L. J. FALIZE, Jr.

Ornamentation of Jewelry and other Articles.

No. 223,803. Patented Jan. 27, 1880.

Fig. 1.

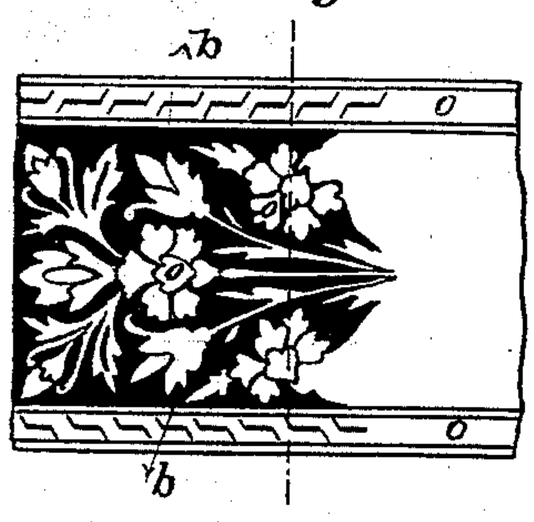


Fig. 2.

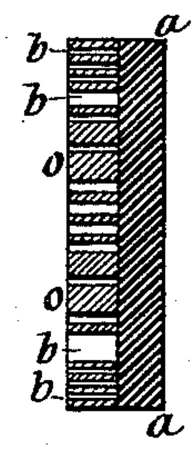


Fig. 3.

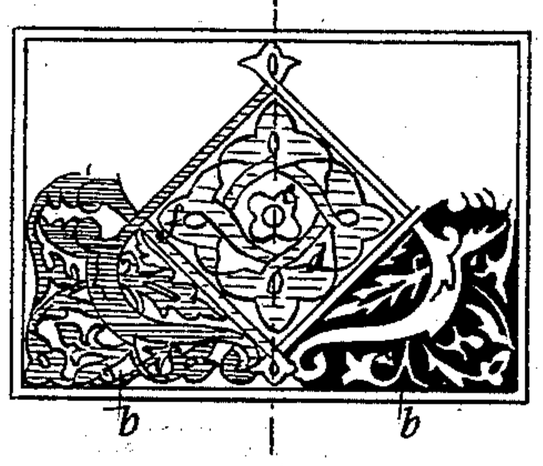


Fig. 4.

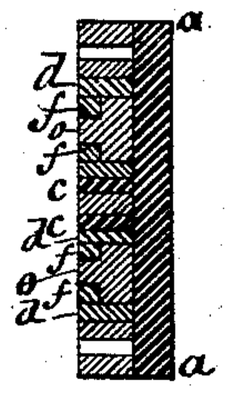


Fig. 5.

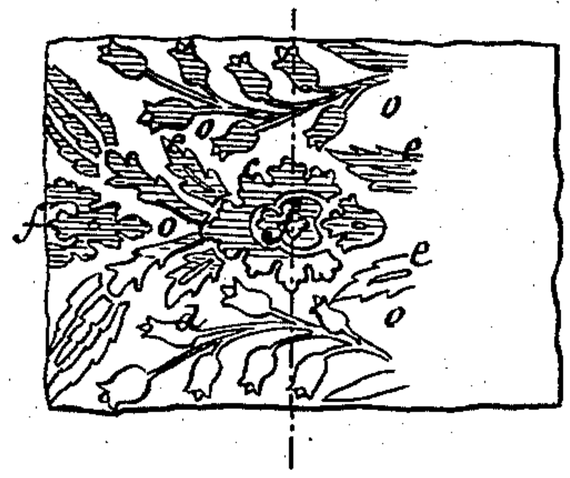
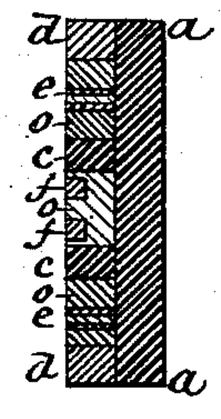


Fig. 6.



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UNITED STATES PATENT OFFICE.

LUCIEN J. FALIZE, JR., OF PARIS, FRANCE.

ORNAMENTATION OF JEWELRY AND OTHER ARTICLES.

SPECIFICATION forming part of Letters Patent No. 223,803, dated January 27, 1880.

Application filed May 15, 1879.

To all whom it may concern:

Be it known that I, LUCIEN JOSEPH FALIZE, Jr., of Paris, in the Republic of France, have invented certain new and useful Improvements in the Ornamentation of Jewelry and other Articles, of which invention the following is a full, clear, and exact description.

