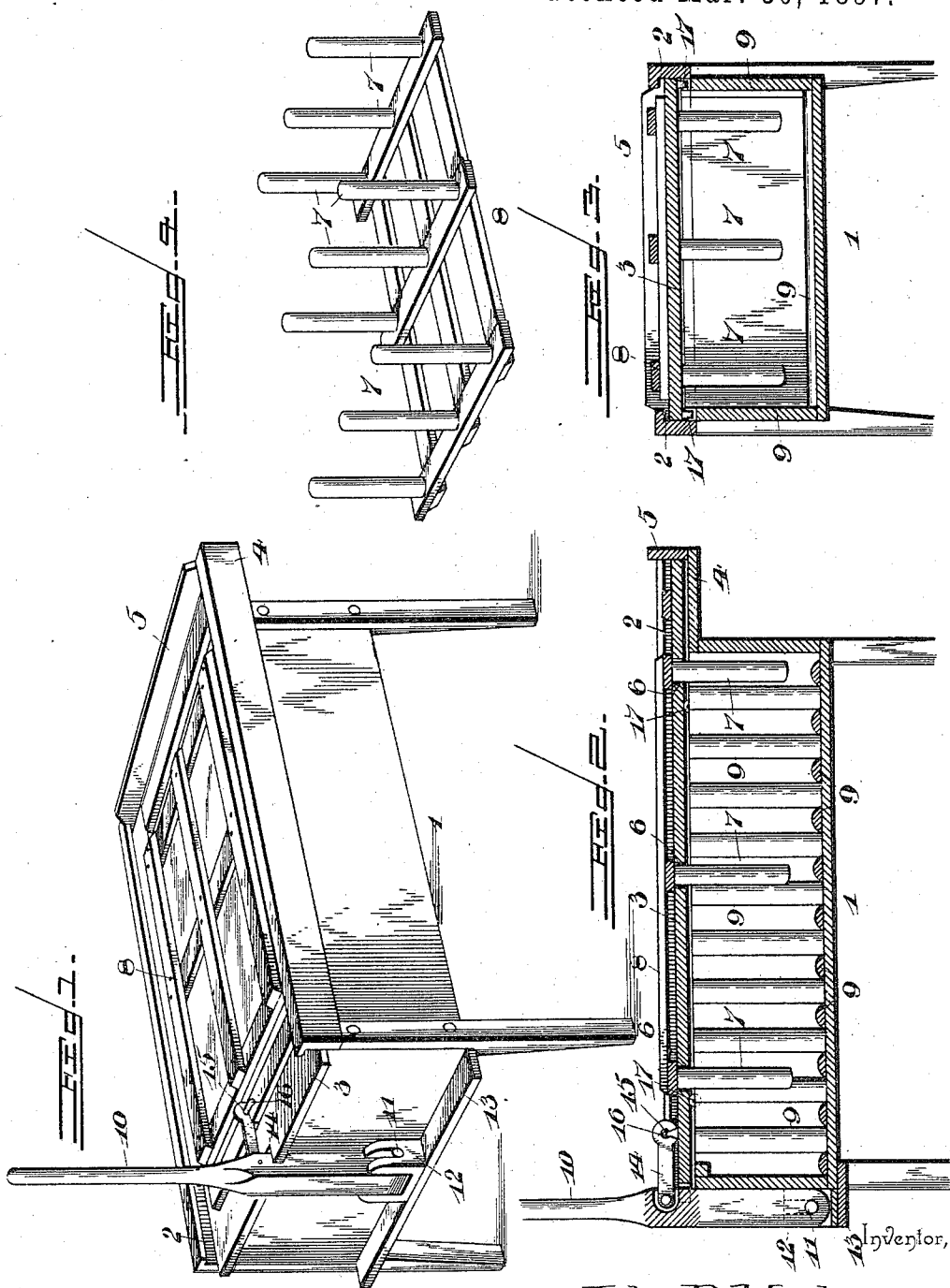


(No Model.)

J. R. HARTMAN.
WASHING MACHINE.

No. 579,578.

Patented Mar. 30, 1897.



Witnesses

H. A. Doyle
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By his Attorneys.

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UNITED STATES PATENT OFFICE.

JOHN R. HARTMAN, OF DAVENPORT, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 579,578, dated March 30, 1897.

