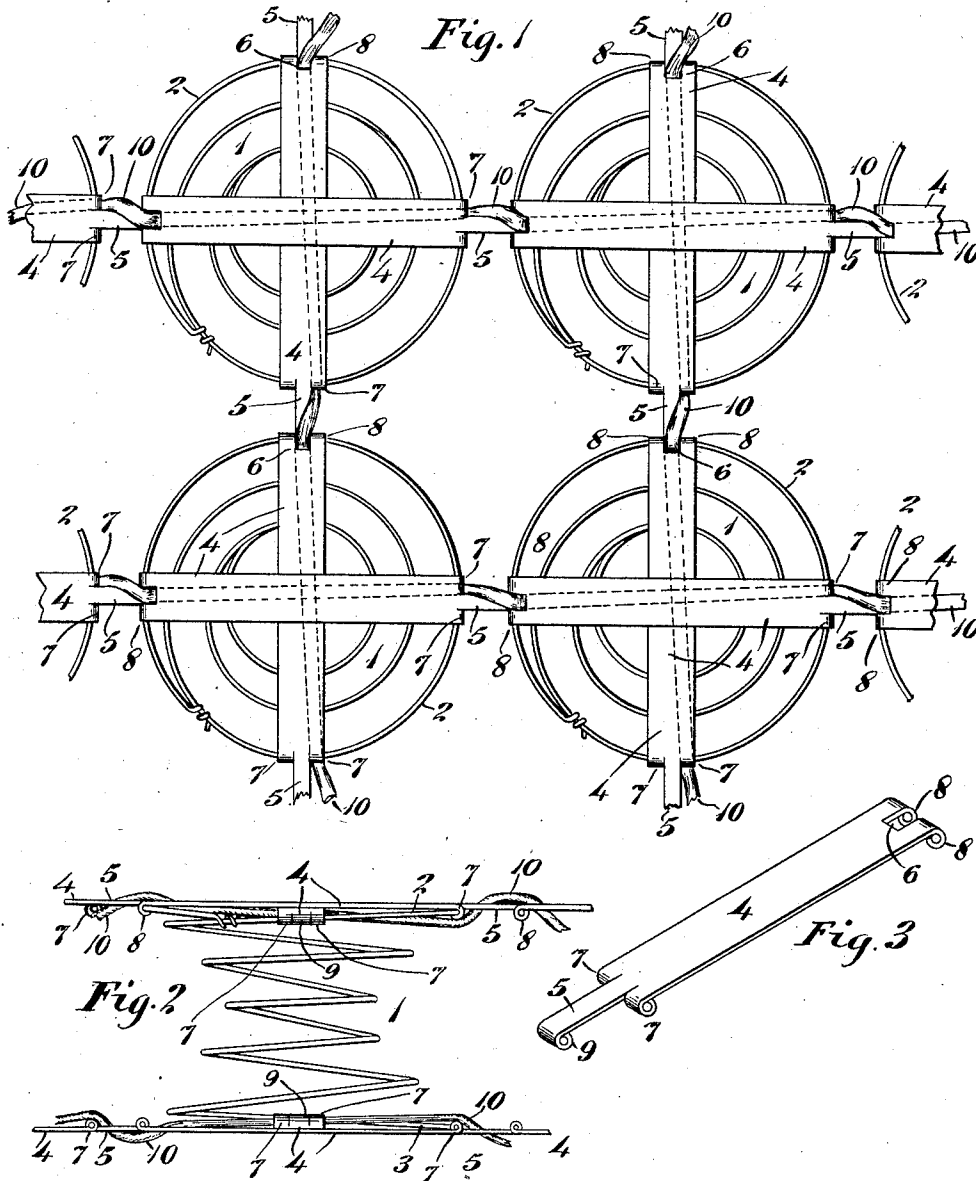


B. D. COURTS.
 SPRING BED.
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1,016,402.

Patented Feb. 6, 1912.



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SPRING-BED.

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To all whom it may concern:

Be it known that I, BENJAMIN D. COURTS, a citizen of the United States of America, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Spring-Beds, of which the following is a specification.

This invention relates to spring-beds, or, more particularly speaking, to spring-structures used for resiliently-supporting mattresses.

One object of the invention is to provide each row of the upright spiral springs of a spring-bed structure with a series of crossed flat sheet-metal strips, each of which crossed strips is hooked or bent over into loose locking-engagement with the top coil of its respective spring and is provided with a central extension or tongue at one end and a central notch or opening at its opposite end, whereby adjacent strips of the said specified construction are hinged or pivotally-connected together in link-form in connection with adjacent top coils as well as in connection with the bottom or basal coils of said spiral springs that are to be supported in both an upright and an elastic manner and, also, firmly held or bound against undue lateral or sidewise movement or becoming canted or out of perpendicular in use.

