July 19, 1927. 1,636,546

A. M. BATES ET AL

STENCIL AND METHOD OF MAKING THE SAME

Filed March 17, 1924

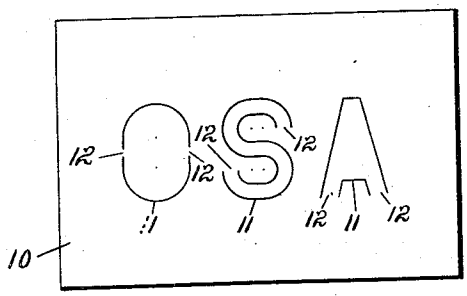
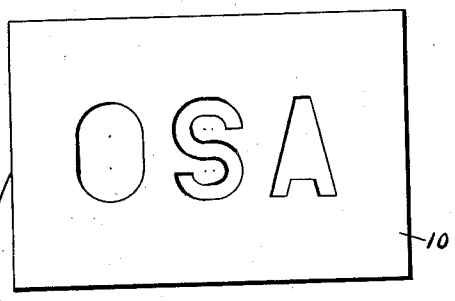


Fig. 1.



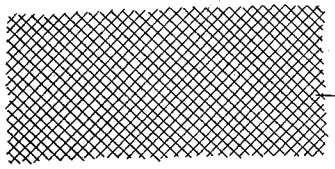


Fig. 2.

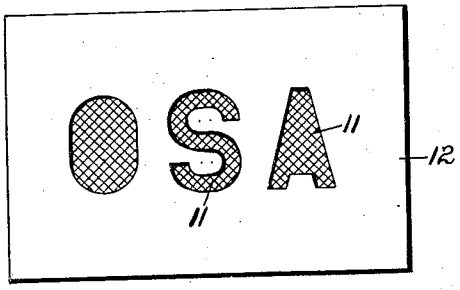
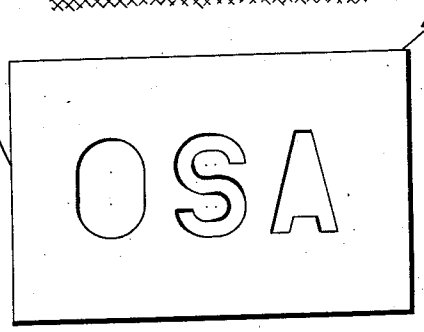


Fig. 3.



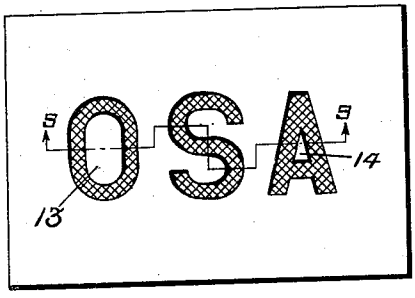


Fig. 4.

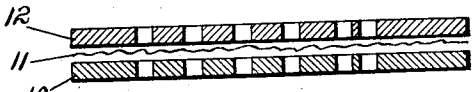


Fig. 5.

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UNITED STATES PATENT OFFICE.

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STENCIL AND METHOD OF MAKING THE SAME.

Application filed March 17, 1924. Serial No. 699,690.

Our invention relates to a stencil plate and the method of making the same, and more particularly to a stencil plate adapted for stencil-printing.

For many uses, printing by applying the ink through the perforations of a stencil plate is cheaper and more satisfactory than printing with type. It is objectionable, however to have connecting lines across the letters where detached pieces are necessary to complete the characters. For example, the letter O cannot be printed in complete outline through a stencil without having some means for holding in place the detached center of the O.

One object of our invention is to overcome this difficulty and provide a stencil through which characters having any desired outline may be printed. Other objects of our invention will appear as the description proceeds.

In the accompanying drawing, Figure 1 shows a blank of stencil material partially prepared. Fig. 2 shows the three layers of our stencil ready for assembling. Figure 3 shows the assembled stencil. Fig. 4 shows the stencil completed by the insertion of detached pieces. Fig. 5 is a section on the line 5—5 of Fig. 4.

In preparing our stencil, we take a blank of stencil material 10 and cut therein outlines 11 of the desired characters. We prefer to cut these outlines by means of dies. Where the letters are of considerable size, it is convenient to complete these outlines by die-cutting, but there is difficulty in detaching the cut out material from the dies where the characters are small in proportion to the thickness of the stencil material. For reasons more fully stated in our copending application, Serial No. 699,689, filed March 17, 1924, we prefer, therefore, to leave the character outlines incomplete, as at 12, so that when the dies are removed the material within the outlines will remain attached to the stencil blank. These completing portions 12 of the outlines may then be cut with less trouble than the removal of the material from the dies would cause.

We prepare two duplicate blanks, 10 and 12, in this manner and unite them to opposite sides of a layer 11 of suitable material. We prefer to use a loosely woven cloth, although the character of the weave is not as essential as that the material shall be ink-absorbent. The resultant blank, shown in Fig. 3, has therein the outlines of the desired characters. Any detached pieces necessary for completing the desired pattern are then united to the layer 11 within the previously formed outlines. In the examples shown, these detached pieces are the center 13 of the letter O and the center 14 of the letter A.

It will be understood that a stencil constructed in the described manner might be used with but one layer of stencil material, which would be placed next to the material intended to receive the printing, but we prefer to use two layers of stencil material in order that the surface of the stencil next to the ink-applying member may be non-adherent to ink.

We are aware that it has been proposed to hold in place detached pieces of stencil material necessary to complete the desired patterns by means of wires or reticulated material. So far as we are aware, these stencils were not intended for stencil-printing, but were intended for use with brushes by means of which coloring matter could be worked around the strands. With stencil-printing any filaments which were non-absorbent to ink would result in un-inked lines across the characters, and would therefore be objectionable, whereas the perforations might be entirely covered with ink-absorbent material without preventing the transmission of ink through the perforations.

Various changes in our method and stencil plate may be made within the scope of the appended claims.

What we claim is:

1. The method of making a stencil plate, which consists in die-cutting the outlines of the desired characters except for connecting lines sufficient to keep the stencil material in place when the dies are removed, removing the dies, and then completing the cutting of said outlines and removing the stencil material within the outlines.

2. The method of making a stencil plate, which consists in die-cutting the outlines of

the desired characters except for connecting lines sufficient to keep the stencil material in place when the dies are removed, removing the die and thereafter cutting the connecting lines of stencil material and removing the material within said outlines, and then uniting the stencil blank and a layer of reticulated material, and finally uniting to the reticulated material within said outlines pieces of stencil material necessary to complete the desired characters.

In testimony whereof we have hereunto signed our names to this specification.

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