(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 1 295 547 B1

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention of the grant of the patent:
28.12.2005 Bulletin 2005/52

(51) Int Cl.[7]: **A47C 4/26**, A47C 1/026

(21) Application number: **01830603.5**

(22) Date of filing: **25.09.2001**

(54) **Safety and adjustment device for inclination in foldable deckchairs**

Sicherheitsverstellvorrichtung für faltbare Liegestühle

Dispositif de sécurité et de réglage de chaises longues pliables

(84) Designated Contracting States:
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

(43) Date of publication of application:
26.03.2003 Bulletin 2003/13

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Printed by Jouve, 75001 PARIS (FR)

Description

Filed of the invention

[0001] The present invention relates to fordable deckchair, so called "rocker, chairs, and more particularly a safety and adjustment device for positioning the back of said chairs.

State of the Technique

[0002] The document DE-A-19857752 discloses a foldable chair, corresponding to the preamble of claim 1 and comprising a pair of front legs, a pair of rear legs which are pivotally connected to the top of the front legs and provided with arm-rests, a seat frame pivoted to an intermediate section of the front legs, a back frame pivotally connected to a rear part of the seat frame, and a cloth applied to the seat and back frames to constitute the seat and backrest, and wherein said back frame in movable at least between and upright position and a backwards reclined position.

[0003] Said foldable chair further comprises a safety device that includes at least a locking means pivotally connected to the back frame and designed to engage with one crosspiece or indexing elements fixed to the seat rear legs. The locking means is provided with a control rod or lever which extends upwards to the level of the chair arm rest and has an end facing frontward on which a sitting person may act with an arm or an elbow in order to disengage the locking means from the crosspiece or indexing elements, thus modifying the position of the back frame.

[0004] In such a construction, the back frame finds a stable support on the crosspiece or indexing elements when it is in position for use, but may, however, be accidentally tipped forward, onto the seat frame, which is not admissible for safety purposes of the chair.

[0005] Also the document US-A-2 696 862 discloses a structure of a foldable chair having a back supporting unit which engages with notched plates fixed to rear legs to vary the inclination of the back frame. But, this structure of foldable chair does not disclose nor suggest the presence of safety members suitable to prevent the back frame may be accidentally tipped up to the seat frame, too.

Object of the invention.

[0006] The object of the present invention is to obviate the disadvantage of the prior art and provide a chair with a safety and adjustment device which may be controlled with an elbow and prevents the backrest from tipping forward up to the seat when it is in position for use.

[0007] The object is achieved by a safety and adjustment device for a chair according to the characterising part of claim 1.

Brief Description of the drawings

[0008] wherein:

Figs. 1 and 2 show a perspective view and a side view, respectively, of a chair in position for use and complete with a safety device; and
Fig. 3 shows a detailed view of the safety device.

[0009] The said designs show a so-called "rocker" chair including, in the known construction, a pair of fore legs 11; a pair of back legs 12 convergent and hinged to the top of the fore legs 11 and having each an extension forming the arm-rests 13; a seat frame 14 hinged to an intermediate section of the fore legs 11; a backrest frame 15 hinged to the back part of the seat frame 14; and a cloth 16 applied to the frames 14, 15 to form the seat and the backrest of the chair.

[0010] The chair structure according to this configuration is foldable to reduce the volume when not in use, and when it is unfolded for use the backrest frame 15 may be positioned and locked in at least two extreme positions: an upright position for the use of the structure as a chair, and a backwards reclined position for use as a lie-down. The backrest frame 15 may also be locked in one or more intermediate positions between the said extreme positions.

[0011] A crosspiece or element 17 is fixed to the back legs 12 and a locking device 19 intended to be engaged with said crosspiece 17 so as to constitute the safety and positioning device is hinged, in 18, to least one side arm of the backrest frame 15. In particular, the locking device 19 comprises a rod 20 having a side bearing locking teeth configured to engage with the crosspiece 17 thus blocking the backrest 15 in upright position and in one or more other backwards reclined positions. The figures illustrate, as an example, a locking device 19 with three teeth 21 to define, in addition to the extreme positions, upright and reclined backwards, an intermediate position. At its lower end the rod 20 is provided with a hook 22 intended to intercept from the bottom upwards the crosspiece or element 17 so as to prevent the backrest from accidentally tipping forward.

