

G. H. BAILEY.
TANK FOR WATER CLOSETS.
APPLICATION FILED MAY 23, 1908.

944,764.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

FIG. 1

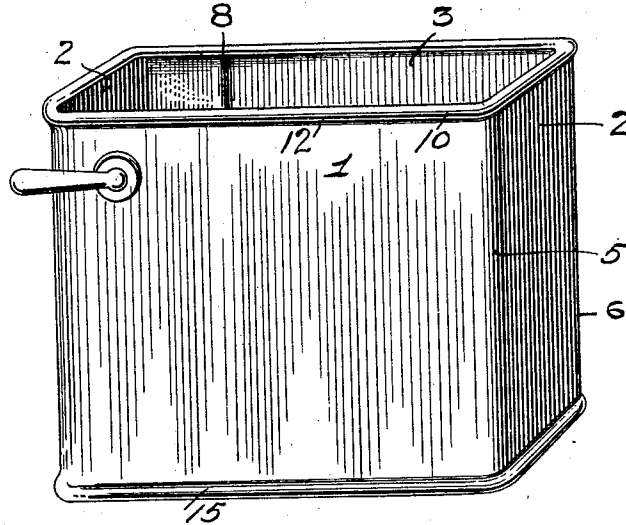


FIG. 12

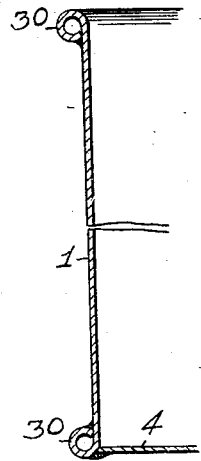


FIG. 2

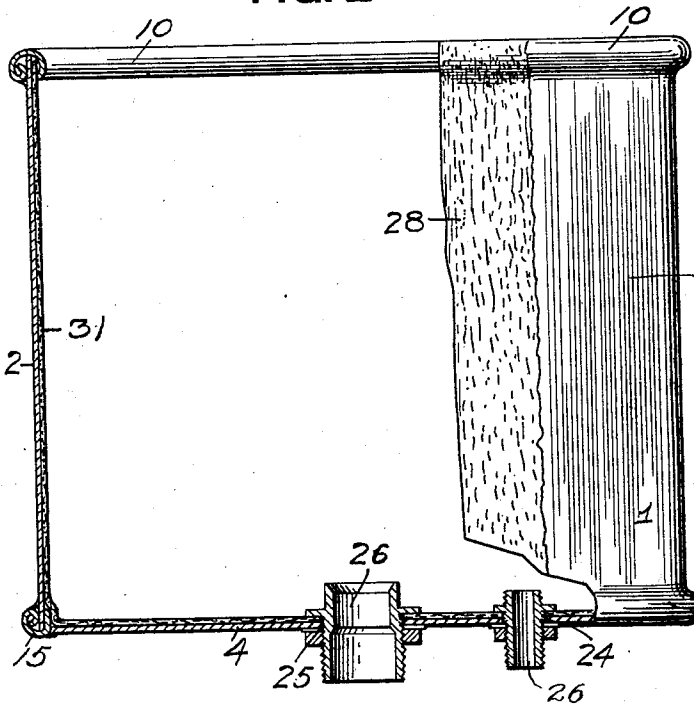
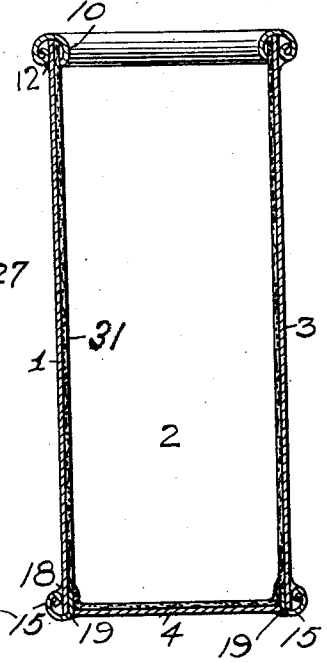


FIG. 3



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2 SHEETS—SHEET 2.

