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### (54) PIVOTING WINGBACK RELAXATION ARMCHAIR

(57) The present invention describes a pivoting wing-back relaxation armchair (1) comprising a seat (2), a backrest (3), and two armrests (4) comprising each one

of which two wings (5) on its upper part and where each wing (5) and its corresponding armrest (4) form a single unit that is connected to the backrest (3).

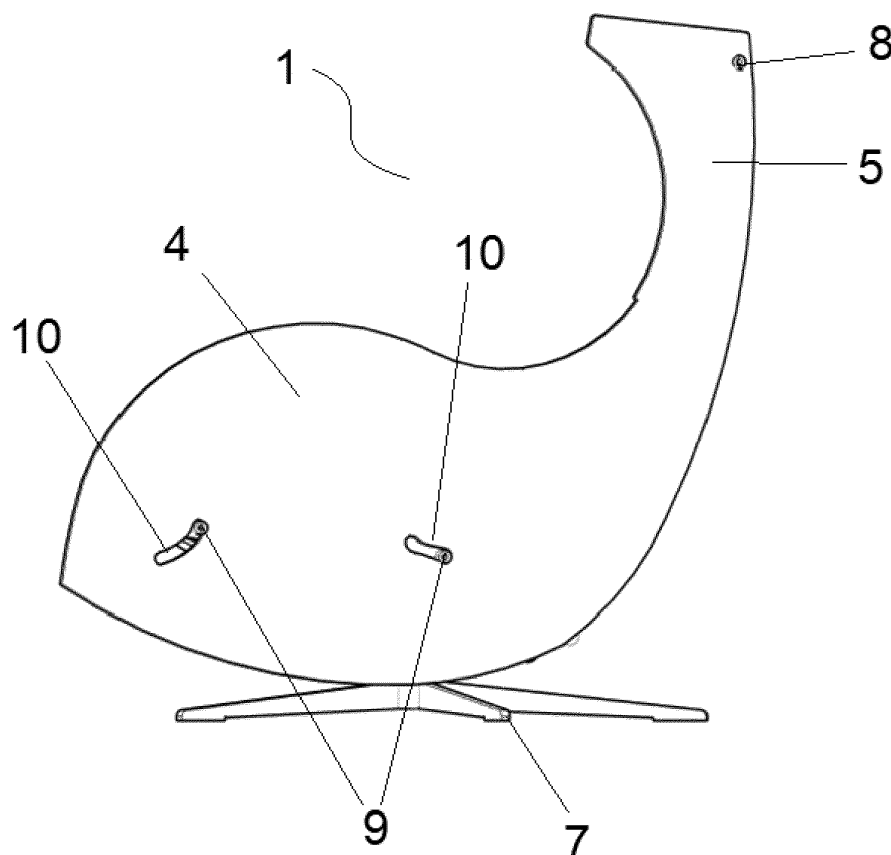


FIG. 1

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## Description

### Technical field

[0001] This invention relates to a relaxation type armchair with wings in the backrest, of the type known in the state of the art as "wingback relaxation".

### State of the prior art

[0002] Relaxation armchairs are known in the state of the art, which are presented with two well differentiated options: (a) relaxation armchairs wherein the backrest tilts backwards, requiring a free space where the backrest tilts backwards; and (b) armchairs known as "zero wall" armchairs, which are those wherein, at the same time as the backrest tilts backwards, both the backrest and the seat move forwards, without the armrests moving. In this way, "zero wall" relaxation armchairs or sofas can be placed up against a wall when they open, avoiding the need to leave a space behind.

[0003] Regardless of whether the relaxation sofa or armchair is of type (a) or (b) mentioned in the previous paragraph, all designs of relaxation armchairs that have wings need to make an inclined or curved cut between the armrest and the wing in order to allow the backrest to tilt backwards. However, in "zero wall" relaxation armchairs, as the seat and backrest move forward and the armrests are fixed, it is not possible to have wings as they would bump into the armrests when they are opened. The only option known in the state of the art is to design tapering wings that allow this forward opening movement without them colliding with the armrests.

[0004] In short, all relaxation-type armchairs with wings, or wingback, must, by necessity, have split wings. Furthermore, this split wing must be connected to the backrest, while the armrest, at its lower part, must be connected to the base. This structure is due to the fact that, when the backrest is tilted backwards, the measurement between the front of the armchair and the upper part of the wing changes because the distance is much greater when the backrest is tilted backwards.

[0005] Therefore, a new design is needed for a wingback relaxation-type armchair that overcomes the design constraints indicated in the previous paragraphs, particularly, the need to make a cut between the armrest and the wing which, in certain types of armchairs, is technically and aesthetically unfeasible. This technical problem is solved with the relaxation armchair of the attached claims, as explained below in this specification.

### Explanation of the invention

[0006] One object of this invention is the manufacture of a relaxation armchair of the wingback type which does not have the technical and aesthetic disadvantages of currently known relaxation armchairs. In particular, it is desired to avoid the use of cuts between the armrest and

backrest. To this end, it is assumed that, in the current state of the art, in relaxation armchairs, the backrests are always connected to the seat and, if they are wingback, the wing must necessarily be connected to the backrest.

