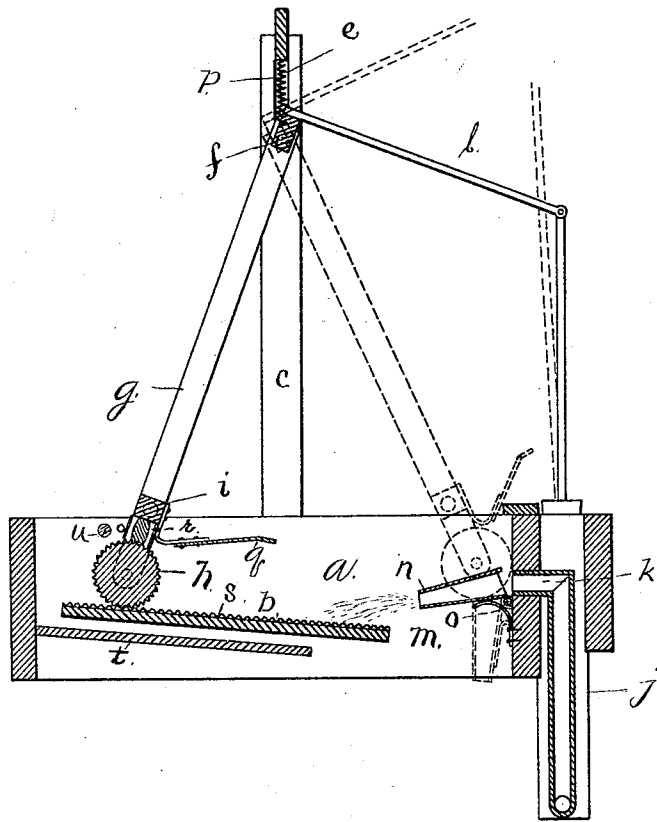


(No Model.)

F. D. HARDING.
WASHING MACHINE.

No. 543,990.

Patented Aug. 6, 1895.



Witnesses:

Jennies E. Pollard,
Frederick G. Fassett

Inventor:

Fred H. Harding,
by Vernill Clifford,
Attorneys.

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. 543,990, dated August 6, 1895.

Application filed May 20, 1895. Serial No. 549,896. (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 that class of machines wherein a corrugated roller is adapted to oscillate back and forth over a corrugated board, the frame in which the roller is journaled being adapted through an intermediate lever to operate a piston in a pump, whereby water is periodically thrown upon said board.

It consists in a supplemental delivery-spout for carrying the water over upon the board from the delivery-spout, and in means for automatically forcing the supplemental spout out of the way when the pump is not in operation.

It also consists in a guard attached to the roller-frame and adapted to prevent the water from being spattered upon the operator.

It further consists in certain details of construction to be hereinafter fully set forth.

In machines of this class the scrubbing-board cannot extend to the end of the box, but must have an open space to permit access to the tub beneath.

It will be evident that in machines constructed on this principle it is absolutely necessary that the board should not extend to the end of the box, but that an opening should be left therein to permit access to the tub beneath.

It will be evident that if the spout were extended into the tub in a permanent form it would be seriously in the way of the operator. I have obviated this objection by making the extension of the delivery-spout pivoted and providing means for holding it out of the way when not in use.

The figure shows a horizontal vertical sec-

tion of a machine embodying my improvements.

In said drawing, *a* represents a box adapted to be set upon the tub. In said box is set a corrugated board *b*, and to the sides of said box are attached standards *c*. In said standards are slots *e* in which rest the ends of the swinging frame *f*. Journaled in the bottom of the sides *g* of said swinging frame is a corrugated roller *h* and a cross-bar *i*, which serves for a handle to operate the frame.

Attached to the end of the box is a pump consisting of a barrel *j*, a piston working therein, and a delivery-spout *k*, said piston being adapted to be operated by means of said swinging frame through an intermediate lever *l* attached to the end of the piston-rod and the top cross-bar of said swinging frame. The delivery-spout at the top is bent at right angles in the direction of the scrubbing-board and extends through the end of the box at a point somewhat higher than the board. Between the scrubbing-board and the end of the tub is an open space *m* to permit access to the tub beneath. Through this open space the clothes to be washed, after being soaked in the water, are taken up and placed upon the board. The roller is then oscillated over the board and upon the clothes thereon, and every time it is drawn toward the operator a stream of water is forced through the delivery-spout toward the board. Pivoted to the wall of the box at a point below the spout is a supplemental spout *n*, which is held normally by spring *o* at a proper angle to receive the water from the spout and direct it over upon the board. It also serves as a support for the roller when the roller is pushed forward out of the way of said opening, as indicated by dotted lines in the figure. The corrugations in the roller engage the top of the supplemental spout at a point below the center of the roller, which rolls upon the supplemental spout and forces said spout downward.

A spring *p* may be arranged to bear upon the top of the swinging frame, tending to force the swinging frame downwardly, but yielding sufficiently to permit said frame to swing back

and forth over the board. The supplemental spout should be not longer than the opening between the board and end of the box, so that it may swing in said opening. The spring *o* holds the supplemental spout up so as to register with the pump-spout when in its normal position. I also attach to the cross-bar of the swinging frame or to the sides thereof a guard *g*, which extends forwardly over the board to a considerable distance, which guard may be made of a flexible or elastic material, so that when the frame and roller are forced forward into the position shown in dotted lines, the guard strikes against the edge of the box and is bent back toward the frame somewhat, so as not to interfere with the free forward movement of the roller.

Mounted in the swinging frame over the roller may be a soap-box *r*, the bottom of which is in communication with the roller, so that when a cake of soap is placed in the box it will rest upon the roller.

The scrubbing-board may be inclined to permit the water to run off from the board. It may also have longitudinal grooves *s* therein to permit the water to run out of the troughs formed by the corrugations. The board may also be made in two parts, the one *t* nearest the operator being without corrugations and

located slightly below the other and extending somewhat beyond the adjacent end thereof. In the sides of the box are lugs *u* which limit the backward movement of the roller.

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

In a washing machine, in combination, a suitable box, a corrugated scrubbing board set therein, standards attached to the sides thereof and having slots therein, a swinging frame having journals adapted to rest in said slots, a corrugated roller journaled in the lower extremities of the sides of said frame, a pump mounted in said box and adapted to be operated by said swinging frame, said pump having a delivery spout projecting through the end of said box and a supplemental delivery spout hinged to said box and adapted to register with the end of said delivery spout when in its normal position and to be bent downwardly, substantially as and for the purposes set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 18th day of May, A. D. 1895.

FRED D. HARDING.

Witnesses:

NATHAN CLIFFORD,
SIMON J. HARDING.