2 Sheets—Sheet 1.

J. O. BENTLEY.

WASH-BOARD.

No. 182,546. Patented Sept. 26, 1876.

FIG. 2

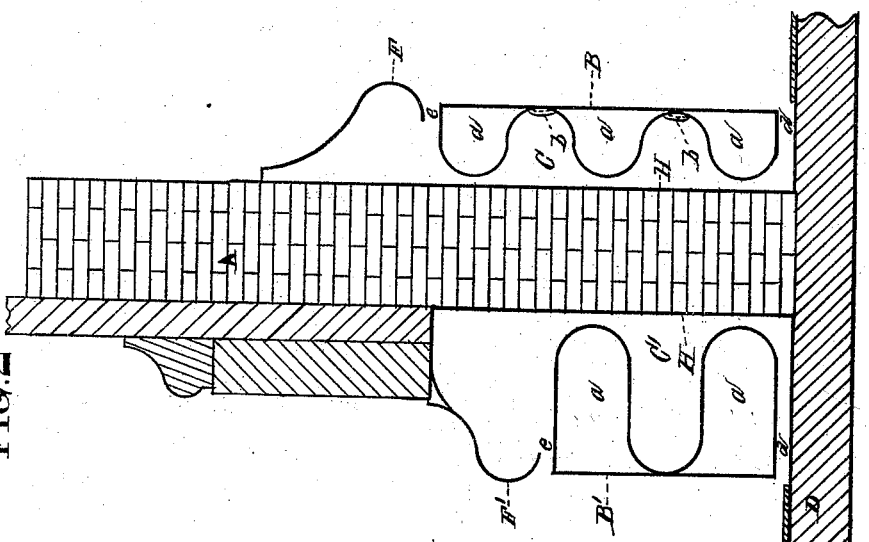
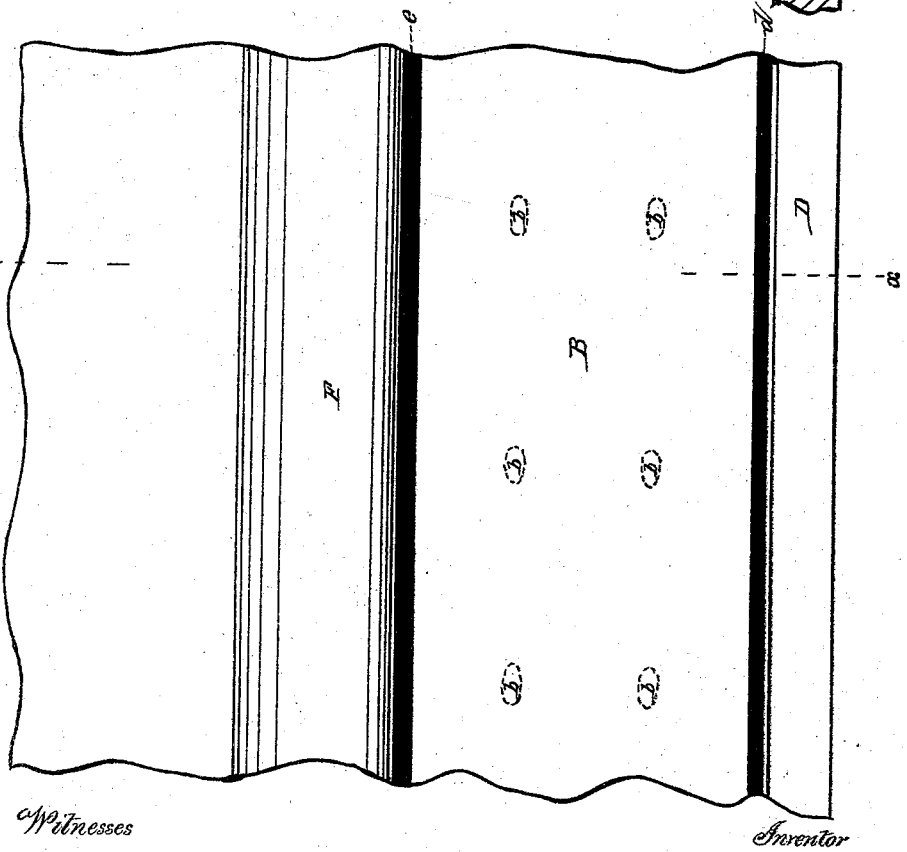


FIG. 1



Witnesses

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Jeffrey O. Bentley

Stephen Ustick Attorney

2 Sheets—Sheet 2.

J. O. BENTLEY.

WASH-BOARD.

No. 182,546. Patented Sept. 26, 1876.

