



No. 732,564.

PATENTED JUNE 30, 1903.

A. D. KLABER.  
STENCIL SHEET.

APPLICATION FILED APR. 30, 1902.

NO MODEL.

4 SHEETS—SHEET 2.

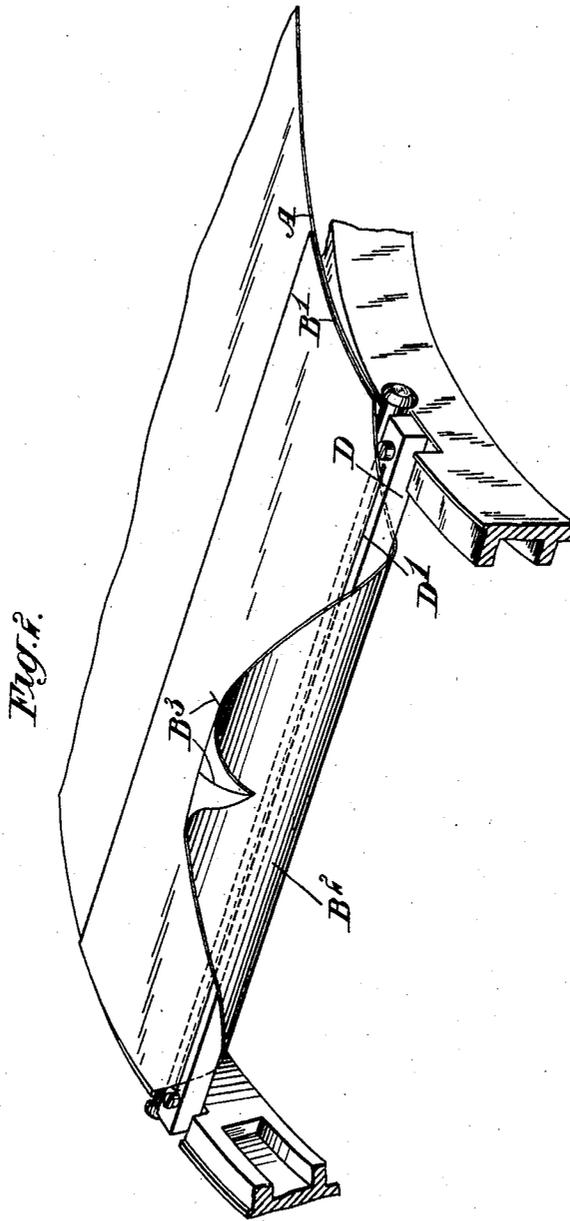


Fig. 2.

Witnesses:

