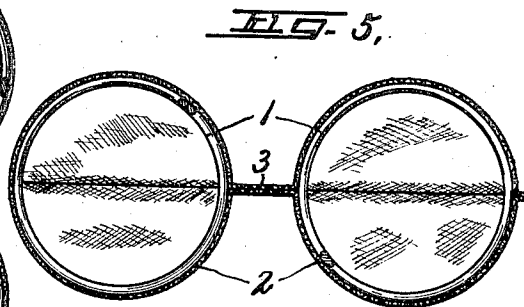
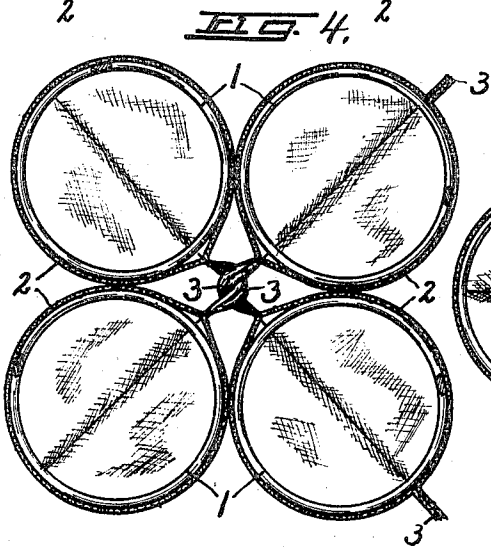
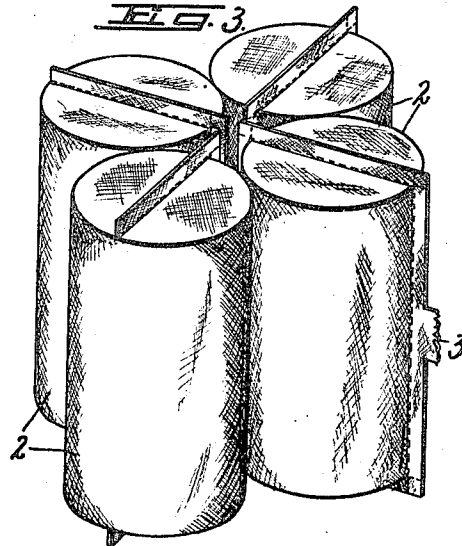
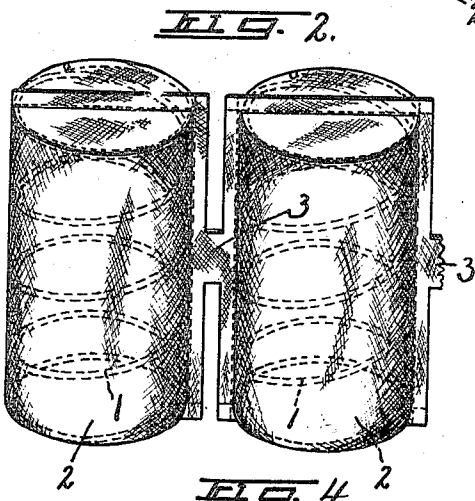
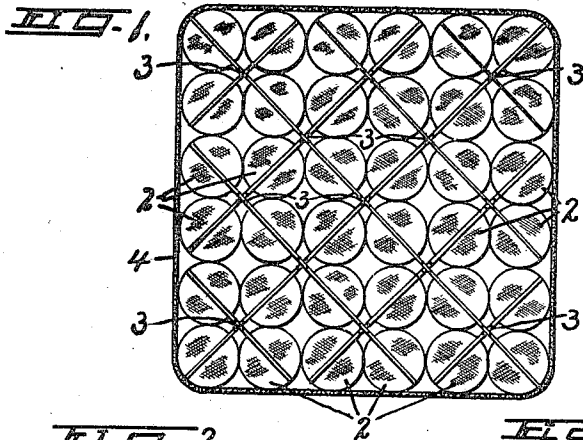


W. LEWIS.
 SPRING MATTRESS.
 APPLICATION FILED MAY 15, 1918.

1,284,384.

Patented Nov. 12, 1918.



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SPRING-MATTRESS.

1,284,384.

Specification of Letters Patent.

Patented Nov. 12, 1918.

Application filed May 15, 1918. Serial No. 234,609.

To all whom it may concern:

Be it known that I, WILLIAM LEWIS, a citizen of the United States of America, and resident of Utica, in the county of Oneida, in the state of New York, have invented new and useful Improvements in Spring-Mattresses, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to certain improvements in spring mattresses adapted to be used more particularly as a super-covering for the spring seats and backs of upholstered furniture, although it is evident that it may
15 be used in connection with the main springs of a bed and in other relations where such a mattress might be useful.

Mattresses of this character are usually made up of a considerable number of relatively small and light coil springs arranged
20 side by side in parallelism with corresponding ends resting upon or against a suitable support so that their opposite ends may yield under the weight or pressure of the
25 occupant so as to conform to the contour of the body.

These springs are preferably of the same size and form and are incased in individual sheathings or envelops of fabric or equivalent flexible material, the entire series being
30 then incased in a sheathing or casing of the same or similar material, and while I am aware that somewhat similar sheathings have heretofore been proposed for incasing
35 the individual springs as well as the complete assemblage, the main object of my present invention is to connect the individual sheathings or envelops in such manner as to allow each individual spring to yield axially
40 and laterally in all directions independently of the other springs, and at the same time to retain all of the springs in operative relation.

