Jan. 2, 1951 C. S. REED 2,536,310

CUSHION CONSTRUCTION

Filed April 2, 1945

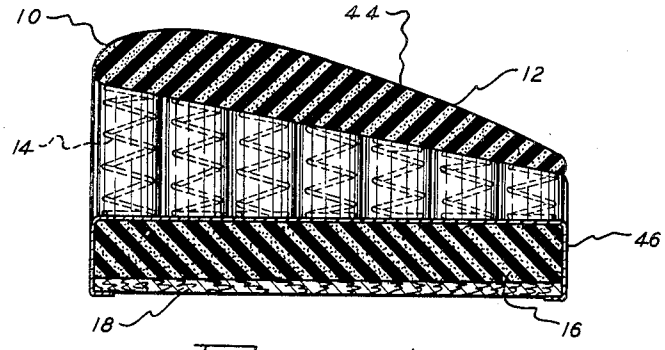


Fig. 1.

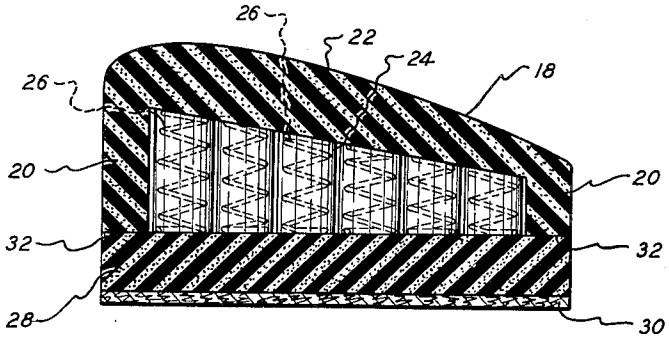


Fig. 2.

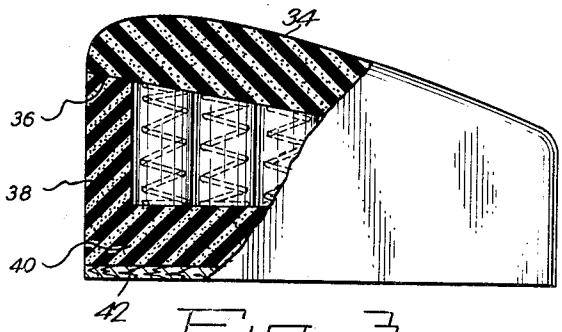


Fig. 3.

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CUSHION CONSTRUCTION

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The present invention relates to improvements in seat cushion construction.

An object of the present invention is to provide a cushion in which resilient material, preferably molded, is combined in a novel manner with coil wire springs.

Another object is to provide an improved seat construction especially designed for automobiles and trucks in which a relatively soft cushion is provided which will not give the impression of hitting bottom when fully depressed as when the vehicle passes over an extremely rough road bed.

A further object is to provide a seat cushion of molded resilient material in combination with encased wire coil springs.

A still further object is to provide a seat cushion having upper and lower portions of molded resilient material with an intermediate section comprising coil springs.

These and other objects and advantages residing in the combination, construction and arrangement of parts more fully appears from a consideration of the following specification and annexed claims.

In the drawing,

Fig. 1 is a cross-sectional view through a seat cushion embodying the present invention,

Fig. 2 is a view similar to Fig. 1 of a modified form of the invention, and

Fig. 3 is a view similar to Fig. 1 of a still further modified form of the invention.

In the form of Fig. 1 is shown a seat construction 10 having an upper portion 12 of molded resilient material, an intermediate portion consisting of coil springs 14, and a lower portion of molded resilient material 16 supported upon a suitable base 18.

In Fig. 2, the side and upper portions 20 and 22 respectively are of molded resilient material comprising a pocket 24 in which the coil springs 26 are housed. A lower portion 28 of molded resilient material is supported on a suitable base 30 and is connected in any adequate manner to the sides 20 along the line 32.

The modification shown in Fig. 3 is similar to that of Fig. 2, except the upper molded portion 34 terminates along the line 36 and the molded sides 38 are integral with the molded bottom portion 40 supported on the base 42.

The molded portions of the several illustrated embodiments of the invention may be of any suitable resilient material, such as foam rubber, curled or artificial hair in combination with a suitable binder such as latex, or other similar materials which are resilient, capable of being molded, and will retain their form under use.

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Referring to the coil springs 14 and 26, these are preferably fabric encased coils of the Marshall type. However, other conventional forms of coil springs may be used, being suitably associated to enable the unit insertion of the same into the molded pocket or between the molded upper and lower portions.

In the form of Fig. 1, the portions 12 and 16 may be provided with fabric covers. Any suitable means may be employed for securely joining the molded portions along the lines 32 and 36.

