(No Model.)

G. E. A. KNIGHT.

PLATED WIRE.

No. 460,750. Patented Oct. 6, 1891.

Fig. 1.

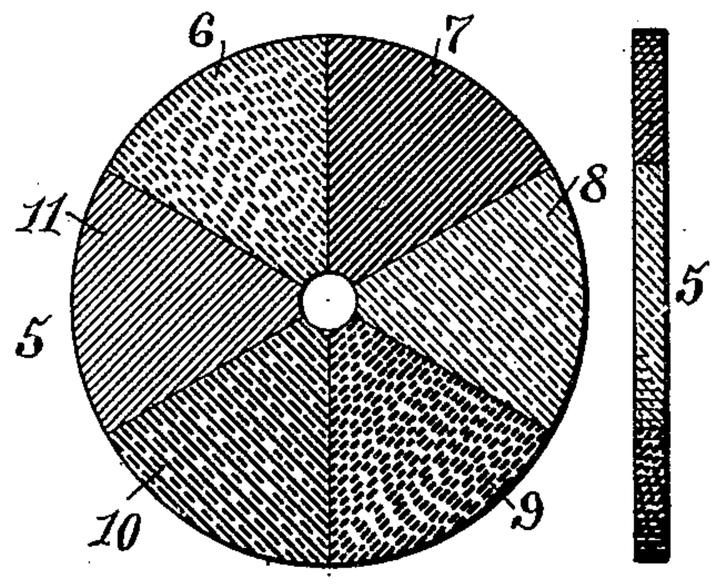


Fig. 2.

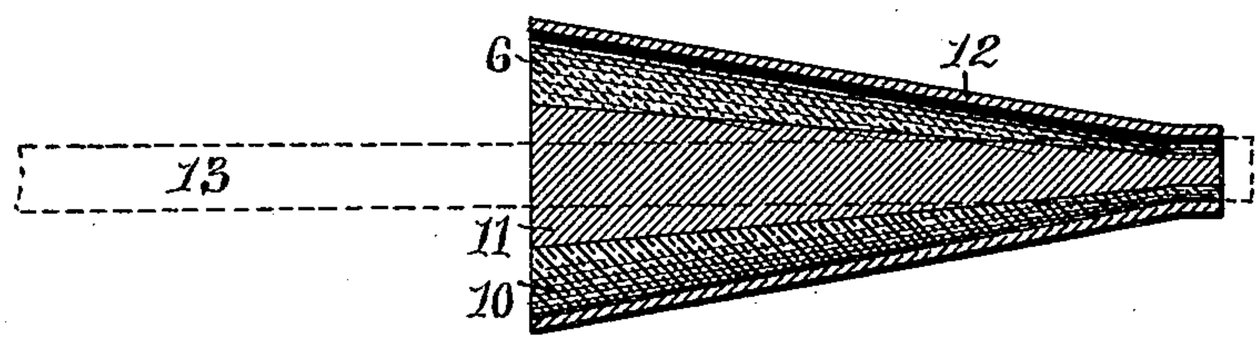


Fig. 3.

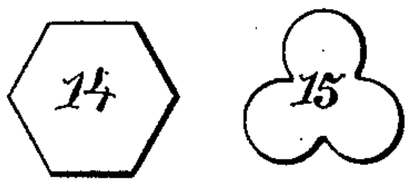
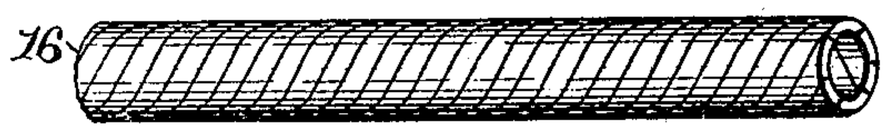


Fig. 4.



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UNITED STATES PATENT OFFICE.

GEORGE E. A. KNIGHT, OF PROVIDENCE, RHODE ISLAND.

PLATED WIRE.

SPECIFICATION forming part of Letters Patent No. 460,750, dated October 6, 1891.

Application filed January 12, 1891. Serial No. 377,485. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. A. KNIGHT, of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Plated Wire; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the manufacture of jewelers' plated, solid, or tubular wire; and it consists in the peculiar and novel steps, as hereinafter more fully described, by which a wire or tube is covered by precious metals of two or more colors.

