

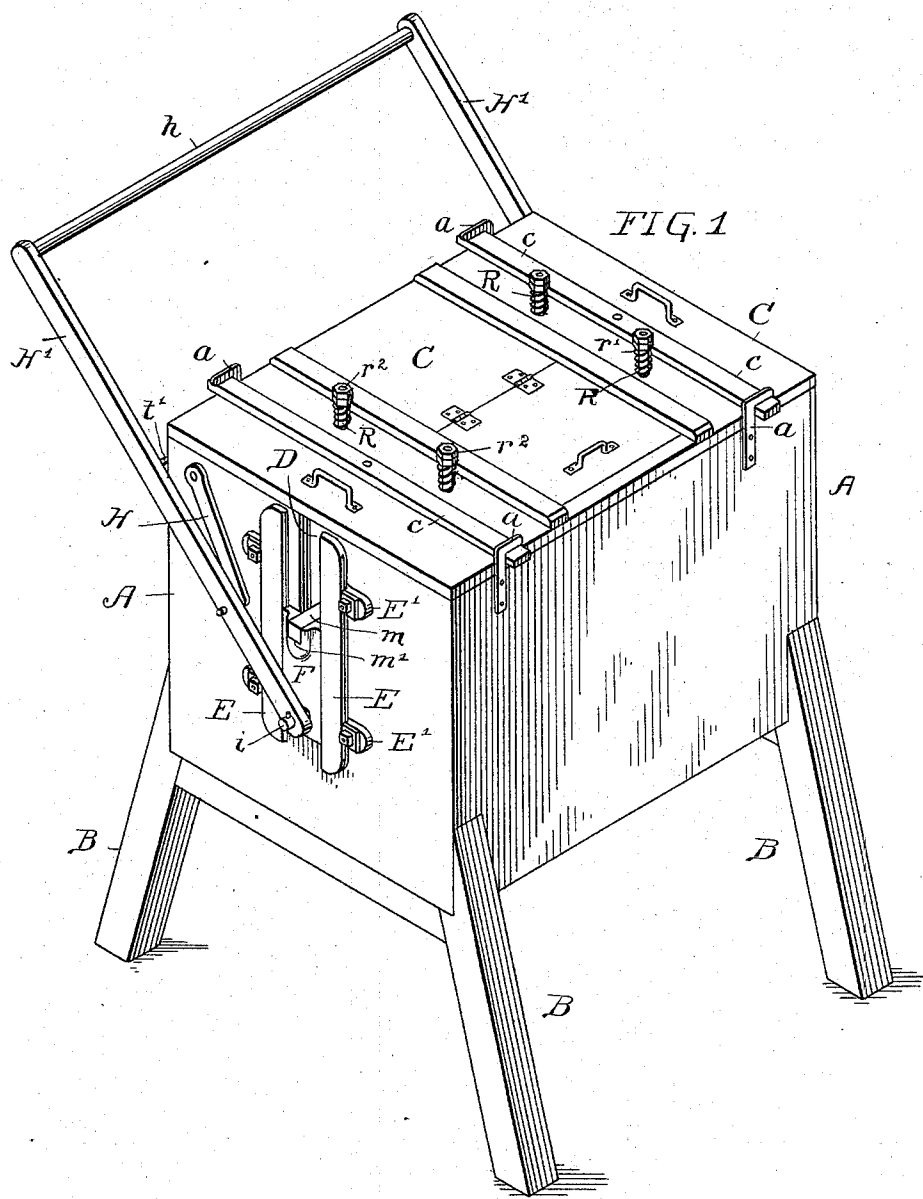
(No Model.)

3 Sheets—Sheet 1.

J. L. WEST.
WASHING MACHINE.

No. 571,501.

Patented Nov. 17, 1896.



Witnesses:
Jno. C. Parker
J. Henderson.

Inventor:
John L. West.
by his Attorney
Homer Pellee.

