

Nov. 6, 1928.

1,690,179

H. S. SADTLER
DECORATION FOR ORNAMENTS FIBROUS AND SIMILAR SURFACES
AND METHOD OF MAKING AND APPLYING THE SAME
Filed July 9, 1926

2 Sheets-Sheet 1

Fig. 1.

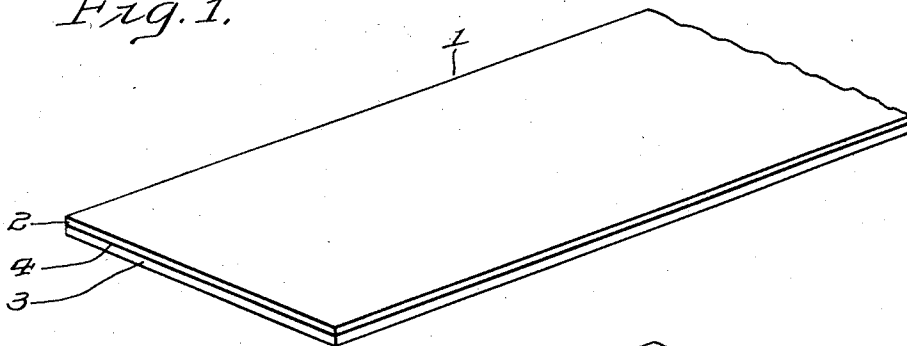


Fig. 2.

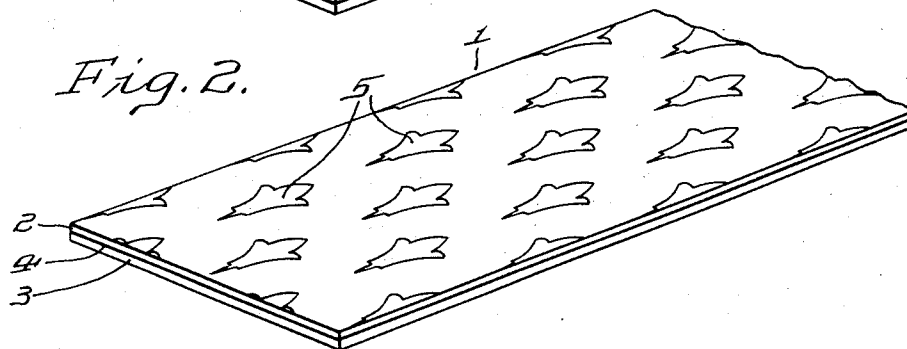
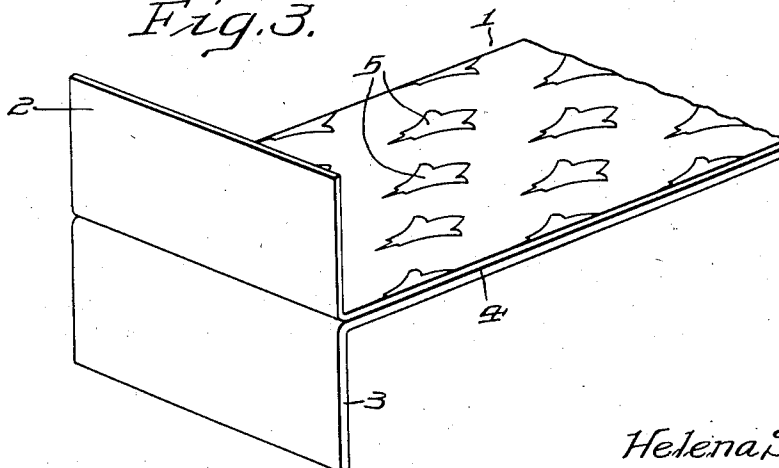


Fig. 3.



WITNESS
W. J. Hartman.

INVENTOR
Helena S. Sadtler.
BY Alston B. Moulton
ATTORNEY

Nov. 6, 1928.

1,690,179

H. S. SADTLER
DECORATION FOR ORNAMENTS FIBROUS AND SIMILAR SURFACES
AND METHOD OF MAKING AND APPLYING THE SAME

Filed July 9, 1926

2 Sheets-Sheet 2

Fig. 4.

