April 14, 1936. C. C. MORRISON 2,037,038

ARTIST'S PAINTING BOARD

Filed Sept. 8, 1932

FIG. 1

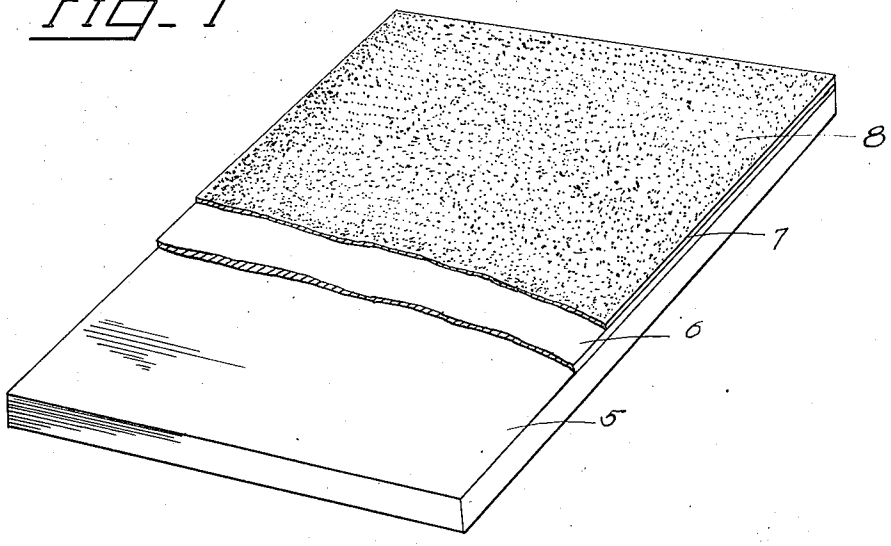
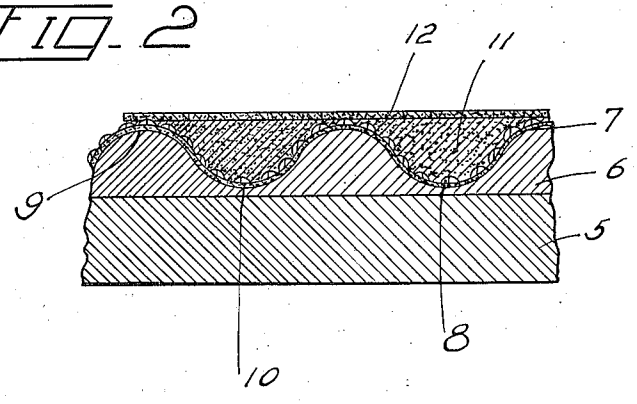


FIG. 2



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2,037,038

ARTIST'S PAINTING BOARD

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Application September 8, 1932, Serial No. 632,192

4 Claims. (Cl. 35—66)

This invention relates to painting surfaces for artists and relates more particularly to a board for water color artists, the present application constituting a continuation in part of my previous application for Surface constructions, Serial No. 534,212, filed May 1, 1931.

The art of the water color painter is a particularly difficult one. The artist who employes oils as a medium of expression uses opaque colors on a roughened surface, usually canvas. As the painting progresses the artist frequently wishes to alter this or that portion of his work which he accomplishes by merely painting over the area to be changed and the correction is easily made. The water color artist is in a different position. To secure the proper effect with water colors he must employ transparent colors with only a very occasional application of opaque colors. His painting surface has heretofore been a paper or fibrous composition board with a fairly hard though absorbent or blotting paper surface. The moment the brush is applied to the surface the color is absorbed by the board and the stroke cannot be altered without "scrubbing" and consequent roughening and distortion of the surface. As a result water colors have always been considered the most difficult medium of expression for the artist and the better works are highly prized.

The present application is directed to certain improvements in the construction of the board as well as to a number of refinements which were included only inferentially in the original broad disclosure.

As set forth in the original application, the embodiment includes a suitable base member having a novel surface construction superimposed thereon.