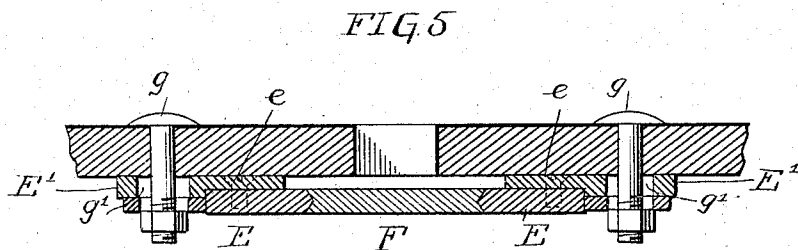
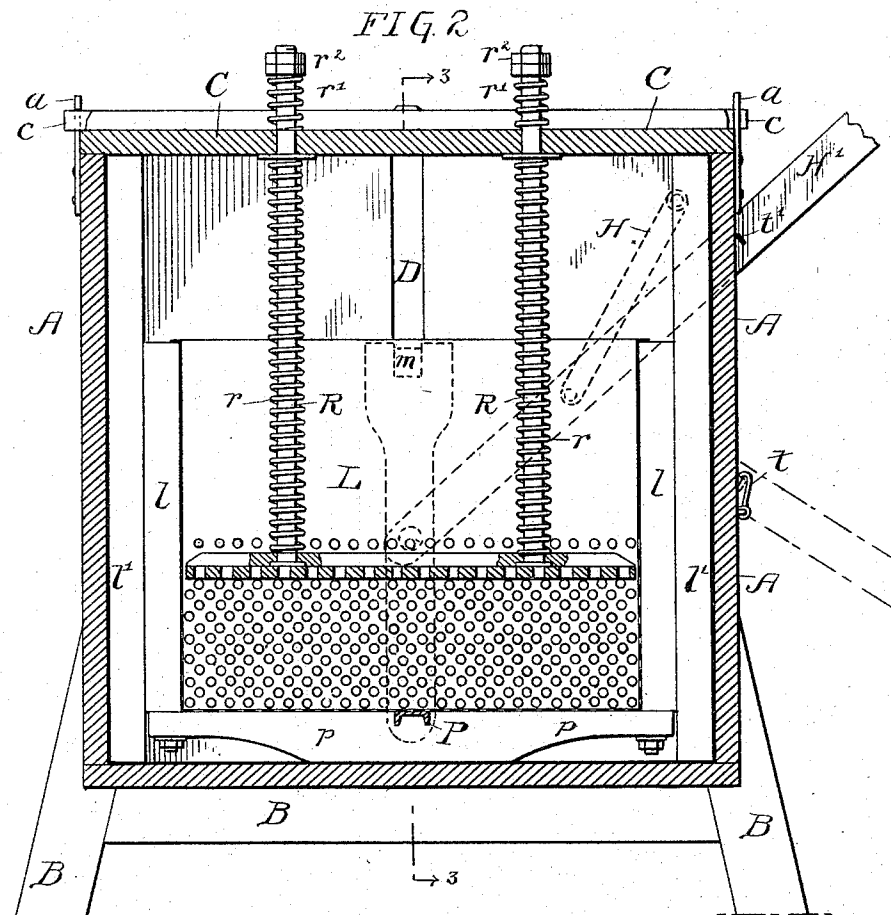
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