

Aug. 6, 1946.

L. B. CORBETT

PRINTING SCREEN

Filed Nov. 10, 1944

2,405,291

FIG. 1.

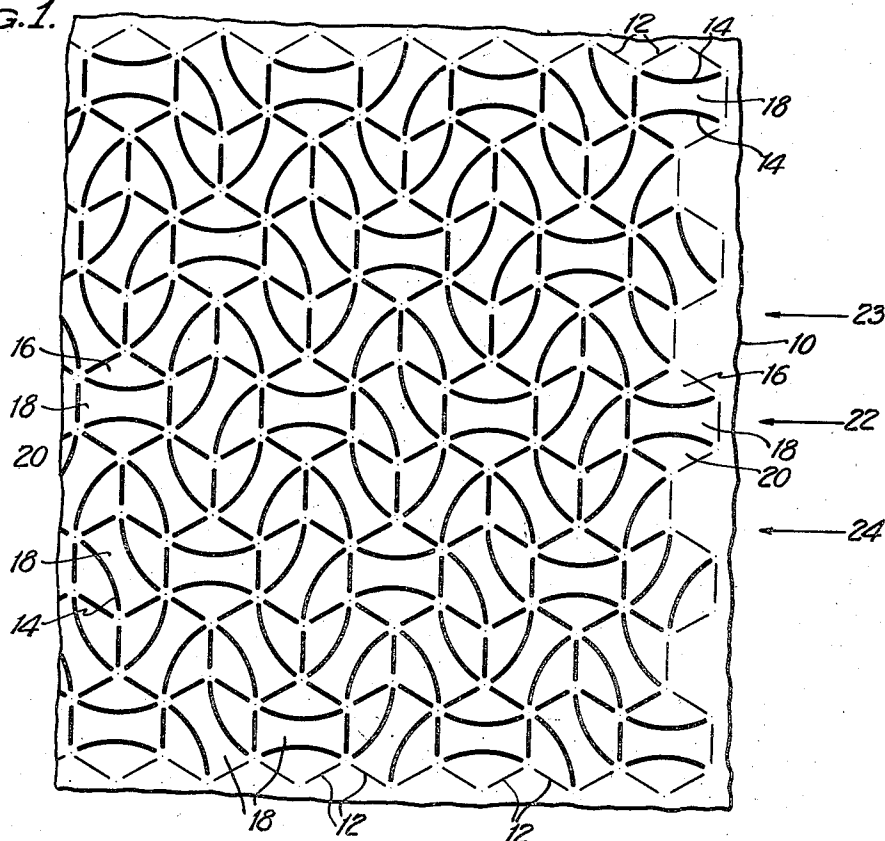


FIG. 2.

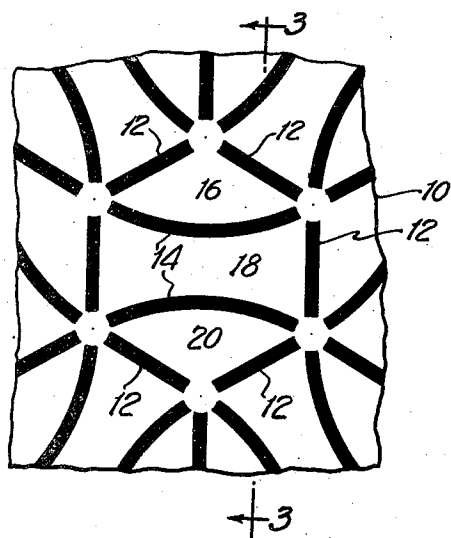
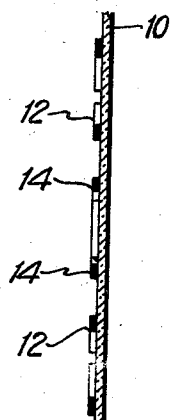


FIG. 3.



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2,405,291

PRINTING SCREEN

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Application November 10, 1944, Serial No. 562,888

3 Claims. (Cl. 95—81)

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This invention relates to printing screens and more particularly to screens employed in the processes of gravure printing.

The principal object of the invention is to provide an improved screen in which a novel cellular arrangement results in greatly improved printing.

In the art of gravure printing the type or characters to be printed are etched into the surface of the printing plate or cylinder, and there is superimposed a design composed of a varied number of ink cells produced by a screen. There are a variety of screens in existence for obtaining this cellular design, none of which cover all patterns satisfactorily so that sometimes four or five different screens are cut in on a single type in order not to lose detail in various sections.

The present invention provides a screen of such configuration that the use of multiple screens is obviated in that the cellular arrangement of the screen of this invention is such as will preserve the detail of any design.

Other objects of the invention will be pointed out in the following description and claims and illustrated in the accompanying drawing, which discloses, by way of example, the principle of the invention and the best mode, which has been contemplated, of applying that principle.

In the drawing:

Fig. 1 is a greatly enlarged section of the screen.

Fig. 2 is a still more greatly enlarged section of the screen.

Fig. 3 is a sectional view taken on lines 3—3 of Fig. 2.

In its preferred form the screen comprises a sheet of transparent film designated 10 in the drawing, upon which there is formed in opaque outline an arrangement of cells grouped in sets of three. In Fig. 2 is shown one such group of three cells formed within the outlines of a hexagon described by lines 12, which hexagon is divided into three cells 16, 18 and 20 by two curved lines 14. It will be noted that the apexes of the hexagon are open, that is, the lines 12 terminate just short of the points of intersection of intersecting lines to thus allow communication between adjoining cell areas 16, 18 and 20.

In the formation of the complete screen, a multiplicity of hexagons are arranged in columns and rows to form a honeycomb with the several hexagons occupying different rotative positions. Thus, for example, along the horizontal line in-

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dicated by the arrow 22 alternate hexagons have their cells 18 extending horizontally or at a 45° angle. Along the adjacent horizontal lines 23 and 24, the hexagons all have their cells 18 inclined with alternate directions of inclination.

There is thus provided a screen with an arrangement made up of cells 16, 18 and 20 disposed in a pattern determined by the rotative positions of the several hexagonal outlines as indicated in Fig. 1. It has been found that this arrangement produces better printed results than are obtainable with the types of commercial screens available.

While there have been shown and described and pointed out the fundamental novel features of the invention as applied to a single modification, it will be understood that various omissions and substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention. It is the intention therefore to be limited only as indicated by the scope of the following claims.

25 What is claimed is:

1. A gravure screen comprising a film having an openwork pattern formed thereon consisting of opaque lines constituting a honeycomb arrangement, each section of the honeycomb being trisected by a pair of curved lines, said curved lines extending in different directions for adjacent sections.

2. A gravure screen comprising a film having an openwork pattern formed thereon consisting of opaque lines forming hexagons extending in rows and columns, each hexagon having a pair of opaque lines thereon extending between different apexes to divide the hexagon into three parts, the said lines extending in different directions in adjacent hexagons.

3. A gravure screen comprising a film having an openwork pattern formed thereon consisting of opaque lines forming hexagons extending in rows and columns, each hexagon having a pair of opaque lines thereon extending between different apexes to divide the hexagon into three parts, the said lines extending in different directions in adjacent hexagons, and each line terminating short of the point of intersection with other lines.

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