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Europäisches Patentamt
European Patent Office
Office européen des brevets

11 Publication number:

0 152 392
B1

12

EUROPEAN PATENT SPECIFICATION

45 Date of publication of patent specification: **18.07.90**

21 Application number: **85850054.9**

22 Date of filing: **15.02.85**

51 Int. Cl.⁵: **A 47 C 5/14, A 47 C 5/12,**
A 47 C 5/04, A 47 C 3/04,
A 47 C 3/12, A 47 C 3/029

54 **Chair comprising seat, backrest and legs.**

30 Priority: **15.02.84 DK 675/84**

43 Date of publication of application:
21.08.85 Bulletin 85/34

45 Publication of the grant of the patent:
18.07.90 Bulletin 90/29

84 Designated Contracting States:
DE FR GB IT NL

56 References cited:
DE-A-2 029 520
GB-A-1 205 038
US-A-2 670 787
US-A-2 936 826

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Description

The present invention relates to a chair comprising a seat, a backrest and side portions functioning as legs according to the first part of claim 1.

Chairs of this type are well known, in particular such chairs where a chassis of metal or wood is fastened to the seat and/or the backrest, which chassis constitutes the legs, and thus a more detailed account of these known chairs may be regarded as unnecessary.

There are however, a number of disadvantages connected with these well known chairs, these disadvantages showing up during manufacture and during use. The disadvantages relating to the manufacture are essentially due to the fact that a chair after partial manufacture, in addition to the necessary treatment, is to be assembled with a heavy chassis, which both enhances the cost of manufacture resulting in an increased price, and also puts on to the weight. At the same time the thickness of the material due to necessary reinforcements, is not always optimal, thereby having a negative influence on among other things material utilization, whereby the chair becomes heavy and difficult to transport.

Disadvantages relating to the use are caused essentially by the construction of the chair, in so far as the stability of the chair due to the anisotropy of the material, and the separately manufactured chassis, frequently is insufficient. It is for example difficult to fasten wood screws in work pieces with small material thickness, and the use of dowels or rivets demands a machining of the top surface of the chair, which both enhances the cost of manufacture and reduces the possibilities for an effective cleaning. Additionally, such a chair as a consequence of utilizing a number of different materials, and the different rates of ageing of these materials, very often suffers from problems of robustness and stability, and relatively quickly becomes unusable, whereto can be added, as mentioned above, that the chair due to joints and corners often is difficult to clean. Furthermore the ground under a chair comprising legs, is subjected to great wear, in particular when the chair is heavy.

DE—A—2 029 520 relates to a chair formed by a single piece of a material such as Nylon®. Reinforcing flanges are provided along the back, seat and side pieces. There is also a reinforcing valley provided along the transition portion between the back and the seat of the chair. Separate feet are attached to the side pieces by means of screws.

US—A—2670787 relates to a chair having seat and backrest formed from one single piece of laminated wood and legs which are fastened separately to the sides of the seat.

Such reinforcing flanges requires the use of an elaborate mould, and the use of screws in order to affix the feet or legs to the seat or side pieces will in the long run be detrimental to the chair, since such screws tend to loose their grip in the resin material.

The object for the present invention is thus to provide a chair of the above mentioned type, with which the above mentioned disadvantages effec-

tively are overcome by the features of the characterising part of claim 1.

This object is achieved according to the invention in that the chair is manufactured through bending of a piece of a flat material, which piece of flat material preferably is anisotropic or laminated and has a generally uniform thickness. With thus shaped legs there is achieved a number of advantages with respect to the assemblage, the strength, the price, the material utilization, the weight and transport. As the chair is produced in one piece it does not have to be assembled, which saves time during manufacture. With the design according to the invention, the chair shall neither be provided with reinforcements, leading to an optimal materials utilization, both because the thickness can be held uniform, and because with a suitable arrangement of the direction of the veining in the veneer, a great static strength can be achieved, at a small consumption of material. Hereto is to be added that the shape of the work piece, i.e. the veneer before glueing and pressing, allows an efficient utilization of material strips or sheets. As a consequence of the small consumption of comparatively light materials, the weight is reduced correspondingly, which also is of importance for transport or keeping in stock. Because of the design of the legs as runners or rockers, together with the small weight, good using characteristics are achieved as well as an increased users comfort. In a particular design of the chair as a rocking chair, the legs can however be convexly curved to form rockers. A further advantage of the chair according to the invention, comes from the fact that with the use of one single material, is achieved both a uniform wear, a robust chair and a homogenous aftertreatment of the chair, in that for example it is not necessary to use a number of types of varnish for varnishing for example wood and metal respectively. Hereby time is saved, and the costs during manufacture are further reduced, and the final product offers to the consumer a uniform upper surface, which due to the compact design of the chair is easy to keep clean. Consequently the chair is suitable for use within the hospital sector or other places where there are high demands for hygiene, for example in the food industry.

One embodiment of the invention will be explained in detail in the following, with reference to the drawing.

In the drawings

Fig. 1 shows a chair according to the invention in a front view,

Fig. 2 shows the same chair in side view,

Fig. 3 shows a chair according to the invention in perspective view, and

Fig. 4 shows a work piece, from which a chair can be manufactured, and with a contour of the final chair indicated with a dash and dot line.

A chair manufactured from a work piece 4 of multi layer veneer, for example cross-veneer, has a seat surface 1 and a backrest 2 and legs 3, formed by bending sideways directed extensions of the seat surface 1. In the shown embodiment the extensions of the seat surface are bent a little less

than 90°, for example 80° to 85°, relative an imaginary line between the highest points of the seat surface, but with the stability of the chair in mind it is also possible to bend these extensions less than 80°.

A more detailed discussion of the manufacture of the backrests and their inclination is left out, since this is regarded as common knowledge.

In Fig. 4 the contour of the final chair is indicated on the work piece 4 with a dashed and dotted line. It is here evident that the loss of material during the manufacture of the chair is relatively small and approximately amounts to a few percent.

The material for manufacture of the chair according to the embodiment described, is essentially veneer, namely a flat cut top veneer with a thickness of for example 0.7 mm and an inlay veneer of for example sliced beech veneer with a thickness of for example 1 mm. In a preferred design of the chair according to the invention, two layers of top veneer and six layers of inlay veneer are used, said layers are arranged such that the direction of the veins in the veneer layers I, III, IV and VI essentially lay parallel with the symmetry axis of the work piece, while the veining in the layers II and V lay perpendicular to the symmetry axis. With this arrangement of the veining it has been taken into account that the greatest stresses on a chair, act thereon parallel to the symmetry axis, in that the veneer actually in the veining can carry great traction forces. This implies that the inlay veneer essentially carries those forces acting on the chair during use, while the top veneer takes on a more decorative roll. The veining in the top veneer is not predetermined to have a certain direction and can thus be chosen with purely decorative aspects in mind.

The weight of the final chair amounts to little less than 6 kg, which constitutes a weight reduction of about 30% compared to previously known chairs, weighing at least 9 kg. As a consequence of this weight reduction the chair according to the invention can be produced without being provided with particular gripping means or cut-in portions, such means being necessary with heavier chairs. This means that the chair at least becomes cheaper to produce since the provision of such gripping means will increase the costs of production.

Claims

1. A chair having a seat, backrest and legs formed from a single piece of multilayered wood, said seat and said backrest being integral and bent along a first line extending in a first direction, a first leg integral with one side of said seat and bent along a second line, and a second leg integral with an opposite side of said seat and bent along a third line, said second and third lines extending in a second direction perpendicular to said first direction, characterized in that the direction of the veins in selected inlay veneer layers are essentially parallel to the symmetry axis of the

work piece from which said selected layers are formed, that the direction of the veins of the rest of the inlay layers are essentially perpendicular to said symmetry axis and that the direction of the veins of the top and bottom layers are chosen according to decorative aspects.

2. Chair according to claim 1, characterized in that the backrest (2) and legs (3) are bent less than 90°, preferably 80—85° relative the seat (1), and that the chair is adapted to be stackable.

3. Chair according to claim 1 or 2, characterized in that the lower edge of the legs are formed as runners.

4. Chair according to claim 1 or 2, characterized in that the legs are convexly curved to provide rockers.

Patentansprüche

1. Aus einem einzigen Stück Mehrschichtholz hergestellter Stuhl mit einer Sitzfläche, einer Rückenlehne und Beinen, bei dem die Sitzfläche und die Rückenlehne ineinander übergehen und um eine sich in einer ersten Richtung erstreckenden Linie gegeneinander abgebogen sind, wobei ein erstes Bein an die eine Seite der Sitzfläche anschließt und um eine zweite Linie abgebogen ist, während ein zweites Bein an die entgegengesetzte Seite der Sitzfläche anschließt und um eine dritte Linie abgebogen ist, wobei sich die zweite und dritte Linie in einer zweiten Richtung senkrecht zur ersten Richtung erstrecken, dadurch gekennzeichnet, daß die Richtung der Maserung eines Teils der inneren Schichten im wesentlichen parallel zu der Symmetrieachse des die Schichten bildenden Zuschnitts verläuft, daß die Richtung der Maserung des anderen Teils der inneren Schichten im wesentlichen senkrecht zu der Symmetrieachse verläuft, und daß die Richtung der Maserung in den Deckschichten nach dekorativen Aspekten gewählt ist.

2. Stuhl nach Anspruch 1, dadurch gekennzeichnet, daß die Rückenlehne (2) und die Beine (3) um weniger als 90°, vorzugsweise um 80 bis 85°, gegenüber der Sitzfläche (1) umgebogen sind, und daß der Stuhl stapelbar ausgebildet ist.

3. Stuhl nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die unteren Kanten der Beine als Gleitkufen ausgebildet sind.

4. Stuhl nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Beine zur Bildung eines Schaukelstuhls konvexe Form aufweisen.

Revendications

1. Chaise possédant un siège, un dossier et des pieds formés d'une seule pièce de bois multicouche, le siège et le dossier étant d'un seul tenant et étant courbés l'un par rapport à l'autre suivant une première ligne s'étendant suivant une première direction, un premier pied d'un seul tenant avec un côté du siège et courbé suivant une deuxième ligne, ainsi qu'un second pied d'un seul tenant avec le côté opposé du siège et courbé suivant une troisième ligne, les deuxième et

troisième lignes s'étendant suivant une seconde direction perpendiculaire à la première direction, caractérisée en ce que l'orientation des fils de couches ou plis sélectionnés de placage intérieur est essentiellement parallèle à l'axe de symétrie de la pièce à travailler dont font partie ces plis sélectionnés, que l'orientation des fils des plis restants de placage intérieur est essentiellement perpendiculaire à cet axe de symétrie et que l'orientation de fil des plis extérieurs ou faces supérieure et inférieure est choisie en fonction d'aspects décoratifs.

2. Chaise selon la revendication 1, caractérisée en ce que le dossier (2) et les pieds (3) sont courbés sur moins de 90°, de préférence sur 80—85° par rapport au siège (1), et que la chaise est conçue pour être empilable.

3. Chaise selon la revendication 1 ou 2, caractérisée en ce que les bords inférieurs des pieds sont réalisés pour constituer des patins.

4. Chaise selon la revendication 1 ou 2, caractérisée en ce que les pieds ont une courbure convexe pour constituer des éléments de basculement.

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