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A. SCHMIDT.

METAL PLATING.

APPLICATION FILED JULY 22, 1904.

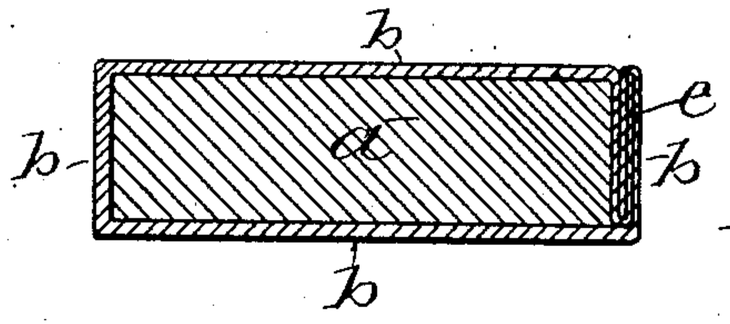

Fig. 1

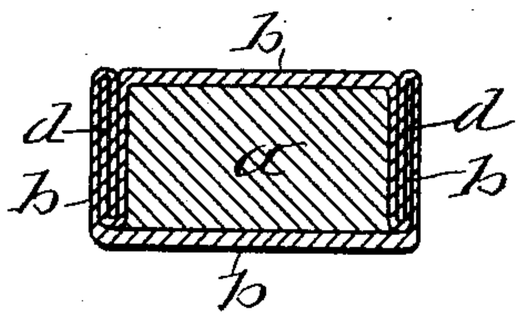

Fig. 2

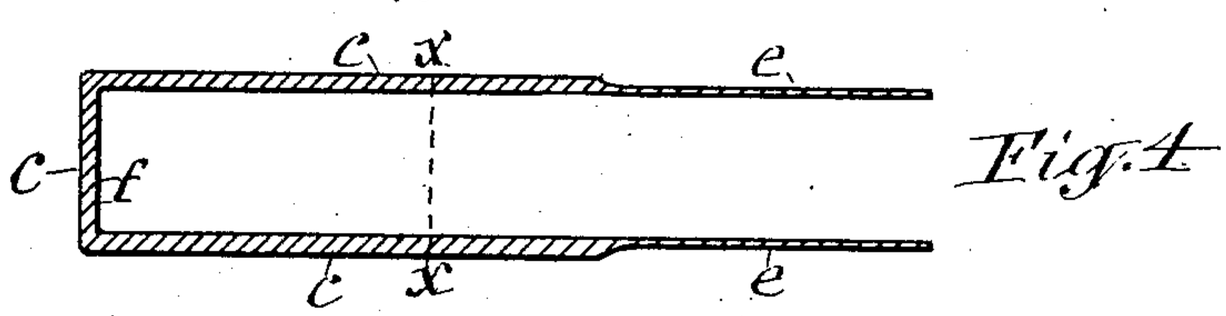

Fig. 4

