T. S. FOX.

PROCESS OF MAKING PRINTING PLATES.

APPLICATION FILED MAY 14, 1908.

1,008,023.

Patented Nov. 7, 1911.

Fig. 1.

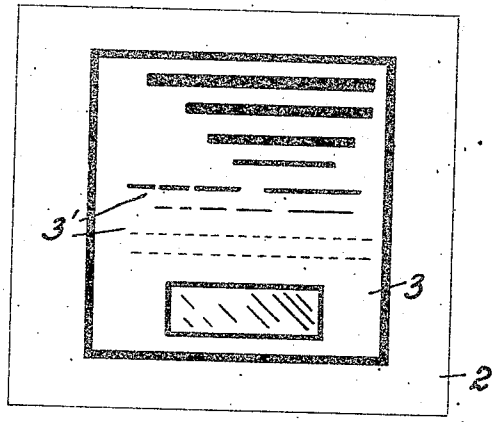
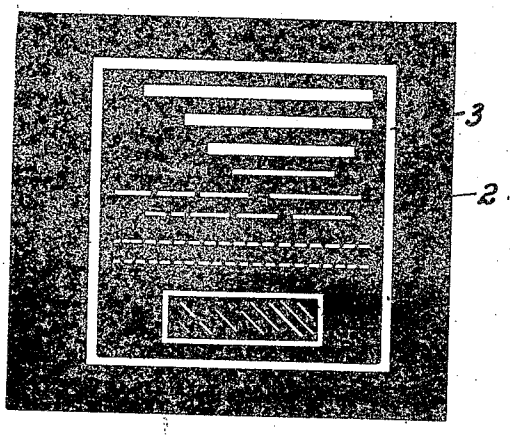


Fig. 2.



Witnesses

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PROCESS OF MAKING PRINTING-PLATES.

1,008,023. Specification of Letters Patent. Patented Nov. 7, 1911.

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To all whom it may concern:

Be it known that I, THOMAS S. FOX, of the borough of Brooklyn, city and State of New York, have invented a certain new and useful Improvement in Processes of Making Printing-Plates.

This invention provides a method of making printing plates which involves the production of a fac-simile of a printing surface like or analogous to that resulting in whole or in part from the use of the invention disclosed in Patent No. 214,493 granted to Benjamin Day on April 22, 1879. Such fac-simile does not, according to this invention, constitute the actual printing surface, since the fac-simile is made upon the face of a suitable transparent medium which is thereafter converted into a negative and this negative is photographically printed upon the plate subsequently etched, inked and press-printed in the usual manner, or otherwise treated to form a printing surface.

In the drawing accompanying the present specification Figure 1 is representative in a general way of a design prepared upon a transparent medium. Fig. 2 is a view of the same medium after the material used in preparing the design and background has been treated according to the present invention in a manner such that the opaque parts of the design are rendered less opaque or in fact transparent and the transparent parts less transparent or in fact opaque.

In carrying my invention into practice, a suitable medium which may afterward be used as a negative is first provided. This medium such as 2 may be of various materials. For instance, it may consist of a film of collodion, pyroxylin, gelatin, or a glass plate covered with suitable ink-receiving transparent material. Under this medium I place a suitable outline sketch, blue print, etc., of the form, picture or other article, comprehensively called design, illuminated by transmitted or reflected light and properly produce the design (such production being here designated in a general way by 3) upon the medium by a printing film such as already referred to see for instance dotted lines 3′ manipulated in the well known manner, or by a pen or in any other proper manner alone or in conjunction with said film.

The next step in the present process involves the conversion of the inked medium 2 into a negative, that is to say those portions of the medium which are inked and opaque are thereby rendered transparent translucent or similarly modified and conversely the transparent parts of the medium are rendered less transparent or opaque.

I do not wish to limit myself to any particular details or materials for effecting this result. I have, however, devised one practical method for the purpose which will now be described; that is to say, I dust finely powdered asphaltum over the inked impressions on the medium and after removing the loose non-adherent surplus, I apply over the entire surface with a brush a washing of Higgins's waterproof black ink which adheres to the parts of the medium not covered by the ink previously applied to the medium as aforesaid. After drying, a suitable reagent such as benzin, or similar solvent, is applied which dissolves the asphaltum-ink parts of the surface and yields in consequence the negative already referred to. From this negative after drying prints may be photographically taken upon sensitized surfaces which may be etched, or otherwise prepared to form a printing plate afterward press-printed in the usual manner. Not only am I thus enabled to utilize the well known printing film with its inherent advantages and facility of operation under circumstances and for purposes to which the film was heretofore altogether or extremely difficult of practical application, but many incidental advantages are involved in the utilization of the present process which will be appreciated by those familiar with the art. For instance, in the zinc plate process of engraving with its difficulty and inconvenience of transferring the proper depth and tone values from a printing film onto a more or less illegible design etched on a zinc plate there is introduced an equivalent transfer onto a transparent medium beneath which is the illuminated design. Moreover, it enables the printing film or analogous methods of preliminary preparation to be readily used in connection with the production of photo-etched printing plates of copper, these latter as is well known to those skilled in the art being particularly adapted to a degree of success in local reëtching not obtaining in the zinc plate process.

Having described my invention, I claim:

1. A process for the production of printing plates, the same consisting in preparing the design on a transparent medium by a

step involving the application of a printing film to such medium, then treating the medium so prepared and acting upon the treated medium by a suitable reagent or reagents whereby the transparent parts are rendered less transparent and the opaque parts less opaque, and then photographically making a printing plate from the medium so prepared, treated and acted upon.

2. A process for the production of photo-etched printing plates, the same consisting in preparing the design in ink on a transparent medium, in then dusting powdered asphaltum over the medium and removing the surplus, in then applying a washing of Higgins's water proof ink to the medium, in then applying a suitable solvent for the purpose specified and drying the medium, and in finally photo-etching a printing plate from the medium so treated.

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

THOMAS S. FOX.

Witnesses:
JOSEPH F. GREVER,
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