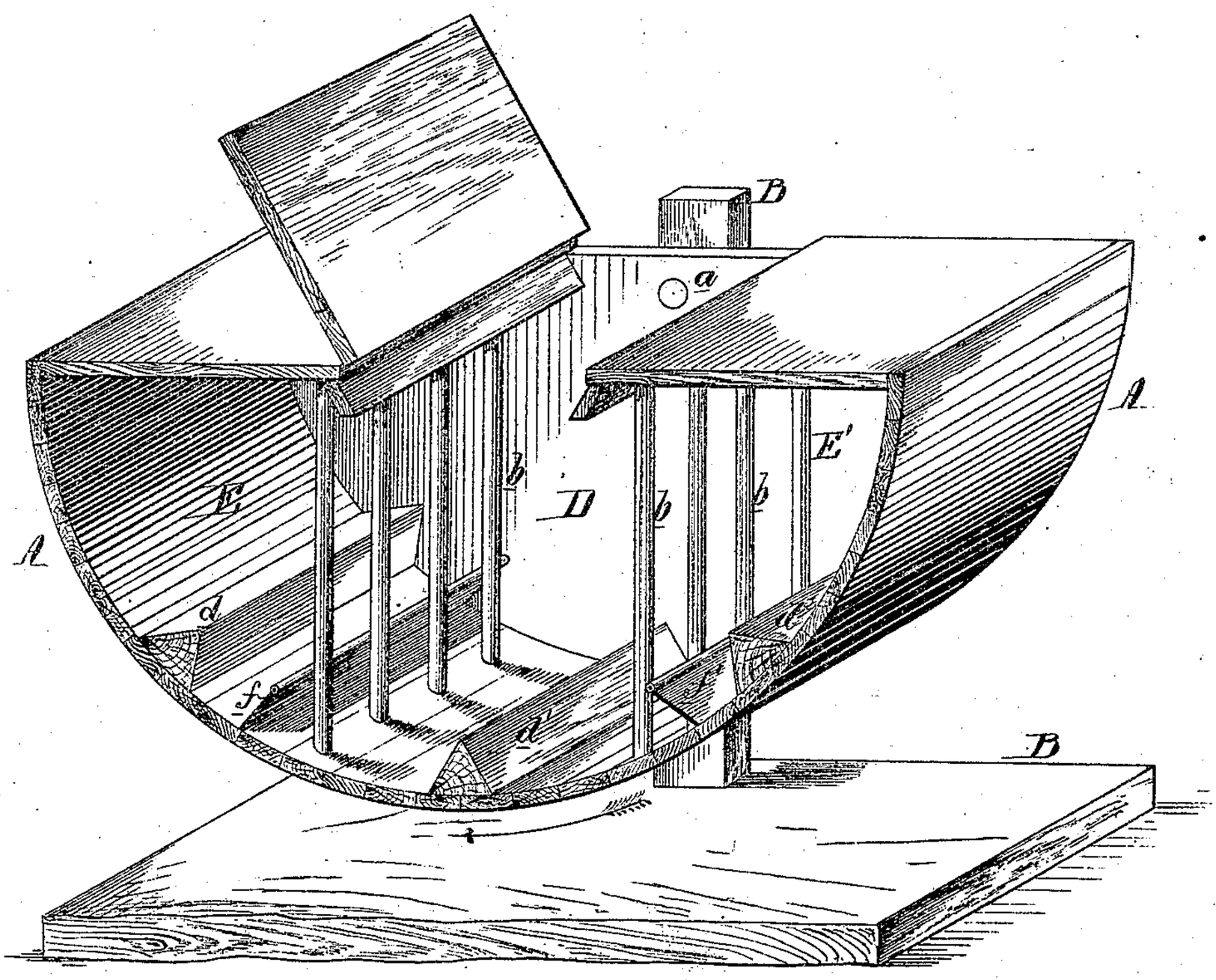
M. W. STAPLES.

Improvement in Washing-Machines.

No. 130,760. Patented Aug. 20, 1872.



Witnesses.

Harry Smith
John K. Ruperlus

M. W. Staples
by his Attys.
Howson and Son

UNITED STATES PATENT OFFICE.

MOSES W. STAPLES, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **130,760**, dated August 20, 1872.

Specification describing an Improved Washing-Machine, invented by MOSES W. STAPLES, of the city of Richmond, Henrico county, State of Virginia.

Improved Washing-Machine.

The object of my invention is a washing-machine, in which clothes and other articles can be quickly and thoroughly cleansed by forcing currents of water through and over the same, first in one direction and then in the other.

I accomplish this object by the use of the apparatus shown by the sectional perspective view in the accompanying drawing, in which A represents a semi-cylindrical vessel, pivoted at *a* to any suitable frame, B, so that it may be vibrated or rocked upon the latter, first in one direction and then in the other, the interior of the said vessel being separated by two rows of rods or rollers, *b*, into a central chamber, D, for the clothes, and into outer water-circulating chambers E and E′, triangular or other shaped projections *d* d^1 d^2 and hinged gates or valves *f f′* being arranged upon or adjacent to the bottoms of the said chambers, for the purpose of agitating, overturning, and directing the water or suds in currents toward and through the clothes, as the vessel is vibrated.

My invention will be fully understood from the following detailed description of the operation of the machine: When the vessel is vibrated in the direction of the arrow, the hot water or suds from the chamber E will flow over the projection *d* and gate *f* between the slats or rollers *b* into the central chamber D, and through and over the mass of clothes contained therein. From the central chamber the water will also flow between the second row of bars, lifting and passing beneath the gate *f′* and over the projection d^2 until the chamber E′ is nearly filled. On suddenly changing the direction of the motion of the vibrating vessel, the water in the chamber E′ will be forcibly projected toward and into the central chamber, the projection d^2 and gate *f′* which now remains closed, directing the water upward and causing it to flow over the same in currents somewhat resembling waterfalls, the several currents thus projected into and over the mass of clothes speedily and thoroughly cleansing the same. The self-acting gates *f f′* yielding to permit the water to pass beneath them in one direction, but obstructing the flow and changing the direction of the currents when the water is moving in the opposite direction, are an important feature of my invention, and they may be duplicated in the chambers E and E′, so as to enable the projections *d* to be dispensed with, but I prefer to employ the latter.

It is essential that the bottom of the vessel A should be curved, or that it should approximate to a curve, but it need not necessarily be semi-cylindrical.

I claim—

1. The combination, substantially as described, of self-acting gates or valves *f* with a washing-machine, to which a vibratory or rocking motion is imparted.

2. The combination, within the vibrating vessel A, of chambers D, E, and E′, slats or rollers *b*, projections *d*, and gates or valves *f*, all substantially as and for the purpose specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

M. W. STAPLES.

Witnesses:
J. B. MORTOR,
THEO. MUNCLE.