(No Model.)

W. H. McINTOSH.

WASHING MACHINE.

No. 492,823. Patented Mar. 7, 1893.

Fig. 1.

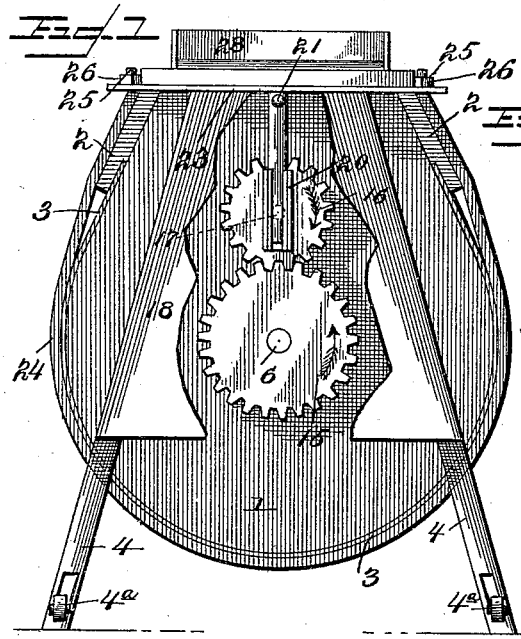


Fig. 2.

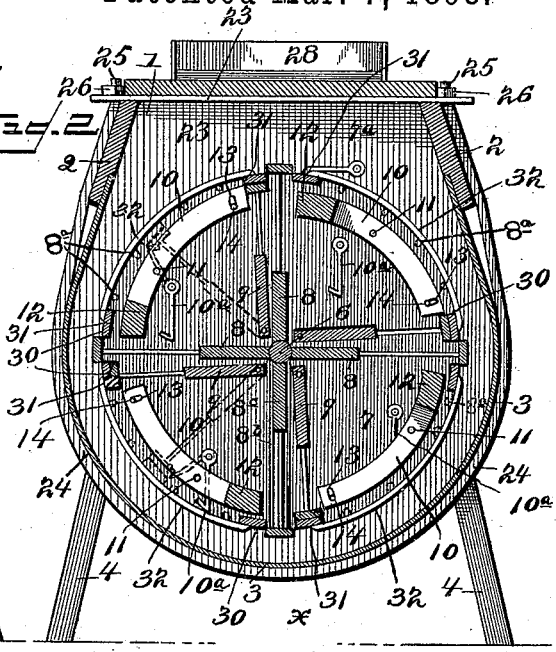


Fig. 3.

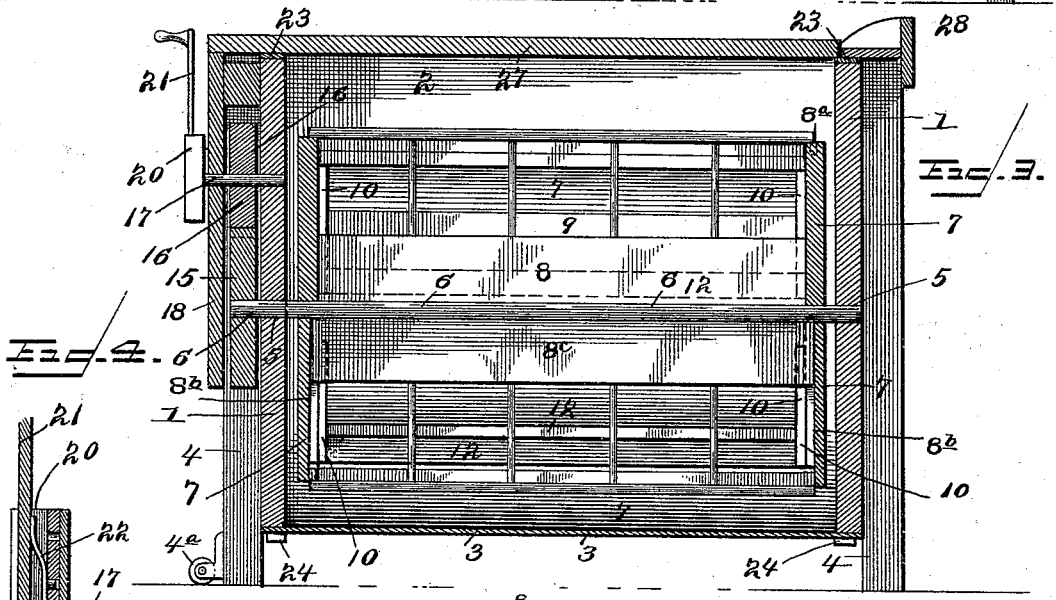
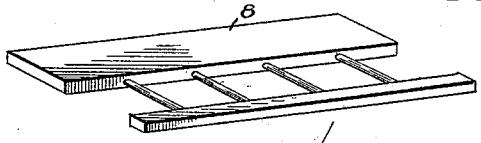


