March 18, 1958 G. DREWS 2,826,768

STABILIZER FOR INNER SPRING UNITS

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Fig. 1.

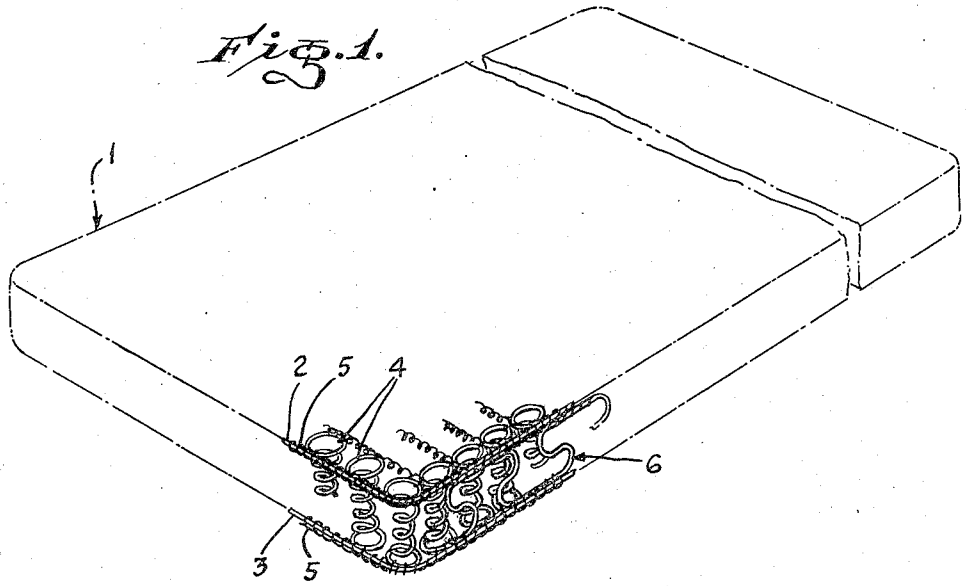
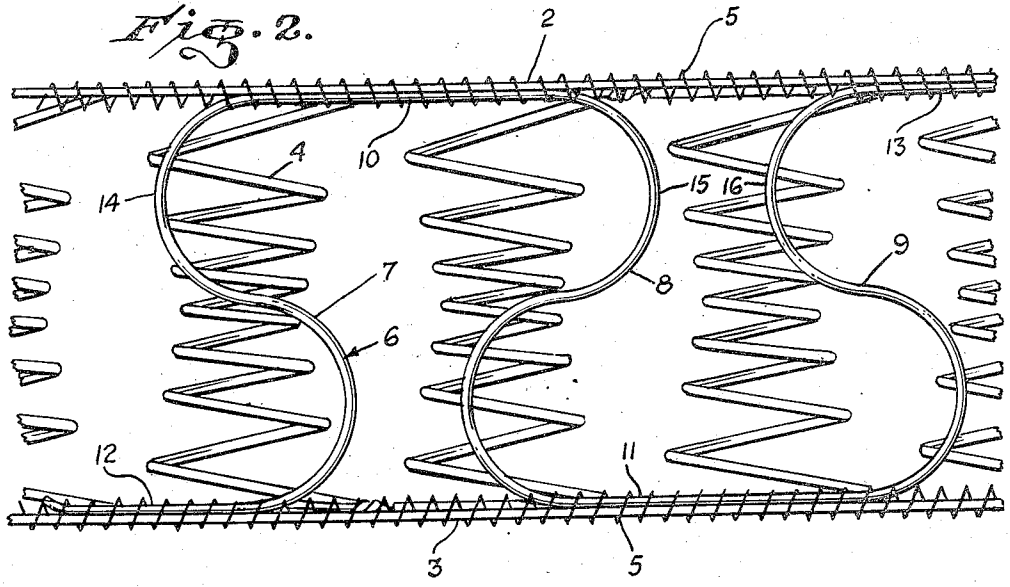


Fig. 2.



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STABILIZER FOR INNER SPRING UNITS

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1 Claim. (Cl. 5—351)

This invention relates to border stabilizers for mattresses such as disclosed in United States Letters Patent No. 2,509,831.

Among the objects of the present invention, it is aimed to provide an improved border stabilizer for mattresses and the like which reduces the cost of assembling to a minimum and otherwise reduces the cost of materials and manufacture to a minimum, without impairing the efficiency of the item characterized by a single looped spring wire secured to the upper and lower frames of the mattress for the entire length of the sides and/or widths of the mattress.

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

Fig. 1 is a mattress equipped with the improved border stabilizer.

Fig. 2 is a fragmental enlarged detail of a portion of the mattress with the covering removed.

In the embodiment shown, the mattress **1** is illustrated as provided with an upper rectangular wire border frame **2** and a lower rectangular wire border frame **3**. These frames **2** and **3** are spaced from one another by the conventional coil springs **4**. The coil springs adjacent the wire frames **2** and **3** are conventionally connected to the same by a helical spring wire connector **5** that is threaded securely around the wire of the frames **2** and **3** and the outer loops of the springs **4** as shown in Fig. 1.

