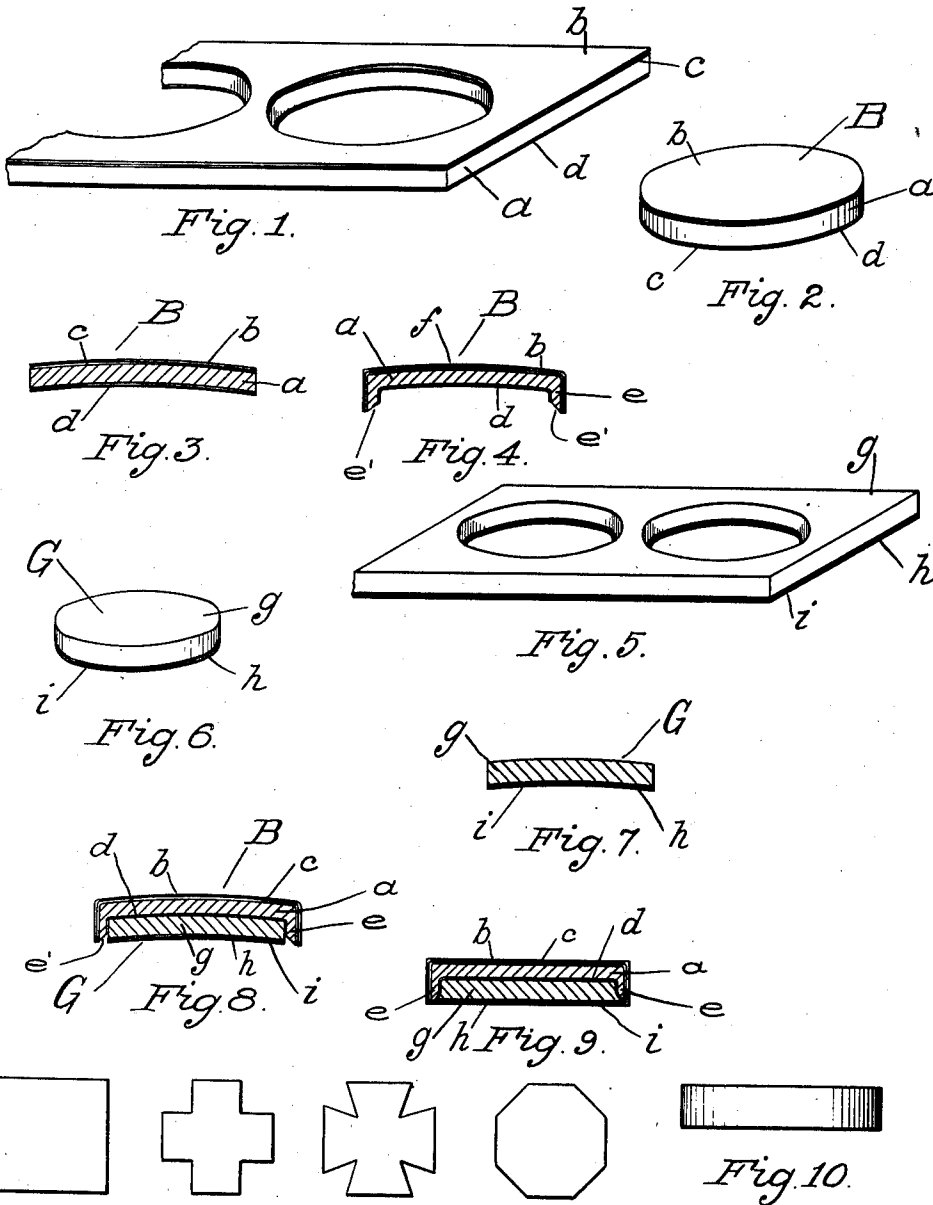


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PROCESS OF PLATING.
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Witnesses

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1,093,698.

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To all whom it may concern:

Be it known that I, CHARLES D. HEATON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Processes of Plating, of which the following is a specification.

My invention relates to a process of plating one metal upon another, and more particularly to inclosing the entire area of a metallic article with another metal.

In plating a metal with an exterior of precious metal it has heretofore been possible, by what is known as double plating, to apply a precious metal plating material to the two parallel upper and lower faces of a flat base metal blank, but the edges of the blank in such cases have required an additional treatment known as shading; or to be electroplated, which has involved great expense, and has resulted in a nonuniform character of plating surface.

