March 11, 1952 R. K. CLARK 2,589,053

BEDSPRING

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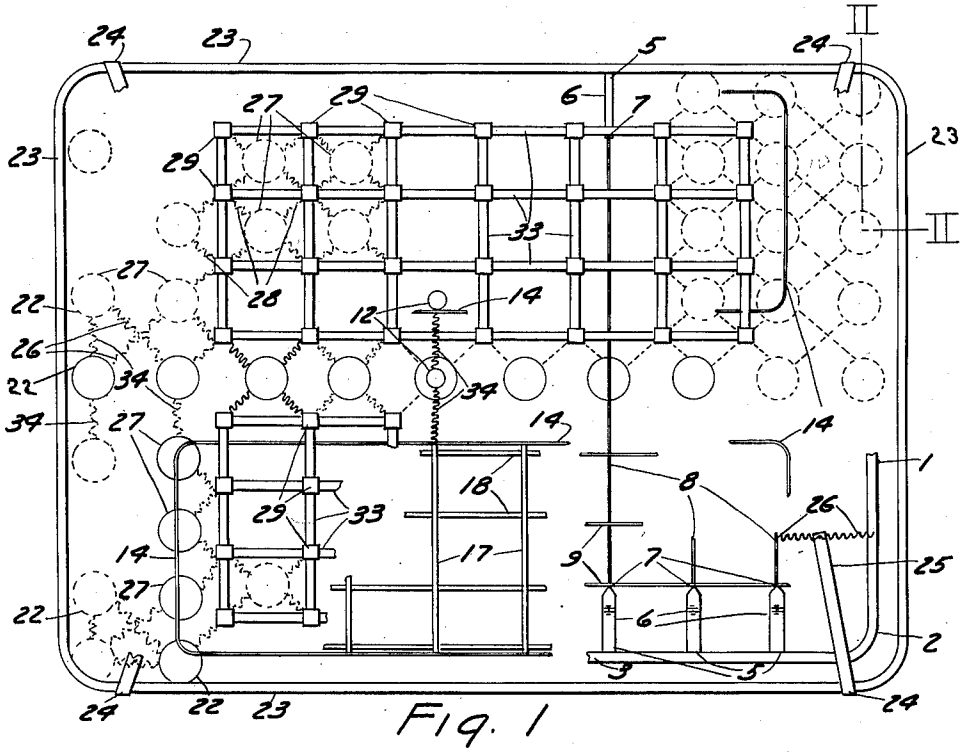


Fig. 1

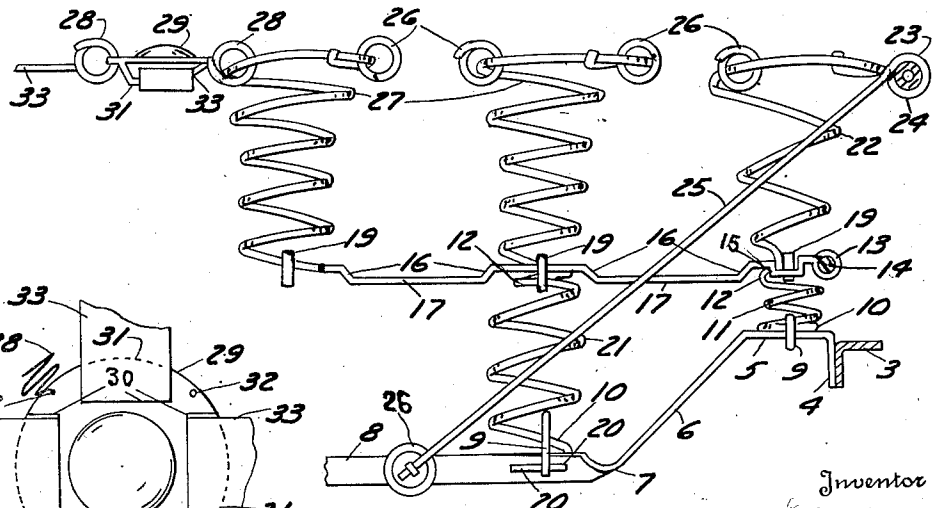


Fig. 2

Fig. 3

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BEDSPRING

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8 Claims. (Cl. 5—267)

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This invention relates to springs.

This invention has utility when incorporated in bed springs, being adapted to localize spring depression to the region of the load as well as tending to minimize down tilt toward such depression.

Referring to the drawings:

Fig. 1 is a plan view, with portions broken away, of a partially diagrammatic embodiment of the invention in a rigid frame bed spring unit for a double bed;

Fig. 2 is an enlarged view in section on the line II—II, Fig. 1, showing the general features of the coil spring assembly; and

Fig. 3 is a detail view, in plan of an intermediate element in the localizing structure for a yield region.

