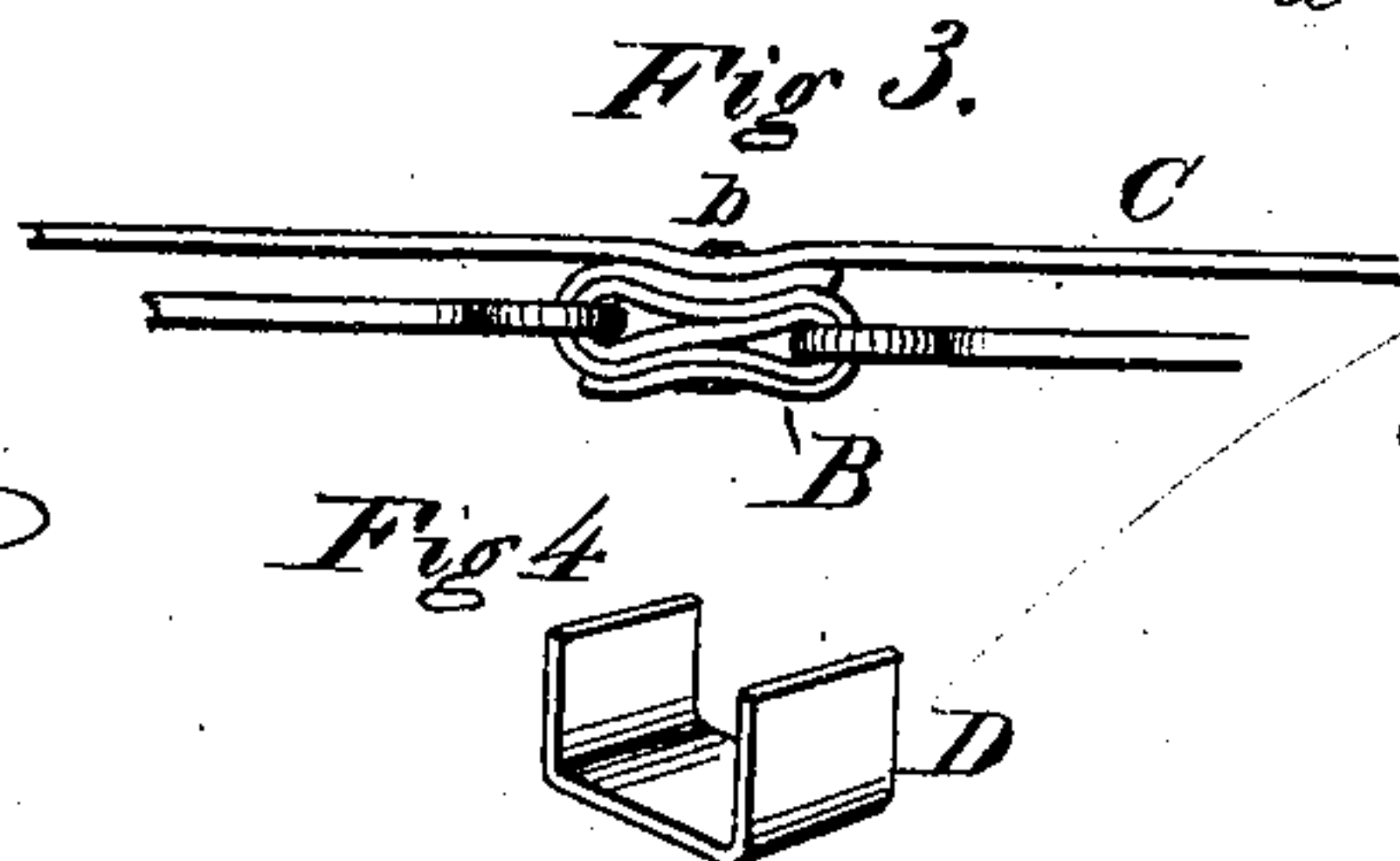
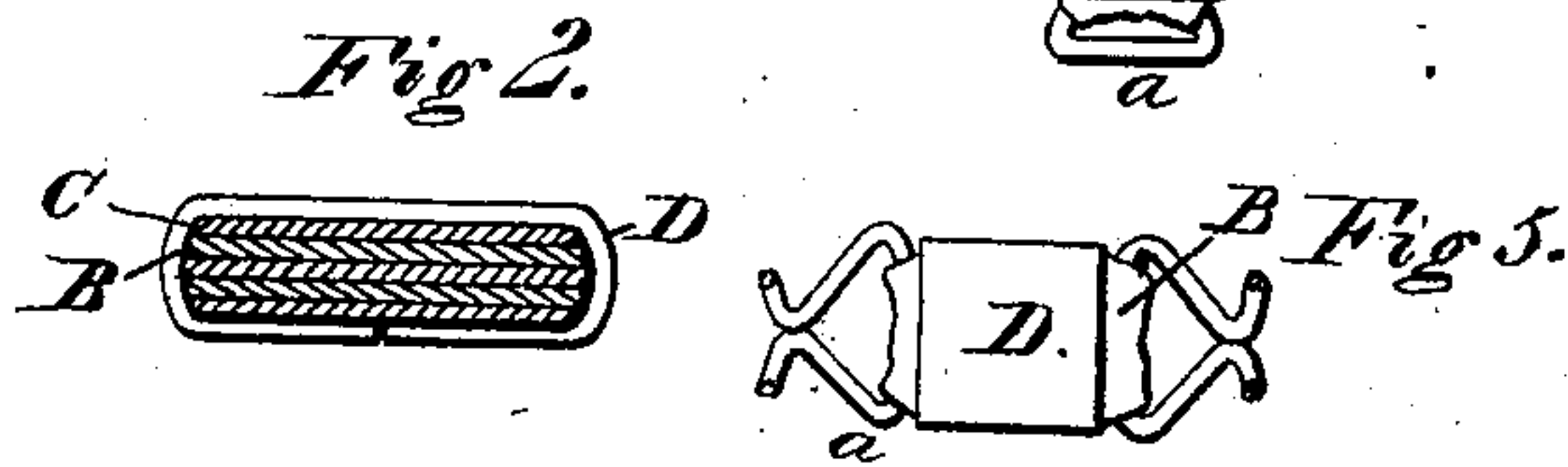
