Nov. 4, 1930. G. F. CAPWELL 1,780,260

METHOD OF PRODUCING PICTURES IN COLORS

Filed Dec. 2, 1929

Fig. 1

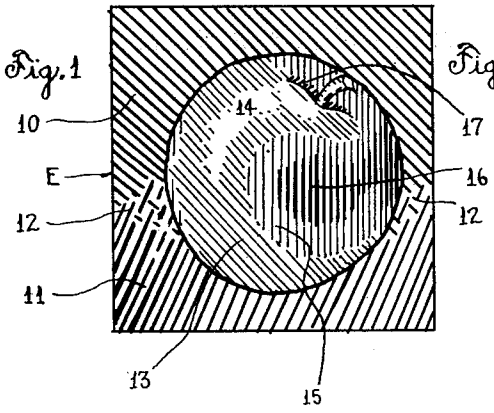


Fig. 2

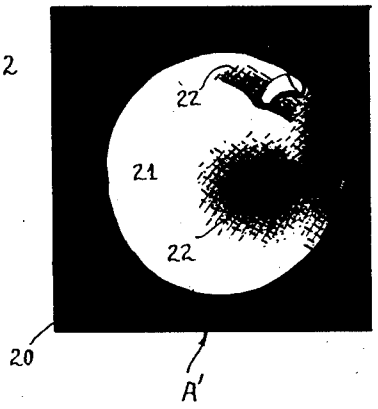


Fig. 3

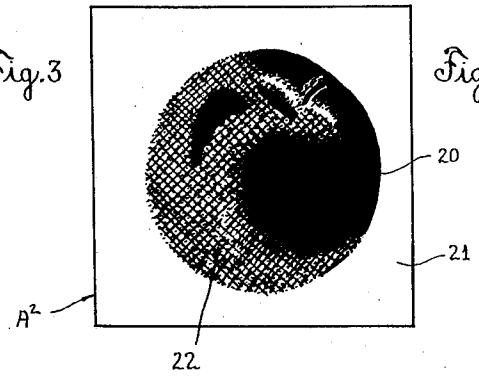


Fig. 4

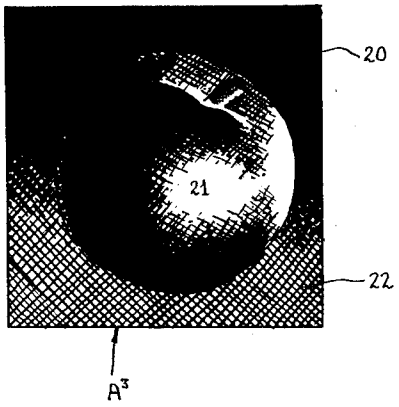


Fig. 5

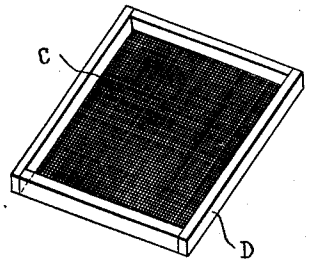
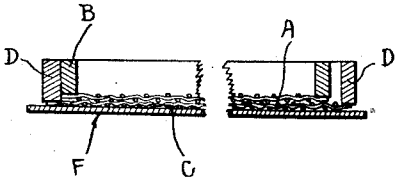


Fig. 6



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UNITED STATES PATENT OFFICE

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METHOD OF PRODUCING PICTURES IN COLORS

Application filed December 2, 1929. Serial No. 410,961.

The present invention relates generally to the production or delineation of pictures or designs by applying several colors onto the surface to receive the picture through screen stencils. The methods or processes heretofore practised in producing pictures in this way are open to numerous objections and disadvantages which result from the heretofore necessity of allowing each layer or coat to dry before applying the next coat in order to avoid each screen from picking up, blotting and smudging a coat previously applied through another screen. This necessity of allowing each coat to dry before applying the next one slowed up the processes so that it took a long time to carry them out and it was impossible to properly blend the colors, shade them into one another, or obtain the desired lights and shadows. Also, in producing pictures by these old methods, but one technique could be followed wherein the several colors were applied in flat masses with a distinct line of demarcation between adjacent areas of different colors.

The aim of the present invention is to provide an improved process of producing pictures in colors by the use of screen stencils and wherein all of the advantages of producing pictures by this general method are retained and the many disadvantages and objections to the processes as heretofore carried out are eliminated.

More particularly, the aim of the invention is to provide an improved process of this sort by means of which better, more pleasing and more natural pictures may be obtained with a great saving of time and wherein the colors may be blended and shaded into one another so as to give the desired effects. By proceeding in accordance with the present invention, any well-known technique may be followed giving greater flexibility and versatility in producing pictures of this sort.

