July 13, 1943. F. HAMPTON 2,324,258

SPRING MATTRESS STRUCTURE

Filed March 14, 1942

Fig. 1.

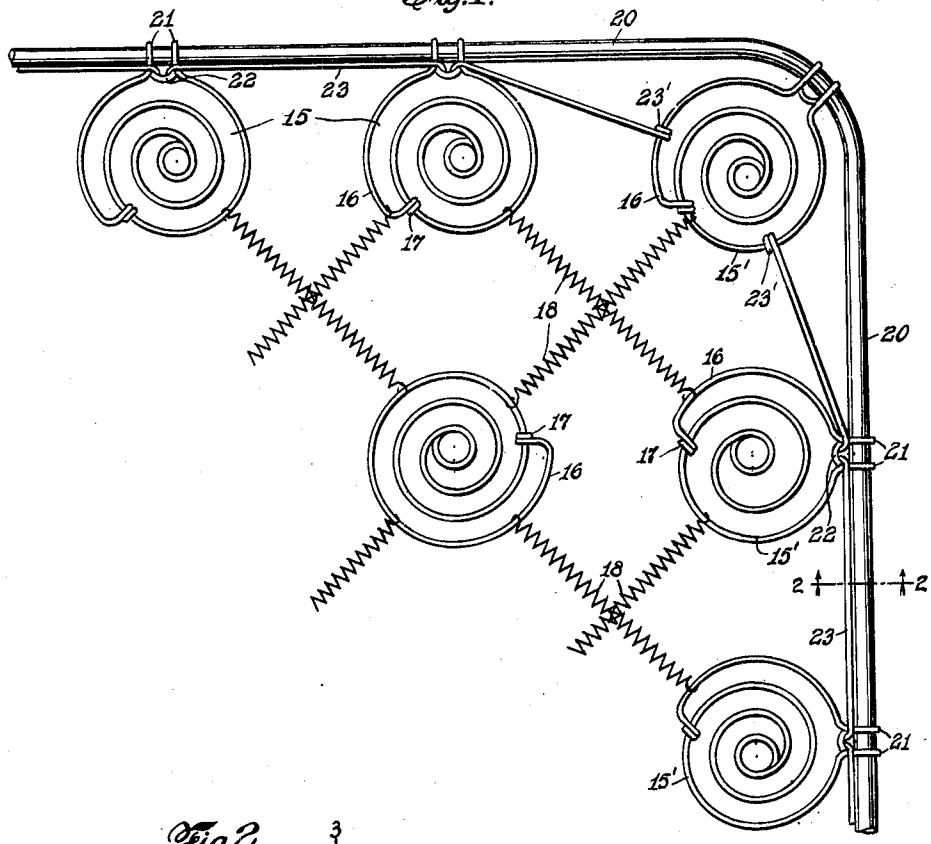


Fig. 2.

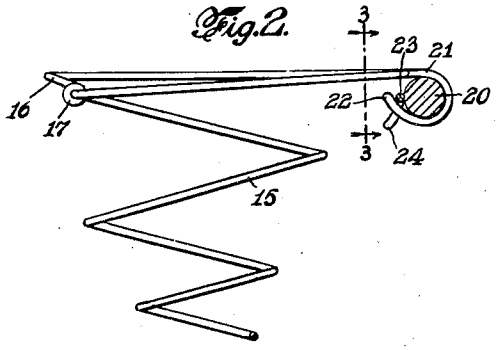


Fig. 3.

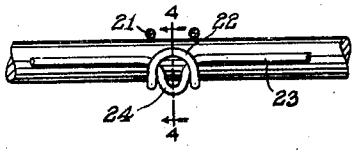
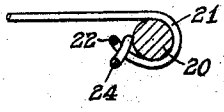


Fig. 4.



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SPRING MATTRESS STRUCTURE

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Application March 14, 1942, Serial No. 434,758

1 Claim. (Cl. 5—260)

This invention relates to spring structures as used in connection with couches, cushions, mattresses and like framed, resilient formations.

In such structures frusto-conical, helically coiled springs are commonly used, anchored securely at their lower ends, interlinked at their spaced apart upper ends, and the outer springs, in some manner, secured to a circumjacent rigid frame at their upper ends.

The principal purpose of the present invention is to provide a novel, simple and practical means for connecting the outermost of the series of springs to a free-floating, but rigid encircling frame.

A further feature is in the provision of means for maintaining the springs in suitably spaced relation without interfering with their resiliency.

Another object is to simplify such structures by reducing the number of parts, and consequently decreasing the cost of construction.

These valuable objects are attained by the novel construction and combination of parts hereinafter described and shown in the accompanying drawing, constituting an important component of this disclosure, and in which:

Figure 1 is a fragmentary plan view of an embodiment of the invention at the corner thereof.

Figure 2 is an enlarged sectional view taken on line 2—2 of Figure 1.

Figure 3 is a sectional view taken on line 3—3 of Figure 2.

Figure 4 is another sectional view taken on line 4—4 of Figure 3.

As shown in the drawing a plurality of helically wound, frusto-conical springs 15 are secured in axially spaced relation on a suitable base support (not shown) in the usual manner.

The ends of upper coils 16 are connected by curling or other analogous means to the main coil, as at 17.

Connecting between the adjacent upper coils 16 are helically coiled tension springs 18, arranged diagonally as shown, and by which the coils are held spacedly and normally upright.

A rigid rod 20 is bent to extend, in slightly spaced relation, circumjacently around the entire structure, the frame thus formed being free to move downwardly towards the base support when under compression.

The rod is floatingly sustained by a series of integral loops 21 extending radially outward from each of the outermost springs 15′ in the structure, each loop being bent, in the manner of a hook 22, to snugly encircle the rod 20, as clearly shown.

Wires 23 are arranged in parallel with the rod 20, along the sides and ends, inwardly therefrom, and provided with undulations 24 adapted to engage the loops 21 in the manner of detents, thus retaining them in spaced relation, and preventing the hooks from slipping on the rod; the end portions of these wires are connected to the corner springs, as at 23′.

From the foregoing it will be apparent that the use of extra clips, or like means to secure the springs to the frame rod is wholly avoided, thereby simplifying and strengthening the structure.

While the invention is shown as applied to a conventional bed mattress, it will be apparent that it is equally applicable to circular cushion seat structures as well as those which are rectangular.

It is understood that the foregoing is to be regarded as suggestive, rather than restrictive, as changes may be made within the scope of the appended claim.

Having thus described the invention, what is claimed as new and sought to secure by Letters Patent, is:

A spring structure comprising a plurality of helically coiled frusto-conical springs anchored at their lower ends in spaced axial relation, a free-floating rigid frame circum-ambient the upper ends of the outer springs, a hook loop formed integrally with the upper coil of each of the outer springs bent to tightly encircle the adjacent portion of said floating frame, and wires adjacently parallel the inner surface of the ends and sides of said frame said wires having undulations to engage in each of said loops thereby to retain the outer springs in spaced relation, said wires being radially connected with the springs at the corners of the structure at equally spaced distances from the loops of the corner springs.

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