

PATENT SPECIFICATION

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335,899

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PROVISIONAL SPECIFICATION.

Improvements in or relating to Sound-record Cinematograph Films.

I, THOMAS THORNE BAKER, British Subject, of The Hut, Hatch End, Middlesex, do hereby declare the nature of this invention to be as follows:—

5 This invention relates to the production of positive and negative photographic films for projection in natural colours of cinematograph pictures in conjunction with sound.

10 It is well-known that in so-called talking films the sounds are reproduced by means of a photographic record printed on a narrow strip about 1/10th inch wide at one side of the picture record. This

15 invention relates to means whereby such a strip would—in a colour film—be substantially an ordinary black and white photographic film devoid of any colour and allowing of the sound record to be photographed in black and white.

20 Where the colours in the picture depend upon a matrix or reseau of primary colours over which the emulsion is coated, it is necessary to have an uncoloured transparent strip at one side of the cine-film on which the sound record can be printed: any pattern in a reseau or matrix would cause high frequency interruptions which would give rise to very objection-
25 able parasitic sounds or ground noise.

30 To obtain a black and white sound record side by side with a coloured cinematograph film, the film base has a layer

of a suitable varnish, such as bitumen dissolved in benzole, applied to its surface 35 in the form of a narrow strip, for example 1/10th" wide, running parallel with the edge of the film. The base is then coated totally with a dye, say a green dye, as described in Patent Specification No. 22,607/28. 40

When the formation of the reseau is completed by treating it with benzole in the manner described in the above-men- 45 tioned specification the varnished strips will be dissolved away exposing corresponding strips of the clear uncoloured film.

In the subsequent coating with sensitive emulsion there will thus be a strip of 50 emulsion 1/10th" wide with no reseau beneath it upon which the sound record can be printed in the well-known manner.

The same result may be attained by various other suitable means. 55

It is also possible by suitable means to adapt any of the well-known diffraction methods for producing colour photo- 60 graphs to the production of a black and white sound record, combined with a coloured film.

Dated this 1st day of July, 1929.

BOULT, WADE & TENNANT,
111/112, Hatton Garden, London, E.C. 1,
Chartered Patent Agents.

COMPLETE SPECIFICATION.

Improvements in or relating to Sound-record Cinematograph Films.

I, THOMAS THORNE BAKER, British Subject, of The Hut, Hatch End, Middlesex, 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:—

65 This invention comprises improvements in or relating to Sound-Record Cinematograph Films.

70 It is well-known that, in the so-called [Price 1s.]

talking films, the sounds are reproduced from a photographic record printed on a narrow strip about one-tenth of an inch 75 in width at one side of the picture record. This invention relates to improvements whereby such a strip would—in a Colour Film—be substantially an ordinary black and white photographic film devoid of 80 any colour and allowing of the sound-record to be photographed in black and white.

Where the colours of the film depend upon a matrix or reseau of primary colours over which the emulsion is coated, it is necessary to have an uncoloured transparent strip at one side of the Cine-film on which the sound-record is to be printed, for any pattern in a reseau or matrix on the sound track (i.e. the portion of the film upon which the sound-record is printed) would give rise to high frequency interruptions which would produce objectionable parasitic sounds or ground noise.

According to this invention in the manufacture of sound-record cinematograph films in natural colours, prior to the application of the reseau to the surface of the film, there is applied to that portion of the film which is to serve as the sound-track, a layer of material to protect the underlying portion of the film from the dyes used in making the reseau.

In a preferred form of the invention the material employed to protect the sound track comprises a varnish such, for example, as bitumen dissolved in benzole.

A specific example of the method of manufacturing a sound-record cinematograph film in natural colours according to the invention will now be described by way of example. The film base which may comprise cellulose acetate, celluloid, nitro-cellulose, or other ester or ether of cellulose has a layer of varnish comprising bitumen dissolved in benzole applied to its surface in the form of a narrow strip, for example, one-tenth of an inch wide running parallel with the edge of the film. The whole surface of the film is then coated with a dye, for example a green dye, and the reseau is then completed in the manner described in British Specification No. 322,432.

When the formation of the reseau is completed the surface of the film is treated with benzole so that the varnished strips are dissolved away, exposing corresponding strips of the clear uncoloured film.

In the subsequent coating with sensitive emulsion there will thus be a strip of

emulsion one-tenth of an inch in width with no reseau beneath it upon which the sound-record can be photographed in the well-known manner.

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

1. A method for the manufacture of a film strip for the production of sound-record cinematograph films in natural colours, wherein, prior to the application of the reseau to the surface of the film, there is applied to that portion of the film which is to serve as the sound track, a layer of material to protect the underlying portion of the film from the dyes used in making the reseau.

2. A method according to Claim 1 wherein the material employed to protect the sound track comprises a varnish, such for example as bitumen dissolved in benzole.

3. A method of manufacturing a film strip for the production of sound-record cinematograph films in natural colours, comprising the following steps:—

(a) Coating a narrow strip of the unprepared film parallel to its edges with a layer of a protecting varnish,

(b) Applying a reseau to the whole surface of the film,

(c) Treating the surface of the film with a solvent capable of removing the varnish.

(d) Coating the film with a sensitive emulsion.

4. The method of manufacturing a film strip for the production of sound-record cinematograph films substantially as described.

5. A film strip for the production of sound-record cinematograph film in natural colours when manufactured by any of the special methods described or claimed herein.

Dated this 1st day of April, 1930.

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