

# UNITED STATES PATENT OFFICE.

JOSEPH BROWN, OF LONDON, ENGLAND.

IMPROVEMENT IN COMPOSITIONS FOR SUPPORTING METALLIC PLATES FOR THE FORMATION OF PRINTING-SURFACES.

Specification forming part of Letters Patent No. **204,795**, dated June 11, 1878; application filed July 12, 1875.

*To all whom it may concern:*

Be it known that I, JOSEPH BROWN, of London, England, have invented an Improved Composition for Supporting Metallic Plates for the Formation of Designs, of which the following is a specification:

This invention relates to an improved process of forming matrices of designs for the production of electrotype-plates directly by the hand of the artist or designer, in which the design is produced by means of a pointed tool upon a thin sheet of soft metal supported upon a peculiar backing of semi-plastic inelastic material, of sufficient body or consistence to support the metal in the absence of pressure, but sufficiently yielding to give to the slightest touch of the artist, and allow the material to be depressed under the tool for the formation of the lines of design.

In carrying out my invention, I take a composition of plaster-of-paris, one pound, chromate of potassa, one-quarter of an ounce, and common salt, one ounce, which forms a compound that will give to the most delicate touch of the artist, and will allow the finest lines to be produced upon the metal by the tool. These ingredients may be mixed in various proportions, which will depend somewhat upon the boldness or delicacy of the design to be produced. The mixture may be brought to a semi-plastic state by the addition of about one pint of water, or sufficient to bring it to the proper consistence, and the plasticity of the compound may be modified to suit various requirements by using more or less water.

The semi-plastic composition is molded or otherwise formed into a flat tablet of suitable size, and a sheet of soft metal is carefully secured upon the upper face of the same, projecting edges being left, which are afterward turned down over the sides of the tablet. The metal is then ready for the artist, who, with a pointed tool or tools, produces the desired design by indenting the lines thereon. Whenever touched by the tool the metal will be depressed into the backing, which is of just sufficient body to support the untouched parts, but yields to the slightest pressure upon the tool. When the design is finished the metal is carefully removed from the backing, having the design in relief on one side and *in intaglio* on the other, and is ready for the production of the electrotype-plate in the ordinary manner, which may be taken from either side, as circumstances may require.

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

The composition of matter for forming the inelastic yielding backing, consisting of plaster-of-paris, chromate of potassa, and common salt, with sufficient water to bring the mass to the required consistence, substantially as herein set forth.

JOSEPH BROWN.

Witnesses:

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