

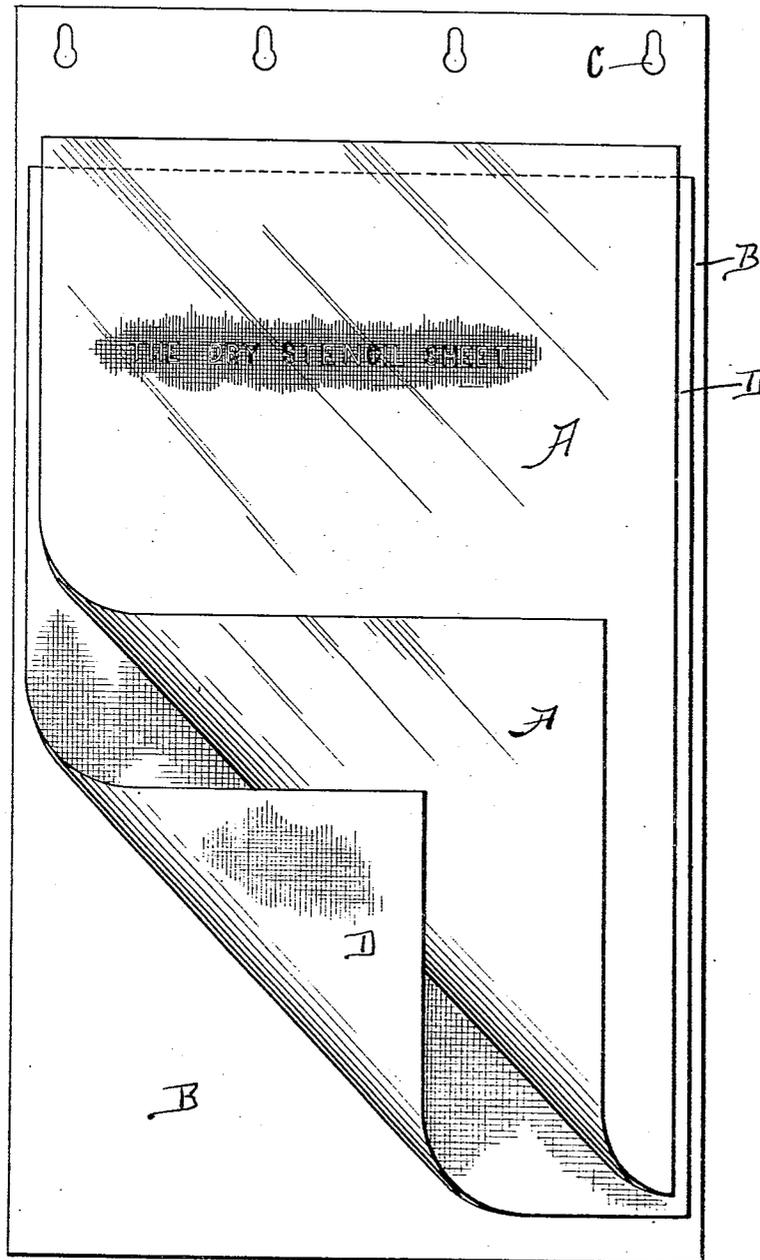
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STENCIL SHEET AND BACKING

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UNITED STATES PATENT OFFICE

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STENCIL SHEET AND BACKING

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The present invention is directed to a stencil sheet and the backing provided therefor which serves to mount and hold the stencil sheet in position during the stencilling operation, and thereafter to secure the stencil sheet in position on the duplicating machine. In stencil sheets and mountings of the character commonly in use, it is customary to employ a stencil sheet provided with a coating consisting of cellulose ester and oil with a blue pigment included in the coating mixture to impart a blue tint to the stencil sheet.

The completed stencil sheet, which is relatively transparent, comprises a smooth and lustrous unbroken surface coating adapted to receive the imprint of the stencil, and when imprinted the continuity of the coating will be broken or fractured along the stencilled lines, so that these lines will be rendered relatively opaque, and hence stand out as lighter lines on the colored ground surface of the stencil. This rendered the imprinted stencil legible as a lighter imprint against a darker background, but in the use of a blue stencil sheet, the imprinted lines nevertheless lack sufficient contrast in color tint to render them easily legible in the proof reading of the completed stencil sheets, so that various expedients of one sort or another have been attempted to render the proof reading of the imprinted stencil sheets easier and less fatiguing to the eyes of the proof reader. The present difficulty appears to be due to the fact that the use of a colored tint in the stencil sheet itself renders it impossible to secure a relatively white or uncolored stencil impression, since the impression itself partakes of the color tint employed in coating the stencil sheet, so that sharp contrast in color tones is impossible.

