

F. I. GIBBS.  
METHOD OF PRODUCING METALLIC ARTICLES BY ELECTRODEPOSITION.  
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975,386.

Patented Nov. 8, 1910.

Fig. 1.

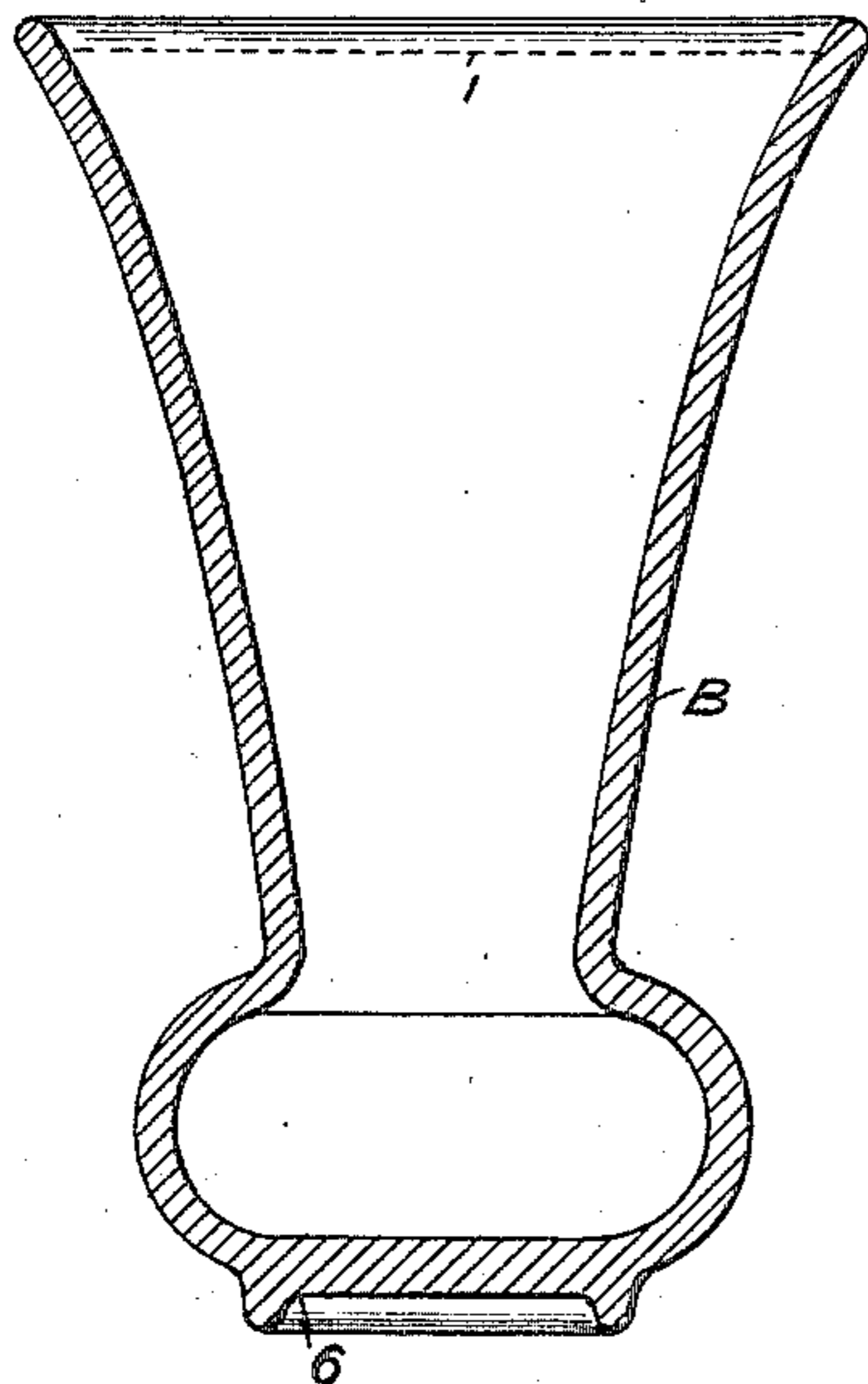


Fig. 2.

