

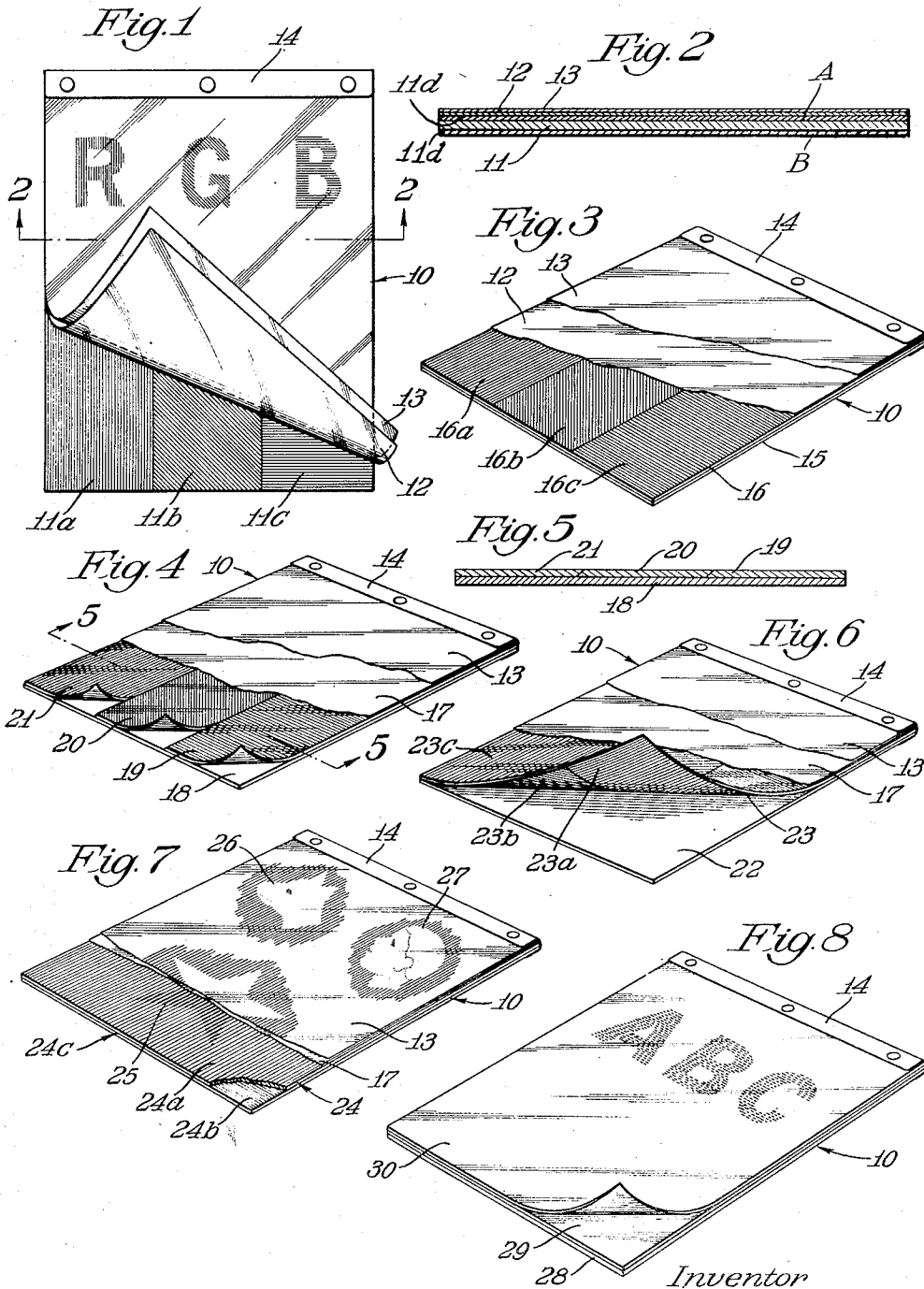
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WRITING PAD FOR TEMPORARY NOTATIONS

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WRITING PAD FOR TEMPORARY NOTATIONS

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6 Claims. (Cl. 35—66)

This application is a continuation in part of my co-pending application Serial No. 44,193, filed August 13, 1948, entitled "Writing Pads for Temporary Notations," now Patent No. 2,596,890, issued May 13, 1952.

This invention relates generally to writing pads conventionally comprising a black base containing a layer of dark, waxy material or having some other like plastic impressionable surface, and a flexible semi-opaque impression sheet removably superimposed thereover, which normally masks the black base, but which, upon the application of writing pressure, is adapted to releasably adhere to the wax coated base and produce a dark line. If a very thin, diaphanous, fragile impression sheet is used, it has been found desirable to provide a thicker, more wear-resistant transparent sheet above the impression sheet, which latter sheet receives the actual writing pressure. After the written material has served its purpose, it is merely necessary to separate the impression sheet from the base as by lifting or by other means known to the art and the written matter disappears from view, thus making the pad available for other notations without the need for using erasers.