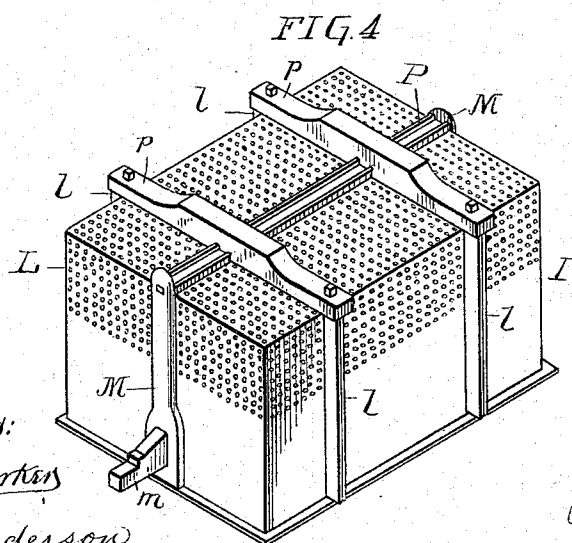
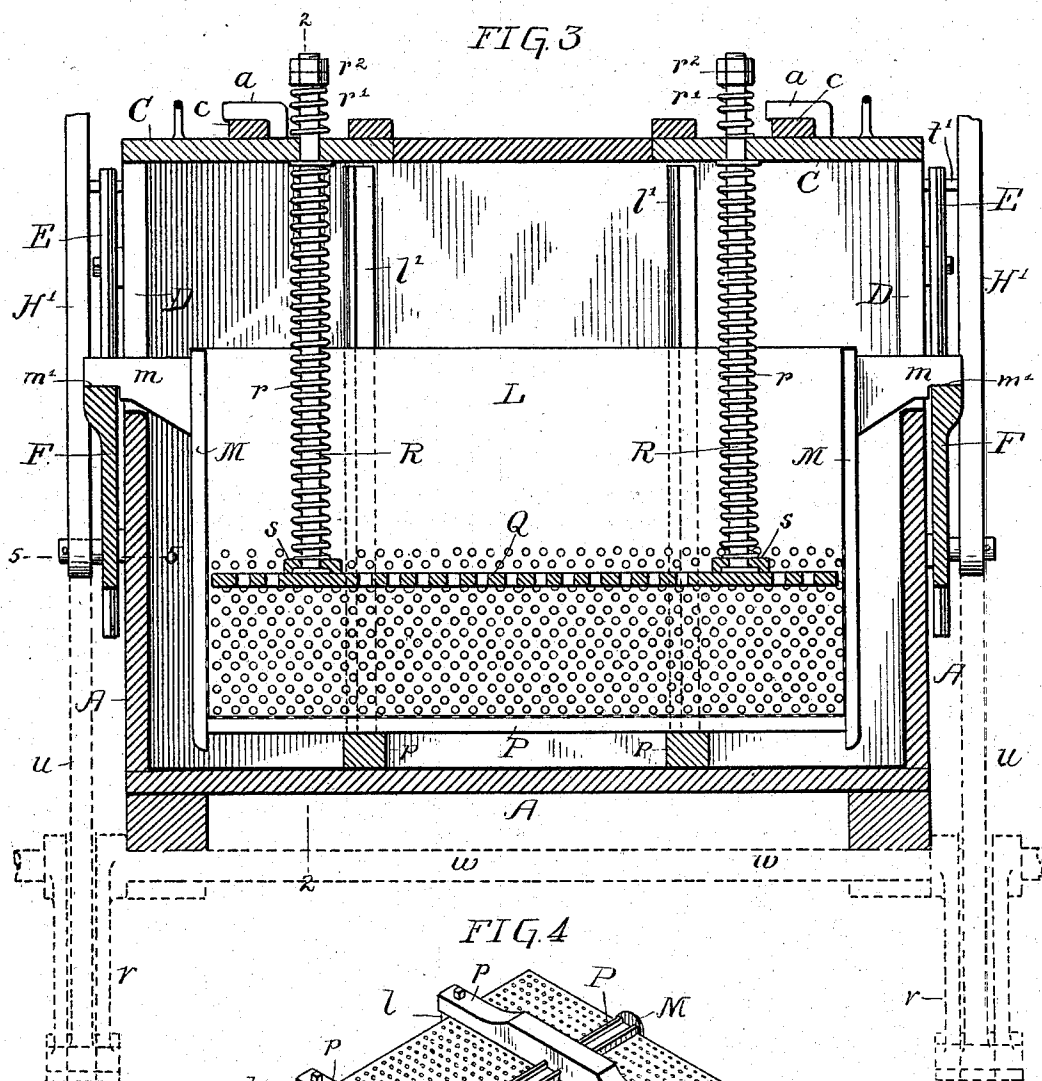
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UNITED STATES PATENT OFFICE.

