

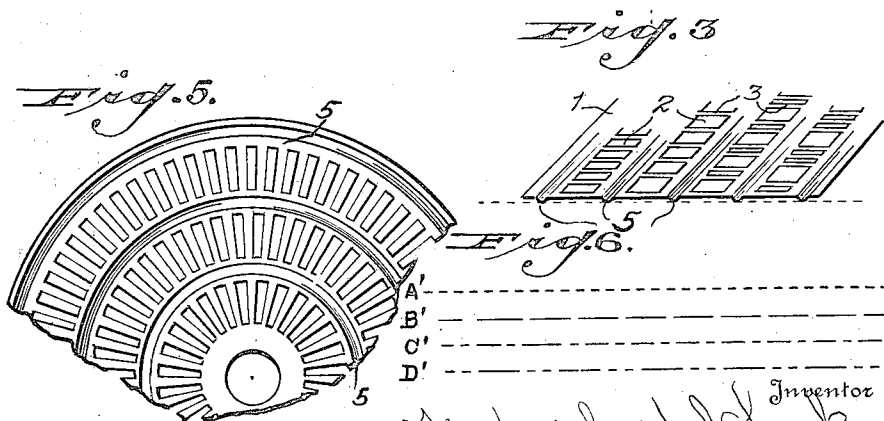
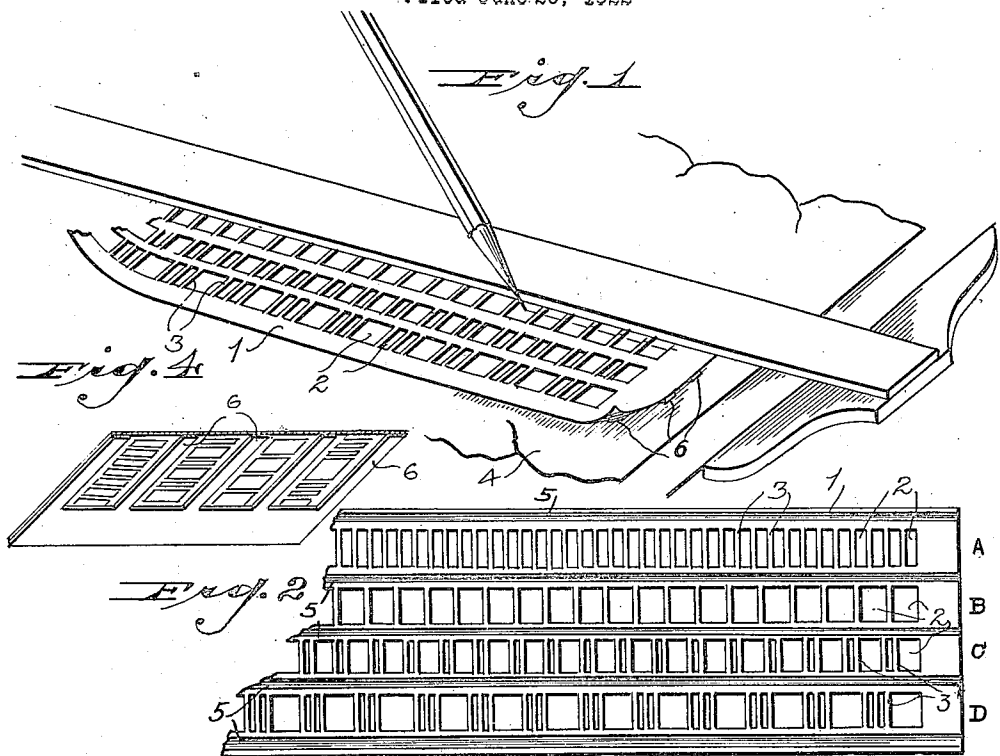
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F. A. CLARK

DRAFTING DEVICE

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UNITED STATES PATENT OFFICE.

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DRAFTING DEVICE.

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My invention relates to drawing instruments and more particularly to a device for quickly producing uniformly spaced broken lines, such as dotted lines, dash lines and dot and dash lines.

Fig. 1 is a perspective view showing the drafting mask forming the subject matter hereof, applied to a drawing and illustrating the manner of producing broken or dotted lines thereby. Fig. 2 is a plan view of a portion of the mask forming the subject matter hereof. Fig. 3 is a detail perspective view. Fig. 4 is a similar view of a modification. Fig. 5 shows a mask adapted for drawing dotted curved lines. Fig. 6 is a group of broken lines of different characteristics produced by the device forming the subject matter hereof.

Like parts are indicated by similar characters of reference throughout the several views.

