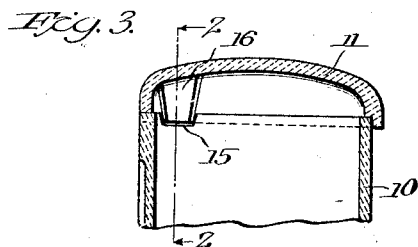
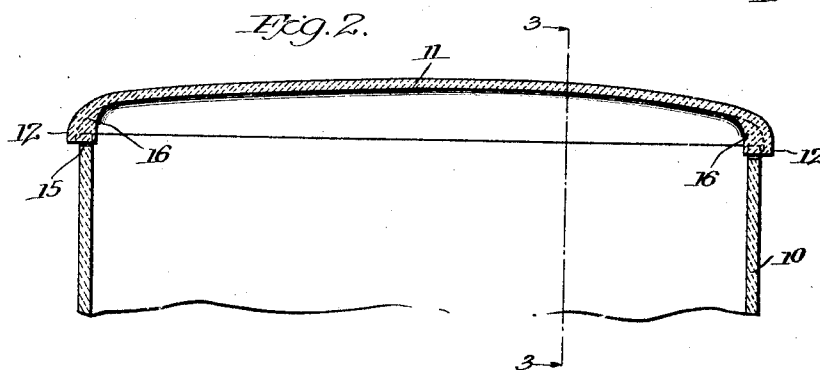
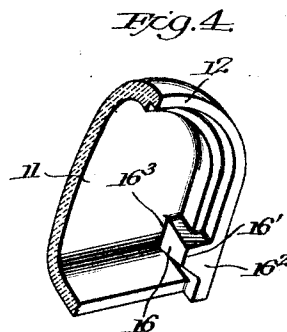
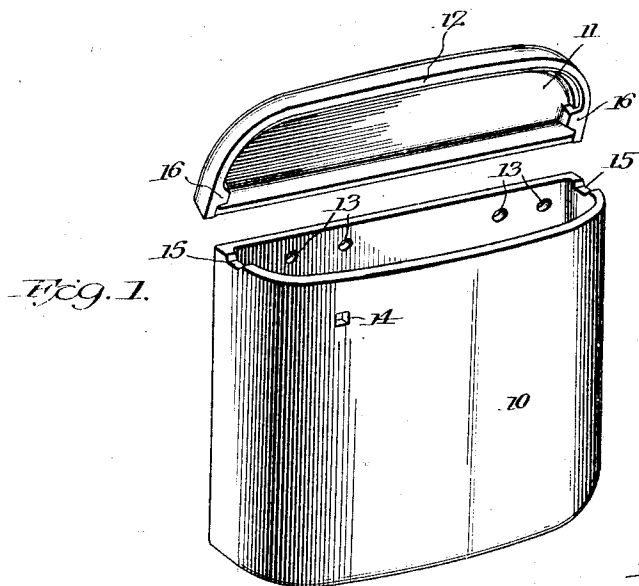


Feb. 12, 1929.

A. V. LAWTON
CLOSET TANK AND COVER
Filed Dec. 11, 1924

1,701,682



Inventor
Alfred V. Lawton

By *Cushman, Bryant & Wark*
Attorneys

UNITED STATES PATENT OFFICE.

ALFRED V. LAWTON, OF DECATUR, ILLINOIS, ASSIGNOR TO ADOLPH MUELLER, TRUSTEE, OF DECATUR, ILLINOIS.

CLOSET TANK AND COVER.

Application filed December 11, 1924. Serial No. 755,332.

This invention relates to tanks and covers therefor, and more particularly to water closet flush tanks constructed of vitreous material.

5 The class of tanks to which this invention relates, are those vitreous tanks made from plastic material in molds, which, after the material has become reasonably hardened, are removed from the molds and baked hard in an oven. Due to the very high degree of heat to which the tanks and covers are subjected, a certain amount of warping and shrinkage will naturally take place, both tanks and covers when taken from the baking oven being of a slightly different size and conformation from their original dimensions. This difference, while not particularly noticeable, often times is sufficiently substantial to prevent the cooperating securing means on the tanks and covers from registering properly. Not infrequently it is necessary to cast aside finished tops for the reason that it becomes impossible to make them fit the tanks after their removal from the baking ovens. Such loss has been occasioned by providing the tanks and covers with close fitting interlocking means not permitting variation in the size or shape of either member.