*John Driscoll.*  
*Francis Albert Taylor*

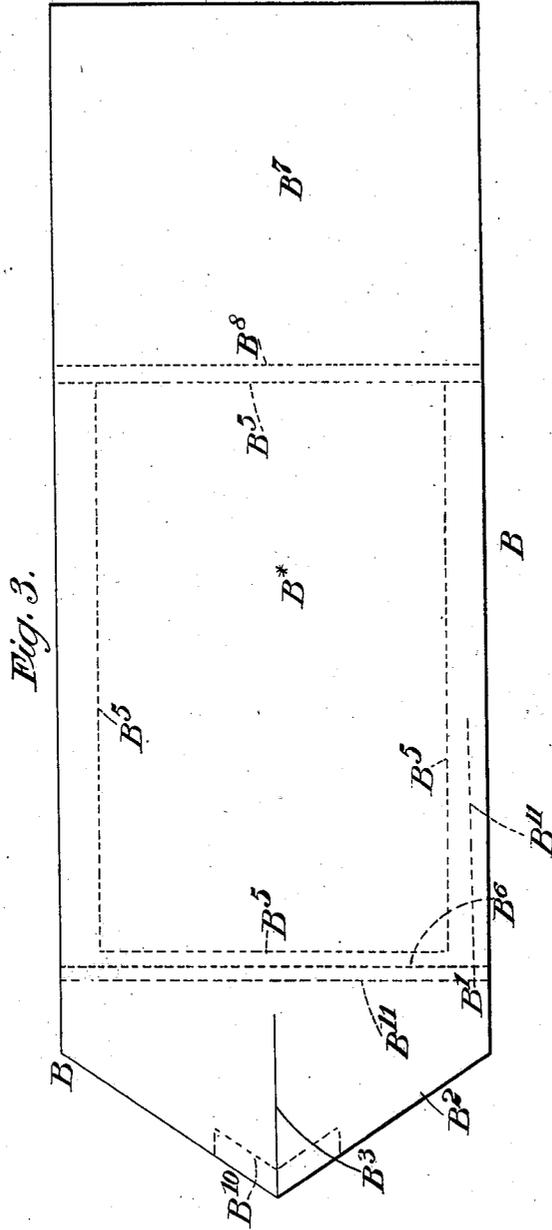
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*Inventor*  
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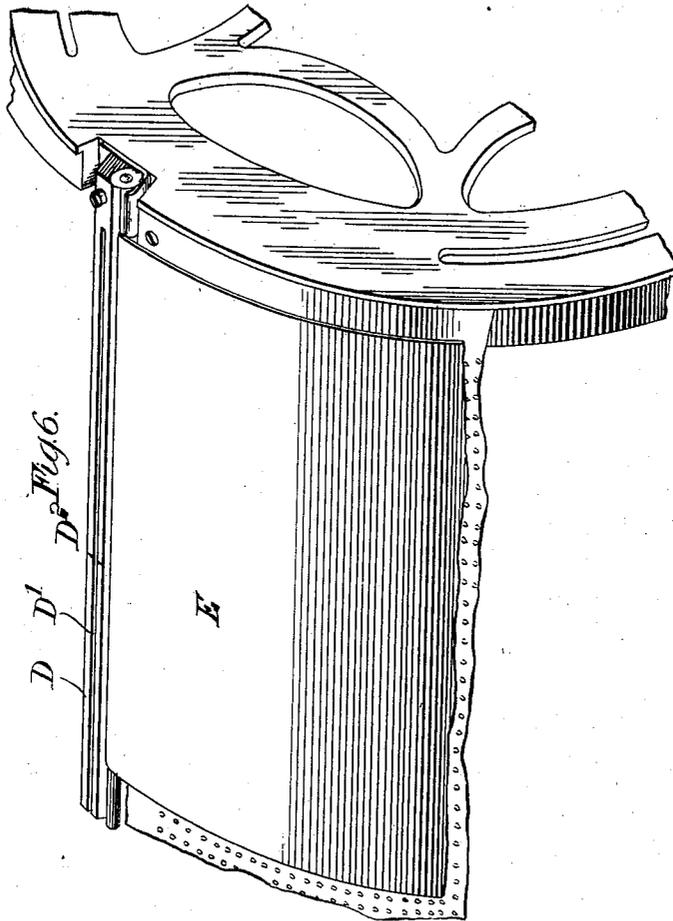
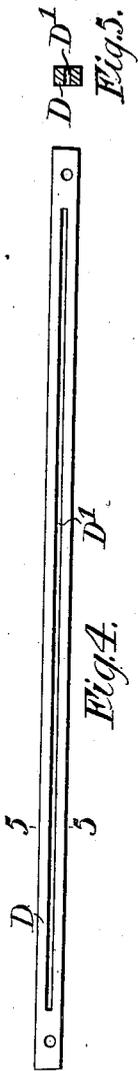
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 by *Wm Robt Taylor*  
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4 SHEETS—SHEET 4.



Witnesses:  
*John Driscoll.*  
*Francis Albert Taylor*

*Augustus David Klaber* Inventor  
 by *Geo. Robt Taylor* Atty.

# UNITED STATES PATENT OFFICE.

AUGUSTUS DAVID KLABER, OF LONDON, ENGLAND, ASSIGNOR TO A. B. DICK COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

## STENCIL-SHEET.

SPECIFICATION forming part of Letters Patent No. 732,564, dated June 30, 1903.

Application filed April 30, 1902. Serial No. 105,329. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUSTUS DAVID KLABER, a subject of the King of Great Britain, residing at London, England, have invented certain new and useful Improvements in Stencil-Sheets, of which the following is a specification.

This invention relates to stencil-sheets and the method of attaching them to duplicating-machines, and has for its object to simplify the arrangement of the stencil-sheet and the backing and protecting sheets necessary for use when producing the stencil.

Further, the intention of the invention is to insure the accurate placing of the stencil-sheet upon the duplicating-machine and the protection of this sheet from undue wear when in position.

A stencil-sheet intended to be used for reproducing type-written matter has commonly to be disposed between a protective sheet of thin paper, which prevents the wax of the stencil-sheet adhering to the types of a type-writing machine, and a backing of some suitable paper or material adapted to receive the portions of wax struck out of the stencil-sheet when the latter is typed upon. According to this invention this backing-sheet or the covering-sheet or the stencil-sheet itself is formed of paper or other material of such a length as to leave a portion which will overlap the upper end of the stencil-sheet and may have another portion which will overlap the lower end of the stencil-sheet. The latter, together with the covering-sheet, is inserted in this backing, the upper ends of both stencil and covering sheets being preferably fastened together and to the upper portion of the backing by some suitable adhesive substance, or if the stencil-sheet is to be prepared by hand the backing and covering sheets are not required when the sheet is being prepared and may be dispensed with, the attaching-flap being attached to or forming part of the stencil-sheet.

