

J. JOHNSTON.
Spring-Mattresses.

No.155,586.

Patented Oct. 6, 1874.

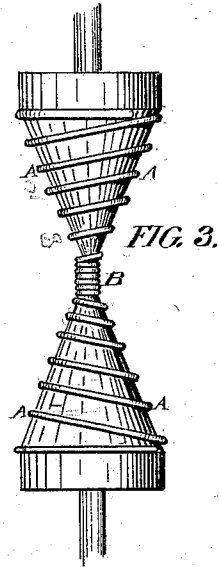
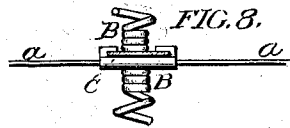
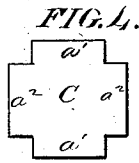
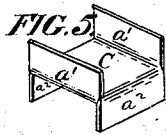
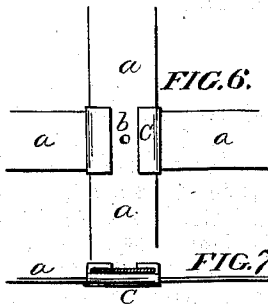
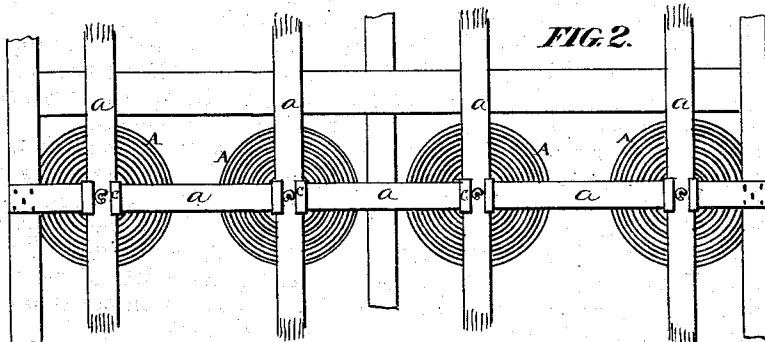
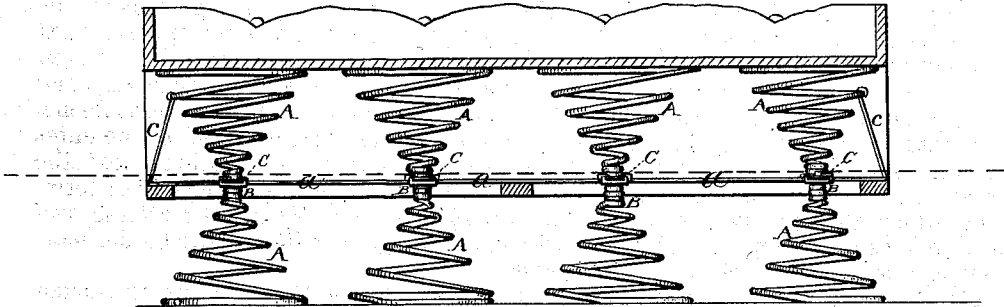


FIG. 1.



WITNESSES.

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IMPROVEMENT IN SPRING-MATTRESSES.

Specification forming part of Letters Patent No. **155,586**, dated October 6, 1874; application filed August 22, 1874.

To all whom it may concern:

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

My invention relates to spring-mattresses; and consists in a novel construction, combination, and arrangement of parts, which have for their object to provide a means whereby the springs are supported and secured in the mattress, so as to lessen the possibility of their being displaced, or of their bulging or bagging in their centers, when subjected to pressure, as will be fully hereafter explained and set forth.

Figure 1 is a vertical transverse section of a spring-mattress embodying my improvements. Fig. 2 is a horizontal section through the line *x x*, Fig. 1. Fig. 3 is an elevation of the former, on which the springs are coiled. Figs. 4 and 5 represent a blank, in different stages of construction, from which the clasp is formed. Fig. 6 is a plan view, illustrating the manner of securing the strips of webbing together by the clasps, (shown in Figs. 4 and 5.) Fig. 7 is a transverse of Fig. 6; and Fig. 8 is a detail view, showing the manner of securing the clasp to the spring.

The spring A is formed as seen in Fig. 3, and at its middle point, or, in other words, at the apexes of the two cones forming the spring, it is wound into a compact helical coil, B, of comparatively small diameter, which coil constitutes a stiff screw-like cylinder, by which the spring is secured to the clasp C, in the manner shown in Fig. 8, and hereafter described. The webbing *a* is secured together at the points of intersection by the metal clasps C, Figs. 4, 5, 6, and 7, in the manner shown in Figs. 6 and 7. This clasp consists of a square blank, the four corners of which are cut out at right angles, as shown in Fig. 4. The two opposite edges or sides *a¹ a¹* are then turned up at right angles to the blank, while the other two, *a² a²*, are turned down likewise at right angles, as shown in Fig. 5.

The webbing is then placed between these turned-up sides and on each side of the blank, thus being at right angles, and the ends of the clasp are then turned over them, thus firmly securing them together. A hole, *b*, for the passage of the spring-wire is then made in or about the middle of the blank, and one end of the wire of the spring being inserted in this hole the spring is turned into it until the helical coil arrives at the clasp. This coil is then screwed into the clasp C, as seen in Fig. 8, where it is firmly retained by its stiffness and solidity. The cords *c c*, in Fig. 1, show the method of attaching the outer springs, next the frame, to it. Such springs, when placed in a mattress, are corded in the usual way, and have a border of rattan, or other light frame, running all around and attached to the outer and largest coil of all the springs next the frame, on both ends of the springs alike, forming a border on each side of the mattress, and is usually called a "double spring-border mattress."

The upper half of Fig. 1 shows that such mattresses are usually upholstered, which is true of either side.

By my invention a greater security of action is effected, because of the vertical and relative position in which the springs are held, and in the intersection of the webbing in a mattress without the necessity of stitches or loops of twine, as are usually adopted, and which are soon loosened by use or vibration. It also secures cheapness and lightness, by the use of less wire in the spring, and durability because of the firmness and solidity of the central coil B in holding the spring in position by its own independent action.

I claim—

The spring A, in combination with the webbing *a* and clasp C, as described, the spring being secured in the clasp in the manner set forth.

JOHN JOHNSTON.

Witnesses:

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