

March 9, 1926.

1,575,718

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STENCIL SHEET FOR ROTARY DUPLICATING MACHINES

Filed June 16, 1925

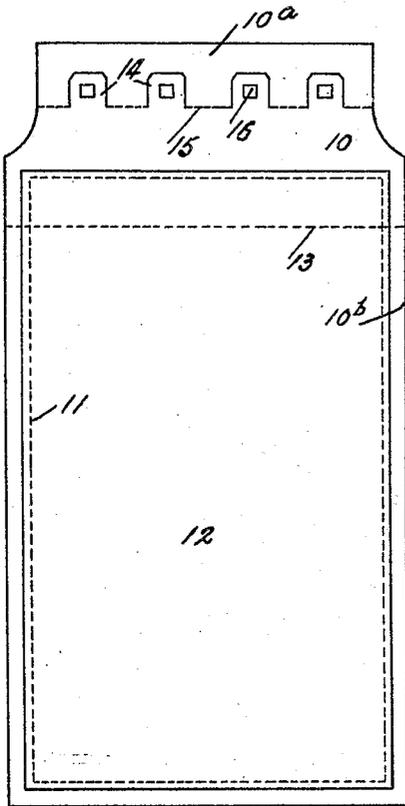


Fig. 1.

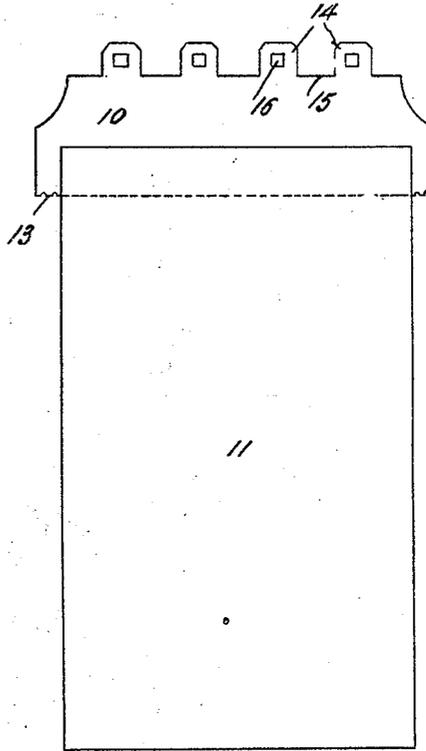


Fig. 2.

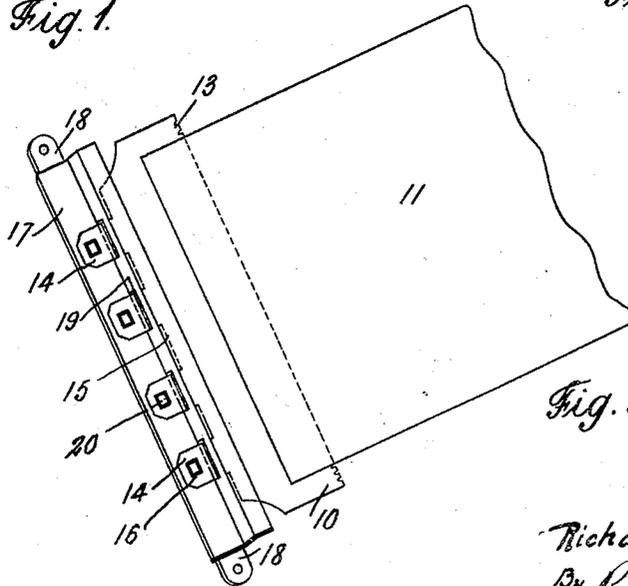


Fig. 3.

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Patented Mar. 9, 1926.

1,575,718

# UNITED STATES PATENT OFFICE.

RICHARD COBDEN ROGERS, OF LONDON, ENGLAND.

STENCIL SHEET FOR ROTARY DUPLICATING MACHINES.

Application filed June 16, 1925. Serial No. 37,561.