In carrying out my invention I form a disk of precious metals of two or more colors, or I plate a disk of inferior metal with precious metals of two or more colors, so that the line or lines forming the adjunction of the plates of precious metals of different colors extend through or radiate from the center of the disk. I now form the disk, by suitable dies, into a conical tube, clean the interior of the so-formed tube, and draw the same over a tube or rod covered with solder and secure the plating-tube to the core by heat sufficient to fuse the solder, forming an ingot, which may be drawn or rolled into wire of any desired cross-section.

Figure 1 is a plan view and an edge view of a disk formed of six conical sections of precious metals differing in color. Fig. 2 is a longitudinal sectional view of the conical tube, formed from the disk shown in Fig. 1, ready for being drawn on the core of inferior metal indicated in broken lines. Fig. 3 represents two end views of wire indicating the uses to which the longitudinally-striped plated wire may be put. Fig. 4 is a perspective view of twisted striped wire.

In the drawings, 5 indicates a circular disk, in the center of which a hole may be punched, as shown, or this hole may be omitted. The disk may be formed by soldering or fusing the edges of the conical sections 6, 7, 8, 9, 10, and 11 together, so as to form a disk of precious metal formed of sections of different-colored precious metal. The disk 5 may also be formed by plating a disk of inferior metal with sections of precious metal, and it may be made up of sections of jewelers' stock-plate—that is to say, of sheets of brass or other inferior metal plated on one side with precious metals of different colors—and these sections may be secured to a disk of easier-flowing metal, which, when drawn on the prepared core, will form the solder. In preparing the disk it is essential that the edges of the different-colored precious metals shall form lines radiating from the center of the disk. The disk 5 is now formed by means of suitable dies into the conical tube 12, into the contracted end of which the core 13 is forced. If the disk 5 has the side which forms the inner side of the conical tube 12 covered with a sheet of easier-flowing metal to form the solder, the core 13 requires only to be cleaned and covered with a suitable flux. If, on the contrary, the disk is not covered with solder, the core must be covered with solder and the inner surface of the conical tube must be cleaned and covered with flux. The contracted end of the conical tube 12, with the core 13, is now inserted into the hole of a draw-plate and the tube is drawn onto the core, so as to form an ingot of uniform cross-section. The ingot is now subjected to heat sufficient to melt the solder, and is then drawn or rolled into the desired wire.

The disk 5, formed of or plated with the six conical sections of precious metals of different colors, is well adapted to form the rod or wire 14, (shown in Fig. 3,) each of the six sides of which may thus be plated with precious metals of different colors, or each of the adjacent sides may be plated with precious metals of alternating colors.

When the disk is formed into a conical tube and when this conical tube is drawn or rolled into a tube of uniform cross-section to form the ingot, each one of the conical sections 6, 7, 8, 9, 10, and 11 is contracted in width and extended in length, so that on the ingot and on the wire formed from the ingot these sections form longitudinal stripes of uniform width and of different colors.

A disk formed of two equal halves of different colors will form a rod or wire of any desired cross-section, one-half of the surface of which will differ in color from the other half. If the disk is formed of four equal sections, the resultant rod, tube, or wire will have a surface formed of four longitudinal

stripes of different colors, and if rolled or drawn into square wire each side of the square may be of a different color, or of alternately different colors. If the disk is formed of three equal sections of different colors, the ingot may be rolled or drawn into the rod or wire 15, (shown in Fig. 3,) of clover-leaf cross-section, each one of the three beads or leaves being plated with precious metal of a different color.

The solid or tubular wire covered or plated with the longitudinally-striped precious metal may be twisted, so as to form the spirally-striped tube or wire 16. (Shown in Fig. 4.)

The sections 6, 7, 8, 9, 10, and 11, instead of being each of a distinctly different color—such as red, white, blue, yellow, black, and green—may be made of different shades of a color or colors.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The herein-described steps in the art of plating wire, rods, or tubes, the same consisting in forming a disk of or plating a disk with two or more sections of precious metal of different colors and forming the disk into a plating-tube, as described.

2. The process herein described of plating wire, rods, or tubes, the same consisting in forming a disk of or plating a disk with two or more sections of precious metal differing in color, covering one side of the disk or the outside of the core with a solder, forming the disk into a conical plating-tube, drawing the tube over the core, and uniting the core and tube by fusing the solder, as described.

3. A new article of manufacture consisting of a core of inferior metal plated with precious metal in longitudinal stripes of different colors or shades of colors drawn or rolled into any desired form of cross-section.

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Witnesses:
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