

No. 842,310.

PATENTED JAN. 29, 1907.

M. W. FLOTO.
WIRE CLOTH FABRIC.
APPLICATION FILED JULY 24, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

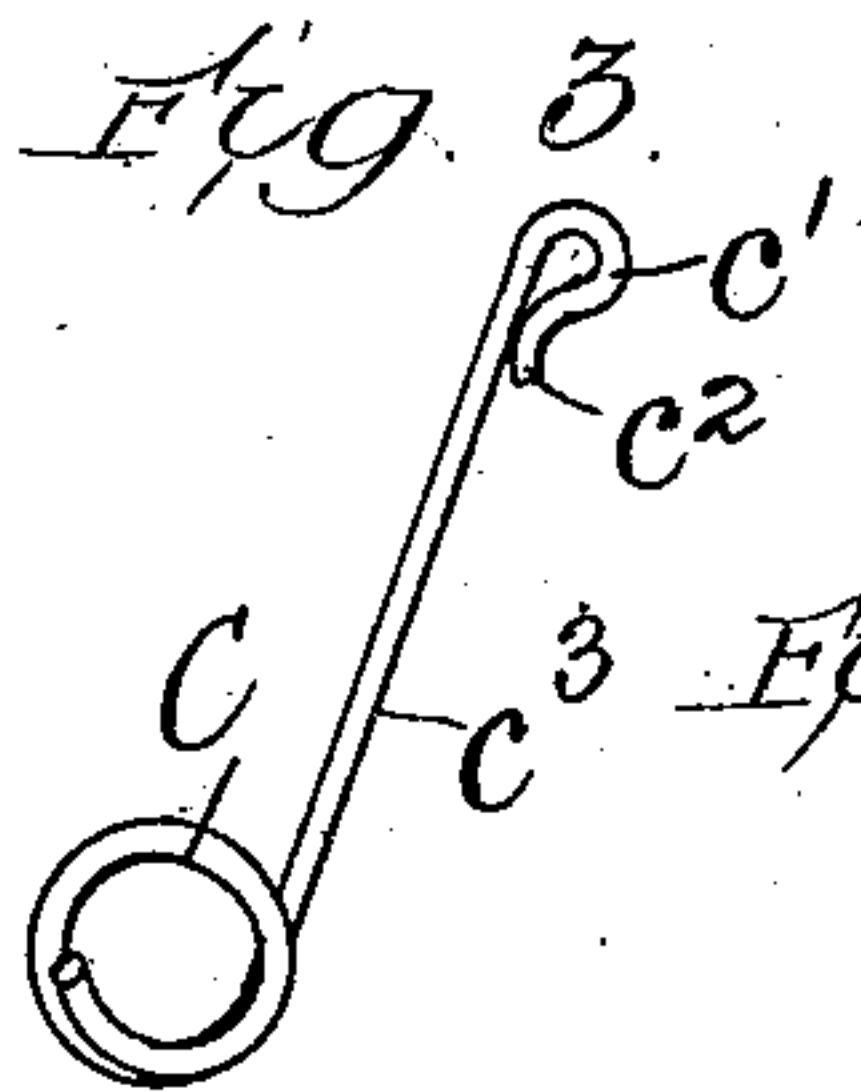
