

UNITED STATES PATENT OFFICE.

EMIL JACOBI, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO F. GUTEKUNST, OF SAME PLACE.

PROCESS OF PRODUCING PHOTOTYPE-PLATES.

SPECIFICATION forming part of Letters Patent No. 225,389, dated March 9, 1880.

Application filed September 11, 1879.

To all whom it may concern:

Be it known that I, EMIL JACOBI, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Phototype Process, which process is fully set forth in the following specification.

My invention relates to a process of preparing photographic plates for printing therefrom by mechanical means; and it consists in forming on a plate a ground coating or film of albumen or gelatine and trichromate of potassium, then subjecting said coating to the action of a solution of an alkali, for purposes hereinafter set forth, and then applying there-
to a second or sensitive and printing film, so that from a gelatine film and employment of ordinary inks I produce pictures that have the same soft, fine, and tender effect as photographs on albumen or plain paper, and the pictures may be reproduced in great numbers.

In carrying out my invention I take a plate of glass, metal, stone, or wood, and coat it primarily with a mixture of one part albumen or gelatine and twenty parts of water, with 0.3 of trichromate of potassium, and dry the same in a temperature below 100° Fahrenheit, and when perfectly dry heat it to 200° Fahrenheit in order to render the albumen insoluble.

To the plate, as coated, I apply a second or printing coating composed of one part of gelatine and twenty parts of water, with 0.2 bichromate of potassium, which, by a special chemical action, using a mineral acid, is converted into a glutinous substance for the production of a film which is tough and sufficiently hard to endure the pressure of a hand or power press.

In order to cause a perfect union of the first and second coatings, the plate, as first coated, is subjected for a few moments to a bath of a solution of any strong alkali in order to soften the surface of the albumen of the first coating, after which the second coating is applied and dried in a temperature of about 150° Fahrenheit, and the plate is ready for exposure un-

der the negative to receive the photographic image.

For the purpose of printing, the prepared plates are washed and dried and passed through a lithographic or other proper press, as usual, and moistened with water after every impression, or with chemical moistening that is sufficient for many impressions.

By these means I obtain from a gelatine film and employing regular colored or black printer's ink pictures that are permanent and have the same soft, fine, and pleasing effect as photographs on albumen or plain paper, and great numbers may be reproduced.

I am aware that plates for phototyping have heretofore been coated with a mixture of albumen or gelatine and trichromate of potassium, also that similar outer coatings have been employed to cover such first coatings; and I do not broadly claim such process, nor the article produced thereby.

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

1. The process of preparing a photographic plate to print from, which consists in first forming on a transparent or non-transparent plate a sensitive coating or film composed of albumen or gelatine and trichromate of potassium, then subjecting the surface to the action of a bath of a strong alkali, and finally applying to such surface a second sensitive film, substantially as described.

2. As a new article of manufacture, a phototype-plate composed of two sensitive coatings or films of albumen or gelatine and trichromate of potassium, said coatings being united by means of an alkali or equivalent substance, so as to form and act virtually as a single printing-film, substantially as and for the purpose set forth.

E. JACOBI.

Witnesses:

JOHN A. WIEDERSHEIM,
A. P. GRANT.