2 Sheets—Sheet 1.

W. B. ALLEN.

Bottom for Domestic Boilers.

No. 220,266. **Patented Oct. 7, 1879.**

Fig. 1.

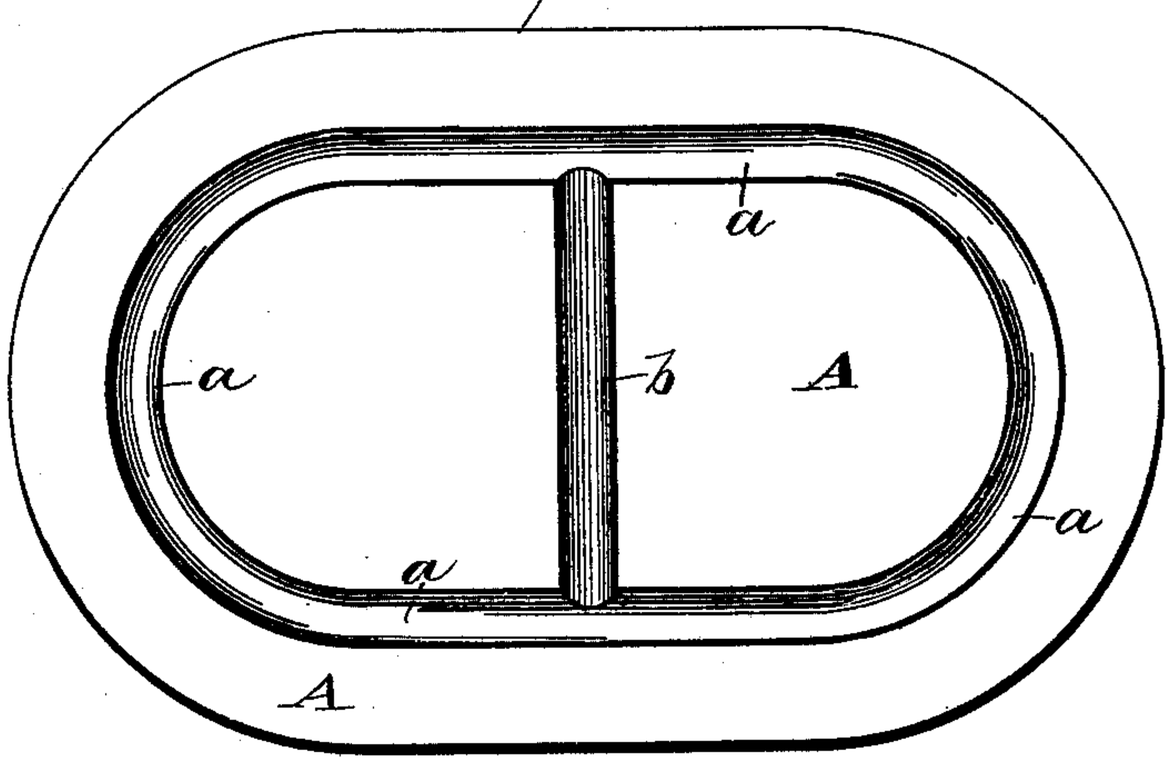


Fig. 2.