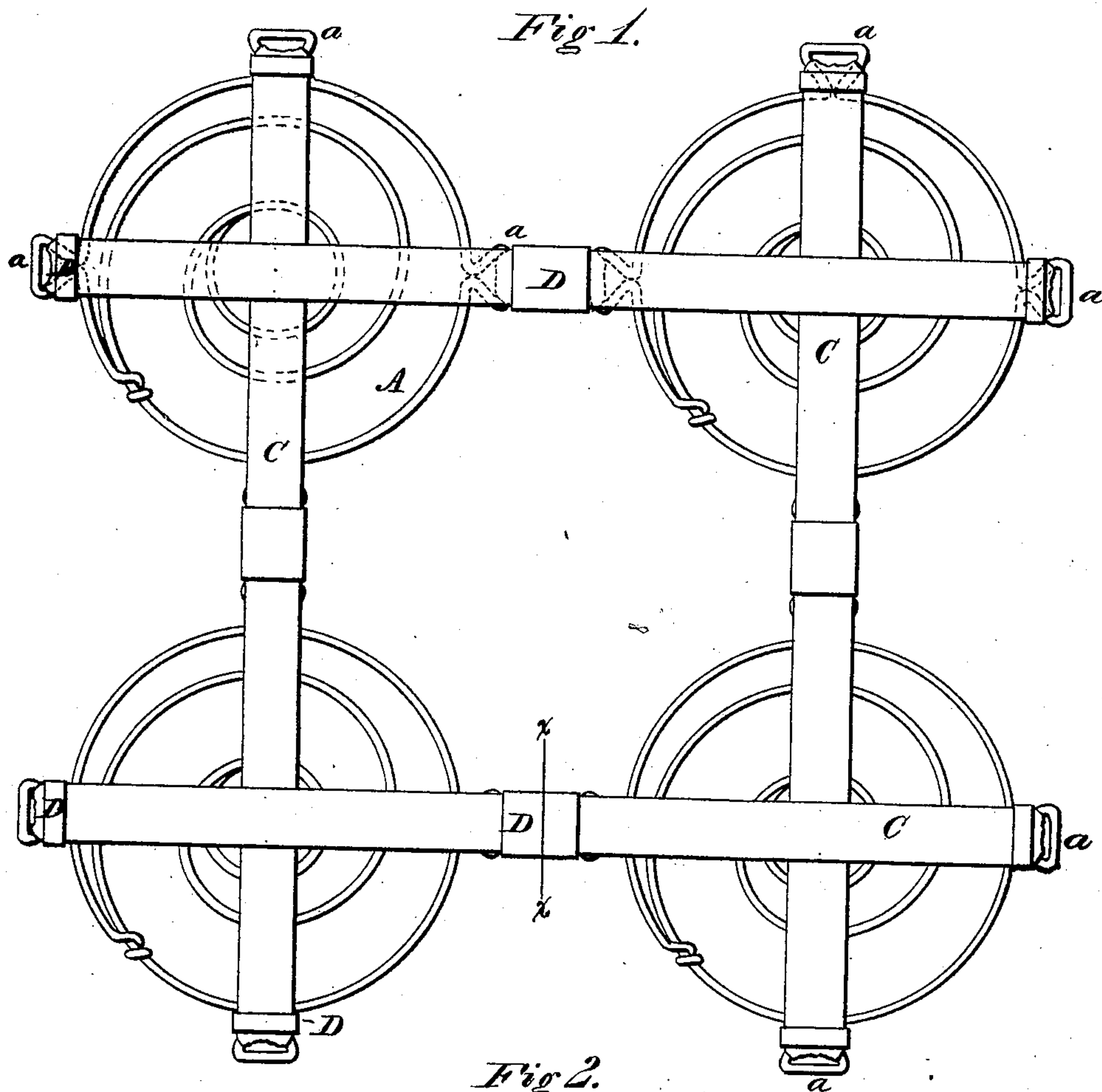