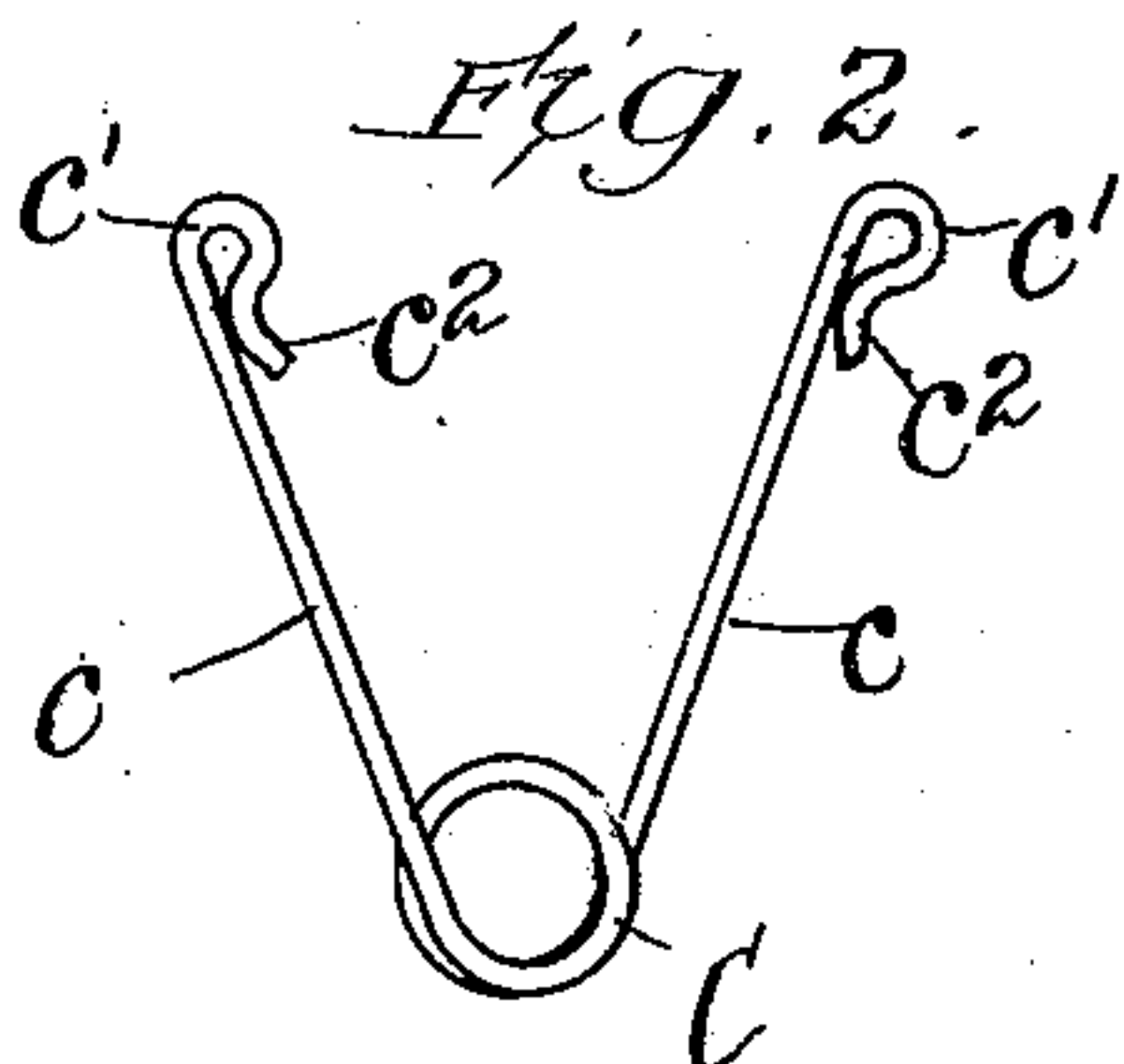
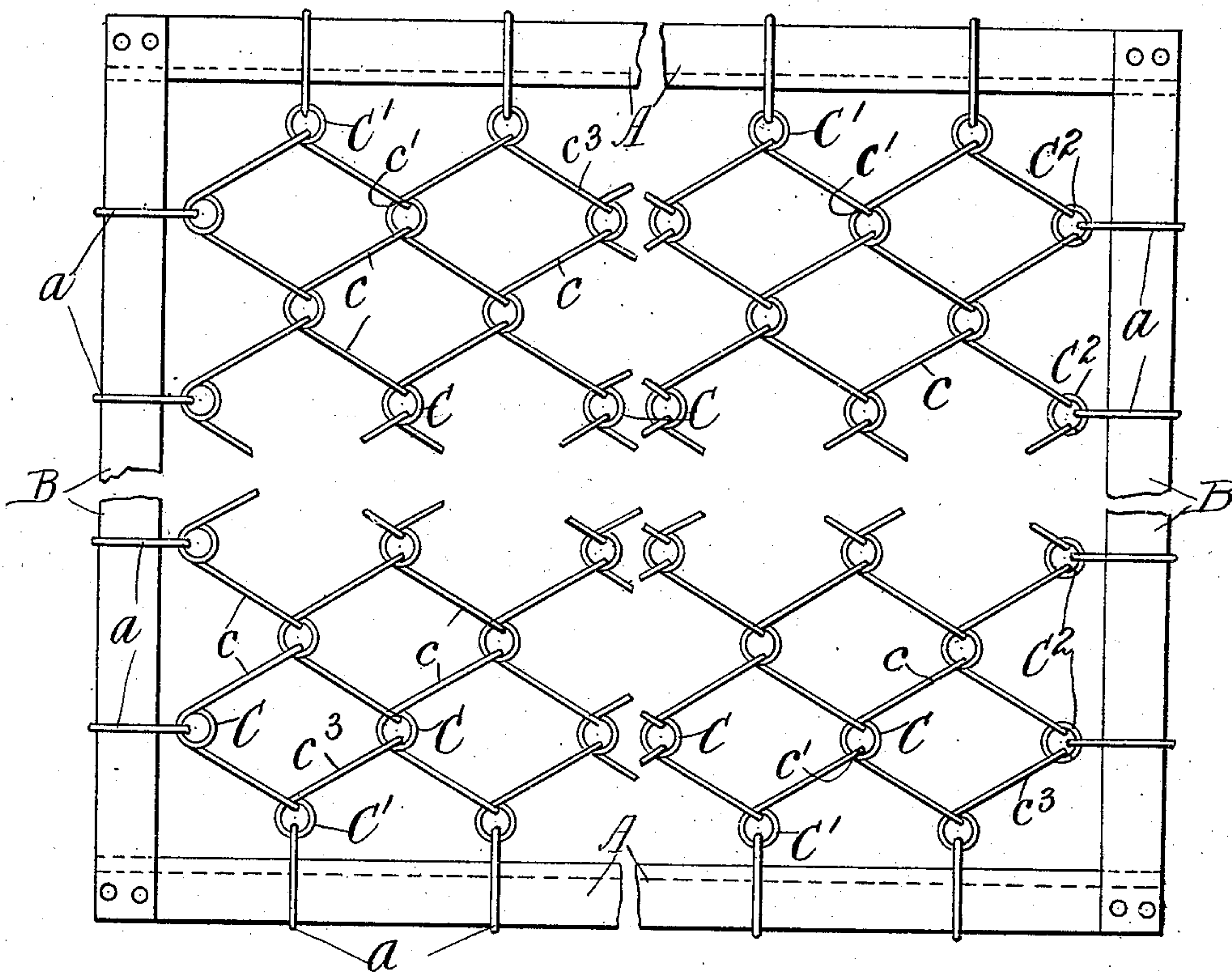
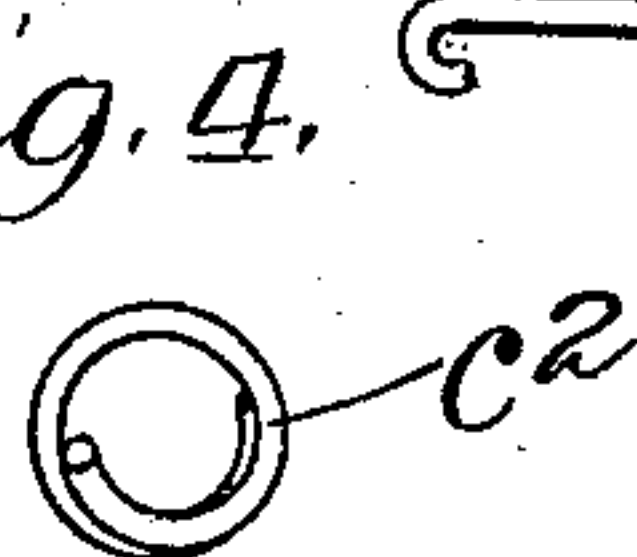