To all whom it may concern:

Be it known that I, RICHARD COBDEN ROGERS, a subject of the King of Great Britain, residing at 45 Clissold Road, Stoke Newington, London, N. 16, England, Great Britain, engineer, have invented certain new and useful Improvements in Stencil Sheets for Rotary Duplicating Machines, of which the following is a specification.

10 The present invention relates to improvements in stencil sheets for rotary duplicating machines, and has for its object to improve upon the means for attaching the said sheets to the printing cylinder.

15 As is well known, the support or backing for the stencil proper has a head piece in which has been punched a series of holes or slots for securing the stencil with its support on studs or pins on a bar carried by the printing cylinder; or the head or top edge of the support has been fashioned with open ended L shape slots the open ends being engaged against studs in a bar attached to the printing cylinder and afforded a lateral movement so that the studs secure the stencil with its headed support over the pad secured to the perforated segment.

In stencils attached to the machine by holes or slots in the headed support no provision has been made for guiding the stencil support on to the studs and such a feature is advantageous in that skill and care is required owing to the fragile nature of the stencil material and also the fact that unless exact registration of the holes in the headed support with the studs is made the holes or slots may be widened and thus produce faulty alignment of the stencil sheet with the printing surface. Furthermore, it is usually necessary after securing the stencil on its supporting bar and allowing the stencil material to adhere to the pad carried by the perforated segment, to raise the stencil from the pad to allow air bubbles to escape. It sometimes happens that in raising the stencil from the pad it is entirely removed from the machine owing to the slots or holes in the stencil support slipping over the studs or pins. Similarly, where open ended stencil supports are used considerable care is required as the studs or pins on the bar are enclosed between two metal surfaces and there is no guiding means for entering the open slots on the enclosed pins, and after the open ended slots have engaged with the pins a lateral movement of the stencil with

its support is necessary so that the pins or studs engage with the ends of the slots.

Now the present invention has for its object to construct stencil sheets in such a manner that immediate and accurate attachment of the stencil with its support to the machine is assured, the construction being such that when raising the stencil from its pad risk of detaching the sheet completely from the machine is eliminated.

The invention consists primarily of a stencil sheet the support or backing for which is provided in its headed portion with a series of tabs or projections having holes or slots formed therein, the sides of the tabs or projections acting as guides for entering the holes or slots in the tabs on the studs, pins, hooks or other supports formed on or secured to the bar attached to the printing cylinder.

The tabs or projections are preferably formed somewhat below the top edge of the headed support so that the stencil with its support may be used in a typewriting machine to cut the stencil without fear of damage being caused to the tabs.

The invention will now be further described with reference to the accompanying drawings whereon:—

Fig. 1 is a plan view of a stencil sheet for rotary duplicating machines.

Fig. 2 is a plan view of the stencil sheet made ready for use.

Fig. 3 is a perspective plan view of the stencil sheet applied to the carrier of a rotary duplicating machine.

On the drawings the complete backing sheet, formed from stout paper or similar material, comprises the parts 10, 10<sup>a</sup>, and 10<sup>b</sup>, the stencil sheet 11 and protecting sheet 12 being applied to the part 10 in the usual manner above the line of perforations 13. The head portion 10 of the backing sheet is formed with a series of tabs or projections 14 cut out of the backing sheet and surrounded by the part 10<sup>a</sup> which is united to the part 10 by the series of perforations or creased lines 15 formed between the side edges of the backing sheet, and the bases of the outer tabs as well as between the tabs. Each tab is provided with a hole or slot 16 for attaching the stencil and the part 10 of the backing sheet to the carrier or bar of the rotary duplicating machine. In Fig. 3 is shown a stencil carrier 17 adapted to be secured to the side frames of a rotary dupli-

cating machine by means of the lugs 18 which are pierced for the reception of screws. The said carrier is provided with slots 19 for the reception of the tabs 14, and pins, studs, or other projections 20 over which the holes or slots 16 engage.

