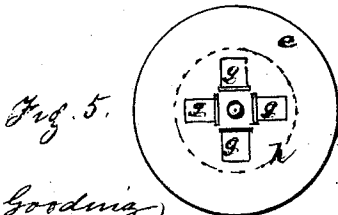
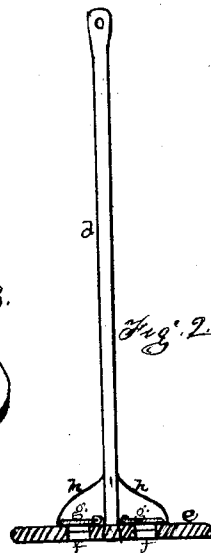
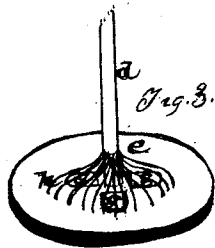
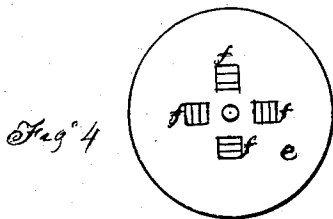
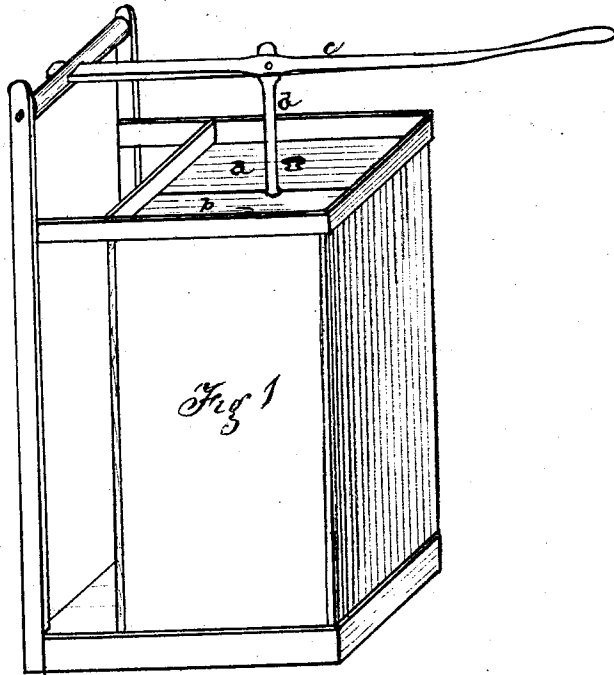


C. Williams,

Washing Mach.

No. 101,335.

Patented Mar. 29, 1870.



Wm M Gooding }
Edward Collier } atty.

Caleb Williams

United States Patent Office.

CALEB WILLIAMS, OF NEWARK, NEW JERSEY.

Letters Patent No. 101,335, dated March 29, 1870.

IMPROVED WASHING-MACHINE.

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

I, CALEB WILLIAMS, of the city of Newark, and State of New Jersey, have invented certain Improvements in Washing-Machines, of which the following is a specification.

The nature and objects of the invention relate to a dasher or plunger constructed with valves to lift the clothes by suction, and, in plunging, force the clothes through the suds and allow the water to pass with slight resistance through the plunger, over the clothes.

In the drawings—

Figure 1 is the machine in perspective.

Figure 2 is the stem of the plunger, showing a cross-section across the middle of the plunger, the ports and the valves, and one of the guard-wires on each side of the stem.

Figure 3 is a view of the upper side of the plunger with its valves and guards.

Figure 4 is a flat view of the ports with the cross-wires in the ports in the plunger; and

Figure 5 is the plunger with the valves over the ports.

The box, in fig. 1, for common size is about two feet deep and twelve or fourteen inches square; the lid is put in a little down from the upper edge of the box, and is in two parts, *a* and *b*.

The lever *c*, with its fulcrum supported by suitable mechanical device, is attached to the top of the stem *d* of the plunger *e* in any way that allows of free movement at the joining.

The plunger *e* is of octagonal or circular form, leav-

ing a space between the edge of the plunger and the sides of the box of an inch, more or less, as may be preferred.

In the plunger are four port holes *f* that are covered on the upper side by the valves *g*, the ports have wires across them to keep the clothes from being drawn into them, and wires (*h*, fig. 3,) pass from the stem *d* over the ports to allow free motion to the valves, keeping the clothes from obstructing them.

I do not confine myself either to size or number of ports in the dasher or plunger.

The plunger is released from the lever *c* by disconnection of the stem *d* and removed from the box; the clothes and hot suds are then put in the box and the plunger set upon them, connecting the stem with the lever; a slight vibration of the lever up and down, increased as the clothes encircle the plunger, the suction upon lifting and the sudden forcing downward change the position of the clothes continually, and the motion in the water removes the dirt with great ease to the operator.

What I claim as my improvement is—

The combination of the box, (fig. 1,) lever, *c*, plunger-rod *d*, plunger *e*, wire guards *h*, ports *f*, and valves *g*, all constructed, combined, and arranged in the manner described for the purpose specified.

CALEB WILLIAMS.

Witnesses:

W. M. GOODING,
EDWARD COLLVER.