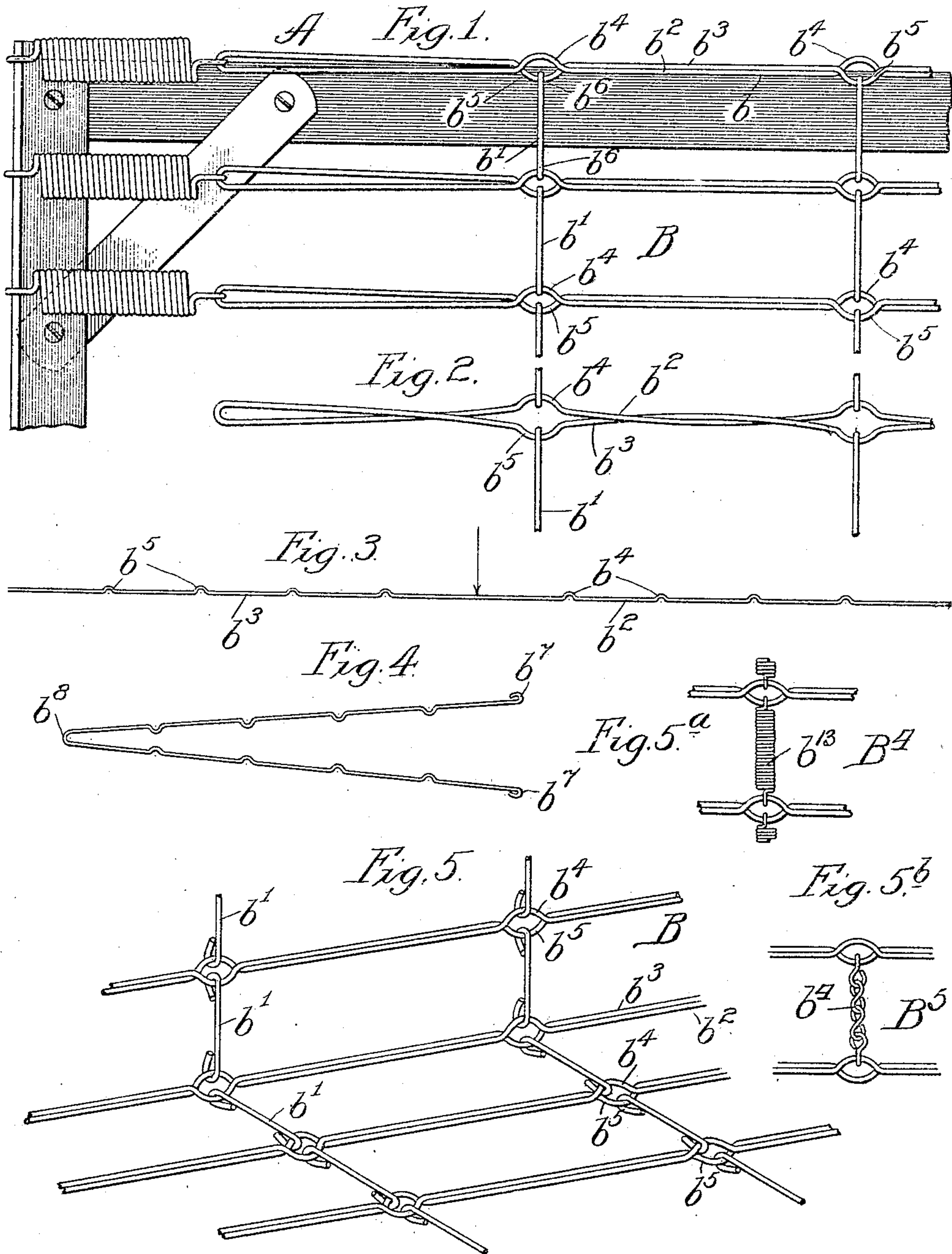


907,602.

O. R. HUNT.
WIRE FABRIC.
APPLICATION FILED OCT. 31, 1907.

Patented Dec. 22, 1908.
2 SHEETS—SHEET 1.



Witnesses:
Chas. H. Buell.
Chas. H. Buell.

Inventor:
Ozello R. Hunt.
By *[Signature]*, Attorney.