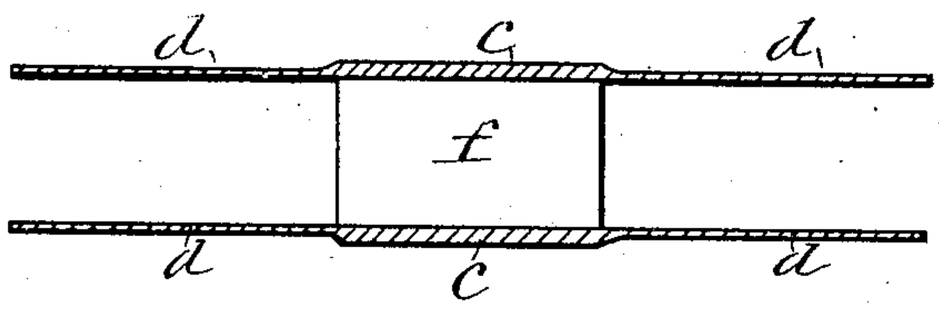

Fig. 5

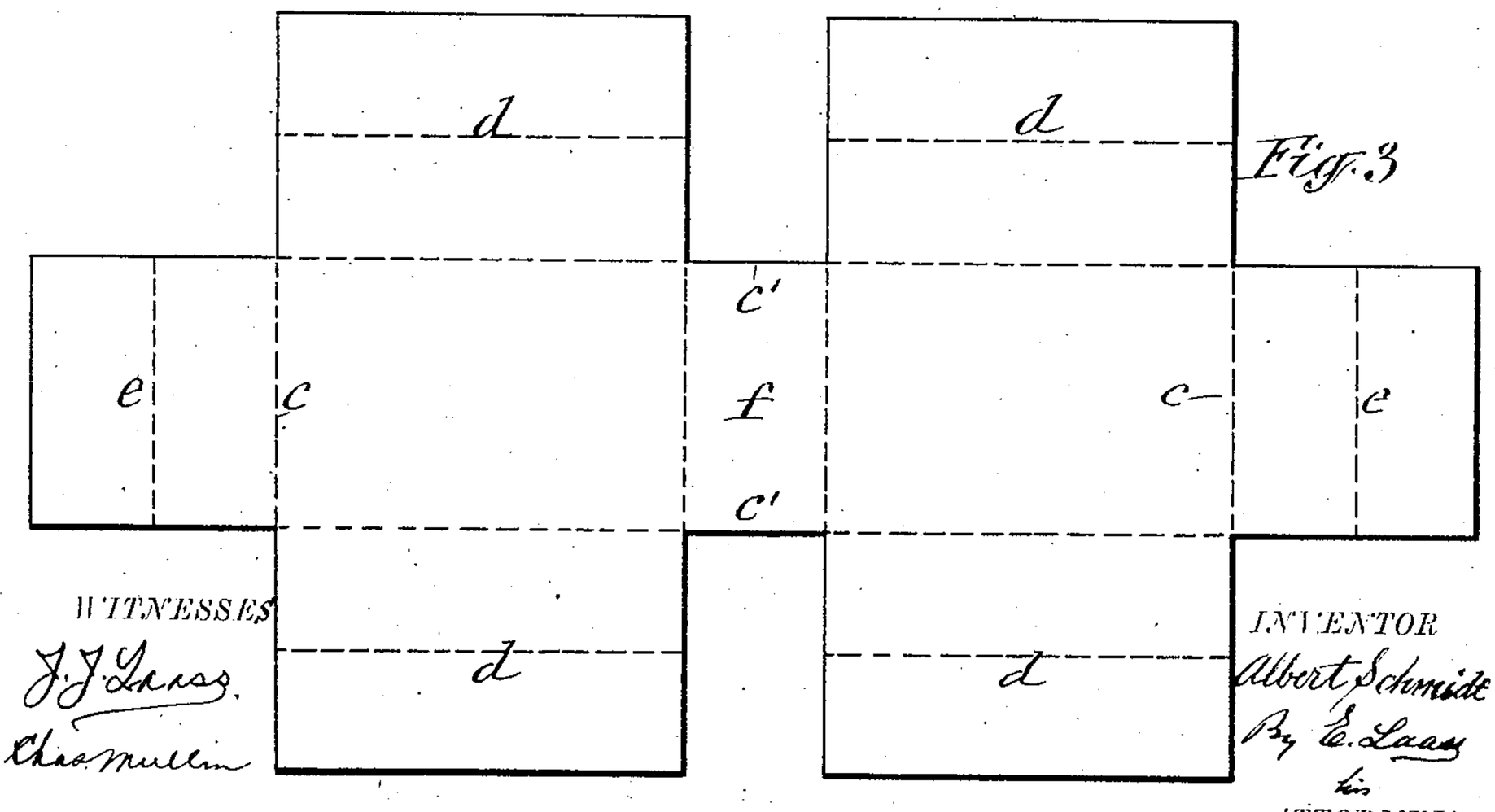

Fig. 3

WITNESSES

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No. 785,979. Patented March 28, 1905.

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ALBERT SCHMIDT, OF ROME, NEW YORK.

