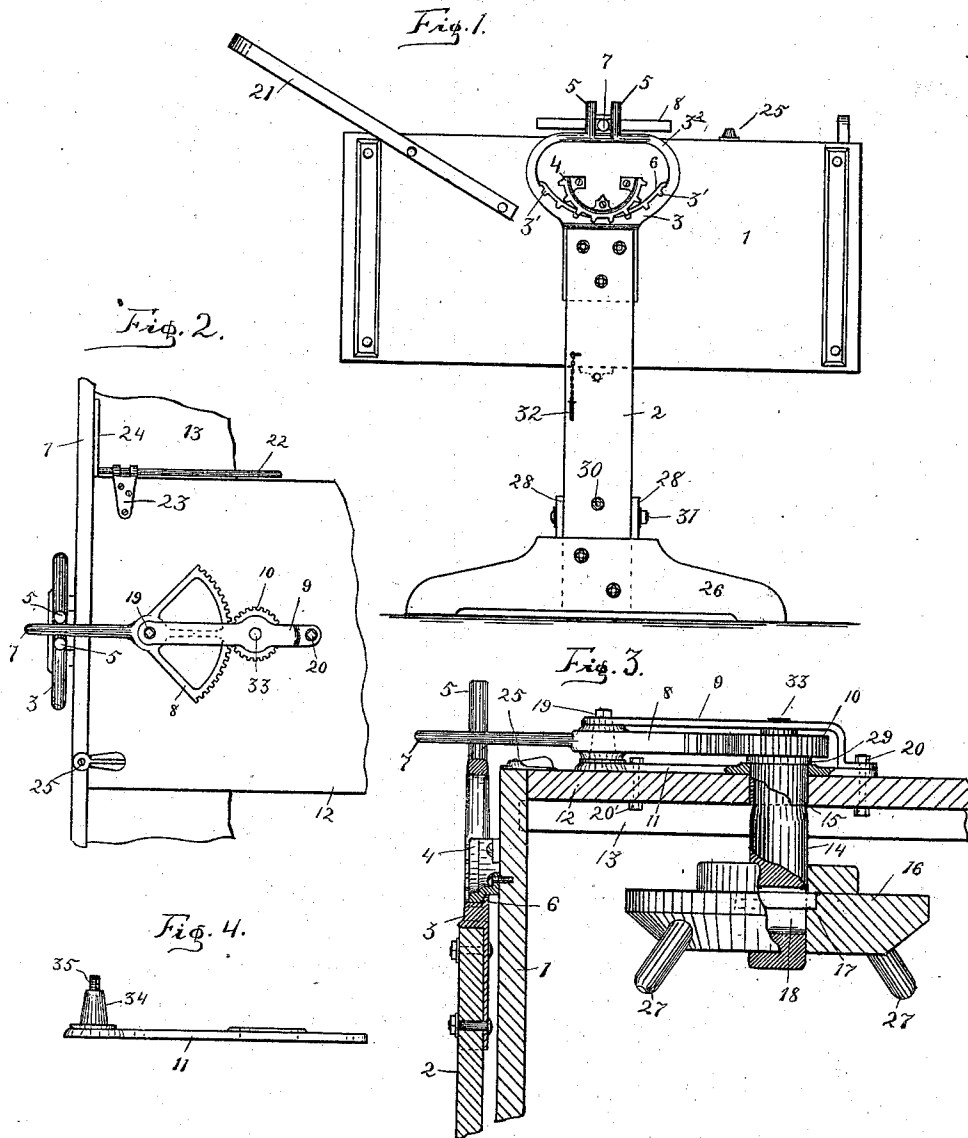


(No Model.)

H. W. WICHMAN.
WASHING MACHINE.

No. 552,736.

Patented Jan. 7, 1896.



WITNESSES:

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HERMAN W. WICHMAN, OF FORT WAYNE, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 552,736, dated January 7, 1896.

Application filed August 27, 1894. Serial No. 521,371. (No model.)

To all whom it may concern:

Be it known that I, HERMAN W. WICHMAN, a citizen of the United States, residing at Fort Wayne, in the county of Allen, in the State of Indiana, 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 part of this specification.