FIG. 4

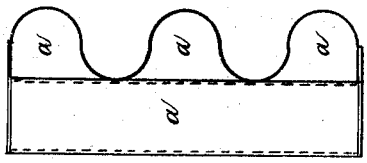
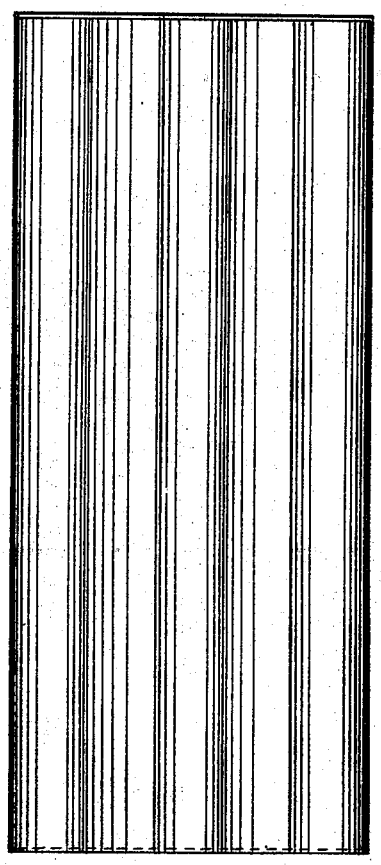


FIG. 3



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UNITED STATES PATENT OFFICE.

JEFFREY O. BENTLEY, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN WASH-BOARDS.

Specification forming part of Letters Patent No. **182,546**, dated September 26, 1876; application filed February 9, 1876.

To all whom it may concern:

Be it known that I, JEFFREY O. BENTLEY, of the city and county of Philadelphia, in the State of Pennsylvania, have invented a Hollow Radiating Metallic Wash-Board, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention consists of a hollow wash-board, for the circulation of steam. It is formed of sheet or cast metal, having in its rear side a hot-air chamber, into which the air passes at the line of the floor, and from which it passes above the wash-board into the room in its heated state, produced from radiation from the rear side of the wash-board. There is also radiation from the front, which assists in warming the room. I prefer making the rear side of the wash-board corrugated, as giving the maximum amount of heating-surface; but any other irregular form may be used, or the shape may be simply of box-form, if desired.

In the accompanying drawings, Figure 1 is a front view of my improved wash-board. Fig. 2 is a vertical section at the line *x x* of Fig. 1. Figs. 3 and 4 show a modification of the invention.

Like letters of reference in both figures indicate the same parts.

A represents a wall between two rooms. On the side there is a wash-board, B, formed of a sheet of metal, part of which is corrugated, to form steam-spaces *a a a*, and part left plain, to form the front of the board, the edges of the sheet being closed and the joints made steam-tight by soldering or otherwise. The corrugations in front touch the front and flat part of the plate, but need not make a tight joint with the same, as the steam may circulate from one space to another, the object of the corrugations being to obtain as much radiating-surface for the rear of the board as possible, to heat the air in the chamber C.

There are indentations *b* at the line where the front extensions of the corrugations meet the vertical part of the sheet for the downward passage of any water formed by the condensation of the steam. Between the lower edge of the wash-board and the floor D there is an air-passage, *d*, through which cold air passes from the room into the hot-air chamber C.

As the air becomes heated in said chamber and thereby rarefied, and ascends, it passes out of the same through the passage *e*, between the upper edge of the wash-board and the lower edge of the molding F, which is made of sheet metal, to increase the capacity of the hot-air chamber.

On the other side of the wall A there is a sub wash-board, B′, which is constructed on the same plan as the wash-board B, above described, having a molding, F′, above it.

There are reflectors H, which cover the back, lower, and upper sides of the hot-air chambers C and C′, for the purpose of utilizing the heat which is thrown against them from the bottom, rear, and upper sides of the steam-chambers, and also for protecting the wall from heat.

For the purpose of equalizing the circulation of the steam in the steam chambers or channels, I indent the sheet of metal at suitable distances apart, where the corrugations meet the back and flat part of the sheet, as at the points *b*, to allow the free passage of steam, and thus prevent condensation along the lines of contact.

I do not confine myself to forming the rear side of the sheet or sheets forming the wash-board with corrugations, as zigzag or other irregular forms will partially accomplish the end in view of increasing the radiating-surface; nor do I confine myself to making the front side of the board a plain flat surface, as any desirable form may be used.

If desired, a plain box-form may be adopted for the wash-board when made of either sheet or cast metal; or the steam-spaces may be made by combining two sheets of corrugated metal together to form a panel, as in Figs. 3 and 4. The edges may be covered by strips of metal, except enough at one end to form an open communication with the boiler or heater.

My hollow wash-board or panel may be used for the circulation of either steam or hot air.

I claim as my invention—

1. A hollow wash-board formed of sheet or cast metal, for the circulation of steam or hot air, it being constructed and arranged in rela-

tion to the wall to radiate the heat into the room from both its front and rear surfaces, substantially as and for the purpose set forth.

2. The hot-air chamber C, having an inlet-passage, *d*, and an outlet-passage, *e*, in combination with a hollow metallic wash-board, substantially as and for the purpose set forth.

3. A hollow wash-board made of sheet or cast metal, with corrugations at its rear side, substantially as and for the purpose set forth.

4. The reflectors H, in combination with a a hollow metallic wash-board and the hot-air chamber, substantially as and for the purpose set forth.

JEFFREY O. BENTLEY.

Witnesses:
THOMAS J. BEWLEY,
STEPHEN USTICK.