Sept. 27, 1966 H. C. RATHKE ET AL 3,275,465

DESIGN OUTLINE TRANSFER SHEET

Filed April 24, 1962

Fig. 1

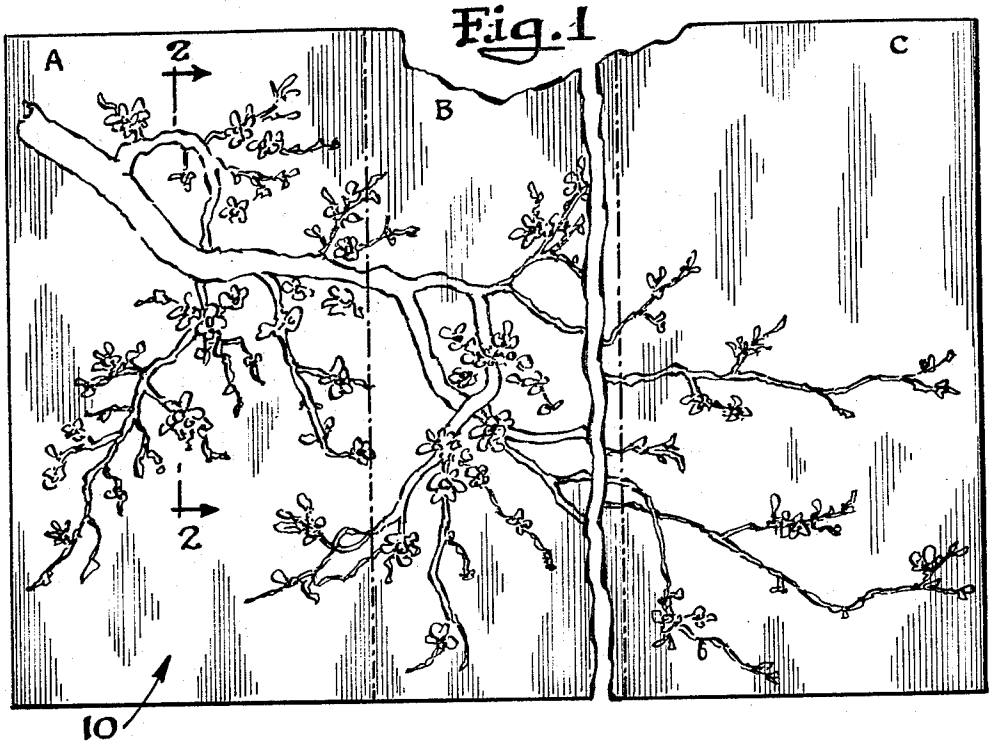


Fig. 3

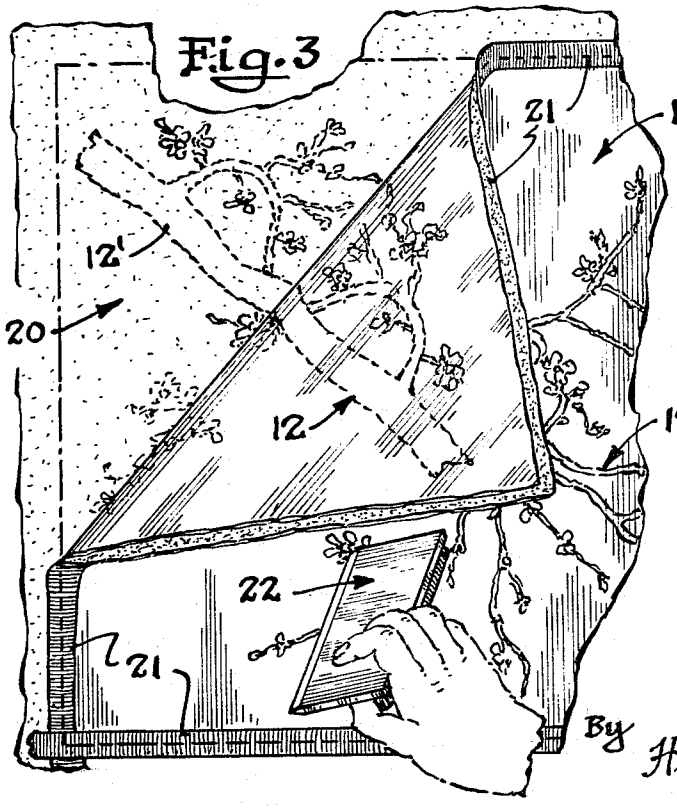
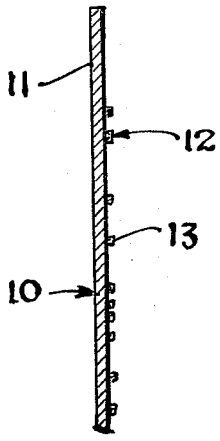


