

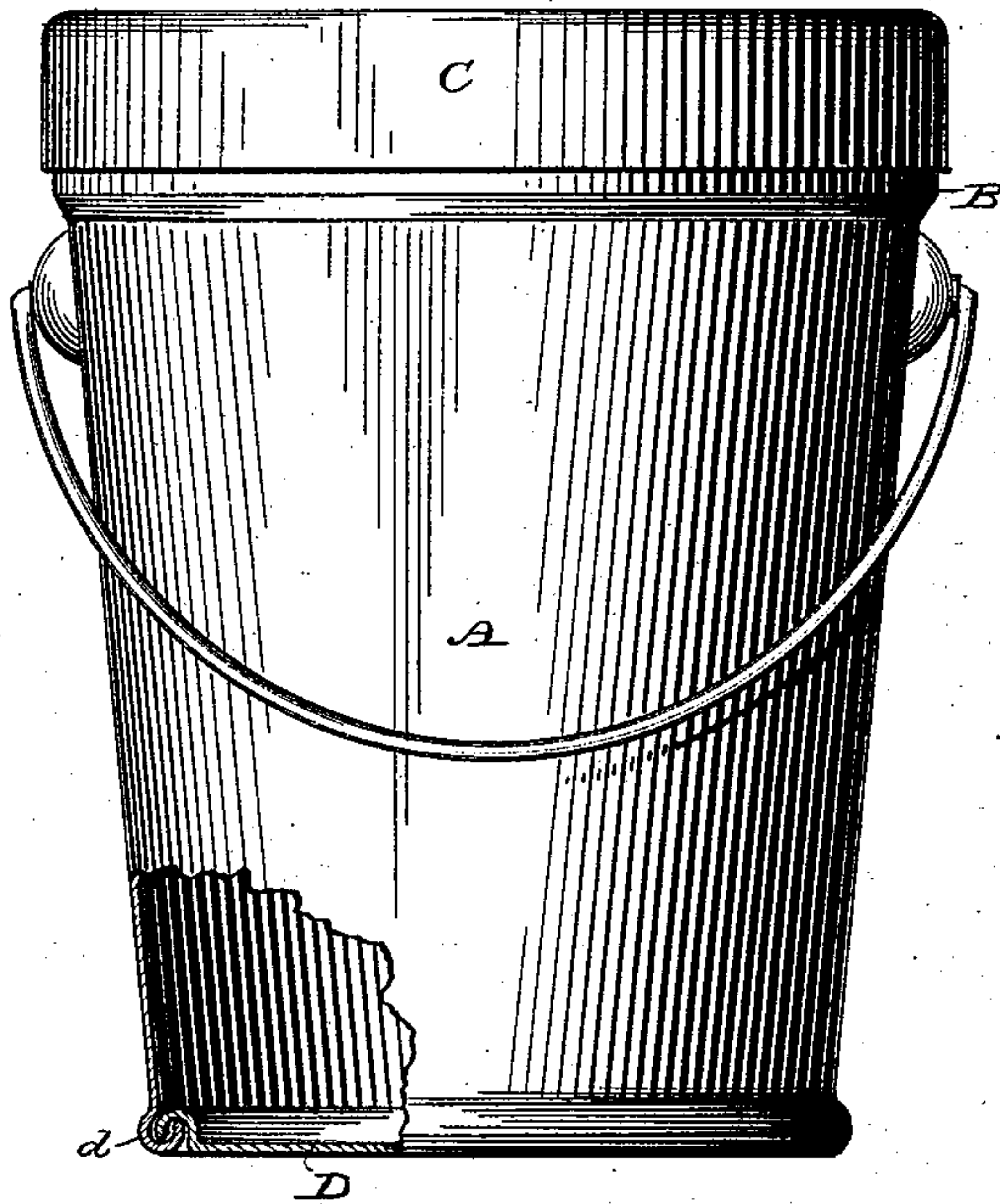
(No Model.)

