May 30, 1950 J. MARTIN 2,509,831

STABILIZER FOR INNER SPRING UNITS

Filed May 3, 1949

Fig. 1.

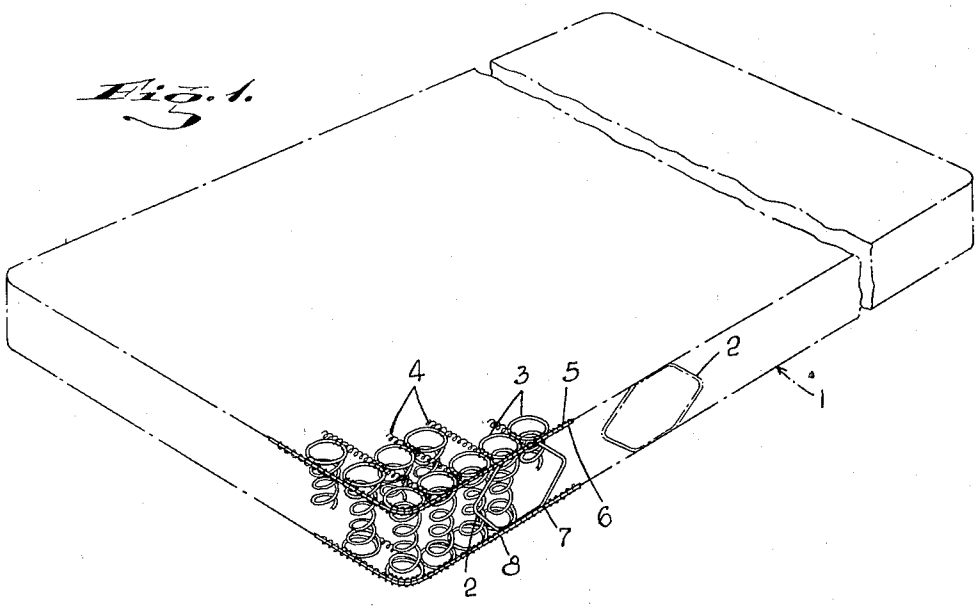
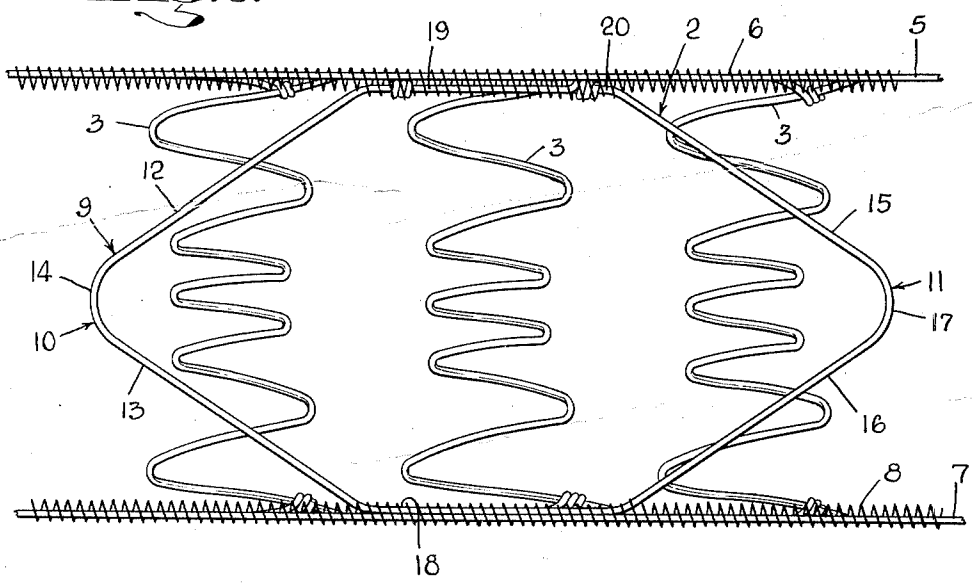


Fig. 2.



