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PATENTED MAR. 10, 1908.

R. S. BOLGER.
STENCIL AND FRAME.
APPLICATION FILED NOV. 23, 1906.

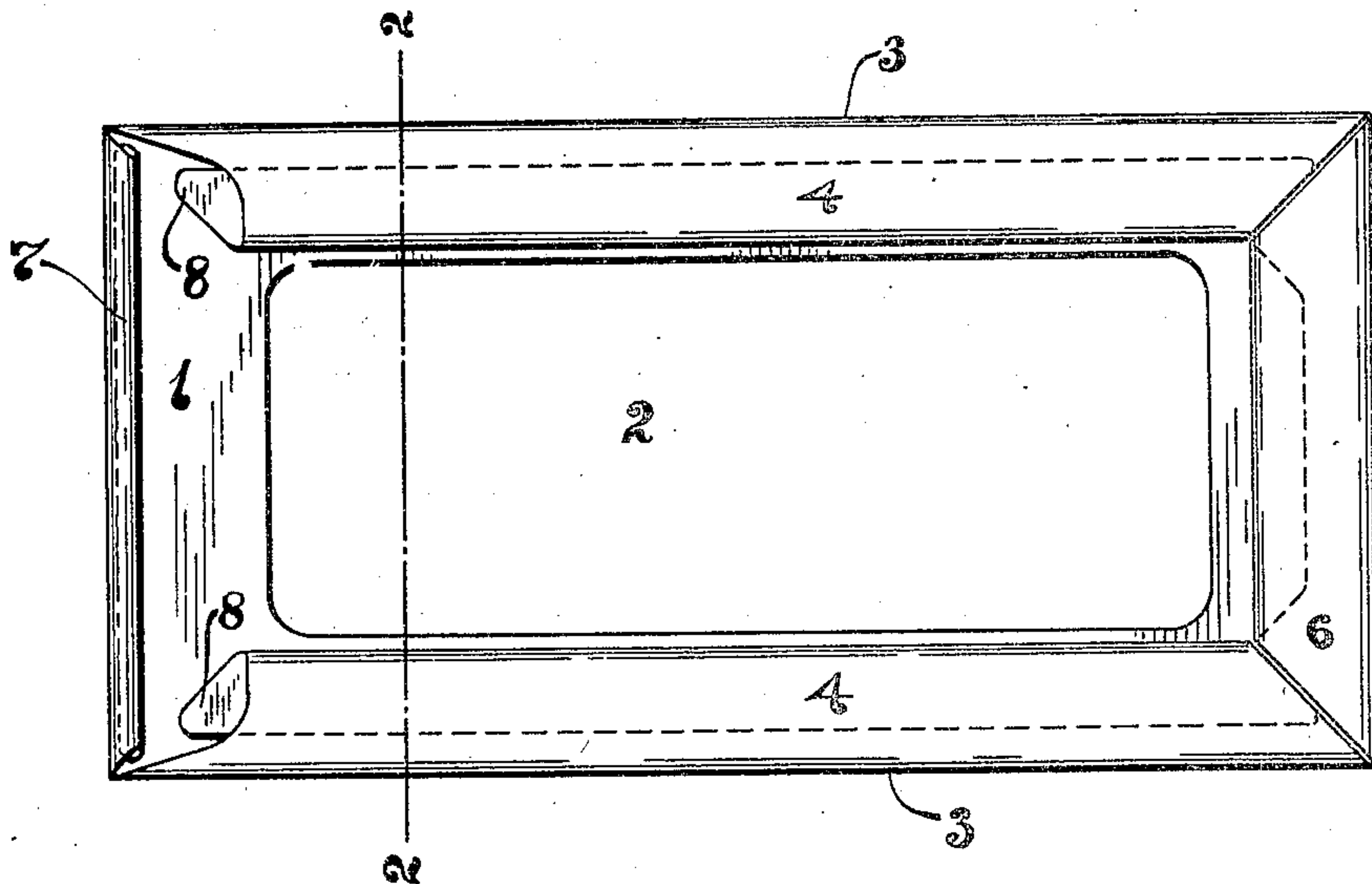


Fig. 1.