FIG. 7

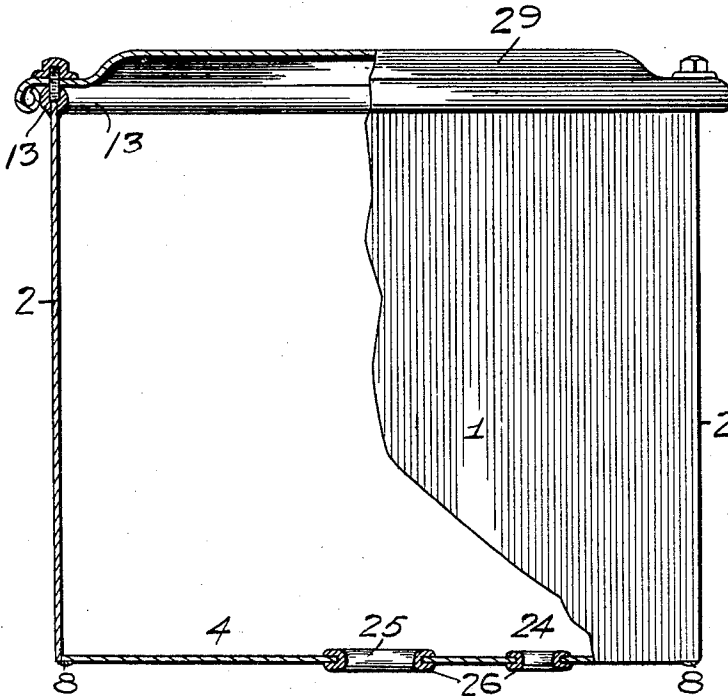


FIG. 8

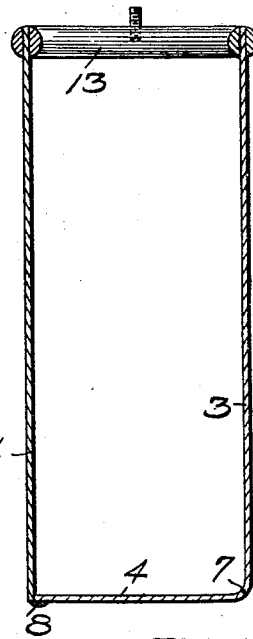


FIG. 9

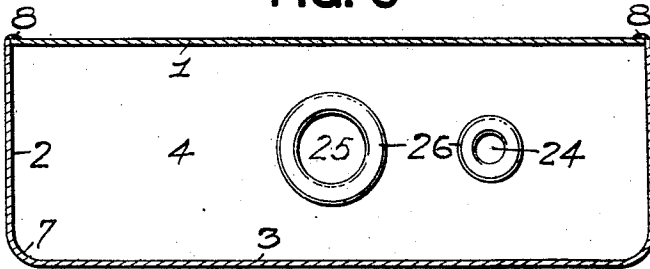


FIG. 4 FIG. 5

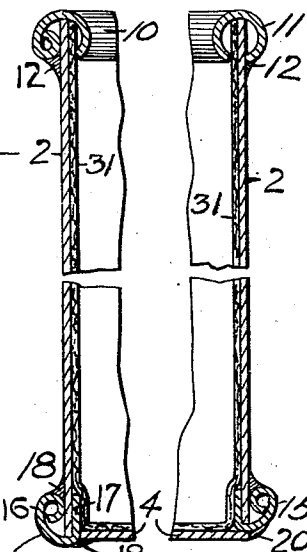


FIG. 11

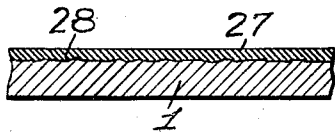
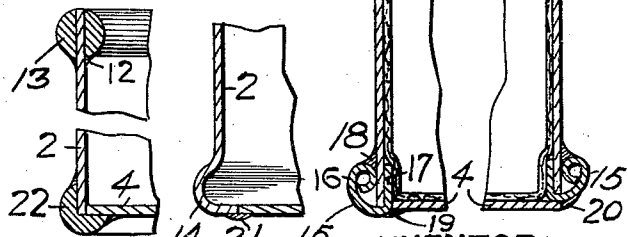


FIG. 10 FIG. 6



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GEORGE H. BAILEY, OF PITTSBURG, PENNSYLVANIA.

TANK FOR WATER-CLOSETS.

944,764.

Specification of Letters Patent.

Patented Dec. 28, 1909.

Application filed May 23, 1908. Serial No. 434,618.

To all whom it may concern:

Be it known that I, GEORGE H. BAILEY, a resident of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Tanks for Water-Closets, of which the following is a specification.

This invention relates to flushing tanks for water closets and the like.

