UNITED STATES PATENT OFFICE.

MORTIMER H. BACHMAN AND SEBASTIAN S. PECKINPAUGH, OF STANTON, MICHIGAN.

IMPROVEMENT IN PROCESSES OF PHOTO-NEGATIVE ENGRAVING.

Specification forming part of Letters Patent No. **221,997**, dated November 25, 1879; application filed May 22, 1879.

To all whom it may concern:

Be it known that we, MORTIMER H. BACHMAN and SEBASTIAN S. PECKINPAUGH, of Stanton, in the county of Montcalm and State of Michigan, have invented a new and Improved Process of Photo-Negative Engraving, of which the following is a specification.

The object of this invention is to furnish business-cards, visiting-cards, directories, &c., by means of photo-negative engraving upon glass, and the following is a description of our invention and its application.

The plate of glass is prepared in the same manner as photographers prepare glass for negatives. The glass is then placed in the camera, and a negative of the object desired to be photographed is made. It is then taken into a dark room and developed by the usual process used by photographers. A mask is then placed over, but not in contact with, the negative thus taken, and the glass is then exposed to the light until objects not covered by the mask are obliterated, which generally takes about ten seconds. The negative is then taken into a dark room, where the process generally used by photographers is applied until the picture is sufficiently developed. The usual photographic process for rendering the glass opaque is then applied, and when the glass obtains a uniform intensity by this process it is dried and flowed with the varnish usually used for negatives. Then the glass is ready for engraving, and any design may then be drawn upon it, either by the usual method of pouncing or with pen or pencil. The engraving is then done by means of sharp steel instruments, which cut through the varnish and expose the glass.

The glass may be put into a frame such as artists use for retouching negatives, and when in that position the design can be executed. The pictures or designs are then printed from this negative by the usual photographic process.

It will be seen that by this process the portrait of the advertiser can be photographed, and his business-card be engraved on and printed from the same plate and on the same plane; that any word, letter, or design may be changed or removed by masking the same at the time of printing; that photographers can use it in ornamenting backgrounds to their pictures and advertising their places of business; that all cards may be easily duplicated; that any ordinary penman may do the engraving, and that the work is much more durable than ordinary pen-work.

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

The herein-described process of photo-negative engraving, which consists in placing a mask over, but not in contact with, the negative previously developed by the usual process of photography, for the purpose of preserving intact any portion of the object upon the negative, while the remainder not wanted is obliterated by exposure to the light, and the negative subsequently finished in the usual manner, substantially as described.

MORTIMER H. BACHMAN.
SEBASTIAN S. PECKINPAUGH.

Witnesses:
HARVEY W. RICE,
J. W. LOWING.