

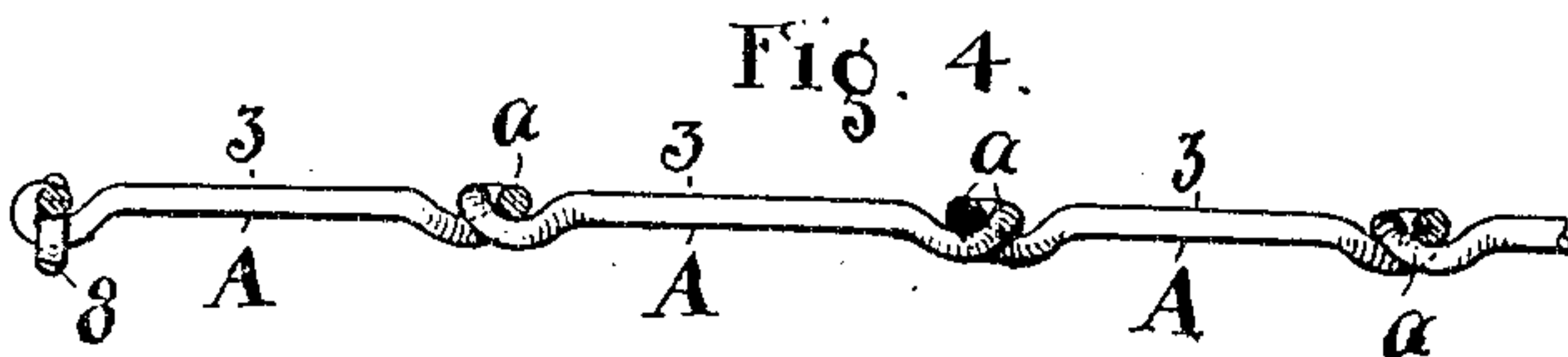
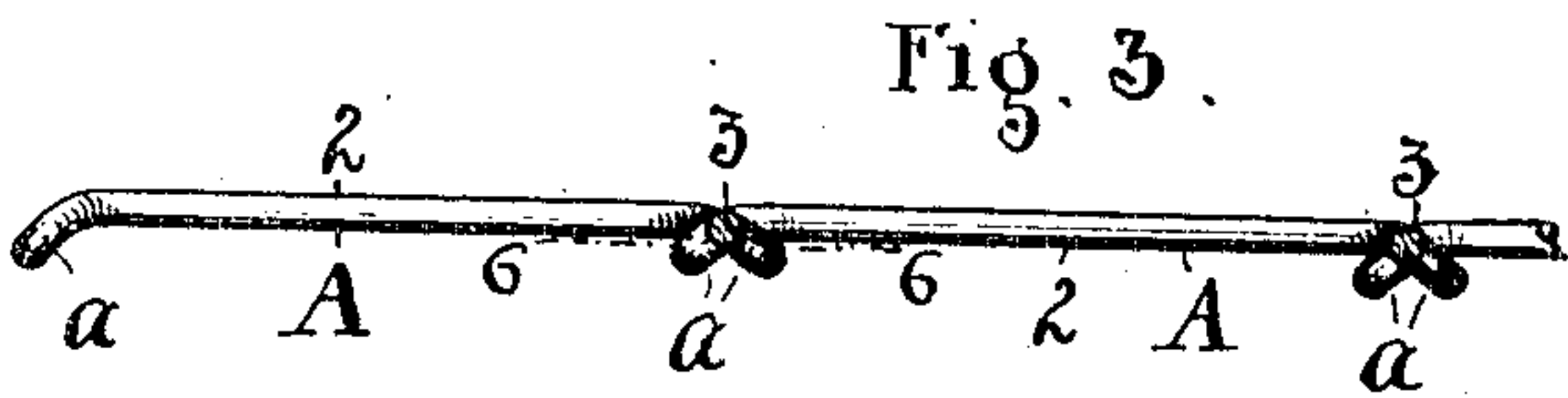
