J. Sheedl.

Wash Boiler.

No. 90,694. Patented Jun. 1, 1869.

Fig. 2.

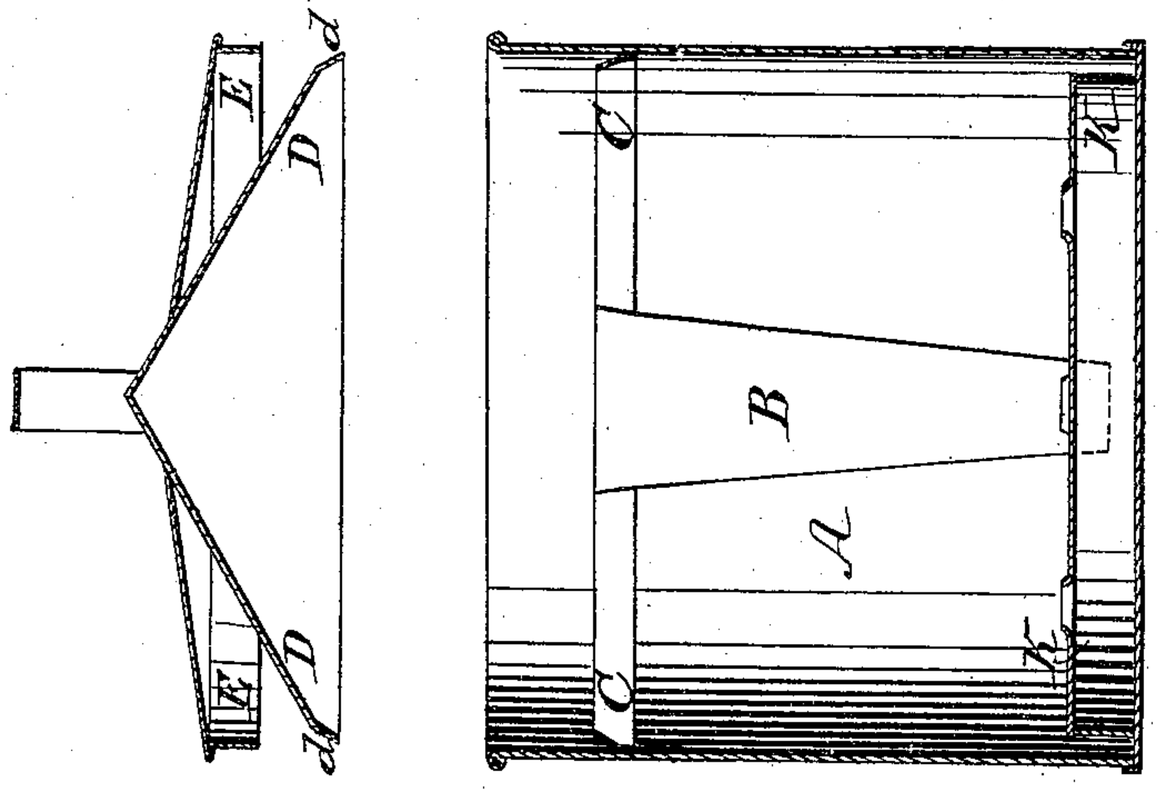
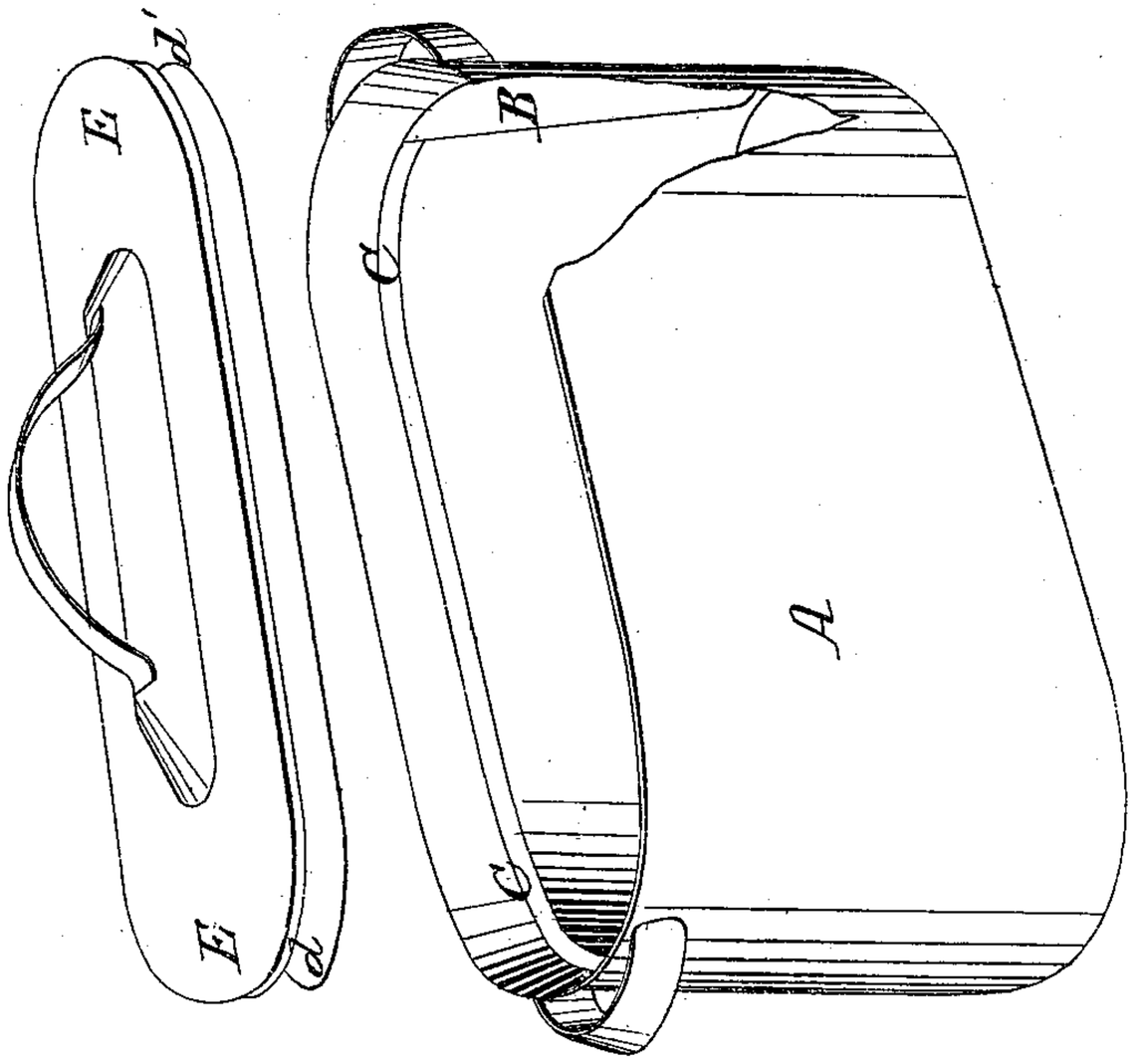