Fig. 5.



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2 SHEETS—SHEET 2.

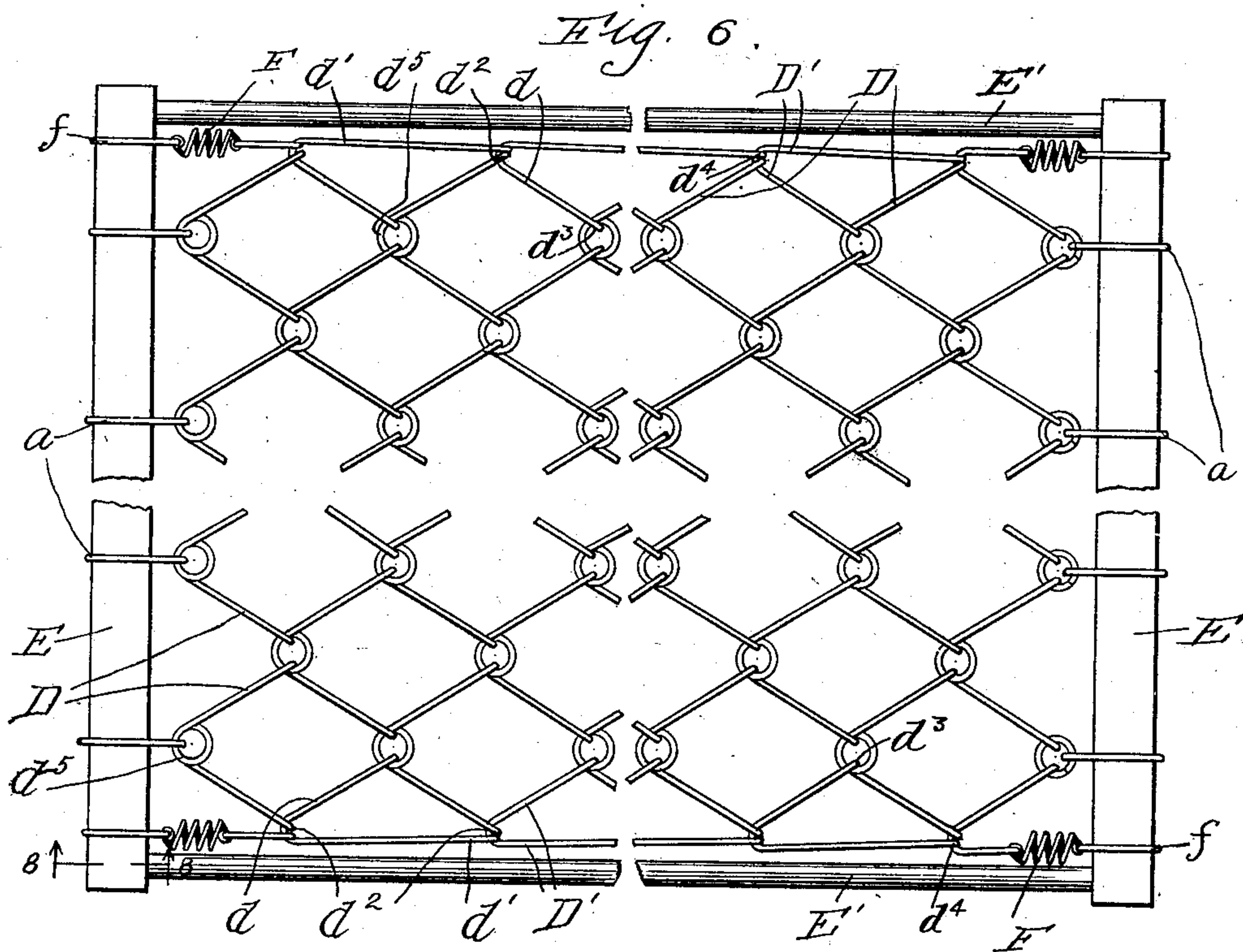


Fig. 7.