30 An object of this invention is to overcome such difficulties and consequent loss of materials by providing inter-engaging means for the covers and tanks, which means will function even though there has been a slight change in the dimensions of the parts during the process of baking.

35 Another object is to provide cooperating means for the tanks and covers which does not require an exact fit to allow the parts to register.

40 A further object is to provide the covers with lugs of a size and shape which will allow them to fit loosely in corresponding notches or recesses formed in the tank, such loose fit compensating for any variation in the size and conformation of the tank and cover caused during the baking step of the process of manufacture.

50 In the preferred embodiment of the invention, which is described in detail, the above and other objects and advantages will be clearly described, pointed out, and illustrated in the accompanying drawings, in which

55 Figure 1 is a perspective view of a tank with the cover removed.

Figure 2 is a longitudinal section through

the tank and cover taken on the line 2—2 of Figure 3.

Figure 3 is a transverse sectional view of the tank and cover, taken on the line 3—3 of Figure 2, and

Figure 4 is a fragmentary perspective view of a portion of the cover showing the securing lug.

Similar numerals of reference show like parts in the several views of the drawing, in which 10 indicates a tank of vitreous material and 11 a cover for the tank having a flange 12 loosely fitting around the upper portion of the curved section of the tank, as illustrated in Figure 3. Openings 13 through the rear wall of the tank adjacent the top are provided to allow the tank to be secured to a wall. An opening 14, preferably rectangular, extends through the front wall of the tank adjacent its upper edge to enable the attachment of a valve actuating handle of any conventional form.

Notches or recesses 15 are formed in the upper edges of each end of the tank, which notches are adapted to receive loosely lugs or projections 16 formed on the under side of the cover 11 which, also, is preferably of vitreous material. The lugs are of a size which permit them to fit with substantial clearance within the recesses in order to insure registration should the tank or cover shrink or warp while being baked.

Referring more particularly to the lugs 16, it will be seen that they are formed integral with the cover, and as clearly shown in Figures 1, 3 and 4, taper in two different directions, namely, (1) longitudinally toward their under surfaces, and (2) transversely toward their inner surfaces. It will be seen that the lug is of less diameter at the inner side 16' than at the outer side 16² adjacent the flange 12. The lug is also thicker or wider at its top end 16³ than at its under surface.

This construction or form of the lug facilitates its insertion into the recess 15, particularly when there has been longitudinal or lateral shrinkage or warping of the tank or cover during manufacture. In the event the tank bulges or expands from front to back relative to the cover portion, the lugs, by being of less width than the recess (Fig. 3) will still fit therein.

As clearly shown in Figures 2 and 3, the cover 11 is made both longer and wider than the tank to which it is applied. This is high-

ly important, since such a cover will fit the tank regardless of any slight variation in the size of the parts which may occur during the baking step of the process of manufacture.

5 In Figure 2, the flange 12 is shown as projecting beyond each end wall of the tank, and it will also be noted (Fig. 3) that the flange 12 on the front of the cover extends outwardly beyond the front of the tank. This is particularly advantageous, since not infrequently the tank will bulge and at the same time the cover shrink, or vice versa, during baking. There is a sufficiently loose fit between the tank and cover to take care of any such variation in the size of these parts.

10 It will be noted that the recesses 15 and their coacting lugs 16 are positioned at points where the cover is subjected to the greatest strain and, therefore, tend to strengthen the same at these points. Moreover, the lugs are positioned so as to preclude the possibility of the outer edge of the cover being brought into forcible contact with the upper edge of the tank thus protecting the most fragile parts of the tank and cover against accidental breakage.

25 While the preferred form of the invention

has been illustrated in the drawing and described in the specification, it is to be understood that other modifications which come within the scope of the appended claim, might be produced without departing from the spirit of the invention.

I claim:

A tank of vitreous material having an open top, the walls of said top having diametrically opposed tapered recesses in the upper surface thereof, a removable vitreous cover having a depending flange arranged to loosely fit around the outer edge of the tank, said cover and flange having greater overall horizontal dimensions than the tank, means for positioning said cover on the tank irrespective of any shrinkage or warping of the parts, comprising lugs projecting from the inner surface of said flange, said cover adapted to loosely engage said recesses with substantial clearance, said lugs being tapered longitudinally and transversely towards the free ends thereof to permit variations in the normal relative dimensions of the tank and cover.

In testimony whereof I have hereunto set my hand.

ALFRED V. LAWTON.