Although the present invention is particularly described as applied to writing pads of this character, it will readily be understood from the following description that in its broader scope it will be useful in many other adaptations.

It is an important object of this invention to improve bases of pads of this type in order to make it possible for artists and others to draw or otherwise produce pictures in a variety of colors on writing pads of this character, which colored pictures may be retained as long as desired, and then completely erased by lifting the impression sheet from the bases herein disclosed, without any of the coloring material adhering to the impression sheet.

It is another important object of this invention to provide pads of this type during the use of which artists and others may easily change bases at will, and, by changing bases, may change the color combinations in which drawing and writing may be executed, as well as to change the automatically produced designs hereinafter disclosed.

Still another important object of certain forms of this invention is to provide bases for pads of this type which function to produce greatly improved results when compared with results heretofore obtainable with the use of wax-coated bases, yet which bases of this invention contain no wax or other like impressionable material.

Yet another object of this invention is to provide pads of this type which will have great utility in a number of applications in conjunction with other known design producing devices in order that results may be obtained which have heretofore been impossible of attainment through the normal use of such devices.

Another object of one form of this invention is to provide pads of this type which do not require any color on the base, or the customary semi-opaque impression sheet.

Writing pads of the type which are erased by the separation of an impression sheet from a wax-coated base, since their introduction previous to 1925, have been provided with a black cardboard base over which has been applied a thin layer of dark waxy material or some like impressionable substance. The production of visible colors on the impression sheets of these pads by incorporating brilliant colors into the thin layer of waxy material covering the base is not feasible, since the incorporation of brilliant colors into the wax coating on the

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base makes the base function in the same manner as a brilliantly colored wax crayon upon the application of a stylus or similar writing instrument to the impression sheet or writing sheet, since some of the wax from the base adheres to the side of the impression sheet pressed thereagainst during writing thus causing said sheet to be permanently marked.

I have found that enamels, paints, inks, or any other coloring materials of a type which will permanently adhere to cardboard or other fairly rigid material and, in addition, will not commingle with wax at any time, may be applied directly to the base and allowed to dry, after which a thin layer of substantially transparent wax may be applied over such colors to produce bases by means of which brilliant color effects in a variety of colors and shades may be produced on the impression sheet upon the application of a stylus or similar writing instrument, which color effects may be completely erased upon removal of the impression sheet from the base without any of the coloring material adhering to said impression sheet. In this manner, it is possible to use a plurality of bases, each with different color arrangements below the transparent wax coating, with any given pad below the same impression sheet.

As hereinafter explained, it has also been found that either permanent or exchangeable bases according to this invention may have the permanently adhering colors affixed in any desired manner to one side of a transparent flexible fairly thin plastic sheet such as celluloid or cellophane, while the wax coating on such bases may be applied to the reverse side of such plastic sheet, that is, the side which in use will contact the impression sheet, or to both sides.

While I have illustrated loose-leaf pads throughout the various figures of the drawings to show the easy achievement of the objects and advantages outlined, the invention is not limited to any particular types of loose-leaf binders, and in addition it will of course be understood that the pads may be permanently bound if desired.

I have found that greatly improved bases may be produced for pads of this character through the use of tough, flexible, resilient, press polished molded plastic sheets or films for this purpose. Such sheets may be produced in various thicknesses and in a variety of colors, as well as in black and white opaque sheets, and in transparent sheets. The press polish on the sheets referred to is permanently applied thereto by a so-called "planishing" operation. This consists, briefly, in first calendaring the sheets, which should contain sufficient plasticizers to render them flexible and somewhat resilient, and then press polishing them between highly polished steel planishing plates on a hydraulic press with the application of heat and pressure. The resulting sheet has a very brilliant permanent polish on its surfaces. Because of their resiliency, flexibility, and polish, such press polished sheets exhibit a rather pronounced cohesive attraction, or what might be called a molecular attraction, for glossy surfaces such as glass or rigid plastics such as "Lucite," "Polystyrene," etc. I have found that such press polished sheets may be used to excellent advantage in writing pads of the type herein referred to, if they are used as the bases for such pads, and provided that the diaphanously thin semi-opaque impression sheet for use in contact therewith contains a sprayed coating of finely divided particles which when dry presents a fairly highly polished surface in contact with the exposed surface of the press polished sheet serving as the base. Excellent results are obtained if such press polished sheets are used as bases and the semi-opaque impression sheet thereabove is made as disclosed in the Jens A. Paasche Patent 2,074,855. Impression sheets according to that patent, briefly, are made by spraying a diaphanously thin clear transparent plastic sheet with a milky-appearing solution containing, among other ingredients, a white pigment and a diluent which is a solvent of the plastic sheet itself. When the impression sheet has been so sprayed, the result is a thin and even coat of very finely divided particles and, since the solution is diluted with a solvent of the sheet material, the particles thereof are relatively moist as they impinge against the plastic sheet and the surface of the plastic sheet will be superficially attacked

