A. BRECHT.

PROCESS FOR PRODUCING UNITS COMPOSED OF DIFFERENT METALS.

APPLICATION FILED MAR. 24, 1915.

**1,159,644.** Patented Nov. 9, 1915.

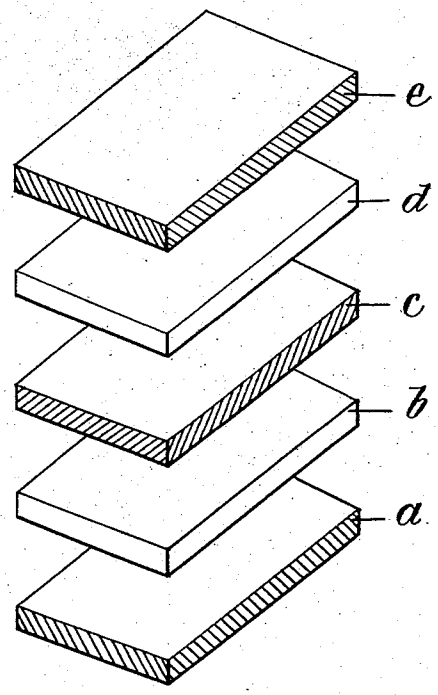



Fig. 1.

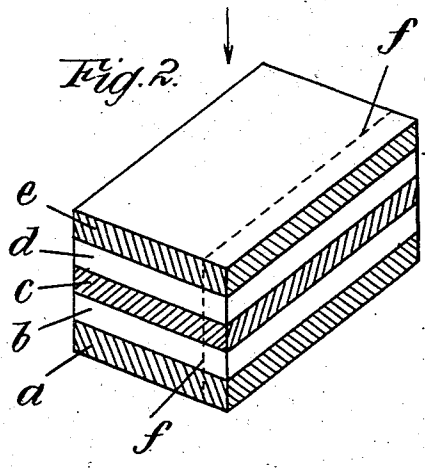



Fig. 2.

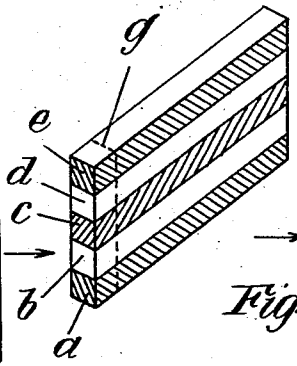



Fig. 3.

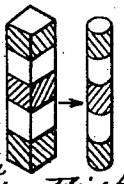


Fig. 4.

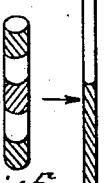


Fig. 5.




Fig. 6.

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# UNITED STATES PATENT OFFICE.

ALBERT BRECHT, OF PFORZHEIM, GERMANY.

## PROCESS FOR PRODUCING UNITS COMPOSED OF DIFFERENT METALS.

1,159,644. Specification of Letters Patent. Patented Nov. 9, 1915.

Original application filed August 15, 1913, Serial No. 784,874. Divided and this application filed March 24, 1915. Serial No. 16,594.

*To all whom it may concern:*

Be it known that I, ALBERT BRECHT, a subject of the German Emperor, and resident of Pforzheim, Germany, have invented certain new and useful Improvements in Processes for Producing Units Composed of Different Metals, of which the following is a specification.

The present invention has for its object the provision of an improved and simple process for producing units composed for instance of precious and base metals in various combinations to produce different designs or patterns and adapted for use in various arts, as for instance in the manufacture of certain articles of jewelry. Up to the present time in attempting to secure the desired effects a relatively large strong foundation composed for instance of base metal has been employed upon which a relatively thin layer for instance of precious metal is located. With such a process an initial unit composed of two unequal layers and at best only three such layers having the design only on one portion can be produced. According to the present invention an initial unit of any number of layers of different metals, with the layers of substantially uniform dimensions may be produced and the said unit utilized as a nucleus from which to obtain any variety of design combination for use for instance in the jewelry art.

My improvement will be fully described hereinafter and the features of novelty will be pointed out in the appended claims.

The present application is a division of another application filed by me in the United States Patent Office on August 15, 1913, Serial No. 784,874.

Reference is to be had to the accompanying drawings which diagrammatically represent successive steps of an example of my improved process and in which—

Figure 1 represents in perspective a plurality of separate units of different metals; Fig. 2 is a perspective view of a block formed of said units; Fig. 3 is a perspective view of a portion cut from said block; Fig. 4 is a perspective view of an end portion cut from the portion shown in Fig. 3; Fig. 5 is a similar view of said end portion after being treated according to my process and Fig. 6 is a perspective view showing the portion illustrated in Fig. 5 drawn into a wire.

In carrying out my improved process one takes for instance five plates *a b c d* and *e* consisting for instance of three different and more or less contrasting metals as shown in Fig. 1. These plates are brought to a red heat and are then welded together one upon the other by hydraulic pressure to form the block shown in Fig. 2 of the drawings, after the adjacent surfaces of adjacent plates have been suitably polished or cleaned to secure the most effective surface contact. This block may then be cut along the dotted line *f* of Fig. 2 to form a plate composed of alternate strips of different metals as shown in Fig. 3, which plate may then be cut transversely along the dotted line *g* of Fig. 3 to form what might be termed a column as shown in Fig. 4. This column is then turned or otherwise manipulated to form the cylinder shown in Fig. 5, which cylinder may then be drawn into a wire as shown in Fig. 6. Such wires, disclosing the design effect produced by the arrangement of different metals, may be used for various purposes where decorative metallic effects are desired.

It will readily be seen that with my improved process the designs, whatever they may be are clearly produced and extend through the particular product, the different metals remaining clearly defined one from the other. At the same time a most intimate connection between said different metals is assured without the use of solder or other extraneous substance, whereby the unit, or more specifically the wire may be easily and suitably worked to produce the desired finished product.

Various changes in the specific form shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. The herein described process which consists in welding together, in a predetermined arrangement a number of units of different metals under pressure while at red heat to form a block, cutting said block transversely to form a plate, separating said plate into sections and forming a wire from each of said sections.

2. The herein described process which

consists in welding together, in a predetermined arrangement a number of units of different metals under pressure while at red heat to form a block, cutting said block transversely to form a plate, cutting said plate transversely to form a column and shaping said column into a wire.

3. The herein described process which consists in welding together, in a predetermined arrangement a number of units of different metals under pressure while at red heat to form a block, cutting said block transversely to form a plate, cutting said plate transversely to form a column, manipulating said column to form a cylinder and drawing said cylinder into a wire.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ALBERT BRECHT.

Witnesses:
EUGEN SCHÖNINGER,
K. BRÜHLER.