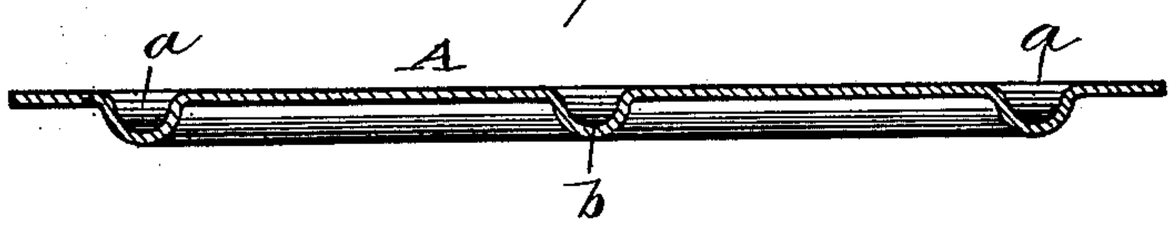
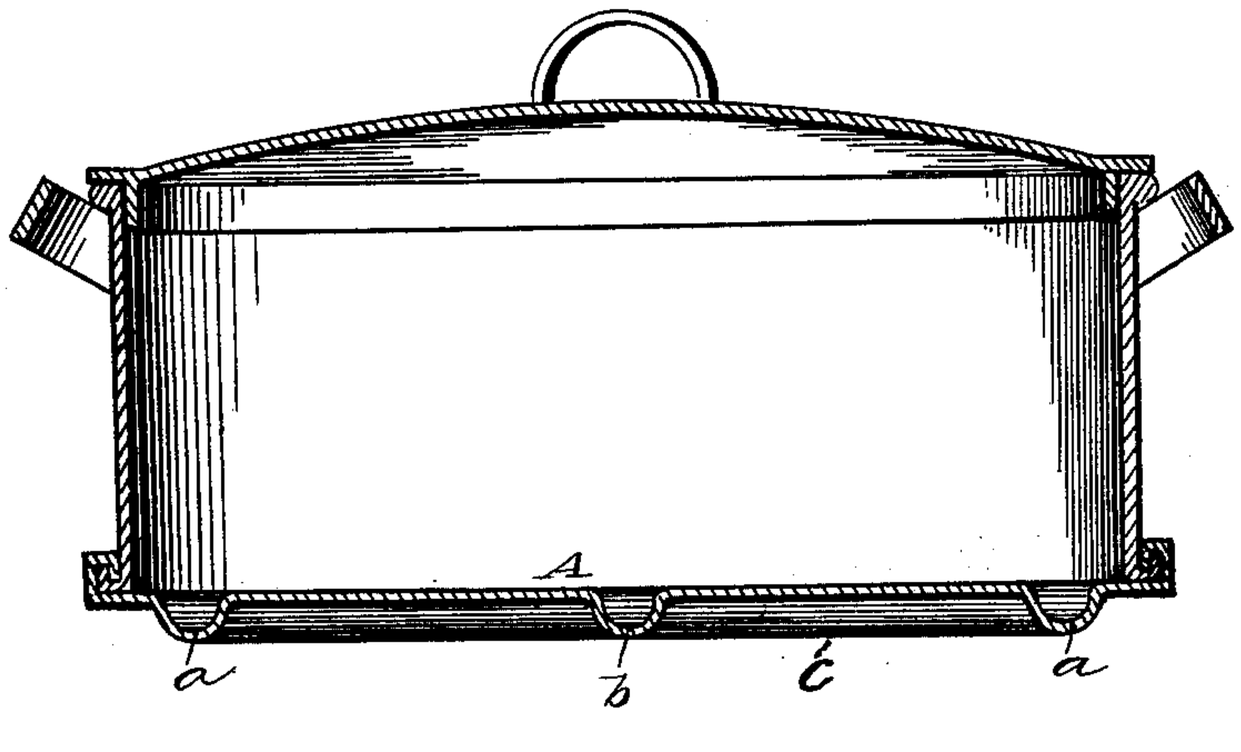


Fig. 3.



WITNESSES

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2 Sheets—Sheet 2.

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Bottom for Domestic Boilers.

No. 220,266. **Patented Oct. 7, 1879.**

Fig. 4.

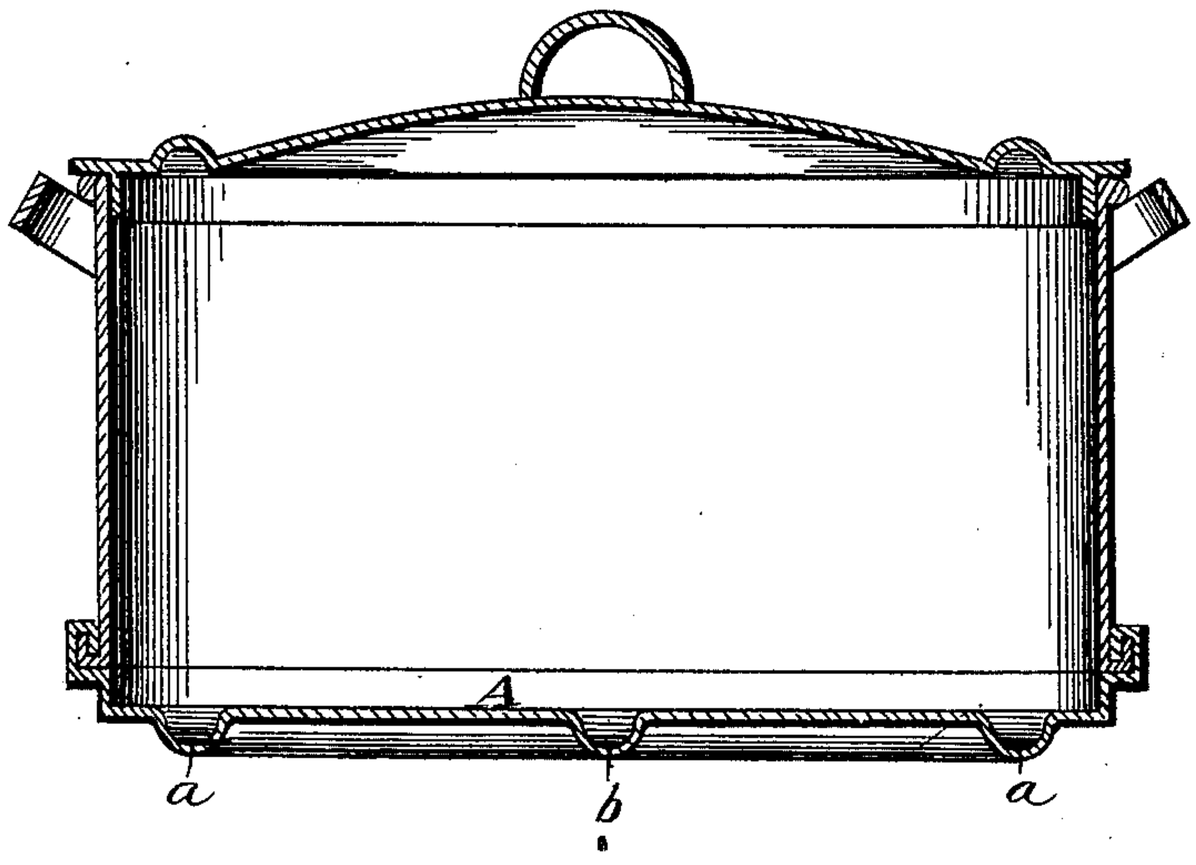


Fig. 5.