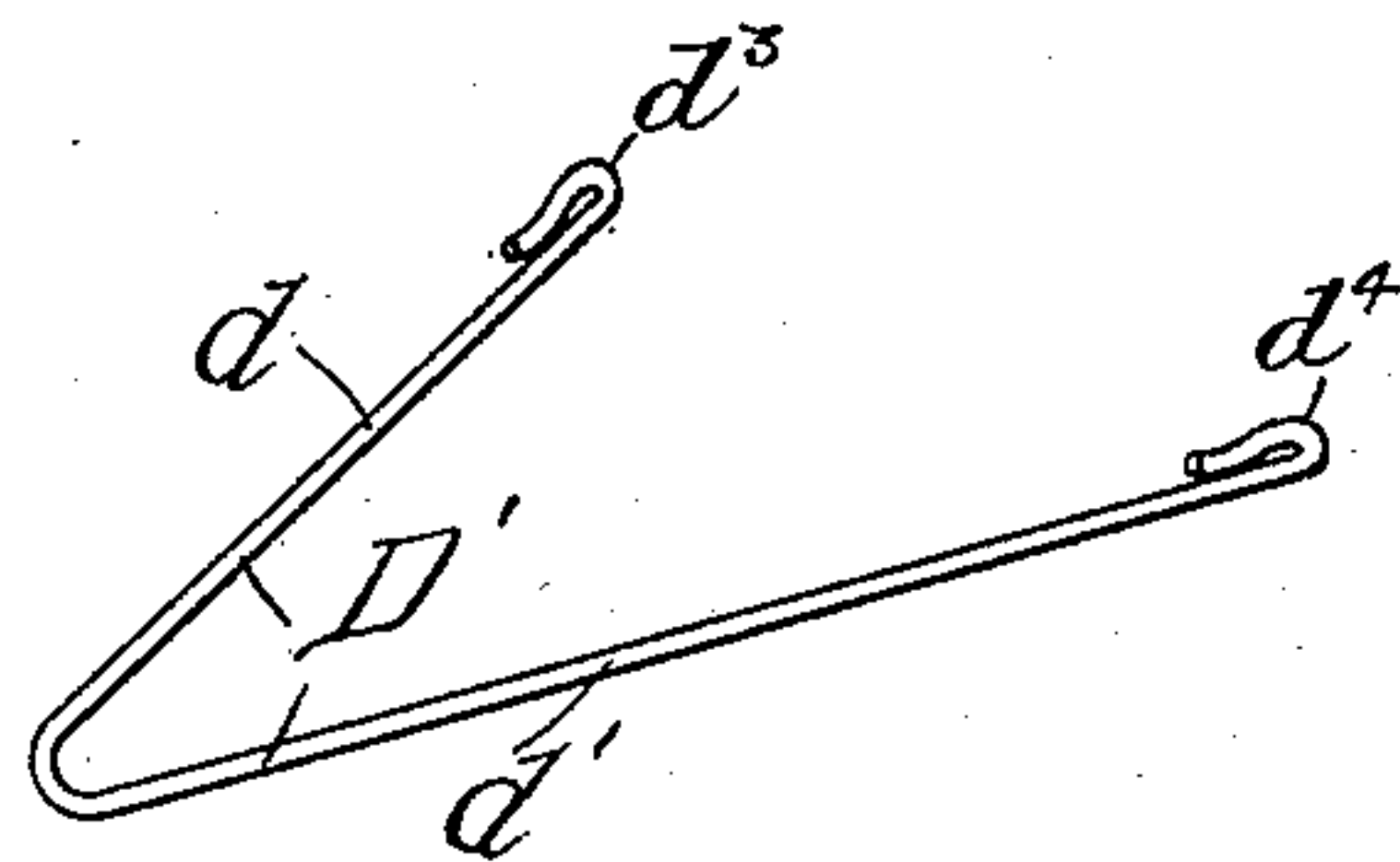