The present invention is of extremely simple character, comprising a piece of sheet material 1, having therein a plurality of perforations 2 arranged in rows and uniformly spaced one from the other. The sheet 1 may have therein one or more rows of perforations, which perforations may be of different sizes, or may be grouped in various combinations. For convenience and to afford a range or latitude whereby the device need not be so accurately positioned, the perforations 2 are preferably a succession of slots. The width of the slots is approximately equivalent to the length of the dash or mark to be produced, while the intervening bridging portions 3 are substantially equal in width to the intervening spaces between the succession of dots and dashes comprising the broken line. In practice, the slots 2 are made slightly wider than the length of the desired dash, while the intervening protective or bridging portion 3 are slightly less in width than the desired spaces, to allow for the rise and drop of the pen or pencil when passing into and out of the slots or perforations 2. In the plan view Fig. 2, the perforations have been shown arranged in four series or rows. The row A comprises a succession of slots of equal width, spaced equal distances apart, and serve to produce a dotted line of the character illustrated at A', in Fig. 6. The second row of perforations are slots of greater width than those of the

initial series, and are for the purpose of producing a dash line, such as shown at B' in Fig. 6. In the drawing, the perforations of the second series B, have been shown equivalent to two of the initial slots A, with the intervening protective portions or bridging strips 3 removed. The third series or row of perforations shown in Fig. 2 and indicated at C, comprises a combination of the holes or perforations of the rows A and B, arranged alternately. This combination produces an alternating dot and dash line, shown in Fig. 6 at C'. The final row or series of perforations D in Fig. 2 comprises one large perforation, alternating with two of the narrow slots or perforations, and enables the production of a dash and double dot line shown at D' in Fig. 6. It will be understood that the extent of the slot or perforation and also the width of the intervening protective or bridging portion may be varied according to the whim of the draftsman or the condition of use.

In using this drafting mask, the perforated sheet is superposed upon the drawing surface 4, as shown in Fig. 1 and a straight edge, T-square, triangle or other template is laid upon the mask 1, with its edge alined with or intersecting the selected series or row of perforations. A marking instrument such as a pencil or pen is drawn along the edge of the T-square or template in the usual manner, just as a draftsman would proceed in making a continuous or solid line. This line intersecting the succession of perforations or holes, the drawing instrument will intermittently engage the drawing surface 4, through such holes 2 of the sheet 1 thereby marking the drawing surface at spaced intervals, the intermediate portions of the line being received upon the protective or bridging portion 3 of the mask. While an ordinary flat sheet of material perforated as described may be successfully employed, not only with pencil, but also with a ruling pen for drawing ink lines by exercising a reasonable amount of care, there has been shown in Figs. 3 and 4, means by which the protective portion or bridging strips 3 of the mask are elevated slightly above the drafting surface 4. This may be effected by forming in the mask or sheet 1, crimps or beads 5, parallel with the rows of perforations. These crimps or beads 5, resting upon the drafting surface

4 will support the bridging portions or protective portions 3 slightly above the surface 4. The material of the strip being flexible or elastic will readily yield as the pen or pencil
5 passes thereover, and will immediately spring up to avoid blotting the line when ink is being employed. In Fig. 4 there are shown auxiliary strips 6, in the form of elongated cleats
10 cemented to the underside of the mask forming spaced supports in lieu of the crimps or beads 5. These strips or cleats 6 perform a like function of elevating the protective portions of the mask. However, as before
15 mentioned, by exercise of reasonable care in drawing ink lines, such elevating supports may be entirely dispensed with. For the purpose of producing curved lines of broken
character, a sheet may be provided as shown in Fig. 5, having therein rows of perforations
20 concentrically arranged. This sheet may be either circular or sector shape in form, and is either provided with a central enlarged opening for the center leg of the compass, or if a sector shape sheet, it may be truncated at its point or center. This will enable
25 the mask to be shifted to and fro within limited range in relation with the center from which the curved line is to be drawn, to bring the arcuate perforation into proper relation upon the drawing. While several
30 forms and proportions or perforations have been shown it is obvious that these may be multiplied and grouped with endless variety.
From the above description it will be apparent that there is thus provided a device
35 of the character described possessing the particular features of advantage before enumerated as desirable, but which obviously is susceptible of modification in its form,
40 proportions, detail construction and arrange-

ment of parts without departing from the principle involved or sacrificing any of its advantages

While in order to comply with the statute the invention has been described in language
45 more or less specific as to structural features, it is to be understood that the invention is not limited to the specific details shown, but that the means and construction herein disclosed comprises the preferred form of several
50 modes of putting the invention into effect and the invention is therefore claimed in any of its forms or modifications within the legitimate and valid scope of the appended claim.

Having thus described my invention, I
55 claim:

An article of manufacture comprising a normally flat strip of thin flexible transparent material having therein a series of spaced
60 perforations arranged in rows and longitudinally disposed crimps formed intermediate the rows of perforations and extending substantially parallel therewith and forming integral ribs normally supporting the perforated
65 portions of the strips in slightly elevated position, the strip being adapted to be slidably inserted edgewise intermediate a straight edge and a drafting surface to such extent that the directing margin of the
70 straight edge will intersect said perforations, the perforated portions of the strip intermediate the longitudinal crimps being depressible into contact with the drafting surface, whereby a line drawn along the straight
75 edge will be produced intermittently upon the drafting surface.

In testimony whereof, I have hereunto set my hand this 16th day of June, A. D. 1922.

FREDERICK A. CLARK.