J. J. BRAZNELL.

MATTRESS SPRING FABRIC.

APPLICATION FILED APR. 14, 1909.

947,192. Patented Jan. 18, 1910.

Fig. 1.

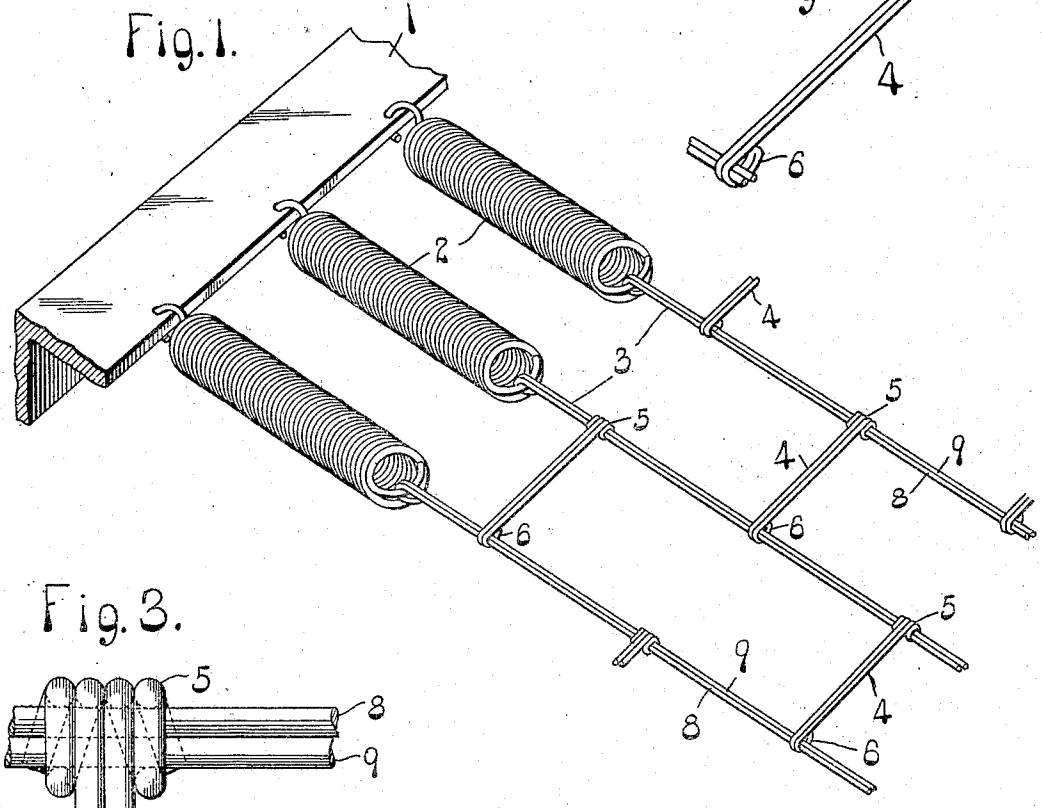


Fig. 2.

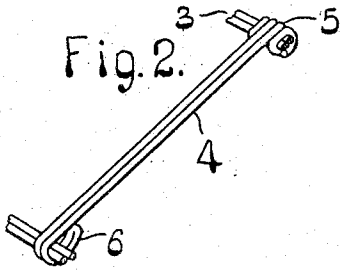


Fig. 3.

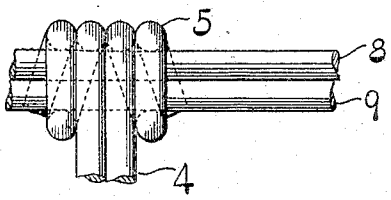


Fig. 4.

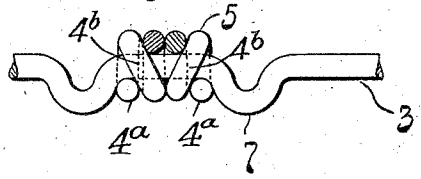
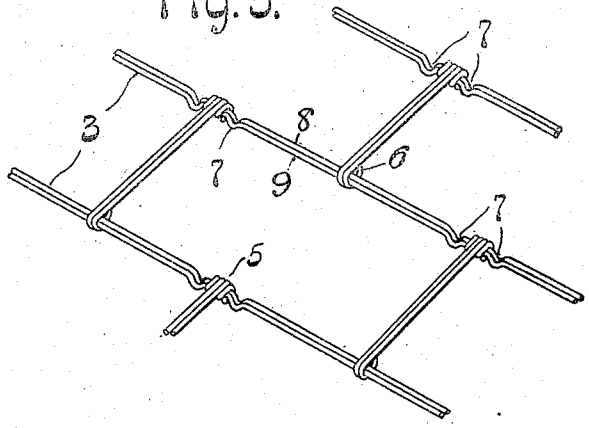


Fig. 5.



WITNESSES

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MATTRESS-SPRING FABRIC.

947,192. Specification of Letters Patent. **Patented Jan. 18, 1910.**

Application filed April 14, 1909. Serial No. 489,792.

To all whom it may concern:

Be it known that I, JOHN J. BRAZNELL, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Mattress-Spring Fabrics, of which the following is a specification.

