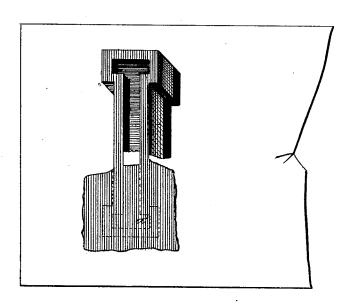
## H. A. GOETZ.

## PROCESS OF ORNAMENTING GLASS.

No. 185,917.

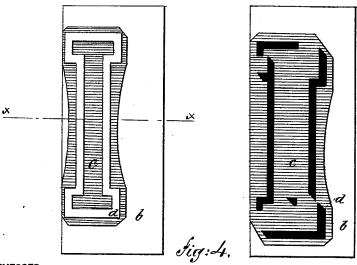
Patented Jan. 2, 1877.

Sig.1.



sig:h.

Sig: 3.



WITNESSES:

John Goethals

Henry a. Fortz

ATTORNEYS.

## UNITED STATES PATENT OFFICE.

HENRY A. GOETZ, OF NEW ALBANY, INDIANA.

## IMPROVEMENT IN PROCESSES OF ORNAMENTING GLASS.

Specification forming part of Letters Patent No. 185,917, dated January 2, 1877; application filed September 22, 1876.

To all whom it may concern:

Be it known that I, HENRY A. GOETZ, of New Albany, in the county of Floyd, and State of Indiana, have invented a new and Improved Process for Lettering and Ornamenting Glass, of which the following is a specification:

Figure 1 in the drawing represents the different stages of the process. Figs. 2 and 3 are views of the type used in making the impression on the glass. Fig. 4 is a transverse section on line x x in Fig. 2.

Similar letters of reference indicate corresponding parts.

My invention relates to an improved process for lettering and ornamenting glass; and it consists in covering the glass with gold or silver leaf, and making thereon an impression of the ornamentation or letters with a hard drying ink applied with elastic type, and brushing off the surplus leaf after the ink becomes dry, and applying shading with elastic type, and backing the whole in the usual way.

In carrying out my invention, I take a clean piece of glass, and cover it where it is to be lettered with gold or silver leaf, having previously applied to the glass a coating of isinglass size. When the size becomes dry, I gently rub the leaf down with cotton until all the wrinkles are removed.

If a heavier or more perfect coating of leaf is desired, another coat may be added, and rubbed down in the same manner. When the gilding or silvering is finished, a yellow, hard drying-ink is applied to the gilded surface with elastic type, in such places as are to retain the leaf, as shown in dotted lines at a' in Fig. 1.

When this ink becomes thoroughly hard and dry, the surplus leaf is removed with whiting applied, with a damp pledget of cotton, while the lettering or ornamentation is retained by the ink. The shading, or the outline of the shading, is now printed on the glass with elastic type in any required color. When this becomes dry, hand-work may be added, if desired, and the whole backed up in the usual way.

The ornamentation or lettering of glass by the process herein described is quicker and more accurately done than by the ordinary method, making an important saving of time and producing a better quality of work.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The method of ornamenting glass by applying gold or silver leaf to one side thereof; on this impressing a design with hard drying-ink and an elastic type; next brushing off the surplus leaf, then shading with an elastic type, and finally backing in the usual way, all substantially as described.

HENRY AUGUST GOETZ. Witnesses:

FRANK F. ENGLISH, WILLIAM L. GRUBB.