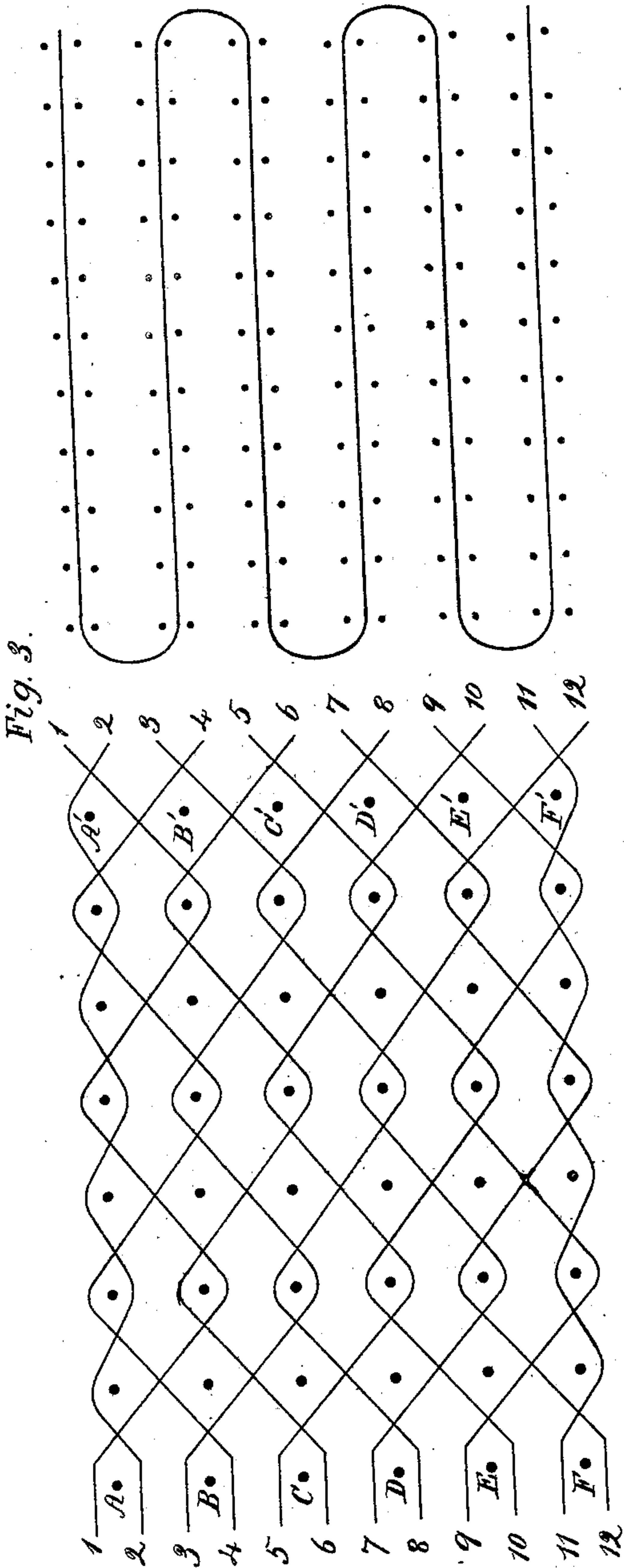


J. Gujer. Woven Fabric.

N^o 20,267.

Patented May 18, 1858.



Witnesses.

J. W. B. Jenkins
John W. Thurston

Fig. 2.

