United States Patent

Borenstein

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[54] **SLING TYPE UPHOLSTERED FURNITURE**

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[52] **U.S. Cl.** **297/441,** 297/443, 297/450, 297/454

[51] **Int. Cl.**.....**A47c 7/00,** A47c 7/20, A47c 5/00

[58] **Field of Search**.....297/307–309, 382, 297/440, 441, 445, 454–456; 182/212–218, 228; 85/41

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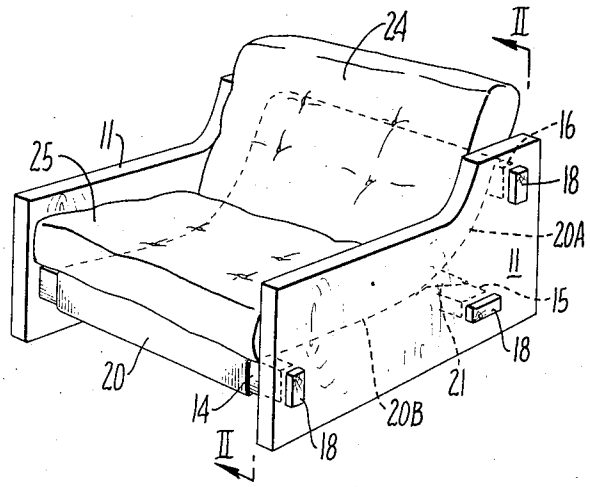
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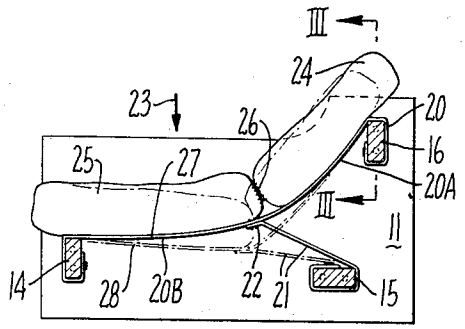
Primary Examiner—Casmir A. Nunberg
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[57] **ABSTRACT**

Furniture construction where the back and seat portions are a unitary fabric or other suitable flexible material loosely hung or slung between a top back rail and a front rail with no other support. However, the loose hanging of the back and seat is restrained by a piece of fabric or the like, secured at one side to a lower back rail and at its opposite side to the slung fabric adjacent a point which would otherwise be the juncture of the back with the seat, straightening the back portion of the fabric under vertical pressure on the seat portion while retaining the slung comfort of the seat portion. The slung portions are covered by unified upholstered seat and back elements which altogether simulate a piece of upholstered furniture.

8 Claims, 4 Drawing Figures





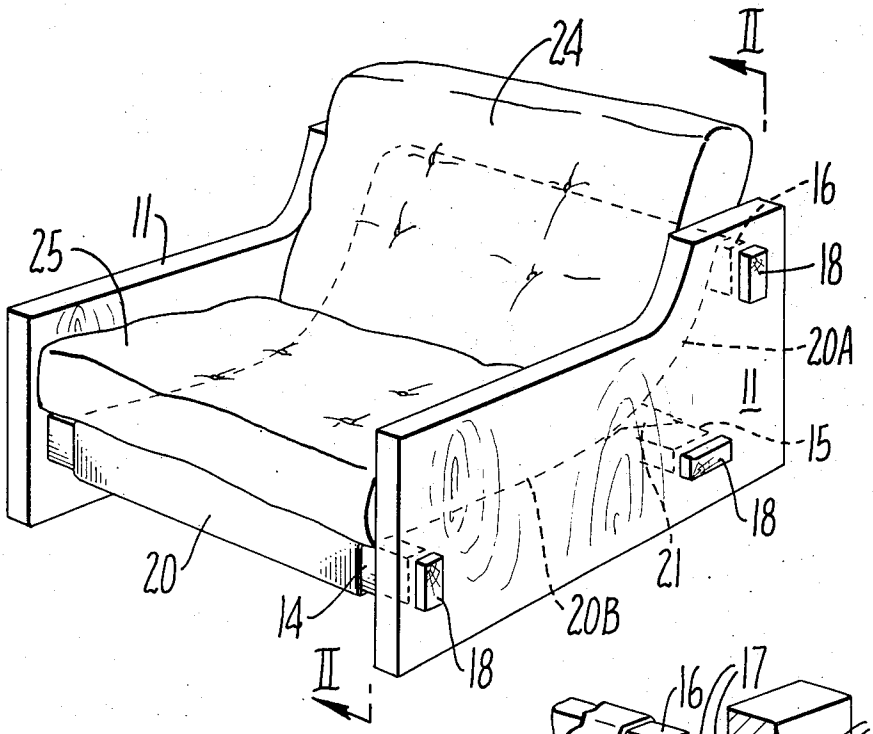


FIG. 1.

