

W. E. HEEREN.
METHOD OF PRODUCING ORNAMENTAL ARTICLES.
APPLICATION FILED FEB. 1, 1909.

958,641.

Patented May 17, 1910.

Fig. 1

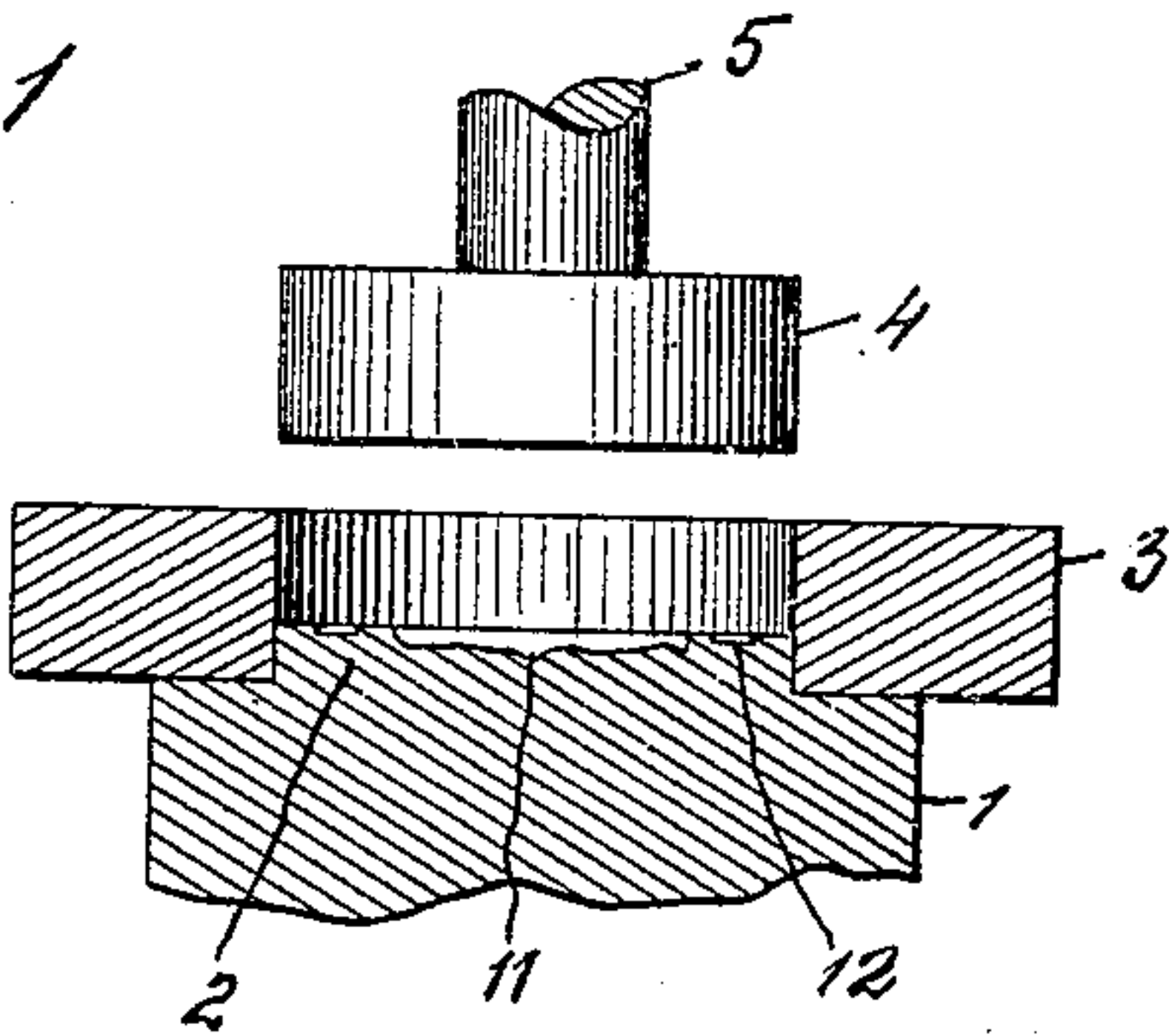


Fig. 7.

