

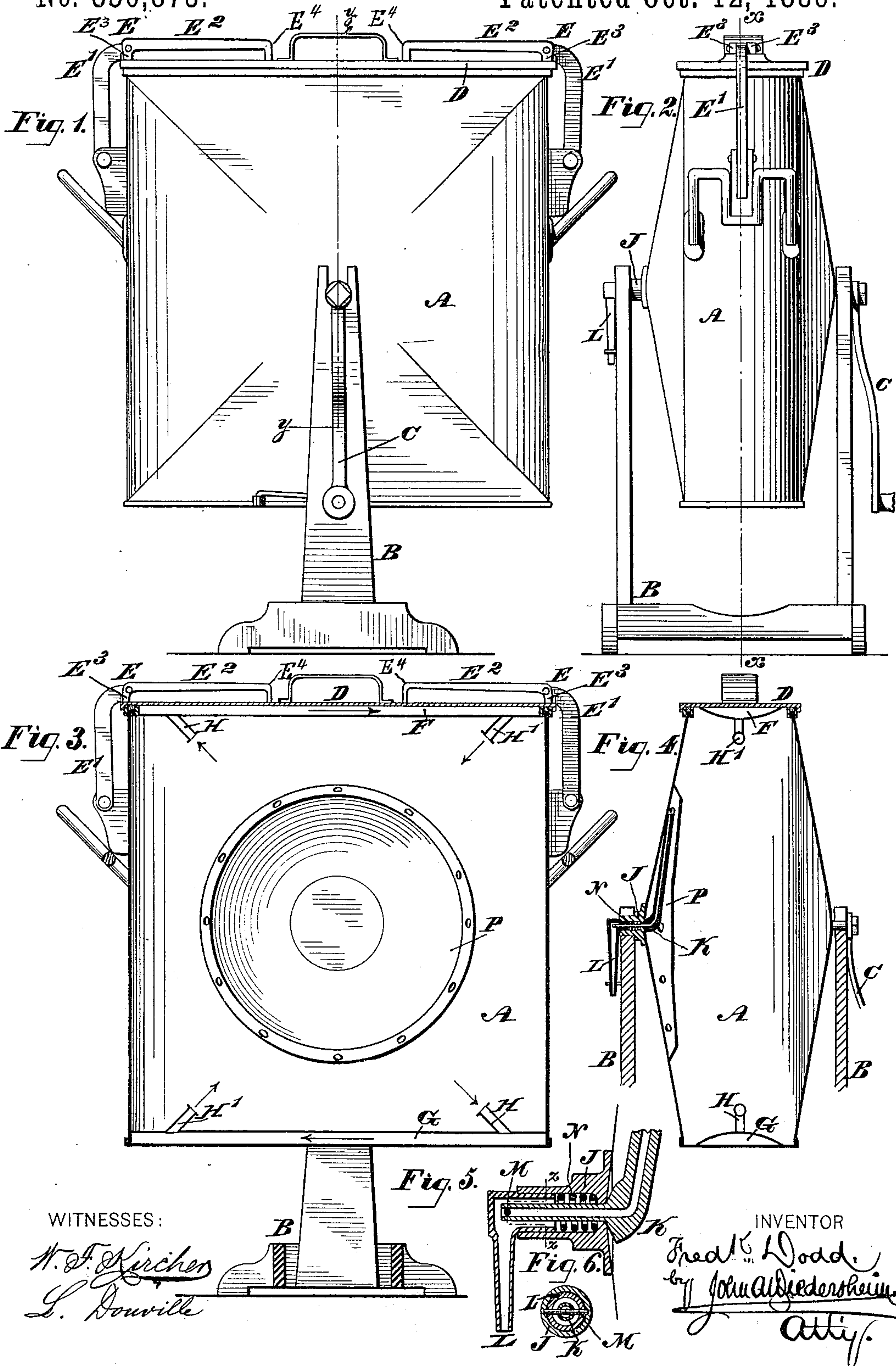
(No Model.)

F. DODD.

WASHING MACHINE.

No. 350,873.

Patented Oct. 12, 1886.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FREDERICK DODD, OF PHILADELPHIA, PENNSYLVANIA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 350,873, dated October 12, 1886.

Application filed July 17, 1885. Serial No. 171,869. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK DODD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Washing-Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 represents a side elevation of a washing-machine embodying my invention. Fig. 2 represents a side elevation at a right angle to Fig. 1. Fig. 3 represents a longitudinal vertical section thereof in line, *x x*  
15 Fig. 2. Fig. 4 represents a transverse vertical section in line *y y*, Fig. 1. Fig. 5 represents an enlarged view of a detached portion. Fig. 6 represents a transverse section thereof in line *z z*, Fig. 5.

20 Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a washing-machine having means for fastening and tightening the lid thereof, as will be hereinafter  
25 fully set forth.