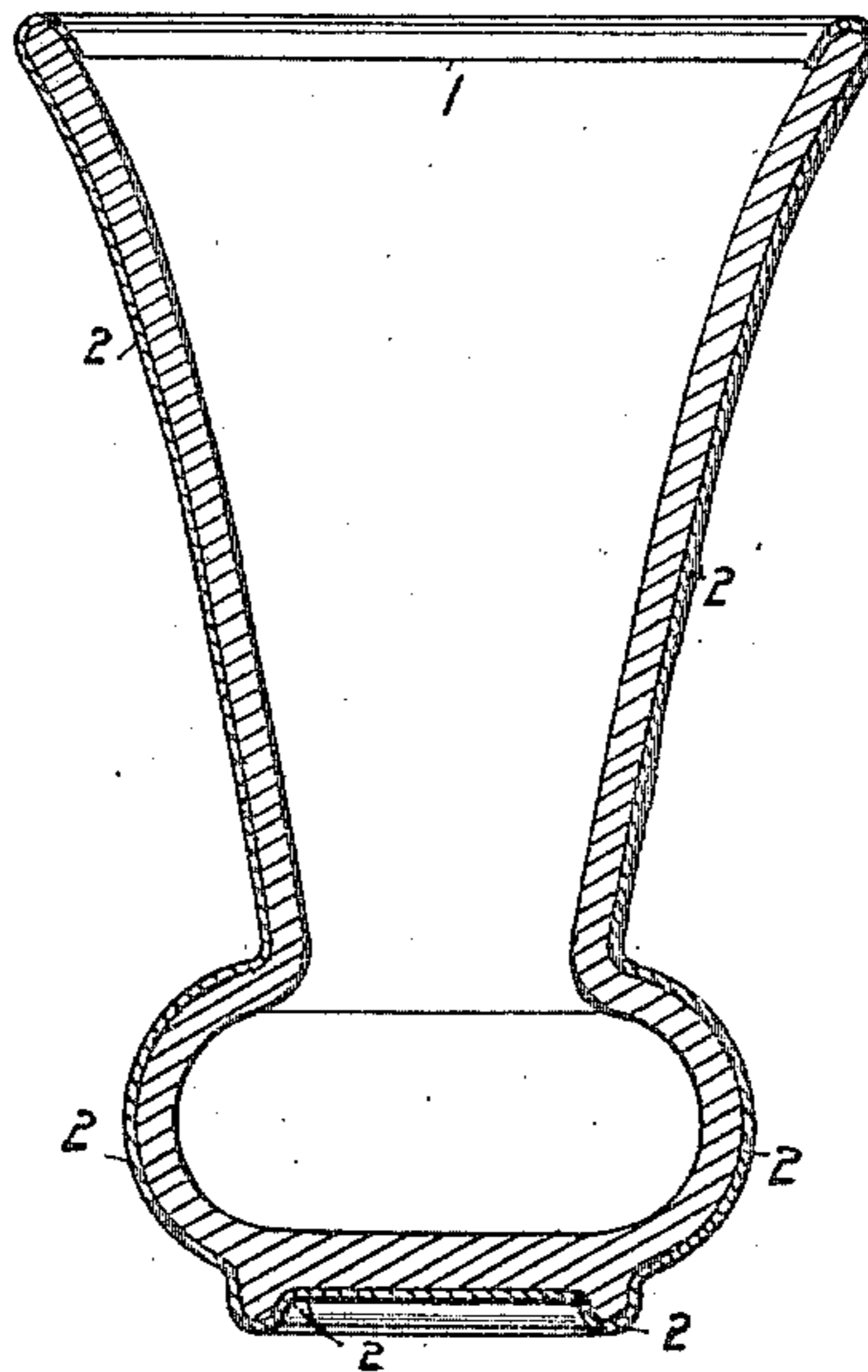


Fig. 3.