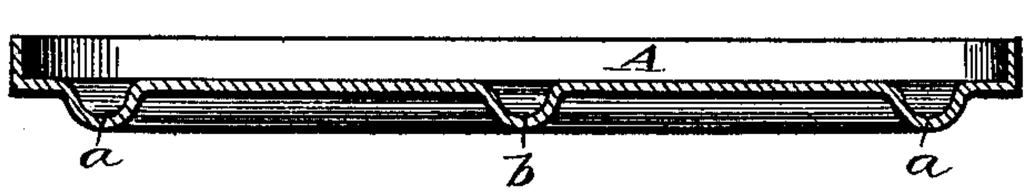
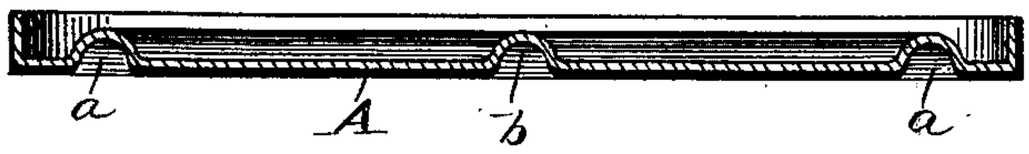


Fig. 6.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM B. ALLEN, OF ORLEANS, NEW YORK.

IMPROVEMENT IN BOTTOMS FOR DOMESTIC BOILERS.

Specification forming part of Letters Patent No. **220,266**, dated October 7, 1879; application filed February 21, 1879.

To all whom it may concern:

Be it known that I, WILLIAM B. ALLEN, of Orleans, in the county of Ontario and State of New York, have invented certain new and useful Improvements in Bottoms for Domestic Boilers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates more especially to bottoms for domestic boilers, and is designed to provide such a form thereof as will be firm and durable, while at the same time it will be adapted to economize fuel in heating boilers, to which it is applied in use.

The object is, by improved means, to prevent the boiler-bottom from springing or yielding when subjected to weight of clothes or water therein; also, to form the flat bottom with recesses or chambers on its under side, which will serve to keep the heat and flame of the fire in constant and close contact with said bottom.

The invention consists of a flat metallic plate made with a groove about its outer portion and a transverse groove in its central portion.

In the drawings, Figure 1 is a plan view of a bottom made according to the invention. Fig. 2 is a vertical longitudinal section of the same, both of the above views representing the form in which the article will be sold to boiler-makers and stove-dealers. Fig. 3 is a longitudinal sectional view of a boiler provided with a bottom made according to my invention, but connected with the boiler-body in the usual manner of double-seaming. Fig. 4 is a similar view of a boiler made according to my invention, and also having the bottom constitute part of the boiler-side, as has heretofore been used, but not as generally as the form shown in the preceding view. Fig. 5 is a longitudinal through-section of a bottom, representing the form in which they will be sold to the trade. Fig. 6 is a similar view, showing a modification.

The bottom A is made of a single piece of copper or other suitable material, and in flat horizontal form. A groove or depression, *a*, whose transverse section is that of a semicircle, is stamped or otherwise pressed out from the upper or under side thereof, and extends continuously about the outer portion of the same. This groove may be of any desired size, but, preferably, I make it about one and one-half inch in depth, and of corresponding width. Its location is such as will cause its outer edge or circumference to just fit within the opening of a stove-top as the boiler is in use. A transverse groove, *b*, is formed in the longitudinal central portion of the bottom, and of suitable dimension. The function of each of these two grooves is to strengthen the bottom and obviate all tendency on its part to give or have a flabby action, as the same supports a heavy load of clothes and water. They hence serve as braces and stiffen the bottom, while they form recesses or chambers *c* on the under side of the bottom, which latter serve to more effectively hold the heat, thereby requiring less fuel to produce the desired effect in the boiler.

In Fig. 3 a bottom formed according to the foregoing description is connected, in the usual manner of double-seaming, to a boiler-body, while Fig. 4 represents the same form of bottom, connected to a boiler-body in a manner which also is old, but not in as general use as the preceding construction.

In Fig. 6 of the drawings is shown a modification of the bottom represented in Fig. 5, the difference being solely in pressing the grooves up from the under side of the bottom, while Fig. 5 shows said grooves as being pressed down from the upper side of the bottom.

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

A bottom for domestic boilers, consisting of a flat metallic plate made with a groove about its outer portion and a transverse groove in its central portion, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 13th day of February, 1879.

WILLIAM B. ALLEN. [L. S.]

Witnesses:

J. A. WADER,

EDWIN WARNER.