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BED SPRING.

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1,122,015.

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Fig. 1.

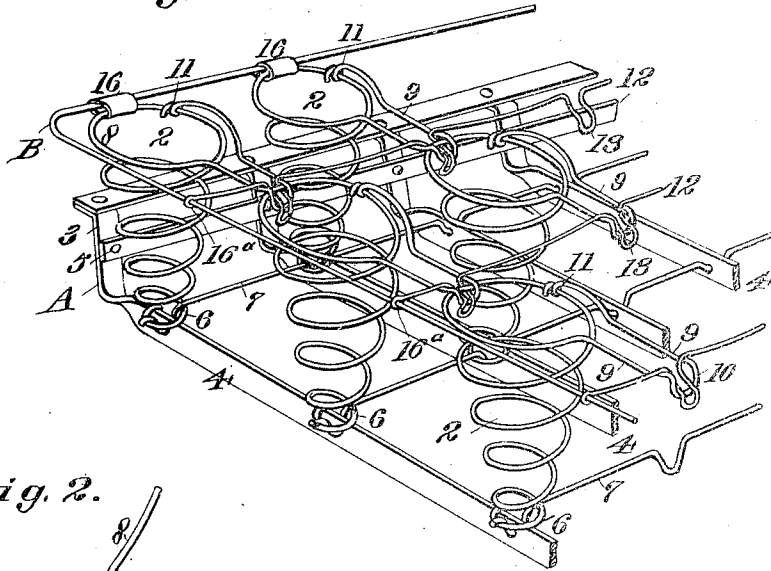


Fig. 2.

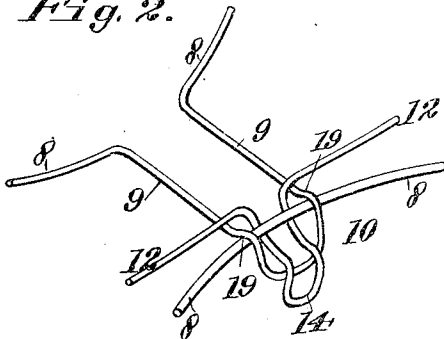


Fig. 3.

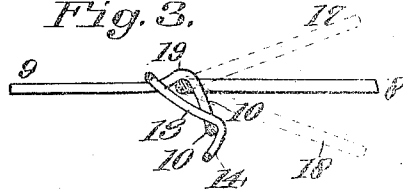
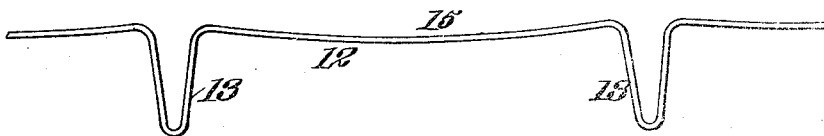


Fig. 4.



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BED-SPRING.

1,122,015.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, PATRICK F. MALLEY, ADDISON P. BREWER, and RALPH B. HOSNER, citizens of the United States, residing in the city and county of San Francisco and State of California, have invented new and useful Improvements in Bed-Springs, of which the following is a specification.

10 This invention relates to a bed spring.

The object of the invention is to provide a simple, durable, easily assembled bed spring which is so constructed that the springs are pivotally interlocked and tied, 25 both longitudinally and transversely, thereby producing a strong, yieldable support for the mattress.

Another object of the invention is to produce a noiseless hinge connected between the 30 springs which will allow every spring to act independently and which will prevent any loose connection or rattling noises.

Further objects will hereinafter appear.

The invention consists of the parts and 25 the construction and combination of parts as hereinafter more fully described and claimed, having reference to the accompanying drawings, in which—

Figure 1 is a perspective view, partly 30 broken away, showing the connected springs assembled. Fig. 2 is an enlarged perspective view of the lateral hinge connection between the springs. Fig. 3 is a side elevation of same. Fig. 4 is a detail view of the longitudinal 35 connecting wire 12.

Referring to the drawings, A indicates in general the base portion of the bed spring, upon which the coils 2 are mounted, and B represents the upper frame, preferably rectangular in shape. The base portion is in 40 this instance rigidly constructed and consists of side rails 3 with the connected cross-bars or slats 4 preferably riveted to the side rails, as at 5. Supported upon the cross-bars 45 of the lower frame is a plurality of coil springs 2, the lower reduced convolutions 6 of which are secured by longitudinally disposed tie wires 7 in the usual manner. The upper or enlarged convolution 8 of each 50 coil is projected laterally and bent upon itself to form an arm 9 having a downwardly turned loop 10 on its outer end which is adapted to engage with and overlap the upper convolution of the adjacent spring 55 and the other side of the wire forming the

arm is returned and secured, as at 11. The upper or enlarged convolution 8 of each cying the springs together laterally and the loops 10 form one side of a hinge connection. The other side of the hinge is formed by a 60 longitudinally disposed wire 12 having a plurality of loops 13 formed thereon, as indicated in Fig. 4. These loops are inserted between the parallel wires of the arms 9, under the wires 8, through the upper sides 65 of the loops 10, and are then bent downwardly, as indicated at 14, by a suitable form of tool to secure them in place. The spacing between the loops 13 is equidistant or equal to the spacing between the centers 70 of the springs and a slight bow is formed between the loops 13, as indicated at 15.