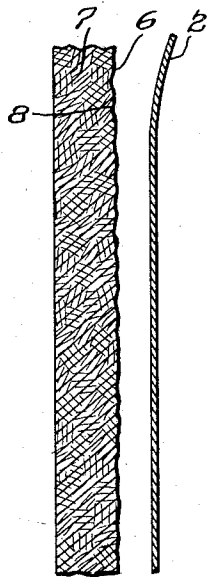


Fig. 5.

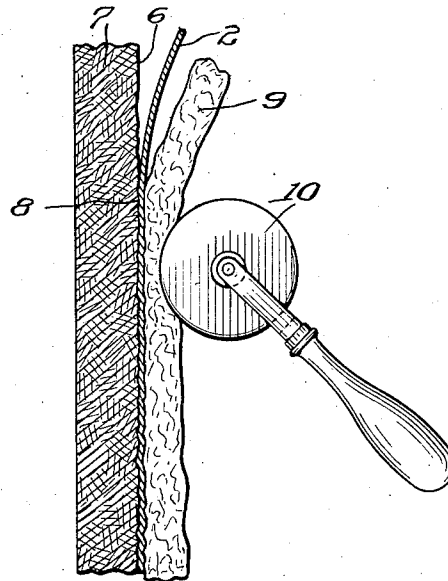
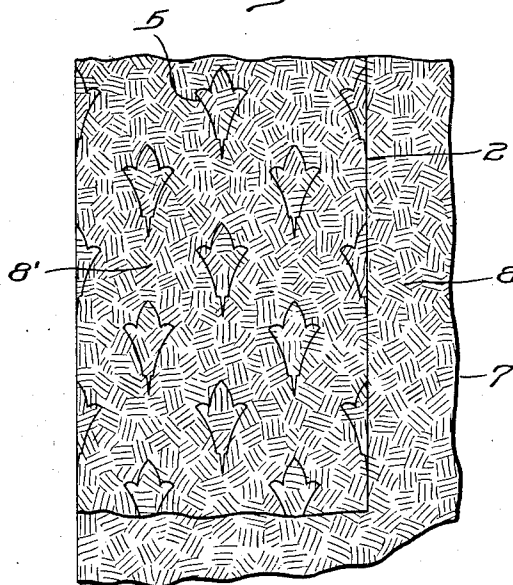


Fig. 6.



WITNESS
F. J. Hartman.

INVENTOR
Helena S. Sadtler
BY *Alston S. Boulton*
ATTORNEY

UNITED STATES PATENT OFFICE.

HELENA S. SADTLER, OF ERDENHEIM, PENNSYLVANIA.

DECORATION FOR ORNAMENTS FIBROUS AND SIMILAR SURFACES AND METHOD OF MAKING AND APPLYING THE SAME.

Application filed July 9, 1926. Serial No. 121,302.

Celotex board, which is a composite board made of bagasse fibers compressed into sheet or board form, is used quite extensively for the inner walls of rooms and for making boxes and similar articles. The texture of its surface is quite pleasing and it is often desirable, on that account, to maintain, preserve or duplicate that texture in the finished wall, and in the articles made of that material.

But it is often equally desirable to ornament such walls or objects to relieve such surfaces of monotony, or render them more attractive or cleanly. Thus, it has been frequently attempted to paper a room, the walls of which are composed of celotex, or similar board, and to apply a decoration to the whole or a part of an object made of similar material, but, generally speaking, it is exceedingly difficult to adhesively secure paper to celotex or similar fibrous board, or cover a celotex surface with paper or paint without destroying or covering up the natural fibrous texture of the plain undecorated celotex.

In my copending application, Serial Number 81,857, filed January 16, 1926, I have set out at length some of these difficulties and have therein disclosed certain methods of applying a decorative sheet to such surfaces without destroying the texture or appearance of the original wall or the finished covered wall. The present invention relates to the production of a decoration suitable for ornamenting or covering the whole or a part of the surface of an object made of celotex or similar fibrous material, and to which decoration may be imparted a texture substantially identical with that of celotex, or of other materials having similar fibrous or uneven surfaces, so that the surface so decorated appears to have the decoration integrally incorporated therein and the decoration appears to have been made on celotex or similar material.

