

UNITED STATES PATENT OFFICE.

JEROME ALLEN, OF GENESEO, NEW YORK.

IMPROVEMENT IN PROCESSES OF PREPARING AUTOGRAPHIC STENCILS.

Specification forming part of Letters Patent No. **211,682**, dated January 23, 1879; application filed March 18, 1878.

To all whom it may concern:

Be it known that I, JEROME ALLEN, of Geneseo, in the county of Livingston and State of New York, have invented a new and useful Improvement in the Art of Making Autographic Stencils for Reduplicating Writing in Fac-Simile, of which the following is a specification:

My invention has for its object the making of paper stencils by a shorter process than the processes heretofore employed for the same purpose.

In carrying out my invention I first saturate a thin but good quality of paper with any solution that will enter into the fibers of the paper and render the latter impervious to water, which solution is also capable of being acted upon by a liquid substance that will also corrode the fiber of the paper.

The best solution for this purpose I have found to be a solution of gun-cotton in alcohol and ether, as collodion, or a solution of some gum capable of being acted upon by said liquid, substantially as hereinafter described.

The collodion is made according to the formula commonly employed by photographers.

I sometimes add to either of these solutions about one part in a hundred of glycerine, or one part in three hundred of hydrate of potassium, and thereby facilitate the corroding action of the liquid substance; but this is not essential to my invention.

The paper may be saturated with either of such solutions by passing the paper through the same, or by brushing both sides of the paper with such solution, or in the process of making said paper. The paper thus prepared is dried and put aside for use, and as it is saturated, it does not matter what side of it is written or marked upon.

The liquid substance above referred to I prefer to make of dilute sulphuric acid, and I prefer to color it with aniline, though any coloring material may be employed. The strength of the acid is modified according to the degree of effect it is intended to produce.

The writing or marks desired to be reproduced are made with the liquid substance, substantially as above described, upon paper prepared substantially as above described, using a common pen or any desired instru-

ment for this purpose. At any time after the writing or marks is or are made, (but preferably within half an hour to produce the best results,) the stencil is made ready for use by moistening the paper with water applied by a brush to the unwritten or unmarked side first, and then slightly pressing said paper between two sheets of blotting-paper, or equivalent absorbent of water, and then similarly moistening the written or face side with water, and again pressing it between the sheets of blotting-paper.

To print from the stencil, the latter, thus moistened with water, is laid face down on a pad or blotting-paper saturated with any coloring material that will not precipitate crystals on drying. I prefer aniline in glycerine as such coloring material. The paper to be printed is then laid on the stencil and pressure applied upon it, either by an ordinary copying-press, a roller pushed over it, or by any suitable mechanism, and then removed, when the process can be repeated, and any desired number of copies can be obtained.

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

1. The improvement in the art of making autographic stencils which consists in preparing the paper by saturating it with a solution, substantially as described, that will enter into the fibers of the paper and render the latter impervious to water, which solution is also capable of being acted upon by an acid liquid substance that will corrode the fibers of the paper, then drying the same, and then writing or marking thereon with such acid liquid substance, substantially as set forth.

2. The improvement in the art of making autographic stencils which consists in preparing the paper by saturating it with collodion, then drying the same, and then writing or marking thereon with sulphuric acid, colored or not, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JEROME ALLEN.

Witnesses:

W. B. PHILIPP,
GEO. H. GRAHAM.