

Feb. 23, 1965

R. BECKMAN ET AL
UPHOLSTERED CHAIR

3,170,730

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2 Sheets-Sheet 1

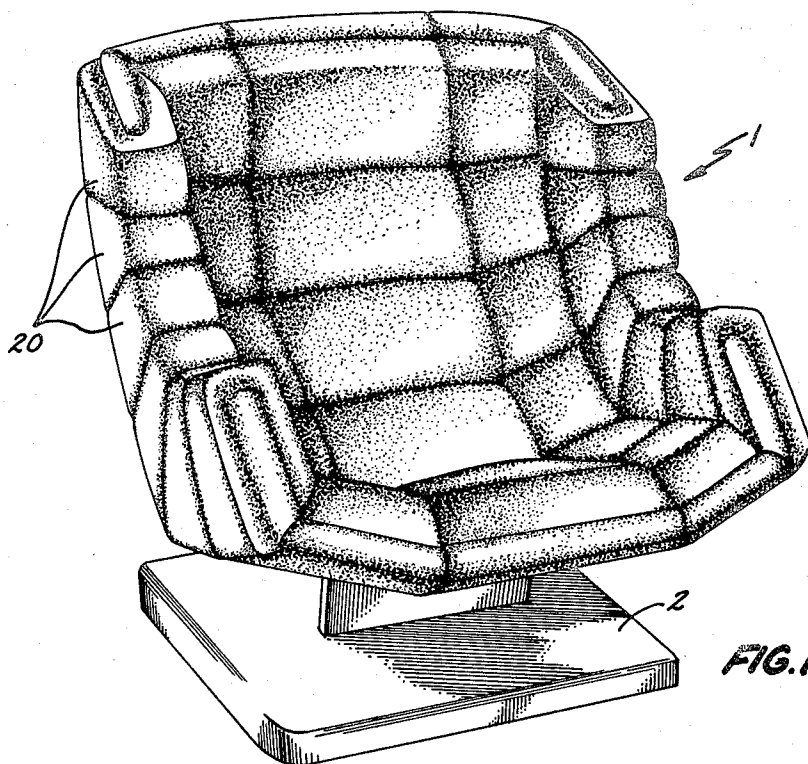


FIG. 1.

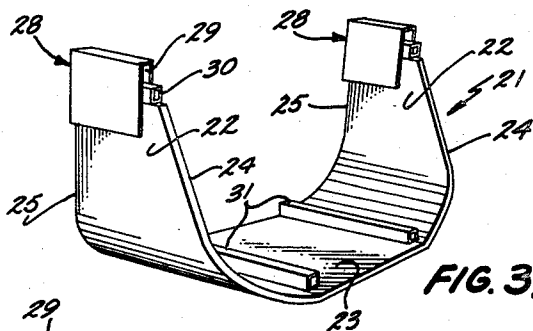


FIG. 3.

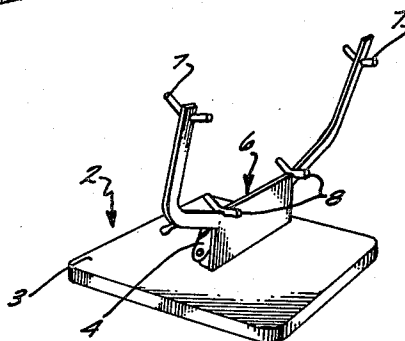


FIG. 2.

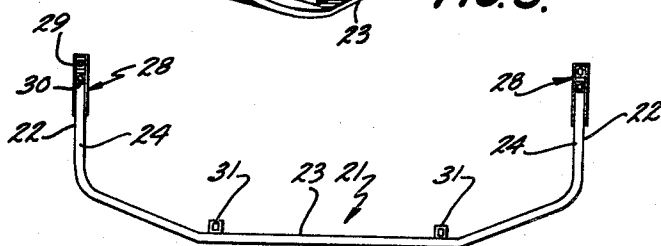


FIG. 4.

