(No Model.)

J. S. PALMER.

MANUFACTURE OF PLATED STOCK FOR JEWELRY.

No. 456,314. Patented July 21, 1891.

Fig. 1.

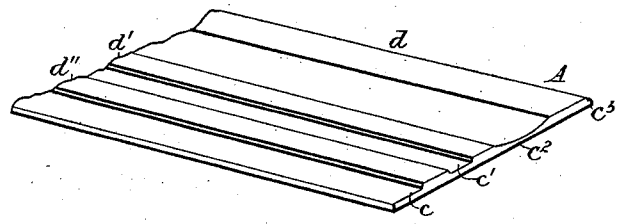


Fig. 2.

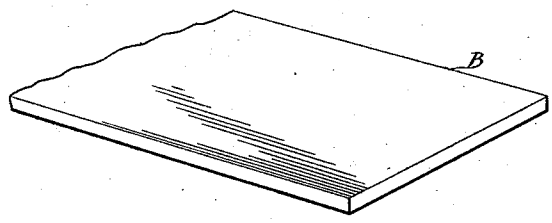


Fig. 3.

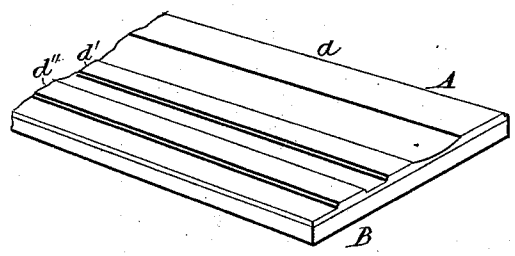


Fig. 4.

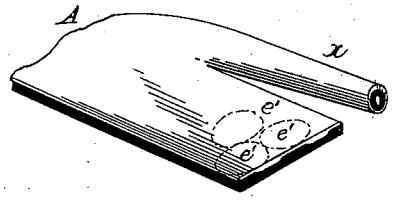


Fig. 8.



Fig. 9.



Fig. 5.

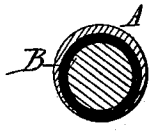


Fig. 6.

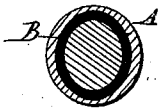
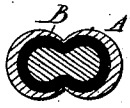


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN S. PALMER, OF PROVIDENCE, RHODE ISLAND.

MANUFACTURE OF PLATED STOCK FOR JEWELRY.

SPECIFICATION forming part of Letters Patent No. 456,314, dated July 21, 1891.

Application filed June 4, 1888. Serial No. 275,991. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. PALMER, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in the Manufacture of Plated Stock for Jewelry; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention relates to a novel method of making gold, silver, platinum, or other precious metal plate, or metal bars plated with gold, silver, platinum, or other precious metal, so that the plate shall have variable thicknesses adapted for the purpose or several purposes for which the bar (when rolled down to be cut into circular pieces or disks for drawing into thimbles or split or cut into separate strips) may be used.

In my former patents Nos. 383,239 and 383,238, dated May 22, 1888, I described dies for making plated thimbles in which the precious or plate metal should have a varying thickness, and also the method of making such thimbles; and in my patents Nos. 383,241 and 383,240, dated May 22, 1888, I described dies for making plated wire in which the precious or plate metal should have a varying thickness, and also the method of making such wire; and in a pending application, Serial No. 264,078, I have described a mechanism for grinding, chipping, or planing off a face or side of a rod plated with a precious metal. In my present invention I commence at a much earlier stage of the manufacture than heretofore to give a varying thickness to the precious metal, and I impart these different thicknesses by rolling or otherwise to a flat bar or plate of considerable thickness, and am thus enabled to make a single plate of the precious metal, as also the thicker bar or plate of baser metal to which it is to be soldered, (either before or after the varying thicknesses shall have been imparted to it,) susceptible when rolled out ready for cutting into disks for drawing into thimbles or split or cut up into strips for forming stock of different kinds for making different articles—such as rings, chains, &c.—according to the predetermined forms of the different ribs or depressions given to one and the same bar or plate; and here I would repeat that the bar or plate may be brought to its primary varying thicknesses or ribbed state either before being soldered to its bar or plate of base metal or after being soldered to and made one with it.

