

(No Model.)

F. D. HARDING.
WASHING MACHINE.

No. 525,322.

Patented Aug. 28, 1894.

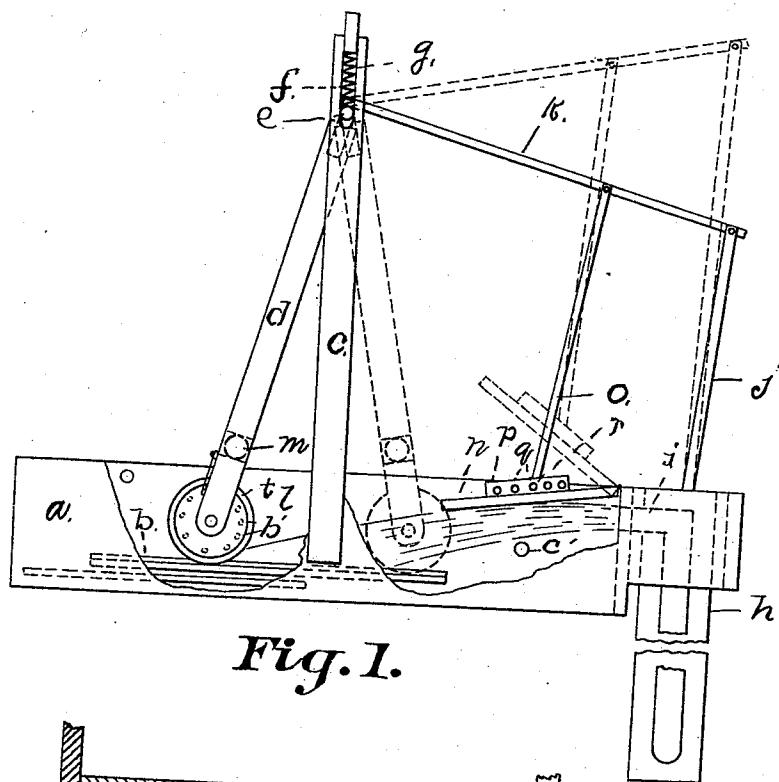


Fig. 1.

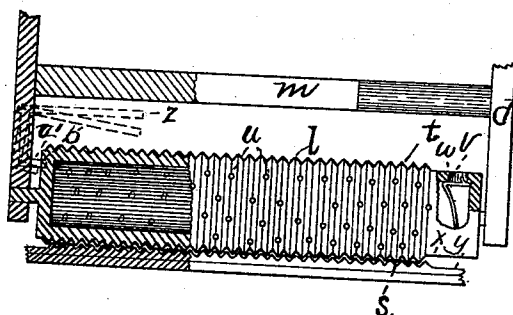


Fig. 2.

Witnesses:

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UNITED STATES PATENT OFFICE.

FRED D. HARDING, OF BALDWIN, MAINE, ASSIGNOR TO SIMON J. HARDING,
OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 525,322, dated August 28, 1894.

Application filed June 6, 1894. Serial No. 513,721. (No model.)

To all whom it may concern:

Be it known that I, FRED D. HARDING, a citizen of the United States of America, residing at Baldwin, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in washing machines, and more particularly to the class of machines which have a box with a corrugated scrubbing board in the bottom thereof, a pump supported in said box, a swinging rotary roller mounted in standards attached to said box and carrying a lever adapted to operate said pump.

My improvement consists in a new and novel arrangement and construction of the corrugated board and corrugated roller, in a device for spreading the water and preventing it from spattering the operator, and in means for causing the roller to move the clothes upon the board.

It further consists in certain details of construction which will be hereinafter more fully set forth.

In the drawings herewith accompanying and making a part of this application, Figure 1 is a side elevation, with parts broken away, and Fig. 2 is an end elevation of the board and roller, with parts broken away.

Same letters refer to like parts.

