C. H. ZWERMANN.

TANK CASING.

APPLICATION FILED OCT. 4, 1910.

1,067,894.

Patented July 22, 1913.

2 SHEETS—SHEET 1.

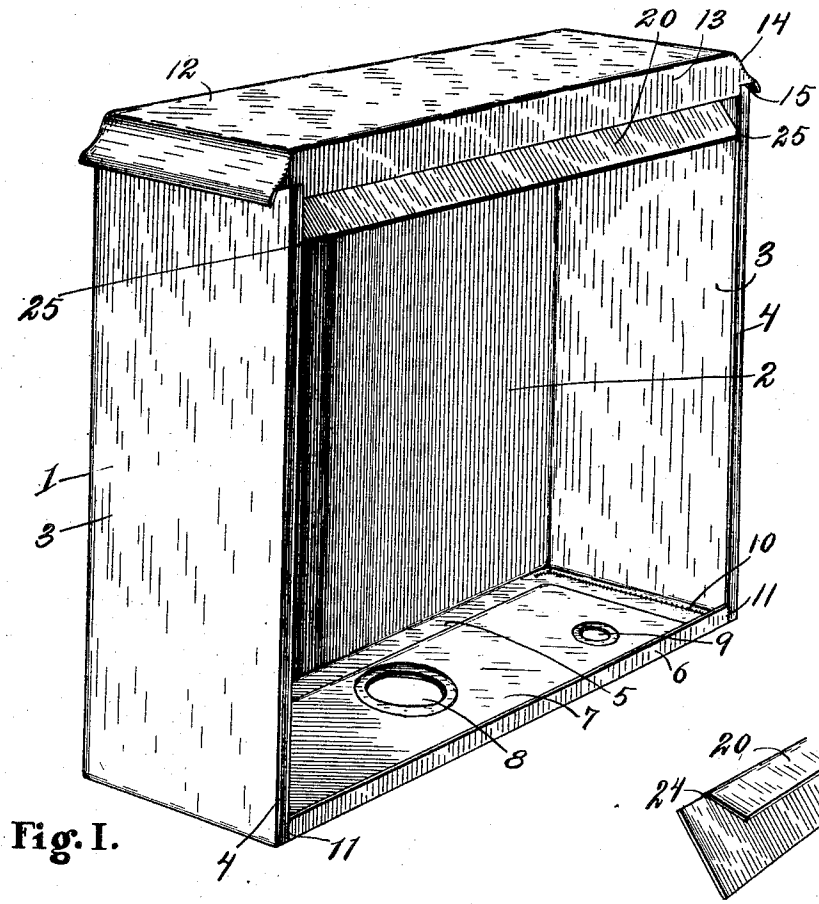


Fig. I.

Fig. V.

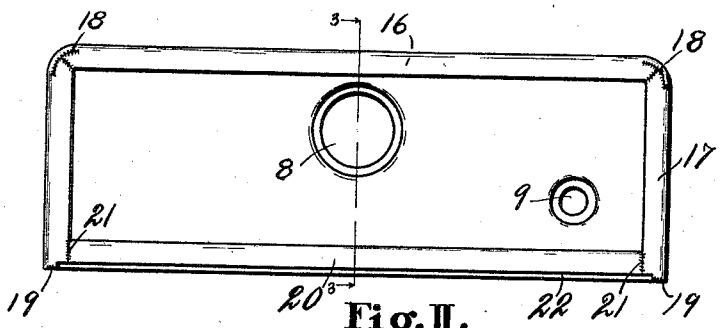


Fig. II.

Witnesses

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2 SHEETS—SHEET 2.

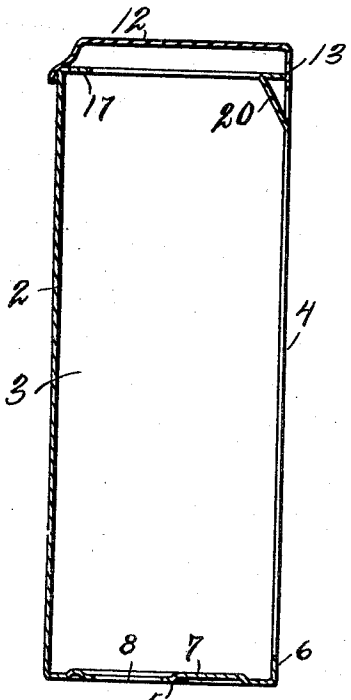


Fig. III

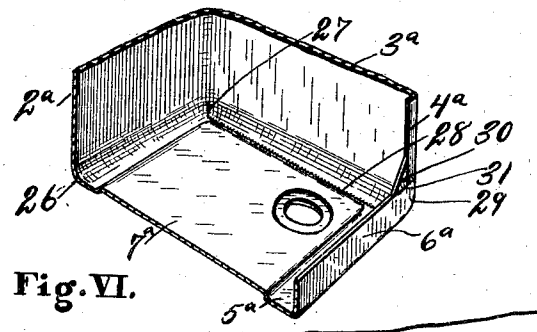


Fig. VI.