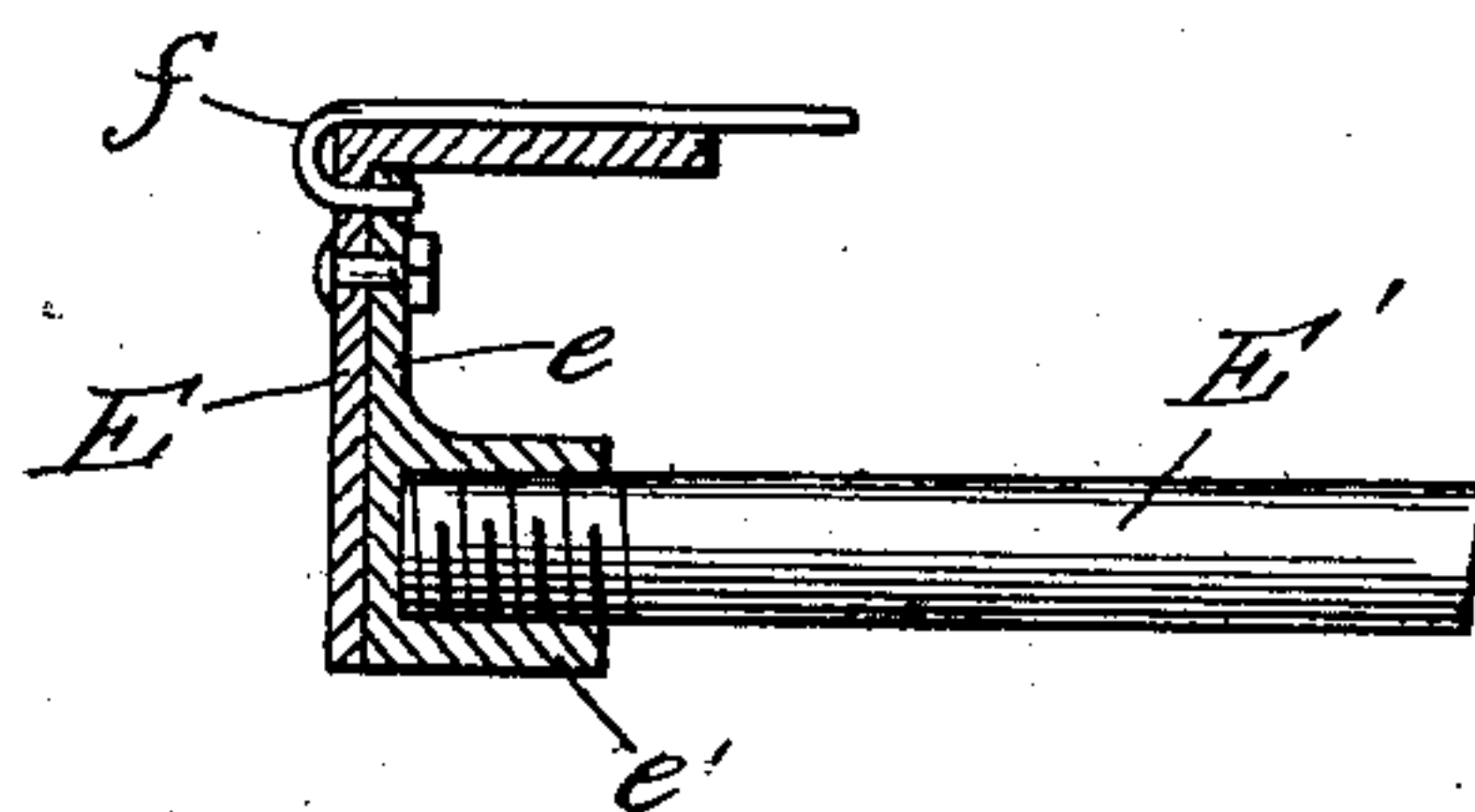


