(No Model.)

J. WILLIAMS.

BOILER WASHING MACHINE.

No. 247,525. Patented Sept. 27, 1881.

Fig. 1.

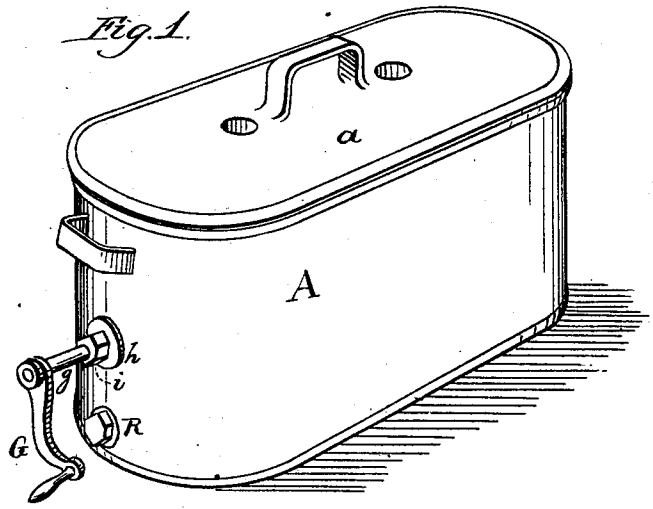


Fig. 2.

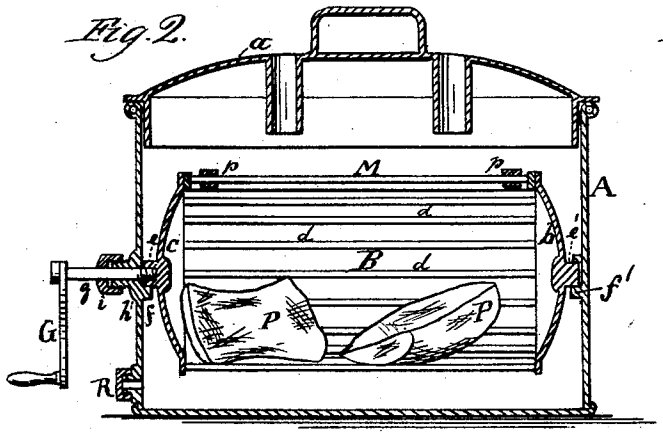


Fig. 3.

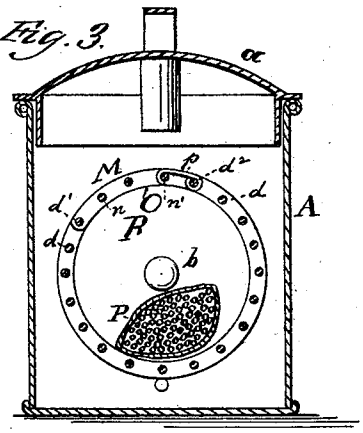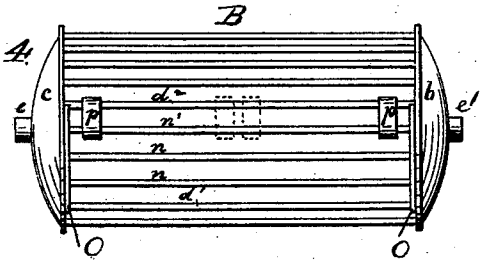


Fig. 4.



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JOHN WILLIAMS, OF CHICAGO, ILLINOIS.

BOILER WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 247,525, dated September 27, 1881.

Application filed June 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILLIAMS, of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Boiler Washing-Machines, of which the following is a specification.

My invention relates to appliances to boiler washing-machines for rubbing, beating, pressing, and pounding the clothes during the process of boiling them; and it is the object of my invention to produce a machine in which the above manipulations can be performed by the simple turning of a crank, and without danger of the operator being scalded by the steam or the splashing of the boiling water, or of the clothes being burned.

My invention consists in a boiler containing a cylinder that has its sides formed of metal rods or bars, and that is arranged to be rotated by a crank outside of the boiler. This cylinder is provided with a door, through which it is filled with clothes, and into said cylinder are placed bags filled with shot or pebbles, that, with the rotation of the cylinder, will tumble upon the clothes and will continually pound and squeeze the same, and will thereby assist in dissolving and removing the dirt therefrom.

In the accompanying drawings, forming a part hereof, Figure 1 represents a perspective exterior view of the wash-boiler. Fig. 2 represents a longitudinal vertical section through the center of the same; Fig. 3, a vertical cross-section, and Fig. 4 a plan of the cylinder.

Like letters denote corresponding parts in all the figures.

A denotes the wash-boiler, preferably made with oval ends, and *a* a suitable cover for the same. B is the drum, composed of two spherical disks, *b c*, which are connected on their periphery by a series of metal rods, *d*, at equal distances apart and parallel with each other.

The disk *b* has a short trunnion, *e*, which rests in a circular socket, *f*, and the disk *c* has a similar trunnion, *e'*, also resting in a bearing, *f'*, and forming the hub or boss for the crank-shaft *g*, that is secured therein by a screw-thread, or otherwise. This crank-shaft *g* is projected through the end wall of the boiler and is passed through a stuffing-box, *h*, which is soldered against the boiler end, and is provided with a packing-nut, *i*, to prevent the leakage of water. G is a hand-crank that is secured upon the end of the shaft *g*.

The cylinder B has on one side a door, M, formed by a series of metal rods, *n*, that are secured between two curved bars, O. These bars at one end are pivotally connected to the rod *d'*.

Upon the rod d^2 are sleeved two clamp-hooks, *p*, that will slide longitudinally upon said rod. These hooks can be turned over the adjacent rod *n'*, when in the position shown by dotted lines in Fig. 4, by pressing the two rods *n'* and d^2 toward each other, and then, for securely locking the door, the said hooks *p* are shifted toward the ends of these rods.

Two or more canvas bags, P P, filled with pebbles or shot, and which I prefer to make of an oval shape, are placed inside the drum. These bags, being heavy and pliable, will accommodate themselves to the varying thicknesses and folds of the clothes, and will equally distribute a pressure over their whole surface, so as not to damage the clothes.

When the cylinder is rotated a tumbling motion is imparted to the bags P, which motion will cause such bags to alternately rub and squeeze the clothes, and thereby remove therefrom the dirt and grease therein.

R is a screw-plug for emptying the boiler.

The clothes to be washed are placed into the drum B through door *m*, with a little powdered soap placed between the several pieces. After the door *m* has been closed, and the boiler has been filled with soap and water in proper proportions, the cover *a* is put on. Now the operator will turn the crank while the water is boiling, whereby the clothes will be constantly stirred and will be rubbed and squeezed by the weighted bags and will be cleaned in a very short time, and without much exertion on the part of the operator. By the revolutions of the cylinder the water in the boiler is also constantly circulated, and is not so apt to boil over.

The end walls of the boiler may be re-enforced by extra metal plates, or by an extra thickness of sheet metal, for better sustaining the weight of the cylinder.

The cylinder may be made an octagon or polygon in shape, so as to make the motions

of the weighted bags more abrupt, and thereby increasing their effect upon the clothes.

What I claim as my invention is—

The combination, in a boiler washing-machine, of the boiler A, having at either end on the interior bearings *f f'*, and at one end a stuffing-box, *h i*, the slatted cylinder B, having at one end disk *b* and trunnion *e'*, and at the other end disk *c* and hollow screw-threaded trunnion *e*, to receive a crank-shaft, and the canvas bags filled with shot or pebbles, substantially as set forth.

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Witnesses:
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