In use the stencil sheet with the complete support shown in Fig. 1 is passed into a typewriting machine the headed portion 10<sup>a</sup> of the backing sheet protecting the tabs 14 formed on the part 10. The stencil is then cut in the well known manner and is removed from the machine. The protecting sheet 12 is next stripped off the stencil, and the part 10<sup>a</sup> is then removed from the part 10 by tearing along the line of perforations 15, or it may be folded over against the back of the part 10. The stencil 11 with its support 10<sup>b</sup> and 10 is now introduced into the rotary stencil duplicating machine, the exposed tabs being passed through the slots 19 of the carrier 17 and the holes 16 in the tabs passed over the pins or studs 20. The part 10<sup>b</sup> is now removed from the part 10 by tearing away along the lines of perforations 13 and the prepared stencil sheet is placed in contact with the inked pad secured on the perforated segment of the machine.

As is well known air bubbles collect between the stencil and the pad generally near the point of junction between the stencil and its support and consequently after the initial adherence of the stencil to the pad it is customary to raise the stencil from the pad and smooth out the bubbles of air which have formed. In stencils of known type considerable care is necessary when raising the stencil and it frequently happens that when lifting the stencil its support is entirely lifted off the pins or studs.

In the present case the tabs 14 prevent complete removal of the stencil from the machine as the bases of the tabs abut against the top edges of slots 19 of the carrier when the sheet is raised. Moreover, the tabs act as guides when introducing the stencil on to the carrier of the machine and the sides of the tabs prevent lateral movements of the part 10 and consequently the stencil sheet secured to it.

The invention is in no way limited to any particular number of tabs or to their outline or the shape of the holes or slots formed therein as such will be governed by the number of slots formed in the carrier or bar or by other conditions.

Again in some types of stencil sheets the support or backing sheet is extended beyond the bottom edge of the stencil proper and is perforated so that a portion can be removed and inserted on studs formed on a bar or carrier fitted to the machine at the other ex-

trinity of the perforated segment. In such types of stencils the bottom or free edge of the stencil material overlaps the perforated edge of the removed portion of the backing sheet and thereby prevents ink from smearing the printed sheets below the extremity of the stencil. Consequently, when desired stencil sheets may be constructed with tabs or projections at the top and also at the bottom to meet such requirements. In this case however provision need not be made for cutting the tabs at a point above the bottom of the sheet.

Having thus described my invention, what I desire to secure by Letters Patent of the United States is as follows:—

1. A stencil sheet for rotary duplicating machines, including a backing sheet capable of attachment to the studs of the carrier of a printing cylinder, and means at one end of said sheet for guiding the same on to said studs.

2. A stencil sheet for rotary duplicating machines, including a backing sheet capable of attachment to the studs of the carrier of a printing cylinder, and a series of tab-like projections formed in the headed portion of said sheet and having perforations formed therein, the sides of the tabs acting as guides for entering the perforations in the tabs on the studs of the carrier.

3. A stencil sheet for rotary duplicating machines, including a backing sheet, a series of tab-like projections formed in its headed portion and having perforations formed therein, and a protective portion for said tabs forming part of said headed portion to afford protection for the tabs when passing the stencil sheet into a typewriting machine to cut the stencil.

4. A stencil sheet for rotary duplicating machines, including a backing sheet, a series of tab-like projections formed in its headed portion somewhat below the top edge of said portion and having perforations therein, and series of perforations extending across the backing sheet between the bases of the tabs to expose the tabs for attachment to the carrier of a printing cylinder.

5. In a rotary duplicating machine, the combination with a printing cylinder, and a carrier therefor having studs and slots; of a stencil sheet including a backing sheet formed with a series of tab-like projections in its headed portion receivable in the slots in said carrier, and said projections having perforations therein for receiving the studs on said carrier.

In testimony whereof, I have affixed my signature.

RICHARD COBDEN ROGERS.