

L. C. BOYINGTON.
SPRING BED-BOTTOM.

No. 181,816.

Patented Sept. 5, 1876.

Fig. 1

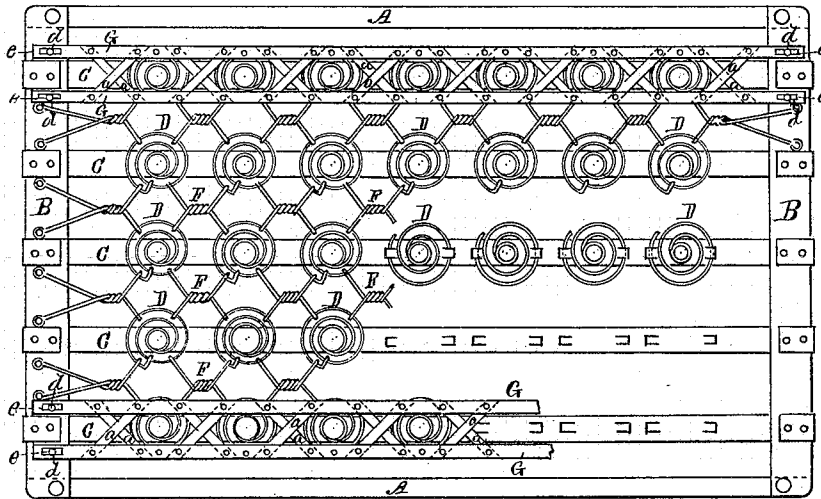
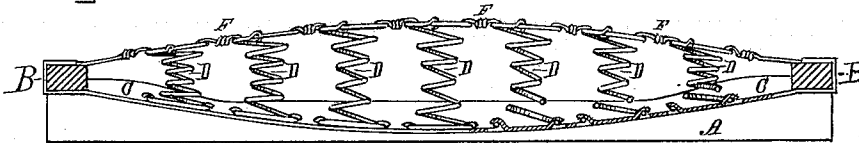


Fig. 2



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IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. 181,816, dated September 5, 1876; application filed July 20, 1876.

To all whom it may concern:

Be it known that I, LEVI C. BOYINGTON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Spring Bed-Bottoms; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents a general plan or top view of a spring bed bottom embodying my invention, and Fig. 2 represents a vertical longitudinal central section of the same.

Like letters of reference indicate like parts. My invention relates to that class of spring bed-bottoms consisting of a series of conical coiled springs, arranged in a vertical position, and so that the mattress or bed will rest thereon; and the object of my invention is to so improve the construction of such bed-bottoms as to increase the elasticity of the springs, and prevent the springs from being displaced or moved laterally by the weight of the occupants of the bed.

In the drawing, A A represent the side pieces of the frame, and which are of the proper length to fit loosely between the head and foot pieces of the bedstead. B B represent the cross-bars, which are of the proper length to fit loosely between the side rails of the bedstead, and are permanently bolted or otherwise secured at their ends to the ends of the side pieces, and on the upper edge thereof, as shown in Fig. 2. C represents a series of longitudinal bars, which are permanently attached at their ends to the cross-bars B B of the frame, and at equal distances each from the other.

The said bars C are made, preferably, of spring metal, and each is sprung down at the center, so as to describe an arc of a circle, as shown in Fig. 2.

D represents the springs, which are made of ordinary spring-wire, coiled in the usual form, and attached at their lower ends to the upper surfaces of the bars C, and at equal

distances each from the other, and extend upward above the upper surface of the cross-bars B B, and are connected together at their upper ends by a series of tie-rods, F, as shown in Fig. 1.

The tie-rods are made of two short pieces of wire, twisted together at the centers thereof, and bent outward at their ends, so as to intersect and pass around the wire forming the springs, and in such a manner as that each of said springs is connected at four points to the adjacent springs, and so as to prevent either of said springs from being moved laterally and independently of the others.

G G are longitudinal spring-slats, which are connected, each to the other, laterally, by diagonal tie-braces *a a*, permanently riveted thereto, forming trusses upon each side of the bed-bottom proper, and to which each outer series of springs are respectively and permanently attached. The slats of the trusses G G are provided at each end with an elongated mortise or slot, *e*, through which a bolt, *d*, is passed, so as to connect the slats to the cross-bars B B of the frame, and in such a manner as to allow the slats to spring down under the weight of the occupant of the bed.

The object of connecting the slats together laterally by the diagonal tie-braces *a a* is to prevent the slats from springing laterally, and thereby retaining the springs at all times in a vertical position.

It will be observed that the bars C, supporting the springs, are attached at each end to the cross-bars of the frame, and so that the centers of said bars are held in a suspended position, which admits of increasing the length of the center springs, so as to crown or elevate the center of the bed-bottom above its ends, and which, when sprung down by the weight of an occupant thereon, brings the same on a level line, or nearly so, from end to end.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with the side pieces

A A, cross-bars B B, and springs D, of the series of metallic arc-shaped spring-bars C, adjusted to support the springs, substantially as and for the purpose specified.

2. The combination, with the springs D, of the arc-shaped springs-slats G G, connected together laterally by the tie-braces *a a*, substantially as and for the purpose specified.

3. In combination with the slats G G, as specified, and the springs D, the tie-rods F, connecting the springs, substantially as and for the purpose specified.

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