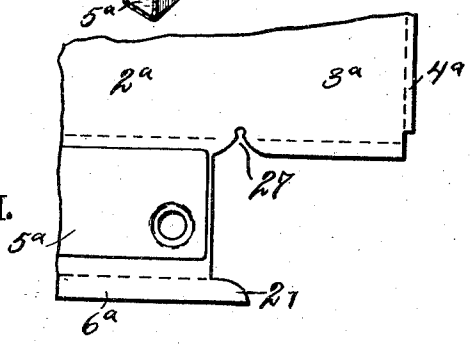


Fig. VII.

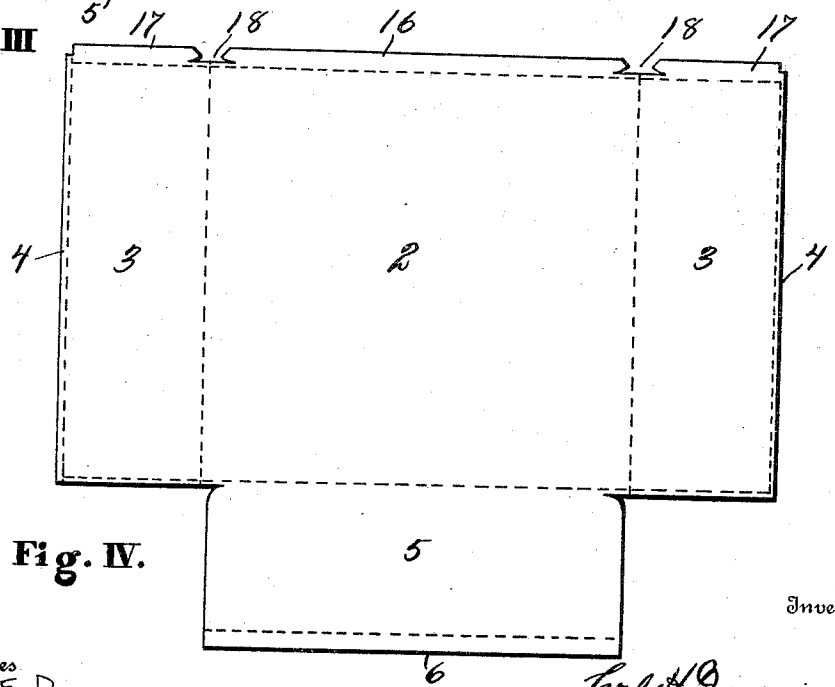


Fig. IV.

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UNITED STATES PATENT OFFICE.

CARL H. ZWERMANN, OF KALAMAZOO, MICHIGAN.

TANK-CASING.

1,067,894. Specification of Letters Patent. Patented July 22, 1913.

Application filed October 4, 1910. Serial No. 585,250.

To all whom it may concern:

Be it known that I, CARL H. ZWERMANN, a citizen of the United States, residing at Kalamazoo, Michigan, have invented certain new and useful Improvements in Tank-Casings, of which the following is a specification.

This invention relates to improvements in tank casings, particularly to the outer casing for closet tanks, similar to those described in my former Patent No. 932,530, issued August 31, 1909, for tanks.

The objects of this invention are: First, to simplify the structure of such tank casing. Second, to provide an improved structure of casing in which the sheet metal is specially seamed to secure the best result in enameled work. Third, to provide a tank with a special construction of bottom for improvements in the seaming and also in supporting the same, whereby comparatively thin metal can be used in the enameled tank. Fourth, to provide an improved construction of cover coupling therefor.

Further objects, and objects relating to structural details, will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention, is clearly illustrated in the accompanying drawing, forming a part of this specification, in which—

Figure I is a rear perspective view of my enameled tank casing, the location of the welding seams being indicated. Fig. II is a plan view of the structure appearing in Fig. I, with the cover removed. Fig. III is a vertical sectional elevation, taken on a line corresponding to line 3—3 of Fig. 2, looking in the direction of the little arrows. Fig. IV is a view of the developed main blank. Fig. V is a detail perspective view of one end of the cross bar 20, showing notch 24. Fig. VI is a detail interior perspective view of one end of the tank of a modified construction. Fig. VII is a detail of part of the blank of this modified structure.

