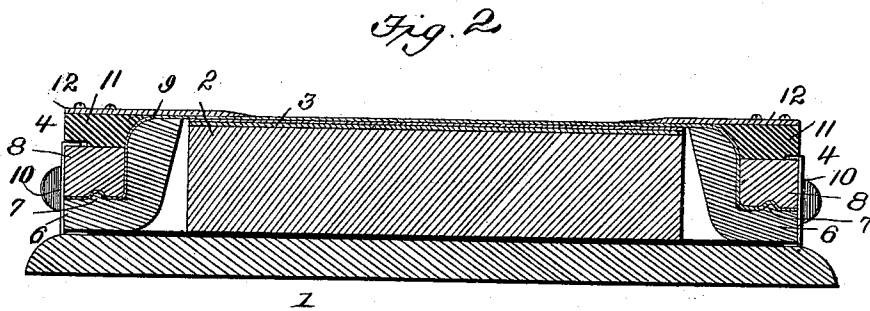
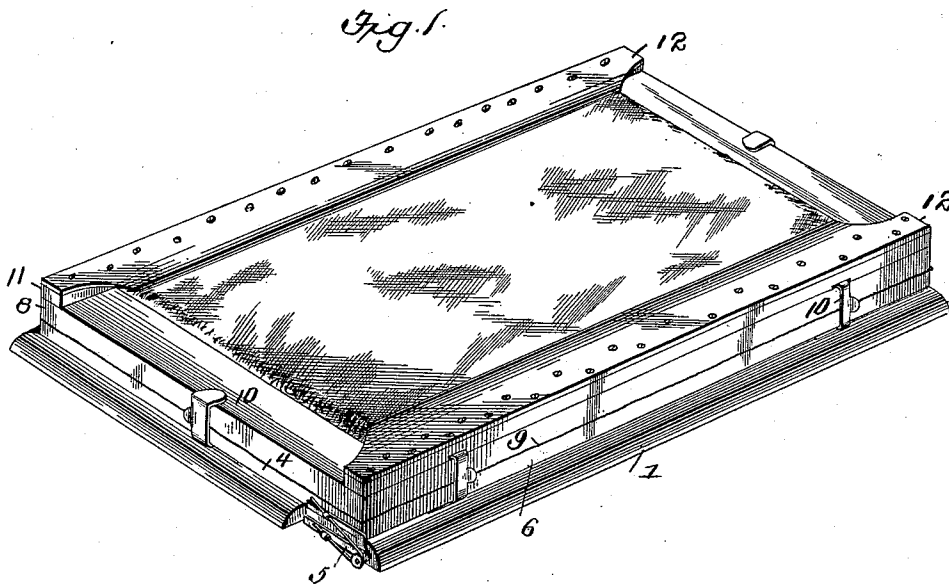


(No Model.)

A. D. KLABER.
DUPLICATING APPARATUS.

No. 540,862.

Patented June 11, 1895.



Witnesses

John T. Davis
Chas. T. Davis, Jr.

Inventor

A. D. Klaber

By *Davis & Co.*
Attorneys

UNITED STATES PATENT OFFICE.

AUGUSTUS D. KLABER, OF NEW YORK, N. Y.

DUPLICATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 540,862, dated June 11, 1895.

Application filed August 25, 1894. Serial No. 521,327. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS D. KLABER, a subject of the Queen of Great Britain, residing at New York, in the county of New York and State of New York, have invented a certain new, useful, and valuable Improvement in Duplicating Apparatus, of which the following is a full, clear, and exact description.

My present invention relates to an improvement in duplicating apparatus and particularly to that class of duplicating apparatus which employs a perforated waxed stencil sheet, over which an inked roller is passed, such as the neostyle, &c.

The object of my invention is to provide means whereby the inking roller is prevented from inking the stencil beyond the lines of writing.

As a further object my invention provides an apparatus wherein a stencil sheet of about the same width of ordinary letter paper may be employed, thus obviating the necessity of folding the stencil sheet at its sides in order to pass it through an ordinary type-writing machine.

As a further object my invention provides a duplicating apparatus which is adapted to employ a permanently stretched porous protecting sheet in lieu of using and consuming a separate protecting sheet with each stencil, and which also results in a saving of time over stretching a separate porous sheet each operation.

As a further object my invention provides an apparatus which is not only practical and economical in construction in itself, but which effects a saving in material, owing to the reduced size and quantity of material employed therewith.

I attain these objects by the construction and arrangement of parts as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of my improved apparatus. Fig. 2 is a cross-sectional view of the same.

Corresponding numerals of reference indicate the same parts in the two views.

