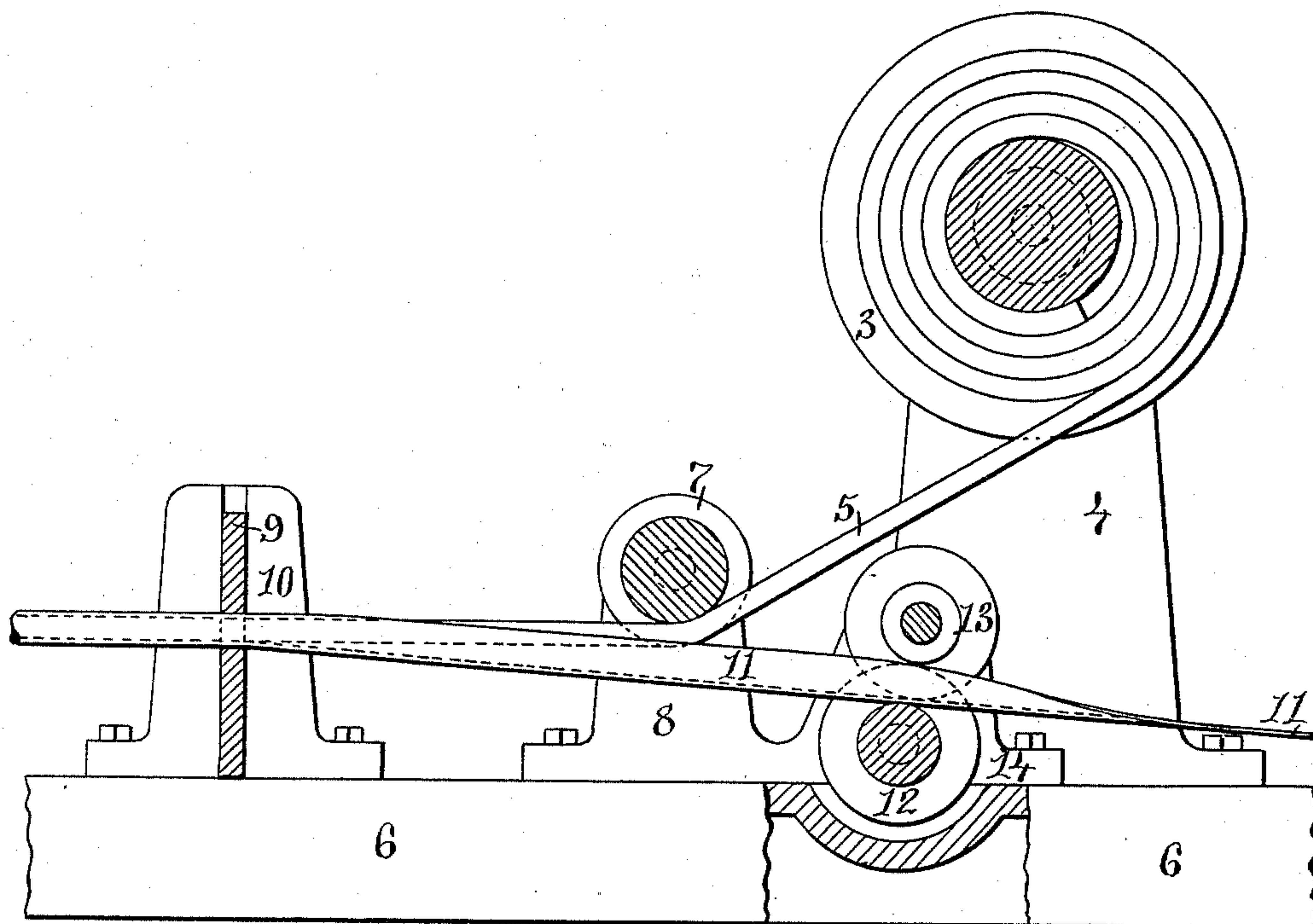


(No Model.)

G. U. MEYER.
PLATED WIRE.

No. 441,885.

Patented Dec. 2, 1890.



WITNESSES:

Chas. H. Luther Jr.
M. F. Bligh.

INVENTOR:

George U. Meyer
by Joseph A. Miller & Co.
Attys.

UNITED STATES PATENT OFFICE.

GEORGE U. MEYER, OF PROVIDENCE, RHODE ISLAND.

PLATED WIRE.

SPECIFICATION forming part of Letters Patent No. 441,885, dated December 2, 1890.

Application filed July 1, 1890. Serial No. 357,356. (No model.)

