

(Specimens.)

B. SCARLES.

MANUFACTURE OF WIRE CLOTH.

No. 314,483.

Patented Mar. 24, 1885.

Fig. 1.

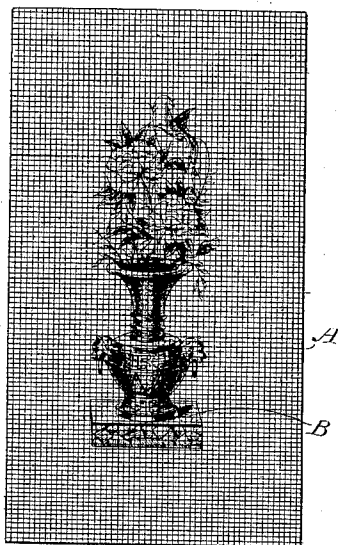


Fig. 3.

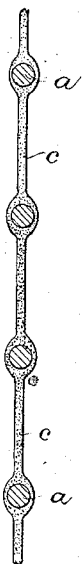
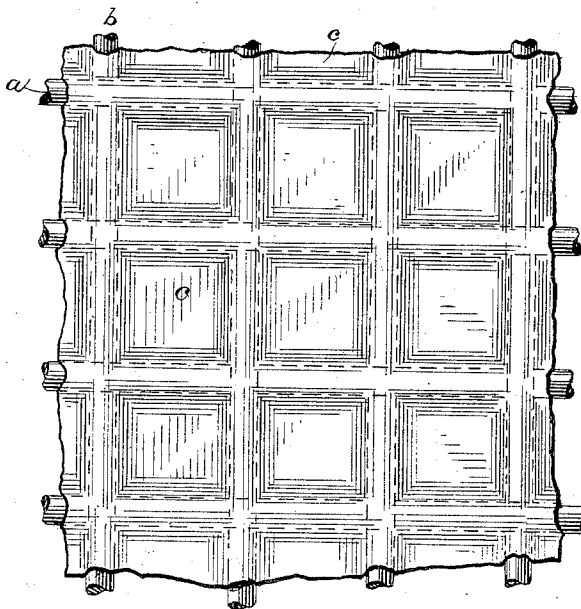


Fig. 2.



WITNESSES

Wm. A. Shinkle.
Geo. W. Young.

INVENTOR

Benjamin Scarles.
By His Attorney
J. L. Soules.

UNITED STATES PATENT OFFICE.

BENJAMIN SCARLES, OF CLINTON, MASSACHUSETTS.

MANUFACTURE OF WIRE-CLOTH.

SPECIFICATION forming part of Letters Patent No. 314,483, dated March 24, 1885.

Application filed April 5, 1884. (Specimens.)

To all whom it may concern:

Be it known that I, BENJAMIN SCARLES, of Clinton, in the county of Worcester and State of Massachusetts, have invented a new and useful Improvement in the Manufacture of Wire-Cloth; and I do hereby declare the following to be a full, clear, and exact description thereof.

I will now describe my invention so that others skilled in the art may employ the same.

Wire-cloth is a well-known article of trade. It consists in wire woven together, and between the wires when so woven are spaces or interstices, larger or smaller, according to the kind of wire employed, which interstices render the cloth pervious to air and moisture and impart to the cloth a rough, uneven surface, upon which it is difficult and impossible to produce an even ornamental design in colors.

In the accompanying drawings, Figure 1 is a face view of a piece of this improved wire-cloth provided with a decorative painting. Fig. 2 is a similar view without the ornamentation of a piece of this improved wire-cloth considerably magnified in order to illustrate the film covering the wires and closing the meshes thereof, which film is almost invisible to the naked eye in the full-sized fabric. Fig. 3 is a transverse section of a piece of this improved wire-cloth, also on a magnified scale.

This wire-cloth A is composed of the warp-wires *a* and the weft-wires *b*, woven together in the usual manner, and is provided with a thin translucent film, *c*, which covers the wires and closes the openings between them. The wire-cloth thus prepared may be decorated by any suitable ornamental figure, as B, Fig. 1. This translucent film is applied to the wire-cloth in the following manner: After the cloth has been woven in the usual manner I immerse it in a solution of a resinous or gelatinous material, or a solution of a gum or albumen, which will adhere to the wires and form a film between them in the interstices. 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 rosin is then added to the former solution to prevent gumminess and impart a sufficient degree of hardness to the coating on the wire-cloth.

Another solution, which I prefer where the cloth is to be decorated after it has been treated with the solution, I form as follows: alcohol, two parts; fusel-oil, one part; sufficient pulverized bleached 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 gauze of suitable mesh, in order to remove any undissolved material, and is brought to the required degree of 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 wire-cloth. The wire-cloth is allowed to remain in this solution until the wires are coated and the interstices are filled with the material. It is then withdrawn from the vat and allowed to dry. Should a thicker coating be desired, it may be immersed again and again allowed to dry, and so on until the desired thickness is obtained. The coating formed on the wire and the filling in the interstices produced by the foregoing solutions is semi-transparent or translucent and of a grayish white color. The cloth is rendered water-proof and a smooth surface is imparted thereto, upon which any desired design may be painted or otherwise produced either by 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 may be dipped or immersed, or the desired portion thereof, 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. This solution of coloring-matter may be incorporated with the coating-solution, if desired.

This cloth, after it has been treated in the solutions hereinbefore described, forms a material admirably adapted for decorative pur-

poses, and upon which designs of any character may be placed for screens, wall and window decorations, and it may also be used as a substitute for stained glass.

5 Although I have mentioned a certain formula of ingredients and proportions in the solutions, I do not desire to limit myself thereto, as india-rubber and other gums may be employed in forming the solution.

10 I am aware that it is not new to paint on wire-cloth, and I do not desire to claim the same, broadly.

I am also aware that painted wire-cloth, whether plain or figured, is not new, broadly;
15 but

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. Open-work wire-cloth provided with a translucent impervious film, coating the wires 20 thereof and closing the openings between them, substantially as described.

2. Open-work wire-cloth provided with a translucent impervious film, coating the wires 25 thereof and closing the openings between them, said film being ornamented, substantially as described.

In testimony whereof I have hereunto set my hand this 25th day of March, A. D. 1884.

BENJAMIN SCARLES.

Witnesses:

ENOCH K. GIBBS,
GEORGE H. GIBBS.