S. S. Miles,

Wash Boiler.

No. 111,860. Patented Feb. 14, 1871.

FIG. 1.

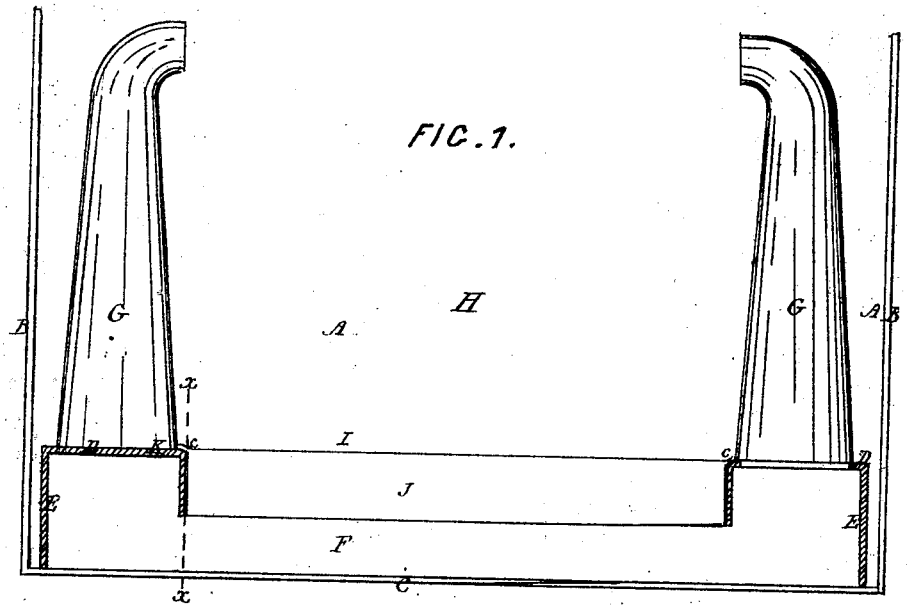


FIG. 2.

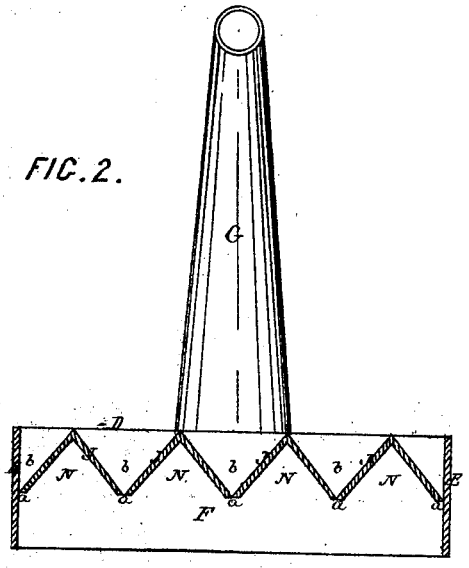


FIG. 3.

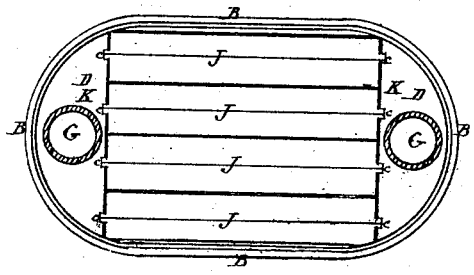
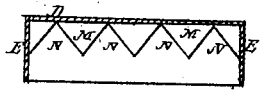


FIG. 4.



WITNESSES.

Fannie M. Brown

W. S. McGowan.

INVENTOR.

Stephen S. Miles

per Brum Brothers

Attorneys

UNITED STATES PATENT OFFICE.

STEPHEN S. MILES, OF DELTA, NEW YORK.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **111,860**, dated February 14, 1871.

To all persons to whom these presents shall come:

Be it known that I, STEPHEN S. MILES, of Delta, in the county of Oneida and State of New York, have invented Improvements in Wash-Boilers; and that the following is a full and complete description of the same, reference being had to the accompanying drawing.

The present invention relates to that class of wash-boilers constructed with a false bottom, so as to secure a circulation of the water from beneath the false bottom thereof through an upwardly-extending tube or tubes communicating with the chamber of the boiler in which the clothes are placed.

Heretofore the false bottom of these boilers has been provided with a series of perforations, to allow the water to pass back into the chamber between the two bottoms of the boiler, for being again carried up through the tubes communicating therewith; but in the practical operation of such boilers it has been found that there was, to a greater or lesser extent, a back action or resistance through the perforations to the free passage of the water, detracting more or less from the force of action through the said tubes.

To entirely prevent this "back action" is the object of the present invention; and the invention consists of the said false bottom, constructed to allow of the passage of the water in only one and the proper direction by forming openings within the same that are arranged to open to the downward passage of the water by the pressure thereof, while to the passage of the water in an upward direction they will be closed.

In the accompanying drawing my improvements in wash-boilers are illustrated, Figure 1 being a central longitudinal section of the same; Fig. 2, a central transverse section; Fig. 3, a plan view, but on a reduced scale; and Fig. 4, a transverse section in plane of line *x x*, Fig. 1.

A in the drawing represents the body of an ordinary wash-boiler; B, the side and C the bottom plate. Within the boiler A is placed a false-bottom plate, D, provided with a flange, E, around it, to secure a chamber, F, between the true bottom C and false-bottom plate D. G, upwardly-extending tubes, one at each end of false-bottom plate D, communicating with the chamber F at their lower ends, and with the clothes-chamber H of the boiler at their upper ends.

The false-bottom plate D, at I, between the two tubes or spouts G, is left open, and within the openings is arranged a series of angular-shaped plates or partitions, J, extending from end to end of the opening I, parallel with each other and at equal and regular distances apart, the edges *a* of the several partitions meeting and producing channels *b* in the upper face of the false bottom D. These partition-plates J, in the line of their apex and at their ends *c*, are fastened to the portions K of the false-bottom plate D, extending by the sides *d* below the plane of the plate D, meeting at their edges *a*, as before stated, between which edges *a* and the said point of fastening, *c*, the sides of the several partitions are free and not confined.

The channels *b*, formed by the several partitions I, are closed at their ends by means of plates M, fastened to the under side of portions K of bottom D, across the width of the same, said plates M being cut out so as to leave the channels made by the under side of the angular partitions J clear at their ends for the free passage of the water from one end to the other of the false bottom.

As the partition-plates J are left free at their edges *a* by the pressure of the water above, as well as the suction of the water through the bottom D, produced by the continual and strong flow of the water through the tubes G, they are sprung or forced open, allowing the water to flow from the clothes-chamber H of the boiler to the chamber between the true and false bottom plates; whereas to the upward flow of the water in the chamber, by the action of the water itself, they are closed, they only allowing, as is thus obvious, the passage of the water in only one and that the proper direction.

The partition-plates J may be more or less in number, and they may be made, in each instance, of a single piece of metal bent into the proper shape, or of two pieces of metal joined together along the apex-line *c*; and, furthermore, the two sides of each angular partition may be separate from each other and hinged

together along the apex-line *c*, and a spring or springs provided and arranged in a suitable manner to secure substantially the same operation of the partitions—that is, their opening and closing, as hereinbefore specified.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The false-bottom plate D, constructed of one or more angular partition-plates, J, arranged to open and close along their edges *a*, substantially as described, for the purpose specified.

The above specification of my improvements in wash-boilers signed by me this 28th day of October, A. D. 1870.

S. S. MILES.

Witnesses:

ALBERT W. BROWN,

FANNIE M. BROWN.