To all whom it may concern:

Be it known that I, GEORGE U. MEYER, 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 drawing, forming part of this specification.

This invention has reference to an improved method for plating wire with sheet metal; and it consists in drawing around a wire previously covered with a film of metal fusible at a lower temperature than the wire a strip of sheet metal of a width equal to the periphery of the wire, which sheet metal is fusible only at a temperature higher than the film of metal on the wire, and heating the so-covered wire to fuse the intermediate metal and unite the covering-sheet to the wire, as will be more fully set forth hereinafter.

The drawing is a longitudinal sectional view showing the relative positions of the parts.

The number 3 indicates a spool supported in bearings formed in the standard 4, secured to the table 6. The wire 5 is coiled on the spool 3 and is guided by the sheave 7, which runs free in bearings formed in the standard 8, to the draw-plate 9, held in the frame 10.

The number 11 indicates a sheet of precious or other metal 12, a sheave having a concaved groove in its periphery, in which fits the sheave 13, having a convex periphery. Both of these sheaves have bearings formed in the standard 4. The spool and the sheaves are journaled in bearings at opposite ends.

The object of this invention is to cover wire with a sheet of metal and unite the plating metal permanently with the core or wire.

The invention is applicable to the manufacture of jewelers' plated wire, and is also applicable to the manufacture of steel wire plated with copper for electrical conductors. The method for both purposes is the same, the sole difference consisting in the metals used.

For jewelers' use, wire of copper, brass, or other suitable inferior metal is first plated with any suitable metal the fusing or flowing temperature of which is lower than the fusing temperature of the precious metal with

which the wire is to be coated. This may be done by electroplating the wire, by passing the wire prepared in the usual method through melted solder, or by any of the methods now in use for covering wire with tin or other metals. A spool 3 of the so-prepared wire 5 is placed on the drawing-frame shown in the drawing. The end of the coil of wire 5 is passed under the sheave 7. A thin strip of the metal or alloy 11, of a width sufficient to surround the wire, is passed between the sheaves 12 and 13 and is there formed into the form of the letter U, and this U-shaped strip 11 is bent around the wire 5 and both are inserted into the hole in the draw-plate 9. It is gripped by the gripping-tongs used in drawing wire, and the combined wire and strip of precious metal inclosing the wire are drawn through the hole in the draw-plate 9. This hole 9 is of such size as will closely draw the plating metal onto the wire. The so-plated wire is now again drawn through a draw-plate, and if the so-united wire is of larger diameter than required it may be drawn down to the desired fineness in the usual manner. The heating and fusing of the intermediate metal may be done continuously after the wire has passed through the draw-plate 9.

In making wires for electrical conductors I take a spool of iron or steel wire covered with tin or any other metal fusible at a lower temperature than copper—what is known in the arts as “galvanized wire” will answer this purpose—place the spool in the machine, and take a strip of copper or other good conductor wide enough to inclose the wire. I pass the strip between the sheaves 12 13, bend the end around the wire, and draw the strip and wire through the draw-plate 9. I now subject the wire to heat, and for the purpose of finishing the wire draw the same again through a draw-plate the hole in which is slightly less in diameter than the compound wire. A wire having great strength to sustain the strain on wire suspended at long intervals may thus be covered with any good conducting metal or composition of metal having great capacity for conducting electric energy, thus combining great strength with great conducting capacity.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The process herein described of covering wire with sheet metal, the same consisting in plating, by electroplating or otherwise, the wire with a metal fusible at a lower temperature than the wire, bending a strip of sheet metal into U-shaped form in cross-section, drawing the wire and the strip of sheet metal through the hole of a die-plate, and thus bend the strip of sheet metal around the wire, the edges of the sheet abutting to form a longitudinal seam, and subjecting the so-covered wire to heat sufficient to fuse the metal intermediate the wire and the covering-strip, as described.

2. As a new article of manufacture, a wire plated with a metal fusible at a lower temperature than the wire, and this with a con-

tinuous strip of sheet metal the edges of which abut and form a longitudinal seam, secured together by the fusion of the metal intermediate the wire and the covering-strip, as described.

3. An electrical-conductor wire consisting of a steel or iron wire plated with a metal fusible at a lower temperature than the wire, and the so-plated wire covered with a continuous strip of copper the edges of which abut and form a longitudinal seam, the wire and the covering-strip being secured together by the fusion of the metal between the wire and covering-strip, as described.

GEORGE U. MEYER.

Witnesses:

J. A. MILLER, Jr.,
M. F. BLIGH.