This invention relates to wire fabrics usually employed in the construction of bed and couch mattresses, seats, chairs, etc.

I am aware of prior patents comprising a series of parallel strands arranged at right angles to and engaged by a plurality of comparatively short links or braces disposed therebetween, and I am also aware of the fact that in such structures as exist there is no method proposed which positively locks one extremity of said links against revolutionary movement about the strand with which it is engaged nor against longitudinal movement thereof.

Having in mind the aforementioned condition of the art, I aim to produce a strong, durable fabric which may be manufactured at not too high a cost, and in which means are presented whereby it is rendered physically impossible for said links to revolve about or move longitudinally of said strands with which they are engaged.

By reason of my experience in manufacturing beds and their several constituent parts I am in a position to know, and do know, that a fabric which embodies the feature last described is deemed of distinct new value to the trade, and constitutes an advance in the art. Mattress-springs whose major portion is composed of strands connected by links arranged therebetween are in that manner constructed to guard against the defect of permanent "sagging," for great weight being disposed over a certain area of such a fabric said links or braces distribute a portion of the load to adjacent strands, and they assisting in the support of the load the tendency is to maintain, throughout constant use, an even degree of resistance to the imposed burden.

In such fabrics as the prior art discloses, one extremity of each of said links is clamped upon or about a strand, while the other extremity loosely engages the succeeding strand. It is obvious that weight being thrown upon only restricted areas of the mattress only certain of said strands (those lying directly in the path of the burden) are materially depressed, and it follows that the links connecting strands which are just without the area upon which the weight is disposed do not remain in a horizontal plane, but are "tilted" or thrown at an oblique angle, and it has been found that the former practice of simply coiling an extremity of said links about a strand with a purpose of so forming an immovable joint is defective. As certain strands are depressed, the links being at right angles thereto and being thrown, as aforesaid, at an oblique angle, there is a strong tendency for the supposedly fixed extremities of the links to "twist" or revolve about the strands. In other words, in the absence of mechanical means whereby an extremity of each of said links is positively locked against revolution about or longitudinal movement of said strands, it is obvious that, eventually, the links work loose, and thereafter, having no fixed position but sliding at random upon the strands, lose their usefulness and necessitate repair of the mattress.

The advantages which I claim may be appreciated by reference to the accompanying drawing, in which—

Figure 1 is a broken perspective of a wire mattress constructed according to a modification of my invention; Fig. 2 a detail view of one of the transversely extending links shown in Fig. 1; Fig. 3 a view on enlarged scale of the juncture of one extremity of the link of the modification with a strand thereof; Fig. 4 a side-elevation on enlarged scale of the essential features of my invention; and Fig. 5 a broken perspective of a wire mattress embodying my invention.

Referring particularly to Figs. 4 and 5, it will be noted that a portion of the frame 1 furnishes support to coil springs 2 which are connected to strands 3, the same being preferably formed of adjacent parallel wires 8 and 9. Disposed between and engaging said strands are links 4, one extremity thereof being peculiarly coiled about and thereafter compressed upon a selected strand at 5, illustrated in detail in Fig. 4 and diagrammatically in Fig. 5, while their other extremity is hooked at 6 to loosely engage the opposite strand. In Fig. 4 it will be observed that the otherwise adjacent wires of link 4 are first spaced widely apart, as indicated by their terminals 4^a; thereafter converging, 4^b, just as they complete one wrap of the strand

and lying, therefore, between said spaced terminals; and subsequently as they continue about the strand come closely together and lie between said converging portions 4^b. Immediately on either side of the joint so formed, and which has been subjected to pressure, the strand is sharply depressed to form half-eyes 7 which force terminals 4^a tightly against the converging wires 4^b and render it impossible for the links to move longitudinally of the strands.

What I claim as new and desire to secure by Letters-Patent is:—

1. A fabric comprising a plurality of strands arranged substantially at right angles to a plurality of links, said strands having at intervals half-eyes between which and rigidly fixed upon the body of said strand is located one extremity of said links, the other extremity of said links having means to loosely engage another of said strands.

2. A fabric of the character described, comprising a plurality of lengthy strands arranged at right angles to a plurality of comparatively short links or braces interposed therebetween; one extremity of each of said latter members being coiled about and thereafter compressed upon an adjacent strand, and the material of said strand being sharply depressed on either side of and immediately adjacent to the point of engagement of said brace therewith, whereby said brace is positively locked against revolutionary or other movement upon said strand; the other extremity of each of said braces or links loosely engaged about the opposite strand.

3. A fabric of the character described, comprising a plurality of lengthy strands arranged at right angles to a plurality of comparatively short braces or links interposed therebetween; said links composed of a single length of wire rebent upon itself and hooked at one extremity for engagement with an adjacent strand; the parallel wires composing each of said links being spaced widely apart at its other extremity, and said spaced wires subsequently converging as they are coiled about the selected strand; the material of said strand being sharply depressed upon either side of and immediately adjacent to the point of engagement of said spaced wires of said link therewith; and said extremity of said brace compressed upon said strand between said depressions therein, whereby said link is positively locked against revolutionary or other movement upon said strand.

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Witnesses:
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