Fig. 2



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DESIGN OUTLINE TRANSFER SHEET

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4 Claims. (Cl. 117—3.1)

The present invention relates generally to a method and means for marking a surface with a suitable design and more particularly to a method of making an outline of an image on a plane surface, such as a wall, by means of a disposable transfer sheet and to the disposable transfer sheet per se.

Picturesque hand painted wall decorations in homes and offices are desired by many individuals but few people have the ability to create original works of art or to produce attractive hand painted wall decorations. In order to assist those who wish to have attractive wall decorations or murals achieve their desire, various "do-it-yourself" mural kits have been devised. Certain of these kits contain a sheet having printed on one side thereof an outline of the image or design to be applied to a wall with the image being transferred to the wall by tracing the outline of the image while the sheet is in contact with the wall to bring the inner surface of the sheet having a carbon paper-like coating thereon into intimate contact with the wall. The task of tracing a mural design, particularly those having considerable detail, is often quite laborious and tedious. Consequently, the use of such aides has heretofore been quite limited.

It is therefore an object of the present invention to provide an inexpensive and improved method and means for applying a decorative design to a plane surface.

It is another object of the present invention to provide an improved disposable transfer sheet for applying an outline of a decorative design to a plane surface.

A further object of the present invention is to provide an improved transfer sheet which greatly simplifies the transfer of an intricate design to a wall surface.

It is a still further object of the present invention to provide an improved method and means for applying a design to a plane by means of a transfer sheet which does not require tracing the lines of the design.

It is also an object of the present invention to provide an improved marking composition for use on a transfer sheet for applying a design to a painted surface which does not effect color changes in said painted surface and which is capable of being readily removed from said painted surface without leaving a permanent stain thereon.

Other objects of the present invention will be apparent from the detailed description of the invention and claims to follow when read in conjunction with the accompanying drawing herein:

FIGURE 1 is a plan view of a transfer sheet of the present invention having a decorative design applied to one surface thereof;

FIGURE 2 is a vertical sectional view on a greatly enlarged scale of the transfer sheet taken along the line 2—2 of FIGURE 1; and

FIGURE 3 is an elevational view illustrating the preferred means of applying the outline of a mural design to a wall surface.

The objects of the present invention are readily achieved by using a specially devised transfer sheet having a design

imprinted on one side thereof and transferring the design onto a plane surface to be decorated by applying pressure to the side of said transfer sheet opposite to the side having the design imprinted thereon. More particularly, the transfer sheet of the present invention is comprised of a flexible sheet-like backing member having a special marking composition applied on one side thereof in the form of the desired design or image. The surface of the backing member on which the special marking composition is applied has preferably a relatively smooth surface. In the preferred form the backing member comprises a sheet of smooth calendered paper stock which may, if desired, be coated with a barrier coating to reduce the absorption or diffusion therein of the marking composition. For example, a thin barrier coating of wax, silicate or gelatin can be applied to the surface of the transfer sheet on which the marking composition is applied. It should be understood, however, that any relatively flexible natural fiber or synthetic sheet material having sufficient strength to permit suspending from an edge and application of pressure thereto by means of a plastic squeegee, and having little tendency to absorb a petroleum base marking composition can be used as a backing member in the present invention.