by the excess solvent in each moist particle with the result that the particles, in effect, become fused to the sheet. An impression sheet produced in this way has a smooth gray semi-opaque glossy non-tacky surface on the coated side or sides. It is believed that a spray coated sheet produced in this or some similar manner coats with the press-polished base sheet in the following manner. Before the application of the stylus to the exposed face of the impression sheet or to the writing sheet, the finely divided particles on its under surface serve to hold the impression sheet slightly offset from the polished surface of the press-polished base. The fact that the surface of the impression sheet in contact with the polished base is not particularly dense also aids to bring about this result. After the application of the stylus to the impression sheet, even though the surface of the base is non-tacky, the surfaces of the press-polished base and the impression sheet are brought into close pressure surface to surface contact and adhere to one another in proportion to the pressure applied due to their cohesive affinity one for the other. This cohesion remains intact until the impression sheet is raised or otherwise removed from close contact with the base. Clearly, other types of spray coated sheets or other semi-opaque sheets produced by various known techniques which sheets will serve as impression sheets in pads of this type may be used with good results provided they are flexible and comparatively thin and that the requisite polished or glossy non-tacky surface is presented to the press-polished sheet. If very thin press polished sheets are used as the base, it will usually be desirable that a backing be provided therebelow of cardboard or other rigid material over which has been placed a varnish, lacquer, or similar coating which, when dry, will present a dense, highly polished smooth surface for which the press-polished sheet will have a stronger cohesive affinity than it has for the polished surface of the impression sheet the surface of which is not so dense, since otherwise after the application of pressure the thin press polished sheet will adhere to the impression sheet and be lifted off the cardboard when the impression sheet is lifted. However, if thicker press polished sheets, in the nature of .015 to .02 inch thickness, are used as the base, their weight will be sufficient to enable them to remain in place even though the surface on which they are mounted is not dense and highly polished, but it should be smooth.

The molded plastic flexible press polished sheets herein referred to are manufactured and/or fabricated by a number of companies such as, for example, the Plastic Laminating Corporation, Vauxhall, New Jersey. These sheets will be referred to hereinafter as press polished flexible sheets for convenience. If the sheets are colored, it is to be understood that the coloring is a part of the composition of the sheet itself, and cannot be rubbed off, or smeared. In addition, these sheets, upon becoming smudged from sources outside of the pads of this invention containing no wax, can easily be removed and cleaned by the application of a clean damp cloth containing water. The press polished flexible sheets herein outlined present a very smooth, highly polished surface which in no way resembles a wax or other impressionable surface such as has heretofore been deemed essential to the operation of writing pads of this type. They likewise do not require any non-drying adhesive coating thereon, the desired results being achieved solely by their characteristics as described, and their cohesive affinity for a polished impression sheet thereabove upon the application of very slight pressure such as in writing.

Wherever colors are referred to throughout this specification in connection with the bases of this invention, whether of the wax-coated type or the press polished type, I desire it to be understood that rich, vivid or vibrant colors are the most effective and most desirable, since with the use of such rich, vibrant colors, the best results are obtained upon application of the stylus to the writing surface. In addition, intermediate and darker colors are also desirable, and, with regard to press-polished sheets, black. While red, blue, and green have been illustrated throughout most of the drawings, I wish it to be understood that any color or shade of a rich, vibrant nature, an intermediate nature, or a darker nature may be used in this invention. I have found that very light tints, such as light yellow, light pink, light blue tints, etc., are not too effective when used beneath a semi-opaque impression sheet, since, while the base and