JOHN L. WEST, OF NORRISTOWN, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 571,501, dated November 17, 1896.

Application filed May 17, 1895. Serial No. 549,663. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. WEST, of Norristown, county of Montgomery, State of Pennsylvania, have invented a certain new and useful Improvement in Washing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to certain improvements in that class of machines used for washing clothing in which the clothes are cleansed by forcing through them a quantity of suds or other liquid, and has for its object to provide an improved construction of apparatus by the use of which the clothes may be rapidly and effectively cleansed without danger of destroying or wearing out the garments.

In the accompanying drawings, Figure 1 is a perspective view of a washing-machine constructed in accordance with my invention. Fig. 2 is a transverse sectional elevation of the same on the line 2 2, Fig. 3. Fig. 3 is a longitudinal sectional elevation on the line 3 3, Fig. 2. Fig. 4 is an inverted perspective view of the perforated casing of the chamber within which the clothes to be washed are placed; and Fig. 5 is a sectional plan view on the line 5 5, Fig. 3, illustrating on an enlarged scale the means of securing the guide-bars to the side of the casing.

Referring to the drawings, A represents the outer casing or tub, preferably provided with suitable supporting-legs B to elevate the tub at a slight distance from the floor. This tub is lined with zinc or other suitable sheet metal, so as to render it waterproof, and has a cover C, which when the machine is operating is locked to the tub by the engagement of pivoted locking-bars c on the cover, with fixed hooks a projecting from the tub.

The opposite ends of the tub are provided with centrally-arranged vertical slots D, and on the ends of said tub at each side of the slot are secured guiding-bars E, serving to guide a block F. The guiding-bars E are secured to the side of the casing A by means of slotted connecting-plates E', in the manner shown in detail in Fig. 5, each plate being secured to one of the bars E by a screw e and each plate being secured to the end wall of the casing or tub by a bolt g, passing

through a slot g' in the plate, the length of the slot being at a right angle to the length of the guiding-bars, so that such guiding-bars can be moved toward each other to compensate for wear between the block F and the guiding-bars.

Near the upper corner of each end of the casing is pivoted a link H, carrying a lever H', one end of each lever being connected to a pin i, projecting from the slide-block F, and the opposite ends of such levers being connected together by a handle-bar h, which the operator grasps while working the machine. If the machine is a large one, any excessive weight of the clothes-containing chamber may be counterbalanced by weight, placed upon these levers H'.

Within the casing A is a vertically-movable chamber or clothes-box L, having a perforated bottom and perforated side and end walls to permit the free passage of the cleansing fluid, and on each side of the chamber-casing are vertical guiding-plates l, adapted to guideways l', secured to the inner side walls of the main casing A. At each end of the casing L are plates M, having projecting lugs m, the outer squared ends of which rest in pockets m', formed in the upper portion of the slide-blocks F, so that as the latter are moved vertically the casing L is given a similar movement.

In order to strengthen and brace the sheet-metal casing L, it is preferred to connect the two end plates M by a bottom channel-bar P, extending across the bottom of the casing L, and the guide-bars l, on the opposite side walls of the casing L, are also connected together by bars p, formed of wood or metal, but preferably formed of wood, so as to lessen the weight of the casing.

Within the casing L is a horizontally-arranged perforated presser-plate or plunger Q, held loosely to the upper cover by a series of long vertical bolts R, each bolt being surrounded by a coiled compression-spring r, which serves to hold the plate in its lowest position, the springs yielding under pressure of the clothing, and during the washing operation, as the chamber L is raised, yield to a considerable extent, while the bolts slide freely through the openings in the cover. It is preferred to provide a short section of metallic or

rubber spring r' between the cover and the adjusting-nuts r^2 at the upper end of each bolt, so as to give greater freedom of movement to the presser-plate, although these springs may
5 be omitted without materially affecting the operation of the machine.

The upper surface of the presser-plate is provided with transversely-arranged strengthening-bars s , through which the bolts R are
10 passed, so that the heads of the bolts will be concealed.

In operation the clothing to be washed is placed within the perforated casing L and the necessary suds or other cleansing liquid is
15 poured into the tub. The cover C and presser-plate are then placed in position, the cover being locked in place by turning the bars c until they engage the hooks a on the sides of the tub. The operator then grasps the handle h
20 and operates it vertically to give a corresponding movement to the casing L , the clothing within the chamber being squeezed between the bottom of the chamber and the presser-plate; and the suds with which the
25 clothing is saturated are forced through all portions of the fabric, the pressure given being adjusted by the nuts r^2 and being governed, to some extent, by the quantity of clothing within the casing and the amount of vertical
30 movement given to the casing L . As the casing is raised the clothing is lifted out of the water, and the greater portion of the water, after being forced through the clothing, escapes through the perforations in the walls
35 and bottom of the casing, and then, as the casing descends again into the water, the clothing again becomes saturated and upon the next upward movement is again squeezed, so that after a short time it will be thoroughly
40 cleansed. After the washing operation is completed the cover and presser-plate are removed and the handle h is moved down until it assumes the position shown by the dotted and dash lines, Fig. 2, when the lever may
45 be locked in this position by a hook t engaging a cross-bar t' , and the casing may be thus held up out of the water until the clothing is drained.

