J. I. SPENCER.

SPRING BED-BOTTOM.

No. 193,567. Patented July 24, 1877.

Fig. 1.

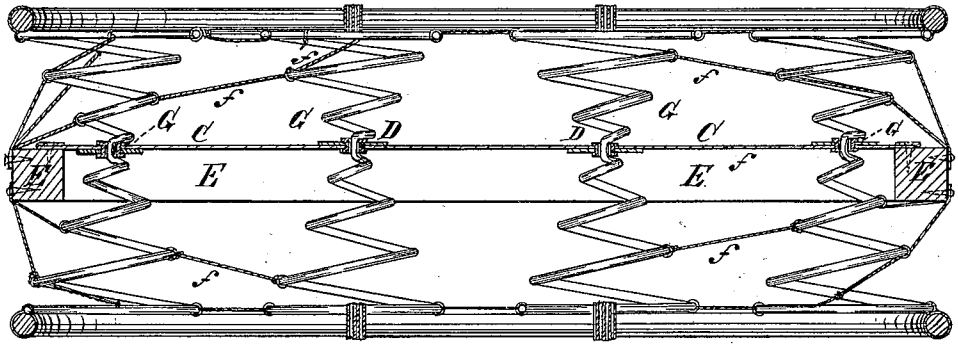


Fig. 2.

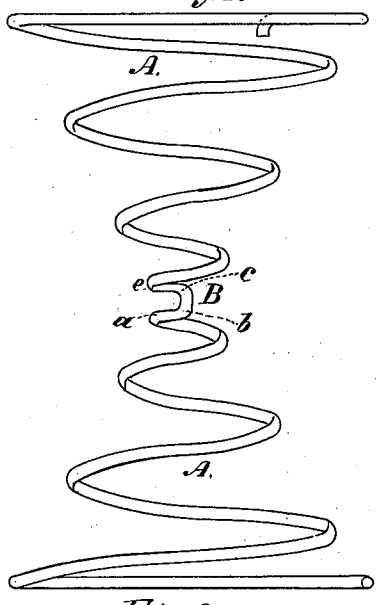
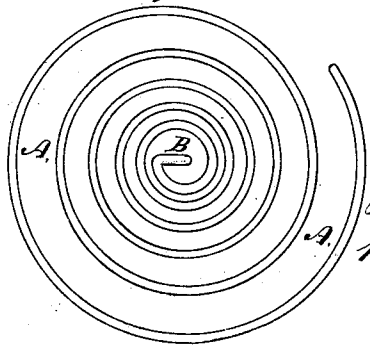


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES I. SPENCER, OF NEW YORK, N. Y.

IMPROVEMENT IN SPRING BED-BOTTOMS.

Specification forming part of Letters Patent No. **193,567**, dated July 24, 1877; application filed November 28, 1876.

To all whom it may concern:

Be it known that I, JAMES I. SPENCER, of the city, county, and State of New York, have invented certain Improvements in Spring-Mattresses, of which the following is a specification:

This invention consists in a spring for spring-beds constructed with a peculiar central bend or bearing-loop, whereby provision is made, when the spring is placed in position in the bed, for the bracing of the centers of the springs against lateral sway or movement much more conveniently and at far less cost than has hitherto been possible.

Figure 1 is a vertical transverse section of a spring-bed constructed according to my invention. Fig. 2 is a side view, on a larger scale, of the spring forming the main feature of my said invention; and Fig. 3 is an end view of said spring.

The end portions A of the spring are of the usual configuration—that is to say, of increasing diameter from the center of the spring outward to the ends; but at the said center of the spring the coil, instead of being on a continuous or uninterrupted curve, is bent, as shown at B. For example, the wire of which the spring is made is bent more or less straight instead of spiral, as shown from *a* to *b*, thence vertically, as from *b* to *c*, and thence again straight, more or less parallel to the part *a b* to *e*.

It will be seen that the peculiar bend thus given to the part B forms the same into a loop.

C and D indicate a system of tapes, the ends of which are attached in any suitable manner to the central part E of the frame of the spring-mattress, these tapes crossing each other at right angles, in a manner analogous to the crossing of the strings by which the common springs of ordinary spring-mattresses are stayed in position at the points of intersection of these tapes C D—in other words, at the places where they cross each other they are united by eyelets G—the bores or orifices of these eyelets being of such diameter that, the one extremity of my herein-described spring being thrust through the same, the spring can be turned or wound therethrough until the loop B is brought within the said bore or orifice of said eyelet, which done, the eyelet will be placed, in relation to the loop B, as represented in Fig. 1, and, the tapes being strained tight from end to end and from side to side of the mattress, it follows that the eyelet attached to the said tapes will brace the center of the spring against lateral movement in any direction, the vertical part *b c* of the bend or loop B passing vertically through and being supported in the bore or orifice of the eyelet, the bends or loops B constituting, as it were, bearing-loops, which bearing against the eyelets, the latter, sustained by the tapes, as herein described, sustain the centers of the springs against any lateral movement, this mode of staying the springs at their centers being much more economical and much more readily applied in practice than any means for a like purpose hitherto devised. The enlarged ends of the springs may be attached to the top or bottom of the mattress, and may be tied against displacement by the strings *f*, in the same manner as the ordinary strings in common spring-mattresses are stayed.

What I claim as my invention is—

The spring constructed with the central bend or bearing-loop B, as and for the purpose herein set forth.

JAMES I. SPENCER.

Witnesses:

EDWARD HOLLY,

H. WELLS, Jr.