Feb. 25, 1930. P. C. BEDNAREK 1,748,666

CUSHIONING STRUCTURE

Filed April 13, 1928

Fig. 1.

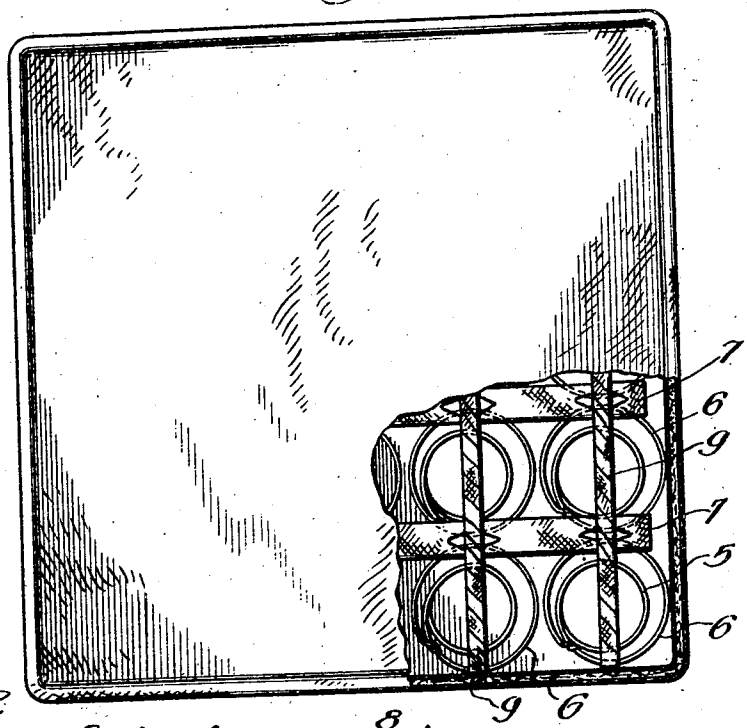


Fig. 2.

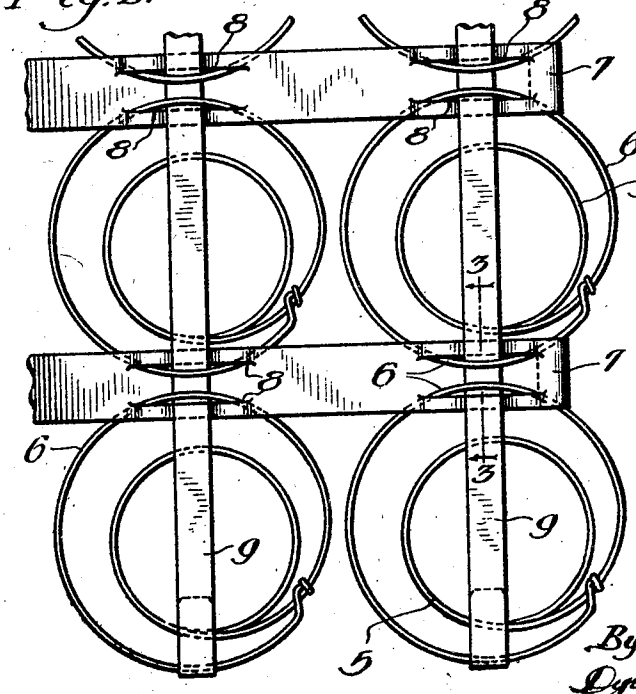


Fig. 3.

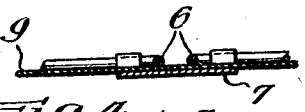
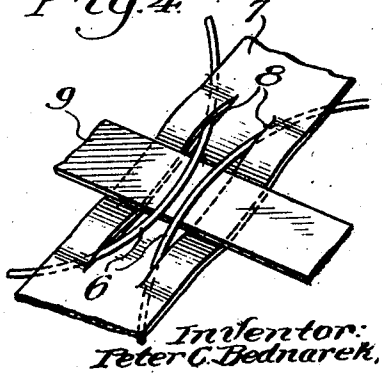


Fig. 4.



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UNITED STATES PATENT OFFICE

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CUSHIONING STRUCTURE

Application filed April 13, 1928. Serial No. 269,812.

