

UNITED STATES PATENT OFFICE.

BERNARD JAMES COOPER, OF LONDON, ENGLAND.

METHOD OF PRODUCING COLORED PHOTOGRAPHS.

No. 898,554.

Specification of Letters Patent.

Patented Sept. 15, 1908.

Application filed December 31, 1906. Serial No. 350,102.

To all whom it may concern:

Be it known that I, BERNARD JAMES COOPER, a subject of the King of England, and residing at 31 York Place, Baker street, London, W., photographer, have invented a certain new and useful Method of Producing Colored Photographs, of which the following is a full, clear, and exact description, and for which I have applied for Letters Patent in Great Britain, No. 22,196 of 1906, dated October 8, 1906.

This invention has reference to the production or preparation of photographs intended to be colored by hand or otherwise.

It relates to the treatment or preparation of the sensitized surface of the printing paper before or during printing thereon from the negative in such a way that the sensitized surface is shaded or protected in order that spaces may be left blank upon the paper, so that the color or pigment may be more easily or more effectively applied to the finished print. These spaces may consist of fine lines, dashes, dots or other blanks, and where lines or dashes are employed they may be of any desired pattern and inter-crossed or otherwise. The colors are more effectively or satisfactorily applied to such lined portions or blanks of the print because the shadows or dark portions of the print normally show through too heavily while the shadows crossed with blank line or spaces according to this invention, show up and display the colors very effectively. The blank spaces may be formed or caused to appear on the sensitized surface in several ways. They may be ruled or otherwise caused to appear upon ordinary sensitized paper or other support. Or alternatively, lines or rows of dots in some non-actinic or opaque color or medium may be applied upon the surface of the negative so that the sensitized surface of the positive when printed therefrom shows the desired blank lines or spaces. Or again the sensitized surface of the positive may be ruled or printed before being darkened by the effect of actinic light, with opaque or non-actinic lines or marks of some medium such as suitable pigment and water, which will first shield the parts of the sensitized surface lying thereunder from the action of light and will afterwards be washed off or leave such sensitized surface so that the lined or blank portions are afforded as desired. If preferred these blank lines may be obtained by interposing a line screen between the negative and

the sensitized surface at the time of printing. This line screen may be of any desired and suitable material which will obstruct the passage of light to the print in the region of the shadows and half tones so that blank lines are left apparent in the darkened portions of the print or in those parts thereof which have been acted on by light and dark dots or spaces between such blank lines in the shadows and half tones. The screen may for example be a lined screen resembling that which is used in half tone work mounted on a thin backing, or it may be a fabric of a textile nature or delicate lace or network, sufficiently open to allow the passage from the negative to the positive of light between the lines. This fabric will by reason of the regular crossing of the threads form a lined screen. Other forms of lined screen for this purpose may be afforded by a ruled sheet of celluloid or tracing paper suitably lined, dotted or otherwise marked. In this form of carrying out the invention the negative is brought as closely to the sensitized positive surface as the interposition of the lined screen will permit. In other words in my invention the lined screen is in contact with the positive and the latter is what is known in the photographic art as a "contact print" as distinguished from an enlargement. The negative, the screen and the positive are packed so closely together in all forms of carrying out the invention that the print is to all intents and purposes and in the result a contact print.

The blank lines or spaces may be secured or produced upon the final print in any other desired way however. They may be hatched lines, and the lines may be crossed at right angles or otherwise. The lines, dashes or spaces may be of any desired fineness of pitch and I can state by way of example that lines of one-half to one-fourth or other fraction of a millimeter thickness and the same or a different distance apart, afford satisfactory results in the case of whole-plate photographs. For smaller photographs the lines might with advantage be finer and closer together. The result is that after the print is finished it is found to be lined in the half-tones and shadows with blank lines and the paints or colors when applied to such print in the ordinary manner are better displayed and their appearance improved.

In addition to gelatino-chlorid printing

papers the invention may be applied to all kinds of sensitized and print-forming surfaces.

5 Having thus described my invention, what I claim as such and desire to secure by Letters Patent, is:—

10 1. The method herein described of producing colored photographs, said method consisting in placing an element in contact with the sensitized surface so as to cause lighter spaces, preferably, as fine white lines, dashes or dots, to appear upon the darkened portions of the contact print where-
15 by the said lines, dashes or dots are made visible in the shadows and half-tones of the finished print, and then applying coloring media to said lines, dashes or dots.

2. The method herein described of producing colored photographs, said method

comprising the placing of a lined screen in contact with a sensitized surface whereby interrupted blank spaces are formed upon the final print in the half-tones and shadows, and then applying coloring media to such print.

25 3. The method of producing colored photographs, which consists in interposing between and in contact with the negative and the sensitized surface of the positive, a cross-lined screen to cause interrupted blank spaces to appear upon the final print, and then applying coloring media to said spaces.

In testimony whereof I affix my signature in presence of two witnesses.

BERNARD JAMES COOPER.

Witnesses:

VICTOR F. FEENY,
H. D. JAMESON.