

UNITED STATES PATENT OFFICE.

OSWALD MOH, OF GÖRLITZ, GERMANY.

METHOD OF PREPARING PHOTOGRAPH-PLATES.

SPECIFICATION forming part of Letters Patent No. 457,817, dated August 18, 1891.

Application filed July 28, 1890. Serial No. 360,203. (No specimens.)

To all whom it may concern:

Be it known that I, OSWALD MOH, a subject of the King of Prussia, residing at Görlitz, in the Kingdom of Prussia, German Empire, have invented certain new and useful Improvements in the Method of Preparing Photograph-Plates, of which the following is a specification.

My invention relates to an improved method of preparing plates for taking photographic pictures; and my invention consists in making said plates or sheets of muscovite or mica, which I submit to a treatment of suitable agents to remove from the native mica the mineral grease before applying the fine sensitive coating of bromic silver gelatine or the like.

Muscovite or mica is a mineral which is divisible into the finest plates and is as limpid as glass. It could not heretofore be employed for taking photographic pictures for the reason that the thin gelatine coating of bromide of silver did not adhere to the surface of the mica, but became loose in the bath.

The object of this invention therefore is to prepare the plates of mica in such a manner as to enable them to hold firmly the thin coating of sensitive material employed for taking the picture. This adhesion is, in the natural state of the mica, prevented by the mineral grease that penetrates it. To remove this grease, I submit the plates of mica for about twenty-four hours to the action of a solution of chromic alum and gelatine. The solution of chromic alum is made in distilled water in the proportion of one to five, and the addition of gelatine is in the proportion of one to two hundred. The mica will by this bath be freed from its grease, and it will now hold the thin

sensitive coating very firmly. It will resist any liquid used in developing the picture and any jet of water directed against it. It will withstand any temperature, and the clearness of the image will not be affected by the latter.

The mica plates offer remarkable advantages over plates of glass. They are not liable to break, are light, are not attacked by acids or chemical agents employed in taking photographs, and, besides, have a sufficient degree of elasticity to permit convenient packing and transportation. The mica plates also offer advantages over gelatine or other emulsion plates in not being subjected to deformations or to any tendency to roll up. Owing to their extreme thinness and perfect transparency they may be readily employed for taking copies, as well on the right hand as on the left hand, or on the front and reverse sides.

In general the mica plates, treated as described, offer an excellent material for photographic purposes.

What I claim is—

The method of preparing photographic plates of muscovite or mica by applying the sensitive coating to the plate of mica previously submitted to a treatment by a solution of chromic alum and gelatine for removing the mineral grease from the natural mica and enabling the same to receive in fixed and solid adherence the said sensitive coating, substantially as and for the purpose set forth.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 12th day of July, 1890.

OSWALD MOH.

Witnesses:

H. J. DUNLAP,
NELLIE B. DUNLAP.