A water color board constructed in accordance with the directions set forth herein possesses the following characteristics and advantages. The surface, being uniformly embossed in varying degrees, depending upon the type of work to be done, provides the necessary and essential "drag" for the brush as it passes thereover. This brush drag characteristic is something demanded by the technique of the artist and this quality the board has in common with the other high class water color boards now in use. A second and more novel quality is its wet-wiping paint removal characteristic. The water color artist has heretofore been subjected to a constant mental hazard for fear that mistakes would be made in the painting and the consequent ruination of the entire work. This hazard is removed in the present board because if the artist desires to change any portion of the work he may dip a sponge in water and wipe the surface perfectly clean and white and with no roughening of the surface or other damage to the board. Furthermore, the paint may be removed at any time, regardless of whether it is a few seconds or several years after the color has been applied. This outstanding quality enables the artist to work upon the painting, set it aside for few days or months, and return to it with the ability to alter any previous work and to express any new ideas he may have acquired in the meantime. A third outstanding quality is the waterproof nature of the surface construction, and, as was partially anticipated in the reference to the last mentioned characteristic, the colors will not impregnate the board but rather do they stay entirely on the surface, thereby retaining all of their initial brilliance for years thereafter. The colors in effect always have the appearance of a freshly painted work. A fourth quality may be termed the overlay characteristic. In recent years many new variations of ready mixed colors have been made available. Many of the finer artists however prefer to mix their own colors by employing only black and the three primary colors, red, blue and yellow. They may either mix these on a pallet or they may apply one of the colors to the surface of the board and then wash another color thereover. Inasmuch as the first color does not impregnate the board but remains entirely on the surface, just as does the second color, there are two distinct layers of colors which produce an unusual effect. It is, of course, necessary to allow the first color to become reasonably dry before the second color is applied. The present board provides admirable layover qualities because although the colors are readily removable by the application of a wet sponge, the pigment clings sufficiently to the surface to allow one color to be applied on top of the first color without picking up or distorting the first, although, of course, any extensive working over of the second color will pick up the first. Thus, the overlay of one or more colors produces a certain depth, brilliance and luminosity not heretofore found in any water color painting surface since each color remains separate and distinct.

Another quality is what artists now refer to as the brush stroke or original color technique retaining characteristic. In the previous water color painting surfaces the artist might make a stroke of the brush which he believes to be perfect, and could the surface retain the precise technique of that stroke the artist would have a

desirable result. In the conventional water color boards, however, the color immediately proceeds to impregnate the surface and in a few seconds the stroke has changed in appearance since half the color has passed into the paper. In the present board, since the surface is waterproof and non-absorbent of the colors, the initial technique remains unchanged.

Another feature of the board is its slow drying quality. Since all of the colors and moisture are on the surface the artist is enabled to "work his wash" as much as he desires without any rolling off of the paper as always happens with the conventional blotting paper surface board. Still another quality of the board is its non-color fading characteristic. Over a period of time the colors do not fade by absorption into the surface but retain their brilliance for many years.

The invention also contemplates the provision of a board which may be most successfully used for oil painting. Whereas the oil artist has usually employed a canvas to paint on he now can get perfect results on a paper composition board which will provide all of the desirable brush-drag qualities from which the paint is quickly removable, if desired, under the influence of a suitable solvent.

Another object of the invention is to provide a sketch block which may be used for water color painting. Sketch blocks are used quite widely by artists who paint out of doors when the spirit moves and who do not wish to be encumbered by carrying a number of relatively clumsy boards. These sketch blocks usually include a score or more of fairly thick sheets of paper which are secured together at their edges, and after the artist completes a sketch he merely removes the top sheet with a penknife. In the conventional sketch blocks the paper is highly absorbent of the water and the surface immediately begins to warp and crinkle, thereby forming ridges and valleys into which the colors run. It is accordingly quite impossible to make an artistic drawing on a conventional sketch block since none of the original technique remains. The present invention contemplates the provision of a sketch block which may include a plurality of sheets of paper having a waterproof surface and when used by the water color artist, the smoothness of the individual sheets is not affected since the water colors cannot penetrate therethrough.

The inventor further contemplates the provision of a novel advertising display card wherein it is desired to frequently alter portions of the advertising matter such as prices and the like.