the impression sheet will cooperate in the same manner as above outlined, the semi-opaque impression sheet will partly hide any color intensification which takes place in the use of such light tints. In other words, as the intensity of any color approaches white, it becomes less and less effective. In Figure 8 hereinafter described I have shown a pad wherein a white press-polished sheet serves as a base and a transparent fairly thick press-polished sheet serves as the writing surface. The results obtained in that modification are believed to be due to the fact that, although visibly the fairly thick transparent press-polished sheet appears to be clear and transparent, it nevertheless contains a very slight normally invisible gray cast evenly dispersed throughout its composition which can only be noticed by holding the sheet between the eye and a source of light, whereupon the intensity of the light will be only slightly decreased. This slight gray cast may be either a part of the composition of the sheet itself or may be caused by the press-polishing or other operation used in the manufacture thereof, or may be partly caused by both. The gray lines produced in the use of this modification of the invention are believed to be caused by the comparatively great cohesive attraction of the press polished sheets for one another upon application of writing pressure, thus rendering the gray cast clearly visible at the points of greatest adhesion while the points in lying contact remain white in appearance. The comparative width of the gray lines produced are directly dependent upon the thickness of the transparent press-polished sheet. Therefore, very thin transparent press-polished sheets will produce practically no visible lines. Consequently, for use in Figure 8, comparatively thick transparent press-polished sheets are desirable, while, if such press-polished sheets are used in Figures 6 and 7, very thin sheets are desirable as will be hereinafter more fully explained.

I have also found that plasticized resin plastic cast films, for example, those known by the trade-mark "Vinylite" may be used in some cases in place of the herein described press-polished sheets, or that coatings of the same characteristics may also be used. The resin plastic cast films are very flexible, somewhat resilient, and, upon the application of slight pressure as by pressing the finger thereagainst, they exhibit a slight surface "tack" upon application of pressure and a cohesive attraction for polished surfaces which renders them useful to be substituted for the press-polished sheets. They are presently made in transparent form in thicknesses of .001 to .005 inch, and I have found that the type specifically designated by their manufacturer as "VB 1930 Natural" containing 30% plasticizers has a surface which in effect closely approximates that of a press-polished sheet. It will be understood that the percentages of plasticizers may be varied depending upon the type of resin sheet or coating used. These films may have any desired colors permanently affixed to one side thereof, and the other side, which contacts the impression sheet during use of the pad, will function the same as a wax coating or a press-polished sheet to render visible the color on the under side thereof after application of writing pressure to the writing sheet thereabove. Coatings of the type above referred to may also be applied to colored surfaces to provide bases for color production and erasure.

The multi-colored bases of this invention, particularly those in which the press-polished or resin plastic cast films are used as such bases, can very effectively be used to produce designs in a number of ways. If rubber stamp pictures of various sorts, including animal and circus pictures which are now available, are lightly pressed onto either the writing sheet, or onto the impression sheet after the writing sheet is lifted therefrom, very effective color reproductions may be obtained in a variety of colors, it being understood that no ink need be used on such rubber stamps to produce the desired effects. Clearer and finer line productions may be obtained by pressing the stamp on the relatively thinner impression sheet, and, since no wear occurs in such use of the rubber images, a multitude of designs may be produced and erased on the same impression sheet without any ill effects appearing thereon. Also, in the use of the press-polished sheets and the resin plastic cast films, it has been found that no part of the design, whether stamped, drawn, or traced, will be visible on either the press-polished sheet, the plastic cast films, or the impression sheet after they are separated and closely examined.

Now if wax bases are used, considerably greater pressure beyond the capability of the average user, must be exerted in order to bring rubber stamp images into view. In addition, it is possible to press the stamps too far into the wax, thus deleteriously affecting the otherwise smooth coating thereon.

The writing pads containing the various multi-colored bases herein illustrated and described may likewise be used very advantageously in connection with other known devices which manually or mechanically produce designs on white paper. If the pads of this invention as illustrated in Figures 1 through 8 are substituted for the white paper, the designs can be rendered visible in any desired color combination, and completely erased, the coloring on the bases being arranged in predetermined manner to secure the results desired.

The press-polished bases of this invention are also ideally suited for the application of designs directly and permanently to the smooth, highly polished surfaces thereof by means such as printing, stenciling, and so forth, to produce either "positive" or "negative" images on the impression sheet upon application of the stylus to the writing surface of the pad. The term "positive" image as used herein means the type of an image which results upon application of a stylus to the writing surface of the pad as in writing or drawing. That is, at any point on the surface of the pad where pressure is applied, a black or colored line is produced, while the surrounding portions of the surface of the pad remain white. The term "negative" image as used herein means the exact reverse of the effect which would be produced in writing on the pad with a stylus. That is, the same effect as would be produced upon application of white chalk to a blackboard, whereupon the lines drawn with the chalk would be white, while the balance of the blackboard would remain black.

