No. 646,131. Patented Mar. 27, 1900.

J. W. SHEPPARD.

WIRE FABRIC.

(Application filed June 7, 1899.)

(No Model.)

Fig. 1.

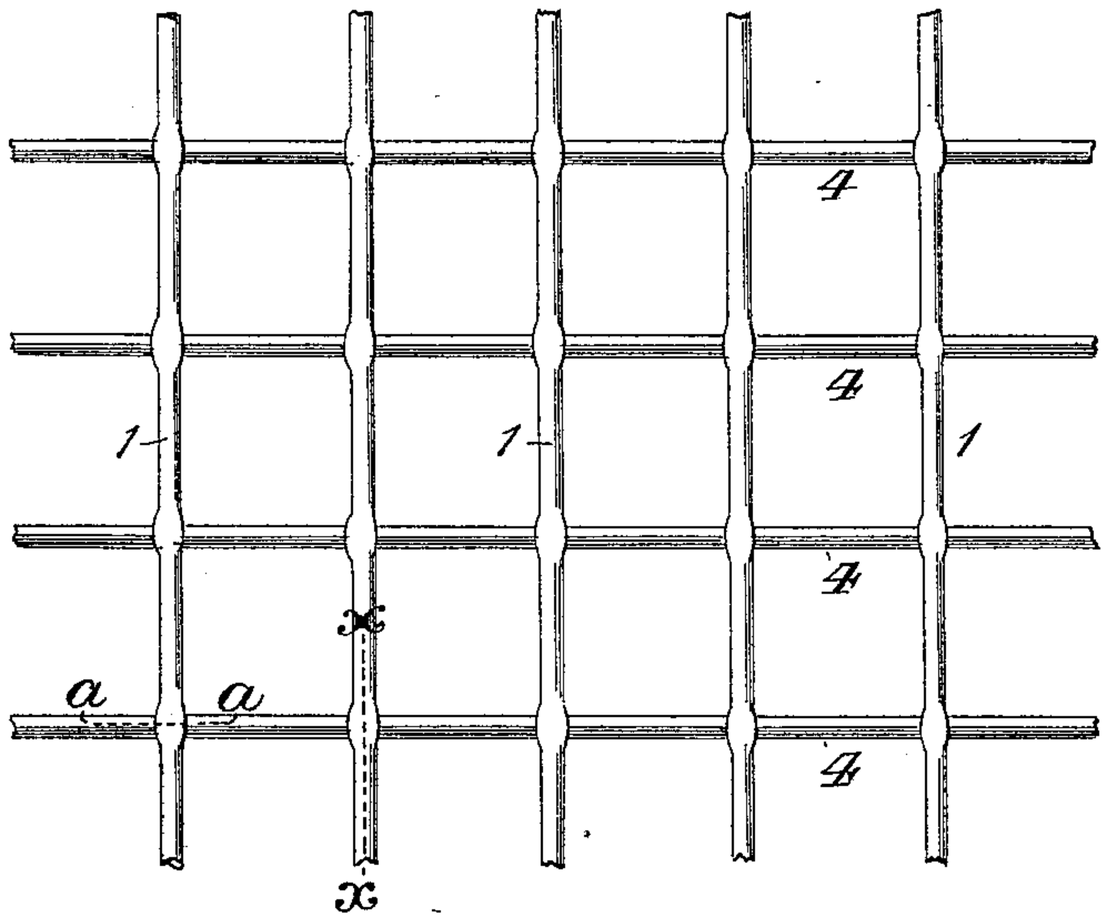

Fig. 2.

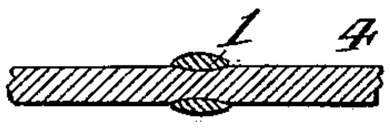

Fig. 3.

Fig. 4.

