(No Model.)

W. SWEET.

WASHING MACHINE.

No. 498,324. Patented May 30, 1893.

Fig. 1.

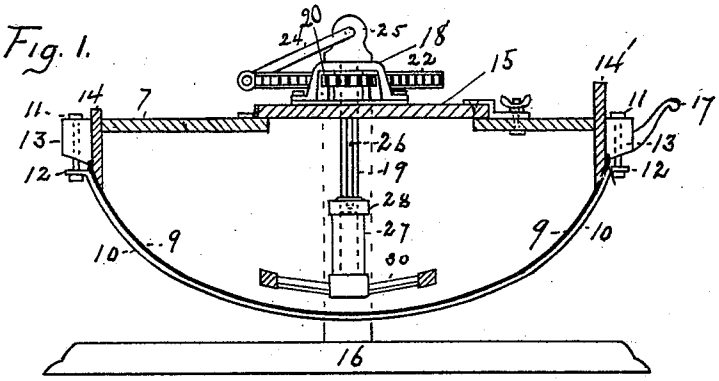


Fig. 2.

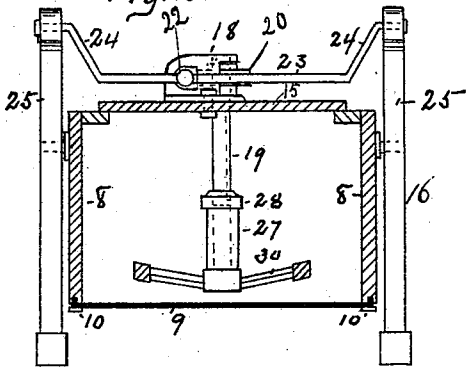


Fig. 3.

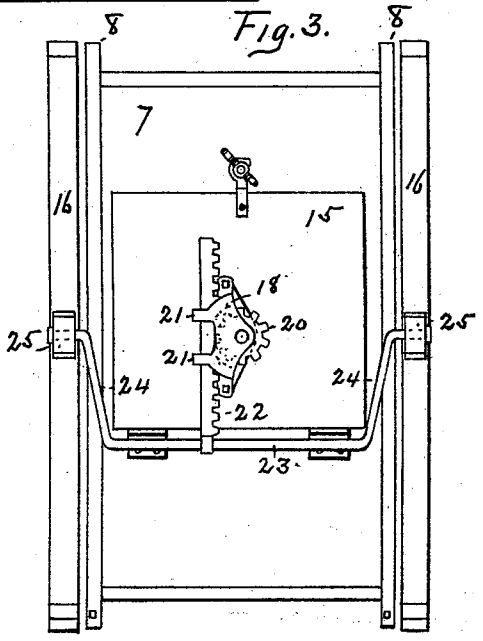


Fig. 4.

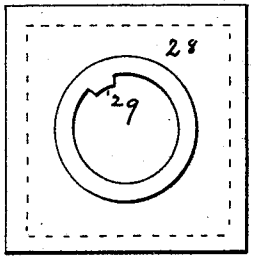
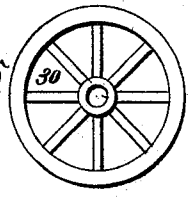


Fig. 5.



WITNESSES:

T. W. Wilson

F. L. Taylor

Warren Sweet INVENTOR

BY

H. C. Hartman

ATTORNEY

UNITED STATES PATENT OFFICE.

WARREN SWEET, OF FORT WAYNE, INDIANA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 498,324, dated May 30, 1893.

Application filed December 22, 1892. Serial No. 456,011. (No model.)

To all whom it may concern:

Be it known that I, WARREN SWEET, a citizen of the United States, residing at the city of 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 washing machines in which the clothes are washed by movement, agitation and rubbing, and its objects are to provide an improved oscillating device for the dasher or rubber: an improved rubber and the combination of a rocking or swinging motion of the suds box with an oscillated rubber or dasher within the same. And the invention consists in the construction and novel combination of parts hereinafter described, pointed out in the appended claims and illlustrated in the accompanying drawings in which—

Figure 1 is a side view of the washing machine with one side removed to show the interior mechanism. Fig. 2, is a cross section of Fig. 1. taken on a central line. Fig. 3, is a plan view of the washing machine, and Fig. 4 is an enlarged view of the top of the metal cap of the post. Fig. 5 is a plan view of the wheel having the square spokes.

