

(No Model.)

J. C. REED.
CAST METAL ARTICLE.

No. 570,769.

Patented Nov. 3, 1896.

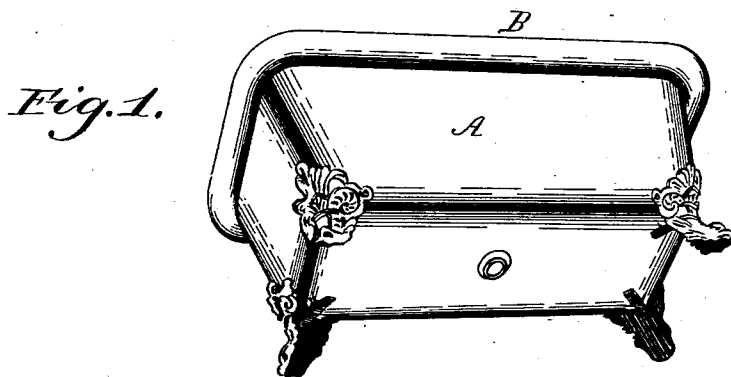


Fig. 2.

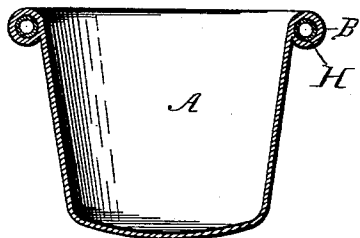


Fig. 3.

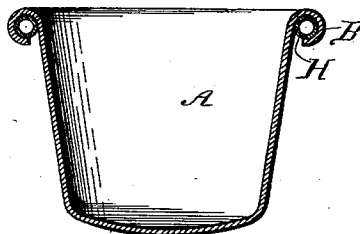


Fig. 5.

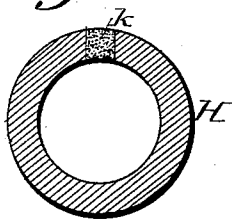
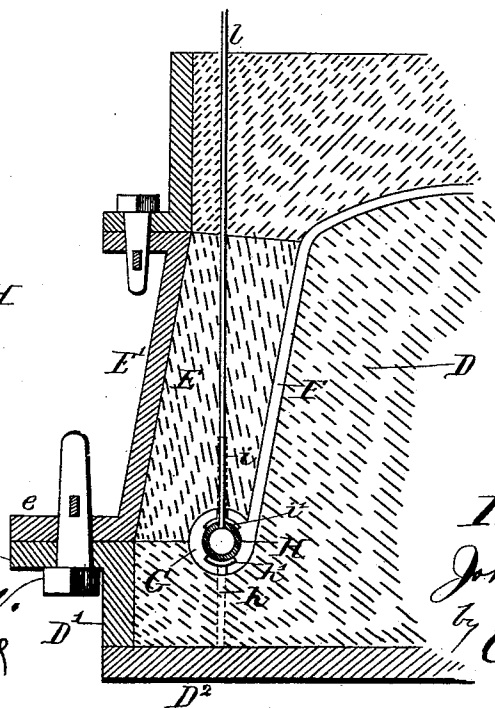


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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CAST-METAL ARTICLE.

SPECIFICATION forming part of Letters Patent No. 570,769, dated November 3, 1896.

Application filed November 29, 1895. Serial No. 570,553. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. REED, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Cast-Metal Articles; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention has relation to that class of metallic articles used in the equipment of the bath-room, laundry, and kitchen, and relates in particular to that class of castings having rims, such as bath, foot, and sitz tubs, sinks, tanks, closets, and the like.

The articles above mentioned and others known under the general designation of "plumbers' supplies" have usually been made with a flat flange cast upon the edge of the article, and upon the top of this flange a rim of wood has been secured by screws passing through holes in the flange. This construction has proved unsatisfactory and unsanitary, owing to the absorbent quality of the wood and the accumulation of filth between the wooden rim and the flange to which it is secured. The flange upon the edge of the article has also been utilized as the rim, being made of sufficient breadth and sometimes in form of segments of circles or ellipses in cross-section. These latter forms of rims, while less unsanitary than the attached rims, yet afford a space for the lodgment of filth on their under sides, and, being of cast-iron, usually present a more or less unsightly and somewhat dangerously sharp edge at the finish of the rim.

