July 18, 1944. C. B. BALCOMB 2,353,867

METHOD OF PRODUCING COLOR SEPARATIONS IN ART WORK

Filed June 15, 1942 2 Sheets-Sheet 1

FIG. 1

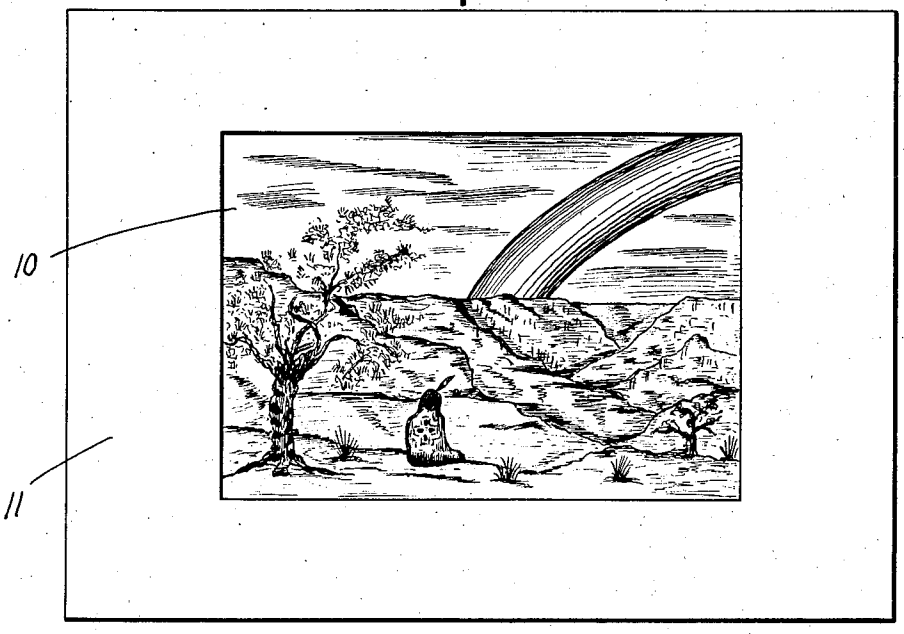
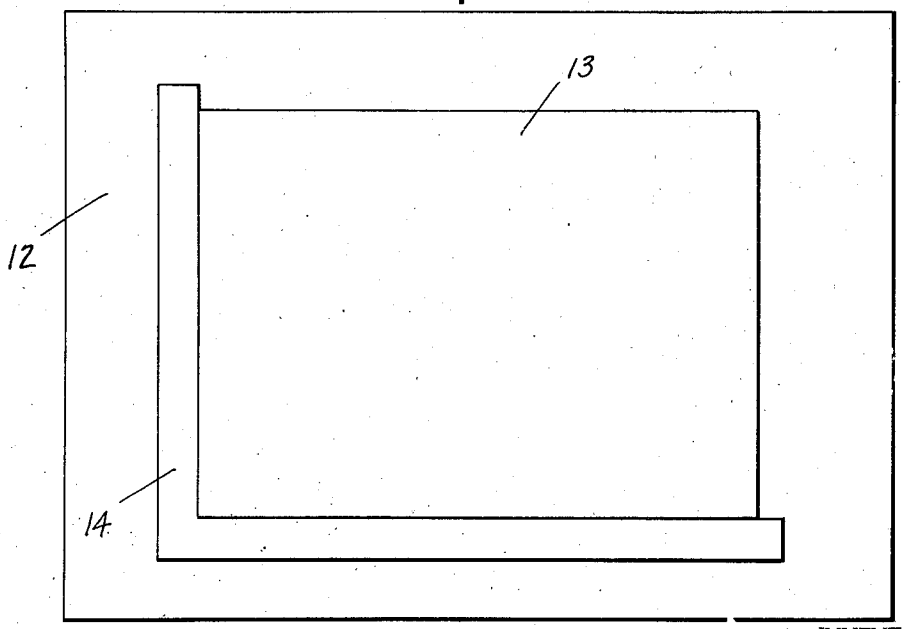


FIG. 2



INVENTOR.
CARL B. BALCOMB.

BY Lockwood, Goldsmith & Galt.
ATTORNEYS.

