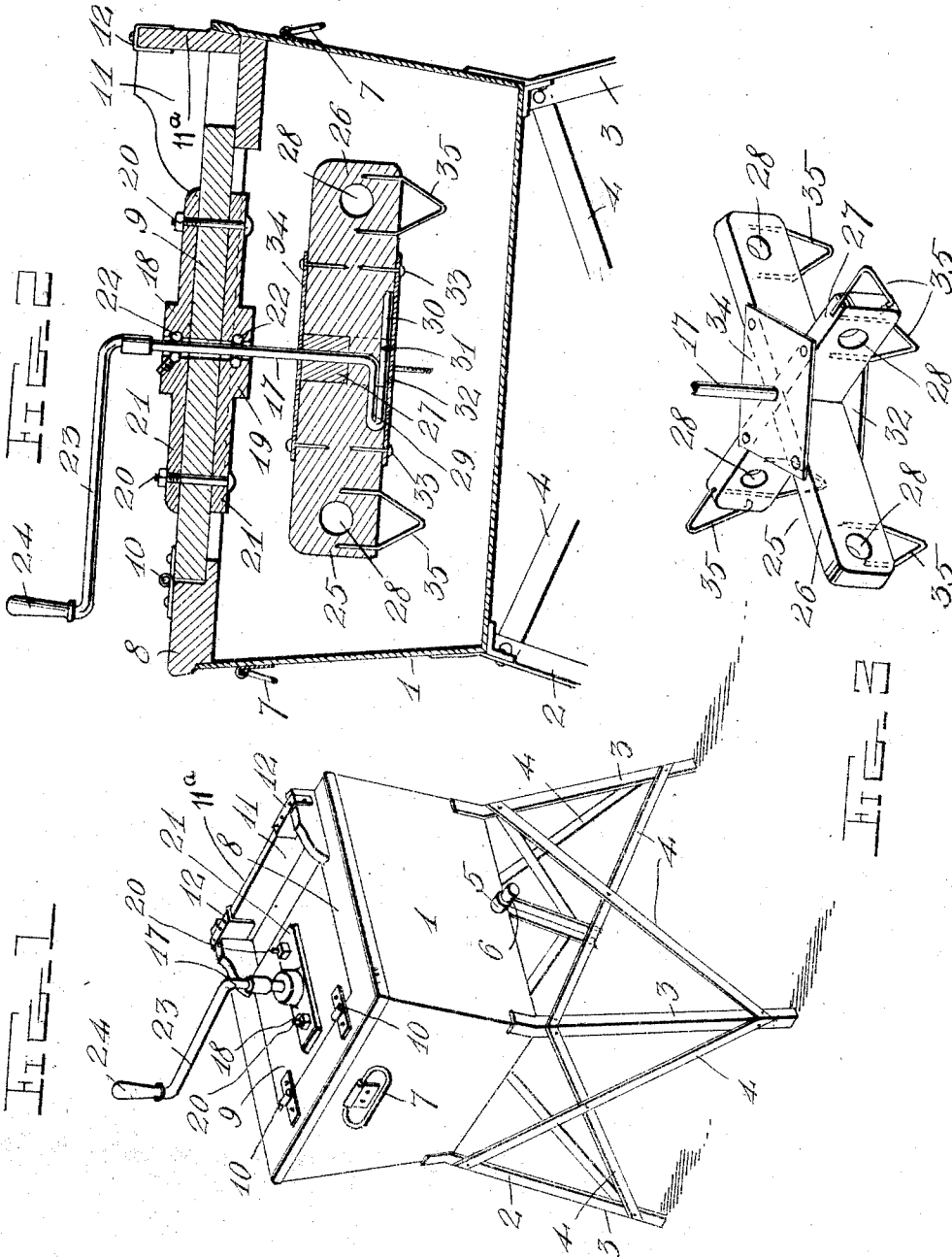


No. 864,591

PATENTED AUG. 27, 1907.

G. R. ADAMS.
WASHING MACHINE.
APPLICATION FILED MAY 3, 1906.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE R. ADAMS, OF HIAWATHA, KANSAS.

WASHING-MACHINE.

No. 864,591

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed May 3, 1906. Serial No. 315,098.

To all whom it may concern:

Be it known that I, GEORGE R. ADAMS, a citizen of the United States, residing at Hiawatha, in the county of Brown and State of Kansas, have invented certain new and useful Improvements in Washing-Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in washing machines and consists in the novel construction, combination and arrangement of parts hereinafter described and claimed.

The object of the invention is to improve and simplify the construction and operation of devices of this character and thereby render the same more efficient and durable in use and less expensive to manufacture.

