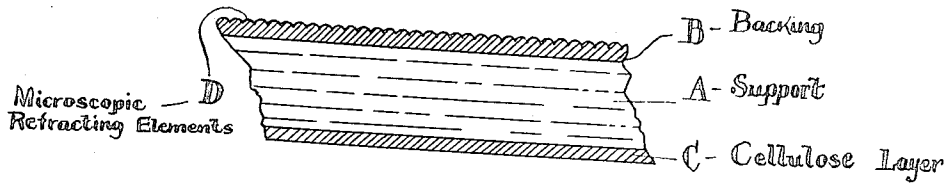
July 16, 1929. R. BERTHON 1,721,244

FILM FOR LENTICULAR SCREEN COLOR PHOTOGRAPHY AND PROCESS OF MAKING THE SAME

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# UNITED STATES PATENT OFFICE.

RODOLPHE BERTHON, OF NEUILLY, FRANCE, ASSIGNOR TO THE SOCIÉTÉ CIVILE POUR L'ETUDE DE LA PHOTOGRAPHIE ET DE LA CINÉMATOGRAPHIE AU COULEURS, OF NEUILLY, FRANCE.

## FILM FOR LENTICULAR-SCREEN COLOR PHOTOGRAPHY AND PROCESS OF MAKING THE SAME.

Application filed June 17, 1927, Serial No. 199,559, and in France July 20, 1926.

The object of my invention is to provide a process for obtaining reticulated films suitable for projection in colour on a screen but requiring no treatment with liquid reagents; the invention also residing in the film itself.

The accompanying drawing shows an enlarged sectional view of such a film, which may, for example, be constituted as follows:

A sheet A constituting the support and which may be made of gelatine, celluloid, cellulose, colophony, etc.

A backing layer B of celluloid or of some other plastic material B laid on the surface of support A and carrying in relief microscopic refracting elements D for colour selection purposes. Said layer B may have the microscopic refracting elements formed on it by rolling after it has been applied to the support; it may also be directly applied to the support by means of a cylinder or of a plate suitably engraved, according to the known methods for application on fabrics.

A layer C of a substance pervious to gases (cellulose, etc.) is spread in adhesive form on the free face of support A. Said layer is impregnated with a substance sensitive to light but capable of forming, when unaffected by light, very dark coloured parts under the influence of certain gaseous reagents, such as certain azo derivatives, or mixtures of azo derivatives and phenols, developable in colours by means of simple or compound ammonias used in gaseous state. As a matter of course said layer may be formed by impregnating the surface of support A opposite to layer B.

When the sensitized layer is exposed to light through a positive photographic image, the diazo substance is destroyed at the points reached by the light; and after this light-printing the film is subjected to the action either of ammonia vapors or of an alkali bath, whereupon the coupling of the diazo substance and the phenol takes place with production of a colourant, so that a positive print is thus obtained from the original positive.

The print so obtained will, therefore, be suitable for projection in colours on a screen equally as the original positive.

I claim as my invention:

1. A method of making reticulated film for colour projection, comprising the steps of applying to one face of a support of transparent plastic material a backing layer having on its outer surface a multitude of microscopic refracting elements for colour-selection purposes; and applying to the other face of said support a layer of material in adhesive form which is pervious to gas and is impregnated with a light-sensitive mixture of a diazo substance and a phenol, such mixture reacting to form very dark coloured substances in an alkaline atmosphere.

2. A method of making reticulated film for colour projection, comprising the steps of applying to one face of a transparent celluloid support a transparent backing layer having on its outer face a multitude of microscopic refracting elements for colour-selection purposes; and applying to the other face of said support a layer of cellulose impregnated with a light-sensitive mixture of a diazo substance and a phenol, such mixture reacting to form very dark coloured substances in an alkaline atmosphere.

3. A reticulated film for colour projection, comprising a transparent support; a backing layer on one face thereof having on its outer surface a multitude of microscopic refracting elements for colour-selection purposes; and a layer of material on the other face of the support which is pervious to gas and is impregnated with a light-sensitive mixture of a diazo substance and a phenol, such mixture reacting to form very dark coloured substances in an alkaline atmosphere.

In testimony whereof I affix my signature.

RODOLPHE BERTHON.