

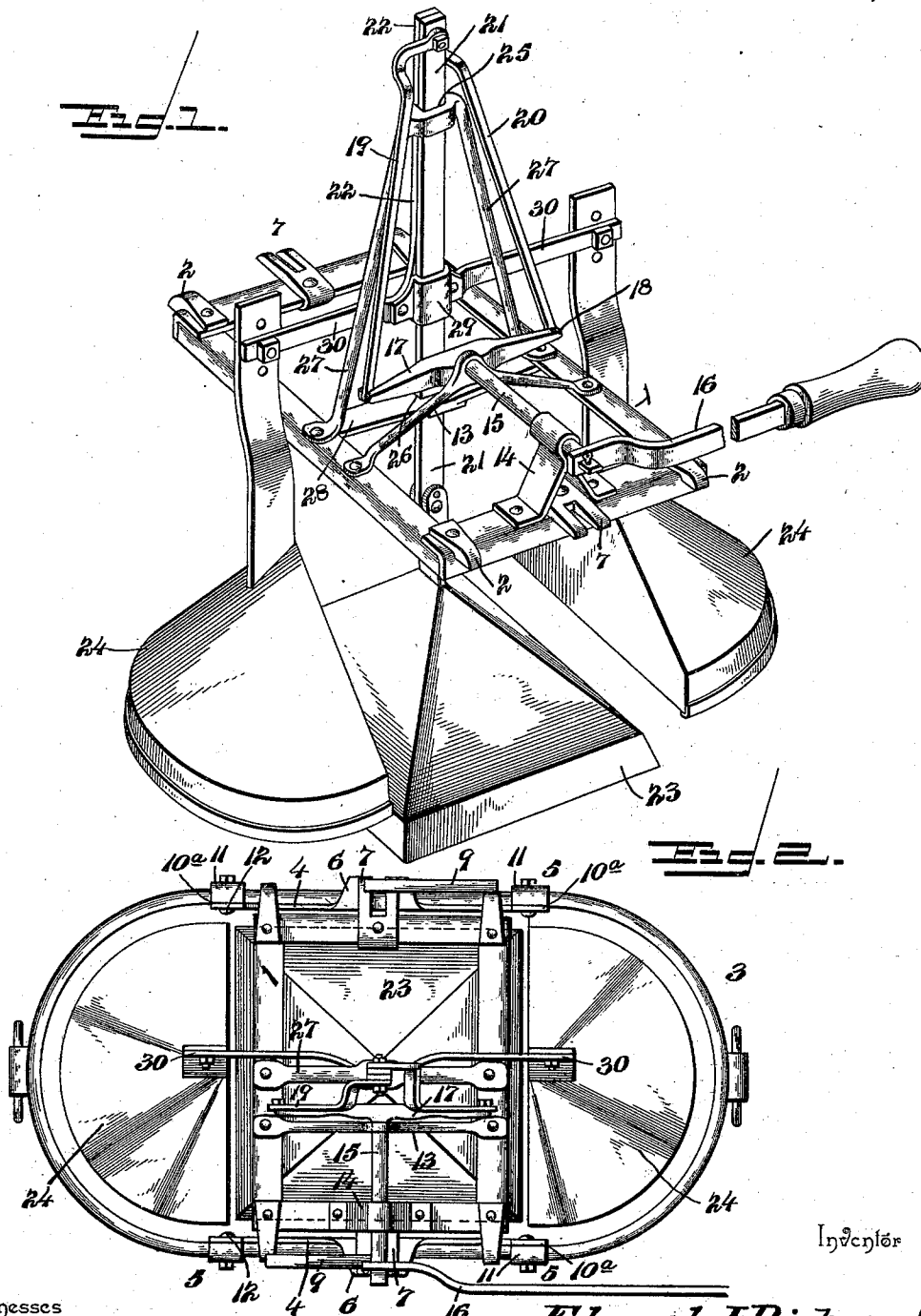
(No Model.)

2 Sheets—Sheet 1.

E. J. RICHMOND.
WASHING MACHINE.

No. 544,903.

Patented Aug. 20, 1895.



Inventor

Witnesses

E. H. Stewart
H. W. Riley

By *his* Attorneys. *Edward J. Richmond*

Cashnow & Co.