The object is to provide a tank constructed of sheet metal and enameled.

The invention comprises a tank constructed and finished in the manner hereinafter described.

In the accompanying drawings Figure 1 is a perspective view of my improved tank; Fig. 2 is in part an elevation and in part a vertical longitudinal section through said tank; Fig. 3 is a transverse section through the same showing one form of top and bottom finish; Fig. 4 is a vertical sectional view showing the finish at the top and bottom on an enlarged scale; Fig. 5 is a similar view showing a modification; Fig. 6 is a small detail view of still another modification; Fig. 7 is in part a front elevation and in part a vertical section of a modified form of tank; Fig. 8 is a vertical transverse section through the same; Fig. 9 is a horizontal section through the same; Fig. 10 is an enlarged detail view showing the finish at the top and bottom; Fig. 11 is a fragmentary sectional view through the side of the tank; and Fig. 12 is a sectional detail showing a modification.

The tank may be made of any desired size and shape and will be made to somewhat resemble the usual wooden tanks. Fig. 1 shows the tank in perspective with the cover omitted. The tank has the front wall 1, end walls 2, rear wall 3, and bottom 4, all composed of sheet metal. Figs. 1, 2 and 3 show the front, end and rear walls formed of a single sheet of metal bent to form front corners 5 and rear corners 6, the front corners preferably being rounded, as shown, to give a neat appearance, while the rear corners may be more acute. The meeting edges of the sheet forming the body of the tank are united by welding, the welded joint being indicated at 8, and running from top to bottom. The metal forming this body is bent beyond its elastic limit so that in the finished tank the metal is entirely in repose,

that is, it is free from internal strains. This prevents movement or tendency of movement in the metal, which would tend to crack the enamel finish.

The bottom 4 is suitably secured to the lower edge of the body so as to form a water tight joint, preferably by welding. The top and bottom edges are provided with finishing beads so as to give a round contour to enable the enamel to adhere more readily thereto. It is well known that enamel does not adhere well to sharp angles. The finish shown at the top edge consists of a tubular finishing strip, either like that shown at 10, Fig. 4 or at 11, Fig. 5, the former giving a slightly larger bead at the top than the latter. This tubular finishing strip is slipped down over the top edge of the body and as it is more or less resilient grips the front end and rear walls of the tank more or less firmly. Additional securing means, however, are preferably employed. As shown in the drawings, this top strip is further secured by welding at intervals, as indicated at 12. At 13 Fig. 10 the finishing strip is shown as two half rounds secured to the body.

The top and bottom beads may be a mere swell or roll formed directly in the sheets composing the body, as shown at 14, Fig. 6, and at 30, Fig. 12, or may be a separate curved finishing strip, as shown at 15, Figs. 4 and 5. This finishing strip has the curved portion 16 lying outside the tank and a comparatively flat portion 17 lying just inside of the walls of the tank. It is secured in place preferably by welding as indicated at 18. Fig. 4 shows the bottom 4 secured in place by welding at 19 above the lower edge of the finishing strip 15, while Fig. 5 shows said bottom welded at 20 below the finishing strip. Fig. 6 shows the bottom secured to the sides by a butt-weld joint 21 which is removed from the corner and is formed in flat portions of the sheets. Fig. 10 shows a three fourths round 22 welded at the lower corner.

Figs. 7 and 8 show a modification in which the front wall 1 and ends 2 of the tank are formed from one sheet and the bottom 4 and rear wall 3 are formed from another sheet, as indicated by the continuous corner at 7 in Fig. 8. Fig. 7 also shows a cover 29 on the tank. This modification, however,

is not claimed in this application but is claimed in an application filed November 16, 1908, Serial No. 462,855.

Fig. 9 shows a tank such as shown in Figs. 7 and 8, but reversed, the wall 3 becoming the front wall and the wall 1 the rear wall, with the welds 8 at the rear vertical corners as shown and the bottom 4 continuous with the wall 3 in the same manner as in Fig. 8. The welding in all cases can be conveniently done by a blow-pipe system. The body is provided with an opening in its walls for receiving the flush operating device 23 and its bottom is provided with two openings one 24, for receiving the supply connection and the other 25 for the flushing connection. These may be reinforced by ferrules, rings or sleeves, shown at 26, that in the opening 25 also serving as a seat for the flushing valve.

