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Oberwager

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[54] **KIT FOR MAKING WORK OF ART HAVING THE APPEARANCE OF A STAINED-GLASS WINDOW**

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[52] **U.S. Cl.** **35/26,** 161/6

[51] **Int. Cl.** **B44f 1/06**

[58] **Field of Search** ..... 35/26, 27, 28; 161/3, 5, 161/6; 40/125 A

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Attorney, Agent, or Firm—Gottlieb, Rackman, Reisman & Kirsch

[57] **ABSTRACT**

There is disclosed a kit for constructing a simulated stained-glass window. A front transparent plastic sheet has lead lines and a shading pattern printed on it. Guide lines which define bounded areas are also printed on the sheet, but they are obscured by the superimposed lead lines when looking at the front of the sheet. There are also provided a plurality of sheets of translucent colored plastic which have light-transmitting characteristics which simulate those of stained glass. Each of these sheets has a paper backing on which there are printed areas which correspond to respective areas on the front sheet defined by the guide lines. The pre-defined sections of the colored sheets are cut and then placed on the front sheet in the proper positions. The backing paper is then removed from the cut sections. Highly plasticized materials are used so that they are self-adhering without the need for adhesives.

7 Claims, 6 Drawing Figures

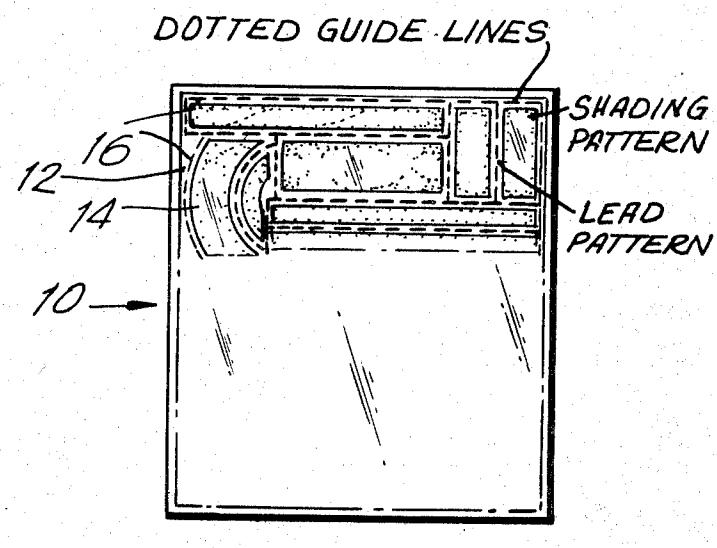


FIG. 1A

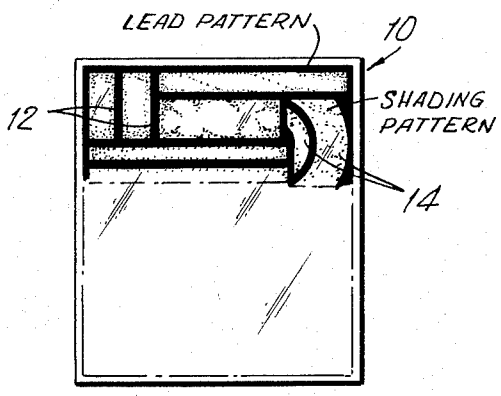


FIG. 1B

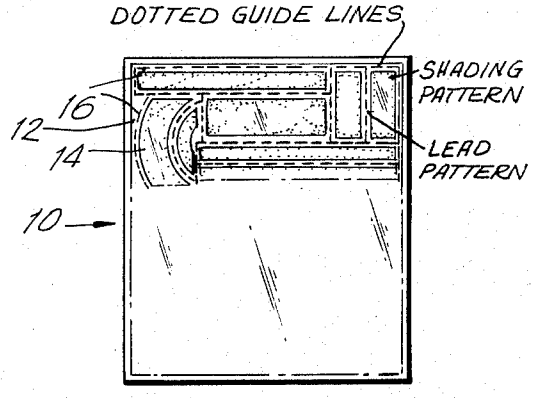


FIG. 1C

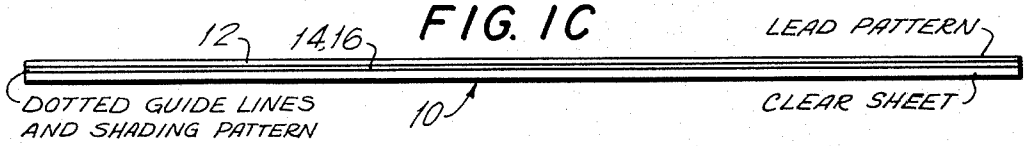




FIG. 2A

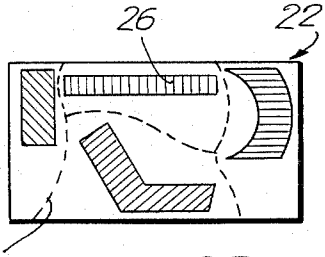


FIG. 2B

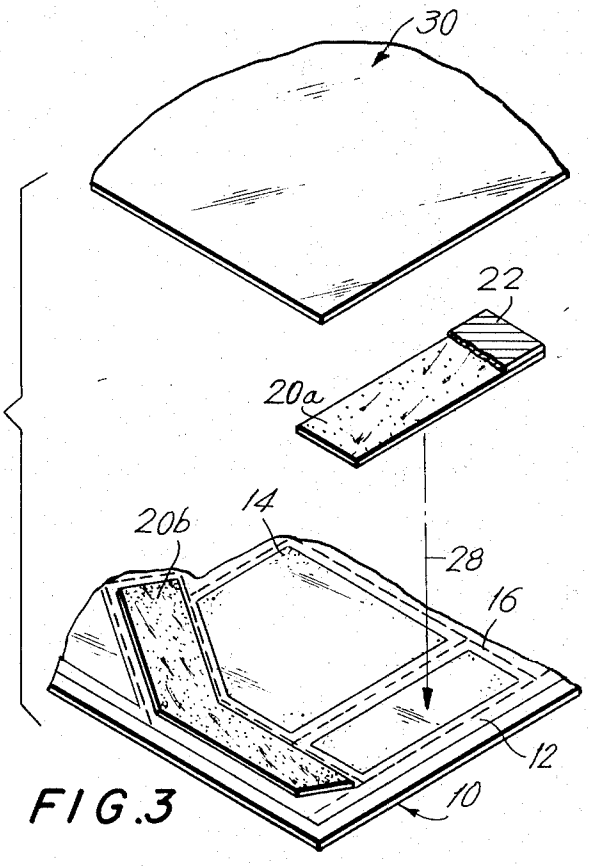


FIG. 3

KIT FOR MAKING WORK OF ART HAVING THE APPEARANCE OF A STAINED-GLASS WINDOW

This invention relates to do-it-yourself kits, and more particularly to such a kit for making a work of art which has the appearance of a stained-glass window.