INVENTOR.
JOSEPH MARTIN
BY Gustav Orews
his ATTORNEY

Patented May 30, 1950

2,509,831

UNITED STATES PATENT OFFICE

2,509,831

STABILIZER FOR INNER SPRING UNITS

Joseph Martin, Laurelton, N. Y., assignor to Eclipse Sleep Products Inc., Brooklyn, N. Y., a corporation of New York

Application May 3, 1949, Serial No. 91,189

5 Claims. (Cl. 5—351)

1

This invention relates to stabilizers for the inner spring units of mattresses.

Among the objects of the present invention it is aimed to provide an improved bed spring unit for a mattress characterized by yieldable bracers or stabilizers attached to, and disposed between, the lateral edges of the spring unit of a mattress normally to maintain the lateral edges of the spring spaced from one another a predetermined distance when not supporting a body, and in turn, although yieldable, to cooperate with the main portion of the spring to accommodate itself to the form and configuration of the body being supported when in supporting position, possessing, however, sufficient elasticity or original form resuming urge to return the edges to the normal spaced apart position when the body being supported leaves or is removed from the mattress.

It is still another object of the present invention to provide an improved stabilizer for the inner spring unit of a mattress which will reenforce the lateral edges to extend the life of a mattress from the objectionable collapsed condition in the center thereof, to contribute materially to protect the person of the user of the mattress from rolling out of bed, and which stabilizer is not only noiseless in operation but can be produced and assembled in the conventional inner spring unit with facility and at a minimum of cost.

These and other features, capabilities and advantages of the invention will appear from one specific embodiment thereof illustrated in the accompanying drawings, in which

Fig. 1 is a perspective partly schematic of an inner spring unit of a mattress equipped with the present invention.

Fig. 2 is an enlarged fragmental side elevation showing one of the stabilizing units in operative position.

In the embodiment shown, the inner spring unit 1 illustrated in Fig. 1 portrays the inner spring unit of a conventional twin bed mattress about thirty-nine inches in width by about seventy-four inches in length. It is of course obvious that the stabilizer units 2 may also be used with a full size inner spring unit which is about fifty-four inches in width by about seventy-four inches in length, without departing from the general spirit of the invention.

The inner spring units for a twin bed mattress of thirty-nine inches in width by seventy-four inches in length frequently have about two hundred thirty-one spring coils 3 arranged in eleven rows of about twenty-one springs to a row, with the rows of twenty-one coils extending longitudinally of the mattress. These coils are in turn connected by helical spring connectors 4 extending transverse of the inner spring unit and connecting the upper and lower outer looped portions of the coils 3 as shown in Fig. 1. After the coils 3 are so connected to one another, then they are provided with a wire frame, to wit, the substantially rectangular wire frame 5, connected by helical spring connectors 6 to the free outer edges of the upper looped portions of the outermost coils 3. In turn, the wire 7 constitutes a substantially rectangular frame which is connected by the helical wire connectors 8 to the free outer edges of the lower looped portions of the outermost coils 3. Preferably, the wire of the frames 5 and 7 is about fourteen gauge, or about one-sixteenth of an inch in diameter.

2

The stabilizing effect is produced by the high carbon steel polygonal shaped wire units 9. These units 9, each consists essentially of one piece of wire having two oppositely extending bulging portions 10 and 11 connected at the top to the wire frame 5 by the helical connecting wire 6 and connected at the bottom to the wire frame 7 by the helical connecting wire 8.