F. A. WALSH.  
SHEET METAL PAIL.

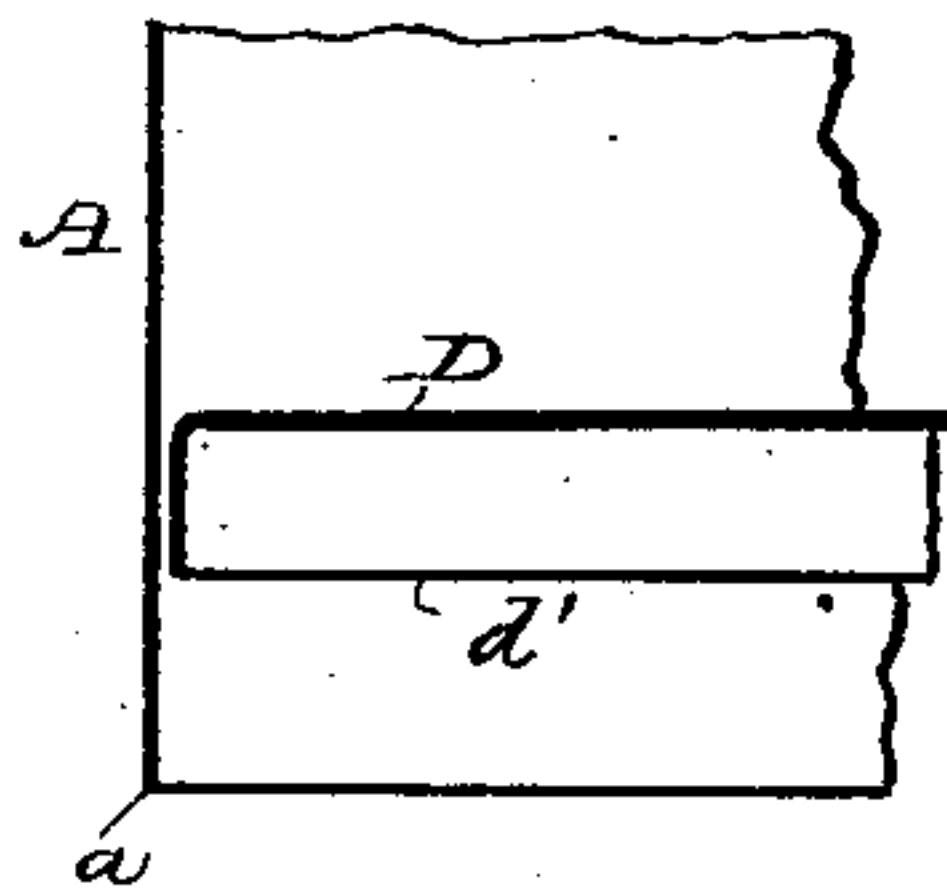
No. 380,151.

Patented Mar. 27, 1888.