The decoration which I employ preferably consists of a sheet or strip of ornamented paper, so thin and water absorbent that, when damp, it cannot be hung in the ordinary way, that is to say, by applying paste directly thereto, lifting the strip by an end thereof and applying it, for instance, to a wall, for if the decorated paper embodying my invention, were to be moistened or wetted by the application of a paste thereto, it would be-

come so thoroughly damp, limp and tender that it would matt and tear in handling and manipulating it in affixing it to an object.

Such thin water-absorbent paper must be handled carefully and gently when dry, and before it is applied to the surface to be decorated, must be kept smooth. Wrinkles and creases once formed in the thin paper, may make it unsuitable for the proper application of it to the surface to be decorated.

It is one object of my invention to provide a thin paper of this character having an ornamentation printed, stamped, or otherwise formed thereon or therein, with a relatively stiff tough temporary backing sheet to protect it and keep it smooth and unwrinkled until it is to be used.

Moreover, this paper, such as I use in carrying out my method or process of decorating rough and irregular fibrous and similar surfaces, is one a plain single ply sheet or strip of which cannot be readily printed, stamped or otherwise provided with a decorative impression. It is difficult to get it to lie smoothly enough to take such an impression and is almost certain to become wrinkled in handling it for the press. It also tends to stick to the plate or other impression surface and, if imprinted on, adheres to the plate and can not well be separated therefrom without tearing it, because of its moisture absorbent properties. To render such paper capable of being subjected to the usual manipulations employed in printing or engraving, I temporarily secure to it a tougher, heavier or stronger and stiffer backing, thereby making a duplex or two-ply paper, in which the thin paper sheet forms one ply, and then stamp or print the decorative design on the surface of the thin paper ply of the duplex paper, whereby I avoid the difficulties above mentioned. But I secure such thin or tissue paper or other thin absorbent fabric to such a backing merely temporarily, that is to say, in such a manner that the thin ply can be readily stripped from the backing without tearing it whenever the thin decoration is to be applied to a surface. This thicker tougher backing is one from which the thin sheet can be readily separated, when desired, but serves to hold the same smooth and unwrinkled during the printing or stamping process and until it is to be actually used,

The object of my invention is to provide a thin pliable decoration or surfacing, suitable to be affixed to objects or articles having rough or slightly rough and irregular surfaces to which a thick or stiff sheet could not be readily made to adhere, and to provide a way, manner or method of applying such a decoration to such surface.

A further object of my invention is to make a decorative surfacing which of itself would become too limp and tender to receive a coating of adhesive directly applied thereto and to then be applied to a surface to be ornamented or re-surfaced and to make such a decorative surfacing into such a form that it can be conveniently transported and handled without injury to the decoration.

A further object of my invention is to decorate, by well-known printing, stamping and engraving process, a thin water absorbent tissue or other thin paper or sheet fabric, which is easily torn, and which of itself is not adapted to receive such an impression applied directly thereto, by providing such thin sheet with a temporary strengthening backing or temporary body to hold the thin material smooth while the decoration is being applied thereto and after it has received the decorative design and until the thin decorated sheet is to be used to decorate a surface.

A further object of my invention is to provide a thin water-absorbent sheet with a backing sheet of thicker tougher material and to print, stamp or decorate the outer surface of the thin sheet of the duplex sheet so formed whereby the design so formed thereon is incorporated into the thin sheet, said sheets being united by an adhesive which permits the thin sheet to be readily stripped from the backing.

A further object of my invention is to make or provide a thin water-absorbent sheet of paper or similar material with a decorative design or print and to apply said thin sheet directly to a rough or irregular surface provided with a coating or layer of wet or damp adhesive, whereby the adhesive on the surface to be decorated softens and makes limp the thin sheet pressed against it so that the thin sheet when yieldingly pressed against said surface by a yielding pressure, as by a manually operated roller pressing through an absorbent pad, conforms to the unevenness and irregularity of the surface to which it is so applied takes on and substantially duplicates in its own surface the texture and finish of the surface beneath it.

Other objects of my invention will appear in the specification and claims below.

In the drawings forming a part of this specification and in which the same reference characters are employed throughout the various views to designate the same parts.

Fig. 1 is a perspective view of a strip or sheet of duplex paper, the two plies of which

are separately united by an adhesive, the same being ready to receive a suitable decoration on the thin paper side thereof.

