

No. 812,939.

PATENTED FEB. 20, 1906.

B. F. LINDSLEY.
BED SPRING.

APPLICATION FILED JAN. 19, 1905.

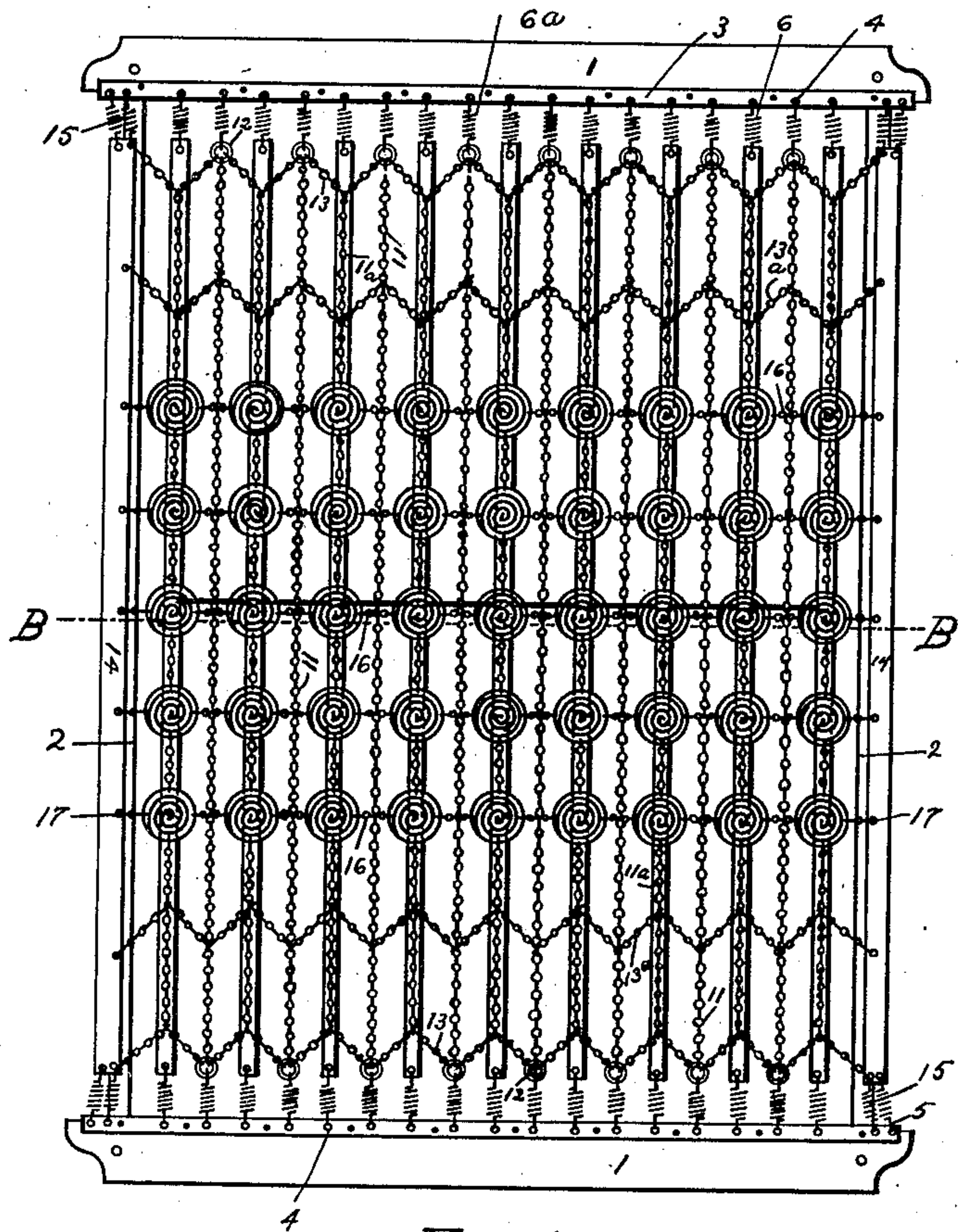


Fig. 1.