Now, for example, in the case of an image printed directly onto the press-polished sheet for use beneath an impression sheet, at all points where the ink appears on the press-polished sheet, contact between the cohesively attracted surfaces of the press-polished sheet and the overlying semi-opaque impression sheet is prevented. Therefore the inked portions of the design on the press-polished sheet will not be visible on the impression sheet thereabove upon application of the stylus, while the portions of the press-polished sheet which contain no ink will be visible on the impression sheet thereabove upon application of the stylus. In other words, the same rubber stamp containing a line drawing which, if applied in a dry condition to the writing surface of the pad, would result in a "positive" image on the impression sheet as above defined, would result in a "negative" image on the impression sheet as above defined if said rubber stamp were inked and pressed against the press-polished sheet, the ink permitted to dry, and the stylus were applied to a superimposed semi-opaque impression sheet, or to the transparent writing sheet of the pad.

The above result is also accomplished in the case of an image produced by temporarily placing a Celluloid stencil against the press-polished sheet and spraying the parts exposed by the cut out portions of the stencil. When the sprayed parts have dried, the stencil is removed and the sprayed parts will thereafter remain blank, while the unsprayed parts will reproduce visibly on the impression sheet upon application of a stylus thereto.

There are available on the market transparent cellophane sheets containing light tints of various colors. It will be clear that various sized sheets of this type, including sheets of a size which will completely cover the writing sheet of the pads of this invention or which can be used in place of the writing sheet in this invention, or below the writing sheet, can be used above the various colored bases herein set forth, and, upon application of the stylus to the writing surface, a large variety of combined changing color effects may be obtained by alternately rendering visible and invisible the colors on the base therebelow.

Either the thinnest possible transparent press-polished sheets, or the resin cast plastic films of intermediate thickness may be used in folded condition as bases for this invention, with the colors of various types being applied to the parts of the sheets which will contact one another upon folding. Such colors, of course, are permitted to dry thoroughly before the sheets are folded. Since the colors are on the interior portions of the

folded sheet, the exterior surfaces thereof will have the requisite surface characteristics to enable either side of the sheet to function as the base for the pads of this invention.

Other and further important objects and advantages of this invention will readily become apparent from the following description when considered in conjunction with the accompanying drawings which, by way of preferred examples only, illustrate several embodiments of the invention.

On the drawings:

Figure 1 is a top plan view of a writing pad of this invention illustrating one side of a rigid base containing three separately colored sections with the coloring material permanently adhering thereto, and a superimposed layer of wax or other fairly transparent impressionable material, and showing the visible effects obtained in each colored section upon application of a stylus to the superimposed writing surface.

Figure 2 is an enlarged view taken along line 2—2 of Fig. 1 in the direction of the arrows, illustrating in detail the superimposed relationship of the parts of the pad of Fig. 1.

Figure 3 is a perspective view of a writing pad of this invention with a cardboard backing and a superimposed comparatively thin flexible transparent sheet such as Celluloid or the like containing three separately colored sections affixed to the under surface thereof and a layer of wax or like material applied to the visible side thereof which will contact the impression sheet when the pad is being used, with parts of the impression sheet and writing sheet removed.

Figure 4 is a perspective view of a pad comprising a base composed of three differently colored juxtaposed sheets of opaque flexible press-polished plastic sheeting of the type herein described, illustrating how the sheets may be lifted off the backing if desired, with parts of the impression sheet and writing sheet removed to better illustrate the positioning of the parts of the pad.

Figure 5 is an enlarged view taken along line 5—5 of Figure 4 in the direction of the arrows showing the mounting of the sheets of Fig. 4 on the base and illustrating that the abutting edges of the sheets may be cut at an angle to the vertical.

Figure 6 is a perspective view of a writing pad having as its base a very thin transparent sheet of flexible press-polished sheeting, or resin cast plastic film, which is colored on its under face to present three separately colored sections.

Figure 7 is a perspective view of a writing pad having as its base a very thin folded transparent sheet of either press-polished flexible sheeting or resin cast plastic film, said film having its interior abutting surfaces when folded respectively colored red and blue, which colors are permitted to dry thoroughly before folding, and are then permanently united by any suitable adhesive, and illustrating designs affixed to the exposed side of the red section which contacts the impression sheet during the use of the base in the position shown.

Figure 8 is a perspective view of a writing pad comprising a fairly thick transparent writing sheet composed of flexible press-polished material containing a very slight gray cast, and a white opaque base composed of the same material and showing the gray reproductions obtained when a writing instrument is applied to the exposed surface of the transparent press-polished sheet which comprises the writing surface of the pad.