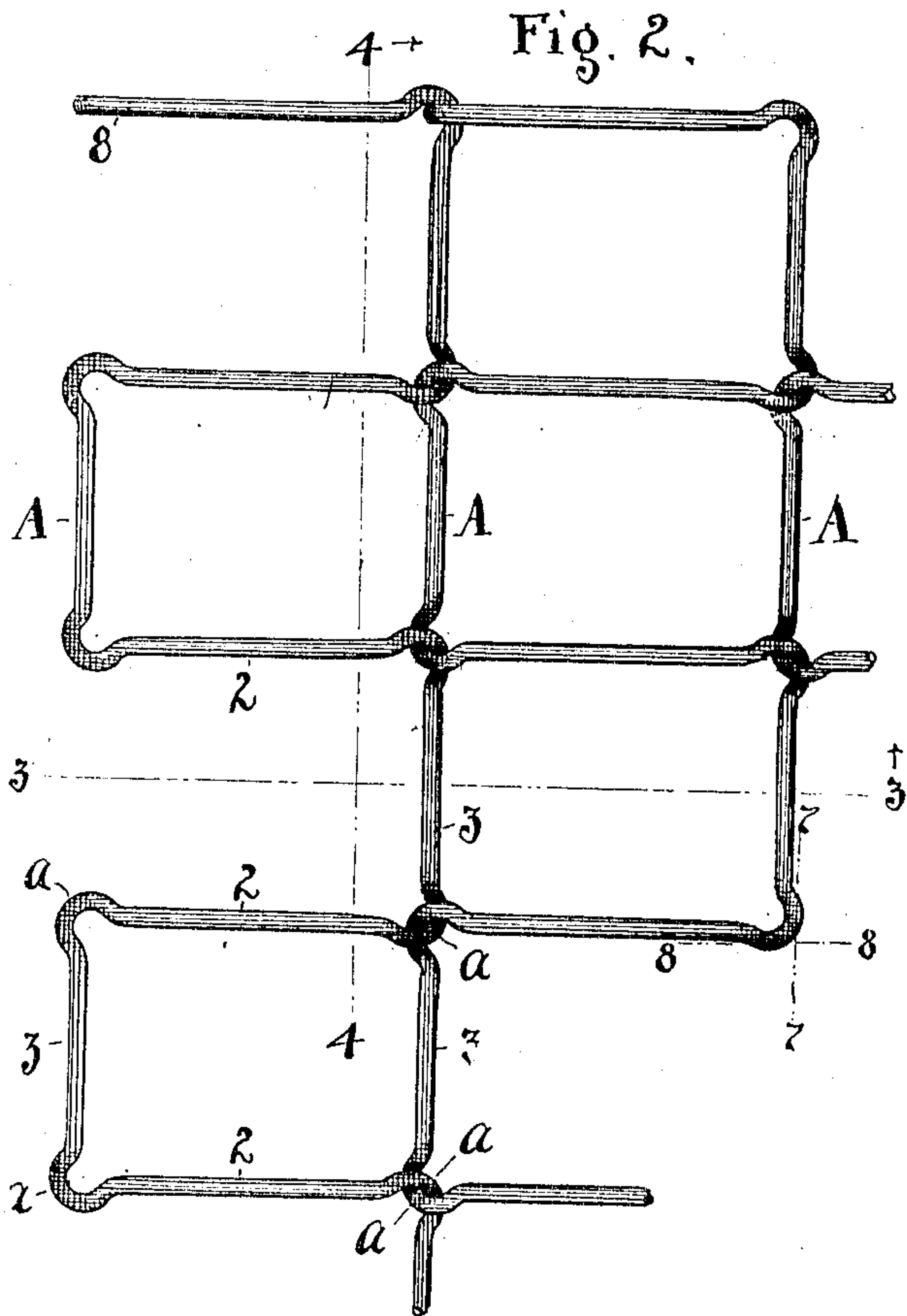
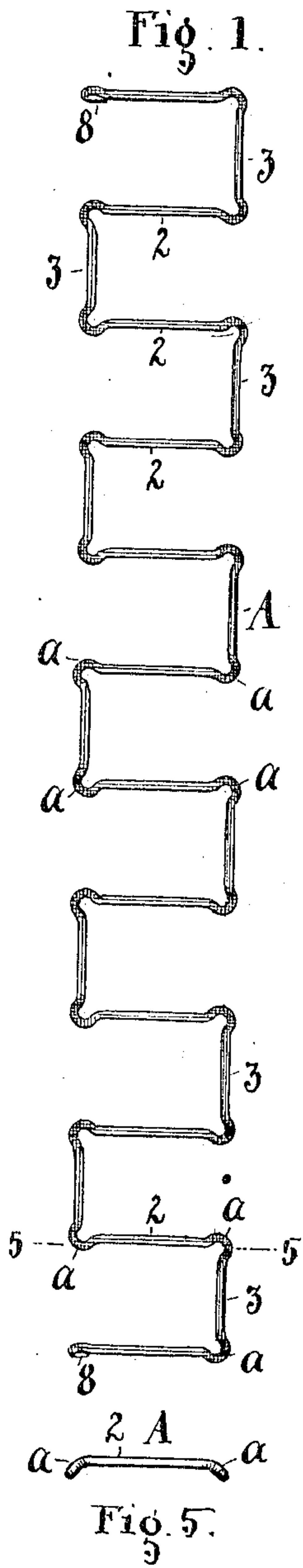
No. 844,681.