The marking composition which is used to form the outline and other details of the design on the backing member is an important feature of the present invention. And, in contrast with the properties of the marking composition used in the presently available tracing papers and the like, the marking composition of the present invention is completely inert to paints and lacquers used as finish coatings on walls or the like, and is inert to all the usual paint pigments which might be used in painting the design. Thus, the marking composition of the present invention does not bleed through the paints which might be used in painting the mural design nor does the marking composition react with the paint on a wall surface to form a permanent stain or effect a change in the color of the wall paint. A further advantage of the present marking composition is the ability to remove the marking composition from the wall surface readily by conventional cleaning methods and without leaving a permanent stain thereon.

In order to provide the marking composition with the foregoing properties a composition is made by combining a petroleum jelly with an extender, such as a paste-like polyethylene glycol compound, and a finely divided absorbent for oil, such as zinc stearate or a low melting point (350° F. or below) Acrowax®, are mixed to form a non-drying paste-like vehicle for the pigment portion of the marking composition. The presence of the polyethylene glycol (Carbowax®) in the marking composition, in addition to providing improved silk screening properties, imparts to the composition the ability to be transferred on to all types of surfaces, including painted and unpainted wall surfaces, metal surfaces, plaster surfaces, wood surfaces, and the like.

A light hydrocarbon thinner, such as "SC 100," or the like diluent is used to adjust the consistency of the marking composition to a sufficiently thin consistency to permit application of the design on to the backing member by a conventional silk screening process. The thinner of the foregoing type evaporates substantially completely after the marking composition has been silk screened on to the backing member, leaving the nondrying paste-like

marking composition on the backing member so that the marking composition remains tacky without remoistening for an indefinite period to permit transfer of the design to the surface to be decorated merely by applying pressure to the surface of the backing member by a plastic squeegee or the like.

The pigments which can be employed in the paste-like vehicle which together form the preferred marking composition of the present invention are metallic pigments which are capable of passing the standard-chlorinate test used widely in the paint industry for determining the stability and suitability of pigments. Use of organic dye type pigments is specifically avoided in the present invention. It has been found that a dark blue pigment, such as iron-blue cobalt or phtalocyanine blue pigments "Solfast Blue" (Sherman-Williams Company), or other insoluble pigments such as the "Monastral" (E. I. du Pont de Nemours & Co.) pigments are particularly well suited for pigmenting the marking composition of the present invention for use in making mural designs to be subsequently painted, since these pigments do not bleed through paint, do not cause color changes in the conventional finishing paints applied thereover or to the wall surface so decorated, and are readily visible when applied to most wall or other surfaces to be decorated. The decorative design can, of course, be made in several colors, in which event the marking composition can be pigmented by using other "Monastral" pigments for example, besides blue in order to provide the desired color combination.

The marking composition of the present invention can be applied to a surface of the backing member in any desired decorative design or configuration and by any suitable means. Preferably, however, the marking composition is applied by means of a conventional silk screening process. After the design is applied to the backing member a slip sheet is preferably placed over the design to prevent smudging or smearing of the marking composition. As the design is clearly visible through the backing member, there is no problem of positioning the design on a wall surface or the like.

The present invention will be clearly understood from the following description of a typical example thereof when read in connection with the accompanying drawing showing a transfer sheet **10** comprising a backing member **11** formed of uncoated paper bag stock calendered to provide a thin flexible sheet having a smooth surface. A decorative design **12** is applied on one side of the backing member **11** by silk screening thereon in a conventional manner the following marking composition:

	Parts by volume
White petroleum jelly	12
Polyethylene glycol, Carbowax #4000	3
Atomized zinc stearate	3
Iron-blue cobalt pigment	1
Light hydrocarbon solvent, SC 100	1

The above ingredients are blended to form a smooth uniform paste-like marking composition **13** and the fluidity thereof is adjusted by use of additional hydrocarbon solvent, as desired, to obtain the necessary properties for silk screening.

In applying the decorative design **12** to a plane surface, such as a wall **20**, the transfer sheet **10** is placed in contact with the wall **20** by suspending the sheet **10** from its upper edge and securing the edges by means of strips and sections of an adhesive tape **21** with the side of the sheet **10** having the marking composition **13** facing the surface of the wall **20**. The sheet **10** is placed in the desired position by adjusting the strips of adhesive tape **21** on the wall **20**. Pressure is then applied to the outer surface of the sheet **10** over the entire area of the design **12**, preferably by means of a plastic squeegee **22** which has a relatively thin semirigid edge portion. The pressure applied to the outer surface of the transfer sheet **10** brings the marking composition **13** into intimate contact with the surface of the wall **20**, and the marking composition which is in a tacky, undried condition is transferred to the surface of the wall **20** and forms thereon the design **12'** which is an exact reproduction of the design **12**. After the design **12** has been transferred to the wall **20**, the transfer sheet **10** is removed from the wall and can be used on another wall surface or area, if desired.