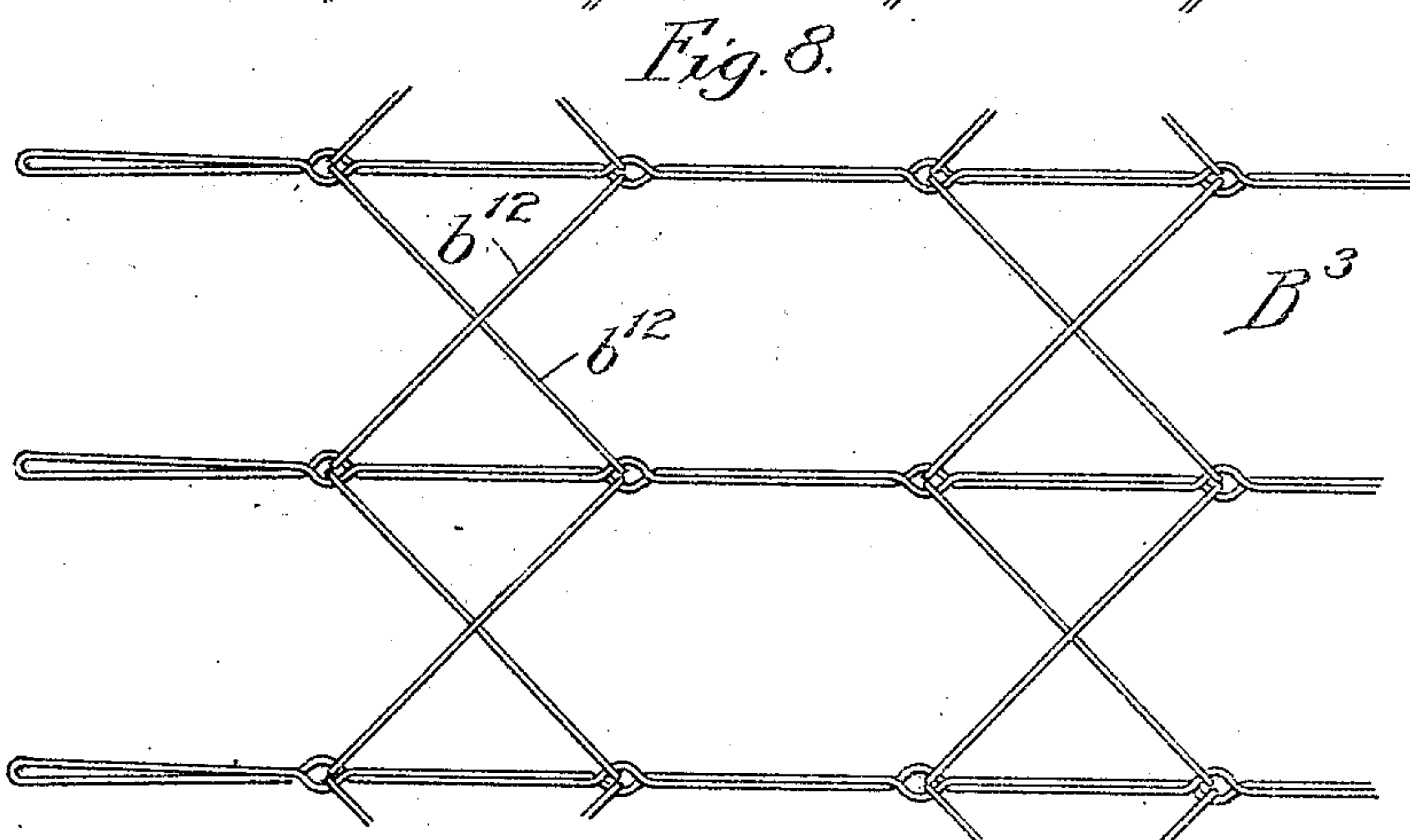
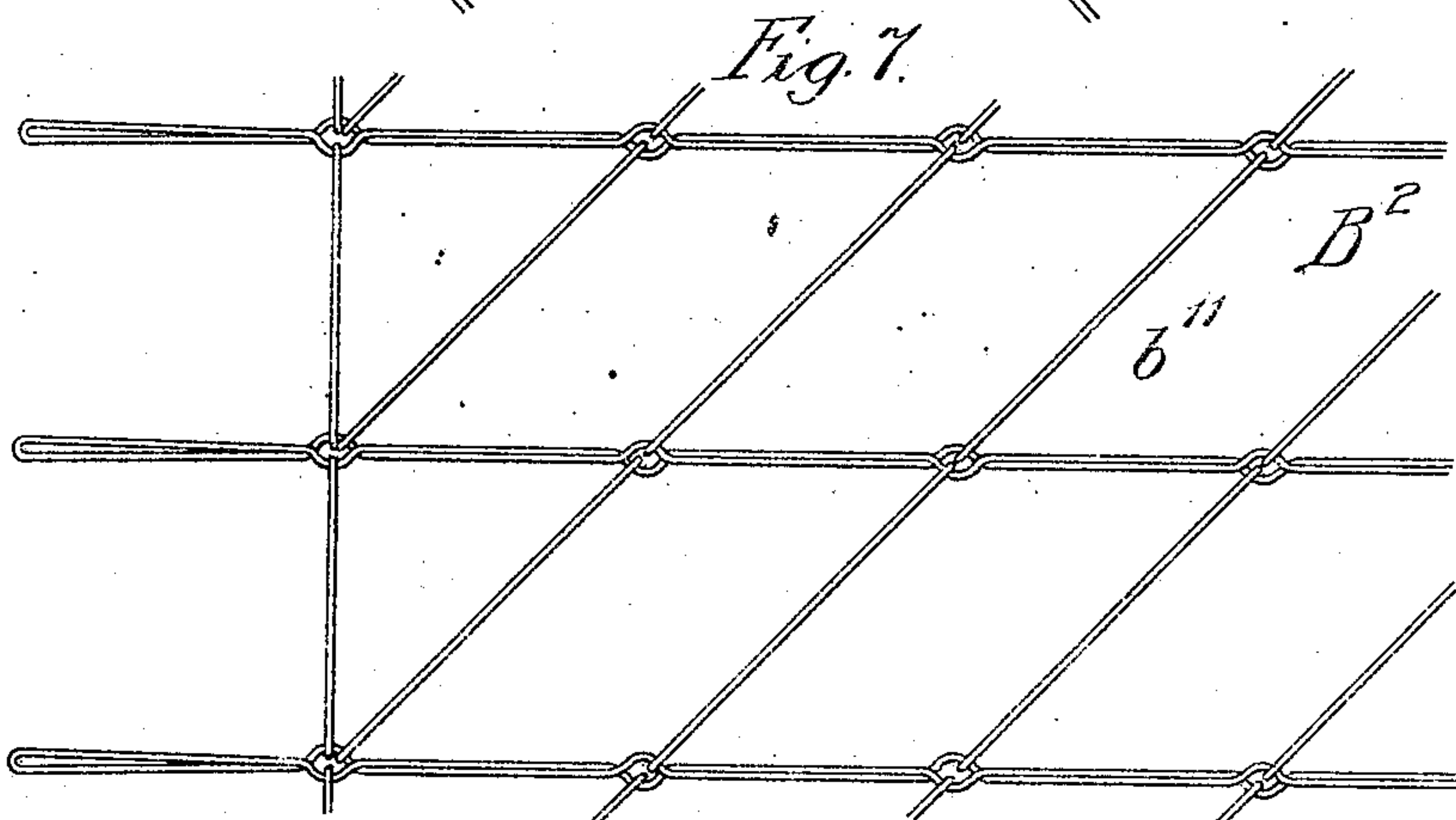
