

(No Model.)

L. L. BURDON.

SEAMLESS COMPOUND GOLD AND SILVER WIRE.

No. 446,618.

Patented Feb. 17, 1891.

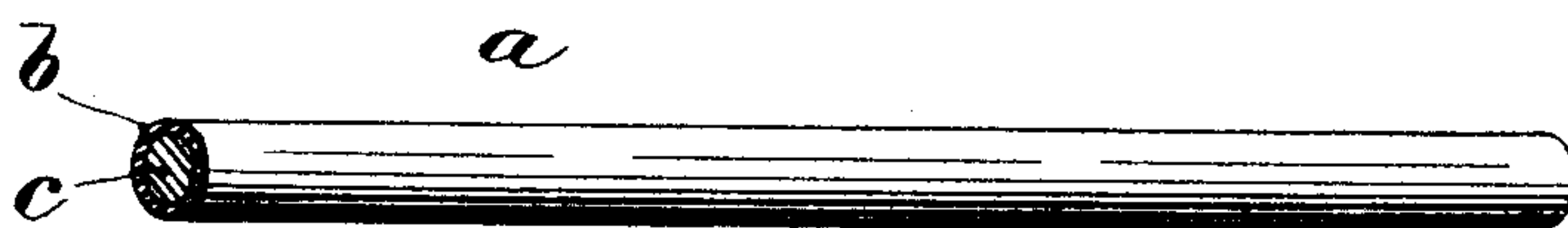


FIG. 1.

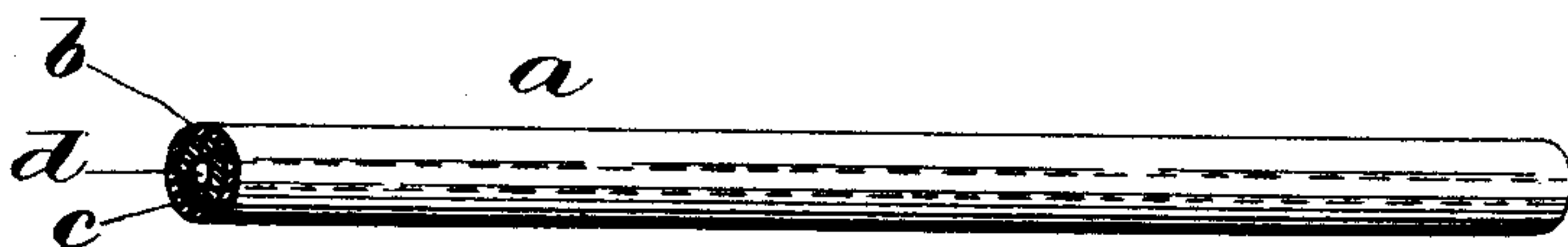


FIG. 2.

WITNESSES.

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SEAMLESS COMPOUND GOLD AND SILVER WIRE.

SPECIFICATION forming part of Letters Patent No. 446,618, dated February 17, 1891.

Application filed July 22, 1890. Serial No. 359,479. (No specimens.)

To all whom it may concern:

Be it known that I, LEVI L. BURDON, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Seamless Compound Wire; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as 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 present invention has for its object the production of seamless plated or compound wire. The essential difference between my present improved wire and seamless compound wire heretofore made is that the former has an exterior seamless surface of gold (alloyed as desired) and an interior or filling portion of silver united to the gold tube, whereas the ordinary seamless compound wire is filled with base metal.

An objection to the ordinary plated wire or seamless compound wire is that the interior or filling portion is composed of base metal having no especial or intrinsic value. Articles made of such wire are termed "plated," which is synonymous with and are classed with cheap or inferior goods, even though the gold plate might be comparatively thick.

The object I have in view is to produce an improved class of compound wire, which is devoid of the objections just referred to. To that end my invention consists, essentially, as before stated, of an outer or exterior seamless shell of suitably alloyed gold and an interior portion of silver united to the said gold.

In the appended drawings, illustrating my improved wire, Figure 1 is a perspective view of a compound solid wire, and Fig. 2 a similar view of a compound hollow wire having a seamless exterior of gold and an inner tube of silver united thereto.

a designates my improved wire complete, consisting of a seamless exterior portion *b* of gold and an inner or filling portion *c* of silver united thereto.

The wire is reduced from a seamless com-

pound ingot, the latter having a core *c* of silver. The core may be first cast and then turned off to the proper size. The outer portion of the ingot consists of a seamless tube *b* of gold suitably alloyed and having the desired thickness. The tube may be drawn up from a disk—in fact, I prefer to thus form them—thereby producing a seamless shell. After the two parts are made the silver core is inserted within the gold tube, the adjacent surfaces having first been properly treated with borax or other equivalent means to effect the union of the parts when subjected to a high temperature. The core may be covered with solder, or the shell *b* itself lined with solder or low-fusing metal, or even a thin sleeve or layer of solder may be introduced between the core and shell, the core being made correspondingly smaller to admit the solder. Still another way consists in forming a small chamber or reservoir at the top of the ingot, into which loose solder is placed. In any event the parts are subjected to a degree of heat sufficient to fuse the solder or low-fusing metals, thereby uniting the core and shell together, after which the compound ingot thus produced may be reduced to wire by any of the well-known methods, when, finally, it may be still further reduced by repeatedly passing it through a draw-plate provided with a series of graduated openings. It will be found that the percentage of the two metals, gold and silver, remains the same throughout in the wire that it possessed in the ingot itself.

In lieu of the solid silver core *c* shown in Fig. 1, it may be annular or hollow, as represented in Fig. 2, wherein a central hole *d* extends longitudinally of the wire.

I claim as my invention—

As an improved article of manufacture, a compound wire consisting of a seamless exterior surface of fine metal, as gold, and an interior portion *c* of silver, united to said exterior portion.

In testimony whereof I have affixed my signature in presence of two witnesses.

LEVI L. BURDON.

Witnesses:

CHARLES HANNIGAN,
GEO. H. REMINGTON.