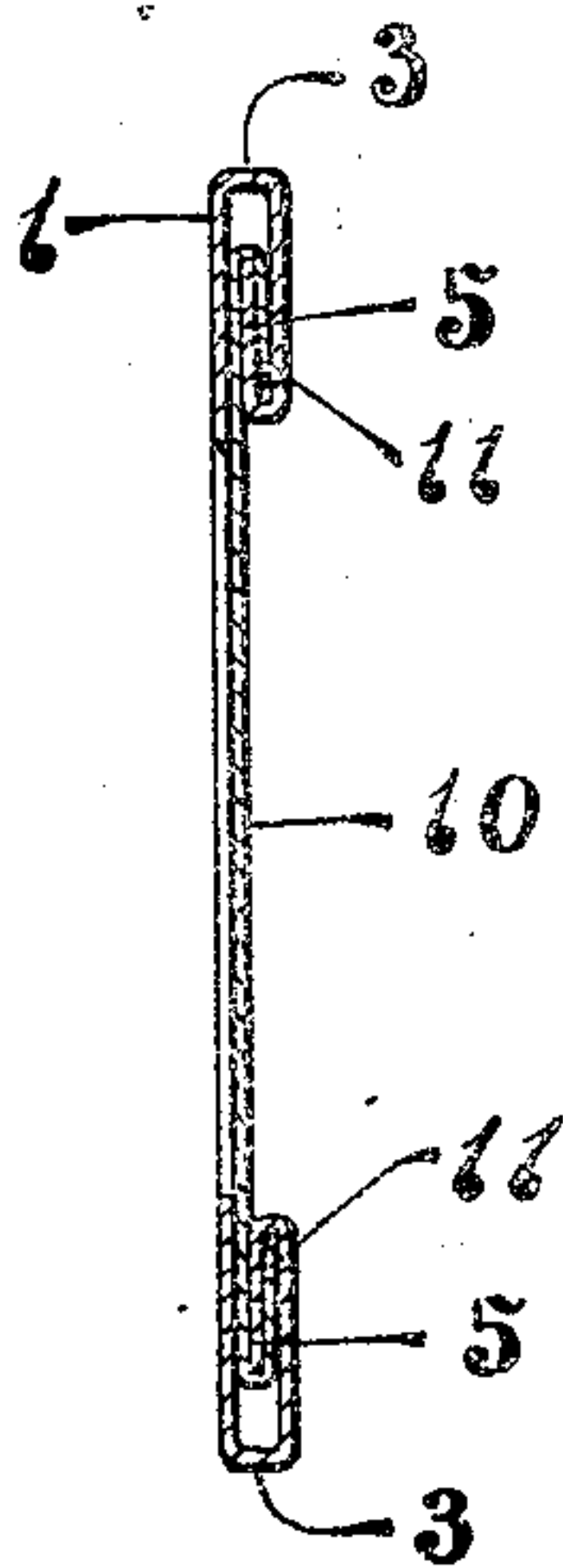


Fig. 2.