The above and other objects which will appear as the nature of the invention is better understood, are accomplished by means of the construction illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of my improved washing machine; Fig. 2 is a vertical sectional view through the upper portion or body of the same, and Fig. 3 is a perspective view of the rotary agitator.

Referring to the drawings by numeral, 1 denotes a tub or receptacle, which is preferably, but not necessarily formed of sheet metal and of rectangular shape, and which is removably supported upon a metal frame 2 consisting of angle-metal legs 3, connected together by crossed diagonal strips 4, as clearly shown in Fig. 1. The tub is removably supported between the upper ends of the legs 3 by angle brackets or lugs secured upon the inner faces of said legs, as shown in Fig. 2. This construction permits the tub to be placed upon a stove for the purpose of heating its contents. The tub 1 has in one of its sides, adjacent to its bottom, an outlet pipe of connection 5, from which the water in the tub may be drained after the washing is completed. This pipe is normally closed by a tapered plug 6. If desired, the tub may also be provided upon its opposite sides with pivoted handles 7, as shown. Secured to the upper edge of the tub is a top or cover 8, which has a central opening adapted to be closed by a door 9. The latter is hinged at one side, as shown at 10, so that it swings upwardly, and when in its lowered position rests upon projecting ledges at the sides of the opening in the top. Upon one side of the top 8 is a soap tray 11 consisting of an upright side piece 11^a and two end pieces 11^b connected to the piece 11^a by metal plates 12, as shown, the soap tray and the top 8 being preferably constructed of wood. The upright piece or board 11^a is adapted to have a wringer clamped upon it in the usual manner.

The door 9 is of rectangular form and has secured upon its upper and lower faces, by means of bolts 20, bearings 18, 19, through which extends a vertical shaft

17. Each of the bearings 18, 19, consists of a plate 21 formed with an apertured boss or enlargement, in which are provided annular grooves or raceways to receive bearing balls 22. These bearings permit the shaft 17 to rotate freely and also to slide longitudinally or vertically. The upper end of the shaft 17 is bent to form a crank 23 which carries at its end a handle 24. Upon the lower end of the shaft 17 is mounted a rotary agitator 25. The latter consists of two crossed strips or blocks 26, 27, of wood or any other suitable material, which are of unequal length and which are formed with openings or apertures 28 adjacent to their ends. This agitator head is firmly secured upon the lower end of the shaft 17 by passing the latter through a vertical opening formed in the strips 26, 27, at their point of intersection and then bending or doubling said end of the shaft upon itself, as shown at 29, to form a cross-piece or bar 30. The latter is adapted to enter a seat or recess 31 formed in the longer strip 26 and it is retained therein so that the agitator head cannot rotate upon or independent of the shaft, by means of a diamond shaped brace plate 32 which is secured to the bottom edges of the strips 26, 27, as shown at 33. A similar diamond shaped brace plate 34 is provided upon the upper or top edges of the strips 26, 27, as clearly shown in Fig. 3 of the drawings. In order to attach the clothes to be washed to the agitator so that they will be rubbed or agitated in the tub, I provide upon the bottom and end edges of the strips 26, 27, wedge shaped spring clips or loops 35. On the longer strip 26 these clips 35 are arranged only upon its bottom edge and they are formed by pieces of resilient wire which are suitably bent and have their ends forced into vertical openings formed in the said strip, as shown. On the shorter strip 27 the clips 35 are provided at both the ends and the bottom, and the two clips at each end of the strip are formed from a single piece of wire by passing the same through a vertical opening in the strip adjacent to its end and then bending the projecting ends of the piece of wire as shown, and driving their extreme ends into openings in the strip 27, as will be seen upon reference to Fig. 3 of the drawings.

From the foregoing description, taken in connection with the accompanying drawings, the construction, operation and advantages of the invention will be readily understood without requiring a more extended explanation.

Various 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 the invention, as defined by the appended claims.

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

In a washing machine, a top having a cover provided

with a bearing opening, a vertical rotary shaft journaled
in said opening, an agitator carried by the shaft within
the tub, said agitator comprising a pair of crossed head
bars provided at their point of intersection with a vertical
5 opening communicating at its lower end with a longitudinal
recess formed in the lower face of one of the bars,
the shaft being extended through said opening in the bars
and having its lower portion folded and bent upon itself
to form a horizontal cross piece seated and fitted within
10 the recess for fixing the agitator for rotation with the
shaft, upper and lower brace plates attached at their cor-

ners to the head bars at points between the ends of the
latter, the lower plate serving to retain the cross piece
within the recess, and clothes-engaging clips carried by
the head bars.

In testimony whereof I have hereunto set my hand in
presence of two subscribing witnesses.

GEORGE B. ADAMS.

Witnesses:

J. F. MEISENHEIMER,
WM. KNARR.