Referring to the accompanying drawings, Figure 1 represents a piece of a bar or plate of precious metal which has been formed with thick parallel ribs of different styles at certain portions of its breadth; Fig. 2, a flat but thicker piece of the base metal of corresponding breadth with the bar of precious metal and to which it is to be soldered, such soldering being done either before or after the bar of precious metal has been ribbed, as may be preferred. Fig. 3 shows these two bars soldered together, and such a plate I style the "ingot," and it is now ready to be rolled out and reduced to any desired degree of thickness, dependent on the article or articles to be ultimately fabricated from it. Fig. 4 shows a small portion of this same stock after having been rolled out, and it is also shown as partially slitted or split through to sever one style of the ribbed part suitable for certain articles from the other style or styles having ribs adapted for making other articles. This figure also shows one of these strips partially converted into a tube by rounding it up and bringing its edges together to be ready for soldering its joint to adapt it for being made into a finger-ring. Fig. 5 illustrates (enlarged) a piece of wire covered by such a tube and the whole drawn out to be suitable for making rings, the thicker portion of the plate being intended to receive the most wear. Fig. 6 shows (enlarged) another piece of single wire having two thick and two thin sides and suitable for making chains or other articles. Fig. 7 shows a piece of double wire having its most exposed sides with the plate thicker than at other parts. Fig. 8 represents a disk, in enlarged view, of unequal thickness cut from a plate of varying thickness; and Fig. 9 represents a piece of wire stock made from a thimble drawn from a disk cut from a plate of varying thickness.

A indicates a piece of a bar of the precious metal with a portion of its surface made with reduced parts; B, a piece of the bar of base metal. $c\,c'\,c^2\,c^3$ show the reduced parts or grooves; $d\ d'\ d''$, the ribs or raised portions. Fig. 3 shows a compound bar composed of this base-metal bar and the precious-metal bar, and styled above as the "ingot."

E illustrates one of the circles or disks of varying thickness cut from one of the plates of varying thickness for conversion into thimbles, and $e'\,e'\,e'$ in dotted lines in Fig. 4 indicate how these disks may be economically cut from the plate.

F, Fig. 9, illustrates a piece of my plated wire stock as drawn down from a thimble made from a disk of varying thickness and then further reduced after a piece of wire has been soldered into it.

The varying thickness and the varying breadths of the depressions or ribs may be made on the precious metal in any way adapted for producing them, and either by shaving, grinding, planing, or rolling, or by striking, or in any other way of forging the precious metal preparatory to affixing the same to the bar of baser metal, or by any of the said means after the precious metal has been soldered to its thicker bar, or at any later stage of the invention. The character of the reduced parts, as also of the ribs, their number, form, breadths, or depths, in a single bar, may be as the exigencies of the case demands, and according to what special article or articles are to be fabricated from the bar when reduced, and dependent on whether any of such articles are to have the precious metal thicker at one portion only or at more than one portion to meet the future wear, &c. By way of illustration, the single thicker precious metal rib or swell d, when the bar has been reduced by drawing down and then split and converted into a tube, as indicated in Fig. 4, would appear as therein shown at x. If, however, another strip cut off from this same bar had originally ribs, such as $d'\ d''$, then upon reducing down the bar to its ultimate thickness the two thicker portions of the plate would appear substantially as shown in Fig. 4, and would in the fabricated article be opposite or nearly opposite each other, substantially as shown in Figs. 6 and 7. It will now be quite clear that this method allows of having the ribs and depressions in any given bar as many and as variant as desired, and that the bar may be as broad as desired to permit the cutting of it into several strips or disks, each having a different style of depression and rib, or all having, if preferred, the same style, and that such precious metal bar may have its grooves made in it by any known or suitable means, either by rolling or by a common planing-machine or shaving or otherwise, or by milling, grinding, or striking, or in any manner of forging or making them in it before or after plating the baser metal with it, and that the different kinds of strips when drawn down, cut off from the bar, and converted into disks or circles for drawn tubes or rods are thus each susceptible of being applied to a different kind of jewelry, though all originally were part of one and the same bar and were originally given their swells and depressions at the same operation at whatever stage such operation may have been performed.

I claim—

1. The described method of making precious-metal bars adapted for the manufacture of plated jewelry, consisting in imparting to one surface of such precious-metal bar preparatory to rolling down and reducing the same longitudinal parallel ribs and depressions, as and for the purposes set forth.

2. The described method of making ingots and bars adapted for the manufacture of plated jewelry, consisting in imparting to one surface of the precious metal different thicknesses longitudinally for the purposes described, and then rolling down and reducing such compound ingot or bar by passing it between and through smooth or flat surfaced rollers and thereby embedding the varying thickness of the precious metal into the body of the baser metal and leaving the exterior surfaces level.

3. The described method of making metal bars adapted for the manufacture of plated jewelry, consisting in imparting to the outer surface of the precious plate of a bar different styles of depressions and ribs, substantially as and for the purposes set forth.

JOHN S. PALMER.

Witnesses:
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ROBERT S. EDWARDS.