

UNITED STATES PATENT OFFICE.

HERMANN BAUER, OF SCHWAEBISCH-GMÜND, GERMANY, ASSIGNOR TO
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PROCESS OF ORNAMENTING METALS.

SPECIFICATION forming part of Letters Patent No. 289,956, dated December 11, 1883.

Application filed May 10, 1883. (No specimens.) Patented in Germany May 3, 1879, No. 7,385, and in France November 29, 1879, No. 132,722.

To all whom it may concern:

Be it known that I, HERMANN BAUER, of Schwaebisch - Gmünd, Germany, have invented a new Process of Ornamenting Metals, (for which I have obtained German Patent No. 7,385, bearing date May 3, 1879, and French Patent No. 132,722, November 29, 1879,) of which the following is a correct description.

My invention consists in superposing several plates of metal having different colors, joining them together, rolling them out into the required thickness, and then stamping or embossing them in such a manner that part of the lower plate or plates will be brought into the level of the upper plate or plates, whereupon the projecting portions of the upper plate are filed or ground off, so that the color of the lower plate or plates will be seen through the openings that are formed by the filing or grinding action in the upper plate.

The following is a more definite description of my process, referring therein to the use of two plates, although more than two may be used.

I first take two sheets or plates of metal of different colors—say, one gold and the other silver, or one gold and the other iron—place them one upon the other, and sweat or solder them carefully together, and then roll them out to the required thickness. The compound plate thus formed is now brought into an embossing apparatus in which the desired ornament is formed in relief, and in this machine the said compound plate is pressed or embossed, so that the desired ornament will stand in relief on the upper face. The compound plate so embossed is now filed or ground, so as to remove the projecting parts until the upper face is quite even and the upper thickness of the compound plate thereby perforated, allowing the color of the lower thickness thereof to be seen in the perforations, thus producing a compound plate showing on its upper face the design or ornamentation of requisite outline in the color of the lower plate. In order to obtain several colors, the plates are treated as above described; but after having once been pressed additional sheets of metal of still other colors may be soldered or sweated onto the compound plate already subjected to the first

treatment, and then the new compound plate containing the third thickness may be embossed again, and then filed off the same as before. After the compound plate of two or more thicknesses has been thus produced, the compound plate may be subjected to a further embossing process, so as to bring the desired design out in relief.

Instead of stamping the plates in an embossing-press, the embossing may be produced between rollers.

Compound plates thus treated may be formed into various articles of jewelry or into wire of different colors by drawing them through perforated plates in the usual manner of forming strips into wires.

The entire compound plate, when treated as above described, may be further ornamented in suitable manner by etching, or by the application of enamel or engraving by hand or machinery, as fancy may dictate.

Although I have referred to the plates as made of "metal," they may of course be of any material analogous to metal without departing from the spirit of this invention.

By rolling the united metals before embossing them, the thickness of the sheets is reduced, and they are best prepared for embossing; but the principal advantage connected with this rolling is that the intervening layer of solder or sweating material, which at first must be of the usual thickness, is reduced to such an extent that it will not interfere with nor crack during the embossing process.

I claim—

The process hereinabove described of producing ornamentation on metals, which process consists in first uniting two or more plates of metal, then rolling them to reduce their thickness and that of the intermediate layer of solder, then embossing them, so as to bring part of the lower plate into the plane of the upper, and filing or grinding off the projecting parts of the upper plate, thereby leaving portions of the lower plate visible through the perforations of the upper, substantially as specified.

This specification of my invention signed by me this 13th day of April, 1883.

Witnesses: HERMANN BAUER.

KARL GÖPEL,
CARL ENYSCHON.