The essential objects of my present invention are to overcome the enumerated disadvantages, and to uniformly cover every portion of the interior metal with a uniform and homogeneous metal covering, and to attain this by a process which is simple, inexpensive, and adaptable to a variety of forms.

To the above ends essentially my invention consists in the steps, and in the combination and arrangement of steps, hereinafter set forth; and embodied in the appended claims.

In the accompanying drawings which form a part of this specification Figure 1 is a perspective view of a strip from which one blank employed in my process is originally cut, Fig. 2, a like view of the severed blank, Fig. 3, a diametrical section of the same, Fig. 4, a like section of the blank after the bending operation, Fig. 5 a perspective view of the strip from which the second blank is originally cut, Fig. 6, a like view of the severed blank, Fig. 7, a diametrical section of the latter, Fig. 8, a like section of the assembled blanks prior to initial compression, Fig. 9, a like view of the same after compression, Fig. 10, a side elevation of the article after the completion of the process, and Figs. 11, 12, 13, and 14, plan views of some articles of different shapes adapted to be made by my process.

Like reference characters indicate like parts throughout the views.

My process is performed as follows. I utilize in the first instance a strip of plated material such as shown in Fig. 1, consisting of a layer of base metal *a* attached to an outer strip of precious metal *b* by an intermediate film of solder *c*. Upon the bottom surface of the strip is a film or layer of solder *d*. From this strip is cut by suitable tools a disk B such as shown in Figs. 2 and 3. This blank is then drawn up into a cup or cap shape as shown in Fig. 4, whereby is formed an annular inturned flanged portion *e* having an internal bevel *e'* upon its inner face. The body of the blank during the operation is preferably bent slightly into concavo-convex form as at *f*. I next utilize another strip of material such as that shown in Fig. 5 comprising a base metal body layer *g* attached by a film of solder *h* to a precious metal skin or plate *i*. This strip is a common commercial article and its method of construction is not pertinent. From this strip by suitable tools is cut a circular blank G, shown in detail in Figs. 6 and 7. The member G is preferably slightly convexed. The shell or cup B is assembled with the disk G by placing the latter within the former as a loose fit, the flange *e* extending to substantially the plane of the bottom face of the disk G. The members thus assembled are next subjected to heat sufficiently intense to fuse the interior solder film *d*, thus uniting the base metal portions *a* and *g*. By suitable tools applied to the periphery of the flange *e* and to the top and bottom of the members B and G the whole mass is compressed inwardly, whereby the precious metal skin *i* of the member G is forced outwardly or laterally, and the metal skin *b* of the beveled or inclined portion *e'* of the member B, and the precious metal portion *i* are brought into contact with each other, thus making a continuous precious metal plating or skin upon the exterior of the member throughout, and of a uniform character. If desired the article in the form shown in Fig. 9 may be again swaged or compressed to improve its form and appearance, but this is not essential.

In the present instance my process is shown in conjunction with circular blanks. It will be understood, however, that the

blanks may in outline be of any preferred desired form. A few of these forms are the square, the Maltese cross, the Greek cross, and the octagon, shown in Figs. 11, 12, 13, and 14 respectively.

While the parts *b* and *i* have been mentioned as precious metals it will be understood that these metals may be of any character or nature other than precious metals which is preferred as an outer skin or covering for the completed article.

What I claim is:—

1. The process of forming ornamental articles consisting in compressing a precious metal covered shell over one surface and the edge of a precious metal covered blank, with a film of solder intermediate the shell and blank, and subjecting the parts to heat to fuse the solder and producing a seam at the corner of the article.

2. The process of forming ornamental articles consisting in first assembling a precious metal covered shell over one surface and the edge of a precious metal covered blank, with a film of solder intermediate the shell and blank, next subjecting the compressed parts to heat to fuse the solder, and then compressing the soldered shell and blank.

3. The process of forming ornamental articles consisting in forming a blank comprising a base metal body, a precious metal exterior layer and an interior solder layer into a shell comprising a flat body provided with a peripheral inclined flange, placing loosely within the flange a blank comprising a convex base metal body, and a precious metal outer layer, subjecting the parts to heat to fuse the solder layer, and finally compressing the shell and the last mentioned blank.

4. The process of forming ornamental articles, which consists in forming a substantially cup-shaped blank with an interior solder layer and an exterior layer of precious metal, placing therein a blank with a precious metal covering, subjecting the parts thus assembled to heat to fuse the solder and unite said blanks, forcing outwardly the precious metal cover of the last-named blank and causing it to unite with that of the first-named blank at the corners of the article, rendering the seam invisible.

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Witnesses:

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