C. L'hondieu

Gilding Daguerreotypes,

No. 9,354. Patented Oct. 26, 1852.

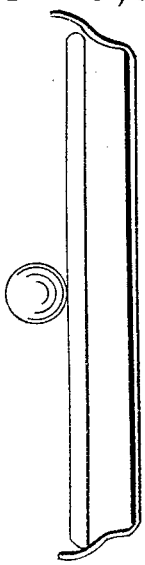

Fig. 5.

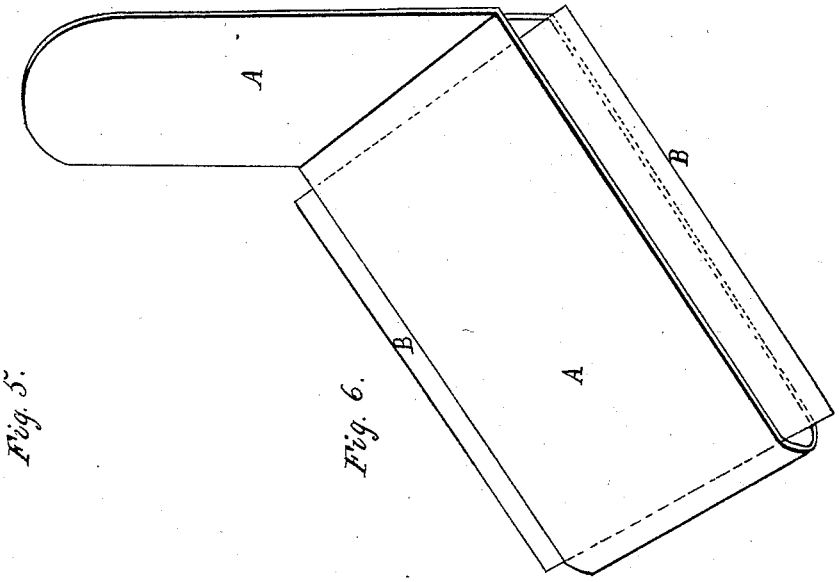

Fig. 6.

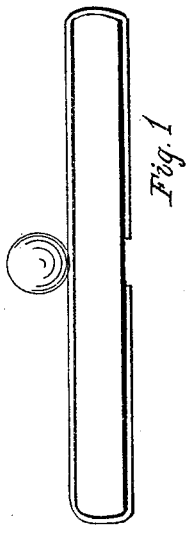

Fig. 1

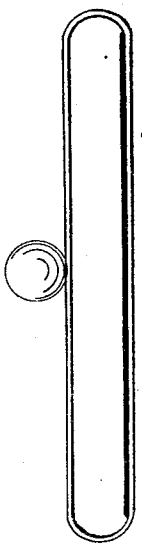

Fig. 2.

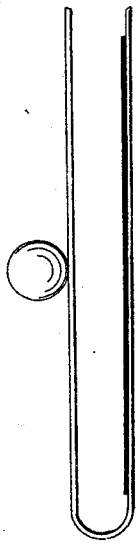

Fig. 3

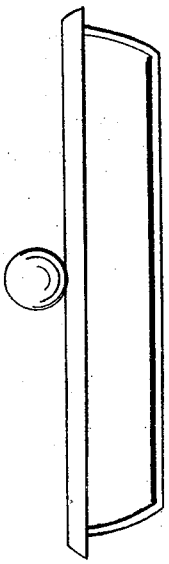

Fig. 4

UNITED STATES PATENT OFFICE.

CHARLES LHOMDIEU, OF CHARLESTON, SOUTH CAROLINA.

IMPROVEMENT IN GILDING DAGUERREOTYPES.

Specification forming part of Letters Patent No. **9,354**, dated October 26, 1852.

To all whom it may concern:

Be it known that I, CHARLES LHOMDIEU, of Charleston, district of Charleston, and State of South Carolina, have invented an Improvement in the Mode of Gilding or Fixing Daguerreotype-Pictures, of which the following is a full, clear, and exact description, reference being had to the drawings hereto annexed.