Some of the greatest works of art ever created are the centuries-old stained-glass windows which are to be found in European cathedrals. Recent years have seen a revival of interest in the ancient art of stained-glass window design. With this rebirth of interest, a number of methods have been proposed to enable amateur hobbyists to design and build simulated stained-glass windows.

The various kits and techniques for making such simulated stained-glass windows have been cumbersome or have not produced final products which in any way approach the beauty of the real windows. The reasons for this can be appreciated by considering how a typical 12th-centruy stained-glass window was made. A full-size design of the entire window was drawn on wood, and the shapes for each piece of colored glass were clearly outlined. Colored glass was made by adding various metallic oxides to the molten glass before it was blown into sheets. The glazier selected a piece of the appropriate color from the supply of sheet glass and cut it to fit the design. After each piece was cut it was placed over the design and the outlines and shading were traced onto the glass with chalk. Using a special paint made of ground glass, usually a dark brown, the painter would add details and shading (grisaille). Not all of the pieces of glass were painted but those that were, were removed from the wooden design table, placed in an oven and heated until the paint fused with the glass. After cooling, the painted glass was returned to its place on the design table. Using strips of lead, the glazier joined each piece into panels about two feet square, often made up of as many as 200 separate pieces of colored and painted glass. When the panel was completely leaded, the joints were secured with solder on both the face and back of the panels. The panels were then set one by one into an iron framework that had been built into the cathedral window and which acted as a frame and support for the glass.

