

J. C HALL.
Wash-Boilers.

No. 154,861.

Patented Sept. 8, 1874.

Fig. 1.

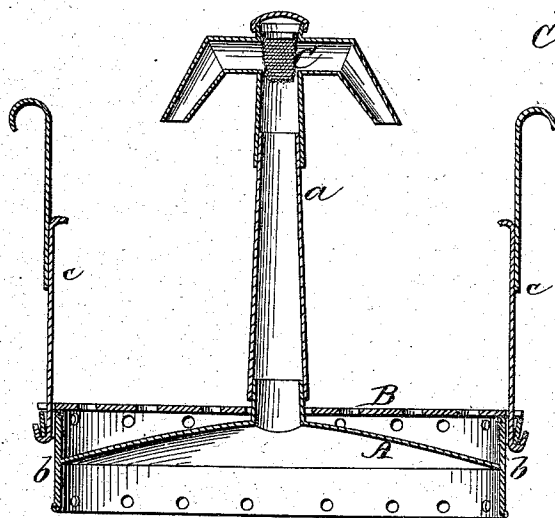


Fig. 2.



WITNESSES

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JAMES C. HALL, OF BATTLE CREEK, MICHIGAN.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **154,861**, dated September 8, 1874; application filed August 8, 1874.

To all whom it may concern:

Be it known that I, JAMES C. HALL, of the city of Battle Creek, in the county of Calhoun and State of Michigan, have invented certain Improvements in Steam Washing Apparatus, of which the following is a description:

My invention relates to that class of washing-machines which work automatically by conducting hot water and steam upward through suitable pipes and letting it fall upon the articles washed in a constant stream.

My improvement consists in providing this apparatus with a suitable receptacle for soap, washing compounds, settling and bleaching chemicals, so constructed and arranged that the chemicals, &c., may be placed in the apparatus, or taken therefrom, either separately or together, while the machine is in operation, and during the progress of the washing.

In order that any one skilled in the art may successfully construct and use my improvement, I will now proceed to describe its manner of construction and operation.

The drawing annexed hereto represents my improved steam washer.

A represents the bottom of a still or "dead" water chamber, which bottom plate also forms the top of the well-known heat and steam confining chamber. This bottom A is placed about midway from top to bottom of an outer rim, *b*, and is provided with an upright pipe, *a*, having its lower end opening upward from the top of the plate A. The rim *b* is perforated at or near its top and bottom in order to permit a free passage of the water, and is made somewhat smaller than the wash-boiler for which it is intended, in order that the water shall have a free passage-way all around it. A perforated plate or cover, B, serves as a support for the articles to be washed, and a top to the upper chamber or dirt-receptacle. This cover is provided with a suitable opening, through which the pipe *a* loosely passes, and should be made to fit the boiler as nearly as may be.

The upright pipe *a* is provided with a chamber at its top for the reception of a basket, C, of gauze, or perforated sheet metal, di-

vided into four or more compartments for receiving cleansing and settling chemicals, soap, &c. This basket is provided with a handle and cover, so that it may be lifted out, and its contents added to, or in any manner changed, at any time during the progress of the washing.

The whole apparatus is suspended, when desired, above the water in the boiler, by means of the straps *c c*, for the purposes of fixing the colors of such goods as otherwise might be likely to fade, and also for the purpose of drainage.

The operation of my improved steam washer is as follows: The water, passing upward, is discharged in the well-known way, passing through the clothes downward and out of the upper chamber through the openings in the top of the rim *b*, then still down, passing rapidly through the lower perforations in the rim *b*, and again upward through the pipe *a*.

In the passage upward through the pipe *a* the water is brought forcibly into contact with the contents of the basket, and, it is obvious, will become thoroughly impregnated therewith, and at every revolution of the same reinvigorated, so as to more effectually cleanse the clothes, and deposit the grosser portions of filth in the dirt-receptacle immediately underneath.

The basket is made movable, in order that its contents may be changed or replenished at any time, for the purpose of insuring thorough work, and the whole apparatus is suspended by the straps *c c* for the purpose of drainage, fixing fast the colors, or lifting out of the boiler, as is desired.

Having thus fully described my invention, and its mode of operation, what I claim, and desire to secure by Letters Patent, is—

The combination, with a washing-boiler provided with upward-extending tube *a*, of the porous basket C, fitted into the opening at the top of the tube, as and for the purposes set forth.

JAMES C. HALL.

Witnesses:

MARTIN METCALF,
FOSTER M. METCALF.