May 3, 1938. M. DUNKLE 2,115,972

SUPPORT FOR THE GRAPHIC ARTS

Original Filed April 6, 1935

Fig. 1.

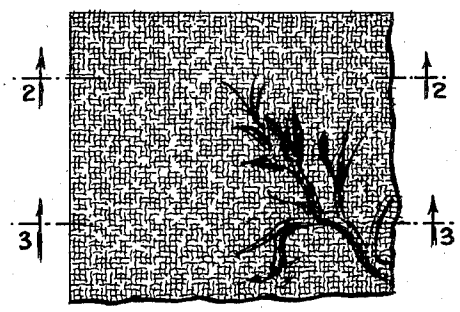


Fig. 2.

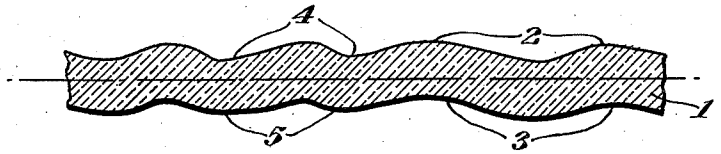


Fig. 3.

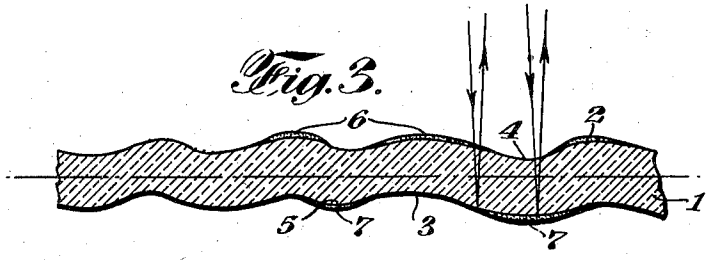


Fig. 4.



INVENTOR

Murna Dunkle

BY *Knight Bros*

ATTORNEYS

Patented May 3, 1938

2,115,972

UNITED STATES PATENT OFFICE

2,115,972

SUPPORT FOR THE GRAPHIC ARTS

Murna Dunkle, Lime Rock, Conn.

Application April 6, 1935, Serial No. 15,095
Renewed September 24, 1937

3 Claims. (Cl. 41—32)

The invention relates to the graphic arts and has for its general object the provision of an improved support and/or ground for the reception of pictorial or other surface ornamentation. The improved support is adapted mainly, though not exclusively, for use in those branches of the graphic arts wherein design and/or color are manually applied to the support in the form of wet pigment, crayon or other visible substance.

More specifically, the improved support is an aid to the production of artistic pictorial or other ornamentation and also constitutes an integral part of the finished product, lending itself to novel aesthetic and practical effects. However, the methods of employing the support and the novel features of the finished product will not be claimed in the present application but will be the subjects of one or more additional applications.

In general, the improved support of my invention consists of a sheet or film of transparent or light-penetrable material, embossed in a particular essential manner. Any transparent material in sheet form may be employed. Cellulose acetate is economically available and possesses the desired physical qualities of thermoplasticity, transparency, non-absorptiveness, flexibility, smoothness, etc. I am aware that glass, Celluloid, and other transparent materials in the form of sheets, plates or films have been heretofore employed as supports in the graphic arts and I make no claim, broadly, to the use of such material in general nor of any particular material.

According to my invention, a sheet or film of suitable material, as specified above, is embossed to produce elevations and depressions on one side which are reciprocal counterparts of the depressions and elevations, respectively, on the other side of the sheet. The forms of the elevations and depressions, as well as their patterns, may be widely varied, but certain characteristics and conditions are essential in order to obtain satisfactory results.

The support is embossed in such manner that a line traversing either surface of the sheet in any direction encounters alternate elevations and depressions of substantially equivalent extent. That is to say, the pattern must be one in which there is no pronounced appearance of unbroken striation and no substantial preponderance, on either side, of elevated areas as compared with depressed areas.