In said drawings *a* represents a suitable frame or box adapted to be set upon or over a tub, and *b* a scrubbing board set in the bottom of said box. Attached to said box are vertical standards *c*, and pivotally mounted in the tops of said standards is a swinging frame *d*, the ends *e* on the top of said swinging frame resting in slots *f* in the top of said standards. Between the top of said swinging frame and the cross head of said standards may be placed one or more springs *g* tending constantly to force said swinging frame downward. Mounted in said box is a pump cylinder *h* having a delivery pipe *i* passing through the end of said box above the board. Adapted to operate in said cylinder is a piston *j*, the

end of which is pivotally attached to an arm *k* rigidly secured to the top of said swinging frame in such manner that said piston is operated by the swinging to and fro of said frame. In the bottom of said standards is set a rotary corrugated roller *l* and a handle *m*, by which said swinging frame is operated.

Pivotally attached to the front end of the box directly over the orifice of the delivery pipe *i* is a combined shield and sprayer *n*, its free end extending forwardly over the scrubbing board. A pivot link *o* connects said shield and the rigid arm *k* secured to the top of the swinging frame in such manner that when said swinging frame is drawn toward the operator, the shield is forced downwardly by said arm and link, and when pushed away from the operator, the shield is raised upwardly out of the way of the roller. The amount of rise and fall of said shield may be regulated by changing the point of connection between the lower end of said link and said shield. This may be done in any convenient manner.

As shown in the drawings, a rack *p* having a series of holes *q* therein is attached to the top of said shield, and a pivot pin *r* may be passed through any one of said holes and through the end of said link.

Instead of having the board and roller of the usual construction with corrugations extending transversely, corrugations in the board may extend longitudinally, and the corrugations in the roller may extend circumferentially. As shown in the drawings, the board has the longitudinal corrugations *s* and the roller has corrugations *t* passing around said roller and adapted to mesh with the corrugations in the board. I also make the roller hollow and have therein a suitable number of perforations *u* to permit water and suds to pass in and out. I also make an opening *v* therein, through which soap may be inserted, the hollow interior of said roller serving for a soap box. The opening *v* may have a suitable door or slide *w* to prevent the soap from passing out therefrom.

To obviate the danger of breaking buttons or tearing them from the garment, I leave one edge of the roller and the edge of the board *y* beneath space *x* without corrugations, so

that the part of the garment to which the buttons are attached may come under said space *x*.

To lock the roller against rotation, I attach 5 to the swinging frame a pivoted angle bar having one end *z* parallel with the handle, and the other end *a'* adapted to engage holes *b'* in the end of the roller. When the scrubbing board has longitudinal corrugations and 10 the roller is locked against rotation, the roller will move the clothes over the board as the roller is swung backward or forward.

Any suitable means may be employed for supporting the roller away from the board 15 when not in use. The drawings show a perch *c'* set in the path of the roller in such position that the roller when moving forward will rest upon it and between it and the end of the box.

The operation of my improved machine is 20 as follows:—As the roller is drawn toward the operator, water is forced through the delivery pipe toward the operator. At the same time the shield descends so as to direct the water downwardly upon the clothes on the board 25 in front of the roller, and inasmuch as the water strikes against the flat surface of the bottom of the shield, it will be spread out laterally instead of falling at a single point as formerly.

30 It will thus be evident that the device accomplishes the two fold purpose of protecting the operator and of causing an even distribution of the water.

The change in the directions of the corrugations in the board and roller in combination 35 with the locking device for the roller, enables the operator to move the clothes upon the board without placing the roller upon its

perch and without touching the clothes with the hands. 40

The hollow roller serves the purpose of an automatic soap box, and the soap box and shield are so arranged that they cannot in any way come in contact with the clothes.

Having thus described my invention and 45 its use, I claim—

1. In a washing machine, the combination with a suitable box having a corrugated scrubbing board set in the bottom thereof, a rotary roller mounted in a swinging frame pivotally 50 supported in standards attached to said box and a pump set in said box and having a delivery spout extending through the wall of said box, of a shield pivotally attached to the edge of said box over said delivery spout, 55 said pump and shield being adapted to be operated by said swinging frame, substantially as and for the purposes set forth.

2. In a washing machine, the combination with a suitable box, a scrubbing board in the 60 bottom thereof, a rotary roller set in a swinging frame mounted in standards attached to said box, and a pump adapted to be operated by said swinging frame, of a shield and 65 sprayer pivotally attached to the end of said box and adapted to be operated by said swinging frame, and means for regulating the rise and fall of said shield, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in 70 presence of two witnesses.

FRED D. HARDING.

Witnesses:

ELGIN C. VERRILL,
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