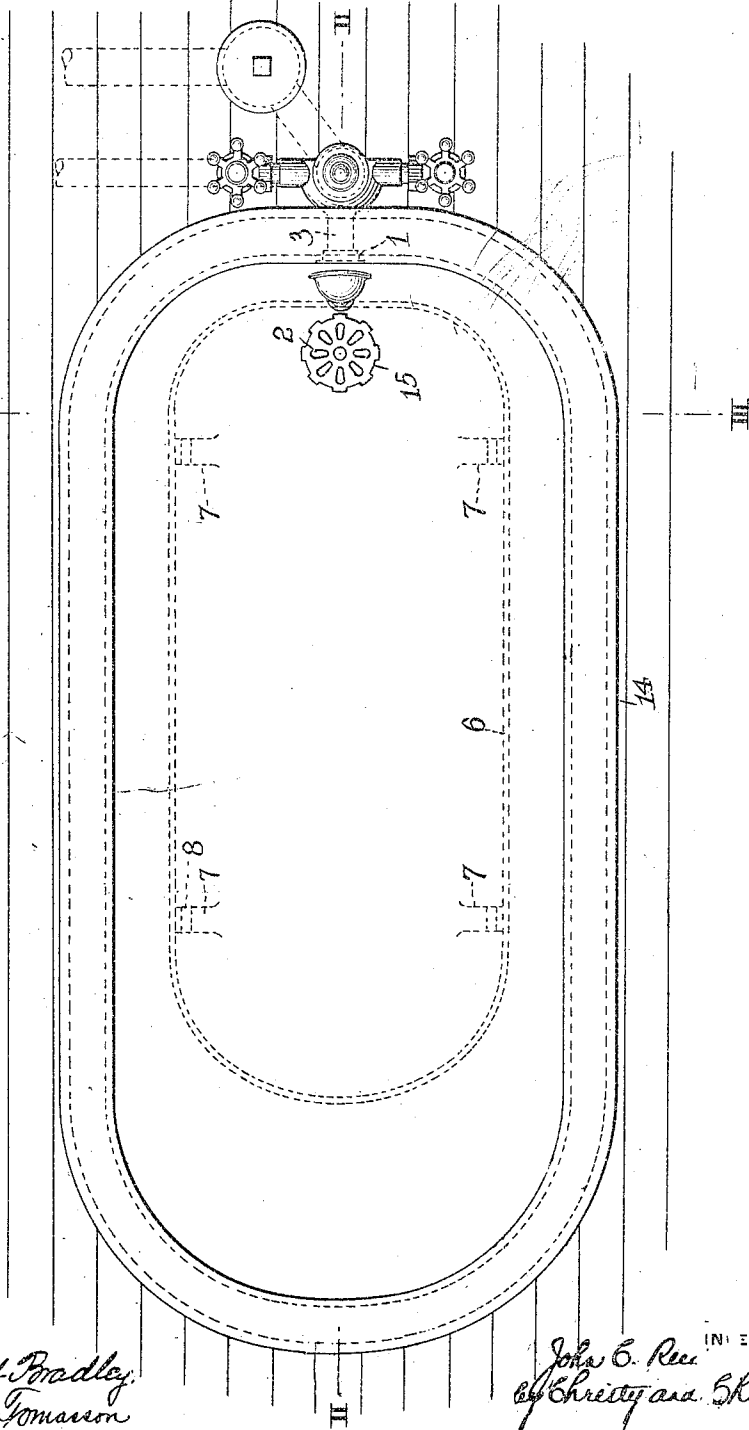


1,049,917.

Patented Jan. 7, 1913.

2 SHEETS-SHEET 1.

FIG. 1.



WITNESSES:

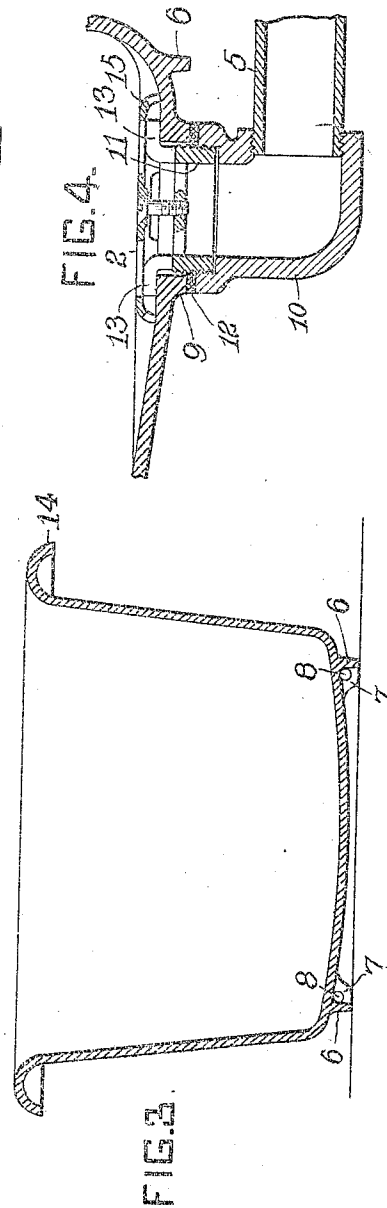
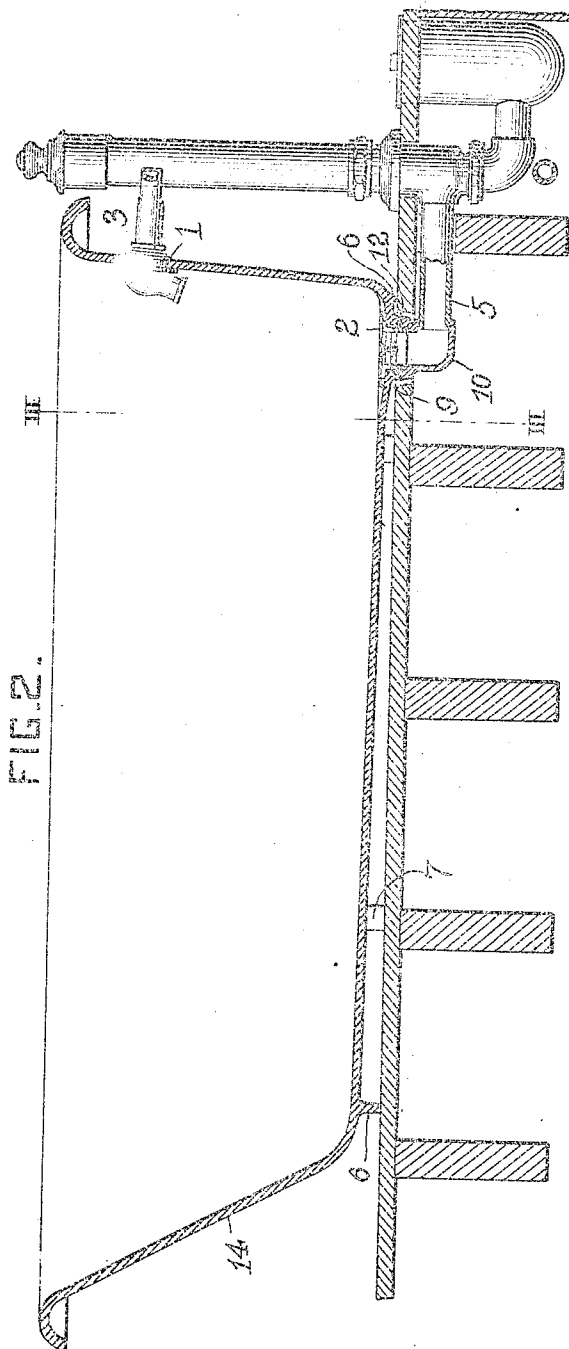
J. Herbert Bradley
Francis J. Tomasson

INVENTOR

John C. Reed
by Christy and Sherry
Attys

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

JOHN C. REED, OF PITTSBURGH, PENNSYLVANIA, ASSIGNOR TO STANDARD SANITARY MANUFACTURING COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF NEW JERSEY.

BATH-TUB.

1,049,917.

Specification of Letters Patent.

Patented Jan. 7, 1913.

Application filed August 4, 1911. Serial No. 642,291.

To all whom it may concern:

Be it known that I, JOHN C. REED, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Bath-Tubs, of which improvements the following is a specification.

My invention relates to bath tubs made of cast metal, such as iron, and covered with a vitreous enamel; and the object of my invention is to provide such a bath tub with an external rib in such a way as, first, to render it commercially possible to enamel the exterior, as well as the interior surface of the bath tub; second, to form a support for the bath tub; and third, to protect the enamel from injury during the manipulation of the bath tub after it has been completed.

My invention is illustrated in the accompanying drawings which form part of my specification, and in which—

Figure 1 is a plan view of a bath tub embodying my invention; Fig. 2 is a longitudinal sectional elevation taken on the line II—II, Fig. 1; Fig. 3 is a transverse sectional elevation taken on the line III—III, Fig. 1; and Fig. 4 is an enlarged sectional elevation through the drain connection.

In the several figures like numerals are used to designate like parts.

In applying the enamel to cast metal bath tubs the castings are heated to about 1700 degrees F. and manipulated from one position to another by suitable exteriorly applied tools, to the end that the enamel may be applied downwardly upon the heated metal, and substantially at right angles to each surface to be covered. After the enamel has been applied to the surface and before the tub has been properly brought to a normal temperature, it has been found that the vitreous finish of the enamel will be marred if touched. On account of these manufacturing features, namely that it is necessary to apply the enamel downwardly, substantially at right angles to the surface, and that an enameled surface is marred if touched while hot, it has been impossible heretofore to successfully enamel the exterior surface of the tub.

