(No Model.)

G. U. MEYER.

PLATED WIRE.

No. 441,884. Patented Dec. 2, 1890.

Fig. 1.

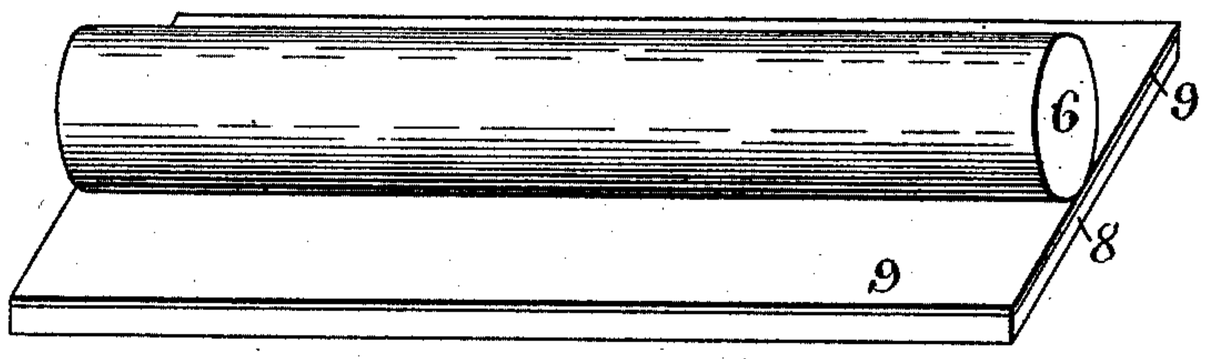


Fig. 2.

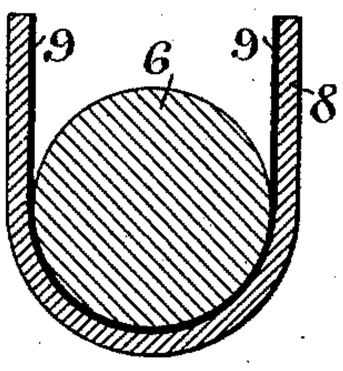


Fig. 3.

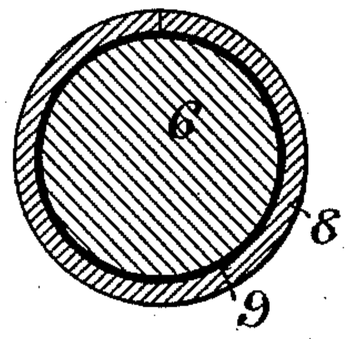
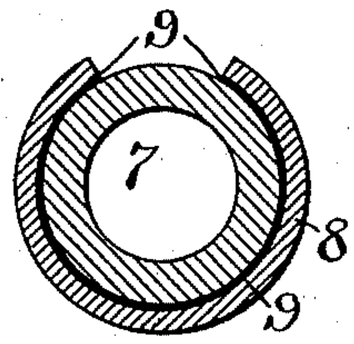


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PLATED WIRE.

SPECIFICATION forming part of Letters Patent No. 441,884, dated December 2, 1890.

Application filed May 15, 1890. Serial No. 351,929. (No model.)

To all whom it may concern:

Be it known that I, GEORGE U. MEYER, of the city and 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 plating wire rods or tubes of metal with a sheet of precious or other metal; and it consists in covering a rod or tube with a sheet of metal previously covered on its inner surface with solder, forming the sheet around the rod or tube and uniting the sheet to the rod or tube by fusing the solder and drawing the so-plated rod or tube into wire, as will be more fully set forth hereinafter.

In forming ingots for plated wire, tubes of precious metal have been secured to cores of base metal by flowing solder between the outer surface of the core and the inner surface of the tube. Such ingots are often imperfect, because the flowing of the solder is not always uniform at all parts, and as the same cannot be examined the wire or tube drawn from such ingots is at places imperfectly protected. It is also frequently desirable to cover only part of the exterior surface of the rod or tube forming the core, so as to draw partially-plated, solid, or hollow wire. This cannot be done in the old process, as the solder will escape at the open side of the tube.

Figure 1 is a isometric view showing a cylindrical core on a sheet of metal. Fig. 2 is a cross-section showing a cylindrical core and a sheet partially formed around the same. Fig. 3 is a section of a core having a sheet formed around the same; and Fig. 4 is section of a cylindrical tube, forming the core and a sheet formed around the greater portion of the core.

In the drawings, the number 6 indicates a solid cylindrical core or rod; 7, a tubular core; 8, a sheet of metal with which the core is plated, and 9 a film of solder on the inner surface of the sheet 8.

In carrying out my invention I cover the clean surface of the sheet of metal intended for covering the core, either in part or wholly, with solder, either in the old method of flushing the solder on the strip or by a new method designed by me, which forms the subject-matter of another application for Letters Patent, filed at even date herewith. This prepared plating-sheet 8 I form around or partially around either a solid or a tubular core cleaned and prepared to receive the same, and thus form an ingot such as is shown in Figs. 3 and 4. The plating-sheet is forced onto the ingot by drawing the same through a suitable draw-plate, and is then subjected to heat sufficient to fuse the solder, and is thus firmly united to the core. The so-formed ingot is now successively drawn through draw-plates into solid or tubular wire in the usual manner, which wire is wholly or partly covered by the plate, the same as the ingot was originally covered. By this improved process the solder can be evenly placed on the plating-sheet, all parts of the sheet being in sight, and when drawn around or partially around the core and subjected to sufficient heat to melt the solder the core and plating-sheet will be firmly united at all points, and the wire drawn from an ingot so prepared will be uniformly covered with the precious or other metal with which the same is plated, and a wire or rod of any desired length may thus be covered or partly covered, by a strip of metal secured to the same by the solder on one side of the plate. As the wire is drawn out through a draw-plate the diameter is reduced and the length increased. The relative thickness of the plate and the core are, however, maintained, and the finished wire has the same relative thickness of core and plate as is shown in Figs. 3 and 4, which, while they are sections of the ingot, also correctly represent the respective sections of the finished wire on an enlarged scale.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

The herein-described process of manufacturing wire covered or partially covered with a sheet of metal, consisting in forming a sheet of plating metal, the inner surface of which is covered with solder, around or partially around a core of metal, subjecting the whole to sufficient heat to fuse the solder, and drawing the so-formed ingot into wire, as described.

GEORGE U. MEYER.

Witnesses:
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