Fig. 4.

Fig. 5.



Witnesses

E. K. Stewart.

O. E. Doyle.

Inventor

Wm. H. McIntosh,

By his Attorneys,

Cashow & Co.

UNITED STATES PATENT OFFICE.

WILLIAM H. McINTOSH, OF CULBERTSON, NEBRASKA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 492,823, dated March 7, 1893.

Application filed April 15, 1891. Serial No. 389,064. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. McINTOSH, a citizen of the United States, residing at Culbertson, in the county of Hitchcock and State of Nebraska, have invented a new and useful Rotary Washer, of which the following is a specification.

My invention relates to rotary washers; and the objects in view are to provide a washer of cheap and simple construction of the above class, which is adapted to receive and gently agitate the articles subjected thereto, thoroughly cleansing the same, and which is easy of operation and also to provide an improved suds box.

Other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings:—Figure 1 is an end view partly broken away of a washing machine constructed in accordance with my invention. Fig. 2 is a transverse section of the same. Fig. 3 is a longitudinal central section of the same. Fig. 4 is a detail in section of the crank for operating the cylinder and the socket for the same. Fig. 5 is a detail perspective view of one of the swinging partitions.

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

In constructing my suds box, I provide a pair of ends, 1, of substantially circular shape, and connect the same at each side of their upper edges, which latter I flatten, by longitudinal side pieces 2. The side pieces 2 I connect by sheet metal curved bottom 3, the opposite ends of which I fasten to the curved bottom edges of the ends 1. These ends I also provide with inclined legs 4, which support the box. The ends of the suds box are provided with bearings 5 which receive the shaft 6 of the cylinder. The cylinder consists of the shaft 6, to which near its opposite ends are secured the circular heads 7, having perforations 8^a in their peripheries and provided with a radial groove 8^b. Between the heads are located a series of, in this instance, three radial fixed partitions 8, and one removable partition 8^c which is mounted in the grooves 8^b. Between each pair of radial partitions there is pivoted, between the heads, a swinging partition or frame 9, constructed somewhat like the partitions, that is, open at its outer half.

10 designates pairs of opposite latches, pivoted as at 11 between each pair of fixed radial partitions, and at one side of each pivoted frame. These latches are connected at their outer ends by weighted cross bars 12, and at their opposite ends have slots 13, through which project stop lugs or pins 14, extending from the inner faces of the heads. The latches when at the top or upper side of the cylinder have their inner stop ends elevated and maintained in the path of the swinging frames by the weighted bars 12, so that they may be locked against the adjacent partitions, and have but little movement. The latches being curved, the frames may ride over the same when they approach the lower side of the cylinder and the weighted bars drop by gravity, thus elevating the stop ends of the levers and freeing the frames. These swinging frames may be secured in an intermediate position, that is, about centrally between two of the fixed frames or partitions, by hooks 10^a, pivoted to the heads and adapted to engage in one of the edges of the frames as shown in Fig. 2. So also may the cylinder be secured in any position by means of hooks 7^a, pivoted to the opposite ends of the casing and adapted to engage any one of the perforations 8^a formed in the heads 7.

