

T. G. HALL.

Improvement in Wash-Boilers.

No. 130,040.

Patented July 30, 1872.

Fig. 1.

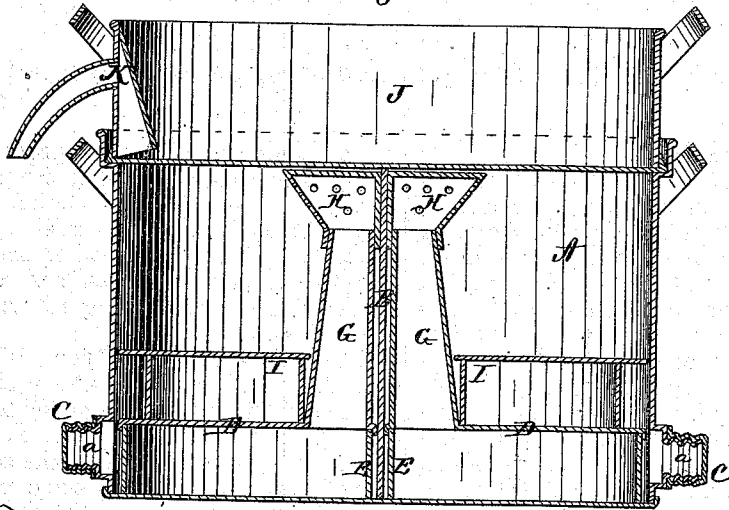


Fig. 2.

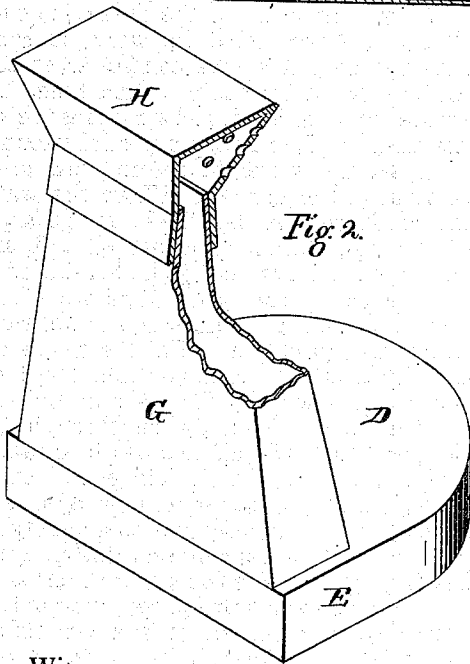
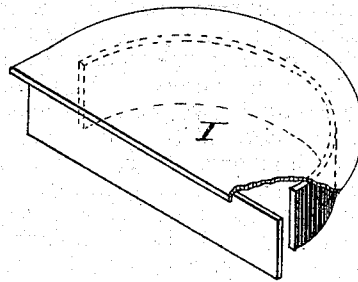


Fig. 3.



Witnesses:

Henry N. Miller  
C. L. Ewert.

Inventor

Thurston G. Hall,  
per Alexander Murray

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# UNITED STATES PATENT OFFICE.

THURSTEN G. HALL, OF WATKINS, NEW YORK, ASSIGNOR OF ONE-HALF OF HIS RIGHT TO C. H. FIRMAN AND H. G. POPE, OF SAME PLACE.

## IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. 130,040, dated July 30, 1872.

*To all whom it may concern:*

Be it known that I, THURSTEN G. HALL, of Watkins, in the county of Schuyler and in the State of New York, have invented certain new and useful Improvements in Wash-Boiler; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a wash-boiler, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a longitudinal vertical section of my wash-boiler, and Figs. 2 and 3 are enlarged detached views of interior parts of my boiler.

A represents a wash-boiler of any suitable shape and dimensions, provided with a central cross-partition, B, dividing the boiler into two compartments, making, as it were, two separate and distinct machines in one, giving an opportunity to wash two kinds of goods at the same time. Each of these compartments is provided with an opening, *a*, at or near the bottom, for the purpose of drawing off the dirty water, said openings being closed by screw-caps C, as shown. Inside of each compartment is placed a false bottom, D, provided with a downward-projecting rim, E, around its edges, which rests upon the bottom of the boiler, forming a water-chamber. From the inner side of this false bottom D—that is, the side which is against the partition B—rises a hollow tapering post, G, extending at the base nearly across the boiler. On top of this post is placed a cap, H, the crown of which is beveled at both ends and front, as shown in Fig. 2, and perforated so that the hot water, steam, and suds which pass up from the water-chamber below through the post and cap may be thrown in a number of streams upon the clothes. Upon the false bottom D is placed what I call a vacuum-chamber, I, constructed, as shown in Fig. 3, of a plate fitting the inside of the boiler, and having a downwardly-projecting rim a suitable distance

from its edges, and the rim provided with an opening on each side. This completes the interior fixtures of my wash-boiler. On the top of the boiler is placed a vessel, J, which is to be filled with cold water when the machine is in operation, its office being to condense the steam, thereby preventing its escape or the water from boiling over.

The operation is as follows: Fill the water-chamber with water and add a small quantity of soap; then pack the goods to be washed on top of the vacuum-chamber. Place the machine on the stove and the condenser on top of the machine, filling the condenser with cold water. As soon as the steam is generated and has performed its work, it rises, strikes the bottom of the condenser, is condensed, and runs back into the machine. At the same time the heat below rarefies the air in the chamber I, creating a partial vacuum, and causes the water to return with great force through the clothes. When the water in the condenser gets hot the openings *a a* at the bottom of the machine are opened, and the dirty water drawn off. The hot water in the condenser is removed by means of the siphon K at one end, and then clean water is added to the clothes. Fill the condenser again with cold water, and continue the operation until the water runs clear at the bottom after having been driven through the clothes, and then the clothes will be clean.

This machine may be used in combination with any ordinary steam-generator by means of a steam-pipe, whereby live steam may be introduced into this machine for the purpose of heating the water in the water-chamber at the bottom. The machine is well adapted to laundries when attached to a steam-boiler. The pipe from the steam-boiler is to be run into the water at the bottom, thereby causing it to boil in a few moments.

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

1. The combination of the false bottom D, with rim E, forming the water-chamber, the hollow tapering post G, and cap H, having its crown beveled and perforated, all substantially as and for the purposes herein set forth.

2. In combination with the fixtures D E G

H, I claim the vacuum-chamber I, placed immediately over the water-chamber, substantially as and for the purposes herein set forth.

3. The combination of the centrally-divided boiler A, interior fixtures D, E, G, H, and I, and condenser J with siphon K, all constructed and arranged substantially as shown and described, and used with or without a

steam-boiler, as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of January, 1872.

Witnesses: THURSTEN G. HALL.

C. L. EVERT,  
W. RICHARDSON.