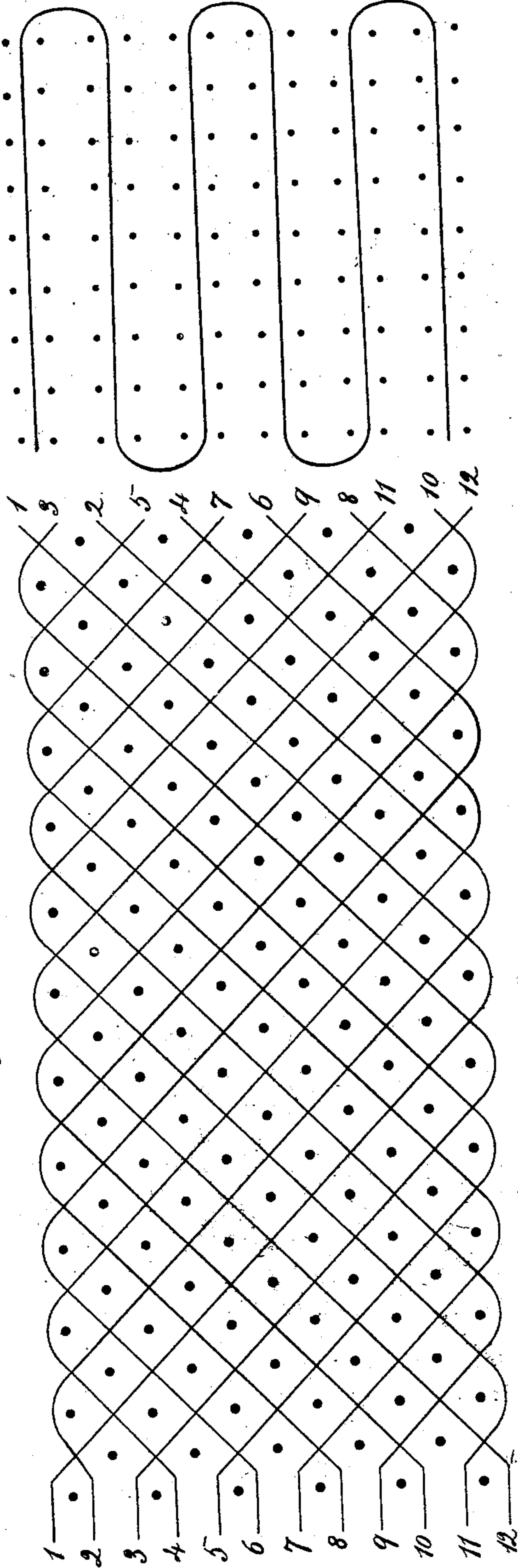


Fig. 1.

Inventor.

John Gujer.

UNITED STATES PATENT OFFICE.

JNO. GUJER, OF PHILADELPHIA, PENNSYLVANIA.

THICK WOVEN FABRIC.

Specification of Letters Patent No. 20,267, dated May 18, 1858.

To all whom it may concern:

Be it known that I, JOHN GUJER, of the city of Philadelphia and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Woven Fabrics; and I do hereby declare the following to be a full and exact description of the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 is a section of my fabric, in a line parallel to the warp threads, and Fig. 2 a section parallel to the filling threads.

My improvement has for its object the production of a new article of manufacture, to be used as a substitute for leather, or vulcanized india rubber cloth, in the making of bands for machinery, soles for boots and shoes, backs for card-teeth in carding machinery, and analogous purposes; and my improvement consists in weaving the warp threads in reference to the filling threads, in the manner shown by the black lines in Fig. 1, which is a longitudinal section of the fabric, or a section parallel to the direction of the warp threads. The filling threads pass straight across, as usual, from side to side of the loom, as shown by the red points in Fig. 1, and by the red lines in Fig. 2.

It will be observed that the two sets of warp threads, 2, 2, and 11, 11, (Fig. 1,) which are on the outer surfaces of the fabric, merely pass above and below the upper and lower sets of filling threads respectively, as in ordinary cloth manufacture, thus giving a smooth and solid exterior surface to the fabric above and below. The sets of warp threads, 1, 1, and 4, 4, pass around the sets of filling threads, A, A', and the sets of filling threads B, B', and unite these two sets of warp threads together. The sets of filling threads, 3, 3, and 6, 6, pass around the filling threads B, B', and C, C', and unite them firmly together. The warp threads 5, 5, and 8, 8, in like manner unite the sets of filling threads, C, C', and D, D', together; the warp threads 7, 7, and 10, 10, unite the filling threads D, D', and E, E'; the warp threads 9, 9, and 12, 12, unite the filling threads E, E', and F, F', together. Thus it

will be seen that each of the respective sets of filling threads is united by a double set of warp threads to the filling threads on each side of it and that while the exterior surfaces are uniform and smooth the whole of this thick fabric is united throughout its mass, no straight warp entering into its composition.

My improved fabric can be worked on any Jacquard loom by arranging the cards and heddles to correspond with the position of the warp threads shown in Fig. 1. I have found by experiment that on such looms a thickness of four, five, six, or more cotton or linen filling threads and twelve warp threads can be readily worked, and will then produce a fabric of sufficient strength, thickness, and uniform firmness of texture throughout as to answer as a valuable substitute for leather or vulcanized india rubber fabrics in the making of machine belting, boot and shoe soles, machine card backs, etc. In order to render this fabric insensible to moisture, it may be saturated with a solution of caoutchouc or resinous matter. Another mode of interweaving the warp threads on the same principle, is shown in Fig. 3, in which the warp threads are also colored black and the filling threads red. In this fabric every set of warp threads turns around each of the outer threads A, A, and F, F, and crosses all the other filling threads diagonally. This unites all the filling threads compactly together throughout, and, as in the other mode, there are no straight warp threads in the fabric.

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

The manufacture of stout textile fabrics, for the purposes above named, of considerable thickness, in which all the warp threads are interwoven with the filling threads, substantially in the manner above described.

JOHN GUJER.

Witnesses:

J. H. B. JENKINS,
JOHN W. HUNTON.