The springs connected as here shown can be quickly and easily assembled. The lower reduced end of each spring is first secured 75 to the cross-bar by the tie wire 7 and placed in a position where the arm 9 with the loop 10 will overlap the enlarged convolution of the adjacent spring. The wires 12 are then placed longitudinally of the bed spring in a 80 position where the loops 13 register with the loops 10. Each loop 13 is then inserted in the manner before described and the outer ends of the loops are then bent downwardly, as indicated at 14, to form a permanent con- 85 nection. The arms 9 will then form a cross tie between the springs while wires 12 will form a longitudinal tie. The upper frame B is then attached to the springs by clips 16, of suitable construction, to form an outer 90 connected edge for the springs and is further secured to the spring structure by attaching the ends of wires 12 to same, as indicated at 16^a. A yieldable interlocking sup- 95 port for the mattress is thus secured.

The hinge connection, formed by the loops 10 and 13, does not only permit a free movement of each spring, with relation to the connected lateral arm 9, as indicated by 100 dotted lines 17 and 18, Fig. 3, but it also forms a noiseless hinge, that is, all play or rattling motion between the connected springs and loops is taken up by placing a slight curve or tension in loop 13 when the outer end of same is bent down, as indi- 105 cated at 14. This slight curve or tension in the loop causes the wires in same to bear against wire 8 and will thus hold this firmly against the underside of the loop 10 which is slightly bent at 19 to form a bearing for 110

wire 8. Loose connections and the tendency to rattle is thus entirely eliminated and accidental disconnection or displacement is entirely prevented.

By having the several springs united in the manner described a smooth, unobstructed, yielding surface is produced for the reception of a mattress and all possibilities of catching and tearing the cloth of same is prevented.

The materials and finish of the several parts of the bed spring are such as the judgment of the manufacturer may dictate.

Having thus described our invention, what we claim and desire to secure by Letters Patent is—

1. In a bed spring, a series of coiled springs, a laterally extending arm on the upper convolution of each spring engaged with one side of the upper convolution of the adjacent spring, and a wire engaged with the arm at spaced points located on opposite sides of the part of the upper convolution of the adjacent spring engaged by said arm and disposed on the opposite side of said arm-engaged part of the upper convolution of the adjacent spring.

2. The combination in a bed spring, of spaced supporting frames, coiled springs interposed between said frames, a laterally extending arm formed on the largest upper convolution of each spring, downwardly bent loops on the ends of said arms overlapping the largest convolution of the adjacent spring, a plurality of longitudinally disposed tie wires, and loops formed on said wires and inserted through the loops on the lateral arms and bent under the upper convolutions of the adjacent springs and secured in the arm loops.

3. In a bed spring of the class described, a plurality of coiled springs, means for tying and interlocking the springs transversely and longitudinally, said means comprising laterally extending arms formed on the largest upper convolution of each

spring, downwardly bent loops on the ends of said arms overlapping the largest convolution of the adjacent spring, a plurality of longitudinally disposed tie wires, and loops formed on said wires and inserted through the loops on the lateral arms and bent under the upper convolutions of the adjacent springs and secured in the arm loops.

4. In a bed spring of the class described, a plurality of coiled springs, means for tying and interlocking the springs transversely and longitudinally, said means comprising laterally extending arms formed on the largest upper convolution of each spring, downwardly bent loops on the ends of said arms overlapping the largest convolution of the adjacent spring, a plurality of longitudinally disposed tie wires, loops formed on said wires and inserted through the loops on the lateral arms and bent under the upper convolutions of the adjacent springs and secured in the arm loops, and bows formed in the tie wires between the loops.

5. In a bed spring, a series of coiled springs, a laterally extending loop arm on the upper convolution of each spring engaged with the top of the upper convolution of the adjacent spring and having its nose extending downwardly and projecting below the last named convolution, and a wire having a loop for each loop arm which wire seats on top of the arm and is disposed below the under side of the last named convolution and has a nose which extends through the loop arm and seats on top of the nose of the loop arm.

In testimony whereof, we have hereunto set our hands in the presence of two subscribing witnesses.

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Witnesses:

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