

(No Model.)

N. S. ALTHOUSE.
WASHING MACHINE.

No. 549,093.

Patented Nov. 5, 1895.

FIG. 1.

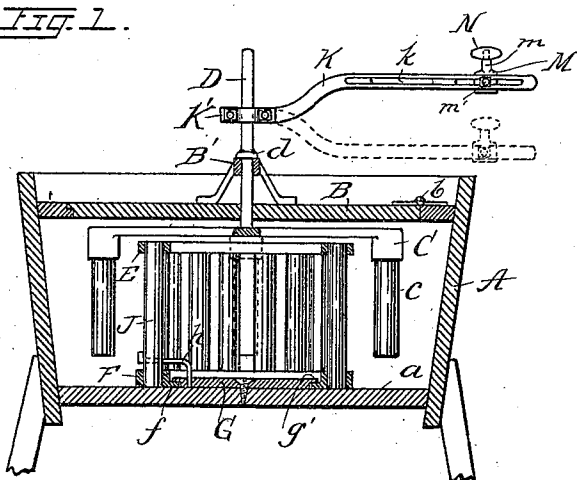


FIG. 3.

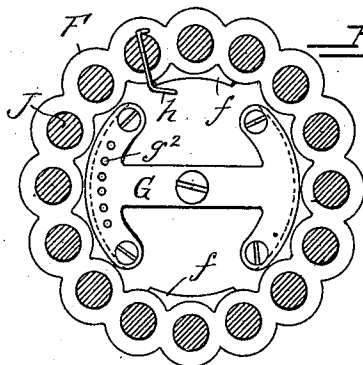
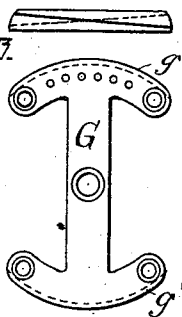


FIG. 2.

FIG. 4.

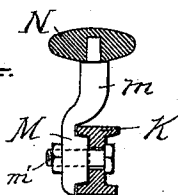
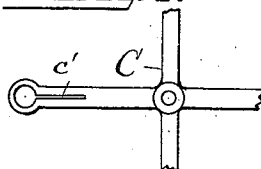


FIG. 5.



Witnesses

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NATHAN S. ALTHOUSE, OF READING, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 549,093, dated November 5, 1895.

Application filed May 28, 1894. Serial No. 512,672. (No model.)

To all whom it may concern:

Be it known that I, NATHAN S. ALTHOUSE, a citizen of the United States, residing at Reading, county of Berks, State of Pennsylvania, have invented certain Improvements in Washing-Machines, of which the following is a specification.

My invention relates to certain improvements in the construction of washing-machines, which are fully described in connection with the accompanying drawings, and specifically pointed out in the subjoined claim.

Figure 1 is a sectional elevation of a washing-machine embodying my improvements. Fig. 2 is a sectional plan view of the rubber-cylinder, showing also the fastening device in the bottom of the tub, from which the cylinder is represented as disconnected instead of connected, as in Fig. 1. Fig. 3 shows the wedge-shaped fastening device separate. Fig. 4 is a sectional view of the operating-lever, and Fig. 5 a separate view of the rubber-frame.

A represents the tub; B, the hinged lid or cover; C, the rubber frame or spider, and D the vertical shaft, to the lower end of which the rubber-frame is fastened, so as to be rotated or oscillated with it. The shaft is mounted in the hinged lid, which is provided with a bearing-bracket B', upon which the collar *d* of the shaft normally rests.

The rubber frame or spider C is provided with a number of radial arms, at the ends of which are secured fingers *c*, the arms being provided with slots *c'*, extending inward from the finger-holes, so as to give sufficient elasticity to facilitate the fitting of the fingers to the holes, and at the same time prevent their becoming loose.

A rubbing-cylinder to occupy the central portion of the tub is formed, as shown in the drawings, by means of a circular series of vertical bars J, which are bound together by a top ring E and base-piece F. To facilitate the cleaning of the tub and keeping the machine in repair, I have provided for conveniently fastening and unfastening this central cylinder. To accomplish this quickly and conveniently, I employ a fastening device G, which is fixed centrally to the bottom *a* of the tub. This device is in the form of a ring

broken away on opposite sides of a connecting-bar and having an outside diameter somewhat less than the internal diameter of the base-piece F, which latter is provided with internally-projecting lugs *ff*. The rim of the fastening device G is formed with overhanging flanges, the under faces of which are oppositely inclined, so as to form reversed wedges *g* and *g'*, which are arranged to bear upon the lugs *ff* on the base-piece F as the latter is turned from the position indicated in Fig. 2 to that indicated in Fig. 1. In order to prevent accidental loosening of the cylinder, I provide a lock-pin *h*, which is pivoted to one of the bars G, so as to be lowered into engagement with one of a series of pin-holes *g*² in the fixed piece G, and thus prevent the turning of the cylinder.

To provide for conveniently operating the machine, whether the operator be sitting or standing, I employ a special form of operating lever and handle, as shown in Figs. 1 and 4. The main arm of the lever K is bent out of line with the shank portion K', by which it is adjustably clamped to the projecting portion of the shaft D, and is also provided with one or more longitudinal slots *k k*, through which passes a bolt *m'* for adjustably securing the handle-piece M. This handle-piece has a knob-spindle *m* and is easily reversible upon the lever-arm, so as to maintain the spindle and the knob N, which is loosely mounted upon it, in proper position whether the lever be secured to the shaft D in the position indicated in full lines or in the position indicated in dotted lines. I am thus enabled to quickly and easily vary both the length of the lever and the height of the operating-handle for the purpose of suiting different conditions. The lever-arm is also formed with flanges *k k* at its top and bottom adjacent to the slot, which flanges are received by recesses formed in the knob-spindle, whereby the handle-piece is properly maintained in vertical position, as is obvious.

It will be readily understood that the central cylinder is secured in position in the tub by first placing it therein, as indicated in Fig. 2, and then turning it until it is wedged fast under the overhanging wedge-shaped flanges *g g'* of the fastening device G, and that it may be quickly removed by simply reversing the

operation. The rubber frame or spider C, however, is so arranged as to be readily swung upward out of the tub by merely raising the hinged lid without coming in contact with the
5 rubber-cylinder.

What I claim is—

In a washing machine, the combination with the tub, the stationary arm, secured to the bottom thereof and formed with lateral flanges
10 having oppositely inclined under faces, and the rotative spider, of the normally stationary,

open rubber cylinder having inwardly projecting lugs at its bottom, said rubber cylinder being rotative to bring said lugs into and out of locking engagement with said flanges, 15 substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

NATHAN S. ALTHOUSE.

Witnesses:

J. H. KNOLL,

F. PIERCE HUMMEL.