

W. D. Hillis.

Wash Boiler.

No. 86,013.

Patented Jan. 19, 1869.

Fig. 1.

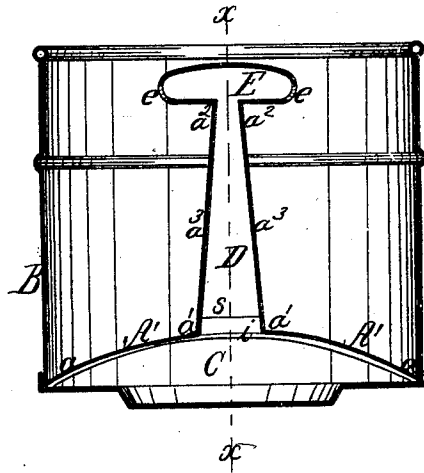
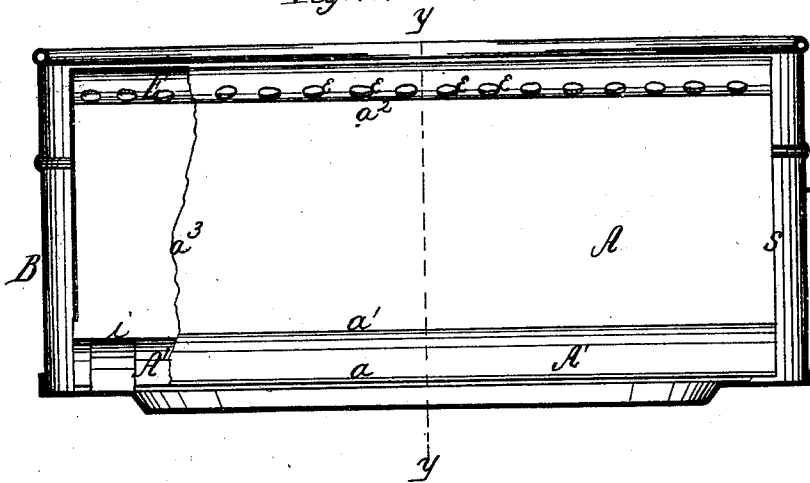


Fig. 2.



Witnesses;
C. A. Pettit
J. C. Kernon.

Inventor;
W. D. Hillis
By Munroe
Attorneys.



WILLIAM D. HILLIS, OF ELGIN, ILLINOIS.

Letters Patent No. 86,013, dated January 19, 1869.

IMPROVEMENT IN WASH-BOILERS.

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

To all whom it may concern:

Be it known that I, WILLIAM D. HILLIS, of Elgin, in the county of Kane, and State of Illinois, have invented a new and improved Wash-Boiler; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a section through line *yy* of fig. 2.

Figure 2 is a section through line *xx* of fig. 1.

This invention relates to that class of wash-boilers in which the steam generated in the lower parts of the vessel is made to force a column of hot water up and discharge it upon the clothes; and

The present improvement consists in a new form of the piece which is placed in the boiler to confine the steam, and direct the upward current of water.

In the drawings—

B represents the boiler, and A, a single elongated piece of sheet-metal, nearly doubled along its centre, which is placed therein for the purposes above described.

The invention consists entirely in the peculiar form of this piece A, which is so bent that it rests upon its edges *a a*, on each side; thence inclines inward and slightly upward to the point *a'*; thence upward and slightly inward to the point *a''*; and thence each side extends outward, upward, and over, to meet the opposite side, which is symmetrical with it.

A broad and somewhat flat space, C, is thus left between the plate A and the bottom of the boiler, and a long, narrow, upward-tapering space, D, is left between the nearly upright walls of the plate, at *a''*, the upper edge of such space expanding into a kind of chamber, E, the cross-section of the plate, as seen in fig. 1, being somewhat similar in appearance to the cross-section of a common T-rail for railroads, except that it is not solid, and the expanded part E is not proportionately so wide as in the rail.

The ends of the space D are closed up by a piece of sheet-metal, *s*, soldered to the piece A.

Braces, *i*, beneath the flanges A' A', and extending from one to the other, across the space D, may be employed to strengthen the plate, and prevent it from being crushed down by the weight upon it.

The plate A, thus formed, is set into the boiler, as seen in the drawings, and a suitable quantity of water and soap is also placed therein. The clothes are then packed on each side of the upright part *a''* of the plate, resting upon the inclined part A' at the bottom, which is covered with water. The boiler being then heated, the steam generated in space C, forces the hot water up through space D into chamber E, and thence through a series of holes, *e e e*, out of the chamber upon the clothes. After filtering through them, it returns to space C, through apertures in the plate at A', or by means of corrugations provided along the edges *a a*. A constant and rapid circulation is thus maintained.

When the plate A is not needed, it can be taken out, and the boiler used without it, the latter being simply a common clothes-boiler.

The advantages of this device are, that it can be made more easily and at less expense than any other, being simply a bent piece of sheet-metal, perforated at *e e e*, and closed at its ends. At the same time that it is so easily constructed, it is efficient to the highest degree, carrying up a large volume of water, and throwing it upon the clothes in every part of the boiler.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

The plate A, when constructed in the form above described, that is to say, having the flanges A' A', the angles *a' a'*, the nearly upright walls *a'' a''*, the openings *e e*, and the end walls *s s*, open at the ends, the whole enclosing the space B and the chamber E, and resting over the space C, substantially as described, and for the purposes specified.

WILLIAM D. HILLIS.

Witnesses:

E. W. VINING,
R. W. PADEFORD.