

100253

William A. Brown  
Washing Machine.

PATENTED MAR 1 1870

Fig. 1.

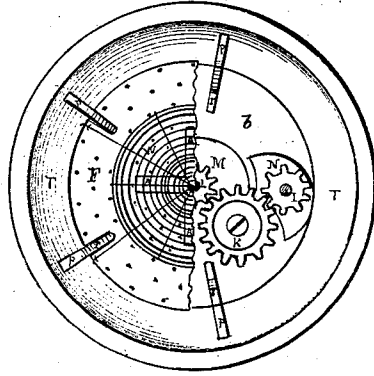
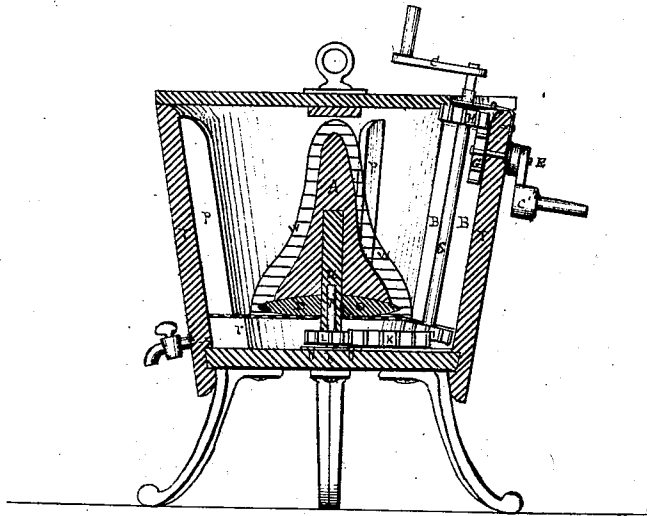


Fig. 2.



Witnesses.

*S. H. Stoward*  
*W. C. Wilson*

Inventor.

*William A. Brown*  
by  
*W. C. Bradley*  
his attorney.

# United States Patent Office.

WILLIAM A. BROWN, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 100,253, dated March 1, 1870.

## IMPROVED WASHING-MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, WILLIAM A. BROWN, of the city and county of Philadelphia, and State of Pennsylvania, have invented certain Improvements in Washing-Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of my improvements.

Figure 2, a central vertical section of the same.

In both drawings, the same letter of reference indicates corresponding parts.

My invention relates—

First, to improvements in the mode of operating those washing-machines which accomplish the washing by means of the agitation of the water produced by the revolution of a central upright agitator; and

Second, to the protection of the motive power and agitator from contact with the articles undergoing the process of washing by inclosing the driving-shaft in a box, and by covering the lower works with a grater or perforated false bottom, and the agitator with a net-work of wood or metal; and

Its objects are, by thus covering the working parts, to obviate the difficulties attending the operation of such machines which are the result of the contact of the clothes with the working parts, and, by using a grated or perforated false bottom, to allow the sediment to deposit below the reach of the direct action of the agitator.

In fig. 1 is represented a plan view of a washing-machine with my improvements attached, in which one-half of false bottom F, agitator A, and wire cover W is cut away, to allow a view of the works attached to the tub's bottom.

At the side of the tub T, and parallel to it, in fig. 2, is shown driving-shaft S.

This shaft's lower bearing is in a socket provided for it in metallic plate N, attached to bottom *b*, and its lower extremity carries pinion I. Its upper end projects through a perforated arm, *o*, attached to the tub's side, and this arm, bearing upon a flange on the shaft, keeps it in place.

The shaft S is operated in two ways, the first of which is by means of crank C, attached to its upper end, and the second by means of crank C', crank-shaft E, which works in the side of the tub and carries gear-wheel G, and bevel-gearing G and H.

Shaft S and wheel G are inclosed in box B, attached to the tub, and thus protected from contact with the articles that are being washed.

To the centre of bottom *b*, metallic plate M, with its solid vertical rod R, is attached.

The office of the plate is to serve as a bearing, and that of the rod as an axle for hollow disk-shaft *u* and its pinion L.

Shaft *u* is inserted through a perforation in false

bottom F, into wooden disk D and agitator A, and there securely fastened.

Agitator A consists of four solid wings or paddles, at right angles to each other, which, at their base, reach nearly to the circumference of disk D, to which they are attached, and from thence to the top are graded to a blunt point.

A strong net-work protector, W, of wire or other material, a little larger than the agitator and its base, and of corresponding conical form, is placed over it, and secured to false bottom F, in such manner that the agitator is allowed a free and unobstructed movement.

It will thus be seen that protector W and bottom F, being connected together, as well as agitator A and shaft *u*, with its attachment, and the latter being removable from its axle R, upon which it works loosely, they can all be removed conveniently together.

False bottom F is a grating, or a perforated disk with notches cut in its periphery corresponding to the radial projections P and box B, attached to the side of the tub, and is supported by rests *r*. It covers and protects from contact with the articles being washed pinions I L and gear-wheel K, attached to bottom *b*, and connecting-pinions I and L.

Wire-protector W allows free circulation to the water, and, at the same time, prevents the clothing from touching the agitator.

Radial projections P serve to prevent the clothing from being carried around by the current of water.

A spigot in the side of the tub, between bottoms F and *b*, affords the means of drawing off the water from below.

By turning crank C or crank C', shaft S is revolved, and by gear-wheels I, K, and L motion is communicated to agitator A, and the machine operated.

I claim as my invention—

1. The combination and arrangement of shaft S, pinion I, gear-wheel K, pinion L, and shaft *u* with agitator A, substantially in the manner and for the purpose set forth.

2. The grated or perforated false bottom F and protector W, constructed substantially as and for the purpose set forth.

3. The combination and arrangement of central revolving agitator A with protector W, false bottom F, and hollow shaft *u*, substantially in the manner described.

The above specification of said invention signed and witnessed at Philadelphia this 25th day of January, 1870.

WM. A. BROWN.

Witnesses:

WILLIAM S. BROWN,  
W. M. BUSEY.