My invention relates generally to cushion structures the cushioning means of which comprise either in whole or in part groups of coil springs, examples of such structures being mattresses, cushions, box springs, seats, etc.

One of my objects is to provide novel, simple, and inexpensive means for maintaining the springs against relative lateral displacement in the continued use of the structure and without impairing the usefulness of the springs as a cushioning medium.

Another object is to provide such a construction involving the minimum amount of labor in assembling the springs.

Another object is to prevent the springs from becoming permanently displaced out of the position in which their axes extend substantially parallel thereby preventing sagging from this cause; and other objects as will be manifest from the following description.

Referring to the accompanying drawing:—

Figure 1 is a plan view of a cushion structure, employing spring cushioning means embodying my invention, a portion of the casing of the structure being removed to disclose a portion of the interior of the spring structure.

Figure 2 is an enlarged plan view of the portion of the spring structure illustrated in Fig. 1.

Figure 3 is an enlarged broken sectional view taken at the line 3—3 on Fig. 2 and viewed in the direction of the arrow; and

Figure 4, an enlarged perspective view of a detail of the means for securing end convolutions of adjacent springs against relative lateral displacement.

According to the arrangement illustrated, the cushioning means comprise five parallel rows of coil springs represented at 5 and of a construction as commonly provided in coil spring cushion structures.

Extending across the adjacent end convolutions 6 of the rows of springs 5, at opposite ends of the springs, are parallel strips 7 preferably relatively rigid in a crosswise direction, these strips by way of example and preferably, being relatively thin gage metal strips, such as of steel or aluminum. Each strip where it registers with opposed adjacent convolutions 6, contains a pair of slits 8 extending lengthwise of the strip to provide openings through which portions of the convolutions 6 are extended while adjacent portions of the metal are moved apart from opposite edges of the strip, and overlie the metal of the strip between the slits 8, as represented in the drawings.

The means for securing the springs together also comprise a plurality of strips 9 which may be of the same material as the strips 7 which are arranged parallel with each other and at right angles to the strips 7, the strips 9 being threaded through the spaces between the strips 7 and those portions of the convolutions 6 which protrude through the slits 8, as represented in the drawings and more particularly in Fig. 4, the slits 8 being preferably of such length that when the convolutions 6 and the strips 9 are assembled therewith as described, the convolutions 6 cannot shift relatively to each other in the direction of either the strips 7 or 9.

If desired, the strips 7 and 9 may be wound, as for example spirally, with any suitable material, such as fabric strips to ensure against noise being made by the movement of the metal parts one against the other, should such occur.

While I have illustrated and described a particular embodiment of my invention, I do not wish to be understood as intending to limit it thereto as the same may be variously modified and altered without departing from the spirit of my invention.

What I claim as new, and desire to secure by Letters Patent, is:

1. A cushioning structure comprising a plurality of coil-springs grouped together, and means securing said springs together comprising a strip-member containing a pair of apertures with an intervening web-portion, end convolutions of adjacent springs extending through said apertures, respectively, and lapping said web-portions, and a member extending between said strip member and the portions of said end convolutions which protrude through said apertures and lock-

ing said strip member and said convolutions.

2. A cushioning structure comprising a plurality of coil-springs grouped together in rows and having plain end convolutions, and means securing the springs of adjacent rows together comprising a strip-member containing a pair of apertures with an intervening web-portion, end convolutions of adjacent springs extending through said apertures, respectively, and lapping said web-portions, and a member extending between said strip member and the portions of said end convolutions which protrude through said apertures and locking said strip member and said convolutions, said apertures being of such length as to receive said plain end convolutions without preliminarily producing a set deflection in said strip.

3. A cushioning structure comprising a plurality of coil-springs grouped together in rows, and means securing said springs together comprising a strip-member containing a pair of apertures with an intervening web-portion, end convolutions of springs of adjacent rows extending through said apertures, respectively, and lapping said web-portion, and a member extending between said strip member and the portions of said end convolutions which protrude through said apertures and entirely across said strip member and locking said strip member and said convolutions and the parts of the strip member engaged by the second mentioned member being disposed in substantially the same plane.

PETER C. BEDNAREK.