As shown on the drawings:

Reference numeral 10 in the various views designates generally writing pads of this invention. In Figures 1 and 2, which may be considered conjointly, numeral 11 designates a rigid cardboard base with three colored sections 11a, 11b, and 11c on the side illustrated in Figure 1 permanently affixed thereto as with enamel, paint, or ink, the coloring material used being of a type which will not commingle with wax at any time. Numeral 12 indicates a semi-opaque impression sheet of a type which is generally used in pads of this type, 13 indicates a transparent sheet of celluloid or other wear-resisting material serving as the writing surface. If sheet 12 has wear-resisting qualities, it is clear that sheet 13 may be eliminated and that the writing may be done on the exposed sheet 12. Numeral 14 indicates a loose-leaf binding of well known type, this binding being only for illustrative purposes, as any loose-leaf binding may be used in this invention. As

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shown in Figure 2, a wax or similar layer of substantially transparent impressionable material 11d is superimposed on the cardboard 11 over the permanently colored sections thereof. Removably superimposed over this layer is the semiopaque impression sheet 12. As illustrated in Fig. 1, the side A of cardboard 11 is exposed, containing three sections colored red, green, and blue, respectively. As shown in Fig. 2, side B of cardboard 11 also contains a transparent wax coating, and below this wax coating other and different colors (not shown) may be permanently applied to side B of cardboard 11 in any desired predetermined manner. With the loose-leaf binding being provided, the base can be easily removed and inverted so that either side thereof, A, or B, may be used. Now as the stylus is applied over any of the colors permanently affixed to cardboard 11, the impression sheet 12 will be placed in adherent pressure contact with the transparent paraffin wax or similar coating on the cardboard at the points where the stylus is applied, and, as long as this pressure contact is maintained, the color below the line or area of impressure will be rendered visible. When the impression sheet 12 is lifted from the wax coating 11d, even though some of the wax itself will adhere to the under surface of the impression sheet, none of the coloring will adhere to the impression sheet. Therefore the pads of this invention may be used for color production and color erasure indefinitely without the necessity for a color medium of any kind being used in conjunction therewith, and a single stroke of a stylus across the width of sheet 13 of the pad of Figures 1 and 2 over side A of base 11 will result in three separate colors being produced. Also, any desired number of bases may be alternatively positioned beneath a single impression sheet in the same pad, and a variety of colors may be produced as desired.

Figure 3 illustrates a writing pad comprising a cardboard backing 15 over which is firmly but releasably mounted a comparatively thin, flexible, clear transparent sheet 16 such as celluloid, or the like, to the under surface of which are applied colors to provide sections 16a, 16b, 16c, the colors being of a type which will permanently adhere to sheet 16 and will not commingle with wax at any time. To both sides of sheet 16 after it is colored and the colors dry, is applied a thin, smooth layer of transparent wax such as 11d, Figure 2. Because of the thinness of the sheet 16, its flexibility and transparency, the base 16 will serve the same function in the pad illustrated in Figure 3 as does side A of the cardboard 11 of Figure 1, since the wax coating on the top surface of sheet 16 will adhere to the impression sheet 12 thereabove to bring through onto the impression sheet the colors on the under surface thereof. The wax coating on the under surface of sheet 16 which contacts cardboard backing 15 serves to firmly hold sheet 16 in place during use, yet it may be removed after use if desired to be replaced by another sheet of like character containing different color arrangements. The bases of Figures 1 to 3, may, quite clearly, be used interchangeably to secure many color arrangements, and clearly the colors on the various bases may, themselves, form various designs.

Figures 4 and 5 may be considered conjointly. Figure 4 shows a writing pad containing transparent writing surface sheet 13, and a diaphanously thin impression sheet 17 which is semi-opaque and preferably produced by spray coating on the side which will contact the base, and this surface of sheet 17 should have a high polish. It need not be as dense, however, as a glass surface, the type of impression sheet disclosed in the Paasche Patent 2,074,855 being very desirable as hereinabove set forth. It will be understood that other types of impression sheets may be used, provided they present a thin, flexible, glossy, non-tacky surface for contacting the base. Such impression sheets include, by preference, transparent plastic sheets in the nature of cellulose acetate sheets which are rendered substantially semi-opaque by having an opaquing pigment the desired amount of which is incorporated in the composition of the sheet itself; or by coating, printing, sand-blasting, or applying a matte finish to one side thereof. In all cases, however, at least one side of the sheet must have a glossy or polished surface to be placed in contact with the base sheets or coatings. Beneath sheet 17 are placed three glossy sheets 19, 20, and 21, which are composed of flexible resilient press-polished molded plastic material produced by planishing operations comprising calendering the material and permanently affixing a polish