Fig. 8.



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UNITED STATES PATENT OFFICE.

MATTHEW W. FLOTO, OF CHICAGO, ILLINOIS.

WIRE-CLOTH FABRIC.

No. 842,310.

Specification of Letters Patent.

Patented Jan. 29, 1907.

Application filed July 24, 1905. Serial No. 270,924.

To all whom it may concern:

Be it known that I, MATTHEW W. FLOTO, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wire-Cloth Fabrics; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in wire-cloth fabric of the class used in constructing bed, couch, and davenport bottoms. Heretofore in building up such fabrics sections or units have been used which afford slight resiliency in themselves, and it has been usual to require strong spiral or other suitable springs for engaging the fabric at the sides and end-frame members of the bed-body. This not only greatly increases the expense, but as well is in several respects objectionable as rendering repairs much more difficult should such a spring or a unit-section be broken or injured. Furthermore, when so constructed the resiliency is insufficient for comfort.

The object of this invention is to afford a construction whereby the end and side springs, usually spiral, may be entirely dispensed with and in which the fabric as a whole affords sufficient resiliency for comfort of the user and for all purposes without the necessity of the employment of additional springs. It is a further object of the invention to simplify the construction as a whole and to afford simple means for uniting the margins of the fabric to the frame.

The invention consists in the matters hereinafter described, and more fully pointed out and defined in the appended claims.

In the drawings, Figure 1 is a fragmentary plan view of a bed, couch, or davenport frame having secured therein a fabric embodying my invention. Fig. 2 is a view in perspective of one of the units or members affording the fabric. Fig. 3 is a similar view of one of the side units. Fig. 4 is a perspective view of one of the rings. Fig. 5 is a side elevation of one of the frame-hooks. Fig. 6 is a view similar to Fig. 1, showing a slightly-modified form. Fig. 7 is an enlarged perspective view of one of the side units there-

for. Fig. 8 is an enlarged section taken on line 8 8 of Fig. 6.

As shown in the drawings, A indicates the side frame members, and B the end frame members, of a davenport, bed, or couch to which my improved fabric is adapted to be applied. *a* indicates the hooks or clamps which engage over the flanges of said frame, which are usually constructed of angle-bars, and into the fabric.

The fabric is constructed of units or members each composed of strong resilient wire of steel or other suitable metal bent to form intermediate the ends a coil or spiral C, from which the extremities *c* diverge, as shown in Fig. 2, and afford attaching-arms the ends of which are turned over, forming a loop *c'*. As shown, the extremities *c'* of said wires beyond the loops are turned outwardly on the under side of each arm, forming a spring beneath which the central coil or spiral of a section engaged thereby is drawn. Said sections or units are assembled in constructing the fabric by drawing the coil or spiral of one section into the loops of the adjacent right and left arm, respectively, of the two preceding sections. In this manner the fabric is built up, having, however, one arm of each of the units or members adjacent the side frame members unconnected. To enable the same to be connected with the next unit or member in advance thereof and with the frame, a half-unit or member C' is provided, comprising a coiled spring having the outwardly-extending arm *c'* thereon corresponding with the arms *c* on the units C and which engages in the coil of the preceding unit. The coils of the units and half-units thus afford rings along both sides and one end of the fabric, and connecting the adjacent arms at the opposite end of the fabric are rings C², as shown in Fig. 4, each of which, as shown, consists of a coil of wire similar to the coils of each unit.

