

ALIEN PROPERTY CUSTODIAN

PROCESS OF MAKING PHOTOGRAPHS

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No Drawing. Application filed May 31, 1940

In our application for letters patent, U. S. Patent 2,186,942, there is described a process for making photographs characterized by the use of photo-tropical matter which under the influence of rays of a certain wave length visibly alter their substantial colour or which adopt a definite tint on exposing them to light of a certain spectral range and which adopt a colour tone different from the first one when exposed to light of another spectral range, especially of fulgids as a repeatedly applicable light sensitive material. Instead of the fulgides also compounds of hydrazones are suited for this purpose.

The further development of the above process has shown that the properties of layers for making such photographs may be varied in different direction by the use of mixtures of two or several photo-tropical substances. It is possible especially to widely affect and vary the tone and the extent of the colour, the sensitiveness, the contrast and the gradation of the pictures.

It is well-known that the photo-tropical substances have in general a well defined colour, which, when excited, changes in a definite manner. For instance the triphenylfulgid in a non-excited state is yellow, while, when excited, it adopts a red-brown tone. It is quite evident that such colours do not correspond in most cases to the characteristic colour of the picture in photographic printing. As a rule a black and white tint of the picture is preferred. Therefore the photo-tropical layer should show such or a similar feature.

Since photo-tropical substances of sufficient sensitiveness with a white and black colour alteration are unknown, according to the invention there are obtained layers by mixing various photo-tropical substances with colour tones approaching the ideal case as closely as possible.

In analogy to the known coloured photographic prints there is sometimes a demand for photo-tropical layers of a definite exciting colour.

For instance a brown-violet colour tone may be obtained in the following manner: mix the well-known α -methyl- α,β -diphenylfulgid which is excited from yellow to red with α -methyl- α -phenyl-(*o*-nitrophenyl)-fulgid which is excited from yellow to blue-grey. Both components are

mixed in a proportion of 1:1. By choosing another ratio of combination, it is naturally possible to obtain rather a red than a blue colour tone.

The process described in the invention may also be employed for altering the extent of the colour tone (extent of blackening) of the photo-tropical layer. By mixing a photo-tropical substance of great sensitiveness but small blackening extent with another photo-tropical substance of little sensitiveness but great blackening extent a combined layer may be made which then incorporates great sensitiveness and great extent of blackening.

In the same way the contrast and above all the curve of gradation of the combined layer may be arranged.

The combined layers can be made in various ways. The selected components, if they are available in powdered form, may for instance be mixed in a simple way and dusted, sprayed or applied thinly in any other manner upon a support provided with an adhesive layer. The various components may however also be mixed in an binding substance which is then transferred to a support. The mixing may either be done in the binding substance itself or before placing the components into the latter.

It is also possible to apply each component separately with a binding substance which for various components may differ, while the various preparations may be mixed afterwards.

As binding substances are selected for instance gelatine, albuminoids, alginates, cellulose derivatives, artificial resins, etc.

The ratio of combination depends on the prevailing requirements. Instead of the process indicated above the combined layer may as well be made by superimposing several layers on a support. The casting is best done successively in such a way that the next layer is transferred on to the support after the previous one has hardened at least to a certain degree. When applying this process it is possible, in addition to alter the condition regarding the concentration of the layers, to alter the colour tone, etc., by varying the thickness of the layer.

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