The area and depth of the elevations and depressions should be adjusted with reference to the distance from which the contemplated work of art will probably be viewed. For murals, to be viewed from a substantial distance, a sheet should be made with larger elevations and depressions than those on a sheet intended for a small picture to be viewed closely. And in general, the area and depth of the elevations and depressions should be scaled to conform to acceptable canons of graphic art. Upon a support of this nature color may be applied to the elevations on one side and a contrasting or related color may be applied to the elevations on the other side, for example, by stroking the opposite sides with crayons of different colors; or wet pigment of different colors may be applied to the opposite sides and wiped from the elevations leaving the pigment in the depressions. In either case, the resultant visual effect is a composite of the contrasting or related colors, produced by interspersed areas of the individual colors rather than by mixture of the same. This granular texture is desired in the fine arts and can be produced by usual painting methods only by great skill, time and labor and only to a limited degree.

The intervals between successive elevations or successive depressions should be of the same general order of magnitude but, for aesthetic reasons, it is of great importance to avoid accurate uniformity in this respect. For the same reason the form or shape of the elevations and depressions should be sufficiently varied to avoid the appearance of meticulous regularity or repetition. However, variations should not be so marked as to acquire individual prominence, as for example, an elevation noticeably higher than the rest.

The intervals between successive elevations or depressions should be sufficiently great so that areas of color applied to the elevations only, or to the depressions only, shall be separately visible, this being a necessary condition in order to produce the desired granular texture.

Preferably, the slopes which connect adjacent elevations and depressions should lie at subparallel angles to the mean plane of the sheet; and changes of elevation should be rounded or gradual rather than sharp. This feature is important in two respects. Sharp changes of contour present too much "tooth", as it is known in the art, so that too much color is taken from the artist's brush or crayon. Also, acute angles produce reflections and refractions of light which interfere and materially alter the quality of the applied color values.

Illustrative examples of the improved support of my invention are shown in the accompanying drawing, in which

Figure 1 is a plan view of a fragment of a sheet of material embossed in accordance with the invention, a portion of a picture being shown thereon.

Figure 2 is a cross-section, much enlarged, on the line 2—2 of Figure 1.

Figure 3 is a cross-section, on the same scale as Figure 2, on the line 3—3 of Figure 1, and

Figure 4 is a cross-section of a sheet of material of less thickness than the sheet shown in Figures 2 and 3 and having deeper embossings.

The sheet which comprises the support is designated generally as 1. It will be seen that elevations 2 on the upper side of the sheet correspond with the depressions 3 on the under side, and depressions 4 are similarly reciprocal to elevations 5. As shown in Figure 3, areas of paint 6 and 7, which are respectively applied to the elevations on the opposite sides of the sheet, are laterally offset with respect to one another, the spots of color on the under side being visible through the transparent or light penetrable sheet as indicated by the light-ray lines.

The sheets may be embossed in a variety of ways. For example, a matrix may be prepared by applying a plastic of fine texture to a smooth, or an all-over-roughened, flat surface, using scumbling and stippling strokes. The plastic should be deposited in averaging quantities over the entire surface in myriad, small, gently rounded, varied, contiguous masses, avoiding any too prominent masses or localized impasto. After the plastic has dried an electrotype may be made from it to form a platen and a thermoplastic sheet embossed from the platen in any usual or suitable manner.

It is believed that the improved support described above is a radically new tool for the graphic artist and will revolutionize painting technique and materials. Not only will it be possible to obtain superior aesthetic results, but these results will be obtainable with moderate skill and with a very material saving of time and labor.

I claim:—

1. A support for the graphic arts comprising a light-penetrable sheet having its opposite sides reciprocally embossed, the embossing being of such nature that a line traversing either surface of the sheet in any direction encounters alternate elevations and depressions of substantially equivalent extent, the intervals between crests of successive elevations or between bottoms of successive depressions being sufficiently great so that spots of color applied to the elevations only, or to the depressions only, are separately visible.

2. A support as claimed in claim 1 in which the slopes connecting the elevations and depressions lie at subparallel angles to the mean plane of the sheet.

3. A support as claimed in claim 1 in which the intervals between adjacent crests of elevations or bottoms of depressions and the contours of said elevations and depressions are non-uniform.

MURNA DUNKLE.