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ART OF INCRUSTING GALVANOPLASTY AND THE OBJECT PRODUCED THEREBY

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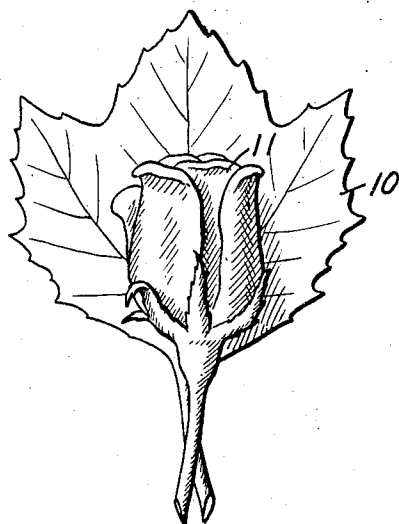


Fig. 1

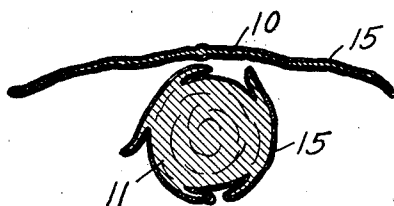


Fig. 2

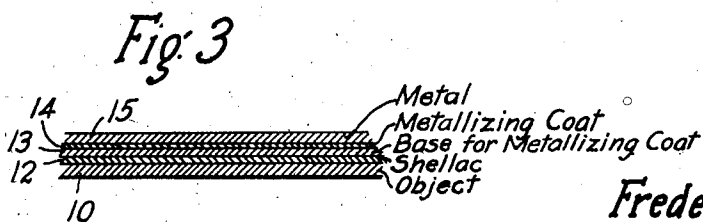


Fig. 3

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ART OF INCRUSTING GALVANOPLASTY AND THE OBJECT PRODUCED THEREBY.

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This invention relates to incrusting gal-
vanoplasty or the process of preserving and
coating objects with a metallic deposit.
This invention relates further to a new ar-
5 ticle of manufacture produced by said pro-
cess which includes a natural or artificial ob-
ject coated evenly throughout with a layer
of metal.

While previous attempts at incrusting gal-
10 vanoplasty have been expensive, uncertain
of results and laborious, I have found that
by first stiffening the object to be metallized,
and then coating said object with the proper
base, I am enabled to readily metallize any
15 fragile objects such as flowers, leaves and
buds, and other objects of any description,
whereafter the usual processes of electroplat-
ing are effective to deposit an even coat of
metal thereon.

20 The various objects of this invention will
best be understood from the description
which follows and from the drawings, in
which

Fig. 1 is a front elevation of a metal in-
25 crusted leaf and flower bud adapted to be
used for ornamental purposes.

Fig. 2 is a horizontal section of the same
showing the metallic layer thereon, but not
30 showing the stiffening coat, the base, or the
metallizing coat for the reason that said
base and coats are of insufficient thickness
to be clearly shown therein, and

Fig. 3 is a cross section of my invention
showing the various layers and coats there-
35 on, the thickness of said layers and coats
being greatly exaggerated for clearness.

In carrying out my improved process, I
first coat the object to be plated, such as the
leaf 10 or the flower 11, with a lacquer as
40 12 designed to stiffen and preserve the ob-
ject and to exclude air therefrom. For this
purpose I have found shellac to be best suit-
ed. After the article 10 has been dipped in
shellac and dried, a second coat 13 of pec-
45 uuliar composition is applied thereto, which
coat is designed to form the base for the
metallizing coat 14, which in turn acts as a
conductor in the electrolytic bath wherein
the metal incrustation 15 is deposited.

50 Said base 13 is preferably made of rub-
ber, carbon bisulphide, asphaltum, beeswax,
mutton tallow, spirits of turpentine and yel-
low or red phosphorus in substantially the

following proportions and prepared substan-
tially as follows:

Dissolve a quarter pound of para rubber
in about two pounds of bisulphide of car-
bon. To the solution, add a quarter pound
of powdered asphaltum. Then melt to-
60 gether a half pound each of beeswax and
mutton tallow and add to the mixture, add-
ing also a half pint of spirits of turpentine
and a quarter pound of yellow or red phos-
phorus. This formula is for the base 13
with which the object is completely coated
65 by dipping, brushing or otherwise, and has
the property of causing the conducting coat
14 soon to be described, to adhere firmly
thereto. Said conducting coat 14 is made
by adding one ounce of silver nitrate to one
70 gallon of distilled water, though it will be
understood that throughout this specifica-
tion, gold chloride may be substituted for
the silver nitrate if desired, since both of
these salts act in exactly the same manner. 75

The object 10 which has been previously
coated and prepared as above described, is
then dipped into the conducting solution 14
and dried, whereby all the surfaces of the
object become conductive to the electrical
80 current and suitable for electroplating.

The final step in the process is plating the
object first prepared as above described elec-
trolytically with a layer of copper as 15 or
with any other metal as is well known in the
85 art. I have found that the surfaces pro-
duced by my improved process are exact re-
productions of the surfaces of the original
unplated object, all of the details being
clearly reproduced and every part of the
90 object being evenly coated with a metallic
deposit of any required thickness, which is
firmly incorporated with the object and can-
not readily be peeled or worn off.

It will be seen that by coating the entire
95 object, air is excluded therefrom, and the
object is therefore preserved indefinitely.
It will further be seen that my improved
process is certain, cheap and efficient and
well adapted for the commercial production
100 of metal covered objects on a large scale.
Said objects have many uses, as for instance,
in the ornamentation of shoes, hats and other
wearing apparel, and for the decoration or
ornamentation of furniture, lamps, picture
frames, mirrors, walls and buildings, since

said objects have substantial wearing properties and are capable of enduring indefinitely.

I do not intend to limit myself to the specific objects illustrated herein, nor to the exact process or formulæ, which I have described above and which I intend to be merely illustrative of my invention, since it will be understood that various changes therein may be made which fall within the range of equivalents afforded by the appended claims.

I claim:

1. The art of galvanoplasty comprising first coating an object with stiffening material, then coating said object with a base containing phosphorus, rubber, asphaltum, carbon bisulphide and binding material, coating with silver nitrate on said base whereby said base reacts with the silver nitrate to render the surface conductive, and then electroplating said object.

2. The art of incrusting galvanoplasty comprising coating an object with shellac, then coating the shellacked object with a base adapted to retain a coat of silver nitrate thereon and containing phosphorus, rubber and binding material, dipping the object so coated into a solution of silver nitrate, allowing the silver nitrate to dry, and plating the object.

3. In the art of incrusting galvanoplasty, coating an object with a base for a conducting coat, said base containing para rubber dissolved in carbon bisulphide, powdered asphaltum, beeswax, mutton tallow, turpentine and phosphorus, then dipping the object so coated into a solution of silver

nitrate, whereby the base and the silver nitrate react to form a conducting coat, and plating the object.

4. As a new article of manufacture, a metallic article simulating a naturally grown object comprising an interior natural fragile object, a stiffening layer of shellac coating and preserving said object, a base for a second layer on said shellac including phosphorus, rubber, carbon bisulphide, asphaltum and binding material, a second layer forming a conducting surface with said base, and an incrusting layer of metal on said last mentioned layer completely covering and reproducing the contours of the surfaces of said object.

5. As a new article of manufacture, the combination with a fragile natural object, of a stiffening layer on said object, a layer of a mixture of rubber, bisulphide of carbon, asphaltum, beeswax, mutton tallow, turpentine, and phosphorus on said stiffening layer, a layer of a silver product, and a layer of metal completely enclosing the aforesaid layers and said object and reproducing the contours of the surfaces thereof.

6. As a new article of manufacture, a perishable object, a layer of shellac directly covering the surfaces of said object, a layer of a mixture of rubber, bisulphide of carbon, asphaltum, waxy material, turpentine and phosphorus on the shellac layer, a layer of a silver product on the layer of said mixture, and a layer of metal on said silver product layer, said last mentioned layer conforming to the contours of the surfaces of said object.

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