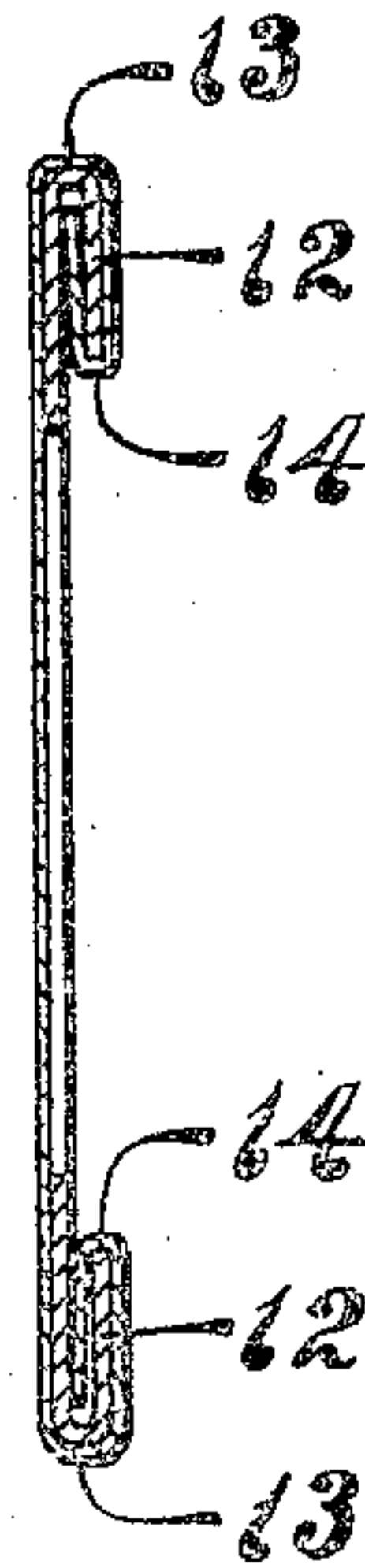


Fig. 3.

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STENCIL AND FRAME.

No. 881,173.

Specification of Letters Patent.

Patented March 10, 1908.

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To all whom it may concern:

Be it known that I, ROBERT STANLEY BOLGER, a citizen of the United States, residing at New York city, New York, have invented certain new and useful Improvements in Improved Stencils and Frames, of which the following is a clear, full, and exact description.

The object of this invention is to provide a rigid and substantial stencil frame, preferably of metal, with a removable stencil card in the form of a sheet of flexible and relatively thin material.

To use a flexible stencil sheet is obviously advantageous in saving material, in enabling one to get better and cleaner stencil letters and also stencil letters which will not clog with ink as quickly or with the ill effects of a thick card when such is used. Such stencil sheets have been used heretofore but each necessarily had its own attached and individual frame to which it was glued. Such frame was generally made of stiff card board and would warp to a greater or less extent. The frame used by me in this invention is rigid, preferably metal, and hence no warping occurs. According to my invention I so form my frame and sheet as to allow one frame to be used indefinitely and any number of different sheets used with the same frame by merely slipping the sheet desired into the frame. In order to do this I provide means for holding the sheet taut transversely of the frame, without unduly preventing its removal longitudinally.

By "flexible" as used in this application I mean like thin paper, which may be folded to produce a crease and not crack at the fold. I use the term to distinguish from straw-board or cardboard usually used for this purpose, which it is my aim to supplant by thin paper of little greater thickness but preferably of greater strength than that upon which Letters Patent are printed. Cardboard is too thick to produce the best stencil openings and it is too difficult to properly and cheaply perforate it. The thin flexible paper used by me is cheap at first cost, cheap to perforate, does not wear out the perforating type and produces the best possible effects as a stencil. All this has been recognized before but such paper stencils have been glued onto cardboard frames from which they were not detachable without destruction, and they were apt to warp out of

shape, or they have depended on their own semi-rigidity in open frames from which they are often accidentally detached by being bent out of shape at the center.

My invention will be particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan of my improved frame; Fig. 2 is a section of the same on line 2—2 Fig. 1 with sheet in place; Fig. 3 is a similar sectional view of a modified form of frame.

As shown in the drawings, the stencil frame is formed of a back plate 1 with a central opening 2. On its longitudinal sides 3—3 the edge of the frame is turned in, as at 4, substantially parallel with the back plate 1, and in the preferred form of Figs. 1 and 2 the portion 4 is again turned towards the bight, formed in the frame by the first fold. This produces a tongue portion 5 in the bight. At one end of the frame I prefer to fold the metal or material to form a pocket or abutment 6 into which the end of the sheet may project for the longitudinal positioning of the same, and at the other end I prefer to form a slight turned-over edge or abutment 7 over which the sheet may be slipped and when in place its end caused to lie against the inner side of the same. I prefer that the turned-in sides do not reach to the end of the frame for which purpose I so shape the edge at that end that the portion 4 starts near the corner on an angular line towards the center of the card, while the inturned portion projects beyond this angular line to form a guiding ear 8 for the sheet.