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to the sides thereof in a hydraulic press, said sheets being colored blue, green, and red respectively and being adapted to be brought into adherent pressure contact with sheet 17. These sheets are firmly yet releasably mounted on backing 18. If sheets 19, 20, and 21 are fairly thick, in the nature of .015 or .02 inch, the backing 18 may be cardboard which should be smooth. If the sheets 19, 20, and 21 are very thin, the backing 18 may be rigid cardboard, but it should have a coating of shellac, varnish, or other like material which when dried will present a highly polished, dense surface which will cause sheets 19, 20, and 21 to firmly adhere thereto. The cohesive attraction of sheets 19, 20, and 21, in other words, should be greater for backing 18 than it is for impression sheet 17 if sheets 19, 20, and 21 are very thin, otherwise they will be lifted with the impression sheet 17 when that sheet is lifted. Figure 5 is an enlarged view on line 5-5 of Fig. 4 in the direction of the arrows, and shows that the abutting edges of sheets 19, 20, and 21 may be cut at an angle to the vertical, to permit smoother movement of the stylus over the abutting edges.

Figure 6 shows a pad having a base composed of a very thin transparent press-polished flexible sheet 23, or preferably a plastic cast film, which is comparatively thin, to the under surface of which are applied three separate colors to provide sections 23a, 23b, and 23c colored blue, green, and red respectively. Backing 22 should be a rigid highly polished plastic, or it may be rigid cardboard containing a coating of varnish, lacquer, or shellac which is dried to present a smooth surface to which sheet 23 will firmly but releasably adhere.

Figure 7 shows a very thin foldable transparent press polished flexible plastic sheet 24, or preferably a plastic cast film, serving as the base. Sheet 24 is equal in width to and twice the length of the writing surface of the pad when unfolded. As illustrated, the sheet has been colored, folded, the parts adhesively joined at 24c, and inserted in the pad. This sheet is prepared as follows: One face of the sheet is coated with opaque coloring such as enamel which will permanently adhere thereto, half of this face, corresponding to the length and width of the pad, being colored red, and the other half of this face being colored blue. The colors are then permitted to dry, whereupon the colored surfaces are brought together by folding and permanently adhesively united at 24c. This procedure results in a sheet which can be used to produce pictures in red on one side, and, by inverting the base, the sheet can be used to produce pictures in blue on the opposite side, since each exposed side of the folded sheet has the desired press-polished or similar surface which will bring up the colors into visibility on the impression sheet 17 upon application of the stylus to sheet 13. Clearly, each half of one face of sheet 24 could have any number of colors applied thereto in any desired relation. As illustrated in Figure 7, the blue half 24b of sheet 24, designating a permanently affixed coating of paint or enamel, is partly visible due to the fact that part of half 24a is torn away. Numeral 25 indicates the design of a star which is coated directly onto the exposed transparent side of part 24a of sheet 24. Design 25 may be applied in the form of an enamel, paint, or ink of the same identical shade of red and the same degree of polish as is visible on part 24a. While the exposed lines 25 are illustrated darker than the surrounding lines illustrating side 24a, to illustrate a continuation of the color, it is to be understood that in practice both the color and polish are to be as nearly identical as is possible to that on side 24a, and it is also to be understood that the coating or printing is to be microscopically thin in character, and as flexible as sheet 24. The part of design 25 covered by impression sheet 17 in Figure 7 is illustrated as white after application of the stylus, since all points covered by the printing or coating will remain blank while the uncoated parts will be produced in the color on the base after application of the stylus. The area of the star is a "negative" image as heretofore defined. Designs 26 and 27 illustrate how positive designs containing line details may be produced, either by pressing a dry rubber stamp over sheet 13, or over sheet 17; or alternatively by printing such designs directly and permanently on side 24a of sheet 24 as by means of a rubber stamp the raised and indented portions of which are exactly the reverse of those on a stamp which will produce the illustrated effect when applied dry to sheet 13 or sheet 17. In connection with stenciled designs such as shown at 25, I have found that

a microscopically thin coating of enamel colored identically with side 24a of sheet 24 which will dry to the same degree of polish as appears on side 24a can be used very effectively, and that such enamel will bend and flex with sheet 24 when it is bent and flexed, and such designs will be substantially completely invisible when sheets 13 and 17 are lifted to enable a view of side 24a. In connection with printed designs such as 26 and 27 for application to the base sheet, I have found that acetate inks such as manufactured and sold under the trade-mark "Craftint" are very desirable. If such inks, which may be either permanent or water-proof, ordinarily dry to a dull finish, sufficient shellac or the like may be added thereto in order that the polish of the dried ink may match the polish on the side 24a of sheet 24.

Figure 8 shows a highly polished semi-rigid backing 28 with a white opaque flexible molded plastic press-polished sheet 29 firmly yet releasably secured thereto, and a superimposed transparent flexible press-polished sheet 30 containing a very slight gray cast, which should be approximately .015 inch thick. Any writing or drawing will be produced in gray, as illustrated, and no semi-opaque impression sheet is needed in this form of the invention.