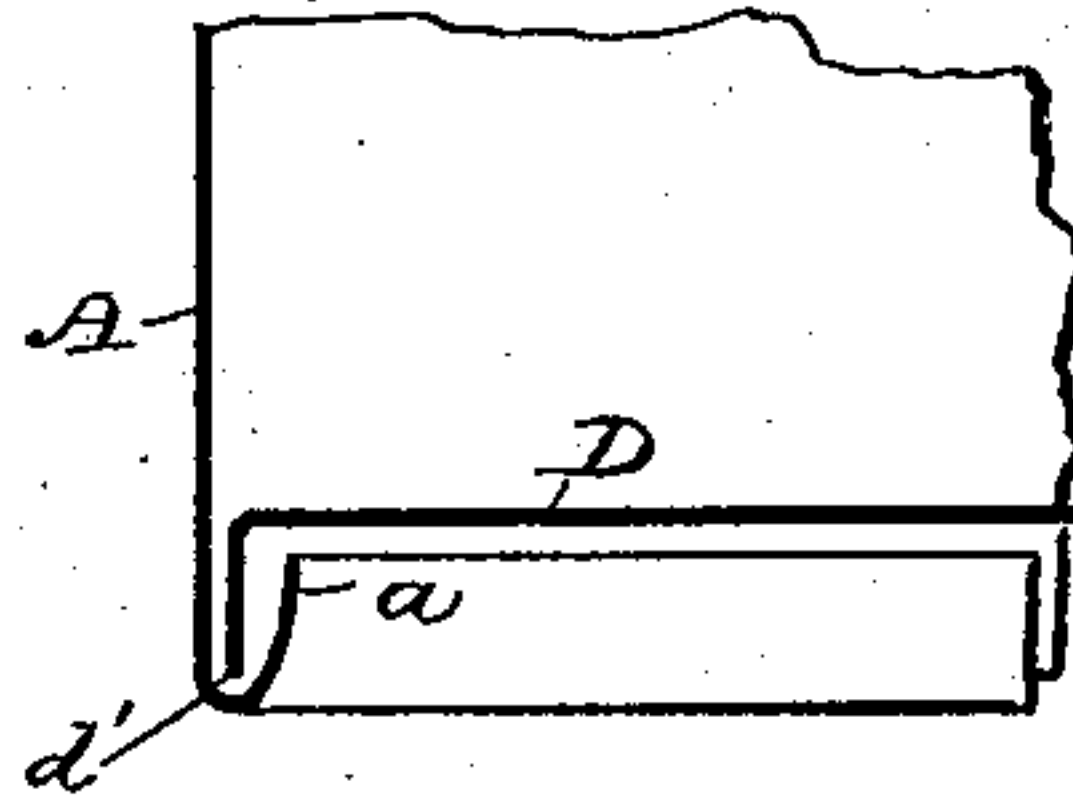
*Fig. 1.*



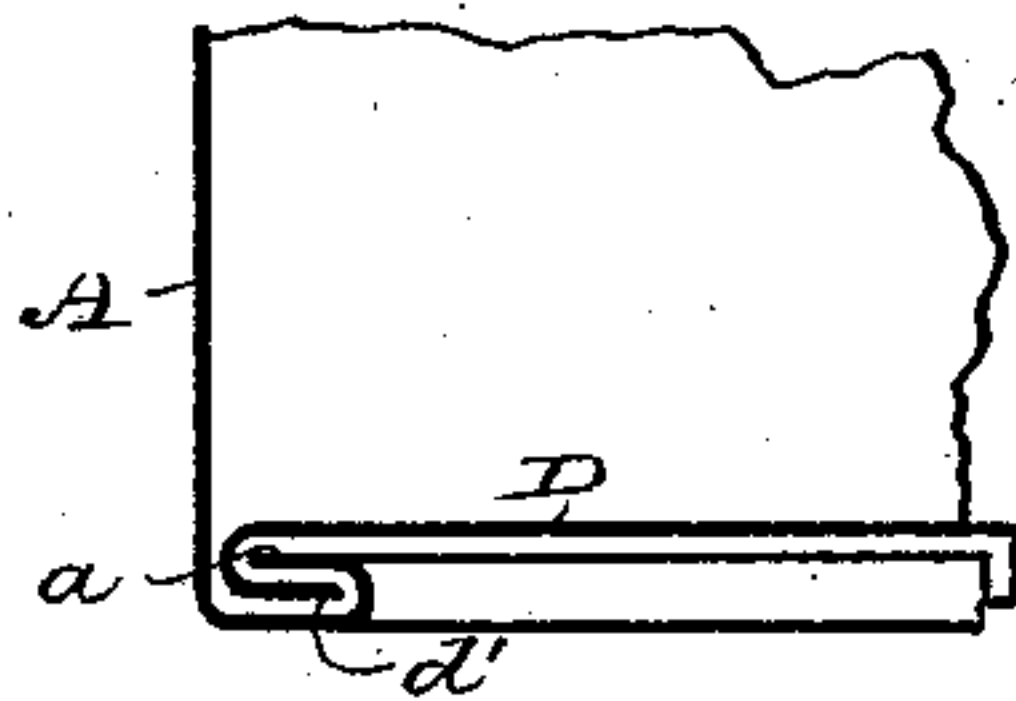
*Fig. 2.*



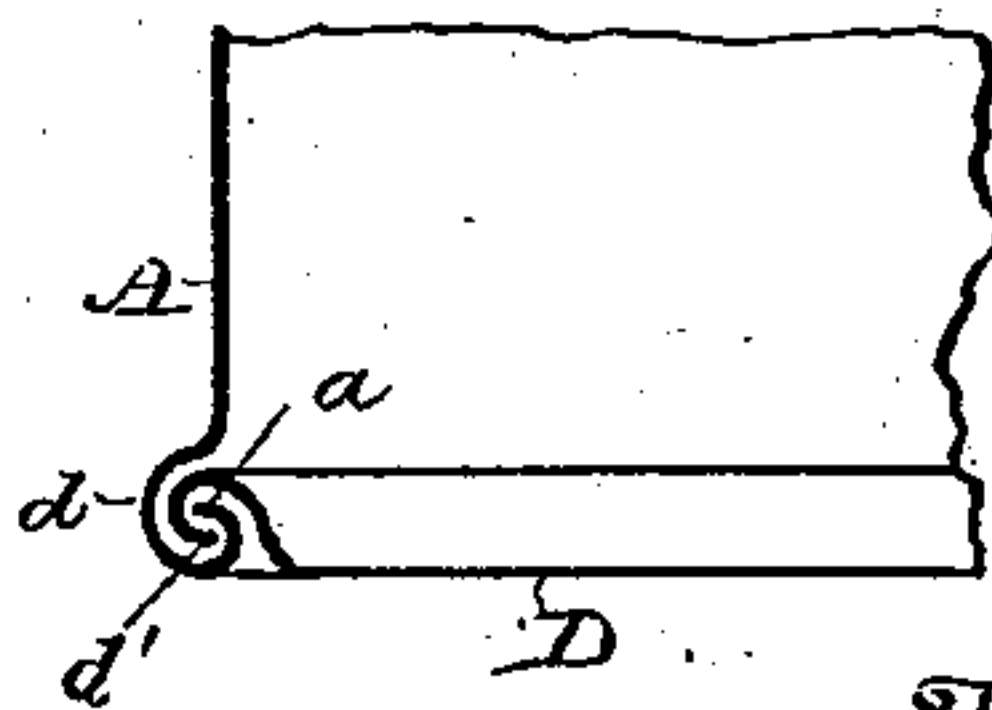
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



Witnesses.