The shaft 6 has one end extended beyond the end wall of the suds box, and is there provided with a large gear 15, which is engaged and driven by a smaller gear 16, mounted upon a shaft 17 journaled at one end in the end wall 1 and at its opposite end in a section 18, which connects the two legs at that end of the suds box, and serves as a casing for the gears. This shaft is provided with a grooved socket 20, and in the same is adapted to be slid an operating crank 21, provided with a spring 20, by which it engages with perforations or notches formed in the socket.

In order to strengthen the suds box, I may if desired and preferably do surmount the opposite upper sides of the end walls 1 with metallic tie plates 23, which plates are perforated at their opposite ends and each is connected at its ends by means of metallic straps 24,

which pass around the body of the suds box and terminate in threaded ends 25, which extend through the plates and are nutted above the same, as at 26. By properly manipulating these nuts, a tight joint may be successfully maintained, as will be apparent.

A bracket 28 is secured to the rear end of the suds box or casing, and serves as a wringer support, and also as a grip, to be grasped by the hand for the purpose of pivoting the suds box and bringing a pair of rollers 4^a, secured to the front legs of the suds box, into contact with the ground or floor. The rollers 4^a are normally out of contact with the floor or ground, and extend laterally or at a right angle to the legs. Notches 30 are let into the perimeters of the heads and in the same take the cross bars 31 of a series of frames, said cross bars being connected by spring rods 32. By springing or pressing the rods to a flat position the bars may be sprung into engagement with the notches 30, and in releasing the same the rods serve to retain the bars in position.

In operation, the latches of the inner cylinder are withdrawn from the paths of the several pivoted frames 9, as they are successively brought opposite the opening in the upper sides of the suds box, and said frames are swung away from the partitions 8 against which they normally lie. The articles to be washed are introduced between the frames 9 and their partitions 8, after which the frames are pressed against the partitions until engaged by the latches, and are thus locked in position, the clothes being clamped between the frames and partitions. It is now simply necessary to place the cover 27 upon the suds box and rotate the crank. The cylinder revolving and passing the articles through the water, thus loosening all dirt, which readily passes off through the open or perforated partitions and frames, and settles at the bottom of the suds box.

Having described my invention, what I claim is—

1. In a washing machine, the combination with the suds box, of a rotatable internal cylinder, consisting of a rotatable shaft, having opposite heads, radial perforated partitions connecting the heads, frames pivoted between the partitions and means for locking each frame against one of said partitions, and mechanism for rotating the cylinder, substantially as specified.

2. The combination with the suds box, of the rotatable shaft journaled therein, and terminating beyond the box in a gear, heads mounted on the shaft within the box and radiating partitions connecting the same at intervals, frames pivoted between each pair of radiating partitions, and like the partitions being perforated, curved latches pivoted at one side of each frame, a bar connecting the outer ends of the latches and serving to weight the same, pins moving in slots in the opposite ends of the latches, and serving to limit the movement of the latches, a shaft located above the cylinder a pinion on the same for engaging the gear of the cylinder, and a crank for operating said shaft, substantially as specified.

3. In a washing machine, the combination with a suds box, of a rotatable cylinder having permanent radial partitions and intermediate radial pivoted partitions, and means to lock the latter to the permanent partitions, substantially as specified.

4. The combination with the suds box, of the opposite heads and their shaft, the series of fixed partitions connecting the heads, and the series of pivoted partitions arranged between the fixed partitions and having perforations and a series of hooks secured to the heads between the partitions and adapted to engage the perforations of the pivoted partitions, substantially as specified.

5. The combination with the suds box, and the inner cylinder comprising opposite cylindrical heads notched at intervals, of the series of frames for connecting the heads, consisting of opposite cross bars and curved resilient connecting wires, adapted to be straightened to engage the cross bars with the notches, substantially as specified.

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

WILLIAM H. McINTOSH.

Witnesses:
J. F. SMITH,
JOHN M. BULGER.