends by means of a vertical and an inclined end piece, B and C, respectively, and inclosed at its lower side by means of a bottom, D, the latter of which inclines slightly upward in a curve from near its longitudinal center to the lower end of the vertical end piece B.

A partition, E, extending longitudinally and vertically through the center of the reservoir, divides the same into two water-tight compartments.

The upper side of the reservoir, from the vertical end piece B inward about one-third of its length, is inclosed by means of a strip of board, F, in and through which are provided two slots, *f*, placed midway between the sides A and the partition E.

An angular metal plate, G, is secured to or upon the strip F, upon each side of the slots *f*, and extending vertically upward beside the same, furnishes bearings for two rollers, H, which are pivoted within said plates, at either end of said slots.

Rising vertically from the sides A, in a line with the slots *f*, are two standards, I, within which is journaled a shaft, K, having two cranks, *k*, placed directly over said slots.

A balance-wheel, L, provided with a handle, *l*, is secured upon each end of said shaft, and furnishes a means whereby the same may be rotated.

Journaled upon each crank *k* is a bar, M, which, from thence, passes downward through the slot *f*, and has secured transversely upon its inner face a corrugated or grooved board or rubber, N, having a length slightly less than the width of the compartment.

In order to prevent injury to the device by an accumulation of clothing beneath the end of the rubber N, the lower side of the crank-bearing within the bar M is removed sufficiently to permit of the insertion therein of a block, *m*, having its upper side fitted to said crank, while its lower side is provided with a pin, upon which is placed a spiral spring, *m'*, the operation of which is to hold said block against said crank, except when an unusual strain occurs, at which time the yielding of said spring will allow the block to press downward so as to enable the crank to complete its revolution without a further downward movement of the bar and rubber.

Within each compartment, between the rubber N and the inclined end C, is placed a second rubber, O, corresponding in length and construction with that before described, and having secured to or upon its rear face, by means of a vertical bar, P, a horizontal metal rod, Q, which has a length equal to the width of the compartment.

R represents a half-round bar, provided upon one of its ends with a semicircular recess, *r*, for the reception of one of the ends of the rod Q, and having at or near its opposite end a hook, *s*, as shown in fig. 4.

As thus constructed, one of said bars is secured to or upon the inner face of each side piece A, and in corresponding positions upon each side of the partition E by means of a screw passing through a horizontal slot within said bar R, and entering the partition; or, by means of a bolt, *a*, secured within said bar, and extending outward through an inclined slot, *a'*, provided in and through the sides A, so as to permit the ready longitudinal adjustment of said bars or bearings to or from the rubbers N.

The rubbers O being placed in position within the compartments, with their pivoted rods Q resting within the recesses *r*, a spiral spring, S, is attached to or near the upper outer corner of each rubber and to the hooks *s* for the purpose of holding said rubber in the

inclined position shown in fig. 2, except when its lower end is pressed rearward by the action of the rubber N operating through the clothing being cleansed.

In order to prevent the accidental displacement of the rod Q from its bearings, one end of a wire, *q*, is coiled around each end of said rod, and from thence, extending upward, has its opposite end secured to the upper coil of the corresponding spring.

The vertical edges of the rubbers are made to work sufficiently close to the sides of the compartments to prevent clothes from getting between the same, by means of a strip of rubber, leather, or other similar substance, *n* and *o*, which affords a yielding pressure that, while sufficient to accomplish the desired object, does not materially retard the action of the device.

It being necessary that the upper side of the machine should be inclosed while washing is being done, in order to prevent water from being thrown outward, each compartment is provided with a cover, T, which corresponds in width therewith, but is slightly shorter than the space between the inclined end piece C and the strip F.

A metal rod, *t*, is secured within the inner end of each cover at its center, transversely, and from thence extending upward, and then outward, as seen in fig. 2, rests upon the upper side of the strip F, and affords a support for said inner end, the opposite end of said cover being supported by or upon the inclined end piece C. By means of the opening left between the ends of the covers and the strip F the suds are less liable to foam and run over the top of the reservoir.

If desired, the inclined end piece C may have its inner face ribbed, grooved, or corrugated, so as to permit of its use as a hand wash-board.

In order to permit the water contained within the reservoir to be drawn off an opening, *z*, is provided in and through the side pieces A, immediately above the bottom D, and is inclosed by means of a gate, U, which is pivoted at one end upon said side piece, while its opposite end is contained within a groove formed within the leg V, or between said leg and said side. As thus attached to the reservoir, the outer end of the gate has a radial vertical movement so as to permit the opening *z* to be opened or closed. The inner face of the gate should be covered with rubber, in order to more readily form a water-tight joint between the same and the reservoir.

The device is now complete, and is operated as follows:

A suitable quantity of boiling suds having been placed within the reservoir and the soiled clothing placed within one of the compartments, the covers are replaced and the shaft turned so as to cause the rubbers N to pass downward toward the vertical end of said compartments, swing forward toward the pivoted rubbers, and then rise, by which means the clothes are rolled over and pressed between the rubbers, a new surface being presented to their action at each revolution of the shaft.

As the rubber N rises the accumulated clothing and water shoot forward, bringing the former in position to receive the next stroke.

After the clothing has been thoroughly rubbed and pressed within the first compartment, a wringer is placed upon the partition and said clothes passed through the same into the fresh suds contained within the second compartment, after which a new supply of soiled clothing should be placed within the first compartment and the machine operated as before, by which means each article leaves the machine thoroughly cleansed.

The position of the pivoted rubbers with relation to the operating-rubbers should be changed to correspond with the amount of clothing that it is found desirable to operate upon at once, it being necessary to so adjust said rubbers as that, at each revolution of the crank, the clothes shall receive a strong pressure.

The especial advantages obtained by this construction of the machine are—

First, the operation of the rubbers is rendered more certain and effective by their packed edges, and all liability to the derangement of the machine by reason of clothing becoming clogged between said rubbers and the reservoir is avoided.

Second, the operation of the machine may be rendered equally effective for a large or a small quantity of clothing by means of the adjustable bearings of the pivoted rubbers; and as said rubbers are readily removed from or placed in position the machine may be quickly and easily cleansed.

Third, the covers remove all possibility of the spattering outward of suds, and are so constructed as to be readily and quickly placed in position or removed therefrom.

Having thus fully set forth the nature and merits of my invention,

What I claim as new is—

1. The adjustable bearings R, in combination with the rod Q and the rubber O, substantially as and for the purpose shown.

2. The double reservoir, formed of the sides A, the ends B and C, the bottom D, the partition E and strip F, and provided with the covers T supported by means of the rod *t*, substantially as and for the purpose shown.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of October, 1870.

JOB ROBINSON.

Witnesses:

SAMUEL C. BLACK,
JAMES MCKENDRY,
M. MCCLELLAN.