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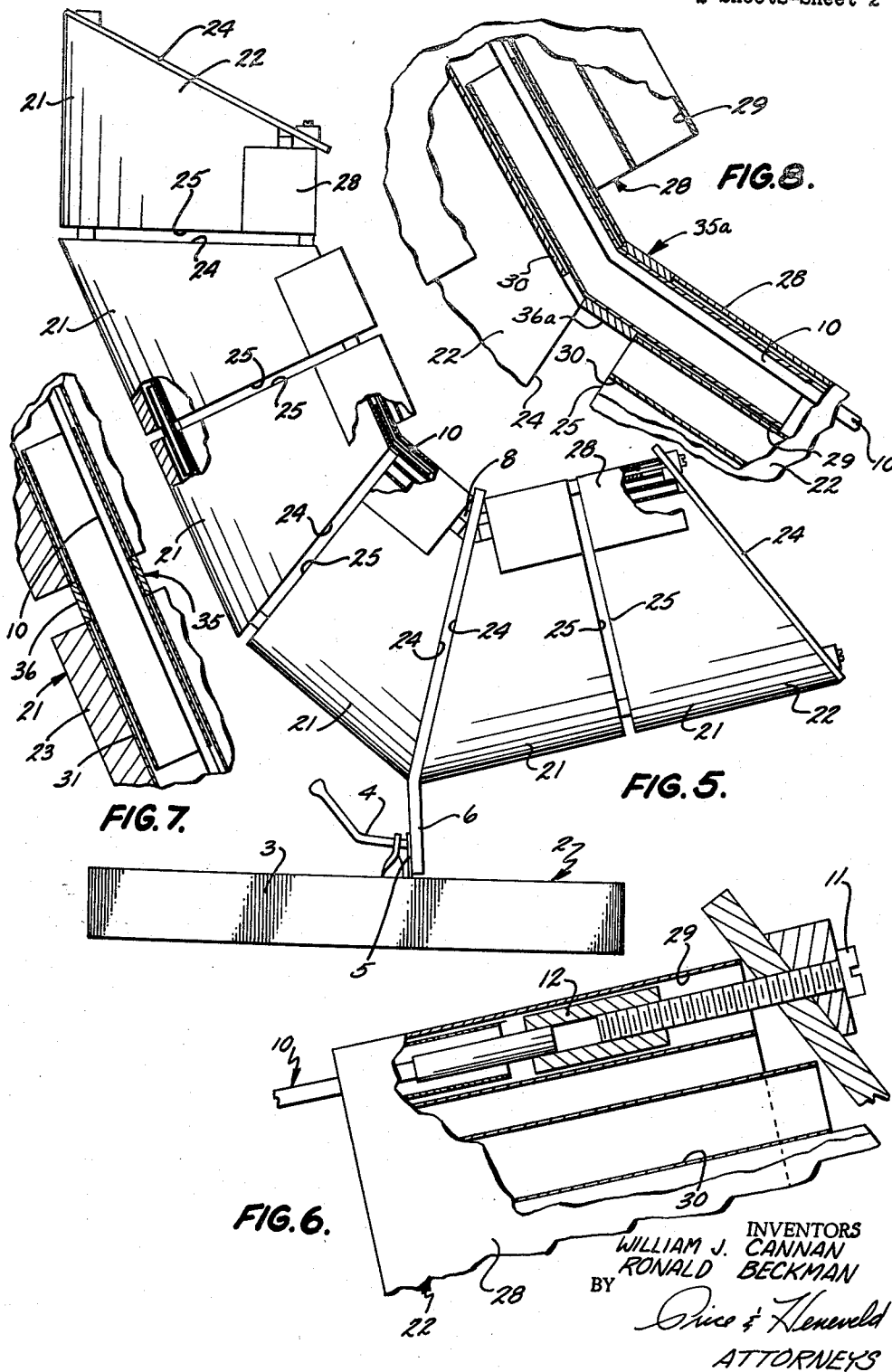
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UPHOLSTERED CHAIR

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13 Claims. (Cl. 297-445)

This invention relates to furniture. More particularly, this invention relates to a unit of furniture including a plurality of logs which uniquely define the contour of the unit of furniture through their inherent structure.

The unit of furniture of this invention comprises a plurality of logs or segments providing support for a person. These logs or segments are adapted to be positioned one against another and are shaped such that the positioning defines the contour of the unit of furniture. The logs are then secured in such a position and the plurality of logs are then positioned and secured to lie above a base. In the embodiment shown, each of the logs include means for receiving cables, these cables securing the logs in the position defining the contour of the unit of furniture and also mounting the structure to the base. Further, the logs are all of identical construction, thus making it possible to completely assemble units of furniture of different contour utilizing a minimum of varying structural components.

It is an object of this invention to provide such a unit of furniture which utilizes unique logs, the inherent structure of which provides the contour thereof.

Another object of this invention is the provision of such a unit of furniture which utilizes a unique means for securing such logs in position and to and above a base.

A further object of this invention is the provision of such a unit of furniture which utilizes logs or segments of identical construction, thereby enabling a minimum number of components to be fabricated for the assembly of a unit of furniture, or the assembly of different types of furniture.

Yet another object of this invention is the provision of a concept of fabricating and assembling units of furniture providing structures unique in appearance and functioning, exhibiting strength and durability.

