

M. L. HORTON.

Improvement in Wash-Boilers.

No. 115,320.

Patented May 30, 1871.

Fig. 1.

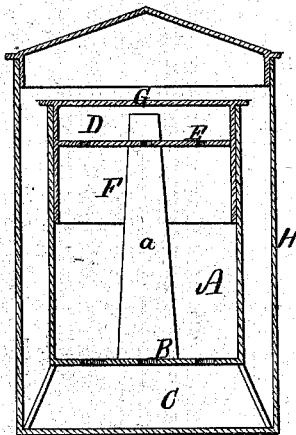


Fig. 2.

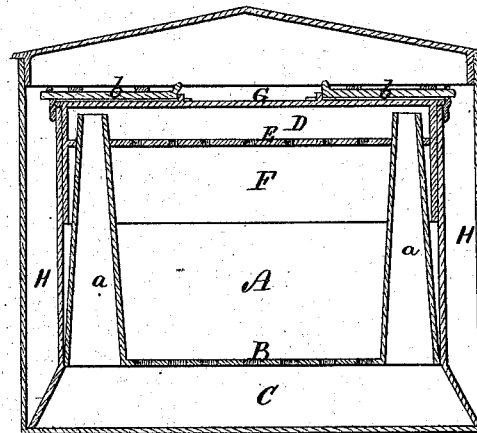
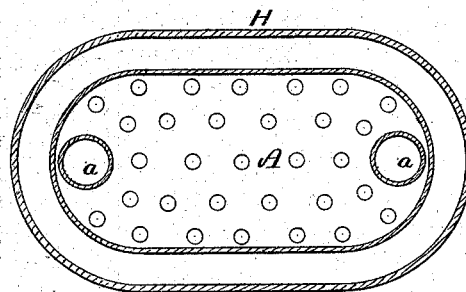


Fig. 3.



Witnesses:

E. T. Eastman
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by his Attorney
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UNITED STATES PATENT OFFICE.

MARCUS L. HORTON, OF WINDSOR, VERMONT.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. 115,320, dated May 30, 1871.

To all to whom these presents shall come:

Be it known that I, MARCUS L. HORTON, of Windsor, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Steam-Boilers, of which the following is a specification:

My invention relates to a wash-boiler having a single interior receptacle for the articles to be cleansed, which receptacle is provided with an elevated pierced bottom for the circulation of water, and one or more steam-pipes leading to a supplementary steam and condensing chamber, having a pierced bottom to secure a perfect circulation of steam and the return of the water of condensation to the receptacle.

In the drawing making part of this specification, Figures 1 and 2 are vertical sections, and Fig. 3 a horizontal section of a steam-boiler embodying my improvements.

A is the clothes-receptacle. B is the elevated perforated bottom thereof. C is the lower chamber. D is the upper or steam chamber. E is the perforated bottom to cover. F is the hoop or flange of cover. G is the top of cover. *a a* are the steam-pipes extending from the bottom B through receptacle A, and opening into upper chamber D. *b b* are bolts holding cover securely in position. H is the outer boiler or jacket.

The interior vessel in all its parts, as well as the outer boiler, may be constructed of tinned iron in the ordinary manner when designed for household use, or may be made of copper or boiler-iron when designed for hotel or laundry use; and the method of operating it is as follows: I first place the soiled or unbleached articles in the receptacle; I then place the cover in its proper position and fasten it securely down by sliding the bolts; I then fill the outer boiler or jacket, which may be of any shape, but which I prefer of the same general form as the receptacle, and not greatly larger, with cold or warm water sufficient to extend to the top cover of the receptacle when the latter is placed therein; I then place the covered receptacle in the boiler and subject the whole to heat by placing it upon a

stove or range. As soon as steam begins to form a current of steam ascends through the tubes into the chamber; a portion of it is here condensed and runs forward into the receptacle, while the uncondensed remainder issues in numerous jets through the perforations in the bottom of cover directly upon the articles to be cleaned or bleached. That portion of the steam generated in the space below the elevated bottom of the receptacle which is not discharged through the pipes into upper chamber rises through the perforations in said elevated bottom and is forced directly through the clothing in the receptacle. The top of the outer boiler or jacket may be covered tightly, but, the exposed surface of the water being slight, no considerable body of steam can escape into the apartment.

By my invention I find that a very high degree of heat can be maintained in the apparatus without danger of explosion and without serious inconvenience or annoyance arising from escaping steam. The whole interior receptacle, with its contents, acts as a safety-valve, permitting a very considerable pressure of steam, and rising to emit steam before a point of danger can be reached, while the agitation of ebullition, added to that exerted by the jets of steam from above and below, speedily dissolves the accumulations in the articles to be cleaned, and is found to act with great rapidity in removing the coloring matter from unbleached goods which it is desirable to whiten.

Claim.

I claim—

The construction and arrangement of the chambers G and D, connected by one or more steam-pipes attached to the perforated bottom B of the receptacle, and passing through the perforated bottom E of cover, the whole arranged substantially as and for the purposes herein specified.

MARCUS L. HORTON.

Witnesses:

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