May 4, 1926. 1,583,518

E. BASSIST

HALFTONE PLATE

Filed August 18, 1925

Fig. 1.

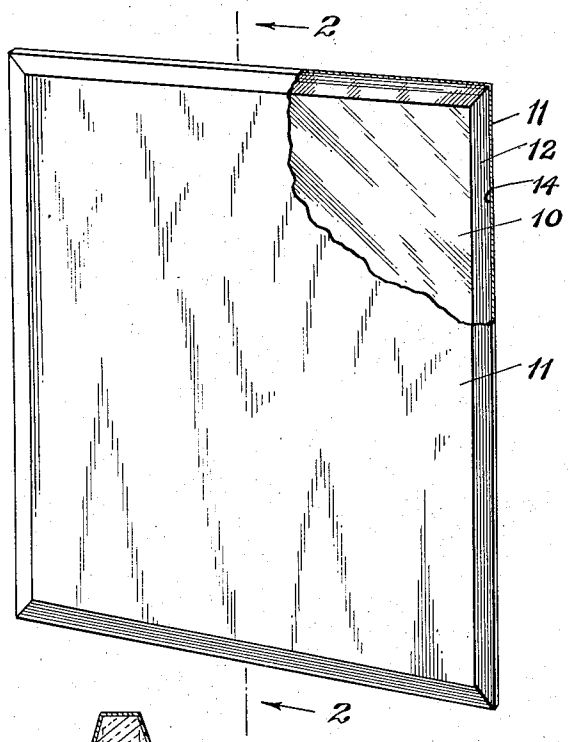
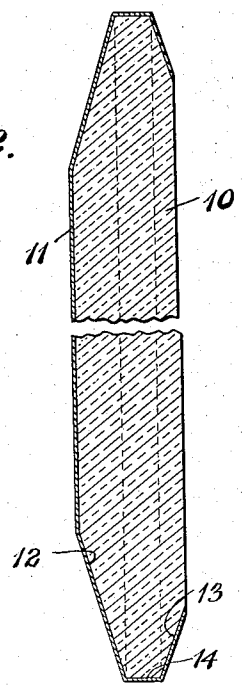


Fig. 2.



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UNITED STATES PATENT OFFICE.

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HALFTONE PLATE.

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To all whom it may concern:

Be it known that I, ELLIS BASSIST, a citizen of Hungary, residing at Westwood, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Halftone Plates, of which the following is a specification.

The invention relates to plates for use in making lithographic printing plates. In a previous U. S. Patent No. 1,525,531, granted me the 10th day of February, 1925, I have disclosed a halftone plate for use as a negative or positive in the making of lithographic printing plates. The plate as set forth therein comprises a transparent base, usually of glass, upon which there is provided on one face a thin opaque covering of suitable material, for example copper, and which material may be deposited thereon by electro-chemical means.

While I found this mode of providing the opaque covering to be most satisfactory, yet there are certain inherent objectionable features involved which are likely to cause trouble in the subsequent handling and treatment of the plate as in providing the sensitized emulsion thereon, and washing, heating, etching, etc. thereof, as set forth in my aforesaid patent. A principal objection is a tendency of the deposited material to peel off from the surface of the underlying base, starting at its edges; and it is the object of the present invention to so construct the base plate and to combine therewith the opaque coating aforesaid that the latter will remain permanently thereon to provide a suitable negative or positive plate for the manufacture of lithographic printing plates therefrom.

The nature of the invention, however, will best be understood when described in connection with the accompanying drawings, in which—

Fig. 1 is a perspective view of the improved plate with a portion of the coating broken away.

Fig. 2 is an enlarged vertical transverse section thereof taken on the line 2—2, Fig. 1, looking in the direction of the arrows.

Referring to the drawings, 10 designates a suitable support member which, in accordance with my previous invention, is to be transparent; and, preferably, I employ a glass plate of the proper shape and thickness for this purpose. The coating 11 provided thereon is preferably also of copper, being of some two thousandths of an inch and obtained by electro-deposition. In accordance with the present invention, the upper surface of the underlying glass plate is bevelled along its edges, the bevel 12 being at a suitable angle and slightly roughened over its face. A further bevel 13 and similarly with roughened face is provided along the edges of the underface of the glass plate but preferably at a more acute angle, the bevel being taken from the sides at a small distance below the bevel 12 so as to leave an intermediate unbevelled portion 14. The latter bevel 13, however, should not extend any great distance due to the subsequent use of the completed printing plate in a vacuum contact frame.

In the provision of the opaque coating thereon, the electro-deposition is so conducted that the copper or other metal will be deposited not only over the upper surface of the plate and its bevelled edge portion 12 but also over the bevelled portion 13 along the edges of the underface as well as over the intermediate portion 14. The coating 11 thus is continuous and embraces the plate along the respective upper and lower edges and any tendency to peel away from the upper surface is resisted along this binding edge portion. I have found that the subsequent operations aforesaid, which are to be performed on the plate in preparing the same for manufacture of lithographic printing plates, do not loosen such coating and that with respect to the coating the finished negatives or positives are thus of more or less permanent character and may be handled and transported without undue care.

I claim:—

1. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces, and an opaque coating provided over the upper face and continuing over the two said bevelled portions.

2. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces, and the bevelled edges being roughened over their surfaces, and an opaque coating provided over the upper face of the base plate and continuing over the two said bevelled portions.

3. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces and the bevelled edges being roughened over their surfaces, and a coating of electrically deposited metal over the upper face and continuing over the said bevelled portions.

4. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces, the bevelled portion along the under face being of less width than along the upper face, and an opaque coating provided over the upper face and continuing over the two said bevelled portions.

5. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces, the bevelled portion along the under face being of less width than along the upper face and at a different angle, and an opaque coating provided over the upper face and continuing over the two said bevelled portions.

6. A member for use in preparing halftone plates for making lithographic printing plates, comprising a transparent base plate bevelled along its edges both on its upper and under faces and having an intermediate portion substantially at right angles to the upper and lower surfaces of the plate, the bevelled portion along the under face being of less width than along the upper face and at a different angle, and both bevelled portions being roughened over their surfaces, and a coating of electrically deposited metal over the upper face and continuing over the two said bevelled portions and the intermediate portion.

In testimony whereof I affix my signature.

ELLIS BASSIST.