Attempts have been made to manipulate the heated tub for both exterior and interior enameling such as by securing the operating tools to the foot attaching members of the

tub, but such means for manipulation have proven unsatisfactory because the heated tub bends and warps at such relatively small areas of support. I have found however that, by forming an external peripheral rib on the surface of the tub and integral with its body portion, and by forming attaching lugs integral with rib and the body of the tub, such a tub may be manipulated to enamel both the external and internal surface without warping or bending the body portion of the tub. Such a rib I have illustrated in the drawings, wherein a bath tub 14 is shown in position ready for use, it being provided with orifices 1 and 2 for supply pipes 3 and drain pipe 5, respectively, and it being further provided with a rib 6.

While I do not wish to limit myself to any specific location of the rib upon the exterior surface of the tub, yet for certain reasons (hereinafter more fully explained) I preferably form the rib on the bottom of the tub, as shown, and in such a manner as to form a support for it; and I form a suitable number of lugs 7, provided with holes 8, the lugs preferably being disposed within the peripheral rib, and between the rib and the body portion of the tub. Furthermore I vary the depth of the rib to accomplish proper drainage of the tub, the deeper portion of the rib being at that part of the tub most remote from the drainage orifice. Also when the rib is thus constructed, the edge of it, which rests upon the floor or other support, will preferably lie in a plane parallel to the plane of the top of the tub.

Another feature of my invention concerns the depth of the rib with relation to the thickness of the boss extending below the bottom of the tub at the drain orifice. In order to obtain an efficient drain connection for a bath tub it has been found necessary to form a depending boss 9 below the bottom surface of the tub. It will be seen that, in the handling and transportation of the tub a large portion of its weight will be supported by the said boss, and it has been found that the frequent impacts sustained by the boss, which extends over a relatively small area of the tub's surface, causes the vitreous enamel, adjacent to the said orifice, to be cracked or otherwise injured. To eliminate this objectionable feature, I form the ribs of such depth that the plane of its bearing edge lies beyond the plane of the

outermost edge of the boss 9, so that the entire weight of the tub, when it is resting with its top uppermost, will be borne by the said rib, which will distribute the effect of impact substantially throughout the entire extent of the tub.

While I do not wish to limit myself to any specific drain connection, the connection which I preferably make to the drain pipe, is, in certain respects, similar to that shown in Letters Patent No. 931,019. The bottom of the tub adjacent to the drain orifice is suitably depressed as shown in Fig. 4, to form the proper drainage without having any abrupt bends; and the drain connection consists of an internally threaded pipe-section 10 and an externally threaded sleeve 11. In setting a bath tub, as heretofore installed, it has been thought necessary to extend the drain connection-pipe sufficiently above the floor to make a union connection between it and a depending pipe secured to the orifice of the bath tub. I have found, however, that an efficient and practical connection may be made between the drain-pipe and the drain-orifice of the tub by placing the drain-pipe 5 and the pipe-section 10 below the floor before the tub is in position. The upper surface of the pipe-section 10 is then provided with a suitable gasket 12 and the boss 9 of the drain-orifice is brought to register with the upper surface of the said pipe-section. The sleeve 11, which is preferably provided with suitable fingers 13, to engage the inner surface of the tub, is then screwed into the said pipe-section to the end that the gasket 12 may be properly compressed to form a water-tight joint; and a suitable strainer 15 may be secured to sleeve 11.

I have found that a rib upon a bath-tub, when used in connection with lugs cast integral with the rib and body of the tub, serves as a strengthening girder during the enameling operation; so that the tub while

hot will not warp or bend when attachments are made to the lugs for supporting the

By the use of this expedient I find it possible to enamel a tub on the exterior as well as the interior surface. It will be observed of my invention, that I have provided a bath-tub capable of being enameled on all its exposed surfaces, and that I have provided a protection for the depending boss surrounding the drain orifice.

I do not wish to be limited to the exact details of construction shown and described, for obviously many changes may be made by those skilled in the art without departing from the spirit of my invention.

I claim herein as my invention:

1. A bath-tub provided with a peripheral rib on its exterior surface and integral therewith, and further provided with lugs formed integrally with the tub and with the rib, and holes through the lugs, substantially as described.

2. A cast metal bath-tub, having a bottom drain orifice surrounded by a depending boss, and provided on its exterior lower surface with a peripheral supporting rib which increases in depth as it extends away from the said drain orifice, the plane of the supporting edge of the said rib being parallel to the plane of the top of the tub and being external to the outermost edge of the said boss, substantially as described.

3. A cast metal bath-tub provided with a peripheral rib on its exterior surface and integral therewith, and further provided with lugs formed integrally with the tub and with the rib, the said lugs forming a means for engaging the said tub for manipulation during the enameling thereof.

In testimony whereof I have hereunto set my hand.

JOHN C. REED.

Witnesses:

PAUL N. CRITCHLOW,
ALICE A. TRILL.