Aug. 30, 1932. J. W. BARBER 1,874,221

SEAT SPRING CONSTRUCTION

Filed April 19, 1930

FIG. 1

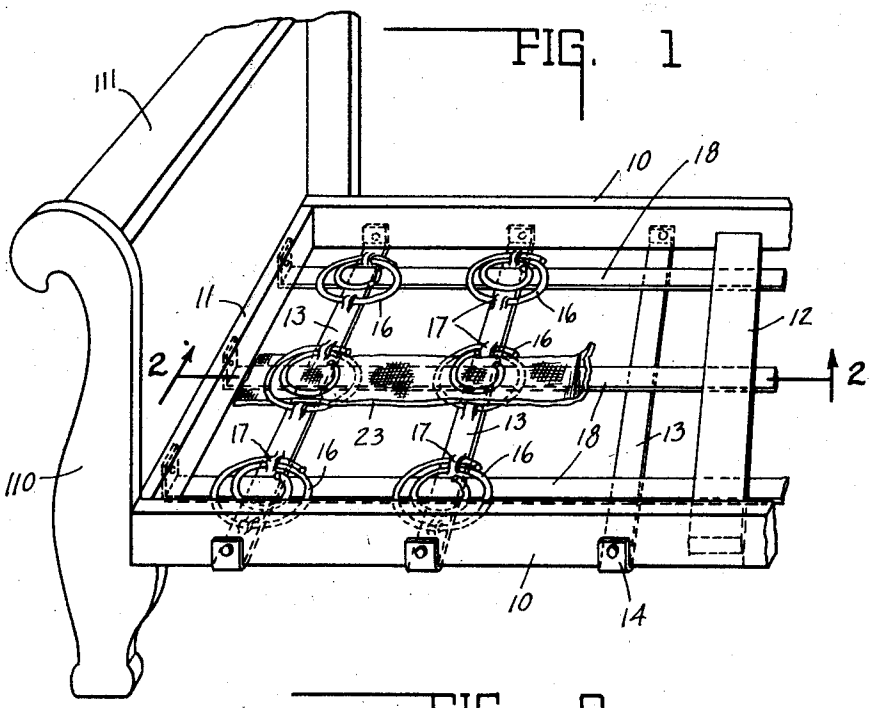


FIG. 2

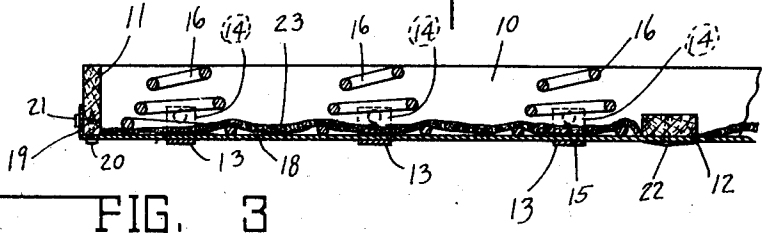
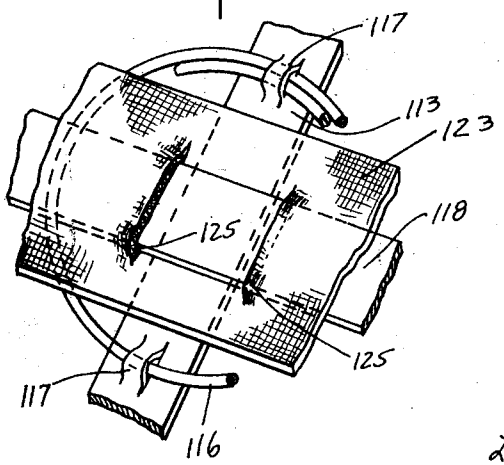


FIG. 3



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SEAT SPRING CONSTRUCTION

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This invention relates to a sagless silent spring construction.

The chief object of this invention is to provide a frame for upholstering with a spring construction so arranged that it is permanently protected against sagging and is further protected against clicking of the springs against the sag preventing construction.

The chief feature of the invention consists in associating with the usual parallel metal spring supporting straps, similar transversely positioned metal straps and interposing between said last mentioned sag proventing straps and the coil springs, a silencing construction.

Another feature of the invention consists in the multiple angular anchorage for each of the spring supporting straps.

A third feature of the invention consists in the arrangement of the silencing means and the sag preventing straps so that a portion of the silencing means is interposed between the spring supporting straps and the sag preventing straps for silencing the bearing therebetween.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims:

In the drawing, Fig. 1 is a perspective view of a frame adapted to be upholstered and provided with the sag preventing means in turn provided with the silencing means.

Fig. 2 is a longitudinal sectional view taken on line 2—2 of Fig. 1 and in the direction of the arrows.

Fig. 3 is an enlarged perspective view of a modified form of a construction including a coil, its support and the associated mechanism adjacent spring thereto.