The improved arrangement is particularly adapted for stencil-sheets intended to be used with rotary or similar duplicating-machines where the stencil is mounted in such a way as to be brought in contact at a given point with the paper to be printed upon. At

the point where the paper is picked up it is found that such wear of the stencil-sheet takes place as is liable to cause damage and spoil the stencil. In order to obviate this, a row of perforations or similar provision is made in the backing or covering sheet on a line which will lie just beyond the point of pick-up when the stencil-sheet is in the machine, so as to cover up and protect the stencil-sheet at the point where the wear takes place, or if the flap is on the stencil-sheet the latter may be protected as herein-after described. The machine itself in place of the usual clamp for holding the end of the stencil-sheet is provided with a bar in which is a slot. That portion of one of the sheets which normally overlaps the top of the prepared stencil-sheet is intended to be passed through the slot in this bar on the machine and when so passed through is drawn upon until the stencil-sheet lies in the proper place, as determined by registering lines or other marks or by a limiting projection on the stencil-sheet or backing, which prevents the flap being drawn too far. This flap is now folded back on top of the backing and is stuck down, the latter or the edge of the flap being provided with the necessary adhesive to effect this. An indicating central line or equivalent is provided to show where the gummed edge of the flap is to be fastened down and when placed in the reproducing-machine coincides with a line or mark on the bar. In some cases it is desirable to place a thin sheet of tissue-paper under the central sheet in addition to that which lies over it and between the stencil-sheet and the backing.

Referring to the drawings, in which I have shown a convenient form of my invention applied to a stencil-sheet intended to be prepared in a type-writing machine, Figure 1 is a perspective view of a stencil-sheet provided with backing and covering sheets in accordance with this invention. Fig. 2 is a perspective view, to an enlarged scale, showing the sheet attached to the fixing-bar in a duplicating-machine. Fig. 3 is a rear view of the backing-sheet separately. Fig. 4 is a plan of the fixing-bar. Fig. 5 is a sectional view on the line 5 5 of Fig. 4; and Fig. 6 is a perspective view of part of the cylinder of the

duplicating-machine, showing the fixing-bar attached thereto.

A is the stencil-sheet, B the backing-sheet, and C the covering or front protecting sheet. The covering-sheet C is provided at the upper edge of its under surface with adhesive substance, by which it is connected to the stencil-sheet A, and the stencil-sheet is provided with a similar portion coated with the adhesive substance, by which it is connected to the backing-sheet B, or the adhesive substance may be placed upon the backing-sheet. Instead of being attached to each other by adhesive substance the sheets may be otherwise joined, or they may be simply superposed without being attached.

The sheets A, B, and C can be handled and readily inserted into a type-writing machine without being liable to become detached or displaced.

The leading portion B' of the backing-sheet is provided with a triangular part or flap B<sup>2</sup>, as shown, which is folded over in front of the covering-sheet C, and after the stencil-sheet has been written upon or otherwise impressed and is to be inserted in the duplicating-machine this flap is passed through a slot D' in a bar D, (see Fig. 2,) which takes the place of the ordinary clamping device in the reproducing-machine, and is guided to a central position by means of a line B<sup>3</sup> on the flap which coincides with the line or mark D<sup>2</sup> on the bar. The flap is pulled upon until the sheet is in proper position, and it is then folded around the bar D and fastened down onto the sheet by means of adhesive substance B<sup>4</sup>, placed along its edges or otherwise. To prevent the flap being drawn too far through the slot and to determine the exact place where the edge of the flap is to be fastened down, the slot is made of such a width that it only permits one thickness of the paper to pass freely through it, so that the top of the stencil-sheet forms a limiting-stop, or some other device, such as a line or other indicating-mark, may be applied to the backing or stencil sheet for this purpose.

Before the stencil is placed on the machine and after it has been prepared by typing upon it the backing is torn across at the above-mentioned row of perforations near the upper end of the backing, this procedure leaving a portion which overlaps the stencil-sheet for a distance beyond that at which occurs the pick-up of the paper upon which the impression is made. This remaining portion of the backing is that to which the attaching-flap is fastened down when it has been passed through the slot in the attaching-bar on the machine and turned back.