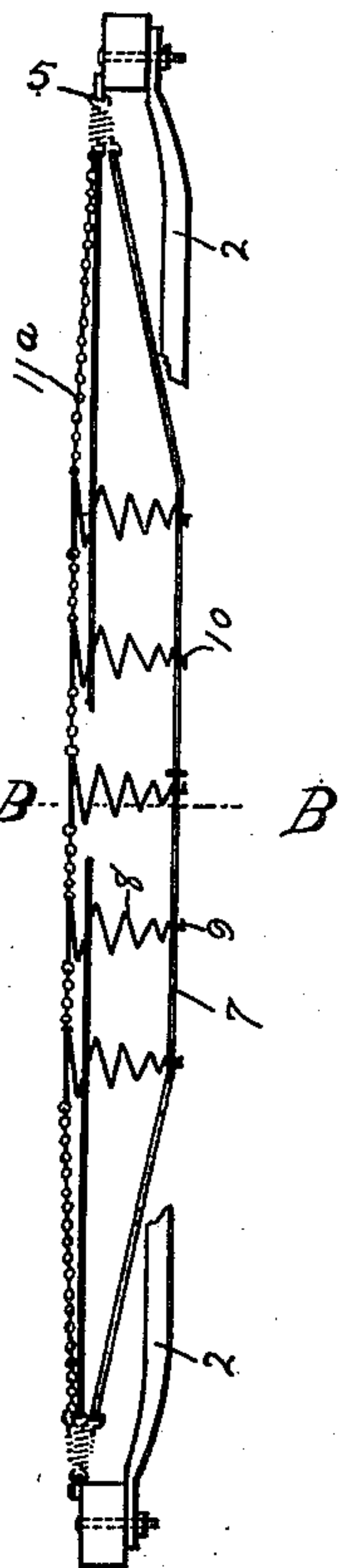


Fig. 2.

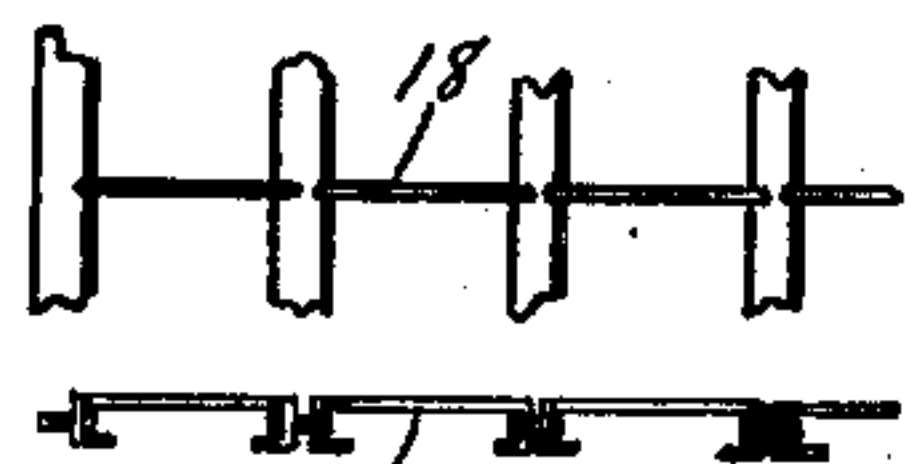


Fig. 3.

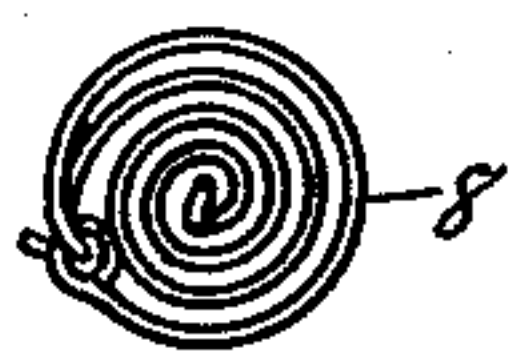


Fig. 4.

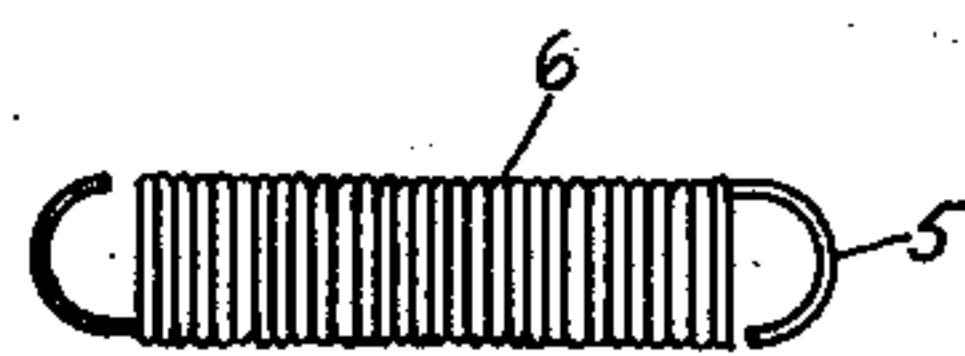


Fig. 5.