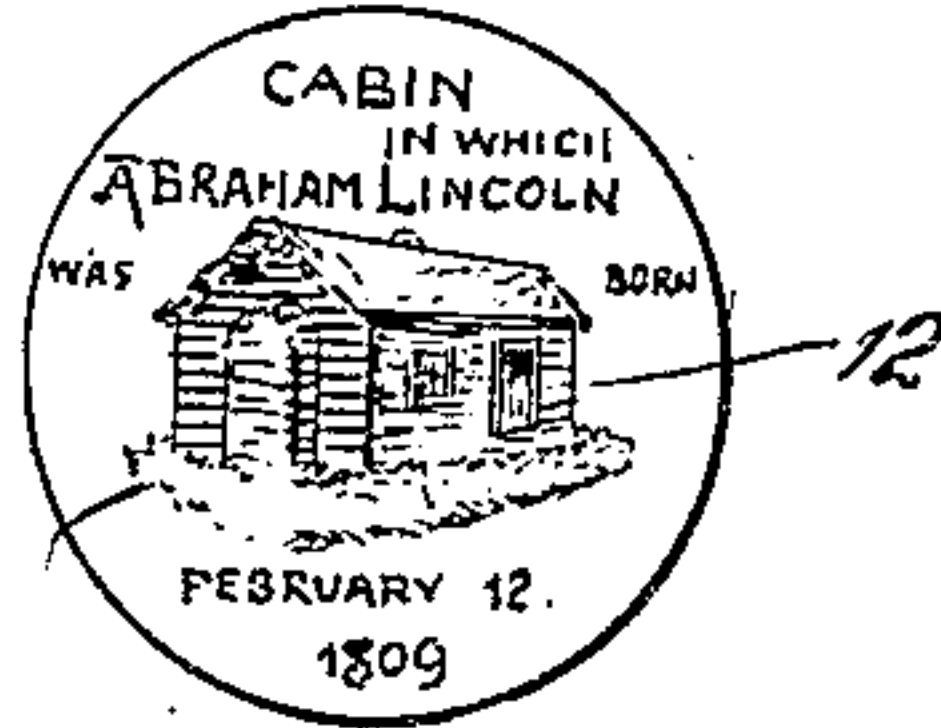


Fig. 2.

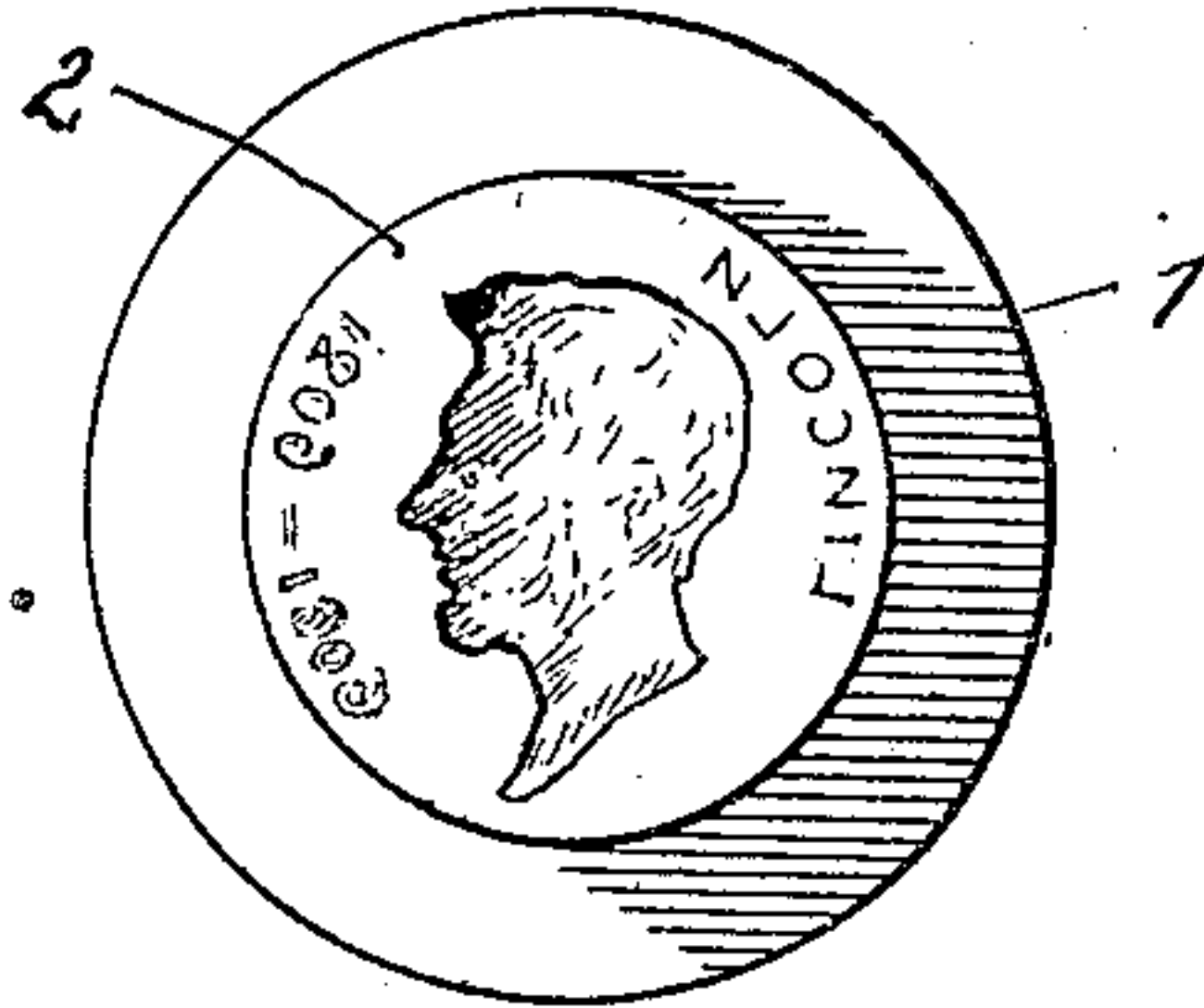
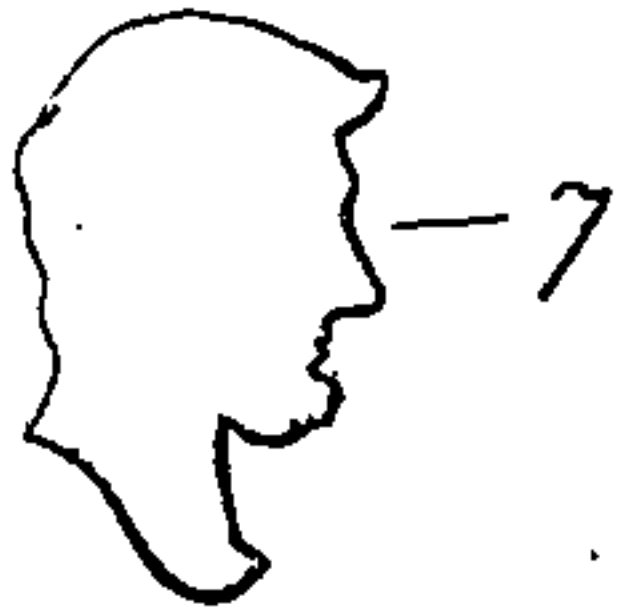