Fig. 2 is a similar view of the sheet of paper or strip of paper shown in Fig. 1 but with a decoration printed, stamped or otherwise formed thereon or therethrough.

Fig. 3 shows the manner in which the thin tissue paper of the duplex paper may be stripped or separated from the tougher backing.

It is to be understood that the thickness of the sheets of paper and of the layer of adhesive are greatly exaggerated in these figures for the sake of clearness in the disclosure of my invention.

Fig. 4 is a cross-sectional view, on a greatly exaggerated scale, of a wall or board provided with a rough or irregular fibrous surface and covered with a layer of adhesive, and of a sheet of thin paper decoration or a sheet of similar material, such as is used in carrying out my invention, adjacent thereto ready to be applied to the adhesive coating on the wall or board.

Fig. 5 is a view, similar to Fig. 4, but showing the thin sheet of paper or similar material being pressed against the irregular surface of the board or wall and conforming to the irregularities of the surface of the board or wall by reason of the pressure exerted thereon by a pressure roller acting through a yielding absorbent pad.

Fig. 6 is a somewhat diagrammatic showing of the appearance of the outer surface of a plain wall or board of celotex or similar material and before any decoration is applied thereto, and a portion of said board covered with the decorative thin paper sheet in accordance with my invention.

In carrying out my invention I first make, or have made for me, the duplex sheet or strip 1, composed of the ply 2, preferably of thin absorbent paper which, if wet or damp, becomes too limp and fragile to manipulate, and the ply 3 of stronger tougher sheet material, such as tough paper, the said two plies being united by a suitable layer of adhesive 4 which holds the plies smoothly together and gives a body or stiffness to the tissue or other thin sheet 2 which makes it admirably adaptable for printing, stamping or engraving manipulations.

The adhesive 4, however, should be one which does not inseparably bind the plies 2 and 3 together. It should hold them firmly and smoothly together until the thin sheet 2 is to be used for the purposes of decorating a surface, but the adhesive should be one which permits of the ready manual separation of the plies when desired, without tearing the thin sheet 2, by merely peeling, stripping or pulling apart the plies as illustrated in Fig. 3.

The thin sheet 2 having been provided with the relatively tough backing 3, I now form on

the thin paper side 2 of the duplex sheet any suitable ornamental design by any desired printing, engraving, stamping or painting process. Since the sheet 2 is thin and is water absorbent, the color of the ink stains or dye may readily be made to penetrate the thin sheet and practically form an integral part of said sheet 2 whenever it is applied thereto. It may go through the thin sheet 2 to the adhesive layer 4.

Fig. 2 shows in a more or less diagrammatic manner the sheet 1 having on the tissue paper side thereof the ornamental design 5 printed or otherwise formed thereon as above indicated.

This printed duplex sheet, shown in Fig. 2, is what is put on the market. It may be rolled or may be kept flat as may be the custom in the merchandizing of any ordinary paper sheets, without injury to the design, or to the thin sheet 2. It will be understood that it is the thin ornamental sheet 2 which I use to decorate walls and objects having a surface texture which it may be desirable to retain in the ornamentation applied thereto and that after printing the sheet 3 is, in the main, a protective carrier sheet.

When I now desire to ornament a surface having a fibrous texture or a surface which is slightly irregular or presents a texture, the character of which it is desirable to impart to or incorporate in the decoration applied thereto, as for instance, a celotex wall or box or piece of canvas, I first apply to such part or parts of the fibrous, rough or textile surface as is to be decorated, a substantial layer coating, stripe or patch of an adhesive 6 such as paste.

In Fig. 4 I have shown, in a somewhat diagrammatic manner and on an enlarged scale, particularly as to the irregularities in the surface and thickness of the layer of paste 6 and of the tissue sheet 2, a wall 7 which, it may be assumed, is a celotex wall or board, the surface 8 of which is fibrous and somewhat uneven, and to which has been applied a damp layer or coating of adhesive 6. I now take the duplex sheet 1 with the picture, design or other ornamentation 5 on the thin sheet 2 and separate the thin sheet 2 from the backing 3 by pulling the plies apart as indicated in Fig. 3. The adhesive 3 is of a character to permit of this separation.