The object of the present invention is to produce a stencil sheet and the associated mounting and impression sheets which will be so arranged and colored as to provide for the securing of a stencil impression which will stand out in white letters against a black or other dark ground, thereby rendering the proof reading much easier and obviating the necessity for the employment of especially

illuminated table tops or the like as aids in the proof reading.

In the drawing, the figure shows a stencil sheet with the impression sheet and backing, the two upper sheets being partially rolled back to illustrate the manner in which the sheets are superposed upon one another.

The stencil sheet A is formed of white or untinted and unsized tissue paper, preferably the Japanese paper known as yoshino. This fibrous tissue paper has applied thereto a stencil coating consisting preferably of a thin layer of cellulose ester with an oil dispersed therein. The ingredients of a suitable coating are set forth and described in my co-pending application Serial No. 152,806, filed July 6, 1926, although in the case of the present invention any suitable dry stencil coating of the character commonly in use at the present time may be employed, provided the coating contains no pigment or coloring matter which will, in any substantial degree, tend to color or darken the surface of the stencil sheet.

If white yoshino paper be employed as a base with an untinted coating of the character indicated, the completed stencil sheet will have the appearance of a thin, white, fibrous, transparent sheet adapted when laid upon a colored backing to assume the color tone of the backing through the sheet with but slight reduction in the color tone.

The stencil sheet is secured by pasting along its upper edge to a backing B of relatively stiff and firm paper provided with the usual slots C near the upper edge for adjustment to the duplicating machine. Between the stencil sheet and the backing is interposed an impression sheet D which, in the present instance, is also of yoshino tinted or stained black, although a very deep shade of some other color might be employed. The impression sheet is provided in order to secure a more perfect action in the coating of the stencil than can ordinarily be secured without extreme care if the stencil sheet were supported directly against the relatively hard and firm surface of the backing.

With the stencil sheet mounted and backed in the manner described the stencil coating

type will strike upon and fracture the surface coating of the stencil sheet in such a way as to break or pulverize the coating material, thereby completely destroying the transparent character of the coating along the lines represented by the lettered forms of the type, so that the letters thus stencilled will appear as purely white letters in sharp contrast to the black or other dark ground afforded by the black impression sheet or similar backing which shows through the untinted transparent background of the stencil sheet. In short, the letters will stand out in sharp color relation by reason of the fact that where the letters are struck the stencil surface will reflect white light by reason of the opaqueness of the letters which will stand out against the dark ground occasioned by the visibility of the black impression sheet through the transparent, thin and untinted stencil sheet.

It will be understood that where reference is made to the transparency of the stencil sheet, it is not intended to convey the impression that the sheet is completely transparent like window glass, but that it possesses the relatively high degree of transparency characteristic of a sheet of oiled tissue paper or oiled tracing paper, so that it will not in any substantial degree lessen the blackness of the color tone transmitted from the backing sheet through the body of the stencil sheet, so that the resulting effect is that of white letters sharply imprinted upon a black ground which renders proof reading much easier than in the case of stencil sheets in which a color tone is applied to the stencil sheet itself.

In short, by employing a stencil coating of untinted materials upon a white sheet of yoshino paper, and relying for the color tone entirely upon a darkly tinted sheet underlying the stencil sheet, applicant is enabled to secure a completely white letter impression rather than a tinted letter impression as heretofore, since the coating materials which display the impression are themselves untinted and produce a white effect as soon as their transparency is destroyed by the impact of the stencilling type which disintegrates or pulverizes the surface coating, and thus causes it to reflect white light which, in conjunction with the transmission of the color tone through the transparent or unstencilled portions of the sheet, produces the sharp color tone contrast characteristic of the present invention.

Although, it is preferred to use a black or darkly tinted impression sheet behind the stencil sheet, it is not the intention to limit the invention strictly to the use of such an impression sheet, since the color contrasts may be secured by superposing the stencil sheet directly upon the hard surfaced backing or mounting sheet colored black or darkly

tinted, although, in this case, the advantages attendant the use of an impression sheet will not be secured. Nor is it the intention in the claim where the stencil sheet and coating are referred to as being untinted to limit the claim to an absolutely colorless or white sheet and coating, although any substantial employment of color tints will to that extent impair the effect which it is desired to secure by the omission of any color whatsoever as an ingredient of the coated stencil sheet.

I claim:

A stencil comprising a stencil sheet composed of untinted tissue paper having applied thereto an untinted stencil coating adapted to render the sheet transparent, said coating being adapted when stencilled to have its coating rendered opaque by the impact to display the impacted portion of the coating as an opaque white stencil impression in conjunction with a relatively firm mounting sheet to which the stencil sheet is secured, and an interposed relatively soft impression sheet of darkly colored tissue paper adapted to show through the unstencilled portions of the stencil sheet and invisible through the stencilled portions thereof to furnish a dark ground color for the display of white stencilled impressions, substantially as described.

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