These and other objects of this invention will be obvious to those skilled in the furniture art upon reading the following specification, in conjunction with the accompanying drawings, wherein:

FIG. 1 is a front perspective view of a chair embodying the principles of this invention;

FIG. 2 is a front perspective view of the base utilized with the chair shown in FIG. 1;

FIG. 3 is a perspective view of the frame of one of the segments or logs utilized in said chair;

FIG. 4 is a front view of the frame shown in FIG. 3;

FIG. 5 is a side view of the chair shown in FIG. 1, only the frames of the logs shown mounted in position, certain parts thereof being broken away to better show the structure of this invention;

FIG. 6 is an enlarged view of the portion broken away at the front of the chair as shown in FIG. 5, showing the means for connecting the logs together;

FIG. 7 is an enlarged view of the portion broken away at the back of the chair as shown in FIG. 5; and

FIG. 8 is an enlarged view of the portion broken away at the middle of the chair as shown in FIG. 5.

In its broadest aspect, this invention relates to a unit of furniture comprising a base and a plurality of logs forming support for a person. The logs are positioned adjacent one another and shaped such that this positioning defines the contour of the unit of furniture. Means are provided for securing the logs in this position of

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engagement and means are further provided for positioning and securing these logs above the base.

Referring more specifically to the drawings, the reference numeral 1 designates a unit of furniture, a chair being shown, embodying the principles of this invention (FIG. 1). It will be understood that other units of furniture, or chairs having different configurations could utilize these principles. The chair 1 includes a base 2 and a plurality of segments or logs, in the embodiment shown being of identical construction and each designated by the reference numeral 20.

The base 2 (FIG. 2) includes a standard 3 to which is mounted a torsion mechanism 4 of standard construction. Welded to the plate 5 of the torsion mechanism 4 is a yoke 6 (FIGS. 2 and 5). It will be seen and understood that adjustment of the torsion mechanism 4 determines the amount of movement or spring which can be exhibited by the yoke 6 through the plate 5. Rigid tubelike members 7 are secured through the ends of the legs of the yoke 6, tubelike members 8 also being secured through the bight portion thereof. The tubelike elements 7 and 8 are bent, extending generally forwardly from one face of the yoke and backwardly and upwardly from the other face thereof. The purpose and functioning of this structure will be explained more fully hereinafter.

Each of the logs 20 include a frame 21 of generally U-shape, the frames 21 having a pair of upstanding legs 22 and a bight portion 23 (FIGS. 3, 4 and 5). The frames 21 may be fabricated from a suitable rigid material, such as plywood. For purposes of identification, the front edges of the legs 22 of the frame 21 are designated by the reference numerals 24, the back edges thereof being designated by the reference numerals 25. The front and back edges 24 and 25 of the legs 22 of each frame 21 are formed at an angle one with respect to the other. The back edges 25 are formed at generally right angles to the tops and bottoms of the legs. The front edges 24 are sloped with respect to the back edges 25. This structure is important and will be more fully described hereinafter.

Brackets 28 are secured at the top of each leg 22, the brackets including a pair of tubelike members 29 and 30 formed therein. Additional tubelike members 31 are secured to the bight portion 23 of the frame 21. A plurality of flexible cables 10 (FIGS. 5-8) are adapted to extend through these tubelike members, as will be described hereinafter.

Each frame 21 is suitably covered with a padding and covering as shown in FIG. 1 to complete the structure of each log 20. In the embodiment shown, it will be noted that each of the logs 20 are of identical construction, the forward edges thereof being sloped and the rearward edges thereof being generally vertical.

The positioning of these logs 20 to form the chair 1 is shown in FIGS. 1 and 5. As will be seen from FIG. 5, positioning of the vertical edges of adjacent logs against each other forms a straight segment of the chair. Positioning of sloped edges of respective logs adjacent one another provides a curved segment of the chair, the degree of the angle of the slope determining the amount of the curve. Positioning of the vertical edge of one log adjacent the sloped edge of another log also provides a curved segment of the chair, the degree of this curve being midway between the curved segment produced when two sloped edges are positioned adjacent one another and a straight segment. Thus, the configuration of the profile of the chair is achieved through the particular sequence of log positions.

Cables 10 are respectively passed through the tubelike members 31 in the bight portions of the frames 21 of the logs 20, the cables also passing through the tubelike members 8 in the bight portion of the yoke 6 of the base

2. The cables 10 include threaded bolts 11 at their ends, the threaded bolts extending into threaded sockets 12 at the ends of cables (FIG. 6). Thus, rotation of the bolt 11 draws the cables tight, forcing the logs 20 one against the other, securing them in the contoured position shown and to the yoke 6 of the base 2. Similar cables 10 normally pass through the tubes 29 of the brackets 28 on the frames of all logs positioned with vertical edges adjacent one another or sloped edges positioned adjacent one another. As shown in FIG. 5, when a sloped edge of one log is positioned adjacent the vertical edge of another log, the cables necessarily pass through the tubelike members 30 in the brackets 28 because of the variation in height. Upon so passing cables 10 through tubelike members 29 and 30 of the brackets 28 and through the tubelike members 7 in the legs of the yoke 6 of the base 2, the securing of the logs 20 to each other and to the yoke 6 is completed.