Application filed April 30, 1896. Serial No. 589,727. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. HARTMAN, a citizen of the United States, residing at Davenport, in the county of Scott and State of Iowa, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines, and to provide a simple, inexpensive, and efficient one, adapted to be readily operated and capable of enabling clothes or other fabrics to be thoroughly and rapidly washed without tearing or otherwise injuring them.

A further object of the invention is to provide a washing-machine in which clothes will be properly rubbed and which will automatically adjust itself to suit the quantity of clothes being washed, and thereby avoid exerting any excessive rubbing action on the fabrics.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claim hereto appended.

In the drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view. Fig. 3 is a transverse sectional view. Fig. 4 is a detail perspective view of the vertically-movable frame which carries the clothes-engaging pins.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a washing-machine body, rectangular in cross-section, supported by suitable legs and provided at the upper edges of its sides with longitudinal ways 2, receiving the reciprocating cover 3, and the washing-machine body is provided at its rear end with an extension 4 to permit the necessary movement of the cover and to enable the washing-machine body to be closed at all times during the operation of washing. At the outer end of the extension is arranged a transverse bar 5, forming a stop for the cover and adapted to receive a wringer after the opera-

tion has been completed. The cover 3, which is provided with a flat lower face, is supported on its upper face by transverse cleats and is provided at intervals with a series of perforations 6, receiving vertically-disposed clothes-carrying pins 7 of a vertically-movable frame 8. The frame 8, which is rectangular and which is composed of bars arranged at right angles, is capable of vertical movement to permit the clothes-carrying pins, which depend from the inner face of the cover, to adjust themselves to the quantity of clothes being washed. The clothes-carrying pins 7 are adapted to engage the clothes and other fabrics being washed during the reciprocation of the cover of the washing-machine body and carry them over the body, which is provided at its bottom and sides with rubbing-surfaces, whereby the operation of washing is effected. By having the clothes-carrying pins automatically adjustable any quantity of clothes may be arranged in the washing-machine body without being subjected to too great a pressure or excessive rubbing.

The rubbing-surfaces of the washing-machine body may be of any desired construction; but they preferably consist of bars or cleats 9, arranged at intervals and forming corrugations.

The cover of the washing-machine body is reciprocated by an oscillating operating-lever 10, provided at its lower end with journals or trunnions 11, detachably arranged in bearing-recesses of a bearing block or bracket 12. The bearing-bracket 12 is composed of opposite sides and a bottom, and it is secured to a shelf or ledge 13, projecting from the front of the washing-machine body at the bottom thereof. The operating-lever is detachably connected at a point intermediate of its ends with a cover by a link 14, pivotally connected at its outer end to the lever and provided at its inner end with a hook or open eye 15, adapted to engage a staple 16 for securing the front cleat to the cover of the washing-machine body. The front cleat is composed of two sections sufficiently separated at their adjacent ends to receive the inner end of the link 14 and to permit the necessary play of the same, and the washing-machine body is recessed at its front end to receive the operating-lever. The staple is

recessed at its lower face to reduce its thickness to permit the link to be readily engaged with it when the link is in a vertical position, and the link, when in a horizontal position, is prevented from becoming disengaged from the staple, the width of which is greater than the width of the entrance slot or opening of the eye or hook of the link.

The cover 3 of the washing-machine body is adapted to be reversed to bring its smooth lower face uppermost to enable it to be used as an ironing-board and the washing-machine to form an ironing-table.

In order to reduce the friction incident to the reciprocation of the cover of the washing-machine body to a minimum, the cover is supported by antifriction-rollers 17, arranged at the bottoms of the ways 2 and disposed at the front and back of the washing-machine body.

Instead of employing an oscillating lever for reciprocating the cover and the vertically-movable frame, a crank eccentric, or similar connection, may be used and may be mounted on the washing-machine body in any desired manner.

It will be seen that the washing-machine is exceedingly simple and inexpensive in construction, that it is conveniently operated, and that it is capable of rapidly and thor-

oughly washing the clothes and of adjusting itself automatically to the quantity of clothes being washed to avoid excessive washing.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

In a washing-machine, the combination of a body provided at its upper edges with horizontal ways, a horizontally-reciprocating cover arranged in said ways and provided with perforations, a frame loosely resting upon the upper face of the cover, carried by the latter in its reciprocation and provided with depending vertically-disposed clothes-engaging pins passing through the perforations of the cover, said frame being capable of free vertical movement independent of the cover and being removable therefrom, and operating mechanism for reciprocating the cover, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOHN R. HARTMAN.

Witnesses:

ORRIN H. ANDREWS,
WILLIAM S. RICE.