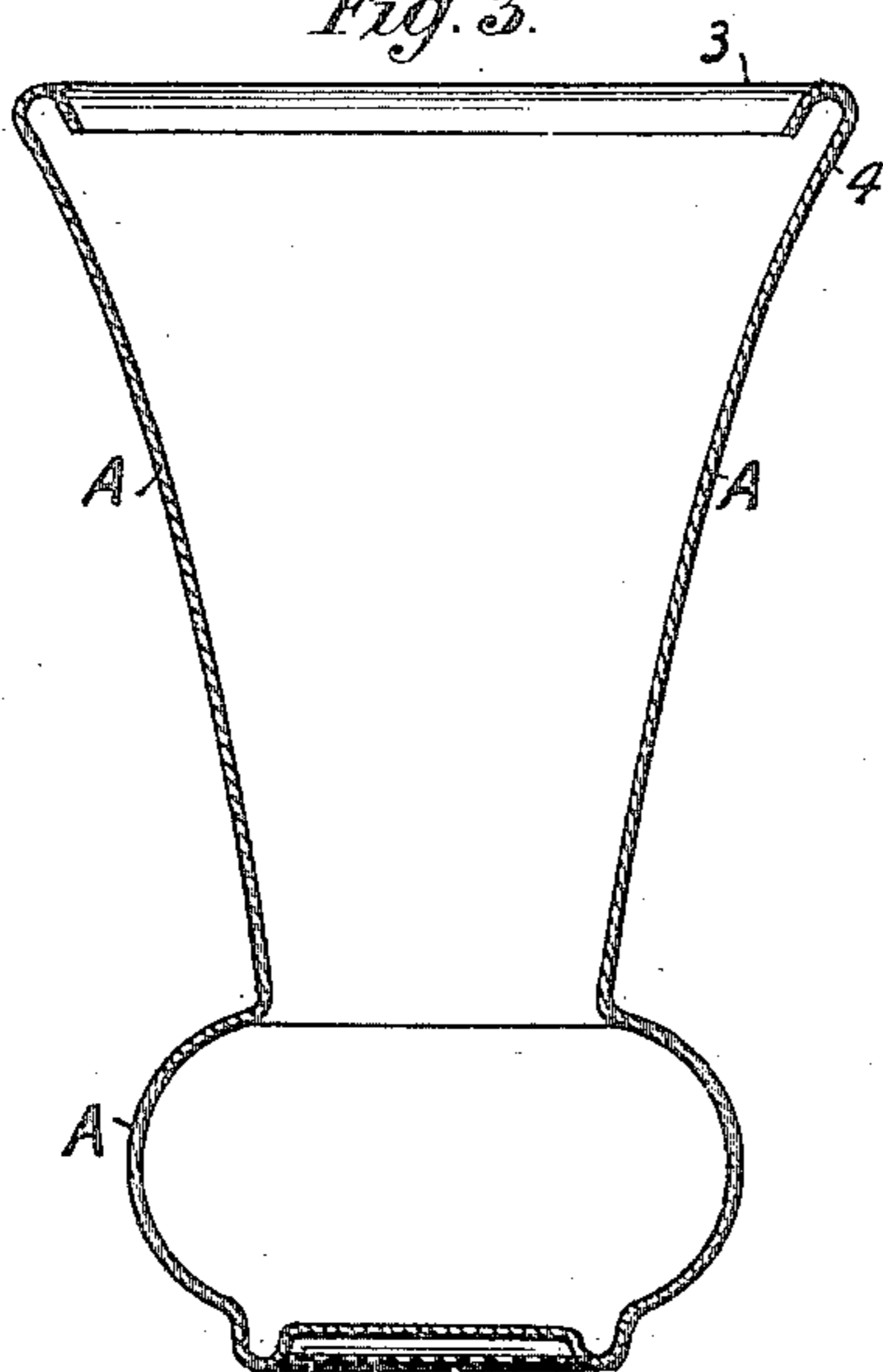


Fig. 7.

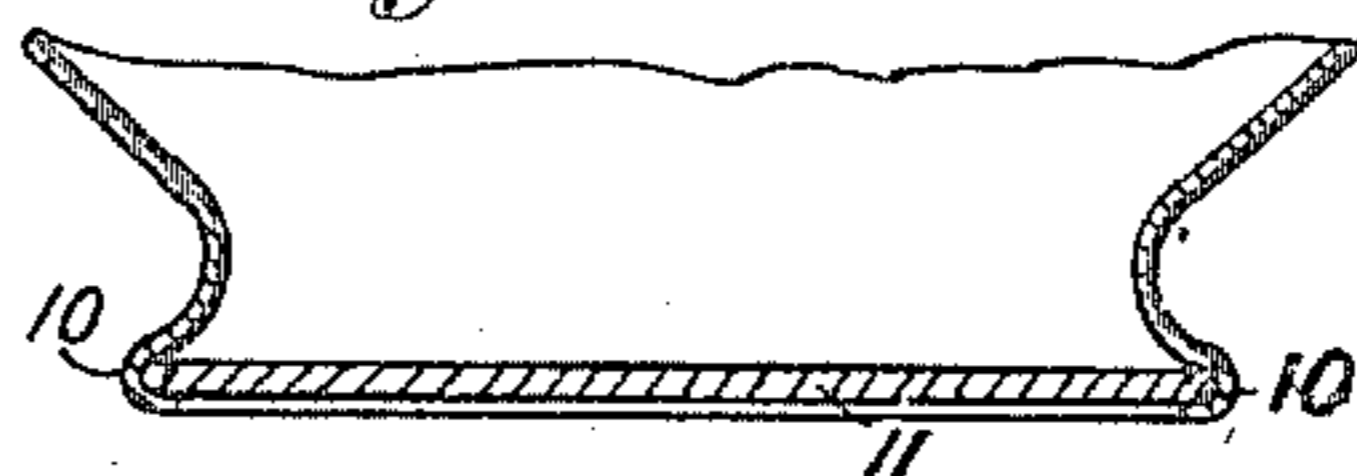


Fig. 4.