Excellent results have been achieved when these units 9 as shown are bent into a hexagon form, with the bulging portion 10 consisting of the two sides 12 and 13 and the intervening arcuate portion 14, and the bulging portion 11 consisting of two sides 15 and 16 and the intervening arcuate portion 17. In the present instance, the lower side portions 13 and 16 are connected to the lower horizontal abutment portion 18 which is disposed adjacent to the lower frame 7 and serves as the abutment which is connected to the wire frame 7 by the helical connecting wire 8, and the upper side portion 12 continues into the upper horizontal abutment 19, and the upper portion 16 continues into the upper horizontal abutment portion 20 which overlap, being disposed adjacent to one another and adjacent to the upper frame wire 5 and being connected thereto by the helical connecting wire 6.

The wire frames 5 and 7 are spaced from one another by the coils 3 about six inches in the conventional inner spring unit, and in turn normally the overlapping portions 19 and 20 of each unit 9 is spaced about six inches from the lower horizontal abutment portion 18. Assuming that a coil spring has twenty-one coils in a longitudinal row, each coil occupying about three inches overall of the longitudinal length of the inner spring unit, then excellent results have been achieved when four of the stabilizing units are

secured to each longitudinal side of the spring unit 1, spaced about four inches from one another with the outer ends of the outermost stabilizing units in a row spaced about seven inches from the adjacent ends of the inner spring unit 1. When so spaced upon receiving a load, the stabilizing units may expand longitudinally without interfering with one another.

Excellent results have been achieved when the stabilizing units in size are about twelve inches from arcuate portion 14 to arcuate portion 17, the abutment portions 18, 19 and 20 are about four inches in length, the inclined portions 12, 13, 15 and 16 are about five inches in length, and the inner angle formed by each abutment portion 18, 19 or 20 with an inclined portion 12, 13, 15 and 16 is about 145°.

Although excellent results have been achieved when with the dimensions aforesaid of a conventional inner spring unit the stabilizing units 9 are composed of high carbon steel of fourteen gauge or about one-sixteenth of an inch in diameter and the bulging portions 10 and 11 are composed of inclined sides, it is of course obvious that other wire and of other gauge may be used and that the bulging portions may assume other forms without departing from the general spirit of the invention.

It is obvious that various changes and modifications may be made to the details of construction without departing from the general spirit of the invention as set forth in the appended claims.

I claim:

1. A stabilizer attached to, and positioned in the plane of the border defined by, the upper and lower wire border frames of the inner spring unit of a mattress having coil springs spacing the upper from the lower face thereof characterized by a wire having two abutment portions and two outwardly extending bulging portions, the two abutment portions disposed at the top and bottom of the stabilizer and secured to the upper and lower wire border frames of the inner spring unit with the bulging portions yieldable in an outward direction under pressure.

2. A spring wire stabilizer secured to, and positioned in the plane of the border defined by, the upper and lower border wires of the inner

spring unit of a mattress having coil springs spacing the upper from the lower face thereof characterized by upper and lower abutment portions and two laterally outwardly extending bulging portions, helical wire connecting means connecting the upper abutment portion to the upper border forming frame and connecting the lower abutment portion to the lower border forming frame with the bulging portions yieldable in an outward direction under pressure.

3. The combination as set forth in claim 2 in which the stabilizer is composed of high carbon spring steel and the bulging portions each consist of two inclined side portions and an intervening arcuate portion.

4. An inner spring unit for a mattress having coil springs spacing the upper from the lower face thereof and having upper and lower border forming wires, a plurality of coils for normally maintaining said border forming wires a predetermined space from one another, a plurality of stabilizers spaced from one another and connected to, and positioned in the plane of the border defined by, the longitudinal extending sides of said border forming wires, said stabilizers having upper and lower horizontally extending straight abutment portions and laterally outward extending bulging portions, and helical wire connectors connecting the upper abutment portions to, and in alinement with, the upper border forming wire and other helical wire connectors connecting the lower abutment portions to, and in alinement with, the lower border forming wire with the bulging portions functioning to yield in an outward direction under pressure.

5. The combination as set forth in claim 4 in which the bulging portions each consist of two inclined side portions and an intervening arcuate portion.

JOSEPH MARTIN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,958,481	Lee	May 15, 1934