C. R. EVERSON.

BOILER-BOTTOM.

No. 189,205. Patented April 3, 1877.

Fig. 1.

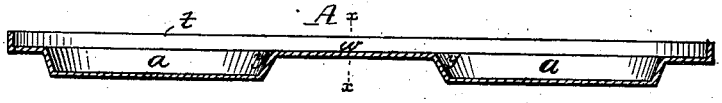


Fig. 2.

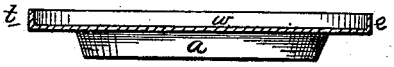
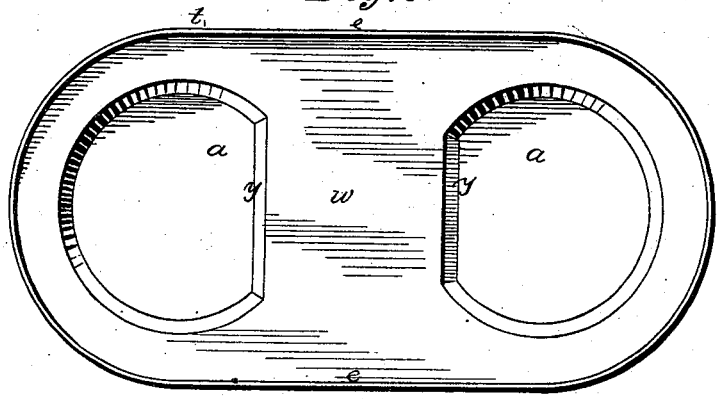


Fig. 3.



Attest;

George Thom.

Fred Benjamin.

C. R. Everson

By his atty.

Charles E. Foster

UNITED STATES PATENT OFFICE.

CHARLES R. EVERSON, OF MACEDON, NEW YORK.

IMPROVEMENT IN BOILER-BOTTOMS.

Specification forming part of Letters Patent No. **189,205**, dated April 3, 1877; application filed October 24, 1876.

To all whom it may concern:

Be it known that I, CHARLES R. EVERSON, of Macedon, Wayne county, New York, have invented Improvements in Bottoms for Boilers, of which the following is a specification:

The object of my invention is a boiler-bottom constructed as fully described hereafter, to insure increased strength and durability, and the ready heating of the contents of the boiler.

In the drawing, Figure 1 is a longitudinal section of my improved boiler-bottom; Fig. 2, a transverse section on the line 1 2, Fig. 1; and Fig. 3, a plan view.

Ordinary flat boiler-bottoms, or those with longitudinal pits, are defective from the want of rigidity in the bottom, which sags under the pressure of the contents, straining the seams and wearing unevenly.

This has been partially remedied by forming the bottoms with two pits; but heretofore, to prevent the straining and puckering of the sheet at the center, caused by sinking two round pits in a single sheet, it has been considered necessary to form each bottom of two plates joined on the line *x x*, Fig. 1. This joint is not only liable to open from the bending of the bottom plates, but forms a rib, which renders it extremely difficult to form water-tight seams at the points *e e*, where the side of the boiler is united to the plate, and prevents a uniform bearing on the cross-piece of the stove.

In order to obviate this difficulty without unduly straining the metal, my improved boiler-bottom is made of one continuous piece of metal, and with two pits, *a a*, rounded except at the adjacent or opposite sides *y y*, which are straight and parallel, forming a continuous flat cross-section, *w*, of equal width, which has a perfectly level bearing upon the cross-piece of the stove, thus preventing the sagging of the bottom under the weight of the contents, while the pits extending into the openings are thoroughly heated by the fire.

Owing to the distance between the straight sides *y* of the pits being uniform, the metal stretches uniformly when subjected to the action of the dies by which it is shaped, and the irregular distention of the metal caused when round pits are formed, puckering it radially at some parts and unduly stretching it at others, is prevented. This insures a degree of durability which could not otherwise be attained, permitting pits of greater depth to be formed, while a continuous uniform flange, *t*, may be made round the edge, uninterrupted by cross-seams, or by the puckered or folded portions formed by previous methods of manufacture, and insuring a uniformly-even, tight, and permanent joint along the entire edge.

I claim—

The wash-boiler bottom consisting of a single sheet with two pits, *a a*, having parallel opposite edges, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES R. EVERSON.

Witnesses:

PETER DOYLE,

HIRAM REEVES.