In the drawings, similar numerals of reference refer to similar parts throughout the several views.

Referring to the drawing, the tank 1 is made of sheet metal enameled. The front 2 is a plain sheet and has extensions forming the sides 3, which are joined at an angle at the corners to the sides of this front and the sides 3 are extended around at the back of the tank into flanges 4. The bottom 5 is integral with the front and has a struck up vertical portion 7,—that is, either struck upwardly into the tank or downwardly out of the same for increasing the rigidity of the bottom of the tank. Perforations 8 and 9 are through the bottom of the tank, the same being slightly struck up to increase the rigidity of the parts and insure that they will be in the proper form and location and at the proper angle to form seats to receive the fittings. The lower edges of the sides 3—3 are inturned and joined to the bottom 5 in the flat portion thereof by the seams 10. The object of this is to secure a structure in which the welded seam is not in the angle of the tank construction. By this means, the retaining of the enamel is insured. The enamel or sheet metal ware is more likely to chip in the angle of any sheet metal article, and, owing to the slight roughness occasioned by the welding seam, it is also liable to chip at the welding seam. By separating these two features, the likelihood of the chipping of the enamel is reduced to the minimum, and when the parts are carefully made, substantially no chipping occurs at these points. The bottom 5 is extended upwardly into a flange 6 at the rear. This rear flange is secured to the vertical flanges 4 and 4 at each side by welded seams 11. The front 2 is turned into a flange 16 and the upper edges of the sides 3 are turned into flanges 17—17, which are joined together by the seam 18. The seam 18 is formed between the flanges 16 and 17, and an inturned portion at the front angle, so that the seam is entirely in the flat portion of the flanges 16 and 17. These flanges 17—17 are secured at their rear ends by seams 19—19 to the vertical flanges 4—4 at the back. A cross bar 20, formed of an angle piece, is arranged at the upper rear corner of the sides 3—3, and is notched at 24, so that it fits at this point against the inner rear edge of the flanges 17—17 to which the bar is secured by welding seams 21. The rear portion of this bar 20 does not extend to the plane of the back of the structure and leaves an open space 22. This open space is to receive the downwardly-projecting vertical rear edge of the cover.

The bar 20 is also secured by a weld 25—25 to the vertical flange 4—4 at each side. The bar 20 is the supporting bar by which the tank is ordinarily suspended, although this casing may be supported in any well known way. The cover 12 is made of a stamping with a vertical rear portion 13, turned downwardly from the upper surface thereof, joined at its corners by seams 14 to downwardly-turned flanges of the cover at each end. This vertical portion 13 is notched at 14—14 at each end, and extends downwardly at 13^a to engage the opening or notch 22 at the back of the bar 20 of the tank casing 1, so that the cover is very effectively secured in place.

I show a modification of my structure in Figs. VI and VII, in which, in place of having substantially right angled corner portions between the front and ends and the bottom, I provide curved corners. In the curved corners, the seam is somewhat different. The curved portions 26 and 28 form inwardly-extending flanges and are joined together by the irregular seam 27,—see Figs. VI and VII. The rear portion is formed by a slight modification of the joints. A triangular brace 30 is secured by welds 31 to an extension 29 of the rear flange 6^a.

Considering these modifications in Figs. VI and VII, the bottom 5^a corresponds to the bottom 5, the struck-up portion 7^a to the part 7, the front 2^a to the front 2, and the end 3^a corresponds to the end 3, and the flange 4^a to the flange 4. With this explanation, the details of that construction will be very readily understood.

I wish to state that my improved structure can be considerably modified without departing from my invention. I have illustrated only simple modifications.

I desire to claim the structure described specifically as well as broadly.

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

1. A sheet metal tank open at the top with a cross bar extending across the rear portion of the top with a suitable notch therein, a cover conformed to the upper side of said tank having a downwardly-projecting engaging portion engaging the notch at the rear of said tank, coacting for the purpose specified.

2. In a sheet metal tank, the combination of a tank having bottom, front and side walls, a back bar at the upper portion thereof formed of an angle piece of metal for suspending the said tank casing and cut away to form a recess, and a cover for the said tank having a downwardly-projecting portion engaging the recess at the back of the back bar, coacting as specified.

In witness whereof, I have hereunto set my hand and seal in the presence of two witnesses.

CARL H. ZWERMANN. [L. S.]

Witnesses:
CLORA E. BRADEN,
MARGARET GLASGOW.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."