Fig. 8

Fig. 3.

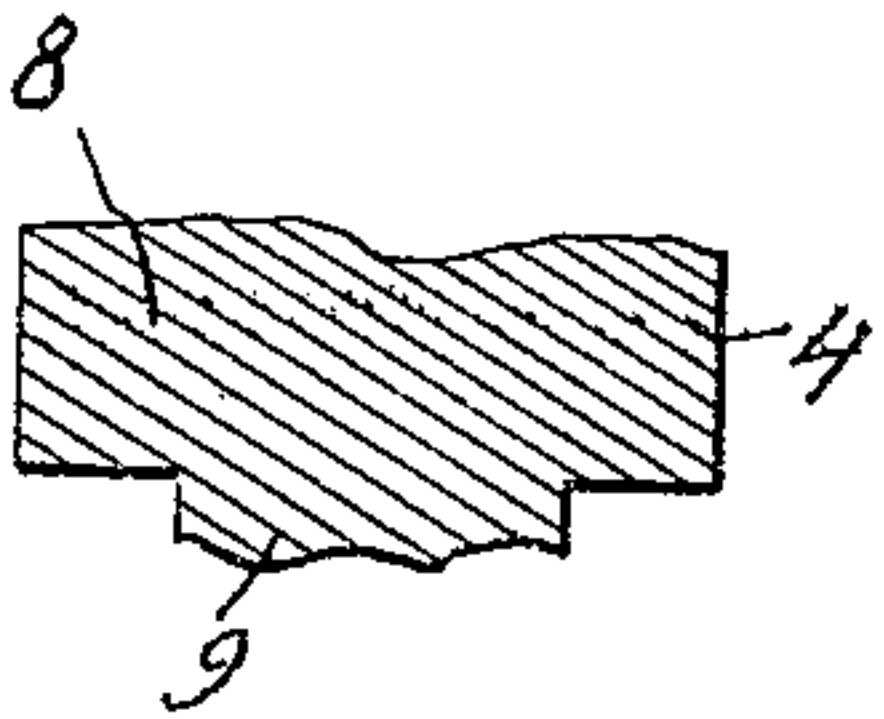


Fig. 4.