Since actual stained-glass window construction involves the fabrication, cutting and mounting of glass pieces with lead strips, other substitutes have been offered to the hobbyist which are less demanding of time and skill. Prior art materials include colored gelatin, acetate, cellophane, tissue paper for mounting on glass or cardboard, transparent paints, rigid colored and textured plastic sheets, adhesive-backed lead strips or "liquid lead" which is applied with a brush or a squeeze tube to glass, and wax crayons. But none of the prior art methods provides the same combination of permanance, visual impact, brilliance and detail of real stained-glass windows.

In addition, the prior art methods require the user to either create his own design or to transfer a suggested (and usually, by necessity, simple) design provided with the materials, usually a pattern printed on paper, to the final medium on which the paints or other coloring materials are applied.

It is a general object of my invention to provide a kit which permits even a person with little artistic ability to make virtually exact reproductions of actual, finely detailed, stained-glass windows, without requiring the use of paints, adhesives, special tools or the transfer of design information from one material to another, the final work of art being capable of adhering permanently (but removably) without adhesives to any clean surface, e.g., a window.

The kit of my invention contains several elements which are assembled by the user into a basic three-layer sandwich. The front layer is a clear sheet of plastic on which there are printed an opaque lead pattern, a shading pattern over desired areas and dotted guide lines. When viewed from the front, the dotted guide lines cannot be seen. The lead lines, of course, simulate the lead used in real stained-glass windows. The shading pattern serves to provide shading for the colored regions in the final assembly.

The kit includes a number of rectangular sheets of translucent plastic of different colors. Each plastic sheet of this type is mounted on a paper backing on which there are printed patterns which correspond to regions defined by the dotted guide lines on the front sheet. Using a scissors, the patterns on the paper backings of the colored plastic sheets are cut; the resulting cut-out sections are placed on the rear face of the front sheet. Thereafter, the paper backings are removed from all of the assembled colored patterns. Finally, a clear backing sheet (third layer) made of plastic material is placed over the assembled colored patterns.

When viewed from the front, what is seen is the lead pattern which separates individual sections of what appear to be stained glass. The stained-glass sections are shaded (as a result of the shading pattern printed on the front clear sheet). A high degree of realism is achieved as a result of the particular type of colored plastic sheets used for the stained-glass sections, which sheets will be described in detail below.

The individual sheets are preferably made of highly plasticized vinyl material. If the colored middle sheet is highly plasticized, the sandwich adheres together without the need for any adhesives. Moreover, if the rear sheet is also plasticized in this manner, the finished product can be placed against a window and it will remain there for many years without falling off, provided that the window is smooth and clean. In this case, light which shines through the window and the finished simulated stained-glass window provides the most realistic effect yet produced.

Further objects, features and advantages of my invention will become apparent upon consideration of the following detailed description in conjunction with the drawing, in which:

FIG. 1A is a partial front view of the front sandwich sheet which is supplied in the kit of my invention;

FIG. 1B is a partial rear view of the same sheet;

FIG. 1C is a sectional view of the same sheet;

FIG. 2A is a top view of one of several different-colored plastic sheets supplied in the kit of my invention;

FIG. 2B shows a typical paper backing for the colored plastic sheet of FIG. 2A, with a cutting pattern being printed thereon; and

FIG. 3 depicts the method of assembling the three-layer stained-glass window simulation which is made with the kit of my invention.

FIGS. 1A–1C depict the clear sheet, e.g., of Mylar or vinyl, on which the lead design, the shading pattern, and the dotted guide lines are printed. Viewing the clear sheet 10 from the front (FIG. 1A) all that can be

seen are the lead pattern **12** and the shading pattern **14.** The shading pattern functions to add realism to the finished product and simulates the shading which is found on real stained-glass windows; this shading is used to produce depth of modeling and to provide design details.