The present invention consists generally in interposing a protective screen between the surface on which the picture is to be painted and the screen stencils through which the colored paints are applied so that each successive coat may be applied while the preceding coat (or coats) is still wet, thus eliminating the time heretofore required in allowing each coat to dry before applying the next; permitting of proper blending and shading of the colors, and resulting in other advantages.

Other objects will be in part obvious and in part pointed out more in detail hereinafter.

In the accompanying drawings, which are for purposes of illustration only:

Figure 1 is a view of the picture to be reproduced;

Fig. 2 is a view of a stencil screen through which the first color, in the present instance white, is applied;

Fig. 3 is a view of a screen through which the second color, in the present instance green, is applied;

Fig. 4 is a view of a third screen through which the third color, in the present instance red, is to be applied;

Fig. 5 is a perspective view of the protective screen; and

Fig. 6 is a transverse sectional view through the cardboard or other object on which the picture is to be painted, the protective screen located on the cardboard, and one of the screen stencils position upon the protective screen.

In carrying out the present invention, any suitable screen stencils and any desired number of such stencils may be employed. Each of these screens or stencils may consist, as is usual, of a piece of silk bolting secured on a frame in stretched or taut condition. Obviously, the screens may be of other material than silk. In Fig. 6 of the drawings, the screen stencil is designated generally by the letter A and its frame by the letter B. In Figs. 2, 3 and 4, the frame is omitted and, for the purpose of identifying the stencils of these figures, they are respectively lettered

A^1, A^2 and A^3 in the order in which they are used. As pointed out hereinafter, each of these screen stencils may have impervious portions through which no paint can pass, these portions being herein referred to as masked portions and being shown in the drawings by solid black and designated by the numeral 20. The screens also have pervious portions through which the paint may freely run, these portions being herein referred to as open portions and being shown in the drawings by solid white and designated by the numeral 21. Further, each of the screens have partially open portions in which the meshes are of reduced size and through which the paint may run in a lesser amount than the open portions, these partially open portions being herein referred to as partially masked portions and being shown in the drawings by cross lines and designated by the numeral 22. These screens may be produced in any suitable way; several methods of doing so being old and well known in the art. The protective screen is shown in perspective in Fig. 5 and in section in Fig. 6. This protective screen, designated by the letter C, may be of any suitable mesh material, such as silk bolting stretched on a frame D.

In order that the process of the present invention may be more fully understood, it will be described in connection with the production of the picture or sketch shown in Fig. 1 which, of course, is selected for illustrative purposes only. This picture, designated generally by the letter E, is an apple on a green and brown background, the apple being of generally green color and having a pinkish and reddish area to indicate ripeness and a brownish portion near the stem. The green portion of the background is indicated by the numeral 10, and the brown portion by the numeral 11. These colors are gradually blended or shaded into each other, as at 12. The green area of the apple, and which is preferably of a lighter green than the background 10, is indicated by the numeral 13 and it has a white spot 14. The pink portion of the apple is indicated by the numeral 15, while the solid red portion is indicated by the heavier shade lines 16. At the top of the apple and around the stem thereof is a blended brown portion 17.

Before describing the manner in which the apple is painted, it may be well to state that a green paint and a red paint, both in wet condition, will blend so as to form a brown color. To produce a lighter green, the surface may be first painted white and then a darker green blended with the wet white coat. A pink color may be obtained by applying a wet red paint to a wet white paint. A decided green or decided red may be obtained by applying the desired colors to a dry surface. It is, of course, understood that two colors will properly blend when those colors are painted one over the other in wet condition. When two colors are painted on a dry surface, with the two colors coming together or meeting, there is a distinct line of demarcation between those colors, the blending, if any, being imperceptible to the eye.

The screen A^1, through which the white paint is to be run, is masked or blocked out as shown by the black areas 20 so as to leave open portions 21 corresponding to the green and white portions of the apple and partially masked portions 22 corresponding to those portions of the apple to be painted pink.

The second screen A^2 shown in Fig. 3, and through which the green paint is to be applied, has masked portions corresponding to the white, pink and red areas of the apple; open portions corresponding to the background of the picture and brown portion of the apple; and a partially masked portion corresponding to the green area of the apple.

The third screen A^3 shown in Fig. 4, and through which the red paint is to be applied, has totally masked portions corresponding to the green area of the background and the green and white areas of the apple; open portions corresponding to the red and brown areas of the apple; and partially masked portions corresponding to the areas 11, 12 and 15 of the picture.