E. L. BUSHNELL.

Improvement in Spring-Mattresses.

No. 132,248.

Patented Oct. 15, 1872.



Witnesses.

*Harry King.*  
*W. H. Dodge.*

Inventor.

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# UNITED STATES PATENT OFFICE.

EDWIN L. BUSHNELL, OF POUGHKEEPSIE, NEW YORK.

## IMPROVEMENT IN SPRING-MATTRESSES.

Specification forming part of Letters Patent No. 132,248, dated October 15, 1872.

*To all whom it may concern:*

Be it known that I, EDWIN L. BUSHNELL, of Poughkeepsie, in the county of Dutchess and State of New York, have invented certain Improvements in Spring-Mattresses, of which the following is a specification:

My present invention relates to an improvement in the mattresses for which I have heretofore obtained Letters Patent; and it consists in an improved manner of joining the springs to each other and of securing cross-straps to them, as hereinafter explained.

Figure 1 is a bottom view of a portion of a mattress constructed on my improved plan; Fig. 2, a cross-section of one of the joints or couplings on the line *x x*; Fig. 3, a side view, showing the appearance of the joint or coupling before the application of the outside metal clasp; Fig. 4, a perspective view of the clasp; Fig. 5, a plan view of one of the joints at the top of the mattress.

The present mattress, like my others, is composed of a series of upright coiled springs connected together at their ends by clasps, which, while they retain the springs in position, permit them to rise and fall freely, and allow the mattress to be rolled up for storage or transportation. The object of the invention is to produce a cheaper and stronger connection between the springs, and to furnish a strong and inexpensive method of fastening cross straps or bands to the faces of the mattress.

In the drawing, A A represent the upright coiled springs, which are constructed in the ordinary manner, with four ears or loops, *a*, on each end to receive and hold the connecting devices. The connections between the springs consist simply of a short strap of webbing, B, passed through the two ears, and fastened by means of a metal band or clasp compressed tightly around it, as shown in Figs. 1, 2, and 5. The webbing is passed through one ear, and then between the two and through the other, as shown in Fig. 3, as this has been found the best way; but, if found desirable, it may be passed through in any other manner. Before the metal band or clasp is applied the webbing is fastened together through its middle by stitching, as at *b*, Fig. 3, or by riveting, eyeleting, or otherwise. The band or clasp is made of sufficient strength and

stiffness to hold the webbing firmly and securely. It is made of a U form, as shown in Fig. 4, and then applied and closed and compressed by any suitable instrument. The band applied around the webbing produces a rigid connection between the two ears, so as to prevent them from approaching, separating, or moving laterally, but at the same time permits them to rise and fall as the movement of the springs renders necessary. The webbing, besides forming the connection between the eyes, separates the metal surfaces from each other and prevents any noise arising therefrom.

The metal bands may be made of any width desired, so as to separate the springs to a greater or less extent, according to the required stiffness of the mattress.

The mattress may be composed simply of springs united in the manner described; but it is preferred to provide the under side at least with cross-straps of webbing C, extending the full length and breadth of the mattress across the center of the springs. The straps are passed through and held by the bands or clasps D, which hold the connecting-loops. They are of course applied before the clasps are closed. The ends of the straps at the edges of the mattress are secured by passing them through the outside ears of the springs and then applying narrow bands or clasps around them, as shown in Fig. 1. The straps, when applied to the springs, serve to brace and strengthen them, and to prevent them from losing their form. On the under side of the mattress they prevent the springs from coming in contact with the slats of the bedstead, and consequently the noise that would arise therefrom, and also support those springs that may happen to sit between or partially over the sides of the slats. When on top they serve to prevent the bedding from sinking into the middle of the springs.

By the above method of connecting the springs together and of applying the straps I produce a mattress which is cheaper, stronger, and in other respects superior to those heretofore in use.

It is obvious that this method of construction is applicable not only to mattresses for beds, but also to sofas, pillows, chairs, &c., and also that the connections and straps may

be applied with equal facility to springs without the eyes or ears.

Having described my invention, what I claim is—

1. In combination with the springs A, the strap B and metal band or clasp D, when applied substantially as set forth.

2. In combination with the springs A, the

straps C extending across the springs and secured to the loop B that unites the springs, substantially as described.

EDWIN L. BUSHNELL.

Witnesses:

A. W. IRISH,

Z. A. LOSSING.