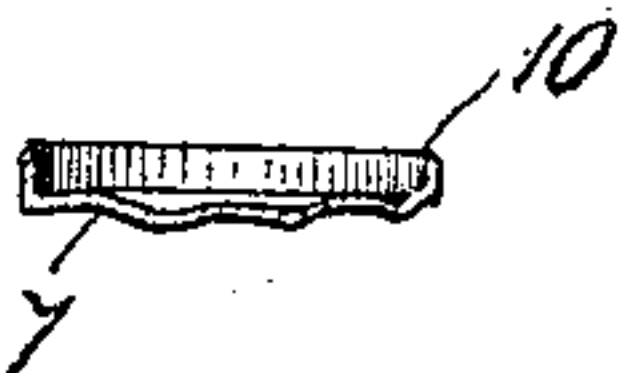


Fig. 9.

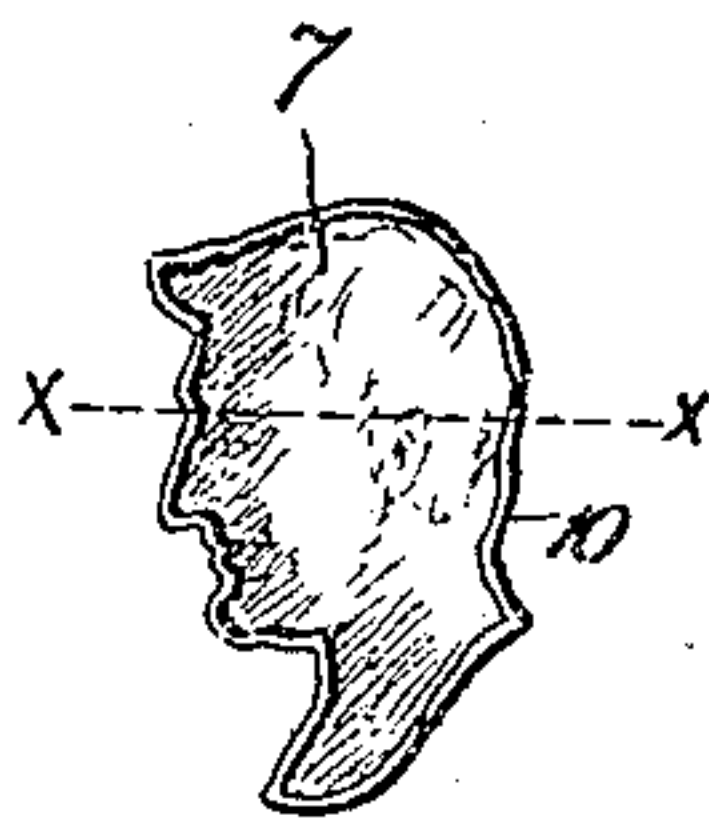


