

(No Model.)

H. F. MOELLER.
WASHING MACHINE.

No. 273,584.

Patented Mar. 6, 1883.

Fig-1.

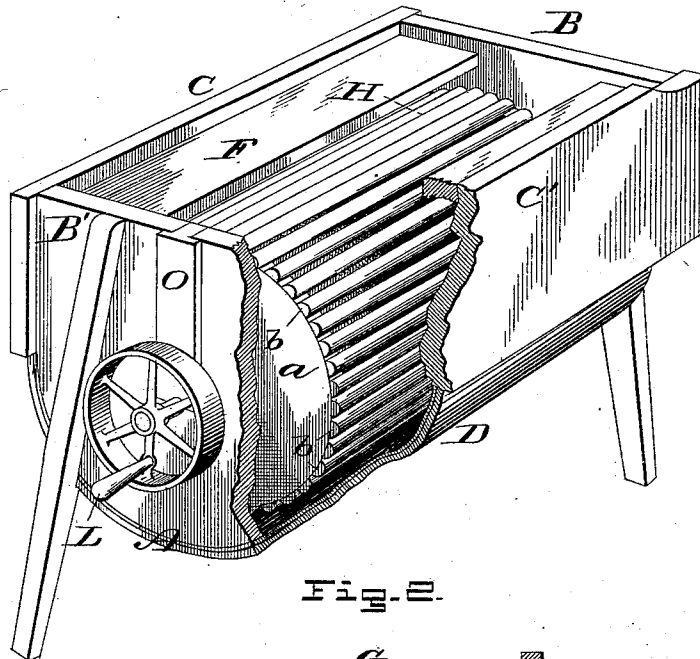
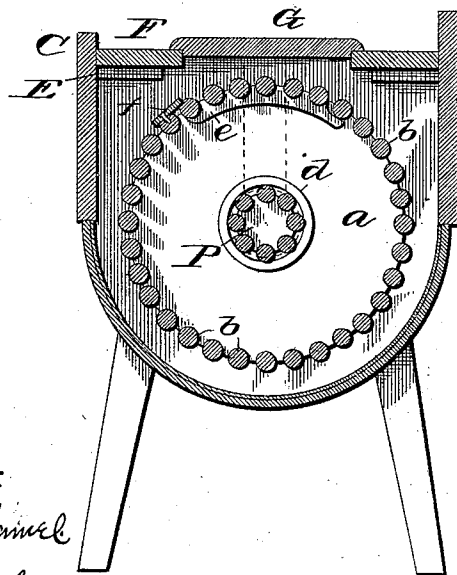


Fig-2.



WITNESSES:

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INVENTOR:

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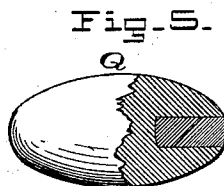
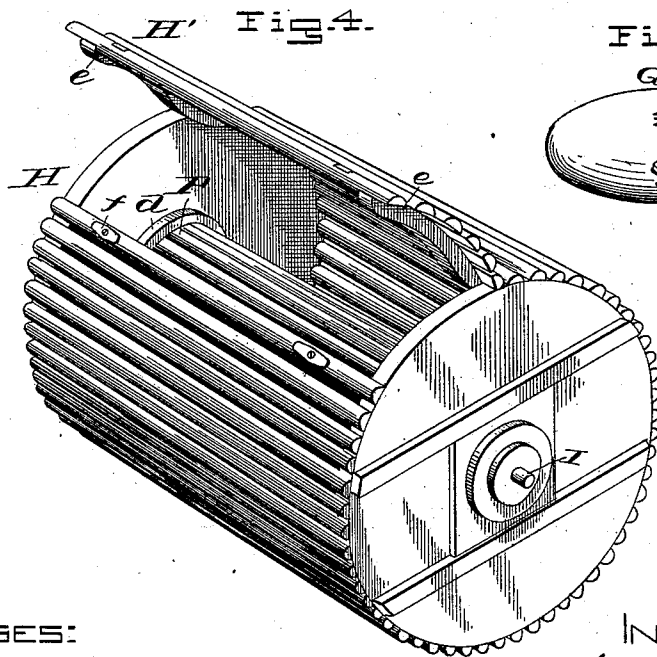
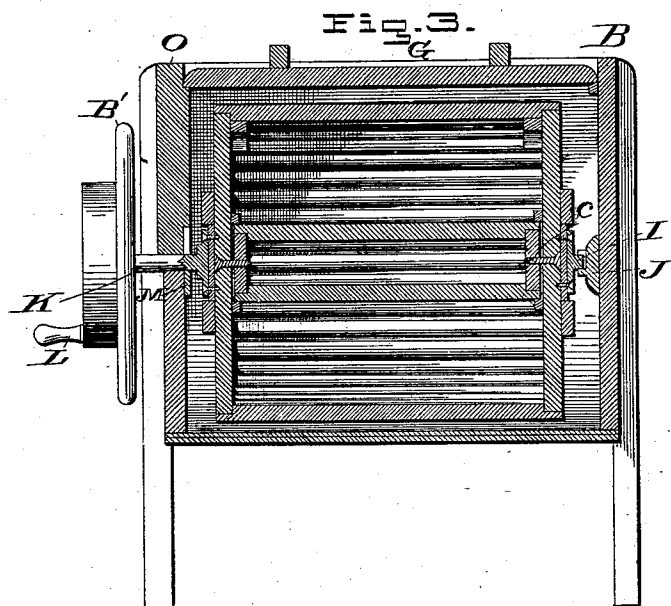
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2 Sheets—Sheet 2.

