(No Model.)

B. SCARLES.

TEXTILE FABRIC.

No. 370,091. Patented Sept. 20, 1887.

Fig. 1.

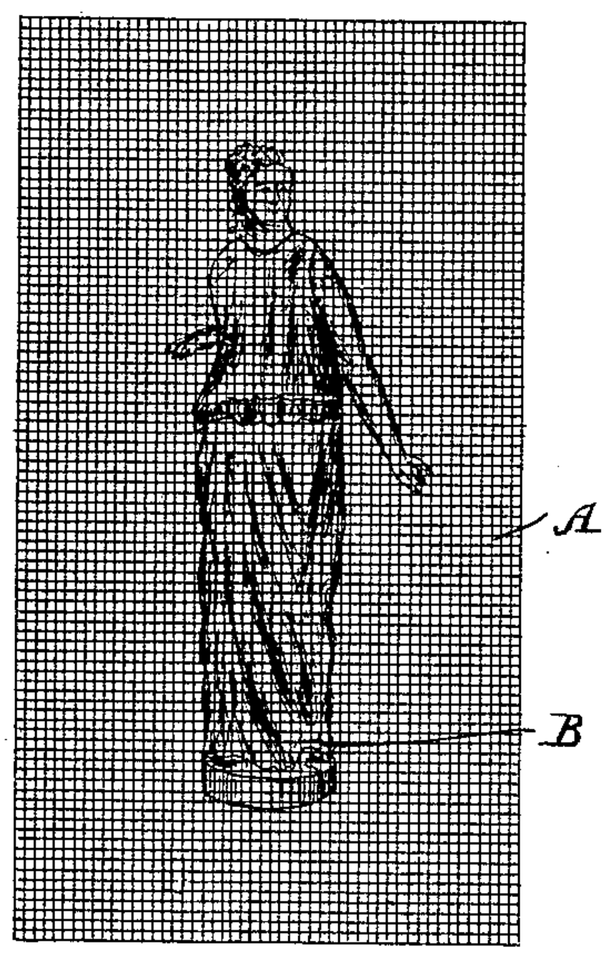


Fig. 3.

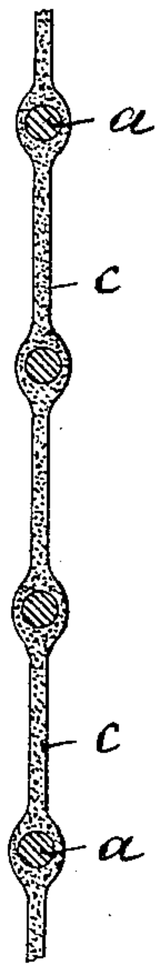
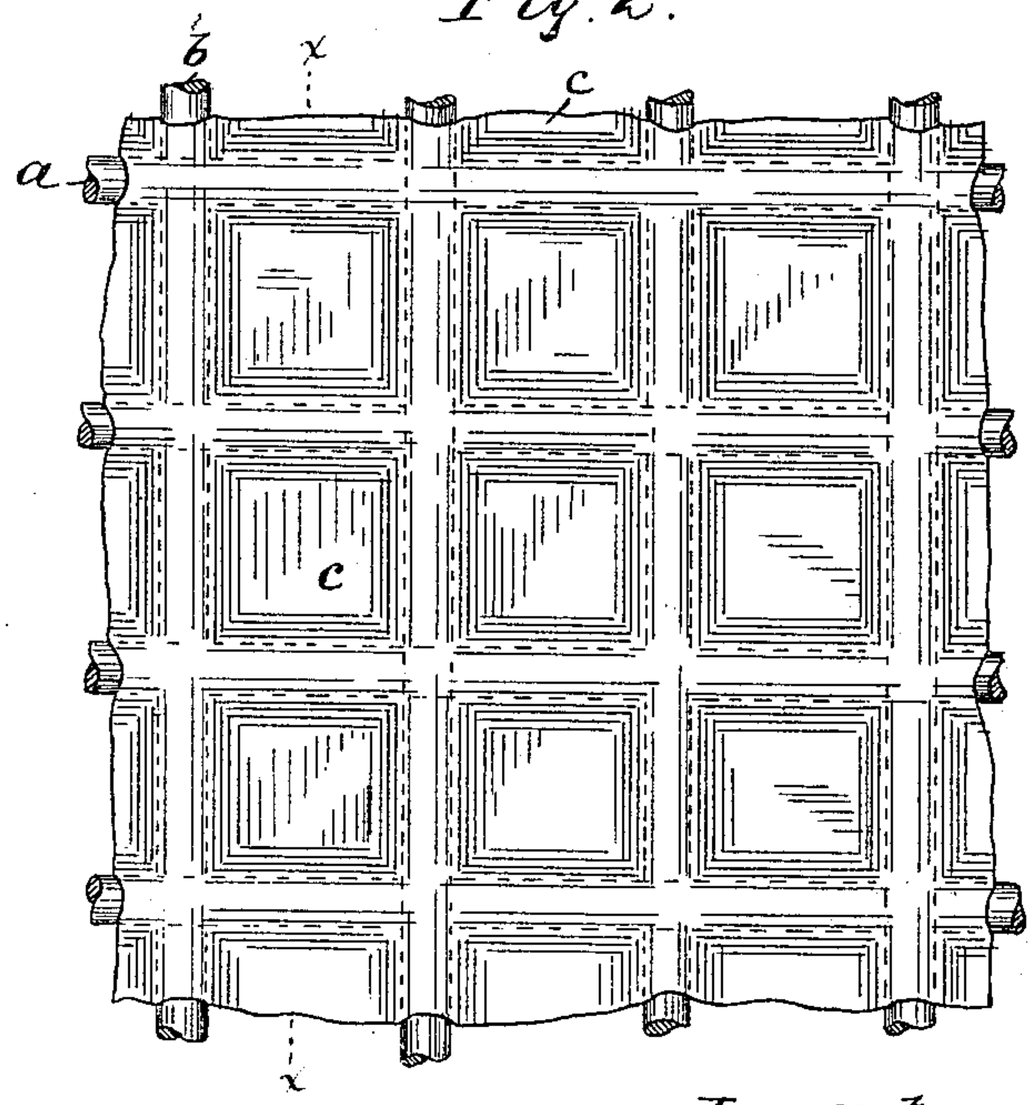


Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

BENJAMIN SCARLES, OF CLINTON, MASSACHUSETTS, ASSIGNOR TO HIMSELF AND CHARLES SWINSCOE, OF SAME PLACE.

TEXTILE FABRIC.

SPECIFICATION forming part of Letters Patent No. 370,091, dated September 20, 1887.

Application filed July 30, 1885. Serial No. 173,062. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN SCARLES, a subject of the Queen of Great Britain, residing at Clinton, in the county of Worcester, State of Massachusetts, have invented a certain new and useful Improvement in Textile Fabrics, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a diagram showing a piece of my improved fabric provided with a decorative painting; Fig. 2, a like view showing a piece of the fabric without ornamentation, but greatly enlarged or magnified; and Fig. 3, a vertical section taken on line *x x* in Fig. 2.

Like letters of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to nearly any of the ordinary textile fabrics of commerce which are composed of fibrous threads woven in the usual manner, or which are interlaced or knitted by any of the processes employed in producing fabrics composed of fibrous threads; and it consists in a fabric composed of fibrous threads and provided with a thin translucent film or coating which permeates and covers said threads and closes the openings between them, said film being either plain or decorated, as may be desired.

The nature of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, A represents a piece of cloth, consisting of the warp-threads *a* and weft or filling threads *b*, the whole being covered with a translucent film or coating, *c*, which covers the threads and closes the openings or meshes between them. The cloth thus prepared may be decorated with any suitable ornamental figure, as shown at B, or with flowers, geometrical figures, &c., which may be painted on the film or transferred thereto by nearly any of the well-known transfer processes in use by decorators for similar purposes, a coat of suitable varnish being used, if desired, to cover the decorations.

The film is applied to the cloth in the following manner: The piece or strip of cloth to be treated is first immersed in a solution of a resinous or gelatinous material, or a solution of a gum or albumen, which will adhere to the threads and form a film in the interstices between them. This solution may be composed of the following ingredients: Gum-shellac, two parts; gum-benzoin, one part; balsam fir, one part, which are dissolved in sufficient methylated spirits or other solvent to form a saturated solution. A sufficient quantity of a saturated solution of wood spirits and resin is then added to the above solution to prevent gumminess and impart the requisite degree of hardness to the coating on the cloth.

When the cloth is to be decorated, I prefer to form the solution as follows: alcohol, two parts; fusel-oil, one part, and sufficient pulverized shellac to form a saturated solution. The shellac and liquid, being mixed together, should be stirred frequently for a few days and then allowed to settle. The clear solution is then strained through a gage or suitable strainer, in order to remove any undissolved material, and is brought to the required consistency by the application of heat. The purpose of the fusel-oil is to prevent the material from cracking after it has been applied to the cloth; but the oil may be omitted, if desired, or other ingredients substituted therefor. The fir balsam may also be omitted or another ingredient substituted therefor. The cloth is immersed in this solution and allowed to remain until the threads are coated and the interstices are filled with the material. It is then withdrawn from the vat and allowed to dry; or it may be dried by the proper application of artificial heat. Should a thicker coating be desired than is produced by one immersion, the process may be repeated until the desired thickness is obtained.

The coating formed on the threads and the filling in the interstices respectively produced by the above-described solutions is semi transparent or translucent and of a grayish color. The cloth is also rendered water-proof and has a smooth surface imparted to it, upon which any desired design may be painted or otherwise produced either in transparent or non-transparent colors.

Where it is desired to impart to the cloth various colors or tints after it has been immersed in the solution and dried, as aforesaid, the cloth or any portion thereof may be dipped or immersed in a solution of aniline or other suitable coloring-matter in a suitable solvent. I prefer, however, to employ a solution of aniline coloring-matter and alcohol. The cloth is then removed from the solution and dried. The coloring-matter may also be incorporated with the coating, if desired.

The solutions not only coat the threads of which the cloth is composed, but permeate or saturate them, and thereby firmly attach the film to the cloth, so that it is not liable to break or be detached in handling.

The cloth, after it has been treated and ornamented, as hereinbefore described, forms a flexible material admirably adapted for decorative purposes, and may be used for screens, wall and window decorations, and also as a substitute for stained glass, or to produce the effect of stained glass by being secured to or placed over ordinary plain glass in windows, doors, &c.

I do not confine myself strictly to the formulas given for preparing the solutions, as some of the ingredients may be substituted by others, and the proportions varied without departing from the spirit of my invention.

I am aware that it is not new to paint on cloth, also that ornamented painted cloth is not new, and I do not claim the same broadly; but,

Having thus explained my invention, what I claim is—

1. As a new article of manufacture, open-work cloth composed of fibrous threads and provided with a translucent impervious film which permeates and coats the threads thereof and closes the openings between them, substantially as described.

2. As a new article of manufacture, open-work cloth composed of fibrous threads and provided with a translucent impervious film which permeates and coats the threads thereof and closes the openings between them, said film being ornamented or decorated, substantially as specified.

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Witnesses:
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