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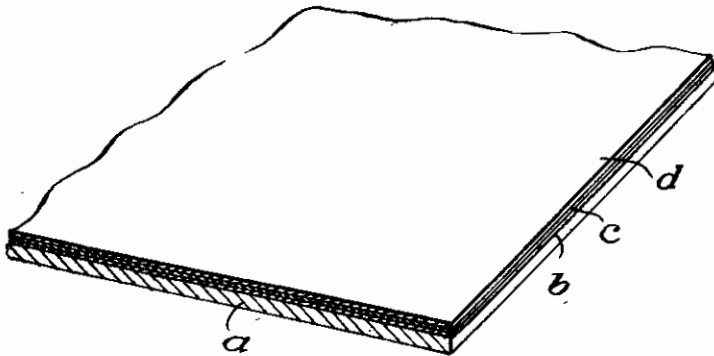
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PHOTOGRAPHIC POSITIVE MATERIAL

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ALIEN PROPERTY CUSTODIAN

PHOTOGRAPHIC POSITIVE MATERIAL

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Application filed May 25, 1942

This application is a division of my copending patent application Ser. No. 369,451, filed December 10, 1940.

My invention relates to a photographic positive material for producing colored positive images either on an opaque material such as paper or the like or on a transparent material such as glass or the like.

This material is to be used in connection with a black-white negative obtained by exposing to the light in a camera of common type a pan-chromatic sensitized material through a colored filter screen contacting the light-sensible layer, and developing the exposed material. The photographic material according to the present invention is composed of an opaque or transparent support, and at least three colored light-sensitive emulsion-layers superposed above one another in such a succession, that always the color emulsion permeable to the more energetic light is located above the color emulsion permeable to the less energetic lights. The light is passed from the negative to the support and then through the colored layers. Finally the prints are developed in warm water, preferably with the addition of a little ammonia.

It is the main object of my invention to simplify the obtainment of colored photographic positives and to enable the use of cheap materials in carrying out my method.

By the filter screen the light is decomposed into its component colors in exact conformity with the colors emitted from the object, the negative becoming graduated in accordance with the values of the colors. After the exposure the colored filter screen is free for other exposures, the negative being now capable of letting pass only such color-rays as correspond to the graduation of its sensitive layer.

The printing material may be sensitized either by potassium dichromate or by silver chloride or bromide. As already said, the developing process takes place by using no other agent than warm water, preferably with the addition of a little ammonia.

When using silver chloride or bromide, special developers known per se are to be employed before the treatment in warm water.

When using silver bromide an enlarging material for making colored prints can be prepared therewith.

When potassium dichromate is employed for sensitizing the printing material one of the following receipts may be followed:

Receipt I

Distilled water.....c. cm.. 200
Potassium dichromate.....grms.. 8

Add ammonia until the solution becomes yellow. 60

Receipt II

Distilled water.....c. cm.. 120
Ammonium dichromate.....grms.. 10

1 part by volume of this solution is to be mixed with 2 parts by volume of alcohol.

Receipt I is for bathing the papers.

Receipt II is to be employed only for sensitizing the layer with a brush or the like. Drying requires a very short time.

When the layers during the exposure were overlighted the developed image may be treated with a solution according to the following receipt III, in order to facilitate the remotion of the unlighted parts.

Receipt III

Distilled water.....c. cm.. 200
Sodium carbonate.....grms.. 8
Pure hydrochloric acid.....drops.. 5

In order to harden the finished images and likewise to further clear the colors, they are to be treated in a bath of the following

Receipt IV

Distilled water.....c. cm.. 250
Chrome alum.....grms.. 3

After exposure and before developing the image (when not more than 3 layers of colors are present on the support of the positive material) a colorless gelatinized paper is laid upon the color-emulsions, which paper was previously laid for a short time in water. With a roll-squeezer the said paper is pressed on the image. Thereafter the picture covered with the said paper is placed for 5 minutes into warm water of not more than 20° C. and then the paper is withdrawn. The non-lighted parts of the emulsion adhere to the paper. Then the positive is cautiously developed in fresh warm water of not more than 20° C.

When silver chloride or bromide are employed, the squeezing of the papers is unnecessary, because in this case the image is developed on its support itself and only the non-lighted parts of the emulsion are removed.

The new positive material forming the object of the present invention is illustrated in perspective view in the accompanying drawing.

a designates the support, preferably paper, for which however glass or another material may be substituted. With b, c and d the color-layers are designated, b representing the yellow, c the red and d the blue color. The yellow color must be adjacent that side from which the light enters. At least three basic colors are to be employed.

However it is clear, that when more than three colors are employed the print will be better and more expressive.

JOHANN SPECHT.