

A. B. DICK.  
 STENCIL DUPLICATING APPARATUS.  
 APPLICATION FILED FEB. 19, 1909.

1,001,824.

Patented Aug. 29, 1911.

Fig. 1,

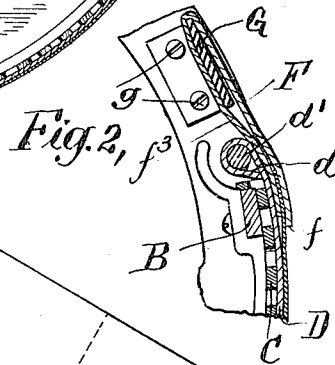
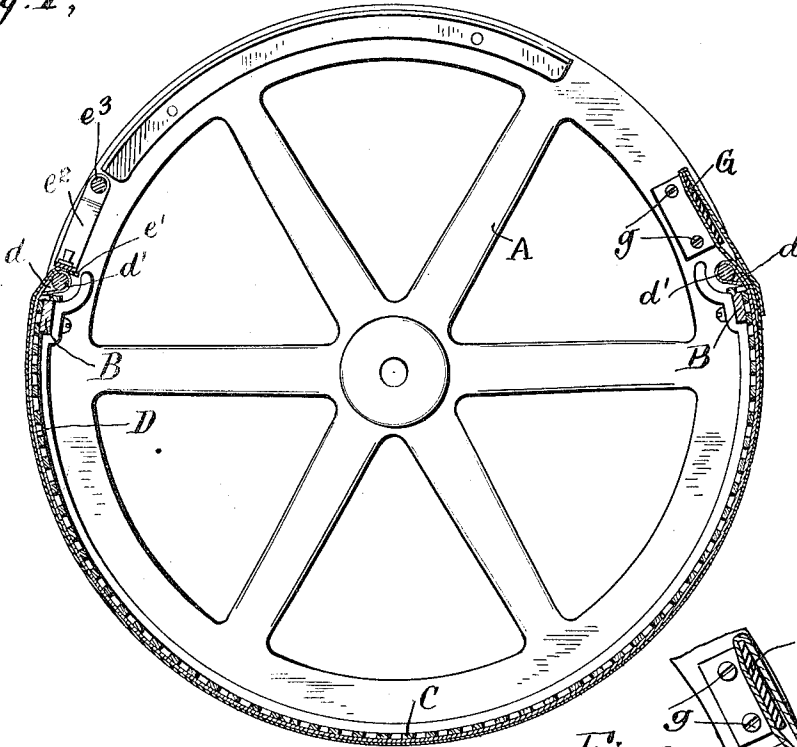
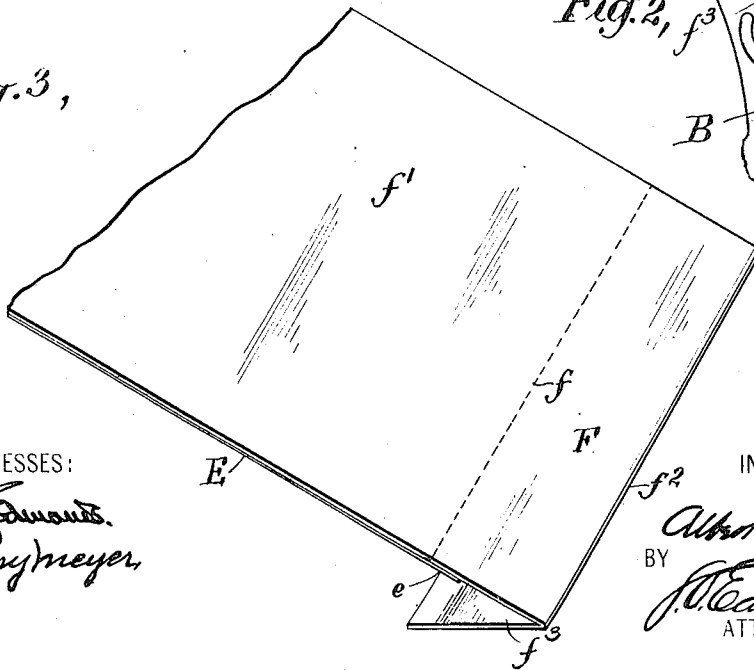


Fig. 3,



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# UNITED STATES PATENT OFFICE.

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## STENCIL-DUPLICATING APPARATUS.

1,001,824.

Specification of Letters Patent. Patented Aug. 29, 1911.

Application filed February 19, 1909. Serial No. 478,857.

To all whom it may concern:

Be it known that I, ALBERT B. DICK, a citizen of the United States, residing at Lake Forest, in the county of Lake and State of Illinois, have invented certain new and useful Improvements in Stencil-Duplicating Apparatus, of which the following is a specification.

The object of the present invention is to improve upon the construction of duplicating apparatus of the character heretofore employed, with respect particularly to the means for securing the stencil in position upon the stencil-carrier. This is accomplished by desirably simplifying both the stencil-sheet or the backing or stub to which it is attached and the coating part of the stencil-carrying drum upon which the stencil is secured for printing.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a cross-section of the stencil-carrying drum of a stencil-duplicator, showing, also in section, the stencil secured in position thereon; Fig. 2 is a detail view, illustrating on enlarged scale the coaction of the forward end of the stencil-sheet and its coating securing means; and Fig. 3 is a perspective view, illustrating a preferred form of stencil-sheet with its attached backing.

