

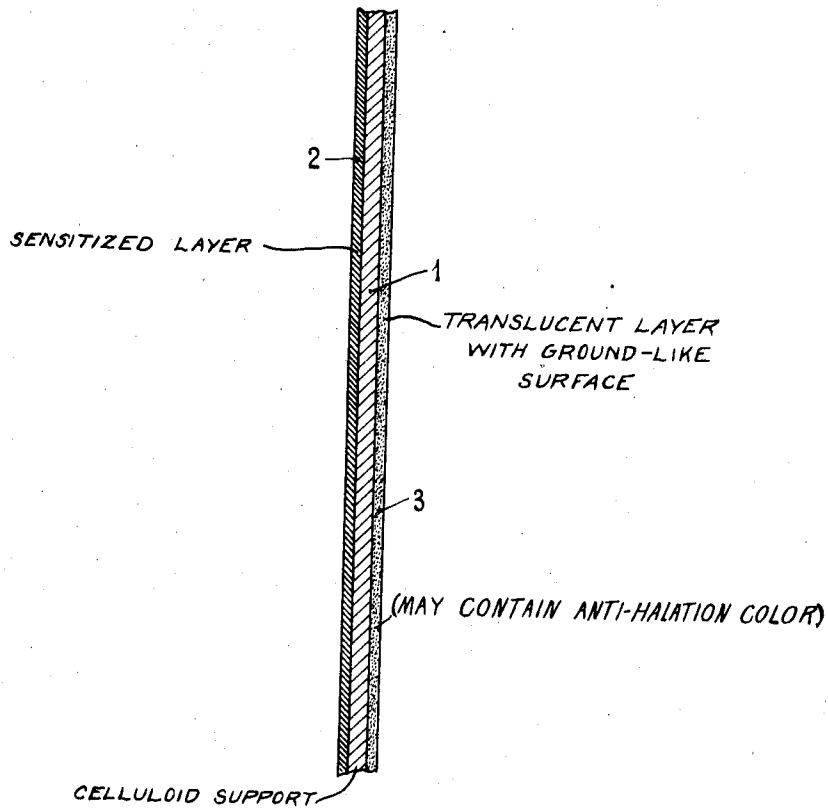
Aug. 31, 1926.

M. DE' SPERATI

1,597,727

FILM

Filed Oct. 19, 1923



Inventor:

Mariano de' Sperati

By Louis Quinley
Attorney

Patented Aug. 31, 1926.

1,597,727

UNITED STATES PATENT OFFICE.

MARIANO DE' SPERATI, OF TURIN, ITALY, ASSIGNOR TO I. G. FARBENINDUSTRIE
AKTIENGESELLSCHAFT, OF FRANKFORT, GERMANY.

FILM.

Application filed October 19, 1923, Serial No. 869,552, and in Italy October 20, 1922.

The present invention relates to films for photographic and motion pictures, and has for its object a film comprising a transparent support, a sensitized layer on one face of said support and a translucent ground layer on the other face of the same support.

Layers or coatings have heretofore been proposed to prevent halation or curling or both, or to scatter visual rays in X-ray work; but most of these coatings present great inconvenience in handling the film after development, i. e., during printing, and none of them was by any means suitable in printing. Various coatings have therefore been devised in the past, which are readily removable, or which may be altered after development in some way to enable printing.

The present invention relates to a layer or coating on photographic film which answers not only two but three requirements, in that it prevents halation and curling and affords at the same time and without any alteration a suitable ground for retouching.

A film according to the present invention has a very extensive anti-halo character in view of the said ground layer which assists efficiently in the absorption of the light passing through its sensitized layer and its support, and the presence of said ground layer prevents the film from rolling or curling in the baths, in the known manner; further the surface of said ground layer is adapted to receive retouches which may be produced in the most satisfactory manner because they may be erased from said ground surface when incorrect and made up again, said ground layer being not liable to be injured by pencil and soft erasers.

In a preferred embodiment of the present invention a film of the described character comprises a transparent layer which adheres to the support and has crystals or grains of exceedingly small size embedded in it and which make it translucent with a ground-like surface; a further embodiment comprises a film having a layer of the described character in which is embedded a substance adapted to increase the anti-halo character of the same layer.

