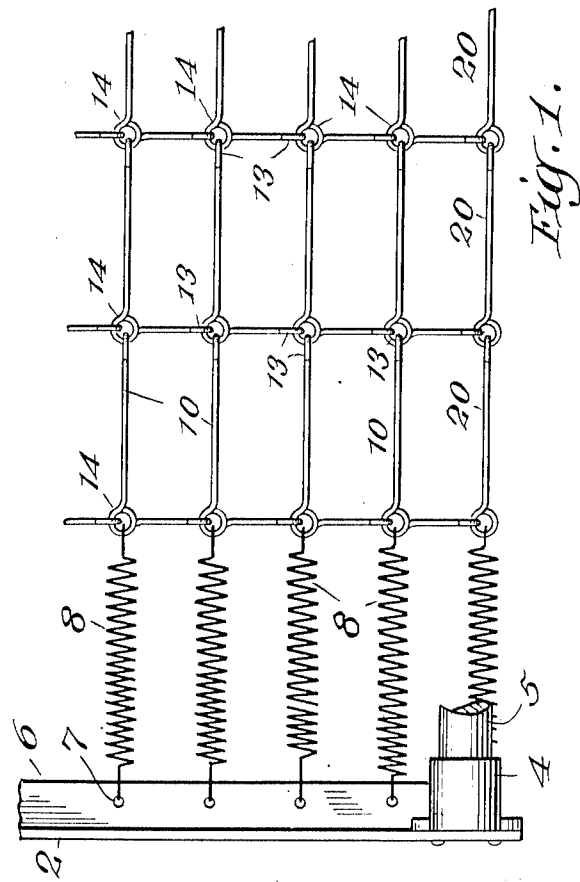
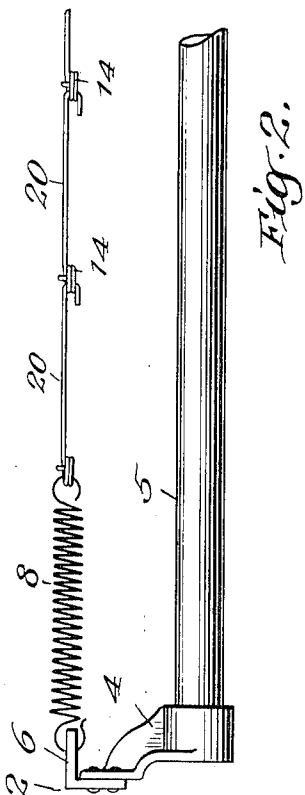
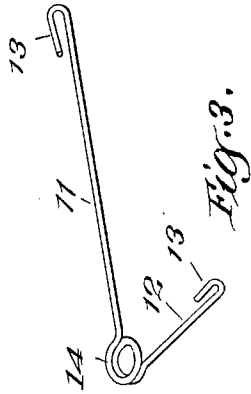
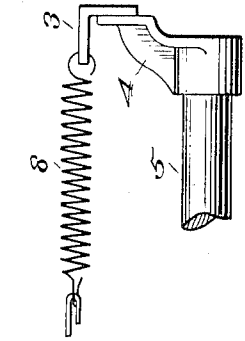


C. L. PLUNKETT.
 SPRING MATTRESS FABRIC.
 APPLICATION FILED APR. 1, 1911.

1,061,402.

Patented May 13, 1913.



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SPRING-MATTRESS FABRIC.

1,061,402.

Specification of Letters Patent.

Patented May 13, 1913.

Application filed April 1, 1911. Serial No. 618,269.

To all whom it may concern:

Be it known that I, CHARLES L. PLUNKETT, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Spring-Mattress Fabrics, of which the following is a specification.

This invention relates to spring mattresses, the object of the invention being to provide an improved spring mattress fabric simple in its construction, durable in use and comparatively inexpensive to manufacture, and made up of links each of which comprises a pair of members extending substantially at right angles to each other or at least 90 degrees apart and integrally connected by a plurality of coils, by reason of which construction the wires forming the link will pull in a straight line in two directions, while each such link is itself provided with a spring in consequence of which considerable resiliency is obtained in different directions and especially lengthwise of the fabric, while the possibility of the breakage of the links is eliminated by reason of the fact that the coils connecting the links members will yield before such members will break.

In the drawings accompanying and forming part of this specification, Figure 1 is a plan view of a portion of this improved spring mattress; Fig. 2 is a side view thereof partly broken away; Fig. 3 is a detail view of one of the fabric links; and Fig. 4 is a detail view of one of the edge or side links of the fabric.

Similar characters of reference indicate corresponding parts throughout the drawings.

The mattress will usually comprise some suitable frame work, shown herein as consisting of a pair of cross or transversely extending end angle bars 2 and 3 supported by suitable brackets 4 connected by side bars 5, one of which only is shown. The horizontal members 6 of the cross angle bars are provided with openings 7 for the reception of the ends of the helical springs 8 by means of which the fabric is stretched under tension.

