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COLOR PHOTOGRAPHY OR CINEMATOG-  
RAPHY

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3 Claims. (Cl. 95—88)

The present invention relates to improvements in color photography or cinematography, and is more particularly concerned with the treatment of color images produced by the known process of color development and which consists in employ-  
5 ing a developer containing an additional substance which results in the deposition of a dye-stuff contemporaneously with the developed silver image. Such substances are, for example, para-  
10 nitrobenzyl cyanide, which gives a Magenta color or  $\alpha$  naphthol, which gives a yellow color.

The principal object of the present invention is to improve the properties of such images more particularly by reducing or eliminating the grain  
15 of the image and increasing the transparency of the color-developed image.

In accordance with the present invention, the properties of one or more dyestuff images produced by color development are improved by  
20 treatment in a dilute solution of phenol in water after removal of the developed silver. The present invention may be applied to photographic material comprising a single emulsion layer which has been processed to give a color record  
25 by a process of color development, and also to a multi-layer film comprising two or more superposed emulsion layers which have been processed to produce different color records therein by color development or by a combination of methods.  
30 For example, some of the emulsion layers may be processed to the desired colors by color development, whereas other of the emulsion layers may have been processed by other methods such as by dye-toning or by the selective destruction  
35 of dyestuffs present or formed in such layers under the control of a silver image produced by development.

After such a single or multi-color film has been processed to produce the required color records,  
40 and after any silver remaining in the layers has been removed, the photographic material is, in accordance with the invention, immersed in a dilute solution of phenol in water. Satisfactory results have been obtained by employing a solu-  
45 tion containing about 4% of phenol and it has been found that any concentration greatly in excess of this figure results in reticulation of the dyestuff images. However, the degree of concentration will depend to a certain extent upon

the character of the gelatine layer employed, and hence within narrow limits must be determined by trial and error procedure. In all cases the concentration must be a dilute one, and such term when employed in this specification refers  
5 to a phenol solution of a concentration not over 4% and one which will give the desired clearness of transparency to the developed color image without imparting thereto a reticulated, granular or clouded effect.

It is difficult to assign any special reason for the improvement in the properties of the color developed images by the treatment in accordance with the invention, but providing that the concentration of the phenol solution does not substantially exceed the figure named, there is a  
10 noticeable improvement in the transparency of the images and graininess of the images is almost if not wholly eliminated.

We claim:

1. In the production of photographic colored images in silver halide emulsion layers, the step for improving the properties of the colored images after removal of the exposed and developed silver, in order to secure greater transparency of  
25 the color images and the elimination of graininess therein, which consists in treating the image-carrying layer or layers in an aqueous solution containing not over 4% of phenol.

2. In the production of photographic colored  
30 images, the steps of color developing an image in a silver halide emulsion layer which has been exposed, comprising removing the developed silver and then treating the colored image-carrying layer or layers in an aqueous solution containing  
35 not over 4% of phenol.

3. In the production of photographic colored images as described in claim 1, the following steps of treatment: color developing an image in a silver halide emulsion layer after exposure, removing  
40 the developed silver, and finally treating the image-bearing layer or layers in an aqueous solution containing not over 4% of phenol for a period of time sufficient to secure the desired transparency and diminution in the graininess  
45 of the colored images.

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