

# PATENT SPECIFICATION

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COMPLETE SPECIFICATION.



## Improvements in or relating to the Reproduction of Colour-record Cinematograph Films.

We, SOCIETE FRANCAISE CINECHROMATIQUE (Procedes R. Berthon), of 24, Rue de la Pepiniere, Paris, France, a Body Corporate organised under the laws of France, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

10 This invention relates to the reproduction by contact of colour-record images made on linear lenticular films intended for cinematographic projection in colours (R. Berthon's process, Specification No. 15 10,611/09), and comprises maintaining during the printing operation the original lenticular film and the sensitive lenticular film ridge against ridge without penetration of the lenticular ridges of one film 20 into the lenticular recesses of the other film. Each film works individually as an independent collimator reproducing respectively line for line in its focal plane the image described in the focal plane of the opposite collimator. Naturally no 25 setting is required in the respective position of these lenticular collimators.

A method of carrying out the process comprises giving an obliquity to the lenticular elements of one of the films 30 relatively to the lenticular elements of the other film, either (1) by relatively inclining during printing two films which have the lenticular elements parallel to each other 35 or, (2) by embossing the lenticular elements on two films so that the elements on one film are inclined relatively to those on the other film in which case the two films remain parallel to each other during 40 printing.

Alternatively a simple transparent sheet or plate with parallel faces can be inserted between the two films during 45 printing.

The process which seems to give the best results in practice consists in arranging the lenticular corrugations on the two 50 films in such a manner that those or the original film are slightly inclined relatively to those of the reproduction film. An obliquity of one to two degrees is sufficient. It will be understood that in these conditions the front planes of the

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two corrugations remain strictly parallel, since the corrugations intersect at close 55 points and are maintained in an invariable plane by the contacts of their ridges or reliefs at the points of intersection. The extreme smallness of the angle of inclination results in the corrugations of the two 60 films acting optically as if they were strictly parallel. The colours are not modified therefore and the elimination of the watering or wavy effects is also effected.

The invention may be carried out in two ways: 65

1) with the assistance of films having linear lenticular elements parallel (or failing 70 this at right angles) to the sides of the film

2) with the assistance of films, the linear lenticular elements of which are 75 inclined at an angle of about 1° to the above mentioned orthogonal directions.

In the first case, no modification is made in the embossing or like machines used for producing the linear lenticular 80 elements on the films, but the printing machine must be provided with a conduit for the original film, and with a conduit for the reproduction film, which latter conduit is inclined to the extent of 1° to 85 2° relatively to the conduit of the original film. The rest of the apparatus remains without any change.

In the second case, no change is made in the printing machines but the linear lenticular elements are provided on the 90 film with a slight obliquity, either owing to the engraving of the embossing cylinder being traced obliquely of the axis or of the generatrices, or owing to the embossing cylinder being slightly 95 inclined relatively to the axis of the counterpart. The obliquity of the grooves is sufficiently slight to avoid any modification in the driving of the film during the embossing operation.

Having now particularly described and 100 ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is:—

1. A process for carrying out reproduction 105 tion by contact of colour record images

made on linear lenticular films used for colour cinematography, consisting in maintaining during the printing operation the original lenticular film and the sensitive lenticular film ridge against ridge without penetration of the lenticular ridges of one film into the lenticular recesses of the other film.

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- 10 2. A method of carrying out the process claimed in claim 1 wherein an obliquity is given to the linear lenticular elements of one of the films relatively to the linear lenticular elements of the other film, either (1) by relatively inclining during printing two films which have the lenticular elements parallel to each other or, (2) by embossing the lenticular elements on the two films so that the elements on one film are inclined relatively to those on the other film in which
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case the two films remain parallel to each other during printing.

3. A method of carrying out the process claimed in claim 1, wherein a simple transparent sheet or plate with parallel faces is inserted between the two films during printing.

4. The process of reproduction of coloured cinematograph films substantially as described.

5. Coloured cinematograph films when produced by the process claimed in any of the foregoing claims.

Dated this 2nd day of August, 1929.

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