The fabric in the present instance is made up of a series of angularly formed links 10,

each comprising a relatively long member 11 and a relatively short transverse member 12, each having a hook or loop 13 at its end, these members being integrally connected by a coiled spring 14 at their point of juncture. In other words, each link is of an integral construction, the straight portions thereof terminating in a coiled spring comprising a plurality of coils, thus forming a double coil, which coils are shown as horizontally located. By this construction the necessity of overlapping or crossing the straight members of the link in order to connect the members by a bent portion is avoided, while at the same time considerable resiliency lengthwise of the link is obtained, which is impossible when the members or arms of the link cross each other. Furthermore, by joining the link members or arms by means of a plurality of coils, or a double coil, it will be immediately apparent that any abnormal tension on the link members will not break the same as would be the case where such link members cross each other, for the reason that the coils will yield without tightly closing the loops thereof and thus prevent any breakage of the links. Furthermore, it will be also observed that the pull on the link members is in a perfectly straight line in each direction, which is a material advantage in structures of this kind, and that the coils form the spring for the link without depending upon the form of the straight members thereof to give such spring action, so that the helical springs 8 at the ends of the fabric may be of lighter and therefore less expensive construction. The links are assembled by hooking the arms of each link into coils of companion links, whereby when assembled the long arms or members of each link will preferably extend longitudinally of the fabric, while the short arms will extend transversely thereof. One outer or side edge of the fabric is made up of lengthwise extending links 20, in which the short arms are dispensed with, so that this edge of the fabric comprises a lengthwise extending member having a hook or loop at one end and a plurality of coils at its opposite end, although, obviously, the coils might be located intermediate the ends, thus forming a

neat finish to the structure. The helical springs 8 for imparting tension to the fabric are each hooked into a coil of a link.

From the foregoing it will be immediately apparent that by the provision of links each comprising a pair of members integrally connected by a plurality of coils the strength of the links is very materially increased, the possibility of breakage thereof avoided and a straight pull in each direction obtained, so that any abnormal tension on the fabric will be readily taken up by the double coils and thus prevent the breakage of the link, which would often result where the members of the links are connected by a simple bend or by the links crossing each other.

By reason of the present improvement it will be observed that the pull on each member of the link is in a substantially straight direction, such pull on either of such members tending to open or spread one of such coils. In other words, applicant provides a fabric in which there is retained the straight pull on the links in transverse directions, and by forming the corners of the links in the manner shown great resiliency is given thereto, and this is equally exerted in either direction. The advantage of having a straight pull is that it prevents the fabric from drawing in at the side edges. In this improved construction the double coil terminating in the straight portions not only permits a straight pull in transverse directions, and especially lengthwise of the fabric, preventing the pulling of the edge of the fabric toward the center, but in action the pull on the longer straight portion of the link tends to pull one coil laterally over or away from its companion coil, thereby materially increasing the resiliency of the link, and of course the whole fabric. The fabric is so resilient by this construction that it can be practically made without coil springs at the ends if this is desired.

I claim as my invention:

1. A spring mattress fabric made up of links, each comprising an eye or loop formed by a plurality of coils, a pair of coils terminating in relatively straight portions, which straight portions are at least 90 degrees apart without one crossing the other and have hook or loop terminals, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, said plurality of coils giving resiliency equally to such straight portions, and the pull on each of said straight portions being in substantially a straight direction.

2. A spring mattress fabric made up of links, each comprising an eye or loop formed by a plurality of coils, a pair of coils terminating in relatively straight portions, one extending substantially at right angles to the other without one crossing the other, and

having hook or loop terminals, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, said plurality of coils giving resiliency equally to such straight portions, and the pull on each of said straight portions being in substantially a straight direction.

3. A spring mattress fabric made up of links, each comprising an eye or loop formed by a plurality of coils, a pair of coils terminating in relatively straight portions, one extending substantially at right angles to the other without one crossing the other, and having hook or loop terminals, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, one straight portion of each link being shorter than its companion straight portion, said plurality of coils giving resiliency equally to such straight portions, and the pull on each of said straight portions being in substantially a straight direction.

4. A spring mattress fabric made up of links, each comprising an eye or loop formed by a plurality of coils, a pair of coils terminating in relatively straight portions, one extending substantially at right angles to the other without one crossing the other, and having hook or loop terminals, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, that straight portion of each link extending crosswise of the fabric being shorter than its companion straight portion, said plurality of coils giving resiliency equally to such straight portions, and the pull on each of said straight portions being in substantially a straight direction.

5. A spring mattress fabric made up of links, each comprising an eye or loop formed by a plurality of coils, a pair of coils terminating in relatively straight portions, one extending substantially at right angles to the other without one crossing the other, and having hook or loop terminals, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, said plurality of coils giving resiliency equally to such straight portions, and the pull on each of said straight portions being in substantially a straight direction, the outer edge of the fabric comprising independent lengthwise extending straight links each also having a plurality of coils.

6. A spring mattress fabric made up of a series of integral links each comprising an eye or loop formed by a pair of horizontally located coils, each terminating in a relatively straight portion extending substantially at right angles one to the other without one crossing the other, and having a hook or loop terminal, said terminals engaging the adjacent links in both longitudinal and transverse straight line series, so that the

pull on the links will be in straight lines
lengthwise and crosswise of the fabric, said
coils giving resiliency equally to such
straight portions, that straight portion of
5 each of the links which extends crosswise
of the fabric being shorter than its com-
panion straight portion, and an outer edge
of the fabric comprising lengthwise extend-
ing straight links, each also having at one

end a pair of horizontally located coils and 10
at its other end a hook or loop.

Signed at 1821 Park Row Building, New
York, N. Y., this 29th day of March, 1911.

CHARLES L. PLUNKETT.

Witnesses:

F. E. BOYCE,

GEORGE F. PURCELL.