In cases where a large number of machines
50 are to be operated the pins i on the blocks F may be connected directly, by means of a short arm, with a crank in a power-shaft.

Having thus described my invention, what I claim; and desire to secure by Letters Pat-
55 ent, is—

1. The combination of the outer casing and removable cover, a perforated clothes-containing chamber; mechanism connected with said clothes-containing chamber for positively reciprocating the same in a vertical line
60 in said casing, an automatically-yielding, perforated presser-plate provided in said clothes-containing chamber having guide-bolts, R , and compression-springs, r , substantially as described.
65

2. The combination of the outer casing having slotted end walls, a guided block arranged opposite each slot, a clothes-containing chamber comprising a perforated casing having
70 end plates, M , lugs, m , projecting from said end plates and adapted to recesses in the guided blocks, guides within said outer casing for the clothes-containing chamber, a perforated presser-plate, and springs acting to depress and hold said presser-plate within the
75 clothes-containing chamber, with means for vertically reciprocating the guided blocks, substantially as specified.

3. The combination of the outer casing or tub, a removable cover, C , thereon, pivoted
80 locking-bars, c , carried by said cover, hooks, a , on the outer casing with which said locking-bars are adapted to engage, a perforated presser-plate, Q , bolts, R , extending therefrom through openings in the cover, C , springs,
85 r , r' , surrounding said bolts, adjusting-nuts, r^2 , on the upper ends of said bolts, and a vertically-movable perforated clothes-containing chamber in said casing or tub, substantially as specified.
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4. The combination of the outer casing or tub having slotted end walls, guide-bars, E , adjustably secured to said end walls on either side of the slots in the casing, guided blocks,
95 F , adapted to the guide-bars at each end of the casing or tub, a perforated clothes-containing chamber; L , within said casing or tub, lugs, m , projecting from the opposite ends of the clothes-containing chamber and adapted to recesses in the blocks, F , a perforated
100 presser-plate, springs acting to depress the same and means for vertically reciprocating the guided blocks, F , substantially as specified.

5. The combination of the outer casing or
105 tub having slotted end walls, guide-bars, E , adjustably secured to said walls on either side of the casing-slots, guided blocks, F , adapted to the guide-bars at each end of the casing or tub, levers, H , pivoted to said blocks, swinging links, H , carrying said levers, the perforated clothes-containing chamber, end lugs,
110 m , thereon adapted to recesses in the blocks, F , a perforated presser-plate, and springs acting to depress said presser-plate, substantially as specified.
115

6. The combination of the outer casing or tub having slotted end walls, links, H , pivoted to said end walls, levers, H' , carried by said
120 links, a connecting-handle, h , and cross-bar, t' , extending between and connected to said levers, a securing-hook, t , adapted to engage with said cross-bar, t' , guided blocks, F , to which the levers, H , are connected, a perforated clothes-containing chamber, end lugs,
125 m , thereon adapted to recesses in the blocks, F , a perforated presser-plate and springs acting to depress said presser-plate, substantially as specified.

7. The combination of the outer casing or
130

tub having slotted end walls, the guide-bars, E, slotted holding-plates, E', carrying said guide-bars, bolts, g, passing through the end walls of the casing and through the slots in the holding-plates, a block, F, guided by said bars, a perforated clothes-containing chamber, end lugs thereon adapted to recesses in the blocks, F, a perforated presser-plate, and

springs acting to depress said presser-plate, substantially as specified. 10

In witness whereof I have hereunto set my hand this 14th day of May, A. D. 1895.

JOHN L. WEST.

Witnesses:

EDMUND S. MILLS,
HORACE PETTIT.