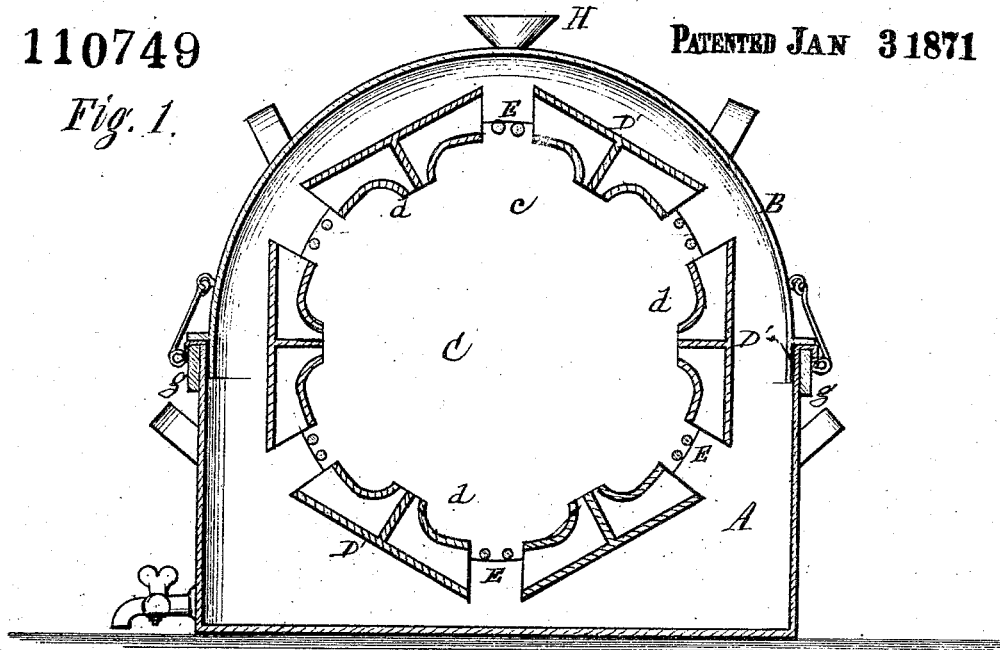


Sam<sup>l</sup> Deveau, Imp<sup>a</sup> Washing Machine.

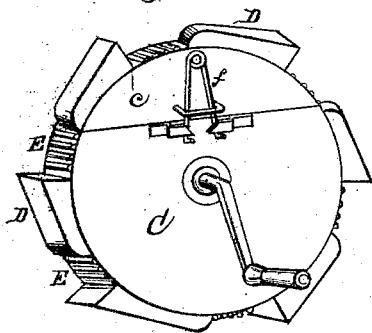
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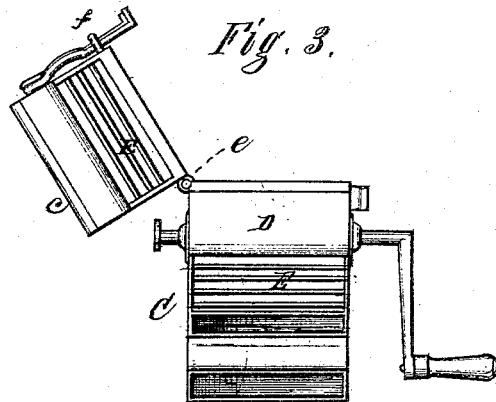
*Fig. 1.*



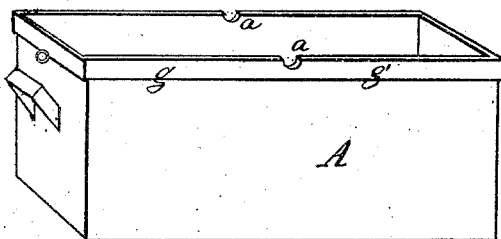
*Fig. 2.*



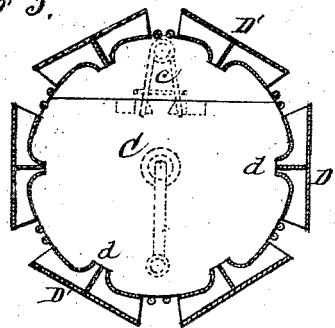
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses.  
*Chas. J. Dodge*  
*J. A. Morley*

Inventor.  
*Samuel Deveau*

# UNITED STATES PATENT OFFICE.

SAMUEL DE VEAU, OF SYRACUSE, NEW YORK.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 110,749, dated January 3, 1871.

