

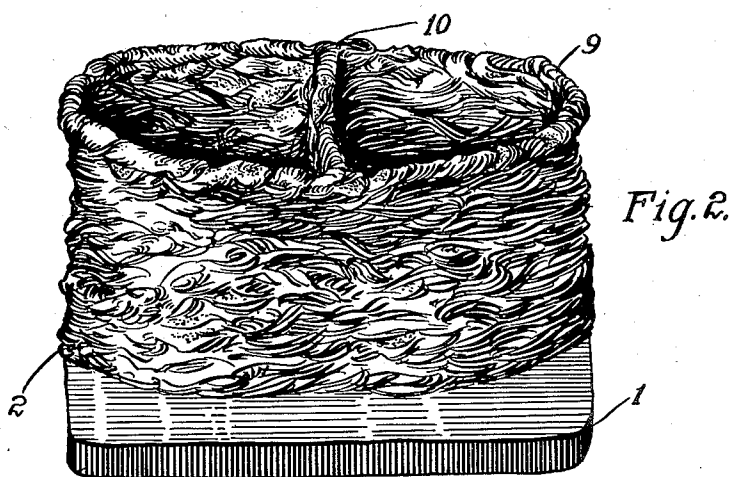
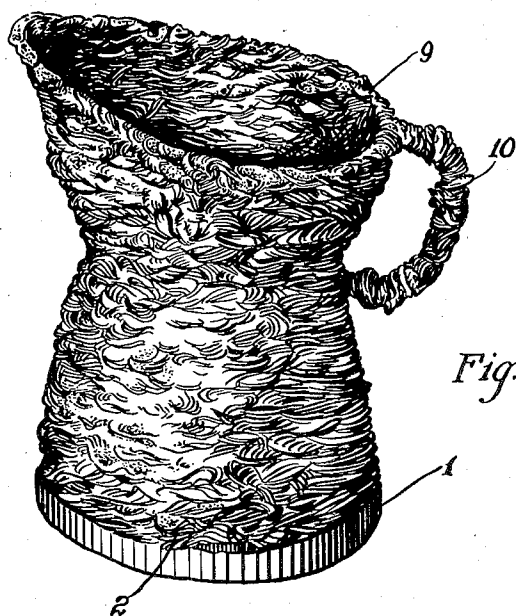
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1,533,300

R. BAKER

METHOD OF MAKING DECORATIVE ARTICLES

Filed Nov. 12, 1920



WITNESSES:

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METHOD OF MAKING DECORATIVE ARTICLES.

Application filed November 12, 1920. Serial No. 423,647.

To all whom it may concern:

Be it known that I, RALPH BAKER, a citizen of the United States, and a resident of Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Methods of Making Decorative Articles, of which the following is a specification.

This invention relates to ornamental arc welding, more especially to utilizing an electric arc, such as is ordinarily employed for electric welding, for the formation of deposits to produce receptacles or containers of ornamental and useful shapes.

I have found that metal derived from a fusible metal electrode by the passage of a current therethrough may be so deposited in superposed layers as to form various articles of an ornamental and useful nature, it being among the objects of my invention to produce such objects of various designs.

Another object of my invention is to construct walls of receptacles or containers by manipulating a fusible electrode helically to form superposed deposits of metal.

A further object of my invention is to provide mechanical control means for manipulating an electrode to obtain predetermined, uniform deposits of metal.

In practising my invention, I generally provide a non-adherent base plate on which the metal is deposited by an arc formed between the base plate and a fusible metal electrode. The current used is of such magnitude as is consistent with the speed at which the electrode is manipulated and the thickness of the deposit desired, the current value usually varying from 5,000 to 10,000 amperes per square inch.

In the accompanying drawings which illustrate several embodiments of my invention,

Fig. 1 is a view, in perspective, of an article formed on a metal plate, and consisting of superposed layers of metal deposited thereon in accordance with my invention;

Fig. 2 is a similar view of an article of somewhat different structure;

Fig. 3 is an elevational view of a wall section showing a sequence of deposits formed in accordance with my invention.

In order to form receptacles or other objects by my method, I provide a fusible electrode of metal placed in a suitable weld-

ing circuit. In accordance with this invention, any suitable motion may be given to the electrode to form various configurations built up of superposed layers of metal deposits to form containers.

To form an integral structure, I utilize a non-fusible base plate, and, by manipulating the electrode to form an endless spiral deposit having a lead equal to the width of the deposit, I form the base or bottom of a container. In forming the side walls, I manipulate the electrode in a circular manner, forming a continuous helix of deposited metal having a lead equal to the depth of the of the deposit.

In forming a complete container from deposited metal, I generally utilize a metal base plate of a high thermal conductivity and capacity which rapidly diffuses the heat of the arc, thus preventing fusion of the metal deposits to the plate. In some instances, I may utilize a base plate of low thermal capacity or of the same metal as the fusible electrode and allow the deposited metal to adhere thereto to form an integral part thereof.

I establish an arc between a fusible metal electrode and a base plate 1 to form a deposit 2 of the desired shape or outline, either round, as shown in Fig. 1, or elliptical, as shown in Fig. 2, or of any suitable contour. By manipulating the electrode to follow the same outline as deposit 2 over and over again, I obtain an endless deposit forming superposed layers 3, 4, 5, 6, 7, 8, etc., constituting the walls of the container. A double or extra heavy deposit 9 may be formed as the top layer of the container, and handles 10 may be formed on the body, as shown, by superposing deposits in a suitable manner.

I need not necessarily manipulate the electrode by hand. If the electrode is to be manipulated to form a number of articles having like contour, pantographic or other apparatus, such as is used by engravers, may be employed.

This invention allows a wide latitude of design and manipulation. The superposed deposits may be combined into any one of a large number of designs, patterns, objects of art, utensils, imitations of objects, trimmings for objects, etc.

It is to be understood that, although I have described my invention as including

the use of a metallic-electrode welding arc, it is not limited to the use thereof, but other means for depositing molten metals, in a manner similar to that described, may be
5 used. For instance, a carbon arc may be used in combination with a fusible metal rod or bar.

I claim as my invention:

10 1. A method of forming metal deposits into receptacles which comprises establishing an arc between a fusible electrode and a metal base, and manipulating said electrode to produce superposed deposits to form the walls of a receptacle.

15 2. A method of depositing metal which comprises establishing an arc between a fusible electrode and a metal base, and manipulating said arc on said base to form an endless helix of superposed deposits.

3. A method of depositing metal which 20 comprises establishing an arc between a fusible metal electrode and a non-adherent metal base plate, manipulating said arc spirally to form contiguous layers, and forming an endless helix of superposed deposits thereon. 25

4. A receptacle comprising superposed layers of fused metal.

5. A receptacle comprising a spiral deposit of fused metal forming a base of contiguous layers, and superposed layers of 30 fused metal forming the walls thereof.

6. A receptacle comprising contiguous and superposed deposits of fused metal having projections deposited thereon.

In testimony whereof, I have hereunto 35 subscribed my name this 3rd day of November, 1920.

RALPH BAKER.