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IMBEDDED METAL BAND

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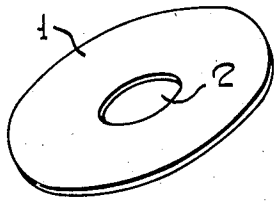



FIG.-1

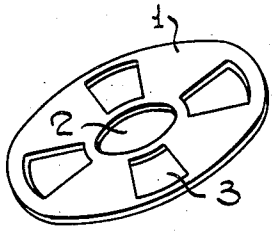



FIG.-2

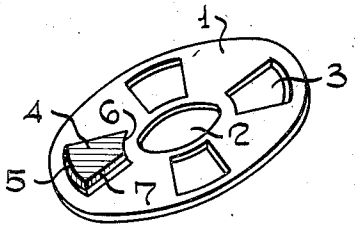



FIG.-3

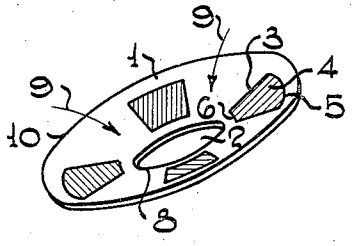



FIG.-4

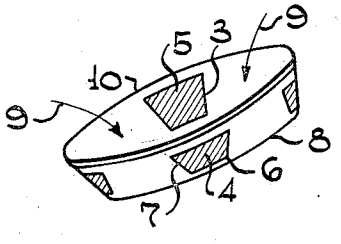



FIG.-5

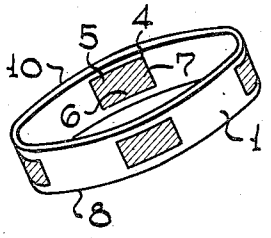



FIG.-6

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2,458,645

## IMBEDDED METAL BAND

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3 Claims. (Cl. 63—15)

1

This invention deals with the production of imbedded metal bands. More specifically, it relates to the production of ornamental metal bands having imbedded metal pieces of different properties.

In the production of jewelry, such as wedding rings, for example, different colored metals are incorporated by the inlay method which involves cutting out, gouging, or etching of the base metal followed by filling the recesses with other metals having different colors or other properties. This is a tedious, time consuming and expensive operation.

An object of the present invention is to provide a means for preparing new and ornamental metal bands by a simpler and less tedious method. Another object is to produce novel metal bands having inserts penetrating through the whole thickness of the base metal. Other objects will become more apparent from the description which is to follow and the drawing in which Figure 1 represents an isometric view of the base metal disk. Figure 2 is a similar view of the same disk having cut-out portions, while Figure 3 shows the insertion of imbedding metal. Figures 4, 5 and 6 show isometric views of forming stages resulting in the finished metal bands. Similar numbers refer to similar parts in the various figures.

Referring again to the drawing, numeral 1 represents a flat metal disk having center opening 2. Out of this disk are cut-out portions 3 which are preferably symmetrically spaced around the disk. In the cut-out portions 3 are inserted similarly shaped sections 4 of the metal to be imbedded, preferably to provide a decorative effect to the finished band.

After the inserts 4 are in place, the center of the disk is gradually pushed out by applying force along the direction of the arrows 9. This may be done by the use of successive dies in the shapes of Figures 4, 5 and 6, or by spinning, or otherwise. During this operation, the dimension of circumference 10 remains substantially unchanged, while the circumference of inner circle 8 is gradually enlarged to that of circumference 10. In order to compensate for the gradual reduction in thickness at the center of the disk, it is preferable (for maintaining uniform thickness) to begin with a disk which is thicker at edge 8 and gradually tapers off in thickness towards edge 10. As the metal is stretched, the lower sections 6 of the inserts will also spread out until lower part 6 has the same width as upper

2

part 5, in accordance with the predetermined design.

It is to be understood that the shapes of the insert may be varied at will, the figures merely showing only one type of design, and any number of such inserts may be employed. It is also preferred to solder the inserts in place with a solder having a color matching the color of the insert or the band, prior to the forming operations.

By employing different colored metal inserts, ring blanks may be obtained having contrasting color effects and possessing excellent wearing properties, since the design will remain until the ring is entirely worn away. It is, of course, possible to employ an engraved or chased design on the top surface to obtain an overall enhanced decorative effect.

Although any metal may be employed to produce the design, it is preferred to employ a metal of substantially the same hardness as that of the disk metal. For example, it is possible to employ a yellow gold disk with inserts of green and/or red gold, and vice-versa. Other combinations include platinum and other rare metals, silver, white gold, and the like.

We claim:

1. In the process of producing embedded metal bands in which an annular disk is pressed out at the center to produce a circular band, the improvement comprising cutting out at least a section of said disk and inserting, in the cut-out portion, a piece of another metal of the shape of the cut-out portion, prior to the pressing-out operation.

2. The process according to claim 1 in which the insert is soldered to the disk into which it is inserted, prior to the pressing-out operation.

3. The process according to claim 1 in which the disk and the insert are of substantially the same hardness.

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