Fig. 10

Fig. 5

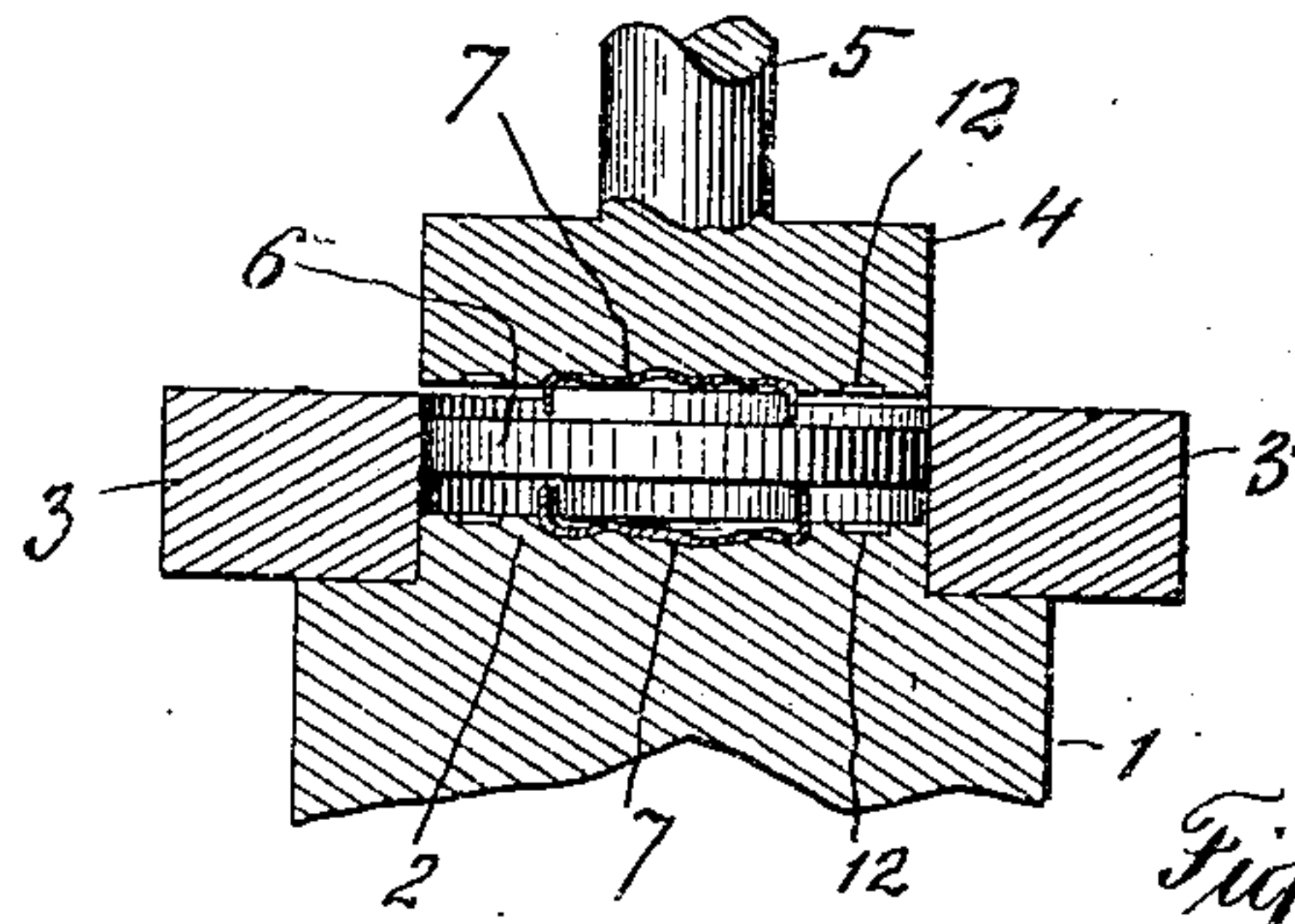
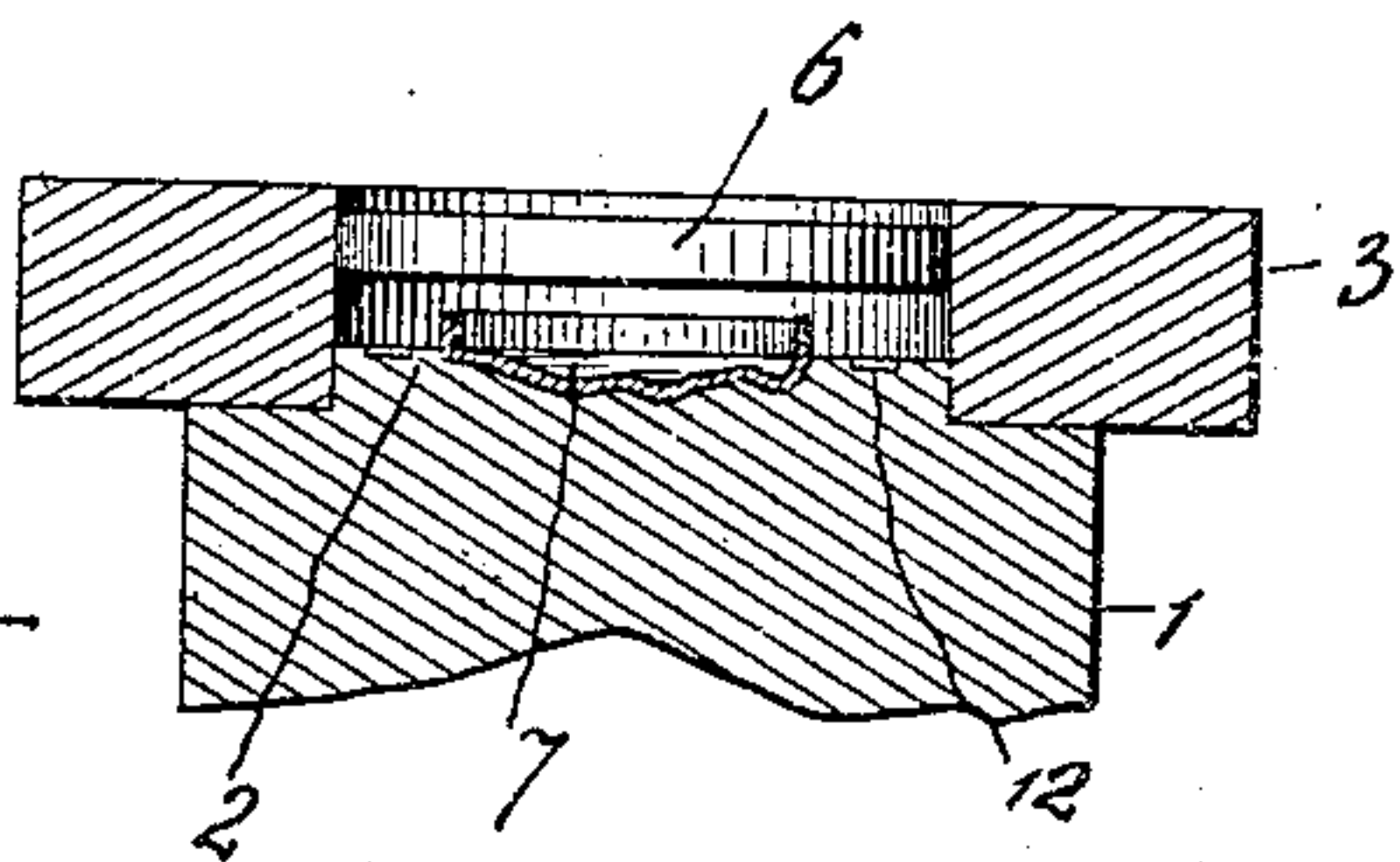