The single figure of the annexed drawing represents by way of example and on enlarged scale a sectional view of a film according to the present invention.

In said section, 1 is a supporting film which is conveniently made of celluloid, as

conventional, while 2 is a sensitized layer located on one face of said film 1 and which preferably is a layer of gelatin sensitized by means of a silver salt as silver bromid; 3 is a layer located on the other face of the film 1 and which consists of a transparent material adapted to adhere to the celluloid support, as gelatin, in which are incorporated exceedingly small grains which cause it to show a ground-like surface and to become translucent. Resins and colloid materials have been found to be particularly useful for this scope.

As stated, said layer may also contain a substance adapted to magnify its antihalo action.

Hereinafter is particularly described by way of example a method of producing a film of the described character.

A solution is prepared as follows:

	Parts by weight.
Amyl acetate	120
Acetone	90
Celluloid	1 80

Another solution is prepared as follows:

Ether 100 c. c., powdered sandarac 12 gms., Dammar gum 4 gms., benzene 60 gms. Then the first solution is added to the second one, the mixture being slowly stirred.

This mixture is spread or distributed on one face of a film and then it is left to dry.

The layer thus produced on the film has embedded in it exceedingly fine and small grains of resinous material and thus it shows a ground-like surface which is quite adapted to receive retouches made by means of pencil and stumps and permits of erasing the same by means of a soft rubber eraser.

Further said layer is impervious to water and therefore the film may be submitted to any desired treatment in baths without said layer being apt to become injured or to show stains which would be reproduced on prints made therefrom.

Another example of a mixture adapted to produce a layer of the described character is as follows:

Water 100 c. c., hard gelatin 8 gms., corn starch 3 gms., phenic acid 0.5 c. c.

With this mixture a similar result as above described is obtained.

An amount of a substance adapted to in-

crease the anti-halo action of the said layer may be added to it; say aurantia may be used, an amount of this substance as 10 c. c. of a 1 % solution of aurantia being added to either of the above described mixtures.

Other antihalo substances as red ocher or anilin colors may also be used for the same purpose.

The film according to the present invention may be used for any photographic process and it is particularly useful in producing colour-selected negatives for tri-chromic processes.

What I claim as my invention and desire to secure by United States Letters Patent is:—

1. A film for photography with visible rays, comprising a transparent support, a sensitized layer on one face of said support, and a layer on the other face of said support; the last-named layer being permanently associated with the support and having a ground-like surface which is capable of receiving retouches.

2. A film for photography with visible rays, comprising a transparent support, a sensitized layer on one face of said support, and a layer on the other face of said support; the last-named layer being permanently associated with the support and containing small grains which render its surface rough and capable of receiving retouches.

3. A film, comprising a transparent support, a sensitized layer on one face of said support, and a layer on the other face of said support; the last-named layer being permanently associated with the support and having a ground-like surface and containing an anti-halo substance, said surface being capable of receiving retouches.

4. A film for photography with visible

rays, comprising a transparent support, a sensitized layer on one face of said support, and a permanent layer on the other face of said support; the last-named layer having small grains of corn starch embedded in it which render its surface rough and capable of receiving retouches.

5. A film for photography with visible rays, comprising a transparent support, a sensitized layer on one face of said support, and a permanent layer of gelatin on the other face of said support; the last-named layer having embedded in it small grains which render its surface rough and capable of receiving retouches.

6. A film for photography with visible rays, comprising a transparent support, a sensitized layer on one face of said support, and a permanent layer of gelatin on the other face of said support; the last-named layer having small grains of corn starch embedded in it which render its surface rough and capable of receiving retouches.

7. A film, comprising a transparent support, a sensitized layer on one face of said support, and a permanent layer on the other face of said support; the last-named layer having small grains of corn starch embedded in it to render its surface capable of receiving retouches, and containing an anti-halo substance.

8. A film, comprising a transparent support, a sensitized layer on one face of said support, and a layer on the other face of said support; the last-named layer being permanently associated with the support and having a ground-like surface which renders it capable of receiving retouches, and containing an amount of aurantia.

In testimony whereof I affix my signature.

MARIANO DE' SPERATI.