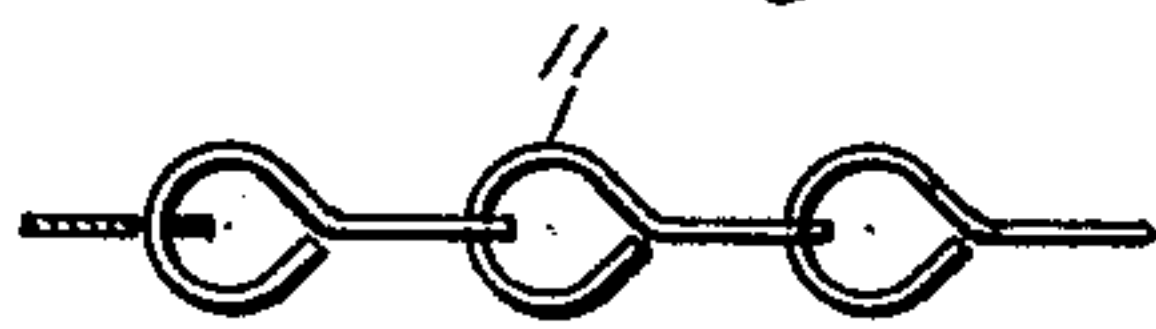


Fig. 6.

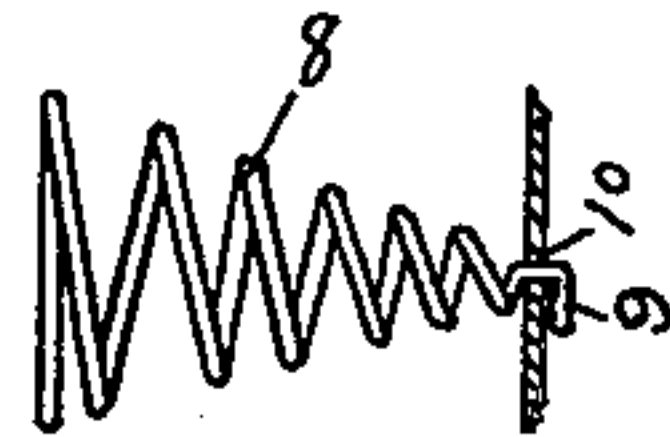


Fig. 7.



Fig. 8.

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BENJAMIN F. LINDSLEY, OF MANSFIELD, OHIO.

BED-SPRING.

No. 812,939.

Specification of Letters Patent.

Patented Feb. 20, 1906.

Application filed January 19, 1905. Serial No. 241,774.

To all whom it may concern:

Be it known that I, BENJAMIN F. LINDSLEY, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Bed-Spring, of which the following is a specification.

My invention relates to a bed-spring composed of a series of conical coiled springs suspended in vertical series, in combination with a series of coiled expansion or compression springs attached to each end of the frame on one end with the opposite ends secured alternately to a bar and a chain which is used to form part of the surface of the bed-spring.

In the construction of the ordinary bed-spring now in use no provision is made with reference to the fact that one or more persons or persons of different weight will occupy the bed, the result being that the tension of the springs is either too weak or too strong to give the necessary elasticity, which affords the comfort and rest the spring is designed to obtain.

The object of my invention is to provide a means of constructing a bed-spring that will retain its elasticity uniformly when subjected to increased or decreased weight and to afford facilities for maintaining the elasticity when the weight is unevenly distributed on either side of the spring.

A further object is to construct a spring in such a manner as to connect the spring and chain to the frame, so as to give free movements to all of the parts forming the surface and at the same time retaining them in their proper positions.

I attain these and other objects by the construction shown and illustrated in the accompanying drawings, in which—

Figure 1 is a top plan view of my device, showing the conical and coiled springs attached, in combination with the chain to the frame which forms the surface of the bed-spring. Fig. 2 is a side view of Fig. 1, with dotted lines B B representing the center of the frame, showing the bar upon which the conical springs are mounted and broken sections of the side rail. Fig. 3 is a top and side view of the linked brace-bar, showing method of tying and retaining the spring-bars in place. Fig. 4 is a bottom plan view of one conical spring, showing loop in spring with the free end hooked therein, forming a complete circle. Fig. 5 is a side plan view of one

of the coiled springs. Fig. 6 is a view of a broken section of the chain used to form the surface of the bed-spring. Fig. 7 is a side plan view of one of the conical springs, showing means of fastening the spring to the bar, whereby free movement is given to the spring. Fig. 8 is a side view of one of the side rails.

Similar figures of reference refer to similar parts throughout the several views.

