

R. S. BALDWIN.
Spring Bed-Bottom.

No. 218,851.

Patented Aug. 26, 1879.

Fig. 1.

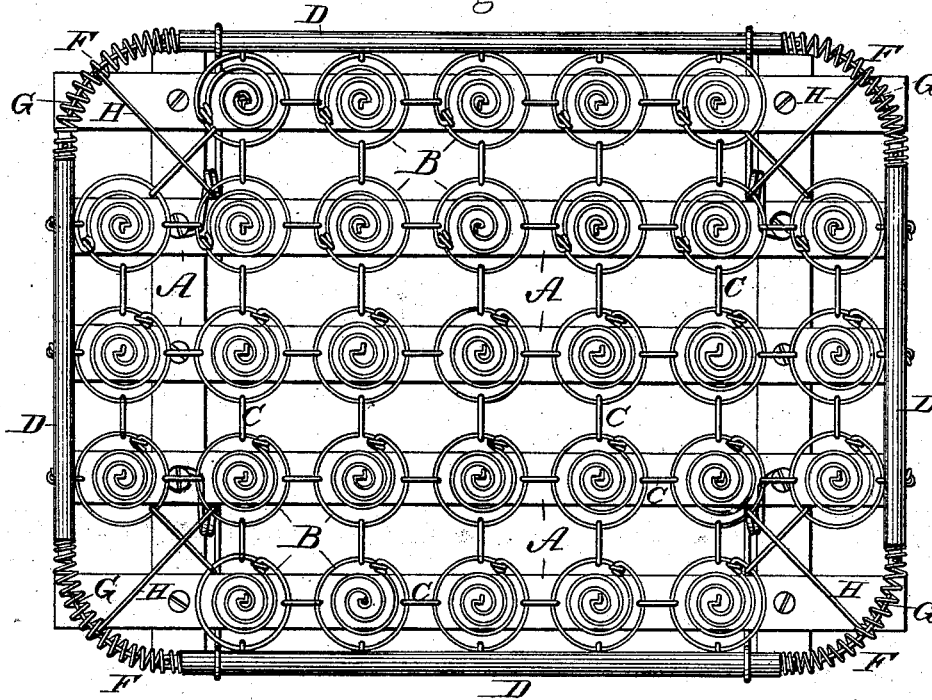


Fig. 2.

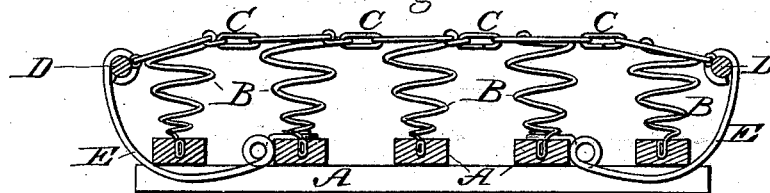
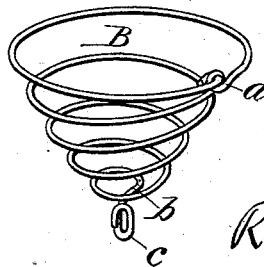


Fig. 3.



Witnesses:

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IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **218,851**, dated August 26, 1879; application filed December 16, 1878.

To all whom it may concern:

Be it known that I, RUEL S. BALDWIN, of Sparta, in the county of Monroe and State of Wisconsin, have invented certain Improvements in Spring Bed-Bottoms, of which the following is a specification.

My invention relates to that class of bed-bottoms which consist of a series of connected helical springs; and consists in the construction and combination of various details, hereinafter described.

Figure 1 represents a top-plan view of my improved bed-bottom; Fig. 2, a vertical transverse section of the same, and Fig. 3 a perspective view of a spring detached.

In constructing my improved bed-bottom, I first provide a slat-frame, A, composed of a series of longitudinal slats secured to two or more transverse bars, and upon this frame I mount a series of conical coiled springs, B, arranged with their large ends uppermost, the springs being provided at their lower ends with a depending ear to enter the slats and maintain them in position. The springs B are connected at their upper ends, one with another, by means of links or clips C, of any suitable construction.

