

# UNITED STATES PATENT OFFICE.

ARTHUR EICHENGRÜN, OF ELBERFELD, AND JULIUS PRECHT, OF HANOVER, GERMANY, ASSIGNORS TO FARBENFABRIKEN OF ELBERFELD CO., OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## PHOTOGRAPHIC PLATE AND PROCESS OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 742,405, dated October 27, 1903.

Application filed December 17, 1901. Serial No. 86,306. (No specimens.)

*To all whom it may concern:*

Be it known that we, ARTHUR EICHENGRÜN, doctor of philosophy and chemist, residing at Elberfeld, and JULIUS PRECHT, doctor of philosophy and professor of physics, residing at Hanover, Germany, (assignors to the FARBENFABRIKEN OF ELBERFELD CO., of New York,) have invented a new and useful Improvement in Photographic Plates and Processes of Making Same; and we hereby declare the following to be a clear and exact description of our invention.

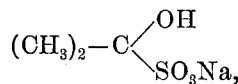
Until now photographic plates and papers which are developed by the mere action of alkalis have not been in use for photography. Many attempts to prepare such plates and papers have been made by adding developing substances and sulfites to the photographic emulsions; but plates containing only a small quantity of sulfite do not keep long, while in plates containing more sulfite a crystallization of inorganic salts sets in, fog being thus produced.

We have found that plates and papers having the above-mentioned valuable property of being developed by the mere action of alkalis can be prepared if instead of adding developing solutions to the photographic emulsions sensitive photographic plates and papers ready for use are treated with developing solutions and then dried. The plates and papers thus produced keep for years notwithstanding they contain a large quantity of sulfite.

We point out distinctly that under the name "plates" we do not only understand the glass plates, but also any other plates, such as the so-called "films" or the like.

In carrying out the new process practically we can proceed as follows, the parts being by weight: Gelatino bromid plates or films are immersed in a solution prepared from five parts of amido-ortho-oxy-benzyl alcohol hydrochlorid, the preparation of which is described in the application for Letters Patent

bearing the Serial No. 70,927, filed August 5, 1901, five parts of acetone sodium bisulfite,



and fifty parts of water. When the gelatin has softened, the plates or films are removed from the solution and dried. The plates or films thus prepared are exposed to light as usual, then they are treated with a small quantity of water, (twenty cubic centimeters,) and finally developed by the addition of five grams of potassium carbonate. The pictures thus obtained show great detail and a high degree of density and no fear of fog need be entertained on developing the same.

In order to illustrate the use of paper, the following prescription may be employed: One volume of the developing solution which is above mentioned is diluted with five volumes of water, and into this solution bromid paper or similar sensitized papers are immersed for five minutes. After drying the papers thus prepared are employed as usual. They are developed by immersing them into a twenty-five-per-cent. solution of sodium carbonate or potassium carbonate.

Having now described our invention and in what manner the same is to be performed, what we claim as new, and desire to secure by Letters Patent, is—

1. The process for the production of a new sensitized photographic material consisting in treating the ordinary sensitized photographic materials, first with a photographic developing solution and a sulfite, secondly drying the same, substantially as described.

2. The process for the production of a new sensitized photographic material consisting in treating the ordinary sensitized photographic materials first with an aqueous solution of the hydrochlorid of amido-ortho-oxy-benzyl alcohol and acetone bisulfite, and

secondly drying the same, substantially as described.

3. A new photographic sensitized material, said material being the ordinary sensitized material which is subsequently treated with a photographic developing solution and a sulfite and dried, substantially as described.

4. A new photographic sensitized material, said material being the ordinary sensitized material, which is subsequently treated with an aqueous solution of the hydrochlorid of

amido-ortho-oxy-benzylic alcohol and acetone bisulfite and dried, substantially as described.

In testimony whereof we have signed our names in the presence of two subscribing witnesses.

ARTHUR EICHENGRÜN.  
JULIUS PRECHT.

Witnesses:

OTTO KÖNIG,  
J. A. RITTERSHAUS.