The body or middle part B<sup>x</sup> of the backing-sheet is preferably formed slightly wider than the stencil-sheet and is provided on one or both edges with indicating-scales B<sup>4</sup> or other marks, by means of which the position of the matter to be inscribed on the stencil may be regulated.

In order to insure positioning the matter to be typed upon the stencil-sheet, either the stencil-sheet or the covering-sheet or the backing may carry along one or both edges a scale or a series of numbered or lettered marks or merely a row of numbers, letters, or other indications, which will enable any particular point on the stencil-sheet to be at once identified with a corresponding point on another sheet of paper—say a sheet of note-paper—when the latter is placed opposite the scale or indicating marks. A convenient arrangement for these indicating-marks is to form the backing for the stencil-sheet slightly wider than the stencil-sheet itself, the indicating-marks being located upon each projecting edge of the backing-sheet, so that they can be seen beyond the edge of the stencil-sheet. Indicating-scales may also be provided across the body of the backing-sheet. In the form illustrated the circumscribing or confining lines B<sup>5</sup> or other marks or indicators are placed upon the backing-sheet to indicate the space within which the matter to be inscribed upon the stencil-sheet must be confined. Scales B<sup>6</sup> or other indicating-marks are preferably placed on the backing-sheet as a further guide for the matter to be inserted, or these lines and scales may be placed upon the stencil-sheet or on the covering-sheet. A line B<sup>11</sup> or other mark is placed at or near the top and edge of the sheet to denote the position in the machine of the upper edge of the sheet or paper to be printed upon, and a short distance below this line is a row of perforations B<sup>6</sup>, along which the backing-sheet is torn in order to be detached when the stencil-sheet is to be inserted in the duplicating-machine. The remaining part of the backing-sheet, to which the stencil-sheet is permanently attached, thus projects between the stencil-sheet and the sheet to be printed upon when the latter is picked up by the machine by the distance between the row of perforations B<sup>6</sup> and the line B<sup>11</sup> at the top part of the backing-sheet, and by this means premature wear or damage to the stencil-sheet along the line where the picking up of the sheet to be impressed takes place is avoided and the ink is prevented from passing through the stencil-sheet at this part.

It is found in duplicating-machines of the kind above referred to that the portion of the inked surface which lies near the lower end of the stencil-sheet requires to be covered over in some way in order to prevent the ink from working around the end of the stencil-sheet and marking the paper printed upon or otherwise causing inconvenience. The previously-mentioned portion of the lower end of one of the sheets serves as an ink-protector, and the backing is perforated at a suitable point to enable this protecting-piece to be torn off. This ink-protector can then be placed in position and secured on the duplicating-machine after the stencil has been fixed. This flap B<sup>7</sup> is shown attached

to the lower part of the sheet and is folded in front of the covering-sheet, and a row of perforations B<sup>8</sup> divides this portion from the body part B<sup>x</sup> of the backing-sheet, or this flap may be dispensed with. After the main portion of the backing-sheet has been detached from the stencil-sheet along the row of perforations B<sup>6</sup> the flap part B<sup>7</sup> is disconnected from the backing-sheet along the line B<sup>8</sup> and is then fastened in the reproducing-machine so as to overlap the lower edge of the stencil-sheet, and thereby form an ink-protector to prevent the ink from the ink-pad from working around the end of the stencil-sheet and damaging or marking the paper being printed upon. The bar D may be formed with a second longitudinal slot, through which the end of the ink-pad may be passed to secure it in proper position in the machine. Said machine may also be provided with a detachable ink-pad E.

Instead of being attached to or forming part of the backing-sheet the part by which the stencil-sheet is connected to the bar in the duplicating-machine and that which protects the stencil along the pick-up line may be formed as part of the covering-sheet or may be connected thereto, the three sheets being connected together, preferably as already described, or the stencil-sheet itself may be provided at one of its ends with an overlapping part or flap which can be passed through the slot in the bar to connect the stencil to the machine, this flap having connected to it preferably a part which protects the stencil along the pick-up line.

Instead of being formed separately from the stencil-sheet and connected thereto as above described the flap by which the stencil is connected to the duplicating-machine may be formed as an extension of one end of the stencil-sheet itself. When the flap forms part of the stencil-sheet, an additional piece of paper or other suitable material may be permanently attached to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, or part of the stencil-sheet may be coated with some protective substance or composition. The flap at the lower end of the stencil-sheet, which serves as an ink-protector in a duplicating-machine, instead of forming part of the backing-sheet may be connected to or form part of the covering-sheet or of the stencil-sheet itself.

