

G. S. BRACHER.
Wire-Fabric.

No. 163,448.

Patented May 18, 1875.

FIG. I.

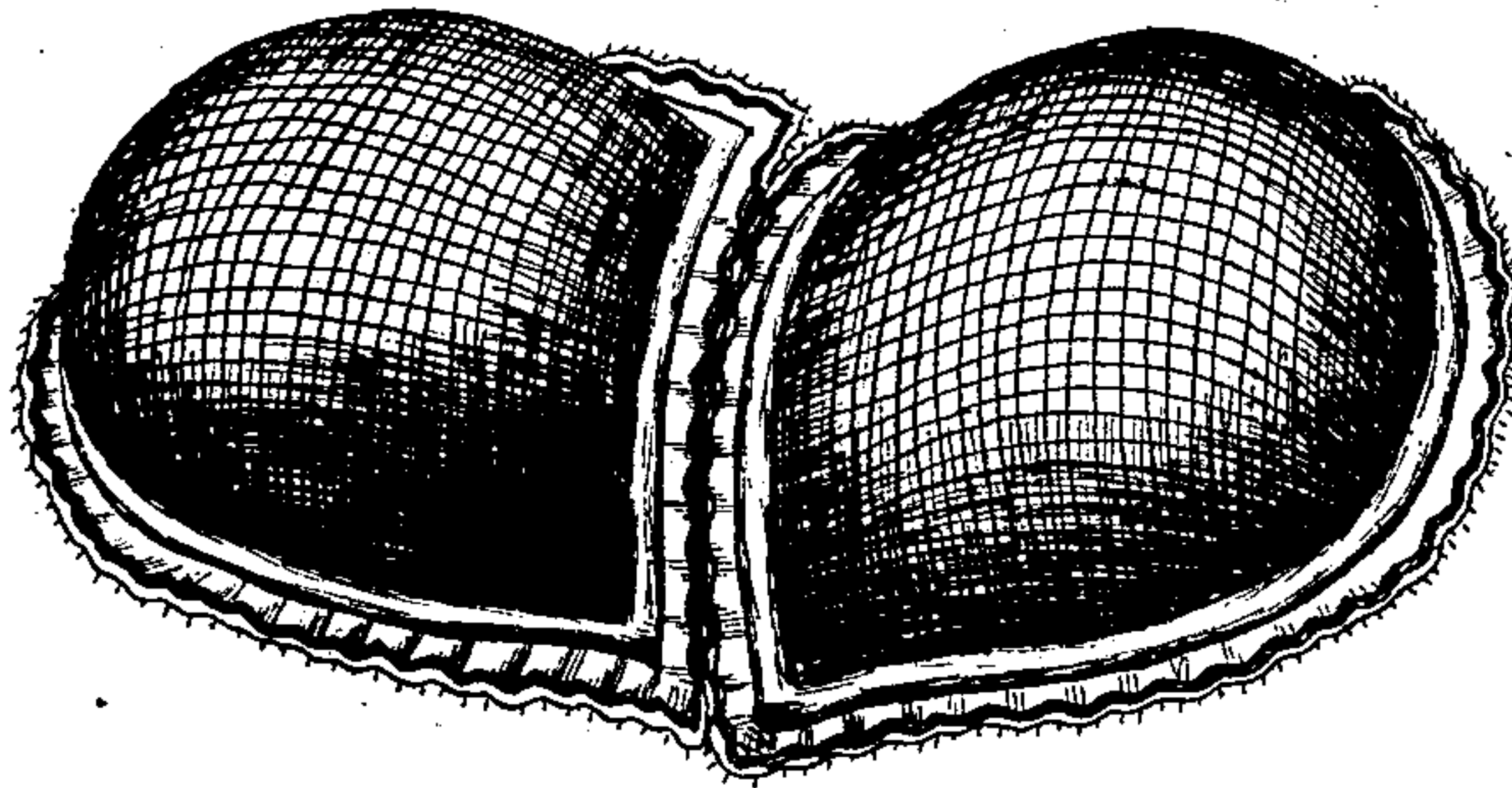


FIG. II.