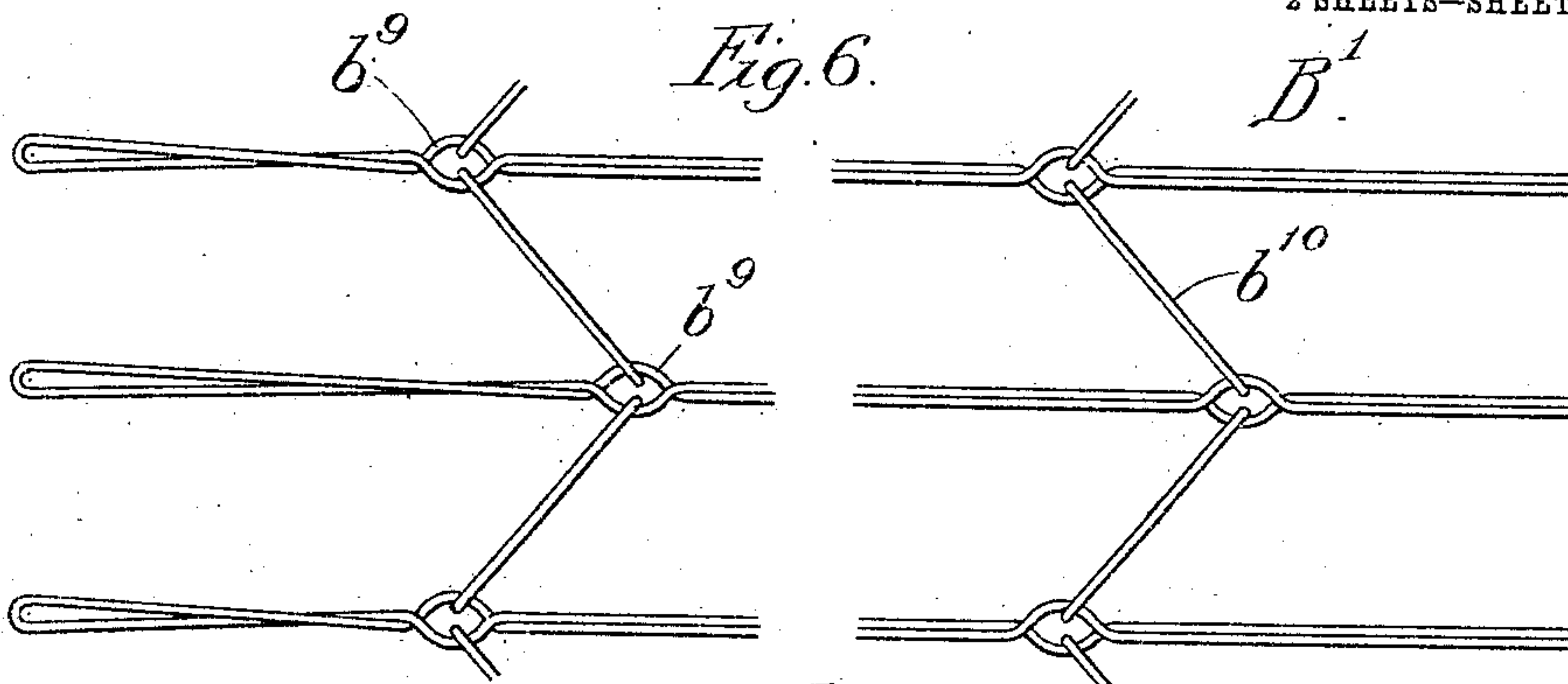
907,602.