METAL-PLATING.

SPECIFICATION forming part of Letters Patent No. 785,979, dated March 28, 1905.

Application filed July 22, 1904. Serial No. 217,679.

To all whom it may concern:

Be it known that I, ALBERT SCHMIDT, a subject of the Emperor of Germany, and a resident of Rome, in the county of Oneida, in the State of New York, have invented new and useful Improvements in Metal-Plating, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to applying copper-plating to iron or steel bars or blocks by fusing the bar or block with the copper sheet applied thereto and while in their fused condition subjecting the pile to compression to permanently unite the copper with the surfaces of the iron or steel bar or block. Said compression has been effected by either passing the fused pile through between rolls or by placing said pile in a suitable press. In practice it has been found that the aforesaid rolling operation has a tendency to cause the copper sheet to curl up in front of the rolls, and thus interfere to some degree with the union of the copper with the steel or iron. This injurious effect has been to some extent overcome by the use of a sheet-metal plate and binders fastening the said plate around the iron or steel body and copper sheet applied thereto and by placing the pile thus prepared between the piston and head-block of a press.

The object of this invention is to provide means for preventing the aforesaid curling of the copper-plating by the pressure of the rolls and also dispense with the aforesaid extra sheet-metal wrapper and binder. This object I accomplish by the use of the novel construction of the enveloping sheet of copper and manner of applying the same to the block or bar to be plated, as hereinafter described and claimed.

In the annexed drawings, Figures 1 and 2 are respectively longitudinal and transverse sections of an oxidable metal body provided with the protective copper-plating. Fig. 3 is a plan view of the copper blank from which the plating is formed. Fig. 4 is a longitudinal section of the blank bent into the shape to receive the oxidable body, and Fig. 5 is a transverse section on line X X in Fig. 4.

In practicing my invention I proceed as follows: Assuming that my invention is to be applied to an oxidable plate or body which is of rectangular shape, as shown at *a* in Figs. 1 and 2 of the drawings, in which *b* denotes the protective copper-plating, I form the said plating from a copper blank of the shape shown in Fig. 3 of the drawings and consisting of a long rectangular central or main portion extending from *c* to *c* in length and from *c' c'* in width, flaps *d d* extending from the sides of the main portion and flaps *e e* extending from the ends of said main portion and of the same width. Each of said flaps is about half as thick as the main portion and projects a distance equal or nearly equal to twice the thickness of the body *a*. In applying the said blank to the oxidable body *a* I place said body with one of its ends transversely on the center of the main portion of the blank indicated at *f* in Fig. 3, then bend the remainder of said main portion onto the top and bottom of the body *a*, then fold each of the side flaps *d d* double into hook shape disposed reverse from the opposite flaps and interlocked therewith, as shown in Fig. 2 of the drawings, and fold and interlock the end flaps *e e* in the same manner and onto the end of the body *a*, as shown in Fig. 1 of the drawings. After the body *a* is thus enveloped in the copper-plating I press the said plating tightly onto said body, so as to exclude air moisture and dust from between the body and its copper-plating, and to retain the copper in its folded and compressed condition without the use of an extra binder, which has prior to my invention been fastened around the exterior of the copper envelop and usually composed of sheet-iron. The body *a*, completely enveloped in the copper-plating, is placed in a muffle and heated in a suitable furnace to fuse the copper-plating on the body *a*, to which it is subsequently united in an even and perfect manner by passing the heated pile through between compressing-rolls. In this pressing operation the interlocking flaps of the copper-plating serve to prevent said plating from being curled from the body *a* by the pressure of the rolls.

What I claim as my invention is—

The combination with a metal body, of a

plating formed from a blank composed of a main portion covering two opposite sides and one end of the body to be plated; flaps of reduced thickness extending from the sides and ends of the main portion, each of said flaps being of a width equal to twice the thickness of the aforesaid body and folded hook shape and reverse from the hook of the opposite flap and interlocked therewith substantially as set forth and shown.

ALBERT SCHMIDT.

Witnesses:
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