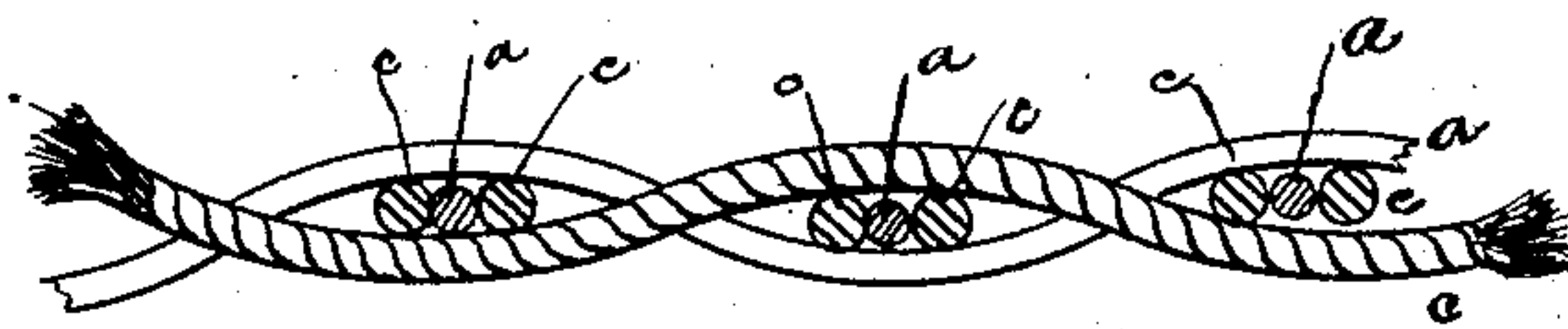
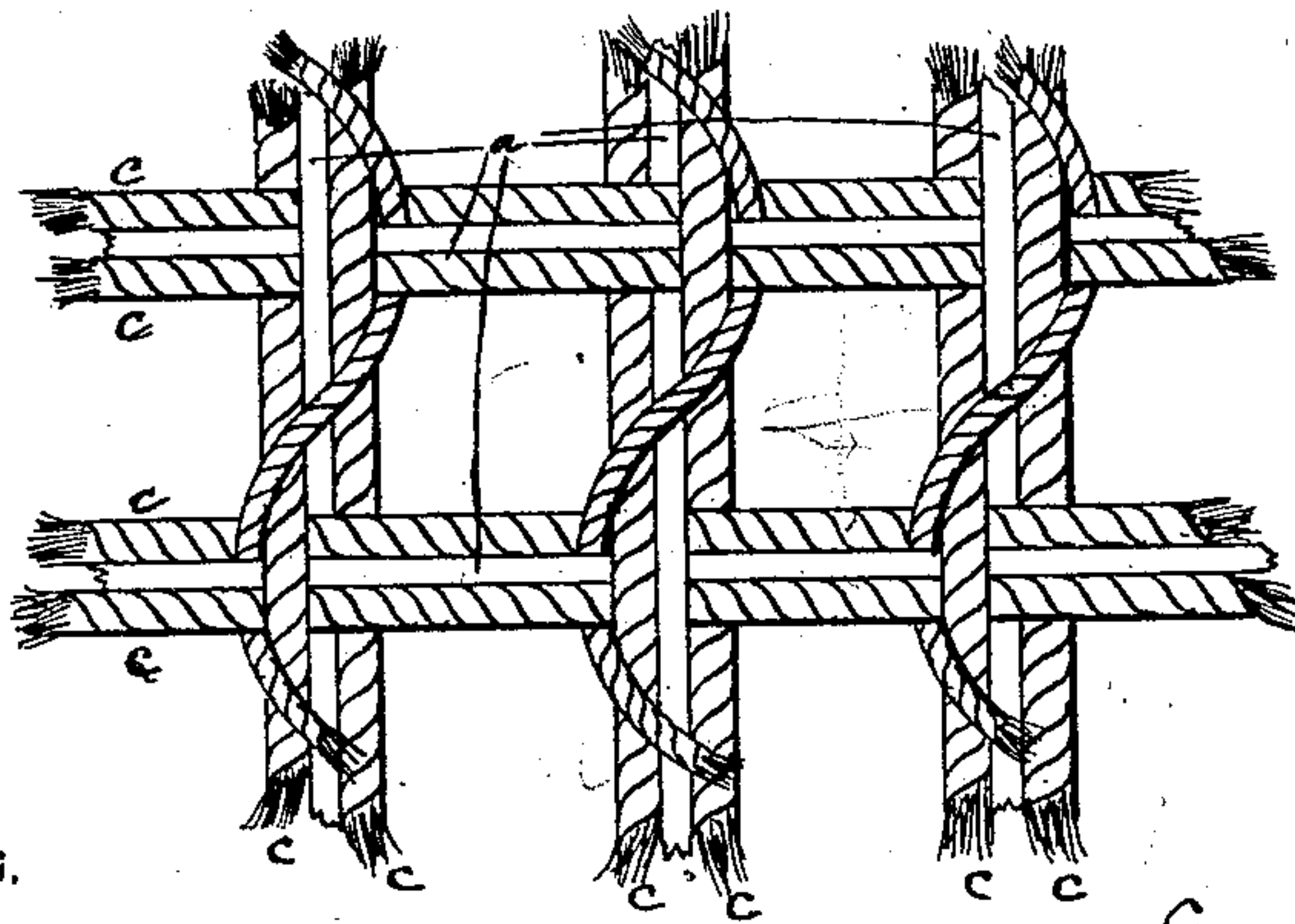