It should be noted that tubelike elements 35 having spacers 36 at their middles are inserted between the frames 21 of the logs 20 having a straight connection (FIG. 7). Tubelike elements 35a having spacers 36a at their middles are inserted between frames 21 of logs 20 forming a curved connection (FIG. 8). These tubelike elements 35 and 35a, inserted into and cooperating with the tubelike members 29, 30 and 31 of the frames of the logs 20 act as rigidifying spacers, aiding in retaining the logs in the proper contoured configuration.

It will now be seen that a unique unit of furniture has been disclosed. The configuration of the logs providing support for a person actually determines the contour of the unit of furniture when positioned adjacent one another. Further, an extremely simplified means has also been provided for securing the logs in the proper position to provide the contour of the unit of furniture, as well as securing the logs to and above a base for the unit. In addition, the logs may be of identical construction, thereby greatly simplifying assembly of the unit of furniture and further minimizing the number of parts required, thereby simplifying fabrication of the unit. Further, this enables furniture of different configurations to be fabricated from essentially identical parts. The chair provided by the teachings of this invention is exceptionally unique in appearance, functioning and comfort for the user.

While only one embodiment of this invention has been shown and described, it may be possible to practice the invention through the utilization of certain other embodiments without departing from the spirit and scope thereof. Such embodiments are to be included as part of this invention unless the following claims specifically state otherwise.

We claim:

1. A unit of furniture, comprising: a base; a plurality of logs forming support for a person; each of said logs having a pair of surfaces adapted for lying in proximity to said surfaces of adjacent of said logs; said surfaces of at least certain of said logs being formed to lie in a non-parallel relationship, whereby positioning of said logs adjacent one another provides the contour of the unit of furniture; means for securing said logs in said position; and means for securing said logs to and above said base.

2. A unit of furniture as defined in claim 1, said means for securing said logs in position comprising cables passing therethrough.

3. A unit of furniture as defined in claim 1, wherein one of said surfaces of each of said logs lies at generally right angles to the top and bottom thereof.

4. A unit of furniture, comprising: a base; a plurality of logs forming support for a person; each of said logs in-

cluding a generally U-shaped frame; each leg of the legs of said frame having front and back edges formed at an angle to one another, whereby positioning of said logs adjacent one another provides the contour of the unit of furniture; means for securing said logs in position; and means for securing said logs to and above said base.

5. A unit of furniture as defined in claim 4, one of said front and back of each of said legs of said frames formed to extend at a generally right angle to the top and bottom thereof.

6. A unit of furniture as defined in claim 4, said means for securing said logs in position comprising tubelike elements secured to said frames and cables extending through respective elements of said frames.

7. A unit of furniture as defined in claim 4, said means for securing said logs in position comprising tubelike elements secured to said frames and cables extending through respective elements of said frames; said base comprising a yokelike member and said means for securing said logs to and above said base comprising openings formed in said member receiving said cables passing through said frames.

8. A unit of furniture, comprising: a base; a plurality of logs forming support for a person; each of said logs including a generally U-shaped frame; each leg of the legs of said frames having front and back edges formed at an angle to one another, one of said front and back edges lying at generally a right angle to the top and bottom thereof, whereby positioning of said logs adjacent one another provides the contour of the unit of furniture; tubelike elements secured on each of said frames; cables passing through respective of said elements securing said logs in position; and means for securing said logs to and above said base.

9. A unit of furniture as defined in claim 8, said base comprising a yokelike member and said means for securing said logs to and above said base including openings in said member receiving said cables therethrough.

10. A unit of furniture as defined in claim 8, said logs being of identical construction and each of said frames including a pair of tubelike elements on each of said logs for reception of one of said cables for proper alignment of said frames when a right angled edge of one of said logs is positioned adjacent a non-right angled edge of another log.

11. A unit of furniture as defined in claim 9, said logs being of identical construction and each of said frames including a pair of tubelike elements on each of said logs for reception of one of said cables for proper alignment of said frames when a right angled edge of one of said logs is positioned adjacent a non-right angled edge of another log.

12. A unit of furniture as defined in claim 11, including tubelike spacers positioned between said logs.

13. A unit of furniture as defined in claim 11, each of said frames having padding and a covering to form said logs.

References Cited in the file of this patent

UNITED STATES PATENTS

2,558,722	Almoslino	July 3, 1951
2,651,058	Almoslino	Sept. 8, 1953
2,874,812	Clevett	Feb. 24, 1959
2,994,558	Draxler	Aug. 1, 1961
3,041,109	Eames et al.	June 26, 1962

FOREIGN PATENTS

228,386	Australia	May 15, 1960
615,947	Germany	July 16, 1935
1,136,531	France	May 15, 1957