[0012] The upper end of the rod 20, above the hinging point 18 with the backrest frame, is bent forward horizontally so as to form a lever 23 to allow the user to operate the locking device 19 with an elbow, while remaining sitting on the chair.

[0013] In practice it is possible to disengage the locking device 19 from the crosspiece 17 in order to change inclination of the backrest or to free the end hook 21 from the crosspiece or element for a voluntary folding of the chair by just pushing the lever 23 downwards.

[0014] The locking rod, furthermore, may be provided with two pins 24 jutting transversally one from the external side of the rod and the other from the internal side, intended to intercept respectively a back leg 12 of the chair and the side arm of the backrest frame on which

the rod is hinged, thus maintaining the locking device 19 in position for use even when it is free to rock.

[0015] Finally, it should be noted that the deckchair may be provided, if necessary, with two locking devices 19, one for each side of the backrest 15, connected to each other by a crosspiece for simultaneous movement thereof.

Claims

1. A foldable seat comprising:

a pair of front legs (11),
a pair of rear legs (12) which are pivotally connected to a top of the front legs and provided with arm-rests, a seat frame (14) pivoted to an intermediate section of the front legs (11),
a back frame (15) pivotally connected to a rear part of the seat frame,
a cloth (16) applied to the seat and back frames (14, 15) to constitute chair seat and backrest, and
at least a locking means (19) pivotally connected to the back frame (15) and designed to engage with at least one crosspiece or indexing element (17) fixed to the rear legs (12) so as to define and stabilize the angular positions of the back frame, and wherein the locking means has a control lever (22) that extends upwards and forward at the level of the chair arm-rest so as to support an arm or elbow of a sitting person to cause disengagement of the locking means (19) from the crosspiece or indexing elements, thus modifying the angular positions of the back frame,

characterized in that said locking means (19) is formed of a rod (20) having a number of positioning teeth (21) selectively engaging said crosspiece or indexing element (17) to define various angular position of the backrest, and a terminal hook (22) intended to intercept from below upwards said crosspiece or indexing element (17) and prevent accidental tipping of the backrest towards the seat.

2. A foldable chair according to claim 1, wherein said rod of the locking device is provided on opposite sides with the projections (24) that extend transversally with respect to the chair so that one intercepts the back leg of the chair and the other the backrest frame to limit the rocking of the locking device when not hooked to the crosspiece.

Patentansprüche

1. Ein Faltsitz der miteinschließt:

- ein Paar Vorderbeine (11),
- ein Paar Hinterbeine (12) die an dem oberen Ende der Vorderbeine verbolzt sind und mit Armlehnen ausgestattet sind,
- ein Sitzgestell (14) das an einem mittleren Teil der Vorderbeine (11) verbolzt ist,
- ein Rückenlehnegestell (15) das am Hinterteil des Sitzgestelles verbolzt ist,
- eine Bahn (16) die an den Sitz- und Rückenlehnegestellen (14, 15) eingesetzt ist um Sitz und Rückenlehne zu bilden, und
- wenigstens eine Hemmvorrichtung (19) die am Rückenlehnegestell (15) schwingend verbolzt ist und die mit mindestens einer an den Hinterbeinen (12) befestigten Strebe oder Anschlagelement (17) sich zu verpflichten bestimmt ist, um die Stellungen des Rückenlehnegestelles zu bestimmen und verfestigen, und wo die Hemmvorrichtung einen Betätigungshebel (22) hat, der sich nach oben und vorwärts auf gleicher Höhe einer der Armlehnen ausdehnt um einen Arm oder einen Ellbogen einer auf dem Stuhl sitzenden Person daran zu lehnen um die Entbindung der Hemmvorrichtung (19) von der Strebe oder Anschlagelement zu bewirken, die winkligen Stellungen des Rückenlehnegestelles so verändernd,

dadurch gekennzeichnet, daß die genannte Hemmvorrichtung (19) aus einer Stange (20) besteht, die einige Stellungszähne (21) hat die sich auf selektive Weise mit der genannten Strebe oder Anschlagelement (17) verpflichten um verschiedene Gebrauchsschrägstellungen der Rückenlehne zu bestimmen, und ein Endhaken (22) der die genannte Strebe oder Anschlagelement (17) von unten nach oben abzufangen und ein unabsichtliches Umkippen der Rückenlehne vorwärts nach dem Sitz zu verhindern bestimmt ist.