July 18, 1944. C. B. BALCOMB 2,353,867

METHOD OF PRODUCING COLOR SEPARATIONS IN ART WORK

Filed June 15, 1942 2 Sheets-Sheet 2

FIG. 4

FIG. 6

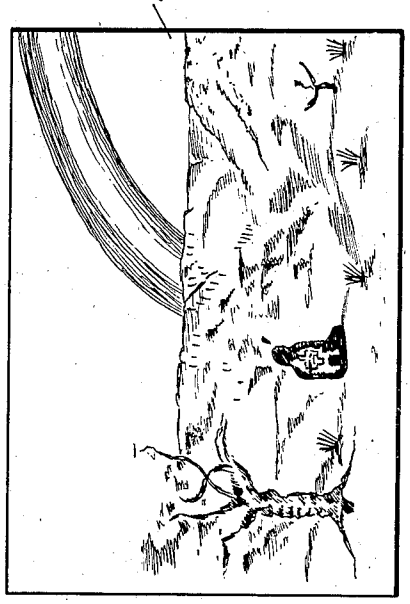
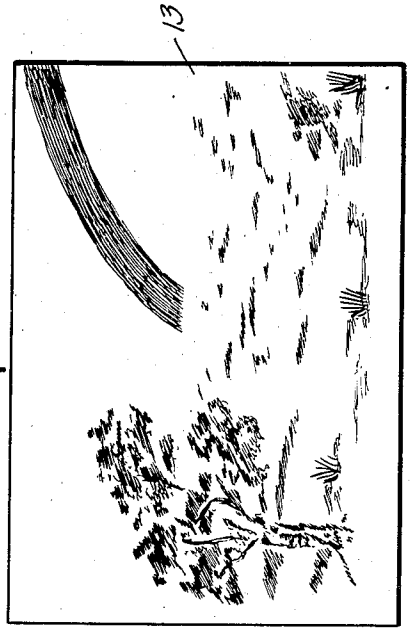


FIG. 3

FIG. 5



INVENTOR.
CARL B. BALCOMB.

BY Lockwood, Goldsmith & Galt,
ATTORNEYS.

Patented July 18, 1944 2,353,867

UNITED STATES PATENT OFFICE

2,353,867

METHOD OF PRODUCING COLOR SEPARATIONS IN ART WORK

Carl B. Balcomb, Dayton, Ohio, assignor of one-half to William P. York, Aurora, Ill.

Application June 15, 1942, Serial No. 447,094

7 Claims. (Cl. 101—211)

This invention relates to the method of producing color separations in art work, being particularly adaptable to the production of color plates for multicolor reproduction of the original art work or master production. The invention is particularly applicable to the reproduction by printing of multi-colored maps, cartoons, advertising displays in newspapers, magazines and the like, as well as scenic and other pictorial color productions.

The principal object of this invention is to formulate and provide a simple and economical method of the character above referred to, wherein complete control of the color separation sheets and print plates is in the artist, requiring no color application by others, or any color filling in after the art work is completed. In other words, by means of this method, all color separation sheets and color fill-ins ready for the printing plates are produced by the original artist during his production of the original art work. This enables the artist to have full control of the shading of one color into the other to produce the desired artistic effect and thereby eliminates the necessity of filling in the color separation sheets apart from and independently of the original production which often results in misapplication of coloring or coloring effect or shading not intended by the artist.

Thus, it is made possible for the artist to control the reproduction of his work, visualize it and work it over to obtain just the desired coloring effects which will be faithfully reproduced, and eliminate the additional time and work necessary to produce the color separation sheets independently and apart from the original art work.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

Fig. 1 represents the original or master sheet mounted in a registering frame after it has been sketched with black, blue, yellow, and red colored pencils.

Fig. 2 represents a blank color separation sheet mounted in its registering frame.

Fig. 3 represents a black color separation sheet, which is a black carbon paper transfer record of all marks made by the artist when using a black pencil.

Fig. 4 represents a blue coloration sheet, which is a black carbon paper transfer record of all marks made by the artist when using a blue pencil.

Fig. 5 represents a yellow coloration sheet which is a black carbon paper transfer record of all marks made by the artist when using a yellow pencil.

Fig. 6 represents a red coloration sheet, which is a black carbon paper transfer record of all marks made by the artist when using a red pencil.

Whereas the method herein described is applicable to many types of art work, such as colored prints, cartoons, maps and the like, for purposes of illustration a mere landscape scene is herein shown, comprising four basic colors, namely, black, blue, yellow, and red. Variations thereof may be employed including different colors of any desired number. Also shading and shadow effects are of course, obtained through applying one color over the other, or by using additional colors.

One means of employing the method may be described as follows: The master sheet which consists of any suitable sheet of thin white paper is secured within a frame 11. The frame 11 is hinged to a backboard 12 by any suitable means, or the frame 11 and board 12 may be provided with fittings so that they may be accurately registered one over the other. They are so arranged that when the frame 11 is registered over the board 12, the master sheet 10 is accurately registered and held over the color separation sheet 13, as shown in Fig. 2. The blank color separation sheet 13 may be conveniently and removably positioned upon the board 12, for registration by the guide member 14. A sheet of black carbon paper or similar copy paper is placed between the master sheet and the color separation sheet when secured in registry by the frame 11 and board 12.

With the first blank color separation sheet 13 in place the artist then proceeds to sketch on the master sheet 10 with a dark or black colored crayon the outlines and any other portions of the picture which he desires to be black in the finished picture. By reason of the pressure applied in this sketching on the master sheet, the carbon paper transmits to the color separation sheet 13 such lines as are thus applied, resulting in a black and white record of all lines drawn with black pencil on the first color separation sheet as represented in Fig. 3. Such completed sheet 13 is then removed from board 12 and a fresh sheet 13 is secured in said frame and placed in registry with and under the master sheet with black carbon paper between as before. The artist then proceeds to apply his second color by a colored crayon which, for example, is herein indicated as blue, with the result that certain lines are transcribed to the sheet 13 through the carbon paper to represent the blue lines or shading which the artist has applied to his master sheet. Thereupon the color separation sheet representing blue is removed from the frame and a fresh sheet and black and white carbon paper is mounted thereon.