Fig. 11.

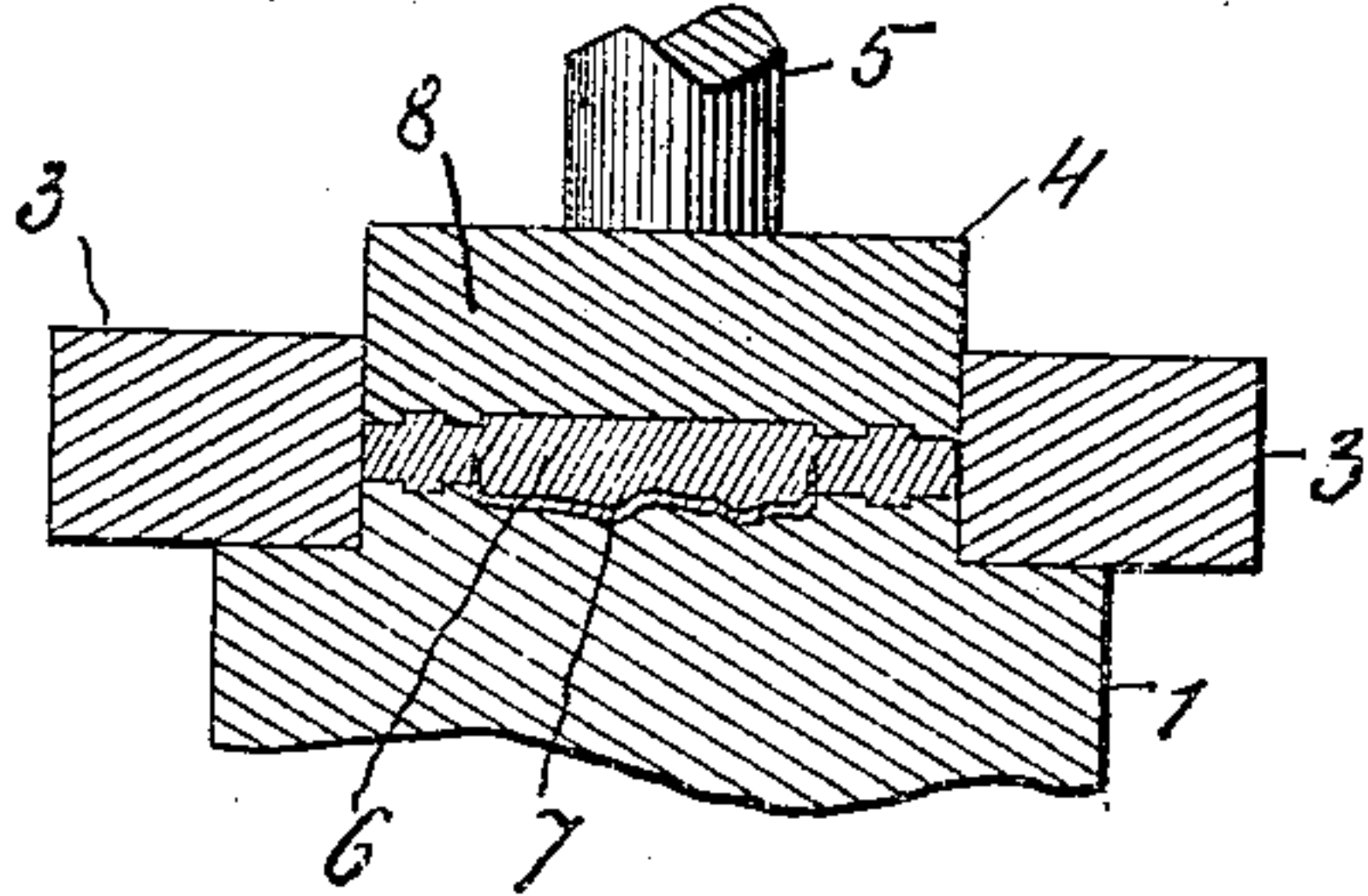


Fig. 12.