It should be apparent to those skilled in the manufacture of seat constructions for automobiles, trucks and the like that the illustrated forms will provide a soft cushion, and at the same time, under severe road shock, following maximum absorption by the coil springs, the resiliency of the bottom portions 16, 28 and 40 will come into play and avoid the sensation of "hitting bottom." Moreover, by controlling the consistency of the molded portions of the construction, structural elements, such as border wires, cross ties, cross wires, helical springs, and other stabilizers and supporting means may be eliminated from or materially reduced in the construction.

Having thus described my invention, what I consider new and wish to cover by Letters Patent is as follows:

1. A seat construction comprising a base supporting structure, a molded section of resilient material of substantially uniform thickness having cushioning properties supported on the base, an intermediate section comprising coil springs having long springs and shorter springs arranged to form a unit wedge-shaped in cross section taken from front to back and supported on said molded section with the long springs forwardly, a one-piece upper section of resilient molded material having cushioning properties, said upper section being substantially wedge-shaped in cross section taken from front to back and being disposed and supported on the spring unit with the thickened portion forwardly, and flexible fabric means encasing said springs and holding said springs in a pre-stressed condition in the wedge-shaped unitary arrangement.

2. A seat construction comprising an upper resilient portion substantially wedge-shaped in cross section taken from front to back, a lower portion of resilient material and of substantially uniform thickness throughout, forward and rear and end portions around the edges of and intermediate the upper and lower portions with the end portions of substantially wedge-shaped formation with the longer edges disposed forwardly,

all of said portions defining a pocket of substantially wedge-shaped form with the forward portion of greater upright extent as taken from front to back, and a wedge-shaped coil spring unit structure tapering rearwardly and located in said pocket and contributing to the support of said upper resilient portion.

3. A seat construction comprising an upper cushion portion substantially wedge-shaped in cross section taken from front to back and having its thickest portion disposed forwardly, lower and side and end portions of molded resilient material with the forward side portion of greater upright extent relative to the rear portion and the end portions of substantially wedge-shaped formation, said portions collectively defining a central hollow pocket portion also substantially wedge-shaped in cross section taken from front to back and having its greater dimension forwardly, and a plurality of fabric-encased coil springs of graduated different lengths assembled as a unit substantially wedge-shaped in cross section tapering from front to back located in said pocket and offering support to the upper portion.

4. A spring seat construction comprising a substantially rigid base supporting portion, a resilient molded cushion member of substantially the same thickness throughout on said supporting portion, a resilient molded cushion substantially wedge-shaped in cross section and tapering from front to back and disposed in spaced relation above the lower member, front and back and substantially wedge-shaped end wall portions between the upper and lower resilient molded portions, said portions forming a pocket substantially wedge-shaped in cross section taken from front to back and with its greater height disposed forwardly, and a coiled spring unit having a plurality of spring elements assembled in substantially wedge-shaped arrangement tapering from front to back and disposed in the substantially wedge-shaped pocket, said unit being substantially encased by the portions of said molded resilient material and contributing to the support of said cushion member.

5. A spring seat construction for vehicles and the like comprising a substantially non-yielding supporting base structure, a lower portion of molded resilient material of substantially uniform thickness throughout mounted on said supporting base, an upper portion of molded resilient material substantially wedge-shaped in cross section and tapering from front to back located and spaced above the lower portion with

a space therebetween substantially wedge-shaped in cross section taken from front to back, substantially wedge-shaped end sections and front and back wall sections substantially enclosing the wedge-shaped space between the upper and lower portions, and a unitary spring structure substantially wedge-shaped in cross section taken from front to back disposed and substantially encased within the space intermediate the lower and upper resilient portions, said upper resilient portion and the spring unit having the thicker portions thereof disposed forwardly and said sections confining the spring unit and upper resilient portion in place.

6. A cushion seat construction for automobiles and the like comprising a substantially non-resilient base supporting portion, a lower portion of molded resilient material of substantially uniform thickness throughout mounted on the supporting base portion, an upper portion of molded resilient material substantially wedge-shaped in cross section taken from front to back located and spaced above the lower portion with the thickened part thereof disposed forwardly, front and back and end walls of resilient material around the sides and ends of said upper and lower resilient portions, said end walls being of substantially wedge-shaped configuration taken from front to back with the wider portions forwardly, the walls thus defining a substantially wedge-shaped pocket with the greater height of the pocket disposed forwardly and underneath the greater thickness of the upper cushion portion, and a multiple coil spring unit having the springs thereof of graduated length and snugly assembled into a unitary substantially wedge-shaped spring portion located in the pocket and enclosed by said walls.

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