O. R. HUNT.
WIRE FABRIC.

APPLICATION FILED OCT. 31, 1907.

Patented Dec. 22, 1908.

2 SHEETS—SHEET 2.



Witnesses:
Edw. J. Gaylord,
Chas. H. Buell

Inventor.
Ozello R. Hunt.
By *Pyra J. L. Platten & Wilco,*
Attys.

UNITED STATES PATENT OFFICE.

OZELLO R. HUNT, OF RACINE, WISCONSIN, ASSIGNOR TO THE SIMMONS MFG. CO., OF KENOSHA, WISCONSIN, A CORPORATION OF WISCONSIN

WIRE FABRIC.

No. 907,602.

Specification of Letters Patent.

Patented Dec. 22, 1908.

Application filed October 31, 1907. Serial No. 400,001.

To all whom it may concern:

Be it known that I, OZELLO R. HUNT, a citizen of the United States, residing at Racine, in the county of Racine and State of Wisconsin, have invented a new and useful Improvement in Wire Fabrics, of which the following is a specification.

My invention relates particularly to wire-fabrics of a character now commonly employed for mattresses, beds, couches, etc.; and my primary object is to provide fabric which can be manufactured at a moderate cost, and which possesses a high degree of resiliency throughout its structure, enabling it to yield to accommodate itself to the person.

A further object is to provide a fabric, the design of which may be varied greatly with but little extra expense.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 represents a broken plan view of a wire-mattress constructed in accordance with my invention; Fig. 2, a broken plan view showing a portion of the fabric under tension and illustrating the resiliency of the fabric; Fig. 3, a view showing one of the wires employed after the same has been subjected to the action of a press which provides it with a series of offsets or half eyes; Fig. 4, a perspective view showing one of the longitudinal strands of the fabric produced by bending the wire shown in Fig. 3 on itself and providing the extremities of the folded wire with hooks; Fig. 5, a broken perspective view illustrating the facility with which the fabric will fold, as for instance in sofa-bed construction; Figs. 5^a and 5^b, views showing modifications of the transverse links employed; Fig. 6, a broken plan view illustrating a modification of my invention providing for a variation in the design of the fabric; Fig. 7, a broken plan view showing a still further modification in another design; and Fig. 8, a broken plan view showing a third modification in another design.

Referring to Figs. 1 to 5 inclusive, A represents a frame; and B my improved fabric.

The fabric B comprises longitudinal strands *b* and transverse links *b*¹ connected with said strands. Each strand comprises two wires *b*², *b*³, provided, respectively, with offsets or half eyes *b*⁴, *b*⁵ adapted to receive the hooks *b*⁶ of the transverse links *b*¹. The offsets or half eyes *b*⁴ and *b*⁵ are disposed adjacent to

each other so as to form a complete eye. The preferred manner of forming a strand is to subject a wire to the action of a press so as to form the eyes *b*⁴ and *b*⁵ on the same side of the wire, as indicated in Fig. 3; to then bend the wire upon itself at its center, striking the wire in the direction indicated by the arrow in Fig. 3, and finally to form the hooks *b*⁷ upon the extremities of the folded wire, as shown in Fig. 4.