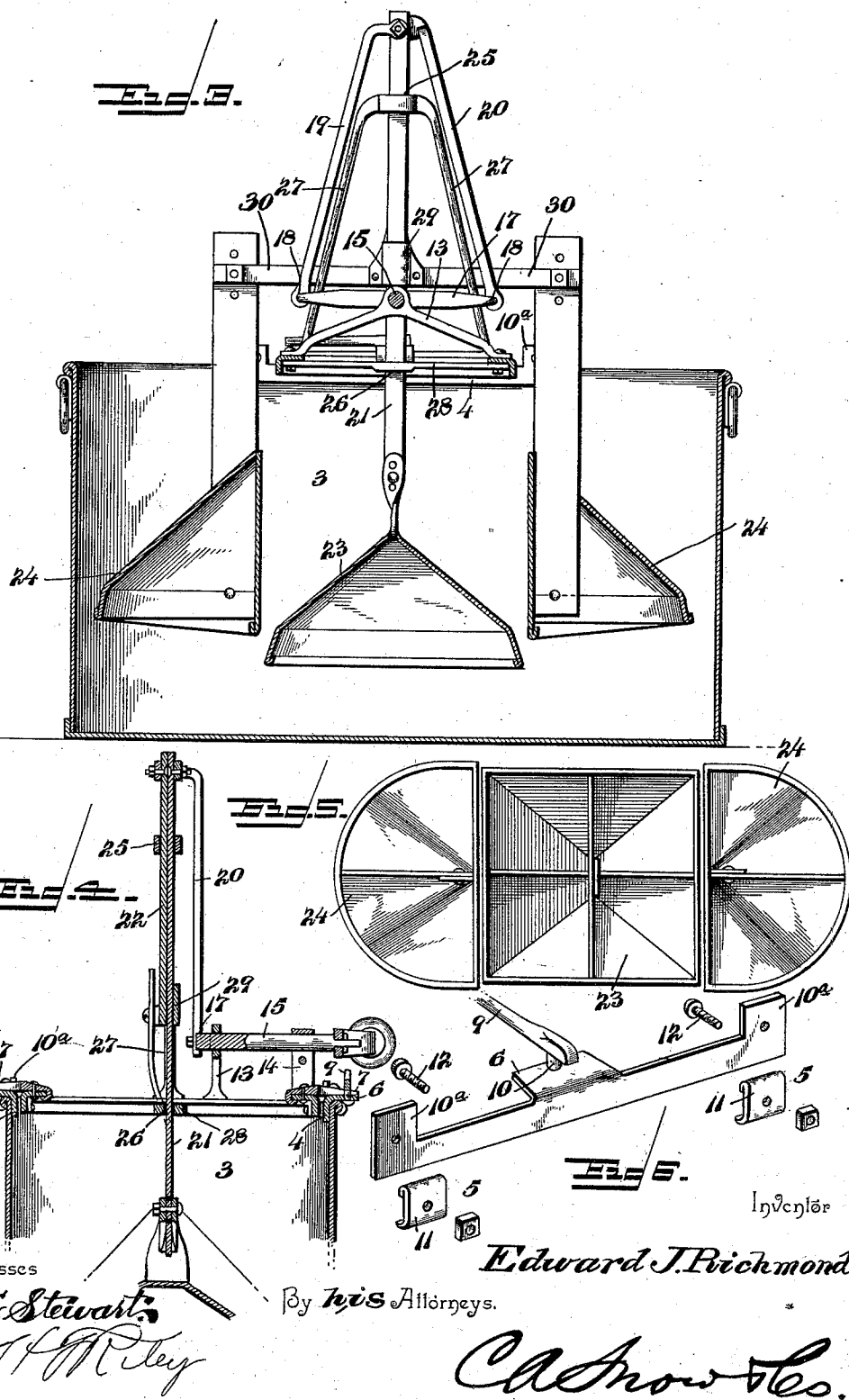
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UNITED STATES PATENT OFFICE.

EDWARD J. RICHMOND, OF CARTHAGE, MISSOURI, ASSIGNOR OF ONE-HALF
TO ISAAC D. HESSER AND JACOB Y. HESSER, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 544,903, dated August 20, 1895.

Application filed July 11, 1894. Serial No. 517,245. (No model.)

To all whom it may concern:

Be it known that I, EDWARD J. RICHMOND, a citizen of the United States, residing at Carthage, in the county of Jasper and State of Missouri, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

10 The object of the present invention is to simplify and improve the construction of washing-machines and to provide one which will be adapted to be readily applied to and operated in connection with the ordinary wash-boiler.

A further object of the invention is to provide a machine capable of rapidly and thoroughly effecting the operation of washing without injuring the fabrics.

20 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 claims hereto appended.

25 In the drawings, Figure 1 is a perspective view of the operating mechanism detached from a boiler. Fig. 2 is a plan view of the washing-machine, the operating mechanism being applied to a boiler. Fig. 3 is a longitudinal sectional view of the same. Fig. 4 is a transverse sectional view. Fig. 5 is a reverse plan view of the pounders. Fig. 6 is a detail perspective view of one of the supporting-plates.

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

1 designates a horizontally-disposed rectangular supporting-frame composed of side and end pieces, constructed of flanged metal, in order to insure the requisite strength and at the same time make the machine light in weight. The rectangular frame 1 is provided at its corners with outward-projecting feet 2, extending transversely of the boiler 3 and resting upon the upper edges thereof, whereby the rectangular frame is held in proper position for use.

