

WILLIAM ARNOLD.

Improvement in Washing Machines.

No. 120,809.

Patented Nov. 14, 1871.

Fig. 1.

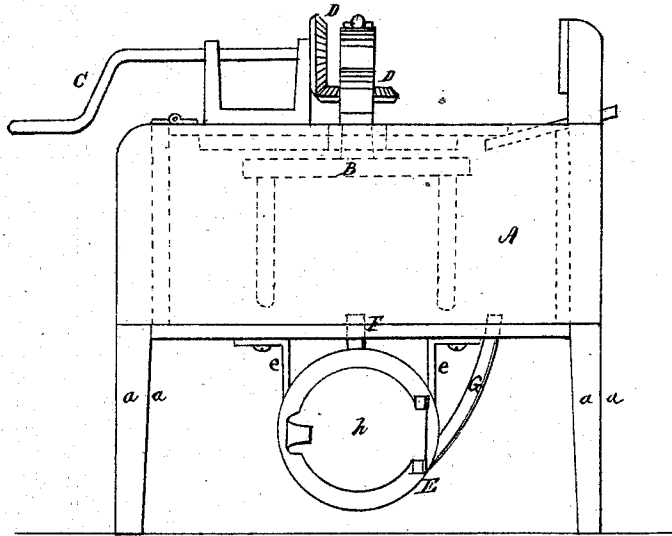


Fig. 2.

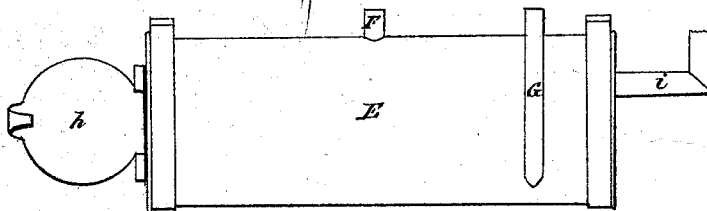
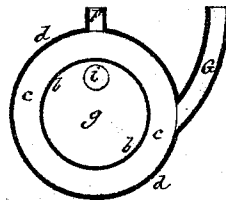


Fig. 3.



Witnesses,

S. Scholfield
A. R. Abbott.

William Arnold

UNITED STATES PATENT OFFICE.

WILLIAM ARNOLD, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. 120,809, dated November 14, 1871.

To all whom it may concern:

Be it known that I, WILLIAM ARNOLD, of Pawtucket, in the county of Providence and State of Rhode Island, have invented an Improvement in Washing-Machines, of which the following is a specification:

The nature of my invention consists in the arrangement of a water-boiling or heating apparatus below the level of the surface of the water in a washing-machine, and connected to the machine by pipes with orifices placed at unequal depths, so that the heated water may flow uninterruptedly from the boiler to the machine while the cooler water from the machine is flowing into the boiler. This circulation, in combination with mechanical agitation, operates to clean the clothes effectually.

Figure 1 represents a view of the washing-machine and heater. Fig. 2 represents a side view of the heater. Fig. 3 represents a transverse sectional view of the heater.

A is the square box of an ordinary washing-machine, resting upon the legs *a a a a*. B is a dasher, which is rotated by means of the crank C and bevel-gears D D, or by other suitable means. E is a cylindrical boiler or heater attached to the bottom of the box A by the straps *e e*. The boiler E has an outer cylindrical shell, *d d*, and an inner shell, *b b*, forming between them the annular water-space *c*. The water-space *c* is connected to the box A by the pipes or passages F and G. The pipe G is connected to the boiler at a

lower point than the pipe F in order that the cooler water of the machine may flow down into the heater, the heated water and steam at the same time passing into the machine through the short pipe F. If the pipe G should be made to extend into the boiler it would be sufficient that its orifice be made lower than that of the pipe F. The cylindrical space *g* within the boiler is the fire-chamber. *h* is the door to the same, and *i* is the smoke-pipe.

The operation of the machine is as follows: Water should be poured into the box A sufficient to fill the boiler E and to cover the bottom of the box. A fire may then be built within the chamber *g*. When the water commences to boil it will rise through the pipe F into the machine, and the cooler water will pass down the pipe G to take its place. While the hot water is thus circulating through the clothes in the machine they are also acted upon by the mechanical devices described, which operate to clean the clothes very expeditiously.

What I claim as my improvement in washing-machines is—

The connection of the boiler E by the pipes G and F, in combination with the machine A, all arranged as shown and described, for the purpose set forth.

WILLIAM ARNOLD.

Witnesses:

S. SCHOLFIELD,
A. R. ABBOTT.

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