In the drawing 10 indicates the front rail of a base. 10 also indicates a parallel back rail of the same. 11 indicates a side rail connected to both, the several rails forming a square or rectangular frame work. The legs 110 and cross connecting portions 111 may be of any suitable form. If the frame is relatively elongated, one or more intermediate transverse brace members 12 may be provided.

Extending parallel to the transverse brace members 12 and the side members 11 and in predetermined spaced relation, are a plurality of parallel spring supporting members in the form of metallic straps 13, the ends of which project beyond the front and back rails 10 and are turned angularly as at 14 to lie immediately adjacent the outside of said rails. Each spring supporting member 13 is suitably apertured at each angular end and in the body portion immediately adjacent thereto and through either or both, there is provided the anchoring nail 15 that extends into the rails 10 and from two transverse directions. Each strap 13 is slotted at predetermined intervals as at 17 and the intermediate portion between each pair of slots is elevated forming a passage between the elevated portion and the main body of the member 13. The coil spring 16, herein shown as conical for the lower most portion, is shown arranged relative to the coil anchorage provided by strap 13 that a complete coil is anchored to the strap member and at opposite sides of the coil. In this way full coil anchorage is obtained.

In addition to the multiple transverse anchorages for each end of the coil supporting straps 13, additional means is provided to prevent cocking of the coils and sagging of the entire construction and herein the same includes a plurality of longitudinal extending parallel straps 18, the free ends of which are turned angularly as at 19 and lie adjacent the sides 11, each angular end 19 is apertured and the main portion immediately adjacent thereto is likewise apertured so that the transverse anchorages 20 and 21 provide multiple anchorage for each end of the longitudinal straps 18 which extend transversely of the main or coil supporting straps 13. The intermediate and normally free portions of the bottom coil of spring 16 thus bear upon the reinforcing straps 18 and cocking of the coils about strap 13 or the axis of support is prevented, thereby preventing the possibility of sagging. To prevent clicking of the superposed coils in their collapsed positioning and engaging the strap 18 as well as the strap 13, a fabric silencer 23 is interposed

between the superposed coils and the bottom coil, as shown in Figs. 1 and 2. Herein the silencing strip extends from one end of the metallic strap 18 to the other and passes under the transverse brace 12. The strap 18 is secured to the transverse brace 12 as at 22, if desired.

The resulting construction is such that clicking of the superposed coils of the conical coil spring is eliminated. Cocking of the coil springs about the axis of anchorage is likewise eliminated and through the employment of metallic straps transversely arranged, a relatively rigid supporting base frame work is obtained for the spring support and through the angular type of end anchorage, multiple transverse anchoring of each strap end is obtained.

In Fig. 3 there is illustrated a modified form of the invention, which embodies all of the features herein before set forth and includes an additional advantage. In this form of the invention, the coil supporting strap 113 supports the coil spring 116 in the usual manner as at 117. The longitudinal strap member 118 is normally covered by the silencing strap 123. In this form of the invention, however, the silencing strap at intervals, equivalent to the spacing between the parallel straps 113, is slit as at 125, the slits 125 being arranged in pairs. Strap 118 extends through the pairs of slits 125, as shown in Fig. 3, thereby positioning a portion of the silencing fabric beneath strap 118 and where strap 118 crosses strap 113, so that the intersecting engagement of the two straps is silenced by the fabric strip which also silences the superposed coils of the coil spring 116 when the coil is collapsed or compressed toward its anchorage.

In davenport constructions the frame is generally made as a unit, the spring constructions are then applied thereto as a unit, following which the upholstering is applied to the springs and the davenport frame. For this reason it has heretofore been impossible in davenport construction to embody a plurality of pairs of transversely parallel metallic straps and such failure has been due to the addition of the cross members 12 and the formation of the frame as a unit. The present invention permits of such construction with all of the advantages that accrue therefrom and from the employment of an elongated strap that extends longitudinally of the framework and is secured at opposite ends to the framework and is also secured to the cross member 12 as shown at 22.

The invention claimed is:

1. In an upholstering construction the combination of a pair of transversely arranged straps, a coil spring secured to one strap and arranged to bear upon the other strap, and a silencing member extending longitudinally of one of the strap members and having a pair of spaced transverse slits therein, between which the silencing member supporting strap is exposed, the intermediate silencing member portion permitting such exposure being interposed between the two straps, said silencing member being engageable by the superposed coils of the coil spring supported by the first mentioned strap upon collapse or compression of said spring.

2. In an upholstery frame construction, the combination with a peripheral frame, a plurality of frame supported spring supporting metal straps arranged in parallel and spaced relation, other frame supported spring supporting metal straps arranged in parallel and spaced position and angularly of the first mentioned straps, and coil springs supported in registration with the intersections of said metal straps, of a silencing strap positioned between the intersecting metal straps for cushioning contact therebetween, each coil spring having a full coil anchored at a plurailty of points to one of said metal straps, said silencing strap being interposed between the other of the intersecting metal straps and a second coil adjacent the anchored full coil for intermediate coil engagement upon coil compression or collapse.

In witness whereof, I have hereunto affixed my signature.

JOHN W. BARBER.