Figures 1, 2, 3, 4, 5, and 6 exhibit the modes under which I contemplate the application of my improvement or that particular part of my improvement which relates to the galvanic arrangement for effecting the deposits of gold upon the plate, the other element of improvement consisting in using a hot cyanide solution of gold previously boiled in connection with one of those galvanic arrangements.

It is common practice to gild other articles than daguerreotype-plates by means of the cyanide solutions of gold and a compound galvanic battery or a battery of intensity, and daguerreotype-plates have also been gilded by these same means; but such practice has long been abandoned by daguerreotype artists, for the reason that a large portion of the pictures so treated were clouded and spoiled, and for many years they have gilded or fixed their pictures by means of chloride and other solutions of gold, which will leave or deposit a coating of gold upon the plate by the agency of heat without the aid of a galvanic arrangement. In this case the solution is poured upon the plate and a spirit-lamp applied to the under surface of the plate till the gilding takes place; but in such cases the coat of gilding can never do more than cover the entire surface of the plate and cannot be increased in thickness after the surface of the plate has been covered by the thinnest possible film. Hence such pictures to the eye do not appear to have been gilded and have not the golden color of my pictures. It is well known that if the galvanic current is brought into requisition for gilding generally by any of the solutions a coat of gilding may be deposited to any desired thickness.

By my improvement I am enabled to use the galvanic current with a cyanide solution for daguerreotype-plates and get the deep gold color upon the plates, giving them a warm tone, great durability, and at the same time with such certainty of operation that I feel persuaded it will supplant the mode at present everywhere in use of gilding by heat alone.

Figs. 1, 2, 3, 4, 5, and 6 exhibit my galvanic arrangement, which are merely zinc trays with zinc caps or covers provided with rings for handles, the red lines indicating the plates to be gilded; but that which I prefer as embodying all the advantages is shown in Fig. 6, where A represents a plate of zinc bent up so as to inclose the daguerreotype-plate B while it is being gilded. The entire circle of zinc enveloping the daguerreotype-plate in this manner presents peculiar advantages. The back surface of the plate resting upon the lower portion of the zinc circle exposes a large surface for contact, which is important, and also prevents waste of the gilding solution, for whenever, as in the usual way, a daguerreotype-plate is suspended in a gilding-cell connected with a battery the back of the plate becomes thickly gilded, as well as the face or picture, and there is so much lost as is deposited upon other parts than the picture itself. The close contact of the plate with the zinc excludes the gilding-liquid, and thus saves the waste. This galvanic arrangement, it will be perceived, has from the construction and mode of using a twofold office to perform. It furnishes the necessary electric power, and serves also to hold the plate in its immersion, emersion, and subsequent washing. In order, however, to succeed entirely with a single circle of zinc, I have discovered that the cyanide solution of gold must be boiled, and when used it must be used hot, and the hotter the better up to its boiling-point. It is all important that the gilding operation should be effected with great dispatch, and I find that by placing the daguerreotype-plate in one of my zinc trays or circles and immersing it in a hot solution the gilding takes place immediately, and in this respect the zinc tray or plate-holder is advantageous, for it is dropped into the solution so as to bring the whole surface at once and evenly in contact with the solution, and as the plate must be instantly washed it is readily taken from the gilding solution and plunged into water. There are no clamps or fastenings required here to make metallic contact, and the entire manipulation of the plate from

the beginning to the end of the fixing or gilding operation is greatly facilitated.

So far as I can ascertain, I am the first to succeed in a practicable degree in gilding daguerreotype-plates with cyanide solutions and the first to have gilded those plates at all with cyanide solutions and a single circle of zinc.

I therefore claim and desire to secure by Letters Patent—

My mode of gilding daguerreotype-plates, substantially as described—that is to say, by the employment of the electric current and of hot solutions of the cyanide of gold previously boiled and the kind of zinc circle or tray designated by Fig. 6.

CHARLES LHOMDIEU.

Witnesses:
A. W. VENABLE,
D. WALLACE.