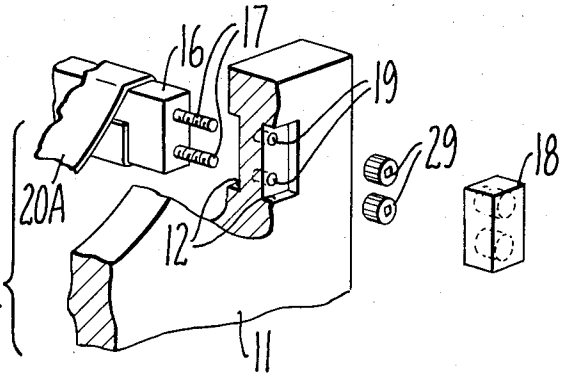


FIG. 4.

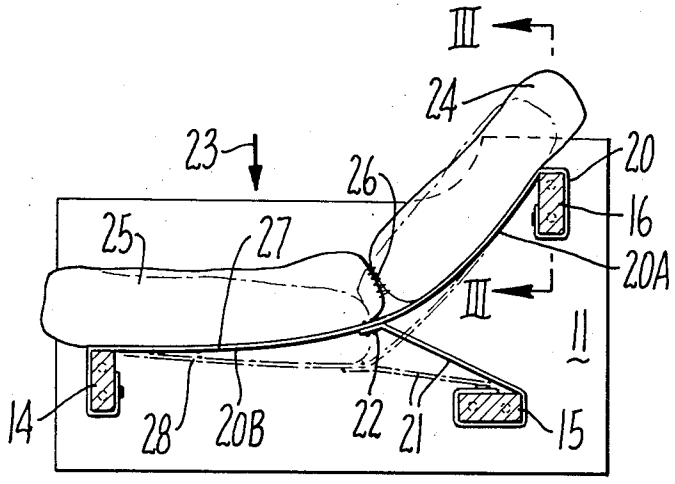


FIG. 2.

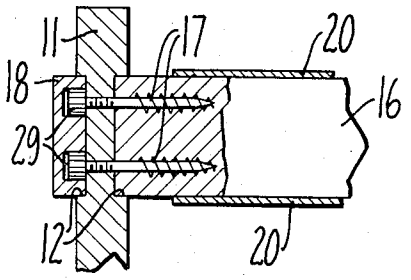


FIG. 3.

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SLING TYPE UPHOLSTERED FURNITURE

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention is directed to a type of simulated upholstered furniture with a flexible support which is restrained under pressure of use to provide a more vertical back without destroying the sling comfort of the seat.

2. Description of the Prior Art

Throughout the course of history sling type furniture has been used with skins and fabric, sometimes in the seat portions alone, sometimes in the seat portion and back portion but separated from each other, and sometimes in a continuous piece forming the back and seat. The very nature of the structure includes some uncomfortable consequences in each form of use. So far as is presently known there has been no attempt to upholster sling type furniture and this may be attributed to the fact that the support is constantly in motion when in use, which motion varies according to the weight on the seat portion and the positioning of the weight thereon.

SUMMARY OF THE INVENTION

It is the purpose of the present invention to provide sling type furniture that is made comfortable by restraining the movement so that when a force or weight is placed on the seat portion, the back portion will straighten to make the seated position comfortable and still provide the benefits of loosely slung material.

It is also an object of the invention to provide upholstery for this type of furniture which adds the upholstered comfort to the loosely slung yielding fabric of the support.

It is also an object to provide upholstery for sling type furniture which will not separate, leaving an opening in use between the seat portion and the back portion and will at all times adjust and adapt to the curvature permitted by the fabric support.

Further objects are to provide a construction of maximum simplicity, economy and ease of assembly and disassembly, also such further objects, advantages and capabilities as will fully appear and as are inherently possessed by the device and invention described herein.

The invention further resides in the combination, construction and arrangement of parts illustrated in the accompanying drawing, and while there is shown therein a preferred embodiment thereof, it is to be understood that the same is illustrative of the invention and that the invention is capable of modification and change and comprehends other details of construction without departing from the spirit thereof or the scope of the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing an occasional chair constructed and upholstered in the manner and form of the present invention,

FIG. 2 is a transverse sectional view taken on the line II—II of FIG. 1,

FIG. 3 is a detailed view on an enlarged scale taken on the line III—III of FIG. 2, and

FIG. 4 is an exploded perspective view of a fragment on an enlarged scale, showing the juncture of the top rail and the side members.

DESCRIPTION OF PREFERRED EMBODIMENTS

Regardless of the kind of the furniture piece, i.e., lounge chair, love seat or davenport, each essentially has the same structural characteristics. The end pieces **11** are preferably uniform for all of the pieces and are countersunk on both sides with uniform rectangular countersinking **12** to receive the but ends of the front rail **14**, the restraining rail **15** and the top rail **16**. The rails **14**, **15** and **16** are secured to the end pieces **11** to form a rigid structure by means of hanger bolts **17**. The hanger bolts **17** project through holes **19** in the countersunk portions and are drawn up tight therein by Allenuts **29**. The heads of nuts **29** are covered by rectangular plugs **18** which are countersunk on their inner surface to receive the Allenut heads **29**. The blocks **18** are positioned with a press fit and do not need any other means for holding them in position. It will be observed that the frame for the furniture consists of two side pieces and the three rails. This is extremely simple and easy to ship in knock-down form.