Referring to these drawings, A designates one of the two heads of a stencil-duplicating machine, connected by means of the tie-bars B, B, and the foraminated stencil-carrier C.

D designates the ink-pad. This is here shown as provided at its ends with loops  $d$  through which pass the securing rods  $d'$ , the ends of which are received in recesses or notches in the heads A, whereby the ink-pad is held snugly against the periphery of the stencil-carrier C.

E designates the stencil-sheet proper, which may comprise the usual paper base coated or impregnated with a waxy material. One or both of the ends of such stencil-sheet may be directly secured to the drum in manner hereinafter described, but I prefer to provide at least the forward end with a reinforcement, either in the form of a stub to which the forward end of the sheet is secured, or a backing of stouter material than the stencil-sheet itself and which will itself perform the function of a stub, as well as the additional function of preserving the

stencil-sheet against injury until the same shall have been placed in position on the drum. In the drawings, I have illustrated the construction last referred to, the forward edge  $e$  of the stencil-sheet being secured by any suitable means, such as an adhesive substance, to the surface of a backing-sheet F. The latter may, if desired, be provided with a weakened portion  $f$ , such as a line of perforations or indentations, indicating the point at which the body  $f'$  of the backing-sheet is to be torn away after the stencil-sheet shall have been placed in position on the stencil-drum. The forward edge of the backing sheet is folded at  $f^2$  backwardly upon itself or upon the forward edge  $e$  of the stencil-sheet E, forming the flap  $f^3$ .

Extending between, and preferably secured by means of screws or rivets  $g$  to, the heads A, is a cross-bar G. This is arranged adjacent to any other suitable part of the mechanism extending between the heads A in position to coact with the stencil-sheet and the cross-bar G to hold the former in position. In the present instance, I have shown said cross-bar G as arranged adjacent to one of the pad-rods  $d'$  and one of the tie-bars B.

In order to secure the forward end of the stencil-sheet in position, it is only necessary to place the stencil-sheet flap downward upon the drum in advance of the cross-bar G and to move the same backward so that said bar shall lie within the fold of said stencil-sheet. The flap  $f^3$  is then brought between the bar G and the rod  $d'$ , so as to overlie the latter and, preferably, a part of the stencil-carrier C. Upon drawing the stencil-sheet taut upon the periphery of the drum, the pressure thereof upon the flap  $f^3$  firmly binds the latter between it and either the pad-rod  $d'$  or the carrier, thereby precluding disarrangement during the printing operation.

It is obvious that the operation of attaching the stencil-sheet as just described is the same whether said sheet be or be not provided with a backing such as the part F. It is essential only that the forward end either of the stencil-sheet or of a part to which it is attached be provided with the flap above described, so that the same may, when the stencil-sheet is in position, be clamped against a part of the duplicator-drum. Both because it serves to strengthen

the forward end of the stencil-sheet and to preserve the body of such sheet against injury during the operation of adjusting it upon the drum, I prefer, as above stated, to use the backing *F*, and where this is employed the flap may conveniently be made in the backing, rather than in the stencil-sheet. Such a backing-sheet commonly forms part of the stencil-sheet, and it is to be understood therefore that in the claims hereof the term "stencil-sheet" is intended to include either the waxed sheet alone or such a sheet with a suitable strengthening member, such as a backing, secured thereto, it being immaterial, for the purposes of this invention, whether the flap be made in the waxed sheet or in a suitable appurtenance thereof, such as the projecting end of a backing-sheet.

The rearward end of the stencil-sheet may be secured upon the drum in any suitable manner. I have here shown such rearward end *e'* as clamped against one of the pad-  
 rods *d'* by means of the bail *e<sup>2</sup>* pivoted at *e<sup>3</sup>*.

As will be seen, the invention above described is of great simplicity, there being no movable part upon the stencil-drum, such, for instance, as a clamp, for securing the forward end of the stencil-sheet in position.

The provision of the flap, and its arrangement so as to lie between the body of the stencil-sheet and a fixed part of the drum and be held thereby against displacement, make such movable part unnecessary, and in addition facilitate, as well as simplify, the operation of applying the stencil-sheet to

the drum. Where, as in its preferred form, the stencil-sheet is provided with a backing of the character described, this is removed after the stencil-sheet has been placed in position, by severing the same at a suitable point, as, for instance that indicated by the dotted line *f*.

Having now described my invention, what I claim as new therein and desire to secure by Letters Patent is as follows:—

In duplicating apparatus, the combination of a drum having heads and a foraminated stencil-carrier secured to the heads and extending about a portion of the cylindrical surface of the drum, a cross-bar extending between the heads adjacent to one edge of the carrier, a rod extending between the heads and lying between the cross-bar and the adjacent edge of the carrier, and a stencil-sheet having a backwardly folded portion at its forward edge disconnected from the sheet except at said edge, said portion and the body of the sheet lying on opposite sides of the cross-bar to secure the sheet to the drum, the extremity of said portion overlying said rod and said rod being disposed at such a distance from the center of the drum that the extremity of said portion is gripped between the rod and the body of the stencil-sheet, substantially as set forth.

This specification signed and witnessed this 9th day of February, 1909.

ALBERT B. DICK.

Witnesses:

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