

UNITED STATES PATENT OFFICE

FREDERICK H. POWELL AND PHILIP LEHNEN, OF AUBURN, NEW YORK.

IMPROVEMENT IN PHOTOGRAPHIC PLATES.

Specification forming part of Letters Patent No. **178,380**, dated June 6, 1876; application filed March 13, 1876.

To all whom it may concern:

Be it known that we, FREDERICK H. POWELL and PHILIP LEHNEN, of Auburn, in the county of Cayuga and State of New York, have invented a new and Improved Photographic Plate, of which the following is a specification:

Our invention relates to an improved plate for photographs and signs that is lighter than the common iron plates, but heavy enough to sink in the water, and of such flexibility that the face will not crack when bent, as in metallic plates.

The invention consists of paper made water-proof, and coated on the back with an oil and varnish paint, and on the face with one or more coats of baking japan or varnish, each coat being baked in an oven. The paper employed may be of any convenient size and thickness, and may be manufactured so as to be heavier and better liable to sink in the bath by adding clay, barytes, or other heavy substance to the pulp. The paper is first made water-proof either with oil or with a mixture of oils and turpentine or benzine, or any kind of varnish. A coat of any suitable oil or varnish paint is put on the back of the paper to increase the weight of the same so that it will sink readily in the bath. The paper is then put into an oven and baked until hard, the baking operation commencing at a low degree of heat. The other side or face of the paper is then coated with one or more layers of baking japan or varnish, according to the finish required, and each coat baked as before,

any desired color or tint being imparted to the face surface, according to the different objects to which the paper is applied. A photographic plate made from paper so prepared sinks readily in the bath; is lighter than the metallic plates, so that photographs made thereon may be sent at less expense through the mail, being cheaper than the metallic plates; and also more durable, as the plate, on account of its flexibility, does not crack when bent.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. An improved plate for photographs or signs made of water-proof paper, having a coat of paint on the back, and one or more coats of baking japan or varnish on the face and hardened, as and for the purpose set forth.

2. The process herein described of preparing paper for photograph and sign plates, consisting in first waterproofing the paper, then coating the back with a paint, and baking in oven till hard, then coating the face with one or more layers of baking japan or varnish and then baking such final coat to hardness to obtain the required finish, substantially as set forth.

FREDK. H. POWELL.
PHILIP LEHNEN.

Witnesses:

S. S. MOTT,
F. S. DAY.