Fig. 1.



Witnesses.

John Bolton.
Frank G Parker.

Inventor.

Joel Sheedl.

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United States Patent Office.

JOEL SHEDD, OF WALTHAM, MASSACHUSETTS.

Letters Patent No. 90,694, *dated June* 1, 1869.

WASH-BOILER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOEL SHEDD, of Waltham, in the county of Middlesex, and State of Massachusetts, have invented certain new and useful Improvements in Wash-Boilers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

To enable others skilled in the art to make and use my invention, I will proceed to describe its nature, construction, and use.

The nature of my invention consists—

First, in combining, with enclosed recesses, which extend from near the bottom of the boiler nearly to the top, a horizontal drip-channel, extending entirely around the inside of the boiler, said drip-channel being so arranged that it collects a large portion of the water of condensation, and conducts it into the enclosed recesses.

Second, in forming a double cover, the lower part of which is considerably "coned," and serves to direct the ascending currents of the boiling water toward the centre, and thus to assist the circulation of boiling water. The upper part of the cover being exposed directly to the outside air, serves to condense any steam that may escape from beneath the lower cover.

Third, combining the lower part of the cover with the drip-channel.

Drawings.

Figure 1 is a perspective view, showing the boiler and cover.

Figure 2 is a cross-vertical section through boiler and cover.

I construct my improved boiler as follows:

A forms the body of the boiler, made in any desirable size and shape.

B, figs. 1 and 2, is an enclosed recess or tube, one of which is at each end of the boiler, extending from near the bottom to the drip-channel.

C C is a small drip-channel extending entirely around the boiler, and so arranged that any water that may collect in it will be carried to the recesses B, and be conducted to the lower part of the boiler.

E E is a cover, constructed in the ordinary manner, excepting that it has attached to it a cone-shaped appendage, D D, fig. 2, which serves as a second or lower cover.

The edges *d d'* of this lower cover fit into the drip-channel C C, so that all the steam that is condensed by the upper cover is carried into the drip-channel C C.

K K is a perforated false bottom, and serves merely to keep the clothes from coming in direct contact with the bottom of the boiler.

The action caused by my arrangement is as follows:

When steam begins to form, it causes a foam, and thus a raising of the water in the boiler. This foaming water coming in contact with the inner cover D, flows upward, above the edge *d d'* of the cover, and toward the centre. As soon as this takes place, some of the water will pass by the edge *d d'* of the lower cover, and into the space between the upper and lower covers. As this water, in its passage around the edge *d d'*, has to pass through a very narrow opening in its passage, the bubbles of which the foam is composed are all broken. In other words, the foaming water is reduced to its normal condition, and is also cooled by the water of condensation, which forms on the outer cover and drops into it. In this state the water is collected by the drip-channel C C, and carried to the recesses B B, and by them, in a comparatively cool state, to the bottom of the boiler.

But very little steam is condensed on the inner surface of the cover D, owing to its high temperature.

The conical form of the inner cover, and the fact that its apex alone is exposed to the cooling effect of the external air, serves to direct the ascending currents toward the centre, where a comparative vacuum is formed.

From this central point the currents descend.

The advantage that I claim is, that the water may be kept in a constant state of ebullition, and at the same time be prevented from boiling over.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination and arrangement of the double cover E E, D D, with the drop-channels C C and the tubes B B, substantially as described and for the purpose set forth.

JOEL SHEDD.

Witnesses:

SETH B. EDSON,

A. HUN BERRY.