The furniture requires no springs but is dependent for comfort and support upon its sling type of suspension. A heavy double piece of vinyl or other suitable flexible material **20** is wrapped around the upper rail **16** and secured thereto as shown in FIGS. **2**, **3** and **4**. The material **20** is brought down over the top in front and extends in a suspended loose loop with its lower edge wrapped around the rail **14**, as shown in FIGS. **1** and **2**, and secured thereto in any suitable manner. The natural assumed curve of the loop with no weight to support is shown at **27** in FIG. **2**. If the suspension was merely a loose sling from the top rail **16** to the front rail **14**, it would have the same discomforts and inconveniences encountered in trying to sit in a hammock, for example. In order to provide the necessary control and back support, and to limit the movement of the back portion **20A**, while at the same time permitting the seat portion **20B** to adapt to the shape and weight of the occupant, another web **21** of material is wrapped around and secured to the restraining rail **15** and sewed at **22** to the material **20** to divide the areas into a back portion **20A** and the seat portion **20B**. It will be observed that as the weight is applied to the seat in the direction of the arrow **23**, the seat portion **20B** being longer than the back portion **20A** is free to adapt itself to the form of the occupant in a comfortable loop or sling. The back portion **20A** does not have this same freedom of movement as it is restrained by the material **21** and the sling **22**. As the weight indicated by arrow **23** is applied, the back portion **20A** straightens thus giving the occupant a more comfortable position with suitable back support which is not obtainable by any other type of sling suspension. The curve of the material **20** under useful weight is shown by the broken line **28** in FIG. **2**.

The upholstery is indicated by a back pillow-like member **24** and a seat pillow-like member **25**. These are joined together by a web of the same material, or sewing if preferred, at **26**. If the two pillows **24** and **25** were not joined as is the usual practice, the seat pillow would be free to move, and would almost invariably move forward, separating itself from the back pillow **24**

leaving an uncomfortable space and an improper back support due to the gap between the seat pillow and the back pillow. When pressure is applied to the seat pillow, as shown by the arrow **23**, invariably the back pillow would remain in place thereby causing the gap. The juncture **26** of the two pillows **24** and **25** in combination, eliminates the possibility of a gap between the two, and further assures that the back pillow will always be in the supporting position for the body, with no possibility of gaps. In a davenport, there would be three sets of upholstered pillows **24** and **25**. In a love seat there would be two sets, and in an ordinary occasional chair, there would be only one set. In each instance the sets would be joined as at **26**.

Having the upholstery only in the joined pillows, it is obvious that the upholstery can be changed by merely changing the seats so that it is possible to have one set of pillows **24** and **25** of vinyl for young children which can be readily replaced by a more sophisticated set of upholstered pillows of fabric and the like, before company arrives. Also, it is not necessary to send the pieces to an upholstery shop when one set of pillows is worn or otherwise rendered undesirable. All that is necessary is to reorder a new set of upholstered pillows and the main piece itself does not have to be either discarded or changed in any manner.

Another feature of this type of furniture is that by removing the plugs **18** and unbolting the bolts **17**, the piece of furniture can be shipped in 'knocked down' form, which is a great saving in shipping, weight and handling, as well as space.

I claim:

1. A frame for sling type furniture comprising in combination a pair of matching end pieces, joined together by a top rail, a front rail, and a lower back rail, being secured thereto, a freely movable web between said end pieces with the upper marginal edge thereof wrapped over and secured to said top rail and the lower marginal edge wrapped over and secured to the said front rail permitting the web to free fall naturally into a supportive loop, and a second web between said end pieces with its outer marginal edge wrapped over and secured to said lower back rail and the inner marginal edge thereof secured to the loop of said first web at a point between the upper and lower marginal edges to define a seat portion and a back portion and to limit somewhat the free movement of said loop.

2. The furniture frame of claim **1** wherein the two webs are a woven fabric.

3. The furniture frame of claim **1** wherein the two webs are a nonwoven flexible free moving material.

4. The furniture frame of claim **1** wherein the rails are mortised into and secured through the end pieces, with the securing means covered by a corresponding plug on the exterior side of said end pieces.

5. Simulated upholstered furniture comprising in combination, a pair of matching end pieces, said end pieces being joined by a top rail, a front rail, and a lower back rail, secured to and between said end pieces, a web between said end pieces with the upper marginal edge wrapped over and secured to said top rail with the lower marginal edge wrapped over and secured to the said front rail permitting the web to free fall into a natural loop, a second web between said end pieces with its outer marginal edge wrapped over and secured to said lower back rail and the inner marginal edge thereof secured to the loop of said first web at a point between the upper and lower marginal edges to define a seat portion and a back portion and limit the free movement of said first web, and a pair of upholstered pillows forming a back and a seat for said web support joined at their juncture to prevent separation caused by movement of the said first web.

6. The simulated upholstered furniture of claim **5** wherein the first and second webs are a woven fabric.

7. The simulated upholstered furniture of claim **5** wherein the first and second webs are a nonwoven flexible free moving material

8. The simulated upholstered furniture of claim **5** wherein the rails are mortised into and secured through the end pieces, with the securing means covered by a corresponding plug on the exterior side of said end pieces.

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