The sheet 10 as before stated is of a thin, flexible material. It has turned-over longitudinal edges 11 so that it may embrace the inturned edges of the frame and be slid into place longitudinally. The relatively sharp turns of the edges of the sheet and frame provide a means for holding the sheet taut transversely, but do not prevent its longitudinal removal or replacement.

In the modification of Fig. 3, the edges 12 of the frame receive but one inward turn while the sheet receives a double fold to embrace the same. One folded portion 13 and an inwardly turned portion 14 extend into the bight of the frame. It will thus be seen that it is only necessary that the frame and sheet be provided with the inturned edge of one embracing the edge of the other.

In both modifications before described it

will be noted that the folded sheets of thin, flexible material are detachably removed by slipping them out in substantially the planes of the frame and sheet, without injuring said sheets. It is the acute folds of the sheet upon itself, each fold of which passes around the inturned edge of the frame, with the angle of the fold against the true edge of the frame, that causes it to be held in place without extraneous clamping means being necessary, and in fact I prefer not to use clamping means, depending upon the folds of the sheet around the edge to give the thin, flexible sheet its tautness and rigidity in use. It will be seen that the fold of the stencil frame where it embraces or receives the folded edge of the card acts as a means for preserving or maintaining the fold of the flexible card without in anywise preventing its longitudinal removal or replacement.

What I claim as my invention is:

1. A stencil card frame, a removable flexible stencil card therefor and means for holding said card taut in said frame, said means being adapted to resist pull at right angles to the edge of the card which is held and non-resisting against longitudinal pull, said means comprising a fold in the card and means adapted to prevent the unfolding of the card by pull at right angles.

2. The combination of a stencil card frame having a fold in its edge, a lengthwise removable flexible stencil sheet having a folded edge, the fold of the sheet embracing said edge in the frame when the sheet is in position.

3. A stencil card frame, a removable flexible stencil sheet therefor and means for holding said sheet taut in said frame, said frame having an inturned edge forming a bight, a fold of the sheet embracing said edge when the sheet is in position, said inturned edge being folded upon itself so that it extends into a bight of the frame, and said sheet in embracing said edge passing into the bight and around the edge.

4. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut.

5. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also

having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut, an abutment at the end of the frame to receive one end of the sheet as it is slid into place.

6. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut, said inturned edge of the frame beginning near the corner of the card and starting angularly therefrom towards the center of the card.

7. A stencil card frame having an inturned edge, in combination with a removable stencil sheet of flexible material also having an inturned edge, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut, said inturned edge of the frame beginning near the corner of the card and starting angularly therefrom towards the center of the card, and a projecting ear for the edge which extends beyond the angular line thus formed.

8. A stencil card frame, a removable flexible stencil sheet therefor and means for holding said sheet taut in said frame, said frame having opposite inturned edges, and a fold on each opposite side of the sheet embracing an edge when the sheet is in position.

9. A stencil card frame, a removable flexible stencil sheet therefor and means for holding said sheet taut in said frame, said frame having inturned edges on opposite sides forming bights, and on each opposite side of the sheet a fold embracing said edge when the sheet is in position, said inturned edge being folded upon itself so that it extends into a bight of the frame, and said sheet in embracing said edge passing into the bight and around the edge.

10. A stencil card frame having opposite inturned edges, in combination with a removable stencil sheet of flexible material also having opposite inturned edges, said edges of frame and sheet being hooked upon each other whereby the sheet will be held taut.

Signed at New York city, this 19 day of November, 1906.

R. STANLEY BOLGER.

Witnesses:

F. WARREN WRIGHT,
BEATRICE MIRVIS.