

(No Model.)

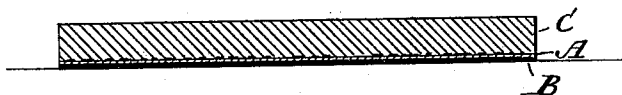
L. SCHAEFER.

METHOD OF PRODUCING PHOTO-MECHANICAL PRINTING PLATES.

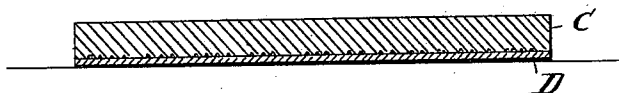
No. 470,012.

Patented Mar. 1, 1892.

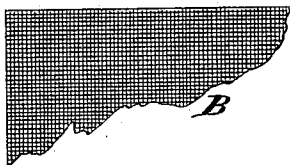
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES:

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# UNITED STATES PATENT OFFICE.

LUDWIG SCHAEFER, OF HEILBRONN, GERMANY.

METHOD OF PRODUCING PHOTO-MECHANICAL PRINTING-PLATES.

SPECIFICATION forming part of Letters Patent No. 470,012, dated March 1, 1892.

Application filed January 3, 1891. Serial No. 376,627. (No model.)

*To all whom it may concern:*

Be it known that I, LUDWIG SCHAEFER, of the city of Heilbronn, Württemberg, Germany, have invented a new and useful Improvement in the Method of Producing Photo-Mechanical Printing-Plates, suitable for casting therefrom or to press from, of which the following is a specification.

The swelling and dissolution of light sensitive gelatinized paper is made use of by me for the reproduction of photographs, drawings, wood-cuts, copper-plate, lithographs, music-prints, and the like, as by this process there are produced elevations which, not being perfectly level and on the same plane, are unsuited for use—as, for example, in printing forms and the like. I make use of the following process for producing the form:

Upon the exposed and developed sensitive gelatine-paper I cast a layer of plaster-of-paris whose tendency for hardening has been retarded to a certain extent by the addition of marble-dust, glue, borax, or the like. As soon as the plaster cast has the necessary degree of compactness the gelatinized paper is removed or pulled off and in place of the same is laid a glass plate. The plaster cast is allowed to rest on the glass plate, so that the weight of the cast will cause the elevations to be forced back into the mass until every delineation comprising the drawing or representation lies upon one and the same level. The depressions or indentations between the delineations of course lie on a lower level than the delineations; but said delineations occupy a common level, so as to be suitable for printing. From the plane and level plaster cast thus obtained casts in wax, metals, plaster-of-paris, or the like can be made, or after the hardening of the original plaster cast I can press into the same any mass that is capable of being shaped or formed.

This invention is illustrated in the annexed drawings, in which—

Figure 1 is a section of a plaster-of-paris layer cast upon gelatine-paper secured to a background. Fig. 2 is a section of the plaster-of-paris layer resting on a glass plate. Fig. 3 shows a face view of a piece of background.

Upon the gelatine-paper A is cast the layer C of plaster-of-paris. The gelatine-paper is shown provided with a suitable background B. When the plaster cast is sufficiently compact, reverse the cast, so that the paper A is on top, and then pull off the paper, the background being of course also removed in case the background is used. Then lay a glass plate D on the plaster cast and reverse the cast, so that it rests on the plate D, as seen in Fig. 2. The cast is left resting on the glass plate until the required leveling is attained.

The gelatinized paper used in carrying out the above process is obtained by bathing the paper in the sensitive fluid, and said sensitive paper can be secured to any suitable background.

This process of obtaining a background is simpler than the process heretofore employed for that purpose, which consists in placing nets or lines between the drawing and the photographic apparatus.

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

1. The process of producing forms of plane level surface suitable for casting or pressing, which process consists in taking developed sensitive gelatine-paper, casting thereon a layer of plaster-of-paris, removing the gelatine-paper, substituting therefor a glass plate, and causing the plaster-of-paris to rest on said glass plate, so as to press out any unevenness in the plaster-of-paris, substantially as described.

2. The process of producing forms of plane level surface suitable for casting or pressing, which process consists in taking developed sensitive gelatine-paper, casting thereon a layer of plaster-of-paris mixed with such substance as marble-dust or equivalent material to retard the hardening of the plaster-of-paris, removing the gelatine-paper, substituting therefor a glass plate, and causing the plaster-of-paris to rest on said glass plate, so as to press out any unevenness in the plaster-of-paris, substantially as described.

3. The process of producing forms of plane level surface suitable for casting or pressing, which process consists in securing developed sensitive gelatine-paper to a suitable back-

ground, casting thereon a layer of plaster-of-paris, removing the gelatine-paper, substituting therefor a glass plate, and causing the plaster-of-paris to rest on said glass plate, so  
5 as to press out any unevenness in the plaster-of-paris, substantially as described.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

LUDWIG SCHAEFER.

Witnesses:

ADOLPH D. SCHLEHER,

FRIEDR. SCHLEHER.