Referring to the drawings by numerals the construction is as follows: The suds box 7 is preferably a rectangular box in horizontal section and is provided with a flat top and lid, and with a circular bottom. I prefer to make the bottom part of galvanized iron, and secure it to the sides by turning up the edges of the galvanized iron sheet 9 for about one eighth of an inch at right angles to the sheet and force the turned up edges into the edge of the wooden side boards 8 by means of iron strips 10 drawn over the parts with bolt and screw nut 11. For the purpose, I turn the ends 12 of the iron strips 10 outward and make suitable holes in them, through which bolts 11 are passed. These bolts are extended up through the cover of the suds box, preferably through holes in projections 13 of the sides and the straps 10 are drawn taut by nuts on the bolts 11. This construction makes an economical bottom, with water tight connections and avoids the use of tacks or nails, which frequently become loose. The ends of this galvanized iron sheet 9 are attached to the end boards 14, and one of the end boards 14′ projects above the cover to afford means for the attachment of a wringer. The cover is provided with a lip 15 on which is placed an automatic oscillating device, and the suds box 7 is mounted pivotally in a frame 16 and is oscillated by means of the handle 17 attached to one end of the box. The oscillating device consists of a frame 18 attached to the lid provided with bearings for the operating shaft 19 which is held at right angles to the lid. On this shaft 19 and within the frame 18 a pinion 20 is fixed. The frame 18 is also provided with guides 21 in which a rack bar 22 is guided, operated and held in engagement with the pinion 20. One end of the rack bar 22 is pivotally attached to a rod 23 held transversely over the suds box 7 at a given distance from the standards by two arms 24 attached pivotally to the standards 25. Such pivotal connection and support of the transverse rod 23, permit a change of distance between the rod and pinion without affecting the line of motion of the rack bar: for when the rod is raised or lowered from a horizontal line, the ends of the arms move on their pivots. The lid is hinged to the top on the same side on which the transverse rod is placed just inside of the rod, so that when the lid is thrown back it passes over and down on the rod, thereby locking the suds box in horizontal position. The operating shaft 19 is provided with a groove 26, and a post or block 27 is provided with an orifice adapted to admit loosely the operating shaft. On the top of the post or block 27 an iron plate 28 provided with an orifice of like diameter and with a projection 29 adapted to engage and move in the groove 26 of said shaft 19, is attached, by means of which the post is revolved and permitted to move up and down in said shaft. Any other means for such purpose may be used such for example as a square shaft below the bearings with a square hole in said plate, as I do not confine myself to that particular construction shown.

I use any suitable rubber, and prefer rubber 30 preferably in the form of a wheel having a hub and fellies with square spokes connecting them. This rubber 30 is attached to the post or block 27 and is operated by it.

The operation is as follows: The suds box being supplied with hot water and clothes to be washed, the lid carrying the rubber, an oscillating device attached is shut down, and the rubber presses with its weight and the weight of the post upon the clothing. The suds box is then oscillated by its handle on its pivotal bearings, and as the box swings between the standards, the relative positions of the rod and the pinion are thereby changed and the rack bar forced forward and backward, operating the pinion and with it the rubber. The water and clothing are thus forced from one end of the suds box to the other, and the oscillation of the rubber rubs the clothing and also more or less changes its position in the suds box so that all parts are subjected to the different flowings of the water and to the action of the rubber. I have thus combined the action of a rocker washer, an oscillating dasher or peg washer and a rubbing device in one machine, avoiding the tearing action of the peg machine, and the heavy rubbing of the rubber washer. And I produce more dashings or changes in the currents of the water than in the rocker washer, thereby subjecting the clothes more fully to the action of the water.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a washing machine the combination of a suds box, provided with a lid hinged thereto, mounted between the standards of a supporting frame and adapted to be oscillated; with an operating shaft for a rubber mounted vertically in a frame attached to the lid; a pinion mounted on said operating shaft; a transverse rod provided with arms pivotally attached to the standards and placed just beyond the hinges of the lid, whereby when the lid is thrown back, the transverse rod is held fixedly in place thereby locking the suds box in a horizontal position; a rack bar engaging said pinion with one end pivotally attached to said transverse rod and mounted in guides in a frame attached to the lid; and a rubber within the suds box attached to said operating shaft.

2. In a washing machine, the combination of a suds box provided with a lid and mounted between the standards of a supporting frame and adapted to be oscillated: with a rubber or dasher placed within the suds box: and an oscillating device consisting of a pinion attached to a shaft and a movable rack bar engaging said pinion and connected to the standard by a rod provided with arms, the device being mounted in a frame attached to the lid of the suds box.

In testimony whereof I hereunto subscribe my name, in the presence of two witnesses, this 19th day of December, 1892.

WARREN SWEET.

Witnesses:
H. C. HARTMAN,
EMMET MCNALLY.