Still another object of the invention is the provision of an improved painting surface which is highly effective for instructing children in the art of painting. For centuries the common slate has been very useful for the instruction of children, principally because any marking thereon could be immediately erased and the slate used again. The childrens' water color slate constructed in accordance with instructions contained herein may be used by the child as often as desired and the colors may be immediately washed off thereby leaving a perfectly clean white surface to again paint on, thereby effecting a great saving of time and money as well as affording the child or student the opportunity of painting on a superior surface instead of a cheap piece of paper. It is also obvious that the child will be greately encouraged in his efforts to learn to paint.

In the drawing:

Fig. 1 is a perspective view of the board, portions of the various layers being broken away.

Fig. 2 is a greatly enlarged broken vertical section taken through the board and illustrating the manner in which one coating of paint overlays another.

In my previous application I described the base member as being made from any suitable material having a smooth, relatively smooth or rough surface. Inasmuch as the first mentioned characteristic, namely the brush drag, is important for the technique of the artist, I have secured the best results by applying my surface composition, hereinafter described, on a base member having an embossed surface. The board includes a backing **5** of relatively inexpensive cardboard to which is adhesively joined a sheet of paper **6** of substantial thickness which has been previously embossed by any of the means well known in the paper art. The particular design on the embossing dies is of small consequence, the principal thing being that the resulting surface of the paper have a plurality of minute raised and depressed portions to give the paper essentially a non-smooth surface. The previously embossed paper having relatively shallow depressions gives the best results when paintings of medium tones are desired. When, however, a painting of greater brilliance is desired, the embossed or unembossed paper is joined to the backing after which an embossing die is brought into contact with the upper surface of the paper under considerable pressure and heat. This die is provided with relatively deep depressions to give a far more pronounced non-smoothness.

In the event that the paper has been embossed prior to being joined to the backing sheet, it is not necessary that the second embossing die be provided with the same pattern as the original.

I next superimpose upon the embossed surface a waterproof coating composition, which, when dry, provides a hard, dull, homogeneous film **7**.

Efforts have been made to employ conventional oil and spirit varnishes with a resinous base. The results obtained from this type of coating have always been unsatisfactory, principally for the reason that although a waterproof surface results, it nevertheless resembles glass in smoothness, hardness, luster and brittleness. This type of surface causes the colors to "crawl", thereby making a fine painting impossible. Even with the addition of some finely subdivided mineral substance such as pumice or silex the results are thoroughly unsatisfactory.

The preferred coating composition must be waterproof, must be capable of even and simple application, preferably by spraying, must have the capacity to receive water color pigments on its surface and to release them under the influence of wet-wiping.

I have discovered that a lacquer having a cellulose ester base produces the best results. There are only two esters of cellulose which up to the present time have any importance in the surface coating industry, namely the nitrate and the acetate, formed by the combination of cellulose with nitric acid and acetic acid, respectively. These substances are soluble in certain mixtures of organic liquids which have a comparatively high rate of evaporation, and when the solutions are spread on solid surfaces they readily become dry, leaving the cellulose ester in the form of a continuous film.

It is well known that lacquers having a cellulose base do not have as high a degree of gloss as those lacquers having a relatively high resinous content. In carrying out the present invention, this feature of the cellulose lacquer is very desirable since it produces the desired dull or satin finish, and only enough gum is added thereto to promote adhesion.

Cellulose solutions have to a great degree the property of contracting on drying, and this contraction, particularly when the solution is applied to paper, not only causes wrinkles or ridges in the film but causes it to buckle or bridge away completely from the surface to which it is applied. For this reason I find it very important to use a plasticizer such as tricresyl phosphate in proportions sufficient to prevent this contraction but not so great as to sacrifice the valuable hardness of the film. The proper quantity of plasticizer is particularly important in view of the fact that I must also add a considerable quantity of insoluble pigment which further increases the brittleness of the film.

I secure the best results with a low viscosity pyroxylin solution with as low an acid content as possible, although practically all pyroxylin has some residual acid. Inasmuch as I give the board two coats of the solution I employ a lacquer with a somewhat higher resin content in the first coat than in the second coat since the paper is notably porous and absorbent and requires a considerable amount of solid film before the grain of the paper is no longer apparent to the touch. In the second coat I employ only enough of the gums to provide the necessary adhesion, this second coat having little or no gloss.

