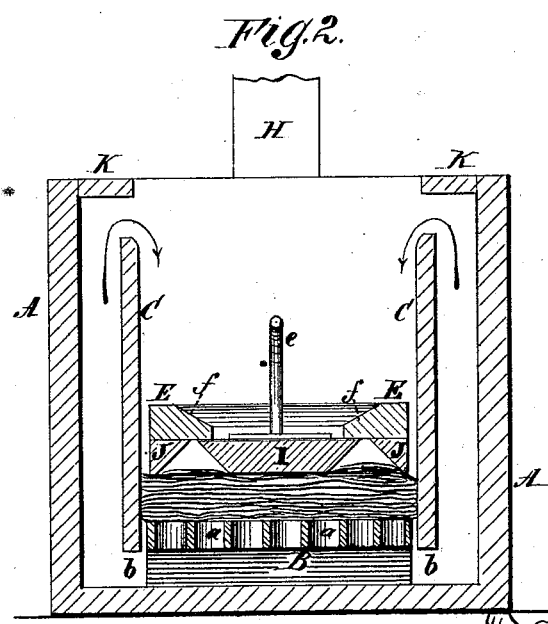
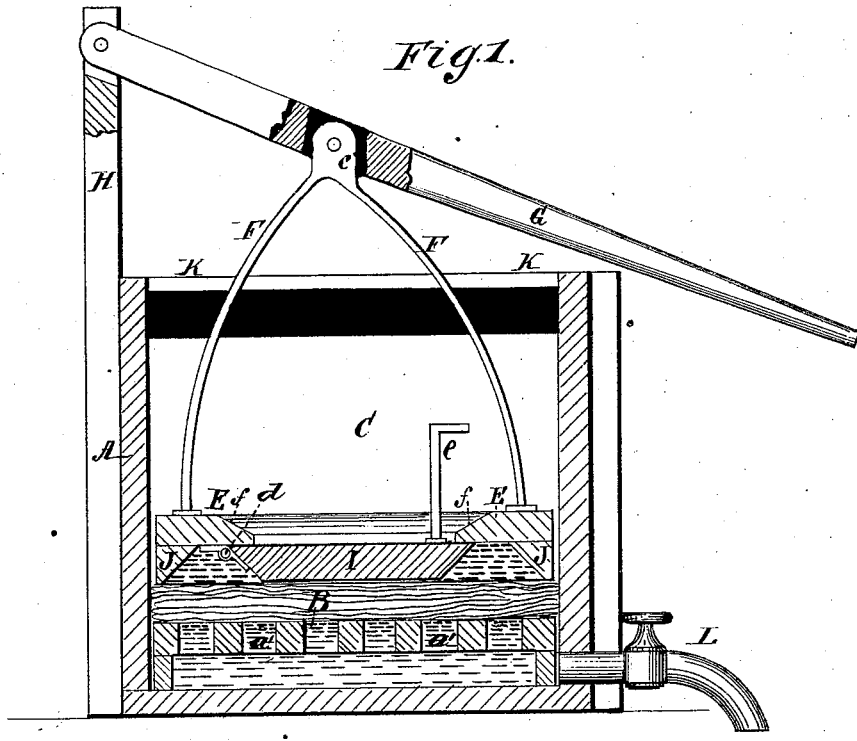


T. ADDISON & J. T. YATES.
Washing-Machine.

No. 163,906.

Patented June 1, 1875.



WITNESSES:
G. Matthews
b. A. Pettit

INVENTOR:
T. Addison
J. T. Yates
BY *[Signature]*

ATTORNEYS.

UNITED STATES PATENT OFFICE

THOMAS ADDISON AND JAMES T. YATES, OF ELLICOTT CITY, MARYLAND.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **163,906**, dated June 1, 1875; application filed July 31, 1874.

To all whom it may concern:

Be it known that we, THOMAS ADDISON and JAMES T. YATES, of Ellicott City, in the county of Howard and State of Maryland, have invented a new and Improved Washing-Machine; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming a part of this specification, in which—

Figure 1 is a longitudinal sectional elevation; Fig. 2, transverse sectional elevation.

