

RESERVE COPY PATENT SPECIFICATION

375,229

Convention Date (Germany): Jan. 27, 1931.

Application Date (in United Kingdom): Jan. 27, 1932. No. 2494/32.

Complete Accepted: June 23, 1932.

COMPLETE SPECIFICATION.



Improvements relating to the Manufacture of Films for Colour Photography.

We, I. G. FARBENINDUSTRIE AKTIEN-GESELLSCHAFT, a Joint Stock Company organised according to the laws of Germany, of Frankfurt a/Main, Germany, 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 In one process of producing photographs having colour, there is used a so-called lenticular film consisting of a film having a number of parallel embossings which are segments of cylinders. These are
15 generally produced by casting a colloid on a surface which has been impressed by means of a die having the required parallel embossings and has therefore been provided with a number of parallel cavities which are segments of cylinders;
20 the casting surface may itself be a colloid layer, which before impression is rendered plastic by heating or by treatment with a suitable liquid, (see, for instance,
25 Specification No. 341,948).

As is known the conditions under which the lenticular film is to be used determine the best radius of curvature for the embossings, so that for making such films a
30 number of dies is necessary, each having cylinder segments of a particular radius.

It is the object of this invention to avoid this multiplicity of dies. For this purpose the casting surface, consisting of
35 a colloid, for instance of gelatine, a cellulose ester, a cellulose ether, a resin, an artificial resin or the like, is treated with a swelling agent, so that it swells. In this swollen state the casting surface
40 is impressed, for instance in the manner described in Specification No. 341,948, by means of a roller helically wound with wire, so as to produce the embossings which are segments of cylinders: the
45 roller is preferably warmed before the impressing operation. On evaporation of the swelling agent, the volume of the colloid layer, forming the casting surface, is reduced, whereby, at the same time, the
50 impression on the swollen casting surface flattens. If there are produced by the process, for instance, impressions of a semi-circular cross-section, these will

[Price 1/-]

flatten to such an extent that their cross-section represents only a small segment of
55 a circle, that is to say the lenticular elements possess a greater radius of curvature than that of the embossings on the die used for impressing the casting surface.

The more the casting surface swells
60 before being impressed, the more the impression after drying, flattens. By a suitable composition of the swelling agent and by a well adapted duration of the treatment, the radius of the impression
65 may be influenced at will.

If the casting surface consists of a layer of a cellulose derivative, for instance, cellulose nitrate or cellulose acetate, it is
70 advantageous to subject it, after the impressing operation, to the after-treatment described in Specification No. 279,047. By this after-treatment the face of the casting surface is entirely or
75 partially regenerated to cellulose. With the casting surface thus treated sharp lenticular embossings on the lenticular film may be produced.

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

1. In the process of making lenticular films according to the casting process by
85 means of a casting support comprising a colloid which is impressed by means of a die having lenticular embossings, the improvement which consists in treating the surface of the casting support, before
90 the impression, with a swelling agent and producing impressions on said swollen surface of the casting support by means of a die, which is preferably warmed, for the purpose set forth.

2. The modification of the improvement referred to in claim 1, wherein the colloid
used is a cellulose derivative, particularly a cellulose ester, which after the impressing operation is regenerated wholly
100 or partially to cellulose at its surface.

3. Lenticular films made by the improved process claimed in claim 1 or 2.

Dated this 27th day of January, 1932.

ABEL & IMRAY,

30, Southampton Buildings, London,
W.C.2,
Agents for the Applicants.

Redhill: Printed for His Majesty's Stationery Office, by Love & Malcomson, Ltd.—1932.