

UNITED STATES PATENT OFFICE.

CÉSAR FELIX JOSZ, OF BOCKENHEIM, ASSIGNOR TO VICTOR EMDEN, OF
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PRODUCING PRINTING-PLATES.

SPECIFICATION forming part of Letters Patent No. 334,234, dated January 12, 1886.

Application filed June 25, 1885. Serial No. 169,760½. (No specimens.) Patented in France October 3, 1884, No. 164,594; in Belgium October 4, 1884, No. 66,499; in Germany October 7, 1884, No. 33,312; in Austria-Hungary December 1, 1884, No. 38,399 and No. 56,532; and in England April 18, 1885, No. 4,816.

To all whom it may concern:

Be it known that I, CÉSAR FELIX JOSZ, a citizen of France, and residing at Bockenheim, Germany, have invented new and useful Improvements in Printing-Plates, of which the following is a specification.

The novelty of this process for preparing metallic plates for printing consists, first, in the practicability of at once obtaining from a metallic printing-plate after the drawing has been prepared and without preliminary etching or gumming an unlimited number of very fine impressions in an unvaried style; second, in rendering all lithographic work practicable by means of metallic printing-plates on which there is no layer or coating of any kind, and from which any desired number of impressions may be obtained without special treatment, as has hitherto been always necessary in the case of all zinc printing processes, but by means not differing from those usually employed on lithographic stones.

Application of the metallic printing-plates.

A. Printing with metallic plates: The metallic printing-plate, unprovided with a layer or coating of any kind, is engraved with a metallic tracing-point. Then, by means of a brush, the plate is covered over with color thinned with turpentine, washed over with a damp sponge, and rolled with a lithographic roller. Only the engraved parts take color, while the other parts of the surface reject it. The impressions obtained are very fine and clear, and in this sense the metallic printing-plates supersede not only the stone, but also with advantage copper and steel plate printing, thus obviating the protracted and difficult execution by pen, lithographic ink, chalk, photolithography, &c.

B. Direct chalk and pen drawings on the metallic plates themselves, as also transfers from stone, engraved plates, &c., are executed in the same way and with the same means as is the case with stone.

C. Engravings on metallic printing-plates: Printing with metallic plates as set forth under A may after the inking-in be etched in relief for book-printing as letter-press blocks and thus the business of book-illustration

is placed in a position to produce direct letter-press blocks very quickly and without previous drawing in ink, chalk, &c., whereby also the individuality of the artist is preserved with the greatest certainty.

Process for the production of the metallic printing-plates.

The metallic plates of every kind are prepared as follows: They are grained by mechanical means. The grained metallic plates are then for the purpose of scouring placed in a saturated solution of alkaline earth, chalk being excepted, the best solution being magnesia in water. They are then taken out rubbed, and dried. Then, in order by means of an astringent to open the grained surface previously produced by mechanical means, the metallic plates are sprinkled with a watery solution, which operates purely mechanically, the preferred solution being water, alabaster powder, and alum, after which the metallic plates are dried. Then the layer or coating when dried is washed off from the plate with alcohol. The plate is then ready for pen and chalk and for transfer.

Plates for printing as set forth under 1 are after preparation as described in the foregoing description, sprinkled over with a solution of water, sodium water glass, chloride of iron, an organic acid, and dried.

Having thus described my invention and the manner of employing the same, I claim—

The herein-described method of preparing metallic printing-plates, consisting in mechanically graining metallic plates of any kind, extracting all grease by means of alkaline earth, and then opening or raising the grains by means of astringents operating mechanically and giving the metallic surface the affinity for ink, lithographic crayon, &c., as set forth.

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

CÉSAR FELIX JOSZ.

Witnesses:

FRANZ HASSLACHER,
JOSEPH PATRICK.