Another object of the invention is to materially strengthen the structure and provide for an absolutely erect position of said springs by using both said transverse and longitudinal series of said flat sheet-metal strips that cross centrally, in pairs, over the axis of each spring.

Another object of the invention is to provide tapes or narrow strips of woven textile fabric that are interlaced or wound around said flat sheet-metal strips so as to intervene between such of the metal parts as contact with each other and thereby muffle the contacting and rubbing metal parts between the said sheet-metal strips and contiguous end-coils of the spring.

The invention consists in certain novel features of construction and arrangement based on the said objects and such as are hereinafter fully described and particularly pointed out in the claims.

In the accompanying sheet of drawings, Figure 1 is a plan view of a bed-spring structure embodying my invention herein

and showing four of the springs complete, together with fragmentary portions of adjacent parts; Fig. 2, an elevation of one of the springs showing the manner in which the upper and lower crossed sheet-metal strips are connected with the respective upper and lower coils; and Fig. 3, a perspective view of one of the flat sheet-metal strips constructed according to my invention herein.

1 indicates each of the springs having an upper end-coil 2 and a lower end-coil 3, as is customary.

4 indicates a flat sheet-metal strip having a central extension or tongue 5 at one end and a central notch or opening 6 at its opposite end. Loops or eyes 7 are made in the sheet-metal at both sides of the inner end of the tongue 5 and similar loops or eyes 8 are made in the sheet-metal at both sides of said notch or opening 6, as best seen in Fig. 3. The loops 7 and 8 are made in each of said sheet-metal strips 4 to secure the latter in place on the respective end-coils 2 and 3 of the several springs 1.

In assembling a structure made up of vertical springs or spirals 1, each of the end-coils 2 and 3 is provided with a pair of centrally-crossed strips 4, lying at right-angles to each other and with their eyes or loops 7 and 8 engaging the wire of said respective end-coils. The respective tongues 5 are provided at their outer ends with loops or eyes 9 that hook over or engage that part of the wire of the end-coils that lies in the notch 6 between the loops or eyes 8 at the opposite end of the strip and thereby forms a hinge or pivotal-connection between adjacent spirals or springs both transversely and longitudinally of the spring-structure. The said flat sheet-metal strips are extremely simple and it is not necessary to intermesh or interweave them with the springs as it is with wire cross-stays and they make a firmer and more substantial cross-stay structure for the springs.

10 indicates a tape or ribbon of woven textile fabric interlaced and wound around the flat metal strips 4, from the inner face of each strip outwardly and thence along the outer face of each tongue 5 and adapted to muffle and cushion any of the metal parts of said strips and coils that contact with each other.

It will be readily seen that a spring-structure made up of spirals having flat sheet-

metal strips crossing diametrically over the end-coils of said spirals and each duly connected at its opposite ends to said end-coils and, in turn pivotally-connected to adjacent
5 strips for likewise connecting adjacent spirals, provides a very firm and elastic fabric, not easily impaired in use but, on the other hand, easily assembled and repaired. The flat sheet-metal cross-stays are superior
10 to the use of wires, such as heretofore used, for the reason that they form a better support for the pad or mattress, owing to a broader surface being presented in each strip to the contacting soft textile fabric of the pad or
15 mattress, and one not liable to tear the said fabric. These are very important features in the use of my invention herein and are believed to be wide departures from the narrow wire net-work heretofore used to support
20 pads or mattresses.

I claim:—

1. In a spring-bed, a spring-structure comprising a plurality of spirals and a multiple of flat sheet-metal strips, each of the
25 latter having at its opposite ends a pair of spaced loops or eyes bent or hooked over the wire of the end-coils of said spirals and a tongue or extension projecting centrally from one end of the strip and also having

an eye or loop at its outer end adapted to 30 engage or hook over the wire of the end-coils of the adjacent spiral.

2. In a spring-bed, a spring-structure comprising vertical spirals having end-coils, cross-stays made of flat sheet-metal strips 35 having separated or spaced loops or eyes at the opposite ends of each strip and hooked over or engaging the wire of said end-coils and a tongue extending centrally from one end of said strip and having a loop or eye 40 adapted to engage the wire of the end-coil in the adjacent spring and thereby form a hinge-connection.

3. In a spring-bed, a spring-structure comprising vertical spirals arranged in suitable rows, cross-stays made of flat sheet-metal strips each attached at opposite ends 45 to the end-coil of its particular spiral, openings in said sheet-metal strips and tapes of soft textile fabric interlaced or wound 50 around said flat metal strips, whereby mufflers and cushions are provided between said flat metal strips and the spirals.

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