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WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY F. MOELLER, OF DAVENPORT, IOWA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 273,584, dated March 6, 1883.

Application filed December 4, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. MOELLER, of Davenport, in the county of Scott and State of Iowa, have invented certain Improvements in Washing-Machines, of which the following is a specification.

My invention relates to that class of washing-machines in which a rotary cylinder is mounted within a tub and adapted to contain the articles to be cleaned; and it consists in certain features and details hereinafter fully set forth.

In the accompanying drawings, Figure 1 is a perspective view with the cover removed, a portion of the tub being broken away to show the interior. Fig. 2 is a vertical central transverse section. Fig. 3 is a vertical central longitudinal section. Fig. 4 is an enlarged view of the cylinder; and Fig. 5 is a view of one of the pounders, partly in section.

The object of this invention is to improve the action and render easier the operation of such machine, and to this end I adopt the construction shown in the drawings, in which A represents the tub, consisting of heads B B', sides C C', and bottom D, curved to conform to the cylinder which revolves within it. The tub may be made of wood or metal, or partly of each, the sides, ends, and top being usually of wood and the bottom of sheet metal, preferably zinc or tin. To the inside of the heads are secured cleats E to support portions F of the cover, and which are removed when it is desired to take out the cylinder.

G represents the central portion of the cover, which fits snugly between the portions F and prevents any escape of water, this middle portion being the only portion of the cover removed in getting access to the interior of the cylinder.

H is the cylinder, composed of the heads a, connected by cylindrical bars b, which are cut away to fit the outer edges of the heads to which they are secured. To one end of the cylinder is secured a central journal, I, which rests in a vertically-slotted bearing-plate or socket-piece, J, secured to the head B of the machine, while at the other end the journal K, which is secured to the cylinder in the same way, is extended outward and adapted to receive a fly-wheel with a crank or handle, L, by which motion is imparted to the machine. A

slotted bearing-plate, M, is secured to the head B' in order to form a support for the shaft K. The cylinder H is also provided with a detachable portion, H', which allows the removal of the article cleaned. It consists of two or more cleats, e, which extend circumferentially partially around the cylinder, to which are secured a number of the bars b, as shown in Figs. 2 and 3, the ends of the bars projecting beyond the cleats in order to rest upon the heads a of the cylinder. The bars or cleats e are curved at one end to fit under the bar b, which serves to hold it to its place. Buttons f or other suitable fastening devices may be employed for securing the portion H' in place, said buttons being secured to a stationary bar of the cylinder and arranged to turn and project over the front bar of the removable section.

The head B' is provided with a vertical slot, N, as shown in Fig. 3, which is of a width equal to the diameter of the shaft K, to permit the shaft to pass to and from its seat in placing and removing the cylinder; and in order to prevent the shaft from rising from its bearing when rotated, I provide a slide, O, which is adapted to snugly fit the slot N, the slide being extended laterally on each side of the slot, both inside and outside of the tub, to insure a tight joint.

Within the cylinder H, and concentric therewith, is a secondary cylinder, P, which is constructed, essentially like the cylinder H, with the heads or cylindrical bars, but not provided with a removable section. This cylinder is adapted to rotate freely within and independently of the large cylinder, and turn upon journals c projecting inward from the heads a of the main cylinder, as shown in Fig. 3. On the interior of the heads a are rings d, which fit closely around and project over the ends of the cylinder P and prevent the articles from winding about the journals or wedging between the cylinder-heads during their rotation. This inner cylinder catches the articles as they fall from the larger cylinder when carried upward and dropped thereby, and materially assists in the cleaning operation by its additional agitation of the article. It also forms a second rubbing-surface, against which the loose pounders work to great advantage. Hitherto spherical pounders have been em-

played in cylinders of this class to assist in agitating the articles and in forcing the water through them; but it is found in practice that such pounders rotate about their axes and produce comparatively little effect. To obviate this difficulty I employ spheroidal pounders Q, and weight them at one end, by which plan I overcome the tendency to rotate about their longer axes, and cause them to roll over end for end, and also to be carried upward by the cylinder and dropped down upon the articles in the lower part thereof. This change is found in practice to greatly improve the action of the machine. The employment of round bars for the cylinders renders the passage of the cylinders through the water much easier than where square or angular bars are used.

Having thus described my invention, what I claim is—

1. The herein-described washing-machine, consisting of tub A, rotary cylinder H, internal cylinder, P, independently journaled within the cylinder H, overhanging bands or rings d, and spheroidal pounders Q, weighted at one end and placed within the cylinder H, all combined and operating substantially as set forth.

2. In a washing-machine, the combination of a rotary cylinder and a pounder or pounders of spheroidal form, weighted at one end and placed within the cylinder, substantially as explained.

HENRY F. MOELLER.

Witnesses:

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JOHN C. BILLS.