June 21, 1927. 1,633,544

D. HANAUER

ANCHORING MEANS BETWEEN CUSHIONING SPRINGS AND A SURROUNDING FRAME

Filed May 21, 1925

Fig. 1.

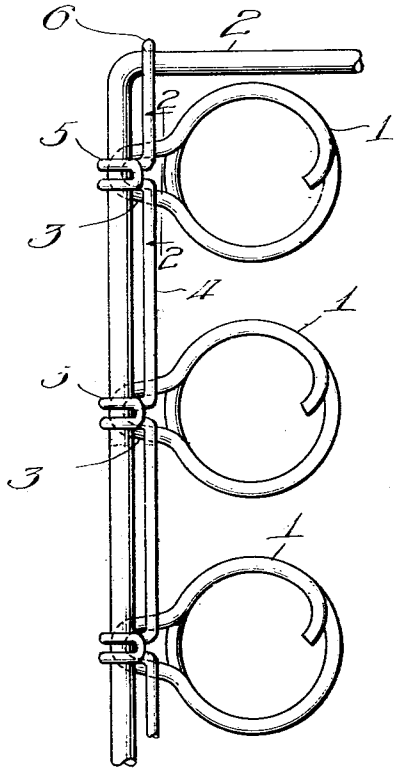


Fig. 2.

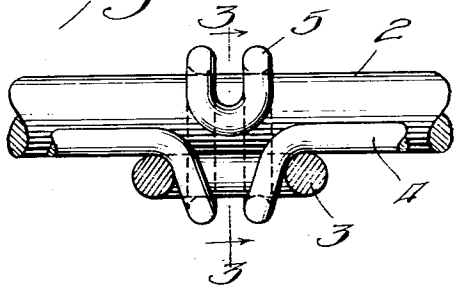


Fig. 3.

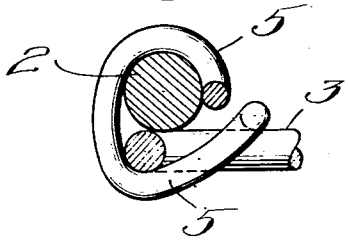
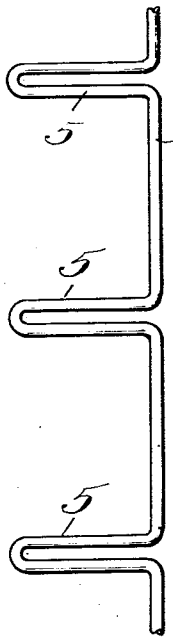


Fig. 4.



Inventor:
Marvin Hanauer,
By Wm F Frendenreich,
Atty

Patented June 21, 1927. 1,633,544

UNITED STATES PATENT OFFICE.

DARWIN HANAUER, OF LA GRANGE, ILLINOIS, ASSIGNOR TO KINNEY ROME COMPANY, A CORPORATION OF ILLINOIS.

ANCHORING MEANS BETWEEN CUSHIONING SPRINGS AND A SURROUNDING FRAME.

Application filed May 21, 1925. Serial No. 31,798.

Certain types of spring cushions as, for example, bed springs, comprise a group of coiled springs surrounding which, in the plane of their upper turns or coils, is a frame to which the outermost springs are anchored; this frame being usually made of a comparatively heavy wire.

The object of the present invention is to produce a simple and novel means for fastening or anchoring the springs to such upper frame in such a manner that the connection will be secure and the frame be left smooth and without projections of any kind on which the bedding or the hands of a person handling the spring or the bedding could catch.

The various features of novelty whereby my invention is characterized will hereinafter be pointed out with particularity in the claim; but, for a full understanding of my invention and of its objects and advantages, reference may be had to the following detailed description taken in connection with the accompanying drawing, wherein:

Figure 1 is a top plan view of one corner of a spring cushion embodying my invention; Fig. 2 is a section on an enlarged scale taken on line 2—2 of Fig. 1; Fig. 3 is a section taken on line 3—3 of Fig. 2 and Fig. 4 is an elevation of a fragment of the tie wire.

Referring to the drawing, 1, 1 represents the upper turns or coils of coiled springs of any usual or suitable type. 2 is a frame of heavy wire that surrounds the spring structure in approximately the plane of said turns or coils. Each of the coils 1 has a lateral bend 3 in the shape of a V with a rounded apex. The parts are so disposed that the outer ends of the parts 3, that is the curved apexes, lie just underneath and in contact with the adjacent bar or strand of the frame, but do not project beyond the vertical plane tangent with the outer side of such bar or strand. The members 3 are then tied to the frame by means of a comparatively light tie wire 4 which is formed, in the first instance, as illustrated in Fig. 4, namely with long lateral U-shaped bends 5 spaced apart a distance equal to the distance between the centers of the members 3 on the springs. This tie wire is laid across the members 3, close to the bar or strand of the frame under which these members pass, the U-shaped elements 5 being passed downwardly through the members 3 on the inner side of said bar or strand, and the ends of the tie wire are bent around the strands or bars arranged at right angles to that beside which the tie wire lies, as indicated at 6.

The U-shaped elements 5 are then bent upwardly past the outer closed ends of the members 3 and over the top of the overlying frame member, so as to bring the closed ends of the elements 5 down on the inner side of the frame member and into the vicinity of the plane of the tops of the arms 3.

It will thus be seen that there are no projections on the outside of the frame, excepting only the small tie wire members that are bent over the same. Consequently the outer side of the frame is smooth and substantially unobstructed, because the strands of the tie wire bent over the frame member are not only small in diameter, but they are round and thus the hand of a person, or a piece of bedding, will ride easily over the same and will not catch thereon, when slid along the frame. It will also be seen that nowhere is there any severed end along the frame member to which the V-shaped arms of the springs are attached, because these arms are made of a continuous piece of wire and the tie elements are continuous. Therefore there is nothing to catch the hand of a person or clothing or bedding, anywhere along the frame.

While I have illustrated and described with particularity only a single preferred form of my invention, I do not desire to be limited to the exact structural details thus illustrated and described; but intend to cover all forms and arrangements which come within the definitions of my invention constituting the appended claim.

I claim:

A cushion comprising coiled springs, an outer frame lying approximately in the plane of the upper turns of said springs, certain of the springs adjacent to the frame having the metal of their upper turns bent

outwardly in the form of double arms underlying the adjacent frame member, and a tie wire extending along said frame member across the tops of said arms and having a series of U-shaped loops formed in the same, each loop extending down through the space within one of the double arms on the springs and then upwardly past the outer side and across the top of said frame member so as to fit snugly on said frame member and press the arms against said frame member.

In testimony whereof, I sign this specification.

DARWIN HANAUER.