When the ornamented sheet 2 has been so detached from the carrier 3 it is manually directly applied to and firmly pressed against the layer of paste 6 on the surface 8 of the wall 7 or other object, with the printed or ornamented side of the sheet 2 outside, that is to say, that side or surface of the sheet 2 which was previously adhesively secured to the backing 3 is now next to the adhesive 6 and is secured to the surface 8 to be ornamented, and the printing 5, or other decoration formed on the outer face of the two-ply sheet 2' is the ex-

posed surface of the sheet 2 when attached to the wall 7, whereby the decoration on the decorated surface is the right side of the original impression 5 and is as bright and clear as it was on the duplex sheet.

But in so applying the thin sheet 2 the layer 6 of adhesive, the water in the paste renders the thin sheet 2 damp and limp. If now the sheet be firmly but yieldingly pressed against the wall or surface being decorated while the sheet 2 is in this damp, limp condition, as by a yielding absorbent pad 9 over which, for instance, a pressure roller 10 is manually rolled, the thin sheet 2 will be forced into intimate contact with every part of the surface 8 of the wall 7 with the result that the outer surface of the paper coating will have substantially the identical appearance that the uncovered part of the wall or board 7. If, therefore, the entire surface of a celotex wall or board 6 be covered with paper, this wall will have the appearance to the eye of a celotex wall, but of the tint or color of the background of the paper and a picture, ornamental figure or other decorative design will appear to be incorporated into and to constitute an integral part of colored or tinted celotex.

In Fig. 6 I have indicated diagrammatically the natural outer slightly irregular, fibrous surface 8 of a celotex board or wall 7 and I have also shown how a like surface will appear on the surface 8' of the decoration when a thin paper sheet 2 having design 5 thereon and applied to the wall, in accordance with my invention. The texture of the surface of the celotex will be duplicated throughout the surface of the sheet 2 and the design 5 thereon.

If a part only of the surface 8 is to be ornamented, e. g., a medallion is to be placed in the center of a panel of a wall or a border is to be placed around the marginal edge of a box or board, the picture or design imprinted upon the sheet 2 will be cut out of the sheet following closely the edge or contour of the printed or stamped design or picture and only so much of the surface 8 of the wall or board 7 will be given the coating 6 of paste as will be finally covered by that design. Then the cut-out design will be carefully placed on the board or wall 7 and pressed against it with an absorbent pad which causes the damp decoration to yield to the irregularities of the surface 8 when pressure is applied to the pad, and takes on the identical appearance of the surface beneath it. Moreover, any moist paste 6 or other adhesive which is expressed from between the thin sheet of paper 2 and the wall 7 and any adhesive surrounding the design will be absorbed by the pad, thus preventing that portion of the wall or board which surrounds the decoration from presenting a stained or different appearance or tint from that part of the board which does

not come into contact with the adhesive.

My invention is not to be construed, however, as limited solely to the ornamentation of a surface presenting a fibrous texture, although it is an important aspect of it, for I may likewise secure a fine colored print, made on my thin absorbent paper, to a stretched canvas with the result that the texture of the canvas, appearing on the surface of the picture or print produces the effect of an oil painting. Further, when such a picture or print on thin paper is similarly secured to a finer woven fabric, as for instance a piece of silk fabric, the print or picture may be made to appear as if printed directly on the fabric because the texture of the fabric can be readily made to show through to the surface of the print or picture.

It is to be noted that the outer side of the ornamentation as formed on the sheet 2 of the duplex sheet 1 is the side which is exposed when the sheet is attached to the surface to be decorated. This is the reverse of the ordinary transfer or decalcomania process, in which the exposed part of the transfer is ordinarily the side which was not exposed on the ornamented sheet.

But my invention is not to be construed, unless so specified in the claims, as strictly limited to the use of a backing sheet of tougher material, for it is my intention, particularly when the decoration is to be used for a transparency, or when the thin paper is to be applied to a surface of a color which would show through the thin paper, to provide the thin sheet with a ground or foundation color or tint which is relatively opaque and will prevent the color of the object to which the sheet is to be applied from showing through the thin paper and upon this first printing or coating to print or engrave the decorated design. The ornamental design or decoration is printed or engraved upon the opaque ground or foundation color or tint. This opaque ground coating or printing, applied to the paper, may be of such a character that it will impart to the paper a body sufficient to make the thin paper capable of being printed upon without using the tougher backing ply. The ground or foundation, however, should be one which is not stiff when water or moisture is applied thereto. It should comprise a water absorbent pigment or color so that when the decorated sheet is pressed by a yielding pad against a wall or object provided with a moist coating of water paste or adhesive, the ground color will soften, as well as the paper itself, and conform with the paper to the irregularities in the surface to which the decorated paper is thus applied.