In the present instance the wire **6** constituting the border stabilizer is secured to the wires of the wire frames **2** and **3**. This wire **6** obviously may extend around all four sides of the mattress **1** or only along the sides, or only along the widths, or only along one side or one width, without departing from the general spirit of the invention. The novelty, however, resides in the fact that one wire extends at least along an entire side of a mattress to take the place of a plurality of stabilizer units such as disclosed in United States Letters Patent No. 2,509,831.

The single wire **6**, see particularly Fig. 2, may be formed into a plurality of loops which will yield when compressed. One form of such loops is illustrated in which the wire **6** consists of a succession of S-shaped loops, such as the loops **7**, **8** and **9** integral with one another by the intervening lengths **10** and **11**. Starting with the length **12** adjacent the wire frame **3**, as an instance, the wire **6** continues in an S-shaped configuration **7** to the intervening length **10** connected to the wire of the wire frame **2**, then continues in the inverted S-shaped configuration **8** to the intervening length **11** connected to the wire of the wire frame **3**, then continues in the S-shaped configuration **9** to the length **13** connected to the wire of the wire frame **2**. Excellent results have been achieved when the loops of the S-shaped configurations **7**, **8** and **9** are substantially identical with one another as shown.

The same helical connecting wire **5** that connects the outer loops of the coil springs **4** to the wire of the frames

2 and **3** may be used and is used in the present instance to connect the lengths **10** and **13** to the wire of the frame **2**, and to connect the lengths **12** and **11** to the wire of the frame **3**. Obviously when pressure is exercised on the upper frame **2**, and particularly if it is adjacent the wire of the frame **2**, the S-shaped loops **7**, **8**, **9** below the same will be compressed.

Although the mattress **1** illustrates the inner spring unit of a conventional twin bed mattress about 39 inches in width by about 74 inches in length, it is of course obvious that the stabilizer wire **2** may also be used with a full size inner spring unit which is about 54 inches in width by about 74 inches in length, without departing from the general spirit of the invention. The inner spring unit of a twin bed mattress of the size aforesaid frequently has about 231 spring coils **4** arranged in eleven rows of about twenty-one coils to a row, with the rows of 21 coils extending longitudinally of the mattress. These coils are in turn connected by the helical spring connecting wires **5** extending transversely of the inner spring unit and connecting the upper and lower outer loop portions of the coils **4** as shown in Fig. 1. After the coils **4** are so connected to one another, then they are provided with a wire frame, to wit, the substantially rectangular wire frames **2** and **3** connected by helical spring connecting wires **5** to the free outer edges of the outer loop portions of the outermost coils **4**. Preferably the wire of the frames **2** and **3** is about 14 gauge, or about 1/16 of an inch in diameter.

The stabilizing effect is produced by the looped wire **6** which is preferably composed of high carbon steel of 14 gauge, or about 1/16 of an inch in diameter.

Obviously the form of the loops and the dimensions may be changed without departing from the general spirit of the invention. Particularly excellent results, however, have been achieved when the border frames **2** and **3** are spaced about six sinches from one another by the coil springs **4**, and the distance, as an instance, from the outer face of the loop portion **14** of a loop **7** to the outer face of the loop portion **15** of an adjacent loop **8** approximates nine inches, and the outer face of the loop portion **15** of a loop **8** is spaced about two and one-half inches from the outer face of the loop portion **16** of a loop **9**.

With the dimensions aforesaid, allowing three and three-quarters inches from the outermost loop portion **14** to the end of the mattress, it will then be possible to fit in five pairs of loops, consisting of the loops **7** and **8**, as an instance, for the side of a twin bed mattress unit.

Although excellent results have been achieved with the conformations and dimensions aforesaid to afford sufficient give under pressure and nevertheless offer sufficient resistance to the objectionable collapse of the edge of a spring mattress unit under pressure, in the interest of comfort, with persons of average weight ranging between 150 and 250 pounds, it is of course obvious that to meet greater or less weight conditions, as an instance other wire and of other gauge may be used and other forms of loops provided 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 claim.

I claim:

A spring unit for a mattress and the like having coil springs spacing the upper from the lower face thereof and having co-extensive parallel upper and lower border forming wires, a stabilizer having a continuous wire extending at least the length of one side of the unit formed into intervening abutment lengths and a plurality of al-

ternate S-shaped and alternate inverted S-shaped configurations, all in a common plane, each configuration having two substantially equal open loops, and one abutment length between each S-shaped and inverted S-shaped configuration, of which abutment lengths, alternate lengths are disposed adjacent to the upper border forming wire and the other alternate lengths are disposed adjacent to the lower border forming wire, with the configurations functioning to yield under pressure in a lateral direction within the common plane of the border defined by said border forming wires, and a continuous helical wire connector threaded around the upper and lower border forming wires and enveloping the adjacent intervening abutment lengths of said stabilizer.

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