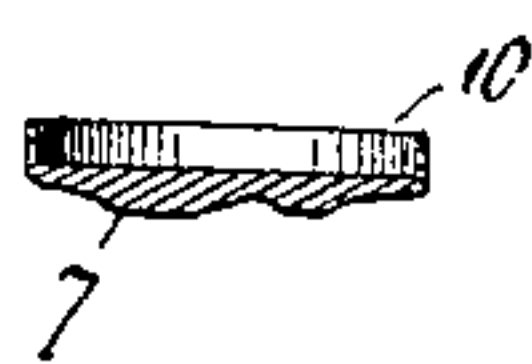
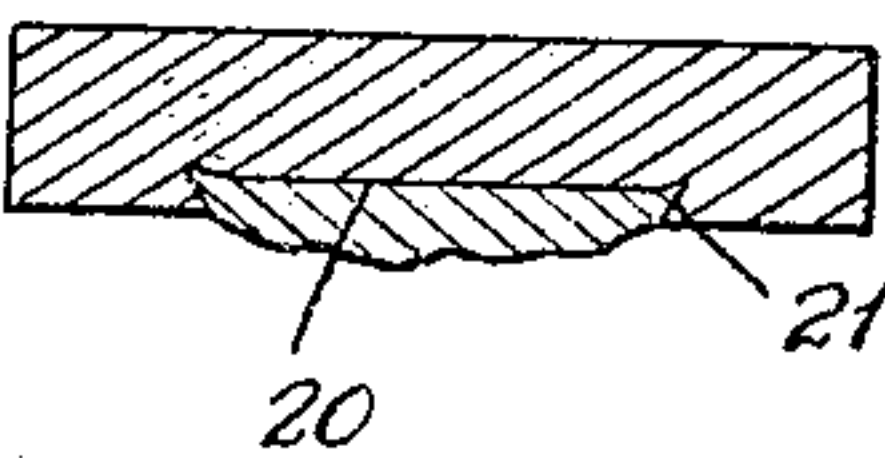


Fig. 13.



Witnesses

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Fig. 6

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METHOD OF PRODUCING ORNAMENTAL ARTICLES.

958,641.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM E. HEEREN, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Methods of Producing Ornamental Articles, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to method of manufacturing ornamental articles, more particularly to ornamental buttons or medallions, which can be used as articles of jewelry, souvenirs, or for commemorative purposes.

It is an object of this invention to produce an ornamental button or medallion from two or more pieces of material, and connect the pieces of material whereby the button or medallion will create the impression of having been made from a single piece of material.

The invention involves a method for expeditiously producing buttons or medallions having an anaglyph made of a different metal or material than the body of the button or medallion, and to accomplish this process, a device is used, the construction of which can be varied according to the type or style of button or medallion produced.

To more clearly set forth the method in accordance with this invention, reference is had to the accompanying drawings, in which—

Figure 1 is a vertical sectional view of a portion of the device for producing a button or medallion, Fig. 2 is a plan of a blank adapted to form a part of the button or medallion, Fig. 3 is a cross-sectional view of a formative die having an alto-rilievo former for pressing and shaping the blank shown in Fig. 2, Fig. 4 is a cross sectional view of a pre-pressed blank or the anaglyph portion of the button or medallion, Fig. 5 is a vertical sectional view of a portion of the device illustrating a pre-pressed blank and disk in position to be pressed and stamped, Fig. 6 is a similar view illustrating a plunger stamping and pressing the disk and blank, Fig. 7 is a bottom plan of the plunger showing the intaglio die for stamping the disk, Fig. 8 is a plan of the stationary die of the device, Fig. 9 is a plan of a pre-pressing blank, the cross sectional view shown in Fig. 4 of the drawings being taken on the line $x-x$ of this figure, Fig. 10 is

a plan of a button or medallion constructed in accordance with my invention, Fig. 11 is a vertical sectional view of a device for producing a button or medallion having a mezzo-rilievo configuration upon both sides, Fig. 12 is a cross sectional view of a pre-pressed blank having a solid body provided with a peripheral flange. Fig. 13 is an enlarged cross sectional view of a button or medallion, illustrating a dovetailed connection between the blank and disk of the button or medallion.