In producing the picture, the protective screen C is positioned upon the surface of the cardboard or other article on which the picture is to be painted, the cardboard being designated by the letter F. Then the screen A^1 is positioned upon the protective screen C so that the silk bolting of the two screens are superimposed, as shown in Fig. 6. A white paint is then applied to the top surface of the screen A^1 and a squeegee is drawn across this surface so as to force the white paint through the open (unmasked) portions and partially masked portions and to wipe off the excess paint. In this operation, the paint, which passes through the open and partially masked portions of the screen A^1, will flow through the protective screen onto the cardboard surface, a part of the paint remaining in the meshes of the protective screen. Then the first screen A^1 is removed, the protective screen being retained on the cardboard. Then the second screen A^2 is placed on the protective screen and, while the white coat is still wet, a green paint is applied to the second screen. The green paint will run through the open portions 21 of the screen A^2, so as to color all portions about the apple green, and will flow through the partially masked portions 22 onto the previously applied white paint so as to give the portion 13 of the apple a lighter green color. A squeegee may be used with this screen also. The screen A^2 is now removed from the protective screen. Then the screen A^3 is positioned on the pro-

tective screen while the previously applied coats of paint are still wet. Red paint is applied to the third screen and forced through the open and partially masked portions by means of a squeegee, as was the case in the preceding screens. Then the third screen and the protective screen are removed while the paint is still wet. When the protective screen is lifted off of the picture, the paint, which was in the meshes of the protective screen, sticks to the picture so the protective screen comes off substantially clean. Immediately after the protective screen is raised, lines corresponding to the warp and woof threads appear in the picture but, as the paint is wet, it will settle down somewhat and these lines are substantially obliterated. The picture is now allowed to dry.

It will be observed that the white portion 14 of the apple was painted by the use of the first screen and, thereafter, that portion was masked in the succeeding screens. The light green portion 13 of the apple was produced by painting that portion white by the use of the first screen and then superimposing on the white a green which was run through the partially masked portions of the second screen. This green portion of the apple was masked when the third screen was used. The red portion of the apple was masked in the first and second screens leaving a dry surface on the cardboard which was painted red when the third screen was employed. The pink portion of the apple was produced by giving that portion a thin coat of white paint through the partially masked portion of the first screen and then applying to that area a thin coat of red paint through the partially masked portions of the third screen. The entire background about the picture was painted green by the use of the second screen and then the lower portion of that background was turned to a brown by applying to that lower portion a red paint through a partially masked portion of the third screen. It will be observed that, where it was desired to gradually shade or blend one color into another color, for instance the portions 10 and 11, the partially masked portions of the screens through which the colors were superimposed were graduated; that is, the openings or meshes in the partially masked portions grew gradually larger from the masked portions to the open portions.

It is, of course, understood that, in positioning the screen stencils, any suitable means or apparatus may be employed in order that they may be brought into proper registry with the picture, such apparatus not being shown as it is old and well-known in the art. Also, the protective screen may be lifted after each application of a coat of paint as, for example, where a number of like pictures are to be made. It is further understood that the successive colors may be applied through the same protective screen or successive protective screens.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawing shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the language used in the following claims is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

I claim as my invention:

1. The method of producing pictures in colors, which consists in interposing a protective screen over the surface to receive the picture and beneath a screen stencil, and forcing a color through the stencil and protective screen.

2. The method of producing pictures in colors, which consists in running successive colors through screen stencils, each successive color being applied through a protective screen between the screen stencil and the picture and while the preceding color is still wet.

3. The method of producing pictures in colors, which consists in applying one color to the surface to receive the picture and then applying another color over a part of the previously colored area and while the previous color is wet by forcing the subsequent color through a screen stencil and a protective screen positioned on said surface.

4. The method of producing pictures in colors, which consists in running successive colors through screen stencils while the preceding colors are still wet, and interposing a protective screen between each stencil and the surface to be painted.

5. The method of producing pictures in colors, which consists in positioning a protective screen upon the surface to receive the picture, placing a screen stencil upon the protective screen, forcing a color through the stencil and protective screen, removing the screen stencil, positioning another screen stencil upon the protective screen, then applying a second color, and repeating the operations until all of the colors have been applied.

6. The method of producing pictures in colors, which consists in applying each color through a screen stencil and a protective screen between the screen stencil and the surface to be painted.

7. The method of producing pictures in colors, which consists in providing a plurality of screen stencils each having masked portions, open portions and partially masked

portions, positioning a protective screen upon the surface to be painted, successively positioning the screen stencils upon the protective screen, and forcing a color through each stencil.

8. The method of producing pictures in colors, which consists in applying successive colors to a surface through screen stencils and protecting the applied colors against smudging by positioning a protective screen directly upon the surface to be painted.

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