My invention relates to improvements in washing-machines.

The objects of my invention are, first, to provide a cheap and substantial suds-box or clothes-receptacle adapted to be conveniently oscillated upon a rigid supporting-frame, and also adapted to be readily disengaged or dismounted by the operator, provided with an improved oscillator-shaft so constructed as to readily release the articles when the lid is raised, and also provided with an actuating-gear which automatically oscillates the agitator when the box is in motion, by means of a novel connection between the oscillator-shaft and the rocker-track; second, to provide an upright supporting-frame whose standards are rigidly secured by a novel arrangement of binding-rods and whose upper extremities are surmounted by a curved track or recessed rocker-tread adapted to automatically return the rocking-box at the limit of each oscillation to its normal position, thereby preventing the said box from being disengaged or displaced by the heedlessness of the operator, one of the said tracks being annularly extended and surmounted by a pair of vertical studs adapted for a working engagement with the driving-gear segment.

My invention comprises a rocking-box or rectangular tub, removably mounted upon a rigid supporting-frame by means of toothed rockers upon recessed tracks, one of the said tracks being provided with means for engaging the lever-arm of the agitator-actuating gear, and a hinged lid for the suds-box having a circular agitator-shaft rotatably mounted therein and carrying at one end a vertically-movable and self-adjusting agitator-head and at the other end a rigidly-mounted pinion adapted for engagement with the said actuating-gear.

The novel features of my invention are the improved manner of detachably mounting the suds-box, the novel means for automatically operating the agitator by means of the actuating-gear in engagement with the rocker-track and the improved manner of mounting and securing the said gear on the lid.

The objects of my invention are secured by the mechanism illustrated in the accompanying drawings, in which similar figures of reference indicate corresponding parts throughout the several views.

Figure 1 is a side elevation of my improved washer, showing the manner of mounting the same and the form of the annularly-extended rocker-track adapted to engage the gear-segment. Fig. 2 is a plan of the gear-segment in engagement with the agitator-pinion and also with the annular rocker-tread. Fig. 3 is a vertical central transverse section showing the manner of mounting and securing the actuating-segment gear, the agitator-pinion, and the agitator-head on the agitator-shaft. Fig. 4 is a detail of plate 11, showing the integral gudgeon.

The upright supporting-standards 2, on which the oscillatory suds-box or clothes-receptacle is mounted, have proper feet or bases 26 and are rigidly braced and connected by the transverse pieces 28. The said standards are further secured by the transverse rod 30 and the short rods 31, all of which have a proper threaded nut and washer and can be readily tightened at pleasure. The rods 31, one at each end of the cross-pieces 28, do not pass through the standards 2, but immediately adjacent to the inner surface thereof. Upon the upper end of the said standards are rigidly bolted the recessed tracks 3 by means of a laterally-flanged base, as seen in Fig. 1. The said tracks are upwardly curved and provided upon their concave surface with a plurality of spaced recesses 3', and also with a retaining-flange 6 upon the inner edge thereof to secure the toothed rockers with which they register against lateral displacement when in operation. One of the said tracks 3 is provided with an annular extension 3² having upon its upper surface the vertical lugs or guide-studs 5, adapted to loosely secure the outer and free end of the horizontal lever-arm 7 of the actuating-gear 8.

The suds-box 1 of any proper form, size, and material, preferably of wood and rect-

angular in form, as shown, has a proper lid 12 at or near its central portion, preferably hinged to the cross-rod 22, which is pivotally mounted at both ends in perforations in the plates 24, the said lid having the pivoted buttons or latches 25 for securing the said lid. On the bottom of said box midway its ends and at or near either edge thereof is rigidly fixed a metallic plate having a dependent perforated ear adapted to register with a proper perforation in the corresponding standard 2. When it is desired to rigidly secure the said box in a horizontal position, it can readily be done by inserting the suspended pin 32 into the said registering perforations. The said box or tub 1 is also provided upon its interior with any proper corrugated rubbing-surfaces of well-known construction and has rigidly secured to the outer face of its sides and equally distant from the ends thereof the semicircular metallic rockers 4, provided upon their lower convex surface with a plurality of teeth adapted to register with the recesses upon the said concave bearing-tracks, which thereby support and maintain the said box in position for use. The suds-box is also provided with any proper handle, preferably a rigid bent wooden handle 21, rigidly fixed near the rear end thereof in an upwardly-pointing oblique position, as seen in Fig. 1.