The device employed for carrying my invention into effect comprises a stationary die block 1, having a cylindrical die 2 surrounded by a detachable collar 3, said collar being of a depth approximately twice the depth of the die 2, whereby a die 4 carried by a plunger 5 can enter the collar 3 and press metal or material between said dies.

The buttons or medallions can be made of various kinds of material,—metal, as aluminum, white metal, tin, lead, etc., or an indurate plastic material as celluloid, rubber, or wax, whereby beautiful contrasts can be made to produce attractive and well designed buttons or medallions, according to one's esthetic taste.

For the convenience of describing the invention, I will assume that the body or disk of the button or medallion is made of aluminum, while the anaglyph is made of copper, the dark reddish copper bas-relief being fully set forth and enhanced by the frosted silver-like surface of the aluminum.

The body of the button or medallion is molded in the form of an aluminum disk 6, while the bas-relief portion of the button or medallion is cut from sheet copper to provide a blank 7 having a periphery conforming to the outline of the anaglyph to be produced.

In order to shape and press the blank 7, a formative die 8 is used having an alto-rilievo former 9, the depth of the former 9 being sufficient to make the blank 7 concavo-convex with a peripheral vertical flange 10.

After the bas-relief portion of a button or medallion has been produced, the dies 2 and 4 are prepared for pressing and embedding the peripheral flange 10 of the bas-relief into the disk 6. The die 2 is fashioned or molded to provide an intaglio or impression 11, and this intaglio can be accurately made by using the former 9 of the die 8. Other

means can be used for producing the intaglio, but the formative die 8 is used as an expedient in the present instance. The dies 2 and 4 can be provided with other impressions 12, whereby both sides of the disks 6 can be simultaneously formed with bas-relief inscriptions and anaglyphs.

To produce a button or medallion, the pre-pressed concavo-convex blank 7 is accurately placed in the intaglio 11 of the die 2 with the peripheral flange 10 of said blank extending upward and the irregularities of the blank snugly fitting the irregularities of the intaglio 11. The disk 6 is then placed in the collar 3 upon the upper edges of the flange 10, and said disk is now in position to be pressed. Upon the plunger 5 being lowered, and pressure brought to bear upon the die 4, the disk 6 is forced downwardly and the flange 10 embedded in said disk, while said disk is shaped to fill the blank, and the impressions of the dies 2 and 4, so that when the disk 6 is removed, one side thereof will have an aluminum anaglyph and bas-relief inscriptions.

Should it be desired to provide the disk 6 with a copper anaglyph upon both sides, the die 4 can be prepared similar to the die 2, and an inverted blank connected to the die 4 by a small quantity of wax, or adhesive substance for holding the blank while the die 4 descends to engage the disk 6. This is best shown in Fig. 11 of the drawings, where it will be observed that the die 4 is in the act of entering the collar 3 to press the disk 6 between the dies.

In Fig. 12 of the drawings, I have illustrated a pre-pressed blank wherein the body of the blank is solid instead of concavo-convex, this blank being secured to the disk with less pressure than the concavo-convex blank shown in Figs. 4 and 9 of the drawings.

In Fig. 13, I have illustrated a blank 20 having flared or beveled edges 21, and this blank is forcibly pressed into a disk by the action of two dies, the pressure brought to bear upon the disk causing the metal thereof to surround the edges of the blank 20 and

lock the same in engagement with the disks, similar to a tongue and groove connection. In other words, the metal of the disks overlaps the edges of the blank 20, and forms the joint that is hardly perceptible to the eye.

It will be observed from the foregoing description, that my method of producing a metallic button consists of first providing a pre-pressed concavo-convex blank having a peripheral flange; placing said blank upon a suitable die, placing a disk upon the flange of the blank, and then subjecting the disk to the action of another die for embedding the flange of the blank in the die.

The method involved in ceroplastics consists of subjecting a celluloid or rubber disk to a warm bath that will soften and render the disk semi-plastic, whereby the peripheral flange of a blank can be readily forced into the disk.

Having now described my invention what I claim as new, is:—

A method of manufacturing ornamental articles consisting in forming a mezzo-relievo blank having the marginal portion thereof provided with a continuous flange extending rearwardly with respect to the outer face of the blank, then placing the blank upon a fashioned surface with the flange projecting away from the said surface, surrounding the fashioned face of the die and the flange of the blank by a collar, then placing in the collar and upon the flange of the blank a disk of softer material and of greater diameter than the blank, and then subjecting the blank and disk to pressure whereby the flange of the blank will be embedded in the disk and the material of the disk snugly engage the inner face of the blank without distorting the contour of the disk.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM E. HEEREN

Witnesses:

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MAX H. SROLOVITZ.