

UNITED STATES PATENT OFFICE

JEROME B. SHAW, OF PITTSBURG, PENNSYLVANIA.

METHOD OF LETTERING AND ORNAMENTING GLASS.

Specification forming part of Letters Patent No. **15,532**, dated August 12, 1856; antedated April 24, 1856.

To all whom it may concern:

Be it known that I, JEROME B. SHAW, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Mode of Ornamenting Glass; and I do hereby declare that the following is a full and exact description thereof.

My improvement consists in the use and application of thin sheet-metal patterns in producing ornamental designs upon glass. The metal which I prefer is what is known in commerce as "tin-foil," or "lead-foil."

In carrying into effect my improved process I first prepare templets of brass, steel, or other sheet metal whose outlines correspond to that of the design intended to be painted upon the glass. I then place these templets upon a sheet of foil, and with a sharp knife cut out a foil pattern of the same shape and size as the templet. These patterns I place upon the back surface of a plate of glass coated with the white of eggs, by which the patterns are held fast, while I brush over the whole surface of the patterns and glass the color desired for a ground. After this has dried I remove the patterns, which leaves the design clear and the ground colored. Next I color those parts of the glass which form the design with transparent or translucent varnish of any desired line. The process is completed by covering the back of the plate with metallic foil, crumpled or corrugated, so as to more fully develop and brighten the colors by reflected light, and at the same time impart the appearance of pearl to the design. This foil must be protected by paper, plaster of paris, putty, or other covering, such as in the judgment of the artist may in each case be most suitable.

In the long course of experiments by which my invention was perfected I found the greatest difficulty in applying and removing my patterns, which at first were cut from tissues, paper, and other textile fabrics, so as to leave the designs with clean surfaces and smooth and sharply-defined outlines. The elasticity of some of these materials prevented their uniform close adhesion to the glass, and thus, by admitting the ground color under their edges, destroyed the clearness of outline so essential to the effect of my design; and the porousness of others caused them to absorb

the ground color and permit it to reach the surfaces, which they should have protected from it, while from their absorbing also the cement which held them in place patterns of such material could not, without great difficulty and labor, be lifted from the glass after the ground color had dried; and it was exceedingly difficult to remove them without leaving at least a fibrous film upon the glass, which greatly diminished the transparency and beauty of the design. The necessity of having some substance for the patterns which would obviate these difficulties induced me to try, among other things, thin sheets of lead or of alloys of lead and tin, known in commerce as "tin" or "lead" foil, which I discovered possesses every quality requisite for this purpose, and is free from the objections to which all other substances that I have tried are liable.

This process is peculiarly applicable to the production of ornamental signs and other decorations in which the same pattern has often to be reproduced, as a large amount of work of this class may be done without multiplying templets to an inconvenient extent.

I have been informed that in the invention of each of the parts of the foregoing process I am anticipated by others, except in the use of metallic-foil patterns of the shape of the design cemented to the glass while the ground is being painted, and that paper patterns have been used to paste upon cloth while painting the ground of transparent designs thereon. I therefore make no claim to any of these things in the invention of which I may have been anticipated; but

What I claim in the before-described process of ornamenting glass as my invention, and desire to secure by Letters Patent, is—

The employment of patterns of metallic foil and cementing the same to and removing them from the glass, as herein set forth, whereby I am enabled to produce ornamental designs on glass at a greatly-reduced cost.

In testimony whereof I have hereunto subscribed my name.

JEROME B. SHAW.

In presence of—

P. H. WATSON,

JOHN S. HOLLINGSHEAD.