A pure cellulose solution is practically colorless and consequently a pigment is added. I secure the best results from a finely divided pigment which is insoluble in the lacquer, such as kaolin, china clay, titanium oxide or "titanox", silex, pumice, silica, quartz and the like. These pigments, when finely ground, are nevertheless possessed of an abrasive characteristic which enhances the brush-drag quality of the board. The fine particles of pigment, designated as 8, are porous and hence somewhat absorbent of the water colors. Being finely subdivided, however, and being coated with lacquer, which tends to reduce the porosity of the particles, the pigments in the water colors are readily removable by the wet wiping operation although the pigments normally cling to the surface quite as well as they would if they impregnated the surface as in the conventional water color board.

The lacquer must be sprayed upon the surface to obtain the best results. It is obvious that the cellulose ester in solution has a greater tendency to penetrate the surface of the paper than the pigment, being a solid. Hence, the ratio of pigment to the lacquer is greater on the surface than immediately thereunder. This greater concentration of lacquer immediately under the surface and greater concentration of pigment at the surface is responsible for the excellent overlay quality possessed by the board. This quality of the board is illustrated in Fig. 2, wherein the raised portions of the surface are designated as 9 and the depression as 10. In the first wash of colors over the surface, the colors work into the depressed areas 10 between the raised portion 9, into the minute interstices between the particles of the finely pulverized solid pigment in the surface of the board, and, to a slight extent, into the particles themselves, which as aforesaid are slightly porous despite the lacquer covering. The second layer of color 12 does not, when applied, work up the first coat but rather does it overlay the first, and the result is a beautiful, luminous, deep color.

The hereinbefore described construction admits of considerable modification without departing from the invention; therefore, it is the wish not to be limited to the precise arrangements described, which are as aforesaid, by way of illustration merely. In other words the scope of protection contemplated is to be taken solely from the appended claims, interpreted as broadly as is consistent with the prior art.

What I claim is:

1. In a water color board having brush-drag characteristics and from the surface of which the colors are removable by a wet wiping operation, a base sheet of material having a uniformly embossed surface and a surface coating superimposed thereon, said surface coating including a homogeneous hard drying cellulose lacquer and a finely subdivided material, insoluble in said lacquer, incorporated therein.

2. In a water color board having brush-drag characteristics, and from the surface of which the colors are removable by a water-wiping operation, a base sheet of material having an embossed surface and a water resisting surface coating superimposed thereon, said surface coating including a cellulose solution combined with finely pulverized hard material insoluble in said cellulose solution.

3. A board for use in artistic painting and having a painting surface including brush-drag and slow dry painting characteristics and from the painting surface of which the work is removable by wet wiping, said board comprising a base sheet of compressed fibrous material having a uniform embossed surface and a surface construction superimposed on said embossed surface, said surface construction comprising a thin layer consisting of a mixture of a cellulose ester combined with finely powdered mineral substance insoluble in said cellulose ester, a plasticizer to give flexibility to the coating, and a gum content to promote adhesion without producing a lustrous finish, said mixture being applied to said surface as a homogeneous coating so that said powdered substance is uniformly distributed within said cellulose layer and occupies the interstices incident to said embossed surface, whereby the outer surface of said surface construction constituting the painting surface of the board is substantially smooth with minute cellulose covered protuberances produced by the powdered substance in cooperation with the embossed surface of the base sheet.

4. A flexible board for use in painting with liquid colors and having a painting surface including brush-drag and slow drying painting characteristics and from the painting surface of which the work is removable by wet wiping, said board comprising a base sheet of material having a uniform embossed or non-smooth surface, and a surface construction superimposed on said embossed surface, said surface construction comprising a thin layer consisting of a mixture of nitrocellulose varnish combined with finely subdivided mineral substance insoluble in said varnish, pigment and a plasticizer, said mixture applied to said sheet surface as a homogeneous coating so that said subdivided substance is uniformly distributed within said varnish and occu-

pies the interstices incident to said non-smooth surface, whereby the outer face of said surface construction constituting the painting surface of the board is substantially non-smooth with minute varnish-covered protuberances produced by the subdivided substance in cooperation with the embossed surface of the base sheet, the varnish on the surface having a higher concentration of the finely subdivided mineral substance than the varnish which has penetrated the surface.

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