April 23, 1946. A. CESLOWITZ 2,398,769

RESILIENT CONSTRUCTION FOR AN ARTICLE OF FURNITURE

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Fig. 1

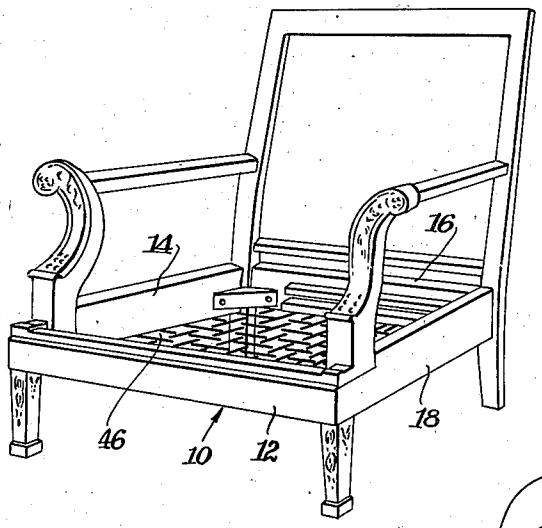
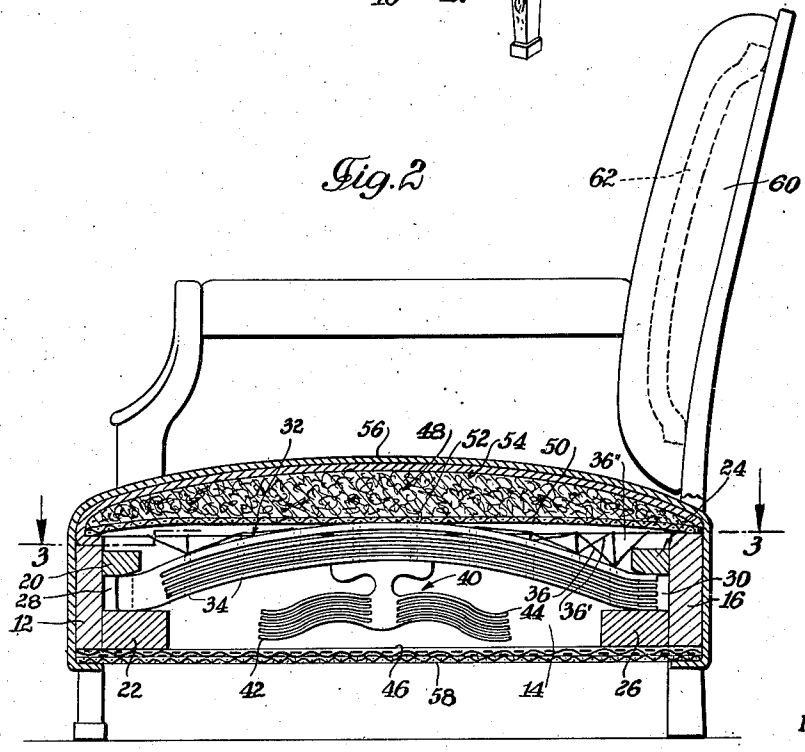


