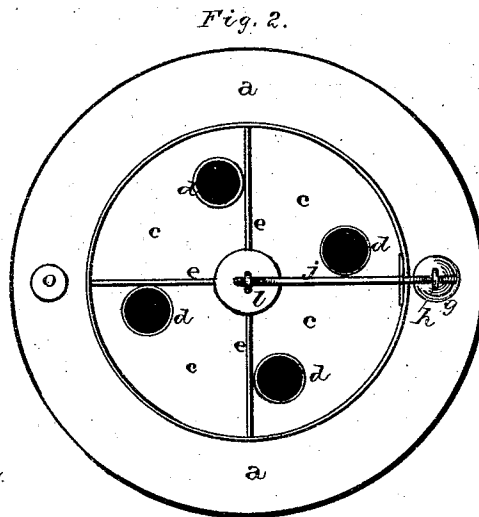
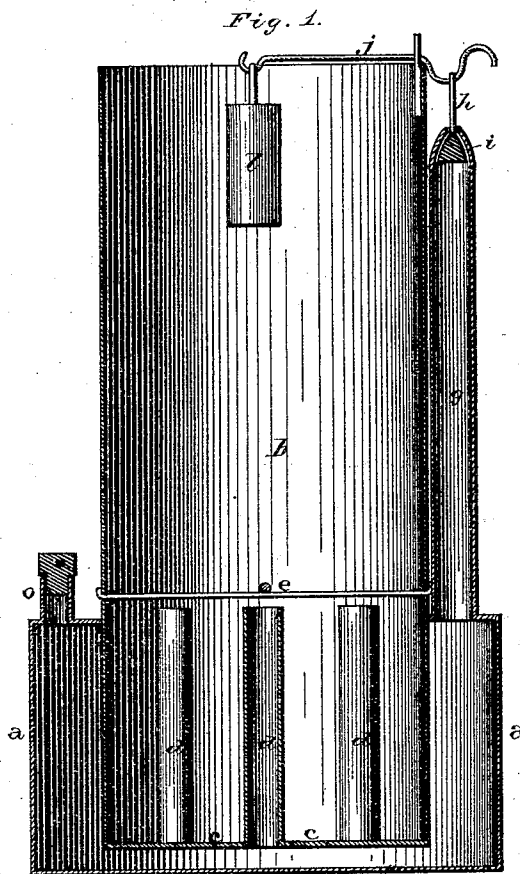


E. A. OSBORNE.
Wash-Boilers.

No. 153,495.

Patented July 28, 1874.



WITNESSES.
W. W. J. Murphy.
Edw. S. Kaiser.

INVENTOR.
Edwin A. Osborne
per
F. A. Lehmann, Atty.

UNITED STATES PATENT OFFICE.

EDWIN A. OSBORNE, OF CHARLOTTE, NORTH CAROLINA.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **153,495**, dated July 28, 1874; application filed April 29, 1874.

To all whom it may concern:

Be it known that I, EDWIN A. OSBORNE, of Charlotte, in the county of Mecklenburg and State of North Carolina, have invented certain new and useful Improvements in Wash-Boilers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in wash-boilers; and it consists in the arrangement and combination of parts, which will be more fully described hereafter, whereby the clothes are cleansed by the combined action of the steam and water, and the action of the steam is controlled by means of a valve which is operated by the combined action of the clothes and a weight.

The accompanying drawing represents my invention.

a represents an ordinary boiler, of any desired shape or size, which is closed at its top. Inserted into the boiler, so as to extend down near its bottom, and some distance above its top, is the vessel *b*, which corresponds in shape to the boiler, and in which the clothes are placed to be cleansed. In order to firmly brace this vessel in its position its lower end is fastened to the bottom of the boiler by means of straps or braces of any suitable kind. In the lower end of the vessel is placed a bottom, *c*, from which there extends up one or any greater number of tubes, *d*, through which the water is forced by the steam from the boiling water in the boiler, and through which, also, the steam is forced, as the water is displaced, and both water and steam are forced up through the clothes, which are placed on the grating or bars *e* just above the tubes. Extending upward from the top of the boiler *a*, nearly to

the top of the vessel *b*, is a steam-tube, *g*, in the upper end of which is placed a valve, *i*, which is connected by the rod *h* to the short end of the lever *j*, and which is held pressed upward against its seat by the weight *l* and the pressure of the steam from below. The boiler *a* is supplied with water through the opening *o*, or any other suitable source, and the clothes are then placed in the vessel *b*, upon the rack or bars *e*, under the weight *l*. The pipes *d* extend up to or above the top of the boiler.

The hot water and steam, passing up through the clothes, expands and partially dissolves and loosens the dirt or any foreign substance in them, and the cooling effect of the air, when the water is forced back again, has a tendency to contract the particles, which are again expanded by the heat as the water returns again hot from the boiler, and this process of heating and cooling, together with the great force with which the water is sent up and down, soon effectually cleanses them.

If so preferred, the false bottom *c* and tubes *d* may be entirely dispensed with, and there be simply a grating across the bottom of the vessel for the clothes to rest upon.

Having thus described my invention, I claim—

1. The combination of the boiler *a*, vessel *b*, steam-tube *g*, valve, lever, and weight, substantially as set forth.

2. The combination of the boiler *a*, vessel *b*, steam-tube *g*, valve, lever, weight, and false bottom *c*, and tubes *d*, the parts being arranged for operation as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of April, 1874.

EDWIN A. OSBORNE.

Witnesses:

JULIUS W. MOORE,
F. M. OSBORNE.