The bed spring frame base

The bed spring may be considered as having an angle iron base frame comprising ends 1, rounded corners 2 to sides 3 as an endless bounds element adapted to be located upon the side rails or slats of a double bed. Between the sides 3 supplemental rigid frame means are provided. End offsets 4 may be weld anchored with the drop inner flange of the angle iron frame sides 3, with an adjacent flat top seat 5 from which extends a dip portion 6 to a 90° twist or turn 7 to provide an on-edge intermediate or connecting portion 8. This on-edge portion 8 establishes stiffness for load support. While the coil springs across the ends 1 may seat on the flat top flange portion of the angle iron frame portion, the intermediate crosswise rows of coil springs are seated centrally on the on-edge portion 8 and along the bed side at the seats 5.

The coil spring assembly

Marginally of the frame base on the flat top flange of the ends 1 and along the sides 3 on the seats 4, strand wires 9 snugly anchor an end coil 10 with a riser coil section 11 to an intermediate coil region 12. A flat wire end 13 may snugly anchor with an endless rod 14 as a sub-frame intermediate bounds section. From the end 13, there is a flat wire stirrup or dip 15 from riser offsets 16. From the offset 16, the flat wire has a portion 17 to a next spring. In addition to this flat wire 13, 16 inward from the frame side 3, there is parallel to the side 3 and from the section 14 a flat wire 18 having stirrups 19 in the coil regions 12 which may be under the stirrups 15.

The on-edge frame portions 8 have at intervals therealong openings 20 for strand wires 9

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to anchor end coils 10 from which riser coils 21 extend to an intermediate coil region 12, at which stirrups 15, 19, from the portions 17, 18, provide transverse stabilizing, while there may be up and down yield as permitted toward the sustaining seats for these coil springs.

From the coil regions 12 of the marginal coils, riser coils 22 may extend to have outer side anchoring by weld slot assembly with a top frame endless tube 23 desirably of width slightly beyond the frame sides 3 and quite a little more beyond the ends 1.

In order to allow down pressure on the bed spring side at the frame 23 with the yield not to bring too much out-of-line shifting, an eye 24 with a metal strap 25 inward and downwardly therefrom may connect the ends of a pair of tension helical springs 26 between parallel spaced apart portions of the rigid main frame 1, 8. The top portion of the coils 22 away from the frame 23 have tension helical springs 26 to extend diagonally to the tops of riser coils 27 of intermediate or non-marginal spring coils.

The spring pad top

Under the invention herein, a localized or pad region is established by having connections of helical tension springs 28 from coil portions 27 and as along the sides 3 from the coil portions 22, to connectors or plates 29. The plates or disks 29 have parallel cuts 30 for offsets 31 between connector openings 32 for the radiating springs 28. Thru these cuts or slots 30, straps 33 extend in sort of basket weave style in a rectangular assembly. The extent of the frame section 14 may be beyond the pad area determined by the plates 29 and straps 33 to the minor coil regions 12 of the spring coils as along the side 3. The metal straps 33 may be stepped inward from the end 1 back one set of coil springs from the frame 14 as also inset one set of coils from the end 1. This leaves a sort of independence for the lesser weight normally carried by the foot and head regions of the bed. The bounds-defining means 33, 29, overlap the means 14.

Spring pad independence

The top frame endless tube 23 is a bounds means at the bed spring top and defines a plane. The sheet metal straps 33 form a mesh in which the plates 29 provide assembly means therefor at the intersections. There is a pair of these mesh assemblies 33, 29, in the plane of the frame 23. What is claimed and it is desired to secure by Letters Patent is:

1. A bedspring structure comprising; a base frame, a plurality of rows of coil springs mounted on said frame with their axes perpendicular to the plane of said frame and terminating in upper ends forming a second plane parallel to said base frame, a marginal frame connected to the upper ends of the border springs mounted on said base frame, a first pair of lattice frames in said second plane between the upper ends of said springs inside said marginal frame, and a second pair of lattice frames in a third plane parallel to and between said base and second planes and connected to inside springs between their ends.

2. The structure of claim 1 wherein said frames are rectangular.

3. The structure of claim 1 wherein said base, marginal, and said second pair of lattice frames are rigid frames.

4. The structure of claim 1 for a double bed wherein said first pair of lattice frames are parallel and spaced by a pair of said coil springs, and said second pair of lattice frames are spaced farther apart than said first pair of lattice frames.

5. The structure of claim 1 wherein said first pair of lattice frames comprises interlaced straps.

6. The structure of claim 1 including helical tension springs connecting the junctions of said first lattice frames with adjacent upper ends of said coil springs.

7. The structure of claim 1 wherein said coil springs are of less diameter in said third plane than in said second plane.

8. The structure of claim 1 including strap members between said base frame and said marginal frame.

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