This invention relates to that class of washing-machines which are operated by a vertically-moving lever, and is a new and improved construction and arrangement of parts, forming a washing-machine of simple design, easy construction, great thoroughness, and rapidity of working, and one which is not liable to get out of order or wear the clothes. It consists of a receptacle for the water, having inside thereof, and resting upon its bottom, a false bottom, upon which are disposed the clothes. Upon the inner sides of the machine are partitions, which, with the sides of the outer casing, form lateral chambers, that open into the main compartment both above and below the clothes, and act as conduits for the water. Fitting in this main compartment, and moving vertically in the same above the clothes, is a large plunger, which, by means of bail-shaped supports, is pivoted to and operated by a vertically-moving lever. In the center of said plunger is a downward-opening valve of large size. Now, as the lever is operated, the water is forced violently through the clothes, down through the false bottom, up the lateral chambers, and falls over the top of said partitions into the main compartment, and through the valve upon the clothes, which action, when repeated, makes a thorough and harmless method of cleaning the same.

In the drawing, A represents the outer case of the washer, which may be constructed of any desirable shape, and adapted to run on wheels, or to rest permanently upon legs, as may be desirable. B is the false bottom, which may be made, as deemed most preferable, either of longitudinal slats, or of a solid piece with perforations *a*, and is made detachable, so that it may be taken out when neces-

sary to repair the same or clean the bottom of the washer. C represents the lateral partitions, with their ends fastened to the ends of the washer-case A. Said partitions do not extend all the way to the bottom of the machine, but have openings *b*, that make a communication between the lateral chambers and the portion of the washer below the false bottom B. E is the vertically-moving plunger, made of any desirable material, and fitting loosely in the main compartment, to prevent gripping when expanded by the action of the water. Said plunger is made of a shape to conform to the shape of the casing, and is operated by supports F, which are pivoted at *c* to a lever, G, said lever being, in turn, pivoted to a standard, H, attached to the casing of the washer. At the edges of the plunger E, upon the under side, are fastened the inclined or beveled strips J, which, by pressing the clothes down near the edges of the washer, prevent the same from being worn out by being caught between the sides of the washer and plunger. I is a large-sized downward-opening valve, fitted in the middle of plunger E, hinged to the same at *d*, and supported, when the plunger is elevated, by the bent stem *e*. The sides of the opening, made to receive the valve I, are beveled or inclined at *f*, to facilitate the passage of the water through the same when the plunger is lifted. K are ledges or strips fastened just above the lateral chambers formed by the partitions, and serve to prevent the water from dashing out when forced up the lateral chamber by the plunger. L is a spigot or stop-cock, through which the dirty water is drawn off when the clothes are to be rinsed.

The operation of this machine is as follows: The washer being charged with a sufficient amount of water and cleansing material, the clothes are disposed upon the false bottom, and the hand-lever operated with a reciprocating vertical movement. When the plunger is forced down the valve is closed, and all the water beneath it forced violently through the clothing and the perforations in the false bottom, up the lateral chambers, and falls over the top of the partitions into the main compartment, where it passes, as soon as the plunger is raised, through the valve to the

clothes, ready for a repetition of the first action.

The effect of the above action is to bring large quantities of water in rapid succession into violent contact with the clothes, thus rapidly dissolving all soluble matters, and also mechanically forcing the particles of dirt from the clothes out into the receptacle below the false bottom.

The advantages of this method are apparent, the clothes being washed rapidly and thoroughly, and without any contact or abrasion with solid matters, by means of which is avoided nearly all of the wear and tear which is so objectionable in the machines operating with rubbers.

We know that washing-machines have been constructed heretofore with vertically-moving plungers and downwardly-opening valves, but of a different construction, and operating upon an entirely different principle from ours. We

disclaim, therefore, the broad principle of a plunger and valve, and confine ourselves to a plunger and valve constructed and operated as shown.

Having thus described our invention, what we claim as new is—

1. The combination of the vertically-moving plunger E, the downward-opening valve I, the false bottom B, and side partitions C, substantially as and for the purpose specified.

2. The combination of the inclined pieces J with the edges of the plunger E, as described, for the purpose of tucking the clothes down and preventing the wear of the same between the edges of the plunger and sides of casings, substantially as specified.

THOMAS ADDISON.

JAMES THOMPSON YATES.

Witnesses:

GEORGE R. REESE,
R. D. WALLACE.