2. Ein Faltsitz gemäß dem Anspruch 1, in dem die genannte Stange der Hemmvorrichtung auf gegenüberliegenden Seiten mit Vorsprüngen (24) ausgestattet ist, die sich nach der Querrichtung in Bezug auf den Stuhl ausdehnen derart, daß die eine ein Hinterbein des Stuhls und die andere das Rückenlehnegestell abfängt um die Schwingung der Hemmvorrichtung, wenn nicht an der Strebe angeklinkt, zu beschränken.

Revendications

1. Une chaise pliante comprenant :

- une paire de pieds antérieurs (11),
- une paire de pieds postérieurs (12) fixés et articulés au sommet des pieds antérieurs et mu-

nis d'accoudoirs,

- un châssis d'assise (14) fixé et articulé sur une partie intermédiaire des pieds antérieurs (11),
- un châssis de dossier (15) fixée et articulé sur la partie postérieure du châssis de l'assise,
- une toile (16) appliquée sur les châssises de l'assise et du dossier (14, 15) pour constituer l'assise et le dossier, et
- au moins un moyen d'arrêt (19) fixé et articulé sur le châssis du dossier (15) et destiné à s'engager sur moins une entretoise ou élément de rencontre (17) fixé aux pieds postérieurs (12) pour définir et stabiliser les positions du châssis du dossier, et où le moyen d'arrêt possède un levier de commande (22) qui s'étend en haut et en avant au niveau d'un accoudoir afin qu'une personne assise sur la chaise y appuie le bras ou le coude pour dégager le moyen d'arrêt (19) de l'entretoise ou élément de rencontre et ainsi modifier les positions angulaires du châssis du dossier,

caractérisé en ce que le moyen d'arrêt (19) est constitué par une tige (20) présentant des dents de positionnement (21) qui s'engagent sélectivement sur l'entretoise ou élément de rencontre (17) pour définir différentes inclinaisons d'utilisation du dossier, et un crochet terminal (22) destiné à intercepter du bas vers le haut ladite entretoise ou élément de rencontre (17) et inhiber le basculement involontaire du dossier en avant vers l'assise.

2. Une chaise pliante selon la revendication 1, dans laquelle la tige du moyen d'arrêt présente sur les côtés des saillies (24) qui s'étendent en direction transversale par rapport à la chaise de telle sorte que l'une intercepte un pied postérieur de la chaise et l'autre le châssis du dossier pour limiter l'oscillation du moyen d'arrêt quand il n'est pas accroché à l'entretoise.

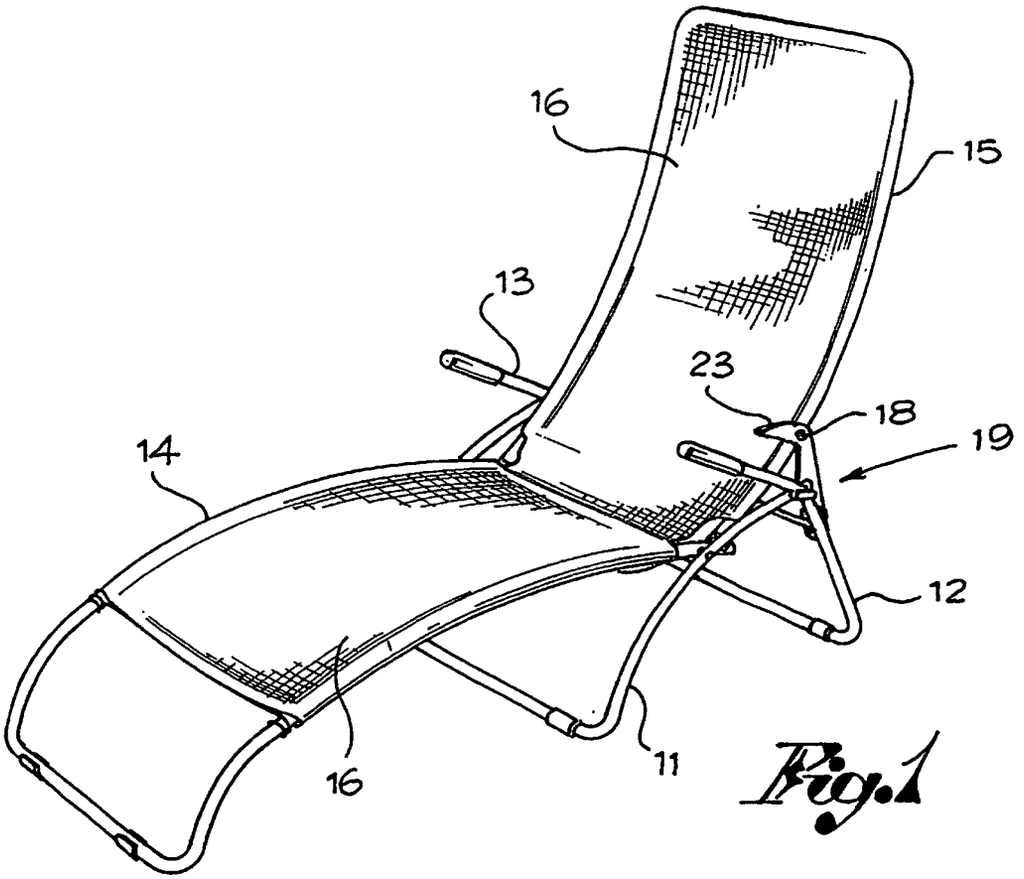


Fig.1

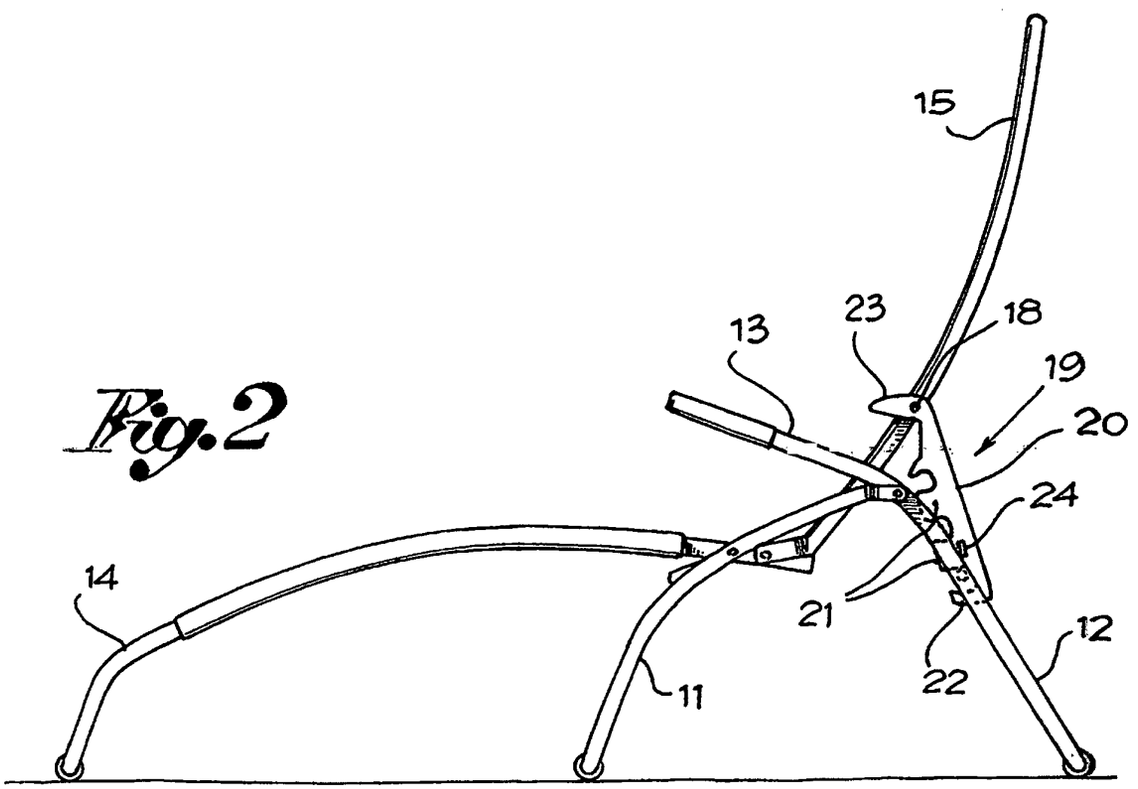


Fig.2

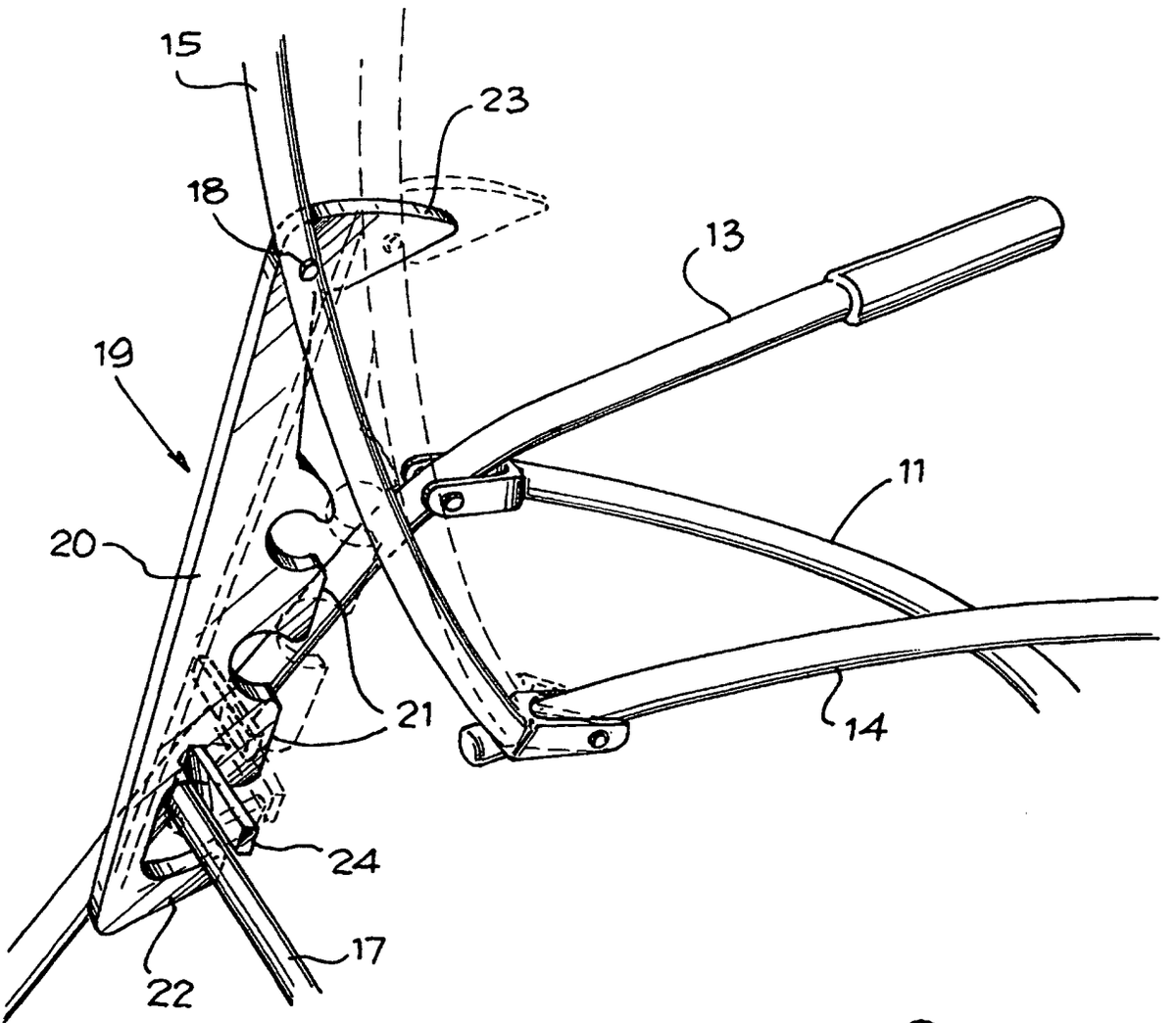


Fig.3