



(No Model.)

2 Sheets—Sheet 2.

# J. DILLEY, Jr. WASHING MACHINE.

No. 495,401.

Patented Apr. 11, 1893.

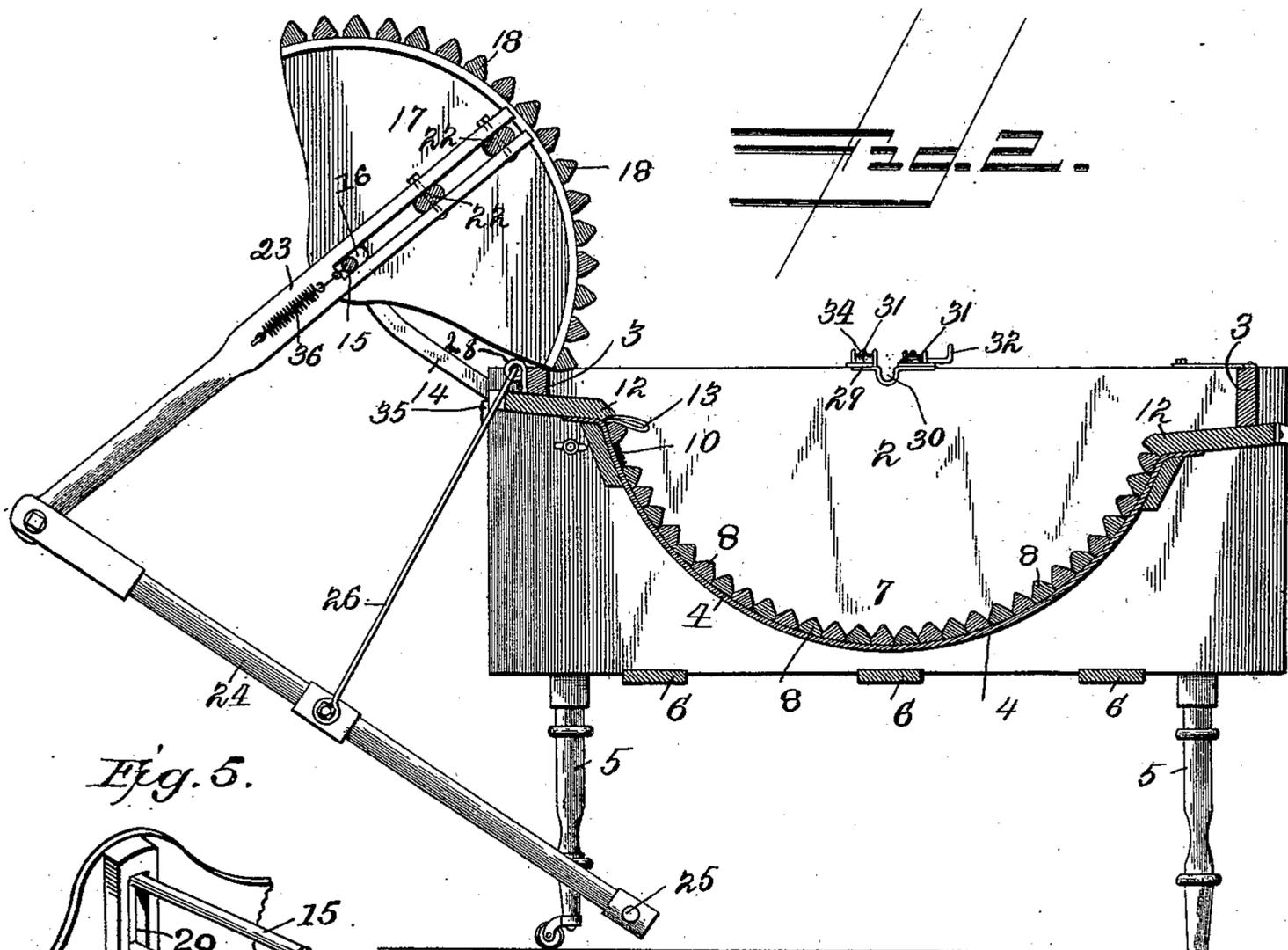
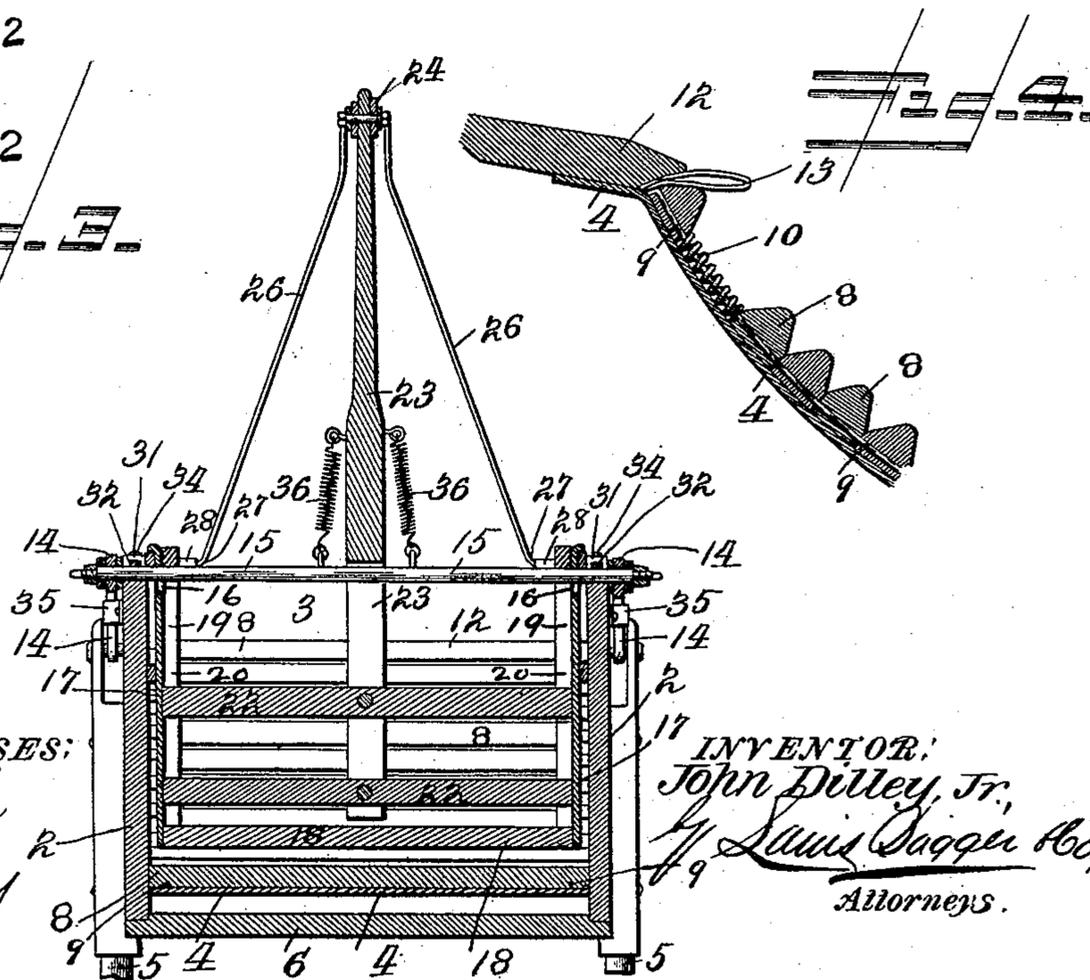
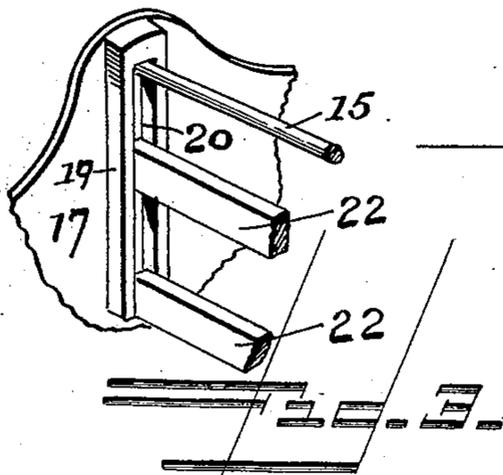