On the reverse side of the printed clear sheet **10,** there is a series of dotted guide lines **16.** Each of these lines is superimposed on part of the lead pattern. The guide lines define bounded regions in which pre-cut "stained-glass" sections are subsequently placed. Although the guide lines are shown on a "white" background in FIG. **1B,** it is to be understood that in actuality the background is the opaque lead lines and the guide lines are of a contrasting color.

FIG. **1C** depicts the printed clear sheet and is intended to show the manner in which the various patterns are printed. The rear face of the sheet is shown facing down. During a first printing pass (any conventional printing process can be used), the shading pattern and dotted guide lines are printed, preferably in brown ink, on the front face of the clear sheet. Thereafter, during a second printing pass, the "lead" pattern is printed on the front face — on top of the previously printed guide lines. Looking from in front of the sheet (down in FIG. **1C**), all that can be seen is the lead pattern, with the shading pattern on the clear plastic between the lead lines; the opaque lead lines obscure the dotted guide lines. Looking from the rear of the sheet (upward in FIG. **1C**), the dotted guide lines can be seen superimposed on the lead lines.

The user is thus provided with a single sheet which includes not only all of the lead lines and the shading pattern, but the guide lines for individual "stained-glass" sections as well. These guide lines are not visible in the finished product — when the clear vinyl sheet is looked at from the front. (Moreover, the edges of the colored sections which are placed on sheet **10** are not visible either in the final product since these edges are hidden by the lead pattern lines.)

It is to be understood that the two printed patterns depicted in FIG. **1C** do not add appreciatively to the thickness of the clear sheet **10.** The thicknesses of the two printed patterns are shown exaggerated in FIG. **1C.** Similarly, the lead and shading patterns of FIGS. **1A** and **1B** are not intended to be based upon any actual cathedral window. Instead, they are designed simply to show the principles of the invention. Kits made in accordance with my invention are marketed by the Stained Vinyl-Glass Guild, a division of National Teaching Aids, Inc. of Garden City Park, N.Y., the assignee of the application.

FIG. **2A** shows a typical one of the translucent colored plastic sheets **20.** This sheet is combined with a paper backing, shown in FIG. **2B,** on which there are printed patterns **26** which correspond to identical regions (not shown) defined by the dotted guide lines **16** on the clear sheet **10.** These patterns on the paper backing sheet **22** are separated by rough cutting lines **24.** On the paper backing for each particular colored sheet **20,** there is printed each of the patterns **26** which is required for that particular color in the finished stained-glass window. The user cuts through the combined sheet pair **20, 22** with a scissors along the cutting lines **24,** and then carefully cuts out each shaded pattern **26.** A separate colored sheet is provided for each color required for the final window. In a typical kit, a half-dozen or more such sheets may be provided.

To assemble the individual pieces, the clear vinyl sheet **10** is first placed front face down on a flat clear surface. In this position, the dotted guide lines **16** are visible as shown in FIG. **3.** The individual pre-cut colored plastic sections are then placed within the regions defined by the dotted guide lines **16.** Preferably, each colored plastic pattern is handled in this step with its respective paper backing still attached to it. It is the plastic side of the pair that is placed face down against clear sheet **10.** Although the paper backing may be removed from each pre-cut colored plastic section prior to placing it on clear sheet **10,** because of the natural stickiness of the plastic it is easier to handle the individual sections if the backing sheets are left on. In FIG. **3,** a typical pre-cut colored plastic section **20*a*** (with its paper backing being shown partially broken away) is shown (by arrow **28**) as being superimposed upon a similarly shaped region on clear sheet **10** defined by the dotted guide lines **16.** Colored plastic section **20*b*** is shown in place on the front sheet after having its paper backing **22** already detached from it. (Section **20*b*** is shown smaller than it actually is in order that the surrounding guide lines **16** be visible; in actual practice, each paper backing pattern **26** closely matches a corresponding area on sheet **10.**)

After all of the pre-cut colored plastic sections are applied to clear sheet **10,** the paper backings may be removed. In actual practice, it has been found advantageous to place all of the pre-cut colored plastic sections on sheet **10** before any of the paper backings are removed.