The object of my invention is to provide cast-metal articles which will fulfil every sanitary requirement and will be at the same time free from the objections now advanced to articles having flat, semirounded, and scroll-shaped rims, and which will also present a highly artistic and pleasing appearance.

My invention consists in the novel cast-

metal articles hereinafter described and claimed.

Referring to the accompanying drawings, Figure 1 is a perspective view of a bath-tub embodying my invention. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a similar view of a modification. Fig. 4 is a vertical transverse sectional view of a mold adapted to carry my invention into effect, and Fig. 5 is an enlarged transverse sectional view of the lining of the hollow rim employed in connection with the mold shown in Fig. 3.

A designates the body of the tub, B the rim of the same, and H a hollow metallic or other suitable lining wholly or partially inclosed and surrounded by the metal of the rim.

In Fig. 4 of the drawings, which illustrates the mold for the manufacture of the article shown in Figs. 1 and 2, D designates the drag portion of the mold or that part of the mold which corresponds to the interior of the article to be cast. This part of the mold rests within a drag D' and upon a bottom board D², and the drag D' is formed with a flange *d*, upon which rests a flange *e*, formed upon a flask E', that contains the cope portion E of the mold or that part of the mold which corresponds to the exterior of the article to be cast.

Between the cope part E of the mold and the drag part D is the space F, which forms the body of the article and the substantially circular space G, which forms the rim of the same. Within the space G is placed a body H, of suitable material, which forms a lining for the rim and performs the functions of a core, preferably thin iron pipe bent to conform to the outline of the tub and having the joint formed by the meeting of its ends closely united, so as to prevent molten metal from running into the interior of the same.

The body H is placed as nearly as possible in the center of the space G and is supported below by anchors *h h*, having arc-shaped segments *h' h'* on top, the stems of the anchors extending to the bottom board D², while it is held in place from above by anchors *i i*, having arc-shaped segments *i' i'*. The stems of the upper anchors extend up into and are properly secured in the sand of the cheek of

the mold. The part H, while it serves the purpose of a core, remains in the casting and constitutes a permanent part of the completed article.

5 When the metal is poured into the mold, it surrounds the body or lining H with a sudden rush, and sometimes the molten iron will unite in an arch over the body or lining before all the air and the gases known as "vent" 10 have passed off through the sand, and this imprisoned air and vent heated by contact with the molten metal have a tendency to expand and blow out through the metal, causing blow-holes and blisters on the rim of the 15 article. This defect may be obviated by boring a number of holes in that side of the body or lining H which is uppermost when the body or lining H is in the mold, one of such holes being shown at *k*, and packing these 20 holes with molding-sand, so that any air or vent which is imprisoned by the flowing metal will pass into the interior of the lining of the rim, and to permit of the escape of the heated air from within the lining of the rim I provide an escape-pipe *l*, passing through the 25 sand of the mold into the air. This defect may also be obviated by not casting the metal entirely around the core or lining, as shown in Fig. 3. When the latter method is em- 30 ployed, the vent is taken off through the sand in contact with the core or lining at that part of the hollow rim formed by the tube alone. This method lightens the casting somewhat without detracting from its sanitary qualities 35 or departing from its sightly appearance.

The casting is accomplished in the usual way, and the molten metal filling the cavity

of the mold completely or partially surrounds and incloses the lining of the rim, and the article, after being cast, is finished in any desired manner, as by painting or enameling. 40

The completed article is perfectly sanitary, there being no space for the lodgment of dirt or moisture, and presents an artistic and pleasing appearance, and the employment of 45 the hollow lining of the rim renders it possible to cast the tubes or other articles without danger of loss from unequal contraction and without material increase of weight.

Having described my invention, I claim— 50

1. A cast-metal article having a hollow rim integral with the body of the article, forming in cross-section a completely-closed tube.

2. An article of cast-metal ware having a cast rim and a tube around which said rim is 55 cast.

3. An article of cast-metal ware having a cast rim and an included hollow lining.

4. An article of cast metal having a rim cast integral with the article and a hollow 60 body, tube or other lining included in said rim and constituting a part of the completed article.

5. An article of cast metal having a rim cast integral with the article and a hollow 65 body, tube or other suitable lining embraced by said rim, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. REED.

Witnesses:

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