

UNITED STATES PATENT OFFICE.

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ASSIGNORS TO FARBENFABRIKEN OF ELBERFELD CO., OF NEW YORK,
N. Y., A CORPORATION OF NEW YORK.

PROCESS OF DEVELOPING PHOTOGRAPHIC PICTURES.

SPECIFICATION forming part of Letters Patent No. 703,242, dated June 24, 1902.

Application filed July 17, 1901. Serial No. 68,675. (No specimens.)

To all whom it may concern:

Be it known that we, ARTHUR EICHENGRÜN and KARL DEMELER, doctors of philosophy, chemists, residing at Elberfeld, Germany, (assignors to the FARBENFABRIKEN OF ELBERFELD CO., of New York,) have invented certain new and useful Improvements in Processes of Developing Photographic Pictures, of which the following is a specification.

10 We have found that the products of addition from polyhydroxyl derivatives of aromatic compounds and aliphatic or cyclic nitrogen bases are especially suitable for developing photographic pictures on glass, celluloid, paper, &c., prepared with silver chlorid, bromid, or iodid, or with two or all of these salts, after proper exposure to light. The new products discovered by us develop such photographic pictures without the addition of an

20 alkali, and in this way they are superior to the developers hitherto employed. They are also superior to the old developers inasmuch as the pictures produced by the new developers show extraordinary brilliancy, great detail, and

25 strong contrast, and possess a color which insures rapid printing. Another special advantage of our new developer is that plates, &c., can be left in the developing-baths for any reasonable length of time and no fear of fog need be entertained. Furthermore, the new developers have the remarkable property that the energy can be increased to any degree by the addition of caustic alkalies or alkali carbonates, so that a developing liquid

35 which should be too weak for an under-exposed plate may be raised to the desired strength by the addition of a few drops of a solution of potassium carbonate.

40 In carrying out our new process practically we can proceed as follows: Eight grams of sodium sulfite are dissolved in one hundred cubic centimeters of water, and into the cold solution one gram of finely-powdered pyrogalloldimethylamin is introduced. The liquid is

shaken in a well-closed bottle until completely dissolved and is then ready to be used as a developer.

Since the formation of the addition product from pyrogallic acid and the nitrogen base takes place in watery solutions, the developing liquid may also be prepared by dissolving the two components of the addition product—for example, pyrogallic acid and dimethylamin—in the necessary quantity of water. The two components may be dissolved separately and then mixed or may be dissolved together.

Having thus 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 herein-described process of developing photographic pictures consisting in subjecting them to the action of a solution containing a product of addition from polyhydroxyl derivatives of aromatic compounds with nitrogen bases, substantially as hereinbefore described.

2. The herein-described process of developing photographic pictures consisting in subjecting them to the action of a solution containing pyrogalloldimethylamin, substantially as hereinbefore described.

3. The herein-described process of developing photographic pictures consisting in subjecting them to the action of an aqueous solution containing pyrogalloldimethylamin and sodium sulfite, substantially as hereinbefore described.

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

ARTHUR EICHENGRÜN.
KARL DEMELER.

Witnesses:

J. A. RITTERSHAUS,
J. SCHADDEJI.