FIG. III.



WITNESSES.

J. B. Townsend.
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INVENTOR

Georg. Bracher,
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UNITED STATES PATENT OFFICE.

GEORGE STEPHEN BRACHER, OF CHATHAM, NEW JERSEY.

IMPROVEMENT IN WIRE FABRICS.

Specification forming part of Letters Patent No. **163,448**, dated May 18, 1875; application filed February 2, 1875.

To all whom it may concern:

Be it known that I, GEORGE S. BRACHER, of Chatham, in the county of Morris and in the State of New Jersey, have invented a new and useful Manufacture, being Perforated Cloth of Wire and Fabric; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings forming a part of this specification.

In the drawings, Figure 1 represents a breast-pad made out of the fabric. Figs. 2 and 3 represent the cloth as it leaves the loom, much enlarged.

My invention consists in a new manufacture—that is, in a new fabric—composed of spring-wires, each wire laid with two or more threads of fiber, and woven so as to produce a reticulated or perforated wire-and-fiber cloth. The cloth thus made is then treated with such solutions as will give it the desired color, stiffness, and general appearance.

In making my improved manufacture I adopt the following or an equivalent process. The warp is composed of the fine spring-wires *a*, each wire being laid with two or more threads, *c*, of linen, cotton, or other fiber. When the warp is laid the space between each two lines of wire should be about from one-sixteenth to one-quarter of an inch, so that when the woof, which is composed of a similarly-disposed series of spring-wires and threads, is woven in, there will be square perforations or reticulations of from about one-sixteenth to one-quarter of an inch square.

As this cloth is chiefly designed for articles which require to be “formed,” such as masks, hats, bonnets, bustles, breast-pads, and the like, it is necessary that the wire used should be tempered or spring wire. When used for such purposes the perforated fabric must be stiffened, so that the threads and wires may not slip, and so that the fabric may retain the form given to it.

After the fabric comes from the loom it is

dipped or washed in a suitable stiffening or fixing solution, such as ordinary starch. It is pressed by heated dies into the desired form, such as a pair of breast-pads, as shown in the drawing. The desired “finish” to the fabric may then be added.

One good finish for the articles above named may be produced by dipping the pressed article just described into a solution of one part of silicate of soda, two parts of water, one part of glycerine, and one part of zinc-white. While still wet the article should be dusted with French flock and soap-stone.

I do not confine myself to this specific solution, for any other equivalent solution may be used.

The object to be attained by the finishing solution and dusting is to cover over and conceal the wire and thread, and to give a “body” and finish to the article, so that it may be used for the purposes named, without the addition of any cotton, silk, or other lining.

The new manufacture of perforated spring-wire cloth or board thus produced is light, strong, elastic, well ventilated, and capable of retaining its shape, these qualities making it well adapted to the manufacture of hats, bonnets, bustles, masks, breast-pads, and numerous other purposes.

The object of this application for a patent is confined to the fabric. In other applications claim will be made to the special construction of the articles named.

I claim—

As a new manufacture, perforated wire cloth, composed of spring-wires laid with two or more fibrous threads to each wire and with reticulations, substantially as set forth.

In testimony that I claim the above-described invention I have hereunto signed my name this 26th day of January, 1875.

GEORGE S. BRACHER.

Witnesses:

A. J. DE LACY,
J. C. CLAYTON.