In a suitable perforation in the center of the top of the box 1 and passing through the lid thereof is mounted the upper end of the vertical oscillator-shaft 14, on the lower end of which is loosely mounted the disk or agitator-head 16 of well-known construction, having a proper number of oblique downwardly-pointing agitator-fingers 27. The said disk or head 16 is secured to the shaft 14 by means of the anchor-pin 17, which passes loosely through a vertical slot 18 in said shaft, thereby adapting the said head for a limited vertical adjustment thereon to accommodate itself to the quantity of articles in the working chamber during the operation of washing. The said slot may be of any vertical width to permit of any desired range of adjustment, the weight of the said disk being sufficient to keep it when in operation in proper engagement with the clothes. The pinion 10, Fig. 3, is rigidly fixed upon said shaft 14 by means of the sleeve 15, which incloses the upper end thereof. The said pinion is also provided with an annular flange 29, which forms a bearing on the base-plate 11. The said pinion is also provided upon its upper surface with a proper trunnion 33, pivotally mounted in the rigid plate 9 parallel to the said plate 11, both of which plates are rigidly secured to the lid 12 and also secured together by the bolts 20 and 20'. The said base-plate 11 is provided with a suitable perforation to loosely contain the said sleeve 15, and is preferably laterally enlarged at that point to permit of the said perforation. The base-plate 11 is also provided upon its outer end with an integral

conical gudgeon 34 on which the actuating-gear is pivotally mounted, and which has a threaded terminal lug 35 adapted to receive the threaded nut 19 by which the outer end of the plate 9 is secured. The horizontal actuating-segment gear 8, adapted for engagement with the said pinion 10 has slightly raised bearing-surfaces, as seen in Fig. 3, is pivotally mounted between the outer ends of the said plates 9 and 11 upon the said conical gudgeon 34, and is provided with an integral lever-handle 7, normally in line with the said plates 9 and 11, and adapted for engagement with the said guide-lugs 5.

The operation of my invention thus described is obvious, and briefly stated is as follows: When the operator oscillates the suds-box or clothes-receptacle, by means of the operating-handle 21, the lever 7 will at each oscillation be thrown out of alignment with the base-plate 11, as its free end is securely but loosely in engagement with the guide-lugs 5, thereby oscillating the said pinion 10 and also the agitator-shaft 14, to which it is rigidly connected.

As the agitator head or disk 16 is loosely mounted upon its shaft by means of the anchor-pin in the vertical slot 18, it will automatically adjust itself to properly engage the contents of the receptacle and thereby assist in the operation of cleansing the clothes by shifting their position at each oscillation.

When the operator desires to use the wringer, the suds-box is rigidly fixed in its normal position by the pin 32, as before described, and the lid can be conveniently raised at pleasure, as the segment-gear arm will readily pass out of its engagement with the lugs 5 and can as readily be replaced.

Having thus described my invention and the manner in which the same is operated, what I claim as my invention, and desire to secure by Letters Patent, is—

In a rocking washing machine, a stationary support, and the toothed tracks secured to the support, and provided on one side with two projections which extend above the box; combined with the rocking box, the toothed rockers secured to the box, the vertical shaft extending through the top of the box, and provided with a pinion at its upper end, and the agitator at its lower one, the pivoted operating lever provided with a toothed sector at its inner end to engage with the pinion, and having its outer end extended between the two stationary projections, whereby the rocking of the box causes the agitator to be revolved, substantially as shown.

Signed by me at Fort Wayne, in the county of Allen and State of Indiana, this 23d day of August, A. D. 1894.

HERMAN W. WICHMAN.

Witnesses:

WALTER G. BURNS,
EDWARD L. CRAW.