PATENTED FEB. 19, 1907.

H. E. LAUGHLIN.

WIRE FABRIC.

APPLICATION FILED MAY 17, 1906.



ATTEST.

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INVENTOR

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# UNITED STATES PATENT OFFICE.

HOWARD E. LAUGHLIN, OF CLEVELAND, OHIO.

## WIRE FABRIC.

No. 844,681.

Specification of Letters Patent.

Patented Feb. 19, 1907.

Application filed May 17, 1906. Serial No. 317,331.

*To all whom it may concern:*

Be it known that I, HOWARD E. LAUGHLIN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wire Fabric; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to wire fabric; and the invention consists in a fabric which is adapted to be used in the manufacture of bed, couch, sofa, and other spring bottoms, mattresses, and the like, the idea being to make a structure which requires no other or additional means at the point where the wires intersect than the construction of the wires themselves at such intersection to make effective locking and bracing engagement, all substantially as shown and described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of a single wire constructed according to my invention and which is an example of all the wire constituting the fabric, all of which are alike. Fig. 2 is a plan view of a section of the fabric, showing how the wires interlock. Fig. 3 is a cross-section on line 3 3, Fig. 1; and Fig. 4 is a cross-section on line 4 4, Fig. 1. Fig. 5 is a cross-section on line 5 5, Fig. 1.

The plan of the fabric as thus shown has regard to the design as well as to the utility thereof, so that it may both look well and serve well the purpose for which it is intended. In respect to appearance I deem the rectangular form or design preferable, and this also best serves my present purpose.

It is well known that wire-fabric bed-bottoms having helical connections at their ends with the bed or mattress frame are under a constant tendency to stretch or elongate at the expense of the fabric laterally, the fabric in that case pulling in from the sides and producing uncomfortable sag in the bed. The same tendency occurs in other uses of the fabric, as in sofa-bottoms. Of course I am aware that different means have been employed by different manufacturers to overcome or remedy this objection, as it is found in such fabrics generally; but regardless of all such and as an original conception I have invented a fabric which is without other or additional means than the wires themselves to both effect such interlocking where the

wires cross and lateral bracing to prevent contraction of the fabric, as will now appear. Thus the individual wires A, out of which the entire structure is made, are bent into a series of oppositely-projecting loops, said loops having the same shape throughout each wire and throughout the entire fabric. The said "loops," so-called, are practically square and have parallel sides 2 and cross portions 3 at their ends connecting said sides. Opposite said cross portions 3 the said loops are open their full width, so that said loops project in opposite directions alternately, but lie in the same plane relatively from end to end. Now in order that interlocking and bracing of the said wires may be accomplished, as above described, so as to prevent lateral contraction of the fabric under any conditions, I provide each angle of the wire at the several corners *a* of said loops with compound bends, the first of which is outward as to both the otherwise straight sides 2 and the straight ends 3 of the loops, as indicated by dotted lines 7 7 and 8 8 in Fig. 2. Then, having formed this bend in the said corners, I bend each corner downward approximately the thickness of the wire, dotted line 6 6, Fig. 3, so as to keep all the longitudinal sides 2 of the loops substantially on the same plane and provide an even surface the full length of the fabric. The first or outward bending of the corners also brings the sides 2 of the loops into practical alinement from wire to wire lengthwise of the fabric, while the cross parts or ends 3 of the loops also are brought into alinement with each other and onto the same plane as the sides 2 of the loops. Then as said corners are engaged with others in the successive wires A they interlock both longitudinally and laterally, and there can be no shrinking or contracting of the fabric between its side edges, because the successive cross parts 3 of the loops make effective braces between said sides. It will also be observed that all the several wires constituting the fabric run transversely thereof, and each wire is made complete before it is incorporated into the fabric. Then to unite said wires and make the fabric each wire is placed in the fabric individually and one after the other until the desired length is obtained. How this can be done is readily seen in Fig. 2, wherein the last-engaged wire has had its loops carried up between the sides of the corresponding loops in the preceding wire by possibly placing it in a somewhat diagonal

position and at right angles as the loops are introduced. (The ends of the several wires are provided with hooks 8, corresponding to the bends or corners *a*.

5 What I claim is—

1. A wire fabric constructed from a succession of transverse wires having each a series of rectangular loops and the corners of said loops bent downward approximately the  
10 thickness of the wire and said wires connected in said corners.

2. A wire fabric formed from independent

transverse wires looped together, the loops of all the said wires being provided with substantially right-angled corners having each a  
15 lateral and a downward bend alike as to both the sides and the cross portions of the said loops.

In testimony whereof I sign this specification in the presence of two witnesses.

HOWARD E. LAUGHLIN.

Witnesses:

R. B. MOSER,

C. A. SELL.