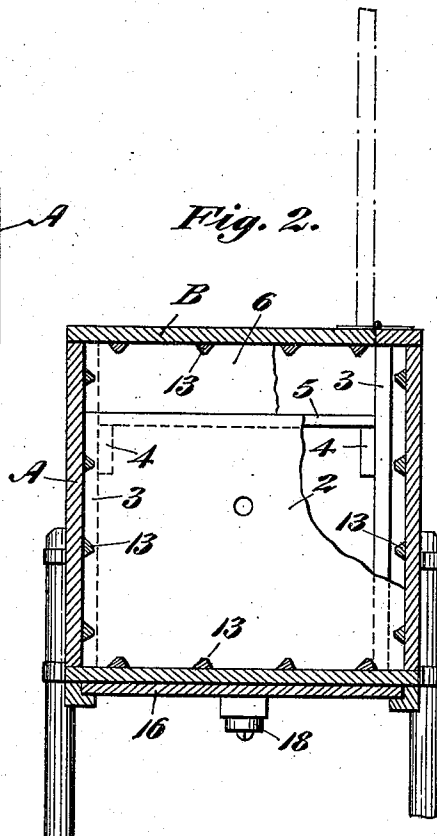
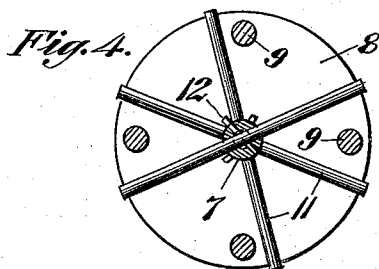
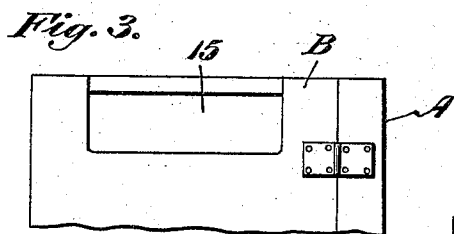
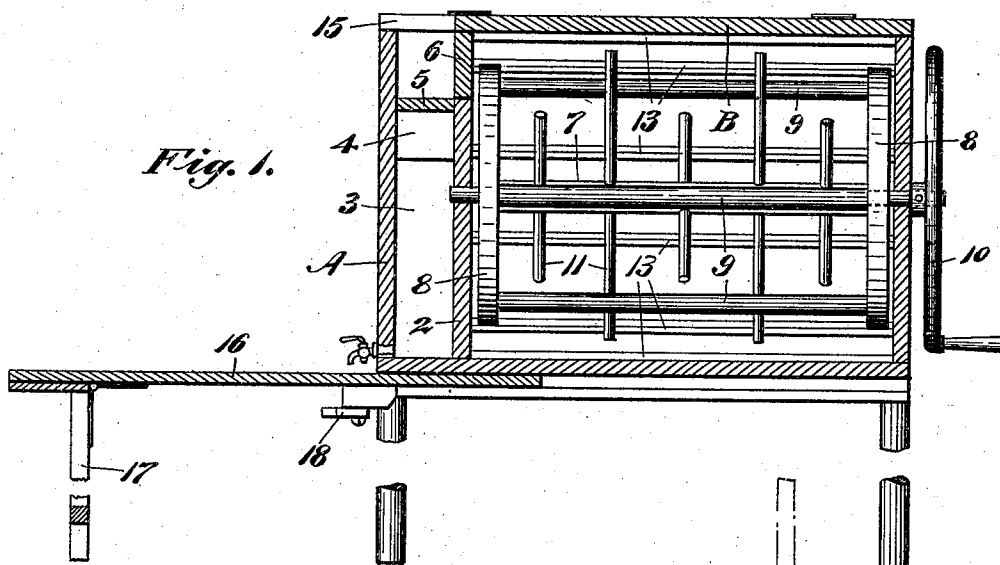


No. 814,989.

PATENTED MAR. 13, 1906.

J. V. DA SILVEIRA.
WASHING MACHINE.

APPLICATION FILED MAR. 9, 1905.



Witnesses,
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UNITED STATES PATENT OFFICE.

JOHN V. DA SILVEIRA, OF OAKLAND, CALIFORNIA.

WASHING-MACHINE.

No. 814,989.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed March 9, 1905. Serial No. 249,233.

To all whom it may concern:

Be it known that I, JOHN V. DA SILVEIRA, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

My invention relates to a machine which is particularly designed for washing clothes.

It consists in a combination of parts and in details of construction, which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a longitudinal section of my machine. Fig. 2 is a cross-section of same with dasher removed. Fig. 3 is a plan view of cover, showing opening. Fig. 4 is a section through dasher.

