To all whom it may concern:

Be it known that I, CHARLES A. HANINGTON, a citizen of the United States, and resident of Freeport, in the county of Nassau and State of New York, have invented certain new and useful Improvements in Stenciled Articles and Methods of Making the Same, of which the following is a specification.

My invention relates to a new stenciled article and method of so stenciling such articles, and is particularly directed to stenciling cloth in the piece with fanciful line configurations.

Heretofore many kinds of cloth articles have been stenciled. Cloth has been stenciled in the piece, but the stenciling has been done by metal stencils wherein a series of openings, such as round dots, dashes or very short, separate lines have been punched or cut in the stencil. Of necessity, these openings have been separated because of the fact that the stencil cylinder would have been weakened if the lines or dots had been placed close together. The selection of configurations of the stencil have been greatly limited because portions of the figures would fall out entirely if continuous lines, such as circles, or other outline effects were attempted. By the former methods of stenciling, it has been impossible to produce many of the most desired types of configurations, but with my invention any desired type of configuration which can be produced with a pen may be stenciled on piece cloth and the characters or configurations accurately repeated indefinitely.

My invention consists in the use of a flexible open mesh stencil, such as bolting cloth, wire mesh or similar material having certain mesh filled or blocked leaving openings to produce the desired configuration or configurations. The strands of the material of which the stencil is made are of such small size that when the adhesive constituting the stenciling material is passed through the stencil onto the goods, there is no visible effect of the strands of the stencil left on the stenciled articles. By the use of this kind of stencil, fanciful line configurations of any desired character may be placed upon piece goods and many new and desirable effects secured.

My invention may be carried out with any well-known stenciling machine so long as a stencil of the type above indicated is employed.

My invention will be better understood by reading the following description taken in connection with the accompanying drawings forming a part thereof and in which Fig. 1 is a diagrammatic section of a machine suitable for carrying out my invention; Fig. 2 is a section of stencil embodying my invention and Fig. 3 shows a portion of a stencil around a roller.

Referring to the drawings, the machine shown in Fig. 1, is a well-known stenciling machine and does not, per se, form any part of my invention. The machine comprises two plain rollers 1 and 2, around which the stencil 5 passes. A roller 4 is placed below and between the rollers 1 and 2. A blanket 6 passes over the roller 4 and the adjustable roller 6. A color box 7 is placed above the roller 4 and extends throughout the width of the machine. This box has a slotted opening 8 in the bottom thereof and a slide 9 is arranged for controlling the flow of color or stencil material through the opening 8. Three presses are provided and are held by a member 11 which is supported by the machine. A greater or less number of presses may be employed, depending upon the nature of the design and stenciling material used. The presses 10 may be of brass or steel plate or rubber and are held against the stencil by springs or weighted levers. These presses act to force the adhesive or colored stenciling material through the openings in the stencil and, at the same time, prevent an excess of the stenciled material from being carried forward on the stencil.

The rollers 1 and 2 are mounted in standards 12 and are provided with sliding bearings 13. These bearings are normally pressed upwardly by springs 14 and held in place by screws 15. By operating the screws 15 the rollers may be moved upwardly or downwardly to change the tension on the stencil.

The material 16 to be stenciled is taken from the pile 17 and passed around a series of guide rollers 18 between the blanket 5 and stencil 3. As it passes under the presses 10 the stenciling material is forced through the stencil onto the material and the material is then conducted away from the stencil.
over the guide rollers 19 to any desired point.

Heretofore, stencils have been made of metal as above explained. These stencils have many disadvantages, some of which have already been set forth. I have devised a stencil, a portion of which is shown in Fig. 2. This stencil is made from open mesh material, such as bolting cloth or fine metal screen material. The open mesh portion of the stencil is shown at 20. The other parts 21 of the stencil are filled in or blocked with some suitable material, such as varnish, so that the stencilling material cannot pass through the parts 21. The strands of the stencil are so small that the stencilling material readily passes through the stencil onto the cloth and no visible effect is produced on the design by the strands of the stencil. By using an open mesh stencil any desired configuration may be made on the stencil and transferred to the cloth, that is, to say, the design of a leaf, circle or any line or solid effect may be produced on cloth in the piece. Any design which can be drawn with a pen can be produced in a stencil of the open mesh type illustrated. Stencils of the type above mentioned may be made into endless belts by taking the bolting cloth or other desired material, preferably after the designs are placed thereon, and lapping the ends over and cementing them together by liquid celluloid or other adhesive material. In applying such a stencil to the machine it should be so placed upon the rollers 1 and 2 that when the stencil is rotated under the pressers the pressers will pass from the end of the stencil onto the body thereof or, in other words, the pressers will drop the thickness of the stencil as the end of the stencil passes under the pressers. Or the ends may be joined as shown in Fig. 3 wherein the ends of the stencil are cut in zigzag fashion and are stitched along the line 22. This arrangement lengthens the line of contact between the two ends of the stencil and thus, to a certain extent, strengthens the contact. In all cases, it is preferred that the line of contact at the ends of the stencil be so arranged as to pass between the designs on the stencil.

In the use of endless stencils of the type above mentioned a slight increase in thickness where the ends join is inevitable; in one case this thickness is due to the lap of the ends and in the other it is due to the stitching or cementing. If rigid pressers were used their effectiveness on the designs near the line of contact would be slightly impaired because they would be raised from the body of the stencil by its thickened portion. I, therefore, prefer to use flexible pressers, such as rubber, in order to overcome this difficulty. Rigid pressers may be used with satisfactory results, however.

The part of the stencilling machine herebefore referred to as pressers is known popularly in the stencilling trade as doctor scrapers.

While I have shown one form of machine for carrying out my invention and have shown, by way of illustration, one form of stencil and design, I desire it to be understood that my invention is not limited to any particular design, machine or stencil, as many small changes may be made in these parts without departing from the spirit of my invention.

I claim:

1. The method of stencilling cloth in the piece which consists in running cloth continuously under a flexible endless open-mesh stencil having continuous and connected line configurations thereon arranged to repeat the configurations on the cloth and pressing a paste substance through the stencil to reproduce raised configurations on the cloth.

2. The method of stencilling cloth in the piece which consists in forming the desired configurations upon an endless open-mesh flexible stencil, passing the cloth continuously under and in contact with the stencil and mechanically forcing a pasty stencilling material through the stencil to reproduce raised configurations on the cloth uniformly throughout the length desired.

CHARLES A. HANINGTON.