Fine gold of a high quality (and particularly pure gold) is not employed for goldsmiths' and jewelers' work, notwithstanding its richness, beautiful color, and attractive appearance, for the reason that it is extremely malleable and possesses but little strength. Therefore the usual practice is to alloy gold with a metal having greater tenacity and resistance than itself, or to gild the surface of articles made of silver or copper; but in neither case is the tone or appearance of the gold anything like that of pure gold, notwithstanding the various means employed for treating the exterior surface of plated articles. Moreover, the latter become deteriorated and wear out rapidly.

The methods of plating employed for uniting silver to copper, or even copper or silver to alloyed gold, are not applicable for uniting silver with fine gold, the reason being that the two metals have no affinity for each other.

In order to effect this union I proceed as follows: I heat the metals to a high temperature, and weld them together by the aid of a hydraulic press. The less affinity the metals have for each other before being welded the more difficult is it to disunite them when once they have been welded. A plate of silver and one of fine gold thus united may be laminated, forged, turned, stamped, beaten, drilled, chased, soldered, or otherwise treated or manipulated without risk of the metals separating.

A plate can thus be made which will stand all the operations of the goldsmith and jeweler, and which presents on one or both of its surfaces a layer, more or less thick, of the purest and best gold. Moreover, the said double metal, by the intimate welding together of the silver and fine gold, permits the manufacture of embossed objects in the following manner: I trace on the surface of the gold any desired design, a portion of which may be preserved intact, while the other portion is cut out—that is to say, the gold is grooved or hollowed with a graving-tool or eaten out by acid. In thus cutting out or deepening the metal the underlying silver is exposed in certain parts. The workmen then finish the article by hammering and rounding the fine gold, in order to remove the sharp edges. The silver exposed in the hollowed or deepened, parts of the designs is oxidized to have the appearance of iron and steel. For example, by means of sulphur vapors or hydrosulphuric acid the exposed silver will be blackened, and a light layer of sulphide of silver will thus be obtained. I thus obtain the same embossing effects as those obtained with gold upon iron or steel, which are seen on certain foreign arms.

The accompanying drawings represent plates of metal ornamented according to the said invention, Figures 1, 3, and 5 being front views, and Figs. 2, 4, and 6 sections, the thickness of the plate in the latter figures being exaggerated.

A plate of gold, *o*, is united, as before described, to a plate of silver, *a*. Then, according to any desired design, the gold is cut out to expose at certain parts, *b*, the underlying silver. The latter having been oxidized in the depressions or cavities gives to the metal plate the appearance seen in Figs. 1 and 3.

The combination of silver with fine gold, as above described, provides means for readily producing (conjointly with the gold and black tones or colors of the united metal) effects of color having altogether a particular and special appearance by employing enamel.

It is well known that enamel is modified with regard to tone and appearance according to the metal upon which it is applied. Thus blue, violet, and green enamel have, through transparency, a better color on silver than on gold, while red, yellow, brown, and pink enamel look better on gold. Therefore if, as shown in Figs. 3, 4, 5, and 6, the sunken or depressed parts or cavities, where the silver is exposed, are filled with dark-blue enamel *c*, light-blue enamel *d*, or green enamel *e*, after having been first scratched or roughened in order to secure the adhesion to the metal, veritable inlaid enamel-work will be produced having as good an appearance as if the enamel had been applied on sheets of silver set in a plate of fine gold.

In applying enamel upon gold—as, for in-

stance, red enamel *f*—all the beauty of the finest enamel-work is obtained. The enamel may be placed in grooves or depressions in the plate of gold, but not extending entirely through it, as shown, or the enamel may be applied directly upon the face of the gold. Under the same conditions I obtain with the said united or doubled metal enamel in mosaic work, painted enamel, translucid enamel, enamel in relievo, and bas-reliefs. This homogeneous double metal may be chased in high relief to form figures and ornaments, or engraved, embossed, punched, sawed, and otherwise manipulated.

For certain art bronzes and for goldsmiths' work the underlying sheet or plate of silver of the united or double metal may be replaced by a sheet of copper; but the gold will always be either pure or of a superior quality to that ordinarily used.

I would observe that heretofore a method of ornamenting jewelry has been devised in which a number of thin plates of different colored metal—gold, silver, platinum, or other metal—are united by soldering, or by heat and pressure, to a comparatively thick backing, and the upper layers cut away or chased to expose the lower layers or backing, and that it has been proposed to produce, in addition, coloring by chemicals, enameling, or machine-turned patterns, and I do not consequently lay any claim thereto; but,

Having thus described my said invention and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. The process of ornamenting jewelry and other articles which consists in uniting two plates of different metals, forming cavities in the face metal, so as to expose the backing, and applying enamels of different colors, corresponding to the metals used, upon the face metal and upon the backing, substantially as set forth.

2. A compound plate composed of two plates of different metals, and ornamented as set forth—that is to say, the backing being exposed in places through the face metal, and enamels of different colors, corresponding to the metals composing the plate, applied upon the face metal and upon exposed portions of the backing, substantially as described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

L. FALIZE, FILS.

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