In constructing my device I provide a frame consisting of end pieces 1 and side rails 2. The end pieces are notched, permitting them to rest on the end and side rails of the bed when used in conjunction with an ordinary iron bed. Bars 3 are securely fastened to the end pieces 1, leaving part of the bars projecting inwardly. Apertures 4 are provided to receive the looped ends 5 of the coiled expansion or compression spring 6. Depending bars 7, having apertures in each end, are attached to the opposite end or loop of the coiled spring 6. The bars 7 are adapted to support the conical springs 8. The bars are formed so as to leave the bottom of the springs projecting more or less above the plane of frame. One end 9 of the conical spring is formed L-shaped and inserted in a suitable aperture 10, provided in the bar 7. It will be noted that this method of fastening the springs to the bar retains the springs securely and at the same time permits free movement of the connecting parts, obviating undue friction, which affects the elasticity of the bed-spring. A suitable linked chain 11, preferably of kind shown in Fig. 6, is attached alternately to the coil-springs 6^a through the medium of the rings 12. Auxiliary chains 13 are connected to the ends of the chains 11 and the rings 12, which in turn are connected to the coil-springs 6^a. Chains 11^a in broken sections are connected to the conical springs and the auxiliary chains 13, forming part of the surface of the bed-spring. Chains 13^a are provided to complete the surface of the bed-spring. The ends of the broken chain 11^a are connected to the top of each conical spring at points diametrically opposed to each other and serve to keep the spring in proper position and counteract the tendency of spring to move endwise.

Side bars 14 are connected to the end pieces 11 of the frame through the medium of the coil-springs 15, which connect them under tension for the purpose of preventing any

tendency of the spring to move sidewise when the springs are under pressure. Short sections 16 of a linked chain are connected to the top of the conical springs at right angles to the chains 11 and 11^a to prevent side or lateral motion. The end sections 17 of the chain 16 are connected to the side bars 14. In order to hold the bars 7 in proper alignment upon which the conical springs are mounted, I connect them together by means of novel brace 18, which is composed of a number of short links having hooked ends adapted to be inserted in suitable apertures in the bars connecting them together, with each bar intervening and forming part of the linked brace.

It will be observed that each series of conical springs have free and independent movement of each other and of the coiled springs attached to the end pieces. The end springs support a predetermined amount of the weight, and when the weight is increased two conical springs support the additional weight without affecting the elasticity of the bed-springs. The entire bed-spring is suspended from the end pieces by the bars and chain, and all parts have free and independent movement in relation to each other.

Slight changes and modifications can be made without deviating from the principal involved in my invention.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a bed-spring the combination of a frame having a series of bars suspended from end pieces, a series of conical springs mounted on said bars, coil-springs securely attached to the end pieces, chains connected to said springs substantially as and for the purpose described.

2. In a bed-spring composed of a frame having suitable bars suspended therefrom, a series of coiled springs attached to said frame, chains attached to said coiled springs through the medium of suitable rings a series of short sections of chain connecting the top of the conical springs at points diametrically opposed to each other with the ends of said sections secured to suitable side bars.

3. The combination of a frame having depending tubular side rails, with end pieces having their corners notched and adapted to fit the end and side rails of the bed, side bars

connected to the end pieces under tension through the medium of coiled springs.

4. In a bed-spring composed of a frame having suitable bars attached thereto and projecting inwardly with apertures provided therein and adapted to receive the looped end of the coiled springs, rings attached to the opposite looped ends of the coiled springs, chains connected thereto and adapted to form part of the surface of the bed-springs, said chains and springs being adapted to maintain a predetermined weight, a series of bars suspended from the end pieces and supported by coiled springs attached thereto, a series of conical springs adapted to be supported vertically from said bars whereby additional weight is sustained without affecting the elasticity of the bed-spring.

5. In a bed-spring the combination of a frame having a series of coiled springs attached horizontally to the end pieces thereof, said springs supporting a series of bars, a series of conical springs mounted thereon, a linked brace connecting said bars together whereby said springs are kept in proper alignment permitting independent movement substantially as and for the purpose described.

6. In a bed-spring the combination of a frame having a series of horizontal coiled springs attached thereto, a series of bars suspended from said frame, chains supported by said coiled springs, a series of conical springs supported by said bars, side bars attached to the end piece of the frame under tension and adapted to prevent lateral motion, chains attached to alternate coiled springs forming a part of the surface of the bed-spring.

7. In a bed-spring the combination of a frame having a series of coiled springs attached thereto, a series of bars suspended therefrom, conical springs supported by said bars, chains secured to said coiled springs, side bars secured to sections of said chains in such a manner as to give free and independent movement to all parts substantially as and for the purpose described.

Signed at Mansfield, Ohio, this 14th day of January, 1905.

BENJAMIN F. LINDSLEY.

Witnesses:

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