

PATENT SPECIFICATION

211,486

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COMPLETE SPECIFICATION.



Improvements in or relating to the Reproduction of Photographic Images on Films having Lenticular Elements Thereon.

We, SOCIETE DU FILM K. D. B., a French company, of 42, rue d'Enghien, Paris, 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:—

This invention relates to photographic or cinematographic film printing or duplicating, or, stated otherwise, the reproduction of the image of one film on another film of the same character, either by the direct contact method or by the use of an optical device. The invention has especial reference to the type of film which is provided with a network of microscopic lenticular projections or elements, and its essential object is to overcome a fault which has heretofore been generally inherent to the employment of such films, namely that of "watering" or the production of "moiré" effects with a consequent spoiling of the image reproduced.

These effects, which occur when two films of the above-indicated type are superposed, are due to the arrangement of the networks in exactly the same way on the films so that they will virtually register during projection; and it has been proposed to accomplish their disappearance by positioning the films at an angle to each other, which angle may be 30°, 90°, 150°, 210°, 270° or 330°. This angular disposition, however, is difficult, if not impossible from a practical standpoint, when working with continuous films, because the films would have to pass through the projection apparatus when thus crossed or angularly disposed.

According to the present invention, two films are embossed with networks of microscopic polygonal lenticular elements in such a way that the network of one

film is positioned at such an angle with relation to the network on the other film that the exact superposition of the outlines of the lenticular elements on the two films will be avoided. So embossed, the printing or duplicating can readily be carried out in either of the usual ways mentioned, and in the case of printing by the projection method, the films can be run through the apparatus without difficulty since their parallel relation is maintained.

The accompanying drawing diagrammatically represents certain phases of the invention in its relation to the known procedure.

Thus, Figure 1 is a view of two films in which the screens or networks of lenticular elements are parallel. If these two films are run through the apparatus in parallel relation, the objectionable moiré effects will be obtained.

Figure 2 is a diagram indicating the various angles at which one film may be positioned relatively to the other, and representing the films as occupying one of such positions, in order to cause the moiré effects to disappear.

Figure 3 represents portions of two films embossed in accordance with the invention—that is, with one network or screen at an angle to the other (in this instance, 90°), the line A B being in the direction of the length of the film in each portion. So embossed, two films can be run through the apparatus, while maintaining the desired parallel relation, without causing the appearance of the moiré effects.

It is obvious that lenticular elements which are circular in form do not come within the scope of the present invention, but that all the polygonal figures are included as it will always be possible to position them so as to avoid any exact

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superposition of the outlines of the lenticular elements on one film with those on the other film.

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

10 1. A process of printing or duplicating images on photographic or cinematographic films comprising the steps of embossing two films of indefinite length with networks of microscopic polygonal lenticular elements in such a way that
15 the network of one film is disposed at such an angle to that on the other film

that the exact superposition of the outlines of the lenticular elements on the two films will be avoided, obtaining an image on one film, and reproducing that image on the other film by running the two films through a printing apparatus while maintaining them parallel. 20

2. A printed film when produced by the process claimed in Claim 1. 25

Dated this 13th day of February, 1924.

SOCIETE DU FILM K.D.B.,
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2nd Edition

Fig. 1.

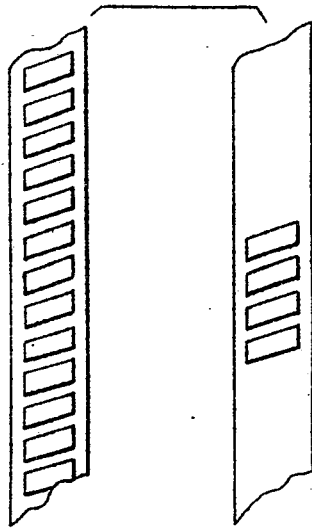


Fig. 2.

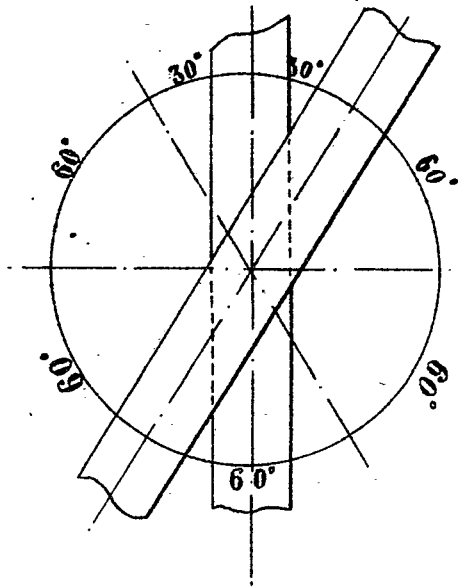
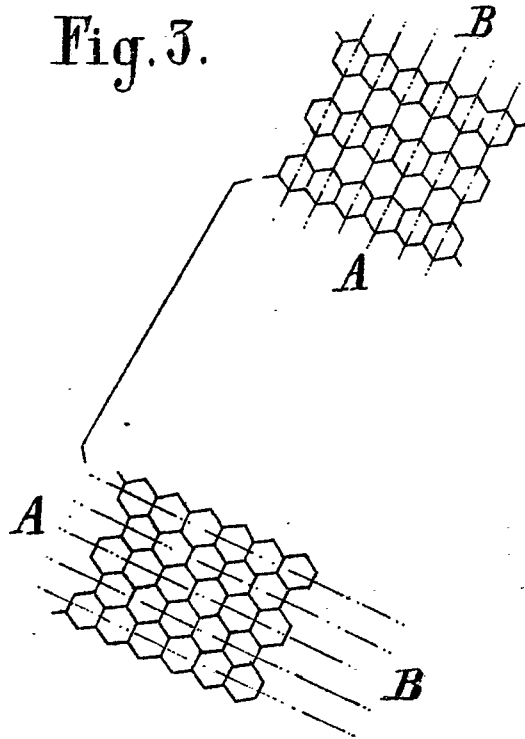


Fig. 3.



[This Drawing is a reproduction of the Original on a reduced scale.]