When the thin paper, used in carrying out my invention, is given a foundation or

coat or coating of opaque color or pigment, it may impart to the thin paper, when the coating thereon is dry, sufficient body or rigidity to permit of the printing of the decorated design directly thereon. It may make the use of the backing ply unnecessary. It may be a body making layer or coating. By whatever steps my improved decoration is prepared, the ground color and the decorative design are on the outside of the paper affixed to the object which is decorated therewith, as distinguished from the ordinary decalcomania process wherein the last printing impression of the decoration is the printing which is next adjacent the surface to which the decoration is affixed.

Having thus described my invention, what I claim and desire to protect by Letters Patent of the United States is:

1. A transfer for use in decorating surfaces which are uneven, rough or fibrous, which consists of a sheet of paper so thin and water-absorbent that if the sheet were dampened with paste applied directly thereto it would be so limp and tender that it would tear of its own weight, and having imprinted on one surface thereof any suitable decorative design and having its back or opposite surface temporarily secured to a backing of tougher sheet material by an adhesive which permits the thin sheet to be readily manually stripped from said backing for the application of said thin sheet to the surface to be decorated.

2. The method of making a transfer for decorating rough, uneven or fibrous surfaces, which consists in securing the back of a sheet paper so thin and water-absorbent that said sheet could not be handled without tearing were a coating of paste to be applied directly thereto, to a temporary backing sheet of tougher material to make a two-ply sheet, said plies being held together by an adhesive which does not inseparably bind said thin sheet to said backing but permits said thin sheet to be readily manually stripped from said backing, and imprinting an ornamental decorative design directly on the thin paper side of said two-ply sheet.

3. The method of decorating a rough, uneven or fibrous surface which consists in providing a duplex sheet consisting of a sheet paper too thin and water-absorbent and tender to be handled when dampened with paste or when subjected directly to a printing or engraving process having imprinted on the exposed surface thereof a decorative design and having its opposite side temporarily adhesively secured to a backing of tougher sheet material, said adhesive permitting the said thin sheet to be readily manually stripped from said backing without tearing said thin sheet, applying a layer of damp adhesive to the surface to be decorated, stripping said thin sheet from said backing and placing the surface of said thin sheet which was secured

to said backing against the damp adhesive on said surface to be ornamented whereby the dampening of said thin sheet by said adhesive renders said thin sheet damp and limp, pressing said thin sheet firmly in place against said surface to be decorated with a yielding absorbent pad to cause said thin sheet to be pressed into intimate contact with every portion of the surface beneath it and to shape said thin sheet to make it conform to any slight elevational irregularities in the said surface whereby said irregularities in said surface being decorated may be pressed into and through said damp sheet to appear on the surface of said thin sheet secured thereto.

4. The method of decorating a rough uneven or fibrous surface which consists in providing a sheet of water-absorbent paper, too thin water-absorbent and tender to be handled when damp or to be subjected directly to a printing or engraving process, with an opaque ground foundation color of a ma-

terial which is also water-absorbent but which, when dry, imparts to said thin sheet body and stiffness sufficient to permit of printing and engraving thereon, imprinting a decoration on said ground foundation color, applying a layer of water-soluble adhesive to the surface to be decorated, pressing every part of the surface of the undecorated side of said sheet against the wet adhesive-coated surface to be decorated, whereby the paper and the ground foundation color become moist and limp and conform to the irregularities of the surface being decorated, whereby said irregularities are pressed through and appear on the exposed decorated side of said sheet, when said adhesive has become dry, and whereby said opaque ground foundation color conceals the color, shade or tint of the surface to which the thin sheet is applied.

In witness whereof, I have hereunto set my hand this eighth day of July, 1926.

HELENA S. SADTLER.