After being built up in the manner described the entire tank is covered with a coating of enamel indicated at 27. In order to enable the enamel to adhere firmly to the sheet metal, the latter is first preferably roughened in any suitable way, such as under an abrading wheel, this roughening being indicated at 28, Figs. 2 and 11. The enamel is applied in the ordinary way, that is, by heating the sheet metal tank and sprinkling onto the same the enamel powder, or by the dipping process, well understood by those skilled in this art. The enamel forms a smooth coating over the entire surface of the tank and fills up the grooves between the edges of the top and bottom finishing strips and the sides of the tank, giving a smooth finish to these points and entirely covering up and obliterating the welds.

The tank is slightly, and exceedingly sanitary. Since the metal is strained beyond its elastic limit, it is entirely in repose and therefore has no tendency to move from its position of repose. The consequence is that the enamel firmly adheres to even the thin sheet metal which is used.

The tank is lined on its interior with a layer of felt 31 or other suitable insulating material. This lining acts in a two-fold capacity, one being to deaden the sounds which might be magnified by the vibration of the thin sheet metal and the other being as a non-heat conductor to prevent the tank from sweating on the exterior on account of cold water contained therein. This lining preferably is water-proofed, or so treated as to withstand the action of the water.

The tank may be provided with any suitable filling and flushing mechanism.

What I claim is:

1. A tank for water closets and the like, composed of sheet metal and having its front, end and rear walls formed from a single sheet bent to shape and the ends there-

of welded together, and its bottom formed from another sheet, the edges of the sheets meeting at the bottom corners of the tank and being welded together, said tank being provided with a coating of enamel.

2. A tank for water closets and the like, composed of sheet metal having its front, end and rear walls formed from a single sheet bent to shape with the edges meeting in the rear wall away from the corners and welded together, and its bottom formed from another sheet, the edges of said sheets meeting at the bottom corners of the tank and being welded together, and the tank being provided with a coating of enamel.

3. A tank for water closets and the like, composed of sheet metal having its front, end and rear walls formed from a single sheet bent to shape and the ends thereof welded together and its bottom formed from another sheet, the edges of said sheets meeting at the bottom corners of the tank and being welded together, said tank being provided at its bottom with a curved outwardly projecting bead and being coated with enamel.

4. A tank for water closets and the like composed of sheet metal having its front, end and rear walls formed from a single sheet bent to shape and the ends thereof welded together, and its bottom formed from another sheet, the edges of the sheets meeting at the bottom corners of the tank and being welded together, said tank being provided at its top with a strengthening bead and being covered with a coating of enamel.

5. A tank for water closets and the like, composed of sheet metal having its front, end and rear walls formed from a single sheet bent to shape with the edges meeting in the rear wall away from the corners and welded together, and its bottom formed from another sheet, the edges of said sheets meeting at the bottom corners and being welded together, said tank being provided at its top edge with a strengthening bead and being provided with a coating of enamel.

6. A tank for water closets and the like, composed of sheet metal having its front and end walls formed from a single sheet bent to shape with the lower edges turned inwardly and horizontally, the bottom being joined to said front and end sheet by a butt-weld.

7. A tank for water closets and the like, composed of sheet metal having its front and end walls composed of a single sheet bent to shape with the bottom portion swelled outwardly and turned inwardly and horizontally, the bottom being welded to said intumed edges by a butt-weld.

8. A tank for water closets and the like, composed of sheet metal having its front and end walls formed from a single sheet

bent to shape and having the lower edges turned inwardly and horizontally, the bottom being welded to said inturned edges.

9. A tank for water closets and the like, composed of sheet metal having its front and end walls formed from a single sheet bent to shape and provided with a strengthening bead at the top and having the lower edges turned inwardly and horizontally, the bottom being welded to said inturned edges.

10. A tank for water closets and the like, composed of sheet metal having its front and end walls composed of a single sheet bent to shape with the top thereof provided with a strengthening bead and with the bottom edges thereof swelled outwardly and

turned inwardly and horizontally, the bottom being welded to said inturned edges.

11. A flushing or like tank comprising a metal sheet bent to form the front and end walls and the bottom welded to the lower edges of the end walls.

12. A flushing or like tank comprising a metal sheet bent to form the front, end and rear walls and a bottom welded to the lower edges of the end walls.

In testimony whereof, I have hereunto set my hand.

GEORGE H. BAILEY.

Witnesses:

JOHN S. CORT,
F. W. WINTER.