Geo. W. Young.  
N. E. Oliphant.

Inventor.

Francis A. Walsh.

By Stout & Underwood.  
Attorneys.



# UNITED STATES PATENT OFFICE.

FRANCIS A. WALSH, OF MILWAUKEE, WISCONSIN.

## SHEET-METAL PAIL.

SPECIFICATION forming part of Letters Patent No. 380,151, dated March 27, 1888.

Application filed February 18, 1884. Serial No. 121,072. (No model.)

*To all whom it may concern:*

Be it known that I, FRANCIS A. WALSH, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Sheet-Metal Vessels; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to the construction of sheet-metal pails and other vessels, and will be fully described hereinafter.

In the drawings, Figure 1 is a side elevation of my improved vessel, partly broken away at the bottom to show the construction. Figs. 2, 3, 4, and 5 are enlarged sectional views showing the positions which the parts assume successively in the formation of the bottom seam of the vessel.

A is the body of my improved vessel.

B is a bead that is formed on the side of the body, the object of which is to receive the lower edge of the rim of the cover C, all as set forth in my application for patent filed August 1, 1887, Serial No. 245,832.

The bottom of my vessel is made by rolling its lower edge in with the flange of an ordinary flanged end plate, D, to form a beaded seam, *d*, and then a former is run around the body just outside of the parts *a* and *d'*, which at this step are in the relative positions shown in Fig. 4, and these parts, by the action of said former, as hereinafter stated, are flared out or expanded, so that when the beaded seam *d* is formed thereby it will be substantially on a line with the bottom, leaving the lower end of the pail or vessel flat, or nearly so, with a rim around it that enlarges its base and renders it less liable to tip over than ordinary vessels are.

In the detail views, Figs. 2 to 5, inclusive, the positions which the parts A and D successively assume in the formation of this beaded seam *d* are clearly shown.

In practice the parts A and D are of course always closely together at all the points shown as adjacent in the drawings, where for the sake of clearness a slight space is everywhere left between the said parts A and D, that the eye may easily distinguish between them, and the manner in which the two parts are united and in which the metal of one will be folded around the metal of the other is plainly shown in said

views. The described bottom plate, D, has, as shown, the downward-extending flange *d'*, and this plate D is slipped within the body A, as shown in Fig. 2, so that the bottom edge, *a*, of said body is as far below the bottom edge of the flange *d'* on the plate D as is necessary for the subsequent union of the parts in order to form the beaded seam *d*. Then the body with the contained plate D is placed upon suitable machinery, (which forms no part of my present invention,) and the first result of this action is to bend the bottom edge, *a*, of the part A inward and upward, as shown in Fig. 3, the body meanwhile being revolved, so that this action and all the other actions may be continuous and successive, the next effect being that the said flange *d'* and bottom portion, *a*, which are now substantially parallel and vertical, are bent or folded inward and upward together, so as to be substantially parallel, as before, but now horizontal instead of vertical, as shown in Fig. 4, and these parts in this position are now subjected to the action of a former which makes out of these parts *d'* and *a* the beaded seam *d*, the action of the said former being such as to press the said seam out beyond the line of the exterior of the body A all around at its base as well as raise said seam up, so that the bottom plate, D, will be on a plane, or nearly so, with the bottom of said beaded seam *d*, as shown in Figs. 1 and 5.

The construction of the former used in the last step is reserved for the subject of a separate application, and, briefly described, consists of a circular head for the reception of the outer surface of the parts *a* and *d'*, (in the positions shown in Fig. 4,) and another circular head adapted to bear against the inner surface of said parts within the vessel; but this former forms no part of this present invention, its action being to draw the parts *a* and *d'* into the position shown in Fig. 5 and form the said beaded seam *d* out of them.

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

A pail or other sheet-metal vessel, consisting of the circular body A, with bottom plate, D, united to the base of the body by the beaded seam *d*, formed of continuous folds of the bot-

tom edge of the said body and the flange of the  
said bottom plate free from any extraneous in-  
ternal support, and with the under surface of  
said bottom plate horizontal and on a plane  
5 substantially that of the lowest surface of the  
beaded seam *d*, substantially as set forth.

In testimony that I claim the foregoing I

have hereunto set my hand, at Milwaukee, in  
the county of Milwaukee and State of Wis-  
consin, in the presence of two witnesses.

FRANCIS A. WALSH.

Witnesses:

STANLEY S. STOUT,

H. G. UNDERWOOD.