Fig. 2



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Fig. 3

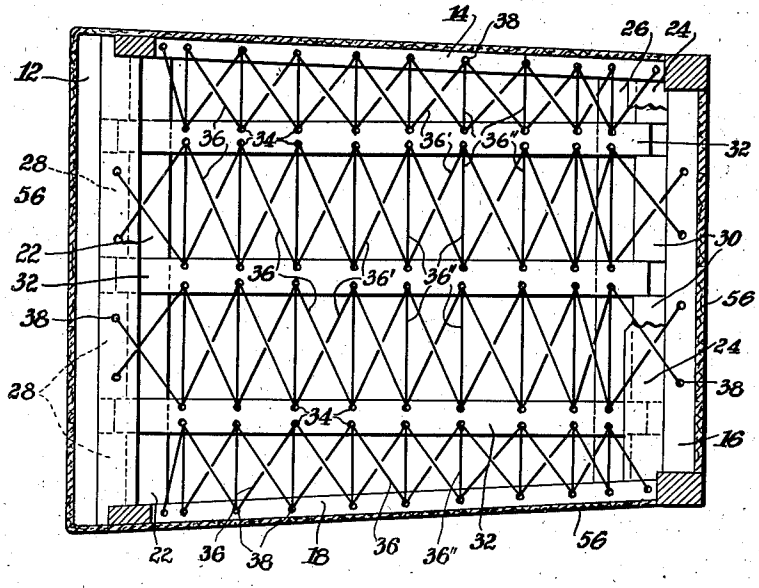


Fig. 4

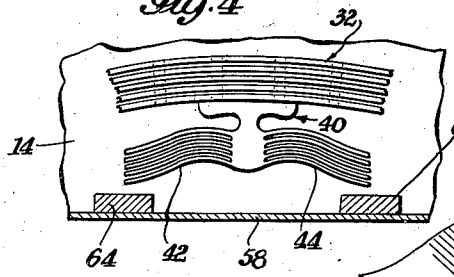


Fig. 5

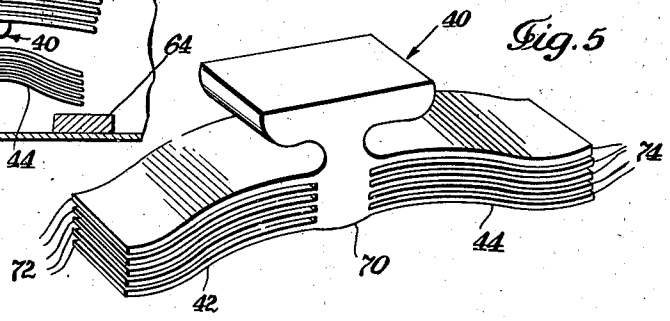
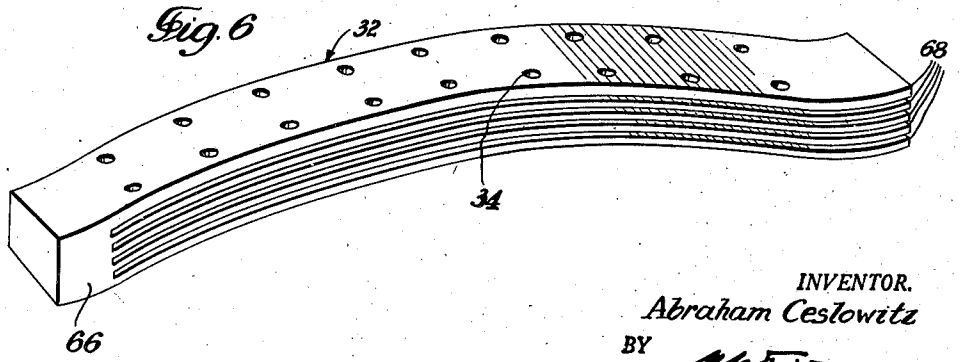


Fig. 6



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UNITED STATES PATENT OFFICE

2,398,769

RESILIENT CONSTRUCTION FOR ARTICLES OF FURNITURE

Abraham Ceslowitz, New York, N. Y.

Application October 17, 1942, Serial No. 462,353

2 Claims. (Cl. 155—179)

My invention relates to furniture, and more particularly to a resilient construction for an article of furniture, such as a chair, a bed, a couch, a sofa or the like.

An object of my invention is to provide a resilient construction of above described type, for example a seat or a back-rest of a chair, which may be readily manufactured without the use of metallic springs.

Another object of my invention is to provide a resilient construction of above described type, by means of which any damage to the upholstery by the springs used may be avoided.

A further object of my invention is to provide a resilient construction of above described type, which may be manufactured at low costs.

The above mentioned objects and advantages as well as other objects and advantages will be more fully disclosed in the following specification reference being had to the accompanying drawings forming part of this specification, wherein:

Fig. 1 is a perspective view of the frame of an armchair, the seat proper and the back-rest proper being omitted,

Fig. 2 is a side elevational view of the chair shown in Fig. 1, the seat construction, however, being shown in section,

Fig. 3 is a sectional view of the chair shown in Fig. 2, taken on line 3—3 of Fig. 2,

Fig. 4 is fragmentary view of a different embodiment of my invention, illustrating rigid supporting bars for cooperation with the ends of the auxiliary springs,

Fig. 5 is a perspective view of a laminated auxiliary spring, and

Fig. 6 is a perspective view of a laminated main spring.

Referring now to the drawings, 10 generally indicates the frame of an arm-chair having the four rails 12, 14, 16 and 18 connected with each other in conventional manner.

As best shown in Fig. 2, an upper transverse bar 20 and a lower transverse bar 22 are secured to the front rail 12 at a certain distance from each other; likewise an upper transverse bar 24 and a lower transverse bar 26 are secured to the back rail 16 at a certain distance from each other. Spacing members 28 secured to the front rail 12 are arranged at intervals in the space between the bars 20 and 22, and similar spacing members 30 secured to the back rail 16 are arranged at intervals in the space between the bars 24 and 26 as shown in Figs. 2 and 3. The spacing members in combination with the transverse bars form guiding means for a series of laminated main springs 32 extending in the longitudinal direction of the chair. The ends of said laminated main springs 32 arranged in the spaces formed by two spacing members and the upper and lower transverse bars slidably rest on the lower transverse bars 22 and 26 respectively. The length of each main spring is somewhat shorter than the distance between the front rail 12 and back rail 16, so that the main springs slidably resting on the lower transverse bars may expand in the longitudinal direction of the chair under the load of an occupant. Each main spring 32 is provided with a plurality of bores 34. Flexible means or strings 36, 36', 36'' attached to the rails by nails 38 or the like pass through said bores 34 of the main springs 32 for holding same in their position.