As shown in the drawings, A is an outer case, which may be rectangular or of other suitable form. I have here shown it as rectangular and as having a cover B, which is hinged to one side so as to be opened or closed at will. At one end of this case is fitted a false end piece, as at 2, and this piece is separated from the end and maintained in position by vertically-removable standards 3, these standards being located between the false end piece 2 and the fixed end of the box. The standards are of such length as to stand upon the bottom of the box and to thus maintain the false end 2 in position. Each of these standards has a projecting lug or shoulder 4, and upon these shoulders the bar 5 is supported, extending from one to the other and serving to hold the standards in place, and thus maintain the false end in position. As a preferred construction I herein show the false end as extending only up to the level of the cross-piece 5, and a supplemental extension 6 may rest upon the top of the false end 2, extending across the width of the box and being supported against the uprights 3, as shown. In the false end 2 and in the opposite fixed end of the casing are made openings to receive the journal-shaft 7, which is carried therein. Upon this shaft are the disks 8, and extending between these disks are bars 9. One end of the shaft extends through the fixed end of the case A and is fitted to receive the hub of a wheel 10, which may be removably secured thereto by a pin passing through the hub and shaft or in other suitable way. Through this wheel power may be applied by any of the usual methods to turn the shaft and its attachments.

Through the shaft 7 are fitted the pins 11, which are locked, so as to project radially from the shaft, and they are secured by pins or keys, as at 12, so that by removing these keys the pins may also be removed. Normally the pins project between the horizontal bars 9 and extend beyond them. The interior of the case A is fitted with longitudinal V-shaped ribs 13, extending from end to end upon the sides, bottom, and upon the cover which closes the case.

When small clothes are to be washed, the pins 11 are in position in the shaft, and water, with suitable soap or cleansing material, being placed in the box the small clothing is revolved by engagement with the ends of the arms 11 and carried around in contact with the ribs 13 until they are cleansed.

When it is desired to wash larger articles, as blankets and heavy goods, the pins 11 are removed from the shaft, and the bars 9 then serve to engage with the larger articles and dash them through the cleansing liquid until they are thoroughly washed.

When it is desired to remove the beater-shaft from the apparatus, the wheel is first removed from the projecting end of the shaft.

The horizontal bar 5 being lifted from the lugs 4, the vertical braces 3 can be taken out, and the false end 2 may then be moved into the open space at that end of the box or casing until sufficient space is provided to allow the revoluble beater to be moved endwise and its two end journals disengaged from their supports, when it can be lifted out of the box. It can be returned in the same manner, and the end which passes through the fixed end of the box is first inserted in place. The movable or false end 2 is then moved up and slipped over the journal at that end of the beater-shaft. Then the locking-standards 3 are fitted behind it, and finally the plate 5 is replaced to hold the standards in position, and the supplemental false end piece 6 being set in position between the top of the false end 2 and the under side of the cover the working portion of the box is practically closed from the other space.

Whatever water may pass through the interstices and into the end chamber may be drawn off through a faucet or cock at the bottom of the box, as shown.

For convenience in removing the clothes from the apparatus and partially drying them I have shown the cover B of the box

having a cut-away portion, as at 15, so that the end of the box is exposed, and this exposed end serves as a point to which a wringer may be attached and remain permanently in place without interfering with the opening and closing of the cover B.

When the clothes are passed through the wringer, it is desirable to have some receiver for them. I have therefore shown a slidable bottom 16, movable in guides beneath the bottom of the part A and having foldable support 17. When not in use, this part is slid in beneath the box A. The support 17 is folded up and is retained in place by a turnable button 18 or equivalent contrivance. When it is to be used, the support is released and the bottom 16 is slid out to a distance sufficient to hold the tub which may be set thereon. The support being turned down supports the outer end of the slidable bottom. The inner end is properly supported by the guides in which it slides. Thus a tub to receive the clothes may be supported in close proximity with the wringer.

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

1. The combination in a washing-machine of a box having internal longitudinally-disposed ribs, a shaft having end disks and arms, a journal-opening in one of the ends of the box through which one of the shaft-journals passes, a supplemental false piece at the opposite end of the box said false piece having a bearing for the journal at the opposite end of the beater-shaft, said supplemental end being movable to disengage it from the beater-shaft and to allow the latter to be removed.

2. The combination in a washing-machine of a box or casing having longitudinally-disposed ribs upon its top bottom and sides, a shaft having end disks and arms, a remov-

able false end piece spaced from one end of the box said false piece and the opposite end of the case having means for supporting the journal ends of the shaft, said shaft being extended beyond the box at one end and provided with means whereby the shaft may be rotated, and bars extending between the disks near their peripheries.

3. In a washing-machine, the combination of a box having ribs upon its bottom and sides, a removable false end, a shaft journaled in said false end and the opposite end of the box said shaft being extended beyond the box and provided with means whereby it may be rotated, a cover for the box said cover having ribs upon its under surface, said false end terminating short of said cover, vertically-removable standards for maintaining the false end in position, said standards having lugs or shoulders, a bar supported on said lugs and adapted to hold the standards in place, and a supplemental piece interposed between the top of the false end and the cover and supported against said standards.

4. In a washing-machine, a box having a hinged cover, a shaft with beaters and radial arms, a false and movable end located at a distance from one of the main box ends and carrying one of the journals of the beater-shaft, the other journal extending through the opposite end of the box and having a removable crank-wheel fixed thereto, said cover having means permitting the attachment of a wringer to the fixed end of the box.

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

JOHN V. DA SILVEIRA.

Witnesses:

HENRY P. TRICOU,
S. H. NOURSE.