The same procedure is followed to obtain the color separation sheet 13 indicating yellow lines

and shading, as shown in Fig. 5; and that shown in Fig. 6 representing the red lines and shading.

After the master sheet has thus been created as desired by the artist, he may see wherein changes or variations in the color effect may be desired and, therefore, he may replace one or more of the color separation sheets 13, as shown in Figs. 3–6, back on the board 12 and add a few lines of that particular color to his master sheet and through the carbon paper to the sheet 13. Thus he may touch up the master sheet to any extent desired by simply replacing the color separation sheet of the color which he is going to employ, back on the board 12.

Having thus produced a series of color separation sheets, each recorded in black and white, one for each color employed, they are then ready for photo engraving and the making of the usual color printing plates. Thus, a printing plate will be made for each of the sheets 13 shown in Figs. 3 to 6 for applying their respective colors with the result that the finished composition will reproduce in color the artist's master sheet with the same overlapping of color application that the artist has placed thereon, the same intensity of application so that the shades and shadows are accurately represented as a direct result of the artist's original work.

It will be obvious that the above method may be applied to multi-color printing in respect to not only paper, but to fabrics and other basic materials and may also extend to all kinds and characters of art reproduction. Also, any character of frame or other device may be employed, such as will maintain at all times the color separation sheets 13 in accurate registry with the master sheet 10. Any copy paper or other device for the transmission of markings from the master sheet to the color separation sheet may be employed, carbon paper or similar copy paper being referred to herein merely by way of example. Also, it should be understood that whereas the color is referred to herein as being applied by the usual color crayon, any device capable of applying color and exerting pressure may be employed, such as a pencil, stylus or pen. Similar and acceptable methods of transmitting the color reproduction from the color separation sheets to the surface bearing the fluid reproduction may be employed, including such well known processes as photoengraving, zinc, copper, half tone plates, etc., silk screens, multi-lithography and rotogravure.

Mimeograph stencils can be made by using such stencils directly under the master sheet 10 without intervening carbon paper and by the use of special carbon paper the color separation records can be made directly on paper or metal sheets used in offset lithography processes.

The invention claimed is:

1. The method of producing color separation in art work, consisting in simultaneously with the original color application, tracing the body of each color design of a work of art to be reproduced onto an individual color separation sheet.

2. The method of producing color separation in art work, consisting in applying a series of base color designs to a master production to be reproduced in color, and tracing said designs onto a separate sheet for each color by the application of the respective color designs to the master production, thereby providing a series of color separation sheets for use in the reproduction.

3. The method of producing color separation in art work, consisting in providing a plurality of individual color separation sheets one for each base color to be printed, progressively placing each of said sheets under and in registry with a master sheet, inserting a tracing medium between said sheets, applying color under pressure to the master sheet for reproduction of said color design through the tracing medium onto the registered color separation sheet, and similarly tracing each additional color design on an additional and corresponding color separation sheet as said several color designs are applied to the master sheet until all coloring of the work is completed.

4. The method of producing multi-color reproduction in art work, consisting in mounting a master sheet for receiving the original color application of the work of art in a registry frame, removably mounting a series of blank color separation sheets in a frame arranged for registry with said first-mentioned frame, said sheets being mounted therein one at a time, inserting a tracing medium over said color separation sheets as they are mounted in registry, and applying color under pressure to the master sheet, whereby the color design will be traced on the mounted color separation sheet, a different color separation sheet being mounted in place for receiving the tracing of each individual base color as it is applied.

5. The method of producing multi-color reproduction in art work consisting in applying a series of base color designs and a master production to be reproduced in color, tracing said designs onto a separate sheet for each color by the application of the respective color designs to the master production, thereby providing a series of color separation sheets, and producing color printing plates from each of said color separation sheets for over printing the colors corresponding to those used in effecting the tracings of the respective color separation sheets.

6. The method of producing multi-color reproduction in art work, consisting in providing a plurality of individual color separation sheets one for each base color to be printed, progressively placing each of said sheets under and in registry with a master sheet, providing a tracing medium intermediate said sheets, applying color under pressure to the master sheet for reproduction of said color design through the tracing medium onto the registered color separation sheet and similarly tracing each additional color design on an additional and corresponding color separation sheet as said several color designs are applied to the master sheet until all coloring of the work is completed, and producing a color printing plate from each of said color separation sheets for over printing the colors corresponding to those used in effecting the tracings of the respective color separation sheets.

7. The method of producing color separation in art work, consisting in providing a plurality of individual color separation sheets, one for each base color to be printed, individually registering each of said sheets with a master sheet, and tracing thereon its respective base color design by and simultaneously with the application of said color to the master sheet.

CARL B. BALCOMB.