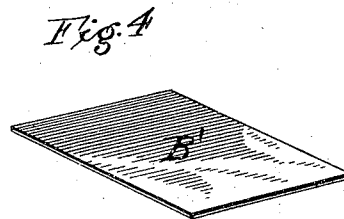
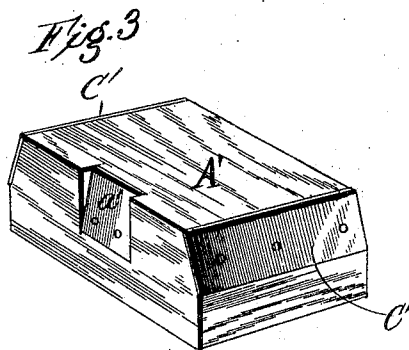
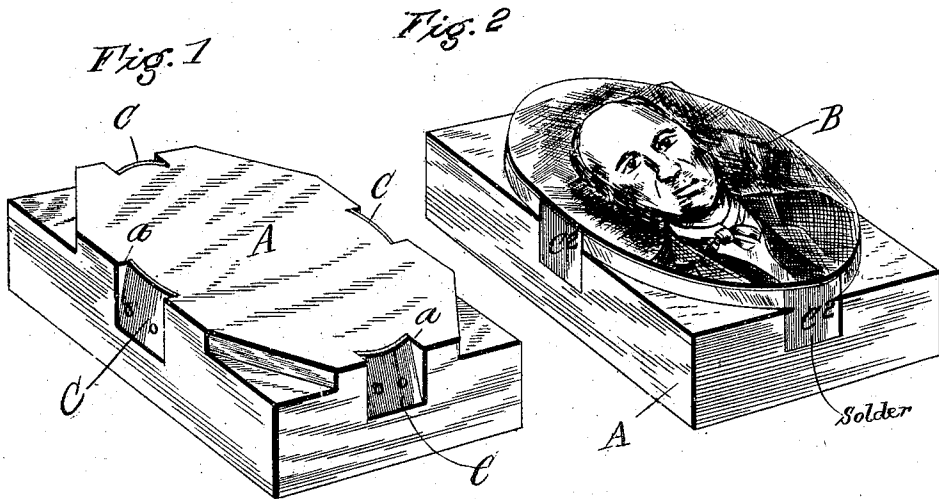


No. 844,968.

PATENTED FEB. 19, 1907.

L. F. SMITH.
HALF TONE PRINTING PLATE.
APPLICATION FILED OCT. 17, 1906.



WITNESSES
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LEVI FRANKLIN SMITH, OF EL PASO, ILLINOIS.

HALF-TONE-PRINTING PLATE.

No. 844,968.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed October 17, 1906. Serial No. 339,353.

To all whom it may concern:

Be it known that I, LEVI FRANKLIN SMITH, a citizen of the United States, and a resident of El Paso, in the county of Woodford and State of Illinois, have invented certain new and useful Improvements in Half-Tone-Printing Plates, of which the following is a specification.

My invention relates to the production of photographic half-tone-printing plates; and it has for its object the cheap but successful making of half-tone plates without any expensive apparatus.

I employ a thin flexible sheet of copper that will conform to an uneven surface of glass in the printing-frame without danger of breaking the negative under the extreme pressure which is employed to bring the negative and copper into absolute and perfect contact. This enables me to use dry plates which are coated on common glass and does away with the expensive and troublesome wet-plate outfit and chemicals. These thin flexible copper plates only cost about one-third of the heavy rigid copper plates, are easily trimmed by a pair of shears like a piece of paper, and by my construction of mounting avoids the necessity of a routing-machine and other expensive apparatus.

My invention consists in the novel construction and arrangement of the printing-plate which I will now proceed to describe with reference to the drawings, in which—

Figure 1 is a perspective view of a block on which the half-tone plate is to be mounted. Fig. 2 is a perspective view of the block with the half-tone copper plate finished and applied permanently to the block. Fig. 3 is a perspective view showing a rectangular form of block; and Fig. 4 is a detail view showing the thin copper sheet which is to be mounted on the block, Fig. 3.

Referring to Fig. 1, A represents a wooden block which is roughly shaped to receive an oval half-tone plate. It is formed on four sides with beveled notches *a*, running out to the face of the block and of greatest depth at the face. In these notches are tacked closely-fitting copper clips C, whose upper edges are deflected inwardly and curved to the oval which is to characterize the plate and which upper edges extend up to and terminate flush with the upper face of the block. On the face of the block A is laid flat the very

thin plate B, bearing the half-tone etching. The edges of the plate touch the upper edges of the clip-plates C, and, as seen in Fig. 2, a filling of solder C² is then applied to the clip and plate which holds the plate flat upon the block and firmly connects it thereto. If the block be rectangular, as in Fig. 3, the clip-plates C' may extend entirely across the ends of the block, and the plate B' is soldered at its ends thereto and is held along the middle of the sides by a notch and clip-plate *a'* similar to that employed in Fig. 1.

The half-tone plates B and B' are made of very thin copper, so thin as to be flexible and adjust themselves to the irregularities of the glass negative in transferring. Two very important advantages are thus secured. In the first place, only about one-third of the copper is required for a half-tone plate, and, secondly, the flexible copper plate in adjusting itself to the glass negatives makes a close fit thereto without risk of breaking the negative in the press and permits dry plates made of common glass to be employed in making half-tones and does away with the expensive outfit of apparatus usually employed with the wet-plate process.

Although the copper printing-plate is so very thin, by mounting it on a smooth flat block and securing its edges by the soldered clips a flat and perfect printing-plane is obtained, and there is no need for routing out a thick plate and securing it by tacks on its face driven in the routed-out depression. Furthermore, the half-tone-printing face can be made the full size of the printing-block.

Although described for half-tone work, it is obvious that line-etching in zinc, brass, or other metals may be made as thin plates and mounted in the same way. I would also state that my method of connecting the face-plate to the back is applicable to all kinds of printing-plates, whether engraved or chemically etched, whether made of thin and flexible plates or thick and rigid plates, whether of a flat plane surface or a curved plane surface, and whether having a wooden backing or a metal backing.

I claim—

1. An engraved printing-plate combined with a wooden back, and metal side clips secured to the wood and soldered to the edges of the printing-plate.

2. An engraved printing-plate combined

with a wooden back having beveled notches, and metal clips secured within these notches and soldered to the printing-plate.

3. A half-tone plate composed of a flexible
5 metal face, a wooden back, and metal clips secured to the sides of the block, and soldered to the marginal edges of the printing-plate.

4. A half-tone plate composed of a flexible metal face, a wooden back having beveled

notches along its edges, and metal clips secured in the beveled notches with their upper edges extending to the printing-plate and soldered thereto.

LEVI FRANKLIN SMITH.

Witnesses:

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