While I have only shown automatically produced designs in Figure 7, it should be understood that in all of the pads of Figures 4 through 8, designs of the type illustrated and any others may be produced in a like manner. In Figure 4, for example, one side of the three colored sheets may contain such designs, while the other side thereof may be simply press-polished, enabling the latter side to be used for drawing or writing.

In Figure 8, automatic designs may be produced by stenciling onto the exposed side of sheet 29 the desired design using a microscopically thin coating of white enamel. In the forms of the invention using colored sheets, such designs may either be matched identically in color and polish with the sheets, or may be transparent, as, for example, a design produced with a coating of shellac.

It will be understood from the above descriptions of my invention that it enables writing pads of the type heretofore only used for writing in black and white to be used for the production of colored drawings, automatic designs in colors, and for many and varied other uses which are both entertaining and educational.

I am aware that numerous changes and modifications may be made in the invention herein described without departing from the scope and spirit thereof, and I do not, therefore, wish to be limited with respect to the protection granted herein except as necessitated by the scope of the appended claims.

I claim as my invention:

1. A writing pad having the elements thereof secured together along a common edge, comprising in superimposed relation a first element comprising a sheet of colored resilient plastic material, the exposed side of said sheet having a non-tacky glossy surface, and a second element substantially coextensive in area with the first element and normally substantially hiding the color of said first element, which second element is semi-opaque to normally hide the color of the first element and contains a non-tacky glossy surface facing the exposed side of said first element, and is of sufficient flexibility to be locally pressed into adhesive contact with the surface of said first element to render the color of said first element visible at local areas subjected to such pressure.

2. A writing pad as claimed in claim 1 wherein the first element is composed of a plurality of juxtaposed colored press-polished sheets, and the second element is a semi-opaque plastic sheet which substantially hides the colors of the juxtaposed sheets of said first element until

the application of pressure thereto, whereupon said colors are rendered visible at localized areas.

3. A writing pad as claimed in claim 1 wherein the first element comprises a transparent cast resin film colored on the unexposed side thereof and rendered resilient by the incorporation therein of approximately thirty weight per cent of plasticizer.

4. A writing pad having the elements thereof substantially coextensive in area and secured together along a common edge, comprising in superimposed relation a first element comprising a sheet of colored resilient plastic material having a non-tacky glossy surface, said sheet being further characterized by the fact that it may be pressed into adhesive contact with a glossy surface, localized portions of said sheet being uncovered and other portions being covered by lacquer matching the color and gloss of said sheet and defining a design, which lacquer does not have the adhesive qualities of said sheet, said lacquer being incapable of being smeared and incapable of transmitting the design defined by said lacquer to a superimposed surface; and said second element is non-tacky, glossy, and semi-opaque, the color of the first element and of said lacquer thereon being substantially hidden by said second element until the application of pressure to said second element, whereupon said uncovered portions of said first element will adhere to said second element and the color of said first element at such uncovered portions will be rendered visible therethrough.

5. A writing pad having the elements thereof secured together along a common edge, comprising in superimposed relation a first element comprising a sheet of flexible resilient plastic material having a light colored cast thereto, the exposed side of said sheet having a non-tacky glossy surface, and a second element substantially coextensive in area with the first element and rendered opaque by white coloring material to an extent that it normally substantially nullifies the colored cast of the first element to a viewer looking through the first element and which contains a non-tacky glossy surface facing said exposed side of the first element and is of sufficient flexibility to be locally pressed together with the first element into adhesive contact with the surface of the first element to render the color of said first element visible at local areas subjected to such pressure.

6. A writing pad as claimed in claim 1 wherein the elements are bound in loose-leaf form and wherein the first element comprises a folded transparent sheet of resilient plastic material each of the contacting surfaces of which contains a different coloring matter, the coloring matter on each surface being permanently affixed to the surface to which it is applied, the exposed faces of said sheet being transparent, and the folded portions of the sheet being adhesively united.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,543,430	Fischer	June 23, 1925
1,555,642	Deutsch	Sept. 29, 1925
1,631,192	Dunlap	June 7, 1927
2,074,855	Paasche	Mar. 23, 1937
2,293,887	Chamberlain	Aug. 25, 1942
2,393,228	Blitz	Jan. 22, 1946
2,585,924	Freedman	Feb. 19, 1952
2,596,890	Dechert	May 13, 1952

FOREIGN PATENTS

Number	Country	Date
175,683	Great Britain	Feb. 15, 1922
212,306	Great Britain	Mar. 7, 1924