Fig. 5.

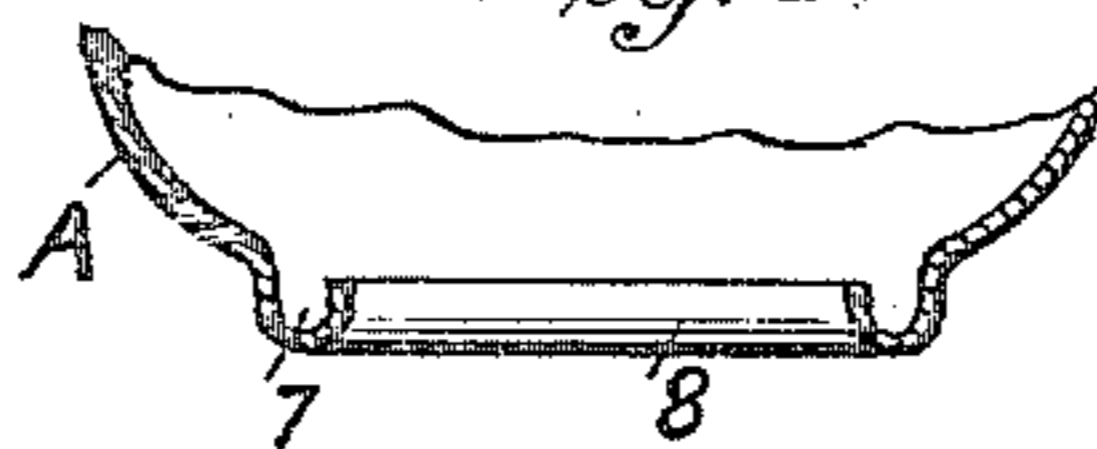
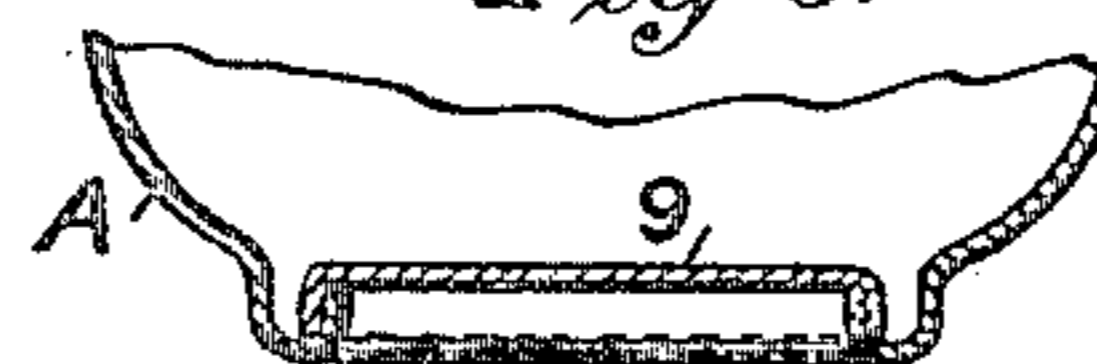


Fig. 6.



Witnesses  
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# UNITED STATES PATENT OFFICE.

FRANK IORNS GIBBS, OF BIRMINGHAM, ENGLAND.

METHOD OF PRODUCING METALLIC ARTICLES BY ELECTRODEPOSITION.

975,386.

Specification of Letters Patent.

Patented Nov. 8, 1910.

Application filed February 23, 1909. Serial No. 479,405.

*To all whom it may concern:*

Be it known that I, FRANK IORNS GIBBS, a subject of His Majesty the King of Great Britain and Ireland, residing at 140 Hurst street, Birmingham, England, manufacturer, have invented new and useful Improvements in the Method of Producing Metallic Articles by Electrodeposition, of which the following is a specification.

10 This invention consists of the herein described improved method of producing many kinds of metallic articles by electrodeposition on glass or potteryware models, or on models of other non-metallic substances, such for instance as ivory, celluloid, 15 hard wood, tortoise-shell, vulcanite and jet, on to the surfaces of which, when properly prepared, metals can be deposited and from which the deposit forming the required metal article is afterward removed.

My invention is applicable to all those metal articles which have a rim or edge such for instance as tea pots, coffee pots, 25 jugs, cups, plates, dishes and all kinds of hollow-ware articles and to candle sticks vases and the like.