A further object is to utilize this connecting medium between the individual sheathings or envelops as a means for tightening
45 said sheathings upon their respective springs so that portions thereof may be drawn more or less between the convolutions to reduce to a minimum the noise incidental to the flexing action of the springs.

Other objects and uses will be brought out in the following description.

In the drawings—

55 Figure 1 is a top plan of a spring mattress

embodying the features of my invention, the outer sheathing being shown in section.

Fig. 2 is an enlarged perspective view of two adjacent springs and their sheathings showing the connecting web between them. 60

Fig. 3 is a perspective view of portions of two sets or rows of springs and their sheathings showing the manner of assembling the same in intersecting planes so that the central webs may be interlocked or tied together. 65

Fig. 4 is a horizontal sectional view of the units of the mattress shown in Fig. 3 with the connecting webs looped or twisted around one another. 70

Fig. 5 is a horizontal sectional view of the portion of the mattress shown in Fig. 2.

As illustrated in Fig. 1, this mattress comprises a plurality of sets or rows of similar comparatively light coil springs—1—, those
75 of each row being arranged side by side and are inclosed in individual flexible sheaths or envelops—2—, of fabric or equivalent material, the adjacent sides of the sheaths of each row or set being connected by relatively
80 narrow necks, webs or ties—3— which, in this instance, are preferably integral with the flexible sheathing or casing and are located some distance from the ends of the
85 springs, or substantially midway between said ends, leaving the ends and major portions of the sheaths or casings disconnected one from the other so as to permit each individual spring and its sheathing to readily
90 yield axially and laterally in all directions independently of the other sheaths or casings and to thereby avoid the objectionable lateral tilting movement of the majority of the free ends of the springs when one of them is
95 depressed axially or moved laterally.

In other words, this construction enables each spring to act independently of the others which not only conserves the energy of the remaining springs, but also keeps the mattress as a whole in better form, and at
100 the same time enables it to more readily conform to all portions of the body of the occupant.

The mattress is adapted to be supported upon the frame of somewhat stiffer springs, not shown, and by leaving both ends of the
105 springs—1— and their sheathings or flexible casings—2— entirely free from connection one with the other, it is obvious that such ends may yield axially or laterally without
110

drawing upon or distorting the remaining springs.

Furthermore, by connecting the sheathings or casings at points substantially midway between their ends, the central connecting necks or tie pieces —3— of intersecting rows may be readily looped or twisted one about the other at the points of intersection so as to establish a positive lock or tie between adjacent springs and their casings, and also between the several sets of casings to hold the springs in operative relation, and to thereby maintain the original form of the mattress.

In assembling the several sets or rows, those of one set are placed at right angles to those of the other set with their connecting webs or ties —3— registering one over the other so that the web connecting two adjacent sheathings of one set may readily pass between the adjacent sides of two of the sheathings of another set until the webs —3— of both sets are engaged with each other, it being understood that these webs are extremely flexible longitudinally, and at the same time are narrow which allows the springs of the several sets to be brought into approximately the same plane with their axes in parallelism, and also their lower and upper faces in parallelism.

These springs and their casings may be assembled in groups of four, as shown in Figs. 3 and 4, in which the sheathings are connected in pairs by the webs or ties —3— and may be looped or twisted around one another, as shown in Fig. 4, for locking the springs and sheathings of both sets together against lateral displacement, the looping or twisting operation being performed by simply sliding the web of one set axially between the adjacent sides of the other set until the webs are brought into contact, and then overturning together two of the springs and their sheathings, one of each set, simultaneously end for end about the axis of intersection of the webs.

This overturning movement may be repeated if necessary to tighten the sheath-

ings upon their respective springs, in which case the portions of the sheathings between the convolutions of the springs would be drawn inwardly toward the axes thereof to serve as mufflers for reducing the liability of noise as the convolutions are brought together under pressure.

What I claim is:

1. In a spring mattress, a plurality of similar coil springs, and fabric envelops therefor integrally united by relatively short webs some distance from one end thereof so as to allow free and independent movement of the opposite ends of each spring and its envelop.

2. In a spring mattress, coil springs arranged side by side in sets which are disposed in intersecting planes, flexible envelops inclosing said springs, the envelops of each set being connected by a relatively narrow tie substantially midway between the ends of the springs so that the tie of one set crosses that of the other set at approximately the point of intersection of said planes.

3. In a spring mattress, coil springs arranged side by side in sets which are disposed in intersecting planes, flexible envelops inclosing said springs, the envelops of each set being connected by a relatively narrow tie substantially midway between the ends of the springs so that the tie of one set crosses that of the other set at approximately the point of intersection of said planes, said ties being looped or twisted one about the other to tighten the envelops around their springs and also to hold the springs of both sets against relative lateral bodily displacement while at the same time allowing independent axial and lateral movement of the unsupported ends of the individual springs.

In witness whereof I have hereunto set my hand this 18th day of March, 1918.

WILLIAM LEWIS.

Witnesses:

EMORY J. WELLER,
WM. WALKER LEWIS.