A laminated auxiliary spring 40 is secured to each main spring 32. The auxiliary springs 40 are arranged in such a manner, that the lower surface of their laminated arms 42 and 44 is at a certain distance from a webbing 46 attached to the lower portion of the frame when the springs are in their normal position shown in Fig. 2, and that said arms 42 and 44 come into engagement with said webbing 46 when the springs are under the load of an occupant.

A pad 48 consisting of a layer 50 of burlap, a layer 52 of hair and a layer 54 of muslin is secured to the rails 12, 14, 16 and 18 by nails. The pad 48 rests on the main springs 32.

The above described resilient seat construction is covered by layers 56 and 58 of covering material, such as leather or fabric, attached to the frame in suitable manner.

If desired, the auxiliary springs 40 may be omitted, so that the resilient construction has only the main springs 32.

My resilient construction may also be used for the back-rests of chairs. For example, the back-rest 60 of the chair shown in Fig. 2 is provided with a resilient construction similar to that shown in cross-section for the seat of the chair, which, however, has only the main springs 62.

Fig. 4 illustrates a different embodiment of the support cooperating with the arms 42 and 44 of the auxiliary spring 40. Instead of the webbing 46 shown in Fig. 2, two transverse supporting bars 64 secured to the side rails 14 and 18 are used in the embodiment shown in Fig. 4.

The laminated main springs 32 and the laminated auxiliary springs 40 used in the resilient construction shown in the drawings are made of wood. Preferably, the main and auxiliary springs are connected with each other by an adhesive.

As best shown in Fig. 6, the main spring 32 is made of a wooden bar having a solid end portion 66. The remaining portion of the bar is slotted, by sawing for example, so as to form a plurality of leaves 68 extending throughout the entire length of the bar from said solid end portion 66 to the other end of the bar and being slidable upon each other.

The wooden body of the auxiliary spring 40 has a solid center portion 70, and the arms 42 and 44 extending from said center portion on each side thereof are slotted from said center portion to their free ends, whereby a plurality of leaves 72 and 74 slidable upon each other is formed.

If desired, the laminated main spring shown in Fig. 6 may have its solid portion at an intermediate point or in the center instead of at the end, and the bar forming the spring is divided into a plurality of leaves on each side of the solid portion.

Furthermore, it may be mentioned that the resilient construction shown in the drawings is not limited to the use in seats or back-rests of chairs. The resilient construction may also be used in beds or couches or sofas or the like, wherever a portion of the article of furniture shall have a certain resiliency.

I have described preferred embodiments of my invention, but it is clear that numerous changes and omissions may be made without departing from the spirit of my invention.

What I claim is:

1. A resilient construction for an article of furniture comprising: a frame, a series of spaced laminated main springs, each of said main springs being made of a bar of wood, each bar having a solid portion, the remaining portion of each bar being slotted so as to form a plurality of at least three substantially parallel leaves slidable upon each other, the ends of said main springs being carried by said frame, and a series of auxiliary springs, each of said auxiliary springs being connected with one of said laminated main springs, supporting means connected with said frame and arranged adjacent said auxiliary springs, said auxiliary springs being capable of engagement with said supporting means when under a load acting on said laminated main springs, each of said auxiliary springs being made of a body of wood having a solid portion, and the remaining portion of each body of wood being slotted so as to form a plurality of substantially parallel leaves slidable upon each other upon an engagement of the auxiliary spring with the supporting means.

2. A resilient construction for an article of furniture comprising: a frame, a series of spaced laminated main springs, each of said main springs being made of a bar of wood, each bar having a solid portion, the remaining portion of each bar being slotted so as to form a plurality of at least three substantially parallel leaves slidable upon each other, the ends of said main springs being carried by said frame, and a series of auxiliary springs, each of said auxiliary springs being connected with one of said laminated main springs, supporting means connected with said frame and arranged adjacent said auxiliary springs, said auxiliary springs being capable of engagement with said supporting means when under a load acting on said laminated main springs, each of said auxiliary springs being made of a body of wood having a solid center portion, and the remaining portion of each body of wood being slotted so as to form a plurality of substantially parallel leaves slidable upon each other upon an engagement of the auxiliary spring with the supporting means, said leaves of the auxiliary springs being arranged on each side of said solid center portion of each auxiliary spring.

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