My duplicating apparatus consists essentially of two parts, viz: the base 1, having the raised portion 2, which is surmounted by a zinc plate 3; and the frame 4, hinged to the

said base by the spring hinges 5, which keep the said frame normally opened or lifted. The said frame 4, consists of a lower part 6, secured by said hinges and having a tongue 7, and of a removable upper part 8 grooved upon its under surface and adapted to set over the said lower part and in conjunction therewith it stretches and holds in position a porous protecting sheet 9, preferably of silk gauze. The clamps 10, pivoted to the lower part, serve to hold the upper part in position and prevent the protecting sheet from becoming loose. In order to remove said protecting sheet for the purpose of renewing or cleaning, which is only necessary at long intervals, it is only necessary to unfasten the clamps 10 and lift off the upper part of the frame, when the sheet can be removed. Upon the two sides of the upper part 8, of the said hinged frame 4, I secure elastic or rubber strips 11, surmounted by inwardly extending metallic strips 12, preferably made of very thin spring brass. The apparatus is now ready for the wax stencil sheet, and at this point it is well to explain that heretofore it has been necessary to use very wide waxed paper for the stencil sheet for use with all of the standard duplicating apparatus such as the neostyle, mimeograph, &c., in which apparatus the stencil sheet, especially when made with a type-writing machine, together with a porous sheet laid over it, had to be of sufficient width and length to extend beyond the edges of the printing plate 3, and be secured between the upper and lower parts, 6, 8, of the hinged frame 4. With the present apparatus the stencil sheet may not be larger than the printing plate 3, thus allowing it to be run through and perforated by an ordinary type writing machine without the necessity of folding and creasing it at either side. Taking a stencil sheet 3, of about the size of a letter sheet, which stencil may contain the perforations made by either a type writing machine, neostyle, pen or stylus, it is pressed against the under side of the protecting sheet 9, to which it adheres owing to the sticky nature of the waxed paper and to the ink which permeates through the said porous sheet. In applying the stencil sheet it is necessary to raise the frame 4.

A sheet of paper to be printed is now laid upon the printing plate 3, the frame 4 closed,

and an inked roller passed over the porous sheet 9, through which the ink readily passes, as also through the perforations previously made in the stencil sheet, upon the paper underneath, leaving thereon an impression of the characters placed upon the stencil sheet, the action of the ink in this particular being identical with that of other duplicating apparatus such as the neostyle, &c; but the roller instead of inking the entire surface of the stencil or the protecting sheet, as in other like apparatus, is only permitted to ink the stencil to a width about equal to the longest type-written line, or between the metallic strips 12.

Another important advantage of the elastic metal strips 12 is that they permit a pile of blank paper, say one hundred sheets or more, to be placed upon the printing bed at once, instead of laying one sheet on at a time, the sheets being removed from the top of the pile as fast as printed. In printing from a pile of paper the elasticity of the metal strips permits the printing frame and the stencil to settle down squarely on the top sheet.

Numerous changes may be made without avoiding the spirit of my invention. For instance, I may dispense with the rubber strips 11 and depend upon the elasticity or spring of the metal strips, 12, alone.

Having described my invention, what I claim as new, and desire to cover by Letters Patent, is—

1. In a duplicating apparatus, the combination with the base plate, of a frame hinged to said base-plate, and a flexible strip secured to each side of the frame and extending inward over the edges of the latter, substantially as described.

2. In a duplicating apparatus, the combination with the frame thereof, an elastic strip secured to each side of the frame, and flexible strips secured to the elastic strips, said flexible strips extending inward a short distance, substantially as described.

3. In a duplicating apparatus, the combination with a two-part frame, of a porous protecting strip stretched between the parts

of said frame, and a flexible strip secured to each side of the frame and extending inwardly and covering the side edges of the porous strip, substantially as described.

4. In a duplicating apparatus, the combination with the two-part frame thereof, of a porous protecting sheet stretched between the parts of said frame, elastic strips secured to the top sides of one of the frames, and a flexible strip secured to each elastic strip, said flexible strips extending inwardly over the edges of the frame, substantially as described.

5. In a duplicating apparatus, the combination with the base plate having a raised central portion, of a two-part frame hinged to said base-plate, a bead projecting outward from one of the frame sections, a groove formed in the other section and registering with the bead, means for locking the sections together, a porous protecting sheet stretched and held between the frame sections, and a flexible strip secured to the top portion on each side of one of the frame sections substantially as described.

6. In a duplicating apparatus, the combination with the base plate, of a frame hinged to said base-plate, a porous sheet carried by the frame, and a flexible strip secured to each side of the frame and extending inward over the edge of the frame above the porous sheet, substantially as described.

7. In a duplicating apparatus, the combination with the base plate having a raised central portion, of a frame hinged to said base-plate and surrounding the raised portion a porous protecting sheet carried by the hinged frame, and a flexible strip secured to each side of the hinged frame above the porous sheet and extending inward over the edges of the frame and raised central portion, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

AUGUSTUS D. KLABER.

Witnesses:

J. GUMBERT.

N. S. NEMMARK.