In some cases, two and even three different pre-cut sheets may be found to have the same shapes. In such a case, these pieces are placed over one another. After a first piece is placed on the clear sheet **10,** its paper backing must be removed, of course, before the second piece is applied. Two layers of the same color increase the intensity of the color, while two different colors combine to produce a third color.

An important aspect of the invention relates to the fact that adhesives are not necessary. Sheet **10** is made of transparent polished plastic material, e.g., Mylar, although the sheet may be made of glass or any other equally smooth-surfaced clear material.

The colored plastic sheets **20,** which in the illustrative embodiment of the invention have an average thickness of 0.007 inch, are made of highly plasticized vinyl; these sheets very closly duplicate the light-transmitting properties of actual stained-glass. The preferred material is described in copending application Ser. No. 317,748 filed on Dec. 22, 1972 in the names of Frierson et al, and entitled "PLASTIC SHEET HAVING THE APPEARANCE OF STAINED GLASS AND METHOD FOR MAKING SAME." It is a characteristic of the individual sheets of colored vinyl that they stick or adhere to the front and rear layers of the overall sandwich without any adhesives being required.

After all of the pre-cut colored plastic sections have been placed on sheet **10** and their backings have been removed, a transparent backing sheet **30** is placed over them. Preferably, this backing sheet is also made of highly plasticized vinyl material so that it adheres to a glass window or similar smooth surface. Thereafter, the selvage edges of the overall sandwich may be trimmed

along the outer border of the lead pattern or to the desired final size.

The sandwich assembly can actually be secured to a window simply by pressing it firmly in place. The vinyl backing sheet adheres to the face of a clean smooth window for extended periods of time. When secured to a window in this manner, and with light shining through the sandwich, the final product looks like a real stained-glass window. To a great extent, this can be attributed to the particular colored sheets **20** which are used in accordance with my invention and which are described in the above-identified copending application. The colored plastic sheets have the appearance of imperfect glass of uneven cross-section, and they exhibit wavy surfaces with bubble inclusions, lumps, streaks and color variations. These are the types of "imperfections" which impart much of the beauty of real stained glass because of the unique refraction effects which they produce as light rays pass through them.

It will be apparent that in order for the various layers of the finished sandwich to adhere to each other, either the colored plastic sections in the middle layer must be inherently sticky, or the two sheets **10** and **30** must be sticky. This can be achieved in the extrusion process for making the plastic sheets in the first place by using highly plasticized vinyl. Polished sheets of compatible materials not appreciably affected by the migration of the plasticizer from one sheet to another should be employed in conjunction with the sticky sheets.

Of considerable importance is the fact that the finished assembly has the appearance of a real stained-glass window when viewed from either side with light behind it, e.g., when viewed from inside a room with sunlight behind it or when viewed at night from outside a window with artificial light behind it. Even in the latter case, the construction details, guide lines and edges are obscured and the total effect is that of a real stained-glass window.

It is thus apparent that with only the limited number of elements provided in a kit very realistic stained-glass type windows can be produced. The single front sheet exhibits the lead pattern and the shading pattern — without anything else being required of the hobbyist. Moreover, the dotted guide lines which facilitate the placing of the pre-cut colored plastic sections are not visible in the finished product. The colored plastic sheets can be cut into properly shaped sections because of the patterns which are printed on their paper backings. Slight mistakes in the cutting will not detract from the final appearance since the edges are hidden by the printed lead lines. Nothing need be done by the user to insure a stained-glass look since that is an inherent characteristic of the plastic sheets. The only assembly steps which are required are the placing of the pre-cut colored sections on the rear face of the front sheet and the removal of the paper backings following which the clear rear sheet is placed on top of the colored plastic sections. No adhesives are required and the final product can even be "hung" on a window simply by pressing it into place. It is apparent that the kit itself is made of relatively inexpensive materials. Despite the low cost of the kit and the simplicity of assembly, the realistic effect of the final work of art cannot be matched by any prior art technique.