*To all whom it may concern:*

Be it known that I, SAMUEL DE VEAU, of Syracuse, in the county of Onondaga and State of New York, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a sectional side view. Figs. 2, 3, and 4 are detail views; and Figs. 1 and 5 show the construction of the lifting-buckets, by which the machine or cylinder can be rotated in either direction.

Similar letters of reference indicate like parts in the several figures.

This invention relates to certain improvements in that class of machines in which the clothes are placed within a wheel and rotated, the wheel having water-lifters, and being rotated within a boiler or outer vessel.

In the accompanying drawing, A, Fig. 1, is the boiler. B is the cover. C is the wheel or cylinder, and D' D' are the double water lifters or buckets. The double buckets D' D' are placed outside of the wheel and separated from each other sufficiently so that direct openings through the rim of the wheel can be made for egress of water, and the inner end or discharge of each bucket is extended into the chamber of the wheel so as to form a rib or butment, *d*, for tumbling the clothes; and by this form of discharge the water is thrown in more toward the center of the wheel, and is delivered more fairly upon the body of the clothes. The openings between the buckets are formed by a series of bars, E, as shown in Figs. 1, 2, and 3, or they can be formed by a perforated plate or part of the rim of the wheel. The door portion *c* of the wheel is attached to the main portion C by hinges *e*, at the joint in one of the side disks of the wheel, so that the cover is opened in direction of its shortest diameter, as shown in Fig. 3, and I provide the opposite side of the cover with a spring-catch, *f*, Figs. 2 and 3, by means of which the wheel is made easy of access. The spring-catch *f* is made double, of spring-wire, as clearly shown in Fig. 2, its legs being made to engage with

the catches by means of the oblique upper faces of said catches. The boxes *a*, Fig. 4, in the edge of the boiler, are formed in a wide, flat bar of iron, *g*, that is run around the entire edge of the boiler, thus making a strong and rigid support for the wheel. The cover of the boiler is made with an opening in its top to allow the steam to escape, and this opening is carried up in a tunnel form, as shown by H, Fig. 1, so that more water can be added at any time without taking off the cover B.

As the machine is placed ordinarily on a common stove, and operated while on the stove, the steam that forms in it tends to press the suds out of the boiler at the joint between it and the cover; but, by means of the opening H, this tendency is obviated by giving the steam a free exit at the top of the machine.

The buckets are made double so that the wheel will work equally well when turned in either direction, by means of which the rolling up of the clothes into a ball is substantially avoided, as the wheel can be turned a short time in one direction, and the clothes then unwound and new surfaces presented by reversing or changing the direction of the wheel.

An important part of my invention is the hinging of the door portion *c* of the wheel C to one of the sides of the latter.

In all wheels, so far as I have ascertained, the lid or door portion of the wheel is hinged so as to open endwise in line with the longest diameter of the wheel. The consequence is that when the door portion of the wheel is swung back to allow access to the interior of the wheel the wheel is thrown out of balance on its pivot, and turns over toward the end where the door portion is hinged, thus bringing the opening of the wheel to the side, instead of on the top.

By hinging the door portion as described and shown by me this difficulty is obviated, and the wheel kept firmly in position with its opening up, the door portion acting as a counter-balance.

This machine is in practical use, and gives excellent results, doing the work well and expeditiously.

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

1. The wheel C, operating substantially as described, when provided with double buckets D' D', substantially as and for the purposes set forth.

2. The combination, with the wheel constructed substantially as described, with double buckets D' D', of a boiler, A, provided with a band, g, in which bearings a are formed for the pivot of the wheel, substantially as shown and set forth.

3. The spring-catch f, in combination with the wheel C c and hinges e, all constructed and arranged as shown and described.

4. The wheel C, having buckets D' D', as described, when provided with a door portion, e, which is hinged so as to open sidewise in line with the shortest diameter of the wheel, substantially as herein shown and set forth.

SAMUEL DE VEAU.

Witnesses:

WM. J. DODGE,  
F. A. MORLEY.