Fig. 5.



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# UNITED STATES PATENT OFFICE.

JOHN DILLEY, JR., OF PORTLAND, MICHIGAN.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 495,401, dated April 11, 1893.

Application filed October 22, 1892. Serial No. 449,573. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN DILLEY, Jr., a citizen of the United States, and a resident of Portland, in the county of Ionia and State of Michigan, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in washing machines, the object being to provide an improved construction of same which shall possess superior advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings: Figure 1 is a side elevation of a washing machine constructed in accordance with my invention. Fig. 2 is a longitudinal sectional view of the same, the rocker being thrown back or removed from the suds-box. Fig. 3 is a central cross sectional view. Fig. 4 is detail sectional view of one end of the rubbing board. Fig. 5 is a detail perspective view of one of the slotted bars secured to the sides of the rubber.

In the said drawings the reference numeral 1 denotes the suds-box comprising the sides 2, ends 3, circular bottom 4, and legs 5. The bottom consists of a curved zinc or other metallic plate, the side edges of which are seated in grooves in the sides 2. The sides 2 are connected together at their lower ends by cross-bars 6.

The numeral 7 denotes the rubbing board consisting of a number of transverse rods or bars 8 equal in length to the width of the suds-box, having their sides beveled as seen in Fig. 2. These rods or bars are strung upon two or more longitudinal flexible metal rods 9, which pass through apertures therein and are secured to the opposite end bars 8, of the series. Between one of the end bars 8 and the next adjacent bar of the series, the rods 9 are provided with coiled springs 10 embracing the same and bearing against said bars so

as to compensate for any warping or shrinking and keep said bars in close contact with each other. This rubbing board is placed upon the metallic bottom 4, and owing to the flexibility of the rods 9 will conform to the curvature thereof, and will be held in place by the end bars of the series abutting against the under side of the cross-bars 12, secured to the sides and ends of the suds-box. One of the end bars 8 is provided with a loop-strap 13, whereby the rubber may be withdrawn from the suds-box as it simply rests on the bottom 4.

Pivoted to the outside of the suds-box, near one end thereof are two arms 14, having slots 14<sup>a</sup> through which the pivots pass and are secured at their upper ends to a transverse rod 15, which passes through slots 16, in the sides 17, of the rocker, which are curved to correspond with the curvature of the bottom 4. Secured to the sides 17 is a series of transverse bars 18 with a slight interval or space between them for the passage of water. Secured to each of the sides 17 is a bar 19 having a slot 20, to receive the ends of the transverse bars 22, which are secured thereto.

The numeral 23 denotes a lever having its lower end bifurcated or slotted and secured to the bars 22. The rod 15 passes loosely through the slot in lever 23. Pivoted to the upper end of lever 23 is a horizontal lever 24, provided with a handle 25. Pivoted to this rod at or near its center are two downwardly depending rods 26, having their lower ends bent outwardly forming short studs 27, which are journaled in bearings 28, in one of the ends of the suds-box.

Secured to the upper edges of the sides of the suds-box at the center thereof are two plates 29, formed with a semi-circular bearing 30 to receive the ends of the transverse bar 15. Each of these plates is provided with two boxes 31 at opposite sides of the bearing 30, in which works a slotted catch 32. A pin 34 is passed through one of these boxes and through the slot in the catch, after the latter has been slid over the bar 15, so as to hold it in place.

Secured to the sides 2, are guides 35, for the arms 14.

Secured to the bar 15 and to the lever 23

are two coiled springs 36, which serve to increase the pressure of the rubber on the clothes.

Supposing the parts to be in the position  
 5 seen in Fig. 1 and it is desired to remove the rubber for the purpose of introducing the clothes into the suds-box, the operation will be as follows. The catches 32 are shot back so as to release the bar 15. By now bearing  
 10 upon the outer end of lever 24, the rocker will be lifted out of the suds-box the pivots of the rods 26, acting as the fulcrum of said lever. When the rocker is elevated above the suds-box, the lever 24 is pulled outward  
 15 carrying with it the suds-box which will occupy the position shown in Fig. 2. The clothes with a sufficient quantity of water are now placed in the suds-box and the rocker returned to normal position and the catches  
 20 manipulated so as to hold the bar 15 in its bearings. By now moving the lever 24, back and forth the lever 23 and rubber will be oscillated and the clothes between the rocker and rubber be thoroughly cleansed. The  
 25 rubber is capable of moving vertically so as to accommodate itself to the clothes in the suds-box. It will be noted that the rubbing board is not attached in any manner to the suds-box so that it can be readily removed  
 30 for cleaning.

Having thus described my invention, what I claim is—

1. In a washing machine the combination

with a suds-box having transverse bars at each end near the upper part thereof, of the  
 35 removable rubbing board consisting of a series of transverse bars provided with apertures through which pass flexible metallic rods secured to the end bars of said series,  
 40 and the coiled springs interposed between said end bars and the next adjoining bars, substantially as described.

2. In a washing machine the combination with the suds-box, the rubber consisting of the sides having slots therein, the transverse  
 45 bars and the slotted bars secured to said sides, of the slotted arms pivoted to the suds-box the rod carried by said arms, passing through said slots, the bearings for said bar, the bifurcated lever, the cross-bars secured to said  
 50 lever having their ends secured to the slotted bars secured to the sides of the rubber, the springs secured to said rod and lever, the horizontal lever pivoted to said lever having  
 55 the downwardly depending rods pivoted intermediate its ends, and the lower ends of said depending rods journaled in bearings in the end of the suds-box, substantially as described.

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

JOHN DILLEY, JR.

Witnesses:

WM. H. WHITE,  
 FRANK E. DOREMUS.