Although the invention has been described with reference to a particular embodiment, it is to be understood that this embodiment is merely illustrative of the application of the principles of the invention. For example, the guide lines may be omitted making the construction more difficult to provide a more challenging craft. Furthermore, the shading and lead patterns, if of the same color, may be printed in a single pass to reduce costs although the final product is less realistic of stained-glass windows. Also the backing sheet **30** may be omitted if desired to reduce costs, but this results in a more fragile product. In fact, the colored sections may be pre-cut and, if non-sticky material is used for the colored sections, the patterns may be printed directly onto the colored sheets, eliminating the backing altogether. Thus it is to be understood that numerous modifications may be made in the illustrative embodiment of the invention and other arrangements may be devised without departing from the spirit and scope of the invention.

What I claim is:

1. A kit for constructing a simulated stained-glass window comprising:

a. a transparent polished sheet having lead lines printed thereon, and

b. a plurality of sheets of translucent colored plastic having light-transmitting characteristics which simulate those of stained-glass, each of said sheets having a backing with printed areas thereon corresponding to respective areas of said transparent polished sheet which are separated by lead lines,

c. said transparent polished sheet including printed guide lines superimposed on said lead lines which are not visible from the front of said sheet but which are visible from the rear thereof during assembly of the kit to define respective areas for placement thereon of sections cut from said translucent colored plastic sheets.

2. A kit in accordance with claim **1** wherein said shading pattern and said guide lines are printed directly on the front face of said transparent polished sheet, and said lead lines are printed thereover to obscure said guide lines when said sheet is viewed from its front.

3. A kit in accordance with claim **1** wherein at least one of said transparent and said plurality of translucent colored sheets are made of plastic which is sufficiently plasticized such that said sheets adhere to each other.

4. A kit for constructing a simulated stained-glass window comprising:

a. a transparent polished sheet having lead lines and a shading pattern printed thereon, and

b. a plurality of sheets of translucent colored plastic having light-transmitting characteristics which simulate those of stained-glass, each of said sheets having a backing with printed areas thereon corresponding to respective areas of said transparent polished sheet which are separated by lead lines,

c. said transparent polished sheet including printed guide lines superimposed on said lead lines which are not visible from the front of said sheet but which are visible from the rear thereof during assembly of the kit to define the respective areas for placement thereon of sections cut from said translucent colored plastic sheets.

5. A kit in accordance with claim **4** wherein said shading pattern and said guide lines are printed directly on the front face of said transparent polished sheet, and

said lead lines are printed thereover to obscure said guide lines when said sheet is viewed from its front.

6. A kit for constructing a simulated stained-glass window comprising:

a. a transparent polished sheet having lead lines and a shading pattern printed thereon,

b. a plurality of sheets of translucent colored plastic having light-transmitting characteristics which simulate those of stained-glass, each of said sheets having a backing with printed areas thereon corresponding to respective areas of said transparent polished sheet which are separated by lead lines, at least one of said transparent and said plurality of translucent colored sheets being made of plastic which is sufficiently plasticized such that said sheets adhere to each other, and

c. a transparent plastic backing for placement over translucent colored plastic sections which are placed on said transparent polished sheet, said backing being sufficiently plasticized so that it self-adheres both to said translucent sections and to a clean, smooth window against which it is placed,

d. said transparent polished sheet further having printed guide lines superimposed on said lead lines which are not visible from the front of said sheet but which are visible from the rear thereof during assembly of the kit to define respective areas for placement thereon of sections cut from said translucent colored plastic sheets.

7. A kit in accordance with claim 1 wherein said shading pattern and said guide lines are printed directly on the front face of said transparent polished sheet, and said lead lines are printed thereover to obscure said guide lines when said sheet is viewed from its front.

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