

# UNITED STATES PATENT OFFICE.

EMANUEL HARMON, OF CLEVELAND, OHIO.

## IMPROVEMENT IN SHADING PICTURES BY METALLIC LEAVES.

Specification forming part of Letters Patent No. 6,241, dated March 27, 1849.

*To all whom it may concern:*

Be it known that I, EMANUEL HARMON, of Cleveland, Cuyahoga county, and State of Ohio, have discovered a new method or process of taking miniatures of pictures of all kinds on glass by the means of gold, silver, platina, and copper-leaf, which I call the "Aureotypic Process," or "Celestial Painting;" and I hereby declare that the following is a full and exact description of the same.

First, a drawing is taken of the object to be represented. Secondly, a polished glass of the requisite dimensions is then gilded in any of the various modes of gilding glass which leaves the gilding pliable and brilliant, a gilding of the requisite pliability and brilliancy being thus obtained.

The outlines of the drawing, painting, engraving, or lithograph are taken in miniature by the pentagraph, a sharp metallic point being substituted for the pencil or other marking-instrument used in tracing maps and reducing figures and proportions.

The shading is transferred in the following manner: If the picture is principally in light or relieve, the lightest leaf, marked No. one, (1,) is to be used first in gilding. If the picture is mainly in perspective or shade, then the leaf No. two (2) is first used. If the picture is equally in light and shade, then either may be used first, at the election of the artist. The outlines of the lights or shades, as the case may be, are then first cut by the pentagraph and the leaf removed and light or dark leaf substituted, as required. Where slight shading is required, No. two (2) must be used. If deep shade is required, or leaf No. two (2) is to be shaded, then leaf No. three (3) is to be inserted.

To make the shading graceful and gradual, a fine needle is used to scratch the adjoining gilding, so as to intermix the metallic colors gradually. To make the greater contrast in the lights and shades, gold-leaf may be procured so mixed with silver as to give it a much lighter appearance than leaf No. one, (1,) or silver leaf itself, or platinum, or leaf by any means colored so as to retain its brilliancy may be used, and Nos. one (1) and two (2) for the shade. After

the shading is completed the glass is put exactly in its former position, the outlines of the miniature then cut, and the superfluous leaf removed.

To protect the gilding it must be painted with a sort of japan made by melting gum-asphaltum and an equal quantity of spirits of turpentine. The miniature being seen from the opposite side of the glass reverses the picture. To prevent this, where it is material, the picture or object must be reversed in the first place.

The following is the process of casing: Another glass the size of the case is painted around the border with the japan, and before it is so dry as to become brittle a ruler and sharp point are used to mark out a sufficient space for the picture, and the japan within the lines must be removed by running a soft piece of wood slightly wet along the japanning, protecting the lines by a ruler, and the glass cleaned by a damp cloth. This glass is placed over the picture, which surrounds it with a halo and a beautiful background; or a picture may be taken in a manner more like a painting by marking the outlines as described and covering them over with a deeper or different shade of leaf, the contrast serving to indicate the lines. In taking likenesses, in particular, the hair can be thus represented to advantage, and other features—indeed, the whole picture. Practice, good sense, and a good machine are all that is required to make a miniature perfectly correct, of unapproachable brilliancy and durability, either as ornaments or as devices for signs, &c.

The size of the miniature can be made of any desirable dimensions, depending upon the size of the picture and the size and compass of the pentagraph.

What I claim as my discovery, and desire to secure by Letters Patent, is—

The shading of gilded pictures by metallic leaves and by the process herein described.  
EMANUEL HARMON.

Witnesses:

N. T. BOWLER,  
J. HOLMES.