The fabric, as shown, is engaged to the frame by means of clips *a*, comprising each a rod or wire bent to afford a hook at each end, one of which engages over the flanges on the frame and the other of which engages in the coils and rings at the ends and sides of the fabric, as shown in Fig. 1, under some tension.

In the construction shown in Fig. 1 the lateral edges or margins of the bottom are

rigid; but it is oftentimes desirable to provide a bed or couch bottom for mattresses having resilient or yielding lateral edges, as shown in Fig. 6. In this construction the units D
5 are similar in all respects to the units C and are engaged together and to the end frame members, as before described. The frame, however, is comprised of angle-bar end members E E and have secured to the inner faces
10 thereof adjacent their ends brackets *e*, which are provided at their lower margins with internally-screw-threaded bosses *e'*, adapted to receive the screw-threaded ends of the side bars or rails E', situated a distance be-
15 low the plane of the fabric.

Side units D' for the fabric are provided, comprising a bent wire or rod affording one long and one short arm *d* and *d'*, respectively, as shown in Fig. 7, and of which the long arm
20 affords the margin for the fabric. As shown, said units D' are each engaged at their bend in the hooks *d*² of the outer arm of the adjacent unit D, and the hooks *d*³ and *d*⁴ on the arms *d* and *d'*, respectively, engage in the
25 coil *d*⁵ of the succeeding unit D and the bend of the succeeding unit D'.

At the corners of the fabric are coiled springs F, which are engaged at one end to a hook or clamp *f*, similar to the hooks *a*, and
30 at the other ends are engaged to the units D.

The operation is obvious. Any stress applied at any point upon the fabric is distributed over the entire fabric, which being formed of a series of connected spiral springs
35 and resilient arms affords great resiliency at trifling cost.

It is obvious that the construction can be very quickly assembled and easily and economically connected with the frame and
40 that the frame may be of any size and that said fabric is not likely to break, owing to the resiliency afforded by the coils. Should, however, any part of the fabric break, the broken part can be quickly and readily re-
45 moved from the fabric and another substituted without requiring the services of skilled labor:

Any number of turns may be provided in the spirals formed at the intersection of the
50 resilient arms. As shown, however, approxi-

mately one and one-half turns are made, thus bringing the resilient arms or ends into the proper angle or divergence.

I claim as my invention—

1. In a device of the class described the
55 combination with a frame of unit members comprising coiled springs having divergent arms, each provided with a hook on the end thereof said members being engaged to-
60 gether and to said frame, half-unit members comprising a coiled spring having an arm, a hook integral with the end thereof and adapted to engage the coils of the unit mem-
65 bers along one side of the frame, rings engaged to the hooks of the unit and half-unit members at one side of the frame and means
engaging said hooks and half-unit members to the frame.

2. In a device of the class described the
70 combination with a frame of unit members comprising coiled springs having a plurality of divergent arms, a hook on the end of each arm bent back upon said arm and then
75 downwardly therefrom, a plurality of half-unit members each comprising a coiled spring having an arm, a hook integral with the end of said arm, said unit and half-unit
80 members being arranged in such a manner that the coils are adjacent the frame, coils engaged to the members adjacent one end of the frame and hooks engaging each of said
coils to the frame.

3. The combination with frame members of a plurality of springs having a spiral coil and divergent arms, a plurality of marginal
85 springs having a coil and an arm, integral hooks on the end of each of said arms and bent back upon the arm and outwardly therefrom to firmly engage said coils, a plu-
90 rality of coils adapted to be engaged to one end of the frame and the hooks of said arms and means for fastening the coils adjacent the frame to said frame.

In testimony whereof I have hereunto sub-
scribed my name in the presence of two sub-
95 scribing witnesses.

MATTHEW W. FLOTO.

Witnesses:

C. W. HILLS,

W. W. WITHEBURY.