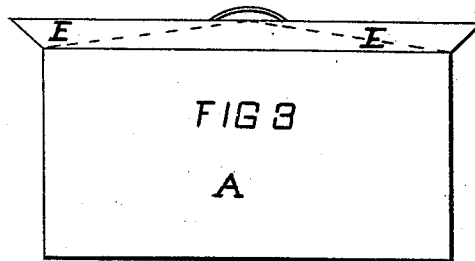
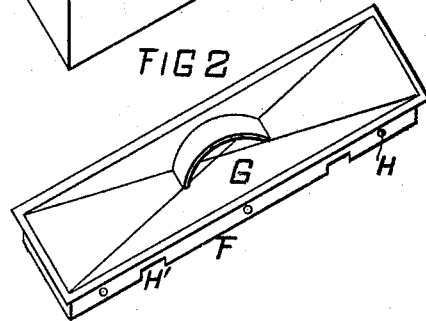
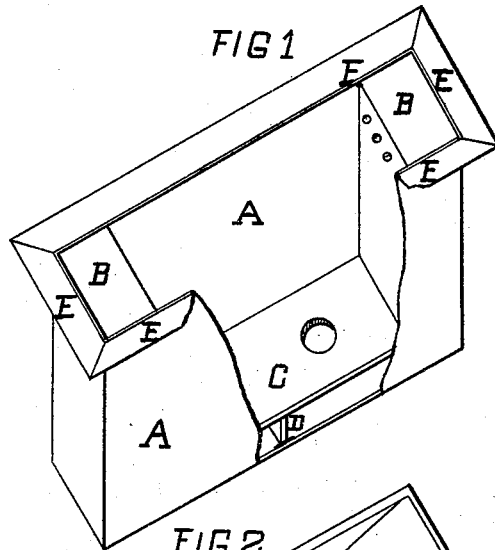


F. J. BOYER.
Wash-Boiler.

No. 212,299.

Patented Feb. 18, 1879.



WITNESSES:

Geo. C. Hutchinson
Robt. Carr

INVENTOR

Franklin J. Boyer
by Francis D. Pastors
ATTORNEY

UNITED STATES PATENT OFFICE.

FRANKLIN J. BOYER, OF SHARON HILL, PENNSYLVANIA.

IMPROVEMENT IN WASH-BOILERS.

Specification forming part of Letters Patent No. **212,299**, dated February 18, 1879; application filed August 2, 1878.

To all whom it may concern:

Be it known that I, FRANKLIN J. BOYER, of Sharon Hill, in the county of Delaware and State of Pennsylvania, have invented certain new and useful Improvements in Wash-Boilers, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

Figure 1 is a perspective view of a wash-boiler, partly in section. Fig. 2 is a perspective view of the lid. Fig. 3 is a side elevation.

The invention is designed to be applied to the improvement in wash-boilers for which Letters Patent of the United States were granted unto Thomas Gunsalus dated June 5, 1877; but it may be applied to all wash-boilers. It is for catching and preventing the escape of the overflow caused by the ebullition of the water in the boiler; and consists of a wash-boiler provided with an upwardly-extending rim or edge and a lid having a perforated depending flange, whereby the steam and water are allowed to escape through the perforations of said flange, the water being returned by means of the rim to the boiler.

I am aware that it is not new to construct a boiler with the upwardly-extending rim herein described, boilers having such rims being known to me, in which, however, while provision is made for the return of the water thrown up by ebullition, no adequate means are provided for the ready escape of the steam and water, which can only escape by the partial unseating of the lid.

I am also aware that vessels have been made with lids having depending perforated flanges, in which, while there are found means whereby the steam and water may escape, provision is wanting for the return of the water to the vessel, the liquid falling upon the stove around the exterior of the vessel.

My invention aims to construct a boiler from which the steam and water may readily escape without the unseating of the lid, and to which the overflow may be returned.

In the accompanying drawings, A is a wash-boiler, B are detachable conduit-pipes, and C a perforated false bottom, supported by a perforated brace, D. E is an upwardly-extending flange of the boiler A, for catching the overflow. The flange F of the lid G is perforated, as shown at H, Fig. 2, or cut out, as at H'. An excess of pressure within the boiler A will raise the lid G and permit an escape or overflow either through the openings H H' or under the flange F, which will be returned through the said openings.

It will be seen that the depending flange need never be lifted above the top edge of the boiler to enable the water to escape and overflow, as this result is effected the moment the perforations in the flange appear above said top edge. The consequence is that a part of the flange is always in position to prevent the detachment of the lid from the boiler, and to serve as a guide to the lid when it is allowed to seat itself again by the removal of the under pressure. I therefore do not claim a lid having a solid depending flange in combination with a boiler provided with an outwardly-flaring upper part. Neither do I claim a lid having a beaded bottom edge in such combination, in which latter construction, there being no guide, the lid when unseated by under pressure assumes a variety of positions; but,

Having described my said improvement, I claim as my invention—

The improved wash-boiler herein described, provided with the upwardly-extending rim or edge E and the lid G, having the perforated depending flange F, whereby the steam and water are allowed to escape through said perforated flange and the water is returned to the boiler by the rim E, as specified.

In testimony whereof I hereunto sign my name in presence of two subscribing witnesses.

FRANKLIN J. BOYER.

Witnesses:

FRANCIS D. PASTORIUS,
GEO. C. SHELMEKDINE.