50 In order to impart the necessary stiffness and strength to the sides of an ordinary washing-boiler 3, supporting-plates 4 are secured

to the inner faces of the opposite sides of the boiler by clamps 5, arranged at the ends of the plates. The plates are disposed horizontally and have their upper edges flush with the upper edges of the boiler, and they are provided intermediate of their ends with outward-extending flanges 6, upon which rest slotted ears or projections 7 of the horizontal frame. The slotted projections or ears 7 are engaged by fastening devices 9, consisting of shanks 10, swiveled to the flanges 6, and handles formed integral with the shank are projecting from opposite sides of the same and adapted to be turned longitudinally of the slots to release the rectangular supporting-frame, and when they are turned transversely of the slots they securely fasten the supporting-frame to the boiler. The clamps at the ends of the supporting-plates consist of vertical extensions 10^a, formed integral with the plates, movable jaws 11, recessed at their inner sides and arranged to engage the outer faces of the boiler, and bolts 12, provided with nuts and passing through the extensions and the movable jaws and causing the latter to grip the boiler securely.

The supporting-frame is provided with bearings 13 and 14, having opposite-inclined sides and receiving a horizontal rock-shaft 15, the outer end of which is polygonal and receives a removable handle or operating-lever 16, whereby the shaft 15 is rocked. The shaft is provided at its inner end with oppositely-disposed arms 17, preferably formed integral with the shaft and having their terminals bent at right angles to form pivots 18 to receive pitmen 19 and 20. The pitmen 19 and 20 are retained on the pivots by nuts, and are respectively connected with vertically-reciprocating plungers 21 and 22, carrying central and end pounders 23 and 24. The vertically-reciprocating plungers 21 and 22 are centrally arranged and slidingly mounted on each other, and are arranged in vertically-aligned guide-openings 25 and 26 of an approximately V-shaped support 27 and a horizontal guide-bar 28. The guide-bar 28 is secured at its ends to the sides of the frame 1. It is disposed longitudinally of the machine, and the V-shaped guide or support is disposed above the guide-bar and has its

lower end perforated and receiving the bolt or fastening devices that secure the horizontal guide-bar to the frame 1. The pitman 19 has its upper end bent horizontally and pivoted to the outer face of the upper end of the plunger 21, and the other pitman 20 is provided at its upper end with an L-shaped arm, which extends inward and is similarly attached to the upper end of the other plunger-bar 22. The plunger-bar 22 is provided at its lower end with a guide or keeper 29 to receive the plunger-bar 21, and it has opposite outward-extending horizontal arms 30, to the extremities of which are secured the stem of the end pounders 24, the central pounder being secured to the lower end of the plunger-bar 21.

As the shaft 15 is rocked its oppositely-disposed arms alternately move up and down, and when one is up the other is down, thereby reversely reciprocating the plunger-bars and the clothes-pounders carried by the latter.

The central plunger is substantially rectangular, and the end plungers are segmental to conform to the configuration of the rounded ends of the washboiler. The clothes-pounders have tapering tops and are divided into compartments by suitable vertical partitions. The vertical reciprocation of the clothes-pounders removes the dirt and stain from clothes and other fabrics and effects the operation of washing in a well-known manner.

The pounders are vertically adjustable by means of suitable perforations and bolts to enable the machine to be readily arranged to suit different quantities of clothes to be washed.

It will be seen that the washing-machine is simple and comparatively inexpensive in construction, that it is adapted to be readily applied to the ordinary construction of wash-boiler, and that it is positive and reliable in its operation. It will also be apparent that it effects the operation of washing with a minimum amount of labor and at the expenditure of but little power, and that it will not injure the fabrics.

Changes in the form, proportion, and the 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—

1. In a washing machine, the combination of a horizontally disposed frame designed to

be mounted on a wash-boiler and provided with suitable guides, centrally arranged reversely reciprocating plunger bars mounted thereon, and sliding on each other one of the plunger bars having at its bottom outward extending arms and provided with a keeper or guide receiving the other plunger bar, a rock shaft journaled on the frame and provided with oppositely disposed arms, the opposite inclined pitmen extending upward from the arms of the rock-shaft and connected with the upper ends of the plunger bars, a central pounder carried by one of the plunger bars, and end pounders carried by the arms of the other plunger bar, substantially as described.

2. In a washing machine, the combination with a wash boiler, of supporting plates arranged at the upper edge of the same and having end extensions and provided with clamps engaging the wash boiler, a supporting frame disposed transversely of the boiler and provided with outward extending feet resting upon the supporting plate and located between the end extensions, clothes pounders arranged within the boiler, and mechanism mounted on the frame for reciprocating the clothes pounders, substantially as described.

3. In a washing machine, the combination with a wash boiler, of supporting plates extending along and provided with clamps engaging the upper edges of the boiler, said plates being provided with outward extending supporting flanges, a transverse frame resting upon the sides of the boiler, and provided with projections arranged upon said supporting flanges and provided with slots, the pivotally mounted fastening devices arranged on the supporting flanges and consisting of shanks located in the slots of the projections and handle portions adapted to be turned transversely of the slots to fasten the projections to the supporting flanges, clothes pounders arranged within the boiler, and mechanism carried by the frame for reciprocating the pounders, 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.

EDWARD J. RICHMOND.

Witnesses:

C. E. GARLINGER,
DAVID ROACH.