It also consists of a washing-machine having channels within the same on opposite sides, and spouts attached to said channels for forcibly injecting water against the garments  
30 or other articles to be washed.

It also consists of a washing-machine having an outlet nozzle for steam, and means for forming a tight joint between said nozzle and the side of the body of the machine and preventing leakage thereat.  
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Referring to the drawings, A represents a rotary tub or body of a washing-machine, the same being mounted on a stand, B, and provided with a crank-handle, C, for operating  
40 purposes.

D represents the lid or cover of the body A, and E represents fastenings for said lid, the same consisting of arms E', which are pivoted to lugs on the sides of the body, and arms E<sup>2</sup>  
45 which are pivoted to the arms E', and provided with legs E<sup>3</sup> at their pivotal ends and legs E' at their outer ends, it being noticed that when the lid is in position the arms E' are raised and the arms E<sup>2</sup> so disposed that  
50 the legs E<sup>3</sup> rest on the top of the lid. The arms E<sup>2</sup> are then swung up and inwardly over the top of the lid and forced down to full ex-

tent, whereby, as the arms E<sup>2</sup> are eccentrically pivoted to the arms E', the former bear firmly downward on the lid, the legs E' resting there- 55 on, and thus hold the lid tightly on the body A. When the arms E<sup>2</sup> are thrown up, the lid is released therefrom, and may then be opened, as is evident.

On the bottom of the body A and under 60 side of the lid D are channels G F, respectively, and the channels have spouts H H', which are secured thereto near the ends thereof, said channels being in communication with the interior of the body A by means of 65 said spouts. It will be seen that when the tub or body is rotated the water is directed into the spouts H, and, thence passing through the channels F G, is forcibly injected by means of the spouts H' against the garments, &c., 70 to be washed, the water thus circulating through the body and channels and acting on the garments, &c., in an effective manner, this being assisted by the dropping and overturning motions imparted to the garments, 75 &c., by the rotation of the body A. One of the journals of the body consists of a sleeve, J, which is secured to said body and supported on one of the uprights of the stand B. Within said sleeve is fitted the horizontal limb of 80 an elbow-pipe, K, the vertical limb whereof enters the body A. Between the horizontal limb of said pipe K and the sleeve J is fitted a nozzle, L, it being noticed that the pipe K enters the sleeve J at the inner end thereof 85 and the nozzle L at the outer end thereof. The nozzle and pipe K are connected by a pin, M, which is passed through the same, whereby they are prevented from separation. Surrounding the horizontal limb of the pipe K, 90 and bearing against the inner end of the nozzle L and a shoulder on the interior of the sleeve, is a spring, N, the tendency whereof is to force the vertical limb of the pipe K against the wall of the opening of the inner end of 95 the sleeve, whereby there is produced a tight joint between the parts and leakage of the body or tub at the sleeve is prevented. The portion of the vertical limb of the pipe K in contact with the sleeve is rounded, and the contiguous parts of the sleeve are rounded, so that 100 as the body rotates the inner end of the sleeve rotates on said rounded portion. The outer end of the sleeve rotates on the horizontal



limb of the nozzle L, the pipe K and said nozzle remaining stationary. It will be seen that the pipe K provides an outlet for steam which rises from the hot water employed for washing garments, &c., and thus provision is made for relieving the body of pressure of steam and created foam. The limb of the pipe K within the body is inclosed by a perforated plate or guard, P, which is secured at its edge to the body A, so as to leave a chamber, whereby the rotation of the body is not interfered with by said limb, which, as seen, occupies said chamber, the guard preventing garments, &c., reaching the inner end of the pipe K and clogging the same.

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

1. A washing-machine having a fastening device consisting of the arms E', pivoted to lugs on the side of the body of the machine, and arms E<sup>2</sup>, pivoted to arms E' and provided with legs E<sup>3</sup> at their pivotal ends and legs E<sup>4</sup> at the outer ends, both legs E<sup>3</sup> and E<sup>4</sup> being adapted to rest or bear on the said lid, substantially as and for the purpose set forth.

2. A washing-machine having a body mounted on a frame and adapted to rotate, the said body being provided with channels G and F, having spouts H and H', substantially as and for the purpose set forth.

3. In a washing-machine, a discharge-pipe passing through a rotary sleeve connected with the rotary body or tub thereof, a nozzle fitted within said sleeve and detachably connected with said pipe, and a spring within the sleeve bearing against the nozzle and sleeve, whereby the inner end of the discharge-pipe is held tightly against the sleeve, substantially as and for the purpose set forth.

4. A rotary body or tub, a hollow journal or sleeve attached thereto, a discharge-pipe, a detachable discharge-nozzle partly inclosing the same and inclosed by said sleeve, a pin connecting said pipe and nozzle, and a spring pressing the inner portion of the discharge-pipe against the sleeve, substantially as described.

FREDERICK DODD.

Witnesses:

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