The hooks *b*⁷ serve to engage the coiled spring at one end of the fabric, and the loop *b*⁸ formed by bending the wire serves as a means of engagement with the coiled spring at the other end of the strand. In applying the links *b*¹ to connect the strands, alternate offsets *b*⁴ are caused to lie above the companion offsets *b*⁵, and the remaining alternate offsets *b*⁴ are caused to lie beneath the companion offsets *b*⁵. This is equivalent to stating that the wires *b*² and *b*³ cross each other in a vertical direction between each pair of eyes of the strand. This provides for resiliency throughout the fabric and enables the fabric at any point to adjust itself to the person, thus greatly enhancing the comfortableness of the fabric. At the same time, the fabric possesses all necessary strength, and will always resume its normal condition when the pressure is relieved. The manner in which the wires *b*² and *b*³ of a given strand are flexed over each other when pressure is applied is illustrated in Fig. 2. It will be understood that ordinarily a coiled spring is employed to connect each end of each strand with the mattress frame.

Fig. 5 represents the facility with which one portion of the fabric may be bent at right angles to another portion, as where a portion of the fabric is connected with the upright back frame of a sofa-bed and another portion is connected with the seat-frame of a sofa-bed. The mattress may be folded about any longitudinal strand, and it follows that the mattress may be rolled upon itself for convenience in shipping or handling.

In the construction illustrated in Fig. 6, B¹ represents a fabric constructed in accordance with my invention with the design or appearance changed. In this construction, the eyes *b*⁹ of each strand are staggered with relation to the eyes *b*⁹ of the adjacent strand, and links *b*¹⁰ which extend diagonally or obliquely are employed to connect the

eyes, the links b^{10} being ordinarily longer than the links b^1 of the fabric B.

In the construction illustrated in Fig. 7, B^2 represents a fabric constructed in accordance with my invention. In this construction, links b^{11} are arranged in a series of diagonal rows and employed to connect the eyes of the strands. This arrangement affords still another design.

In the construction illustrated in Fig. 8, B^3 represents a fabric constructed in accordance with my invention. In this construction, the eyes of the strands are arranged in transverse rows, and diagonal links b^{12} which cross each other are employed to connect the eyes, giving the appearance of superposed zig-zag transversely extending rows of connecting links.

It will be understood that in each of the constructions described, the desired resiliency is obtained; and, it is to be observed, the same press and dies may be employed for producing the offsets or eyes in the strands of the fabric, the gage being adjusted according to requirement. Ordinarily, a large number of wires are simultaneously fed into a press to enable the eyes to be produced as shown in Fig. 3; and, while the wires are still in the holder, they are subjected to the action of a second press to fold them to the condition shown in Fig. 4.

It is obvious that my invention requires the use of wire of some rigidity and of considerable springiness or resiliency. A fabric constructed in accordance with the present invention possesses much greater resiliency than any fabric in which the longitudinal strands are formed of a series of links as well as the transverse strands. Moreover, there is some economy in the use of wire, according to this description.

In the construction illustrated in Fig.

5^a, B^4 represents a fabric of the general construction described above. In this construction, the links b^1 are replaced by coil-spring links b^{13} , which lend a still greater resiliency to the fabric. This feature is desirable in those cases where the item of expense need not be considered, and where a variation in the design is desired.

In the construction illustrated in Fig. 5^b, B^5 represents a fabric of the same general construction, in which the links b^1 are replaced by chain-links b^{14} .

The foregoing detailed description has been given for clearness of understanding only, and no undue limitation is to be understood therefrom.

What I regard as new, and desire to secure by Letters Patent, is—

1. A fabric comprising a plurality of strands, each strand composed of two substantially straight adjacent resilient wires with offsets therein lying adjacent to each other and forming eyes, the wires of each strand crossing each other between eyes, and links joining said eyes and connecting the strands together, whereby the strand-wires will be subject to a flexing action upon each other, for the purpose set forth.

2. A fabric comprising a plurality of strands, each strand composed of a resilient wire folded upon itself to form two substantially straight parallel members which lie adjacent to each other, said members having offsets crossing each other and forming eyes, and links connecting the offsets of one member of one strand with the offsets of the other member of the adjacent strand, for the purpose set forth.

OZELLO R. HUNT.

In presence of—

RALPH A. SCHAEFER,
W. T. JONES.