In certain instances the design **12'** may be considered sufficiently attractive and decorative without further alteration. However, in most instances it will be considered desirable to add to the initial attractiveness of the design **12'** by applying various colored paints to portions of the design and thereby produce a mural design. When painting the mural design any of the standard types of wall paint can be used. It is preferable, however, to use a paint having a heavy body or consistency. Paints which exhibit thixotropic properties are particularly good for painting the mural design, and among such paints which are well suited for painting the mural designs are the alkyd resin flat oil paints.

To facilitate painting the designs **12'**, various areas of the design **12** of the transfer sheet **10** can be provided with special indicia cross-hatching or certain lines of the design can be provided in a particular color to indicate that a particular color is to be used when painting a particular area of the design. Having the color coding directly embodied in the design **12'** eliminates the necessity of referring to a separate coded sheet when painting the design, and thereby greatly facilitates the painting of the design in an attractive and artistic manner.

It will be evident from the foregoing description that the present invention makes it possible to transfer designs having intricate details to a plain surface without laboriously tracing each line or area of the design and thereby makes possible the application of highly decorative designs relatively rapidly and in a convenient manner. It will also be understood that by making a design on two or more transfer sheets which can be placed in matching alignment, a large design can be transferred to a wall surface, as indicated by the designation A, B and C in FIGURE 1.

We claim:

1. A design outline transfer sheet which comprises essentially; a backing member consisting of a thin flexible sheet relatively non-absorbant to oils having relatively smooth surfaces and being sufficiently strong to be secured to a plane surface by an edge thereof and adapted to be pressed into intimate contact with said plane surface without tearing, said sheet having a tacky non-drying paste-like marking composition applied to one of said smooth surfaces in outline form as a decorative design, said marking composition comprising a major proportion of a petroleum jelly as a base mixed with a minor proportion of a waxy solid dispersed throughout said petroleum jelly as an extender and a finely divided powdered oil-absorbant material as an absorbent for said petroleum jelly and having dispersed therethrough as a coloring agent a metal containing pigment which passes a standard sulphur-chlorinate pigment stability test and is free of organic dyes, a portion of said non-drying paste-like marking composition being transferable to said plane surface by the application of pressure to the surface of said sheet opposite said smooth surface having the marking composition thereon, and said backing member being removable from said plane surface as a unit for application of said design to another plane surface.

2. A nondrying marking composition for use on a transfer sheet comprising essentially; a major proportion of petroleum jelly as a base mixed with a minor proportion of a waxy solid dispersed throughout said petroleum jelly as an extender and a finely divided powdered oil-

absorbant material as an absorbent for said petroleum jelly, and having disbursed therethrough as a coloring agent a metal-containing pigment which passes a standard sulphur-chlorinate pigment stability test and which is free of organic dyes, said marking composition being substantially non-drying with a paste-like consistency and which remains indefinitely in an adhesive condition without application of a remoistenable adhesive coating thereover; whereby said marking composition is readily transferable from a transfer sheet to a wall surface when placed in intimate contact therewith.

3. A transfer sheet as in claim **1**, wherein said waxy solid is a polyethylene glycol.

4. A marking composition as in claim **2**, wherein said waxy solid is a polyethylene glycol.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,275,465 September 27, 1966

Harry Charles Rathke et al.

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, line 47, after "sheet" insert -- having thereon a non-drying paste-like marking composition --; line 49, after "be" insert -- supportively --; line 53, after "to" insert -- only --; line 54, strike out "in outline form"; line 62, after "agent" insert -- a minor proportion --; same column 4, line 71, after "nondrying" insert -- paste-like --.

Signed and sealed this 29th day of August 1967.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents