

Process for electro-plating eggs

This invention relates to a process for electro-plating eggs and is particularly concerned with such a process for real or natural fresh eggs.

5 The inherent visual and aesthetic appeal of the natural fragility and delicacy of real eggs makes then a potentially attractive commercial proposition as the basis for novel and distinctive ornamental or jewellery items, but poses particularly acute fabrication and process problems in order to achieve
10 a suitable desired quality of finished precious or semi-precious product directly representing or evocative of the natural object and yet reasonably able to withstand the rigours of handling and usage and without undue deterioration with age.

15 According to the invention there is provided a method of producing an ornamental or jewellery item utilising a natural egg and comprising the steps of drilling a hole in the egg wall and removing the natural egg contents by introducing a pressure
20 differential between the egg interior and exterior, applying a protective coating to the egg exterior surface, introducing weighted particles through the hole into the egg interior, introducing a wax bonding agent for said weights and to plug said hole, applying
25 an electro-conductive paint to said coating,

electro-plating one or more metal surface coatings by immersing in an appropriate electroplating bath solution.

There now follows a description of a particular embodiment of the invention, by way of example only.

A hole is first drilled in one end of the fresh egg to allow extraction of the egg yolk and egg white, by either sucking out the contents with a syringe or introducing a jet of air into the egg and forcing out the content. The inside of the empty egg-shell is then washed by using a jet of water.

In order to prevent the egg shell from being attacked by acid, a coating of acid-resistant paint is sprayed onto the egg outer surface and either air dried or heat cured in an oven at 150°C for 20-30 minutes. Steel shots, lead shots or powder with weights ranging from 10-500gms are then introduced into the egg through the hole in the wall thereof, in order to weight down the egg during electroplating. At the same time, sufficient bonding agent, such as any commercially available wax having a melting point in the range of 50-200°C is introduced so that, when melted, it will bond the weights internally to the broader base of the egg, in order that the egg will stand upright of its own accord. The hole is then

sealed with wax and a layer of conductive paint is applied on the outer shell.

The egg is then passed through an electroplating copper sulphate bath at a current density of
55 1-2 amps/dm² for between 24 and 48 hours, until a thickness of 0.5mm to 5.0mm copper is achieved, depending upon the size of the egg. Any rough surface spots of irregularities on the copper plated egg are ground off with a belt sander and the surface then
60 buffed to a mirror finish with a polishing machine. The electroplated egg is then placed in an upright position in an oven at 150°C to enable the wax to melt, thus holding down the steel shots, lead shots or powder in a position that will cause the egg to
65 stand generally upright on its base. The upright standing egg is then electro-cleaned before re-brightening in a copper plating bath at a current density of 3-4 amps/dm² for about 10 minutes. This is followed by nickel plating at 3-4 amp/dm² for 4 minutes. The
70 nickel plated egg is immediately gold-striked in a gold-cyanide bath for 5-10 sec followed by electroplating in a gold solution at a current density of 0.2-0.5 amps/dm² for 3-5 minutes.

The gold-plated egg is finally lacquered and
75 allowed to dry.



Claims

1. A method of producing an ornamental or jewellery item utilising a natural egg and comprising the steps of drilling a hole in the egg wall and removing the natural egg contents by introducing a pressure differential between the egg interior and exterior, applying a protective coating to the egg exterior surface, introducing weighted particles through the hole into the egg interior, introducing a bonding agent for said weights and to plug said hole, applying an electro-conductive paint to said coating, and electroplating one or more metal surface coatings by immersing in an appropriate electroplating solution.
2. A method of producing an ornamental item, as claimed in Claim 1, wherein an initial copper electroplate is applied by immersion in a copper sulphate electrolyte.
3. A method of producing an ornamental item, as claimed in either of the preceding Claims, wherein a final gold electroplate is applied by immersion in a gold-cyanide electrolyte.
4. A method of producing an ornamental item, as claims in any of the preceding Claims, wherein said bonding agent is melted by the application of heat prior to said electroplating in order to allow said weights to move internally to the egg base/tip and thereby hold the egg in a generally upright position on

(13)



- 5 -

its base.

5. A method of producing an ornamental item, as claimed in any of the preceding Claims, wherein the electroplated egg surface is polished by buffing.

105 6. A method of producing an ornamental item, as claimed in any of the preceding Claims, wherein a lacquer finish coat is applied to the electroplated egg.

7. A method of producing an ornamental item,
110 substantially as hereinbefore described.

8. An electroplated egg produced by the method according to any of the preceding Claims.