For the purpose of maintaining the springs in their proper upright position bars D are extended along each side and across the ends of the bed-bottom, as shown in Fig. 1, and are attached to the upper coil of the springs by means of staples, eyes, or other devices, each of the bars being independent of the others.

The side bars are each sustained by means of strong supporting-arms E, which, clasping the bar D, pass downward under the outer slat of the frame A, and to the next slat thereto, to which they are secured in any convenient manner. In practice I prefer to form the arms E of heavy spring wire or bar, and to form in each one or more coils, which rest close against the slat to which the arms are secured, as shown in Figs. 1 and 2.

The outer ends of the arms E curve upward from the slat-frame A, and sustain the bars D at or nearly on a level with the upper face of the bed-bottom, as shown in Fig. 2.

This arrangement of the side bars D serves to support the outer row of springs at each side, to keep the top of the mattress or bot-

tom extended and even and the springs in an upright position, to prevent the outer row of springs from falling inward under pressure, and finally to give to said springs an additional support against a downward pressure, and to cause them, under such pressure, to move in a true perpendicular line, thus causing the bed-bottom to offer an equal support to the weight placed upon it at all points.

The end bars may be mounted in the same manner, if desired, though in practice I prefer to connect them with the frame A simply by means of chains or links, which prevents their falling inward.

In order to give the edge of the bed-bottom a regular outline, while at the same time permitting the sides and ends to yield independently, I provide at each corner a flexible connection, F, uniting the side and end bars D, this connection or coupling consisting preferably of coiled spring-wire, as shown in Fig. 1, though it is obvious that rattan, or flat metal strips, or similar connecting-pieces may be used instead. An internal rod or stem, G, secured upon a supporting-arm, H, may be furnished to retain the connections F in proper position, the arms H being in turn secured upon the springs or frame in any convenient manner.

As now commonly made, considerable trouble is experienced in the use of bed-bottoms consisting of upright spiral springs, on account of their spreading out and losing shape, and because of their insufficient support at the lower end, permitting them to turn and to double or fall over.

To prevent the spreading or loss of shape, I form in the wire of which the spring is made, just where the last or largest coil commences, an eye or loop, *a*, by giving to the wire one complete short turn or bend, and, after carrying the wire around to make the last or largest coil, pass its end through said eye or loop, and bend it down thereupon. In this way the end of the wire is firmly secured, and the spring is prevented from either expanding or contracting.

In order to furnish the lower end of the spring with a better means of attachment to the slats, and one which will more perfectly support the spring, the wire is carried inward

to the center after completing the smallest coil, forming, as usual, a horizontal supporting portion, *b*, which prevents the movement of the spring from side to side in the direction of the length of the supporting portion *b*. At the center the wire is bent directly downward, and formed into a flat loop, *c*, the face of which is arranged at right angles to the length of the part *b*. This loop serves to prevent the spring from turning, and also from doubling or bending over in a direction parallel to its face. The end or loop *c* is formed by carrying the wire down, and then upward and down a second time, whereby it is made very stiff, and adapted to enter the wood readily.

When the springs are thus constructed there is but slight tendency to fall or bend over, and when arranged as above described, and supported by the rods and braces D and E, this is entirely overcome or prevented.

Having thus described my invention, what I claim is—

1. The combination of the springs B, connecting-links C, the four outside bars D, corner connecting-springs F, and sustaining-arms E, as shown.

2. The combination of connected upright springs, a flexible frame, the sides of which are capable of descending independently, surrounding and connected to the tops of the springs, and a series of spring-arms, E, connected to and sustaining the frame, as shown.

3. In combination with a series of springs, a surrounding frame, D, connected to their upper ends and coupled together at its corners by springs F.

4. The combination of springs B, the outside supporting-bars D, corner springs F, and stays or braces G.

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Witnesses:

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