The arrangement of the stencil-sheet with its backing and covering sheets as above described is more particularly adapted for use when the stencil is to be prepared in a type-writing machine; but in some cases—such, for example, when the stencil-sheet is to be prepared or written upon by hand—that is to say, by employing a stylus or other similar instrument—the covering-sheet need not be employed, and the backing-sheet may also be dispensed with, the flap by which the stencil-sheet can be fixed to the machine being formed integral with the stencil-sheet itself or has a

separate piece connected thereto, as above described. In this case also the part which protects the stencil on the pick-up line may be attached to the flap or to the stencil-sheet, or the sheet may be coated with protective substance in the manner above referred to.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination with a stencil-sheet for duplicating purposes, of a flap by which the stencil-sheet is connected to a bar in a duplicating-machine and means for protecting the stencil on the "pick-up" line substantially as described.

2. The combination with a stencil-sheet for duplicating purposes, of a backing-sheet temporarily secured thereto, and an extension-flap for attachment to a duplicating-machine, substantially as described.

3. The combination with a stencil-sheet for duplicating purposes, of a backing-sheet temporarily secured thereto, a covering-sheet, and an extension-flap for attachment to a duplicating-machine, substantially as described.

4. The combination with a stencil-sheet for duplicating purposes, the same having a strengthened edge, of means located at such edge for attaching said sheet to a duplicating-machine, substantially as described.

5. The combination with a stencil-sheet for duplicating purposes, of an extension permanently secured thereto, substantially as described.

6. The combination with a stencil-sheet for duplicating purposes, of an extension secured thereto and means in operative relation to said extension for attaching said sheet to a duplicating-machine, substantially as described.

7. The combination with a stencil-sheet for duplicating purposes, of backing and covering sheets temporarily secured thereto, an extension-flap on one of the sheets for the purpose set forth, and a protecting-flap overlapping the edge of the stencil-sheet opposite to the extension-flap, substantially as described.

8. The combination with a stencil-sheet, a backing-sheet, and a front covering-sheet, of flaps at both ends of one of the sheets, substantially as and for the purpose described.

9. The combination with a stencil-sheet, a backing-sheet, and front covering-sheet, of a connecting-flap at one end of one of the sheets, an ink-protecting flap carried at the other end of one of the sheets and means for protecting the stencil-sheet on the line of pick-up in the duplicating-machine, substantially as described.

10. The combination with a stencil-sheet, a backing-sheet and a front covering-sheet, of a connecting-flap at one end of one of the sheets, an ink-protecting flap at the other end of one of the sheets and a portion attached to the connecting-flap for protecting the stencil-sheet on the pick-up line in the duplicating-machine, substantially as described.

11. The combination with a stencil-sheet, of a front covering-sheet, a backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine and a connecting-flap attached to this portion, as and for the purpose described.

12. The combination with a stencil-sheet, a front covering-sheet, a backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, a flap connected to this portion for attaching the stencil-sheet to a bar in the duplicating-machine, and an ink-protecting flap connected to the backing-sheet at its other end, substantially as described.

13. The combination with a stencil-sheet, a front covering-sheet, a backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, a flap connected to this portion for attaching the stencil-sheet to a bar in the duplicating-machine, a line B<sup>3</sup> on the flap, and an ink-protecting flap connected to the backing-sheet at its other end, substantially as described.

14. The combination with a stencil-sheet, a front covering-sheet, a backing-sheet, circumscribing-lines on the backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, a flap connected to this portion for attaching the stencil-sheet to a bar in the duplicating-

machine, a line B<sup>3</sup> on the flap and an ink-protecting flap connected to the backing-sheet at its other end, substantially as described.

15. The combination with a stencil-sheet, a front covering-sheet, a backing-sheet, circumscribing-lines on the backing-sheet, scales on the backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, a flap connected to this portion for attaching the stencil-sheet to a bar in the duplicating-machine, a line B<sup>3</sup> on the flap and an ink-protecting flap connected to the backing-sheet at its other end, substantially as described.

16. The combination with a stencil-sheet, a front covering-sheet, a backing-sheet, circumscribing-lines on the backing-sheet, scales on the backing-sheet, lines B<sup>11</sup> on the backing-sheet, a portion of the backing-sheet permanently connected to the stencil-sheet to protect it on the pick-up line in the duplicating-machine, a flap connected to this portion for attaching the stencil-sheet to a bar in the duplicating-machine, a line B<sup>3</sup> on the flap, and an ink-protecting flap connected to the backing-sheet at its other end, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

AUGUSTUS DAVID KLABER.

Witnesses:

WM. J. DOW,

ERNEST F. FOTHERGILL.