The object of this invention is to form the electro-deposited metal article with a rounded channel section or inclosed edge or 30 rim of double thickness of metal which will be smooth and form a properly finished rim or edge to the article. As an example I will describe my invention in connection with making a metallic vase and I will refer to 35 the accompanying drawings on which—

Figure 1 is a sectional elevation of the glass or other non-metallic or non-porous model which I use in my process; Fig. 2 shows the same model with an electro-deposit on its exterior and extending for a 40 certain distance in the interior; Fig. 3 is a sectional elevation of the complete vase after the model has been removed; Fig. 4 is a sectional elevation of the top part of the vase showing how the internal overhanging edge can be closed in to form a hollow bead around the rim; Figs. 5 and 6 are sectional 45 elevations of the bottom of the same vase showing how the same may be deposited open with a channel section rim and subsequently closed; and Fig. 7 is a sectional elevation of the foot part of a metal vessel formed with a channel section rim in accordance with this invention and closed by 50 a separate metal blank.

In making for instance the complete me-

tallic vase A shown by Fig. 3, I employ a "model" B Fig. 1 which is an ordinary glass or glazed potteryware or other suitable non-metallic vase, the exterior shape of 60 which corresponds with the internal shape of the required vase shown in Fig. 3. This model is by preference made of glass or glazed potteryware so as not to affect the electrolyte in the bath, and its exterior surface is coated with a metallic paint of sufficient metallic strength to convey the electric current, or is coated with any other suitably prepared conducting material of which 65 many kinds are well known. According to this invention the conducting material forming the prepared surface 2 and which covers the outside of the model B is carried over the top edge of the model to the line 1 in Fig. 1 inside the vase so that the deposited metal 70 will extend from the outside over the top edge of the model and down to the line 1 in Figs. 1 and 2 and will thus form an inverted channel section rim around the top of the vase when the model has been broken away 75 or otherwise removed therefrom the upper edge 3 of the vase turning inwardly and forming the inverted channel 4 as in Fig. 3. This overhanging edge can if desired be closed in, as in Fig. 4, so as to form a 80 nice rounded edge, or this channel 4 can be filled up by leaving in it the top rim of the glass or potteryware model which has previously been nicked around by a diamond at the line 1; or the channel can be 85 filled in with metallic paste and the vessel be returned to the bath so that the metal will be deposited over the paste at what was the mouth of the channel thus making an apparently thick solid edge; or the channel 90 4 can be filled with solder, or with wire, or with a strip of metal, to strengthen it, and the overhanging rim 3 be closed down over this strengthening wire or strip or solder thus forming a strong bead or rim to the 95 vase. It will be evident that if desired the foot of the vessel may be similarly formed with an inturned edge as shown for instance in Fig. 5. To accomplish this the said prepared surface will be continued around the 100 foot and finished at the line 6 in Fig. 1 so that when the model has been cracked and removed from the deposited exterior the foot of the latter will have an upturned rim 7 as in Fig. 5 leading to a central hole 105 8 at the bottom of the vase which can then as in Fig. 6 be closed by a metal disk 9

soldered or otherwise fixed thereto. Or as shown in Fig. 7 the trough section rim 10 around the opening in the base of the deposit may be shaped to receive a disk like metal plate 11 which can be tucked into the trough section bead or rim 10 of the base of the deposited article and this bead can then be closed down on to the rim of the disk 11 or part which closes the hollow base and which will then appear to be a part of the same. After this has been done the vessel can be returned to the bath so as to deposit some more metal around the foot to hide the joint at 10 so that the disk 11 will then appear to be an integral part of the vessel. When the metal or other article, as for instance a vase, is to be formed by depositing the metal on the inside of the model, then the trough section rim will turn outwardly instead of inwardly as will readily be understood as the conducting surface will extend from the interior of the model over the rim of the same and finish at a definite line on the outside of the model instead of inside the same as above described. The

said channel section rim can be similarly formed during the depositing of a metal article which is made perforated in an ornamental design like a saw pierced silver article such for instance as a sweetmeat dish as will readily be understood. 30

What I claim as my invention and desire to secure by Letters Patent is:—

A method of forming a rounded rim at an opening in a metal article consisting in continuing the prepared surface of the glass or pottery ware model to a definite line on the other side so that when the metal is electro-deposited thereon a rim will be formed around the top of the vessel from which the model can be removed, and then filling in the rim with suitable material and making it solid. 40

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses. 45

FRANK IORNS GIBBS.

Witnesses:

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THOMAS JOHN ROWE.