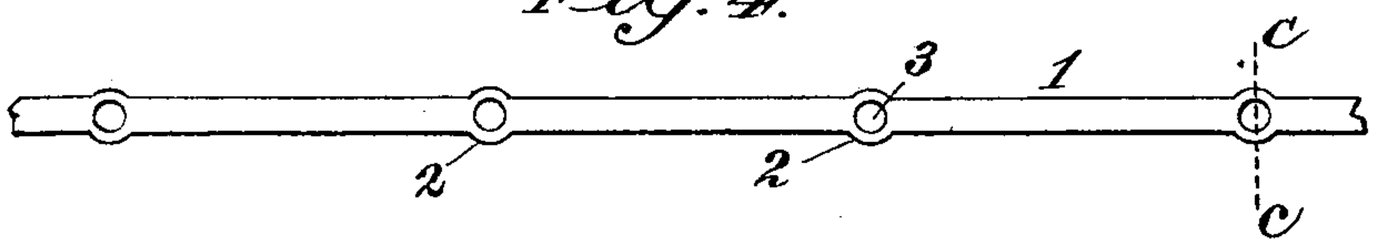

Fig. 5.

Witnesses
Edward C. Rowland.
Chas. F. Foss.

Joseph W. Sheppard. Inventor
By his Attorney A. M. Pierce.

UNITED STATES PATENT OFFICE.

JOSEPH W. SHEPPARD, OF NEW YORK, N. Y.

WIRE FABRIC.

SPECIFICATION forming part of Letters Patent No. 646,131, dated March 27, 1900.

Application filed June 7, 1899. Serial No. 719,730. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. SHEPPARD, a citizen of the United States, residing in the city, county, and State of New York, have invented new and useful Improvements in Metal Fabrics, of which the following is a specification.

My invention relates especially to the construction of metallic fabric, and has for its object the provision of such fabric made of wire, of any size or shape in cross-section, the intersecting points of the material of which the fabric is made being smooth and uniform in appearance and without twists in the strands, providing a perfectly-rigid fabric, the strands being held in any desired relation to each other.

To attain the desired end my invention consists, essentially, in a metal fabric made of wire of substantially-uniform diameter, the strands of the material in one direction being perforated and in the other direction passing through said perforations, the material at such intersections being compressed to form substantially-rigid connections, making the strands immovable in relation to each other; and my invention also involves certain other novel and useful combinations of parts and peculiarities of construction, all of which will be hereinafter first fully described and then pointed out in the claim.

In the accompanying drawings, forming a part hereof, Figure 1 is a plan view of a fragment of metal fabric embodying my invention. Fig. 2 is a sectional view at line *a a* of Fig. 1, and Fig. 3 is a like view at line *x x* thereof. Fig. 4 is a side elevation of one of the strands forming one direction of the fabric. Fig. 5 is a cross-sectional view at line *c c* of Fig. 4.

Similar numerals of reference wherever they occur indicate corresponding parts in all the figures.

For convenience I have shown the fabric and its constituent parts on an enlarged scale, and it is obvious that any size or shape of material may be employed, and the shape and size of the openings in the fabric may be varied at pleasure without departing from the spirit of my invention.

In making my improved metal fabric one direction of the material, such as 1, is flattened at fixed intervals 2, Figs. 4 and 5, and a perforation 3 is made through each flattened part. The transverse strands 4 of the fabric are passed through the perforations 3, and at each intersecting point pressure is applied to the metal, reducing the diameter of the material 1 where it has been expanded by the flattening process, and at the same time attenuating the portion of the strand 4 passing through the strand 1, thus forming a locking together of the strands, preventing any possible movement at the points of intersection.

It will thus be seen that I produce a metal fabric having a uniform and even structure, which is not only pleasing to the eye, but the openings between the strands are regular in shape and the strands are permanently held at desired angles to each other. The metal at the meeting points has no unsightly depressions, such as are caused by twisting or riveting, distorting the shape of the opening, and serving to catch moisture, causing the fabric to rust, as is the case with woven wire as heretofore produced.

My improved metal fabric is particularly adapted for use in the manufacture of what is known as "wire-glass."

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

A metal fabric formed of strands of wire of substantially-uniform diameter, the strands in one direction being perforated, and in the other direction passing through said perforations, the material of the imperforate strands being attenuated within the perforations, and the perforated strands compressed around the attenuations.

Signed by me at New York, N. Y., this 6th day of June, 1899.

JOSEPH W. SHEPPARD.

Witnesses:

CHAS. F. FOGG,

A. M. PIERCE.