[0007] However, this invention overcomes the problems indicated in the state of the art due to the fact that it has been possible for the wing to always be attached to the backrest and for it to pivot when it opens on the seat, thus achieving a series of advantageous technical effects compared to those known in the state of the art.

[0008] Firstly, it is possible to manufacture relaxation armchairs with wings without the need for a separation cut between the wing and the armrest. This fact, in addition to the simplicity of construction, has an obvious aesthetic effect, since a design is achieved which, when open, maintains the same aesthetic line as when closed. In other words, the same aesthetic line is maintained, regardless of whether it is open or closed. Finally, by avoiding the use of separation cuts, during use, possible entrapment between the wing and the armrest is avoided during the closing operation of the relaxation armchair. All these advantages and objectives are achieved with the armchair of claim 1. In the dependent claims, particular or preferred solutions of the armchair are described.

[0009] More specifically, in a first aspect of the invention, the pivoting wingback relaxation armchair comprises a seat, a backrest and two armrests, left and right, each of which has, on its upper part, two wings, left and right, which are structurally integrated into their respective wings, a footrest and a foot that supports and balances the whole of the armchair on the floor; and wherein the armchair comprises an extendable mechanism configured to move the seat, the backrest and the footrest between two extreme positions, open and closed, such that between these two extreme positions, the extendable mechanism adopts at least one intermediate position.

[0010] The armchair has the particularity that each wing and its corresponding armrest form a single unit that is connected to the backrest by means of a pivoting upper axis located in the upper part of the wing, while the lower part of the unit formed by the armrest and the wing is mobile by means of at least one lower pivot that can be moved along at least one curvilinear guide, in such a way that when the backrest begins to tilt backwards, the armrest pivots with respect to the guides and the upper pivot axis in such a way that the unit formed by each armrest and its corresponding wing remains static, regardless of the position adopted by the extendable mechanism.

[0011] In a particular embodiment, the armchair that is the object of this invention comprises two lower pivots, each of which can be moved along its corresponding curvilinear guide.

[0012] Throughout the description and the claims, the word «comprises» and its variants are not intended to exclude other technical characteristics, additives, components or steps. To those skilled in the art, other objects, advantages and characteristics of the invention will become apparent, in part from the invention and in part from

using the invention. The following examples and drawings are provided by way of illustration and are not intended to restrict this invention. Furthermore, the invention covers all possible combinations of particular and preferred embodiments indicated herein.

### Brief description of the drawings

**[0013]** The following is a very brief description of a series of drawings that help to understand the invention better and which relate expressly to one embodiment of said invention, which is illustrated as a non-limiting example thereof.

**[0014]** FIG.1 shows the pivoting wingback relaxation armchair that is the object of this invention in the initial position with the relaxation mechanism closed; FIG.2 shows the pivoting wingback relaxation armchair that is the object of this invention in the intermediate or opening position; and FIG.3 shows the pivoting wingback relaxation armchair that is the object of this invention in the final open position, i.e., with the relaxation mechanism open.

### Detailed explanation of one embodiment of the invention

**[0015]** As indicated, the attached figures show the armchair of the invention in three different positions: (a) initial position with the relaxation mechanism closed (figure 1); (b) intermediate or open position (figure 2) in side view (FIG.2A) and perspective (FIG.2B); and (c) final open position, i.e., with the relaxation mechanism open (figure 3) in side view (FIG.3A) and perspective (FIG.3B).

**[0016]** Referring to all the attached figures, the relaxation-type armchair (1) comprises a seat (2), a backrest (3), and two armrests (4) -left and right-, each of which has, on its upper part, two wings (5) -also left and right- which are structurally integrated into their respective armrests (4). Finally, the armchair (1) is completed with a footrest (6) and a foot (7) that supports and balances the whole armchair (1) on the floor.

**[0017]** As is known in the state of the art, the relaxation armchair (1) comprises an extendable mechanism configured to move the mobile parts (i.e., the seat (2), the backrest (3) and the footrest (6)) between two extreme positions, such as the closed position represented in figure 1 and the open position represented in figure 3. Between these two extreme positions, the extendable mechanism adopts different intermediate positions at the whim of the user and exemplified in figure 2.

**[0018]** In other words, when it passes from the closed position (FIG.1) to the intermediate position (FIG.2), if the armrest (4) with the wing (5) were connected in one piece to the seat (2), the wing (5) would be straight, and the backrest would protrude from behind the armchair. However, if the wing (5) were connected to the backrest (3), the armrest (4) would be higher and therefore more uncomfortable, as shown in the dashed line of FIG.2A.

**[0019]** The innovation of this invention consists, however, in the fact that the wing (5) and the armrest (4) form a single unit that is connected to the backrest (3) by means of a pivoting axis (8) in the upper part of the wing (5), while, in the lower part, a system of pivots (9) inserted into respective curvilinear guides (10), when the backrest (3) begins to tilt backwards, ensure that the armrest (4) pivots with respect to the guides (10) so that the armrest (4) remains in the same position as when the armchair is closed.

**[0020]** However, the advantage over the current state of the art is best seen in FIG.3, which illustrates the open or extended position of the armchair. In FIG.3A, with a dashed line, we can see the position the armrest (4) would have if it were fixed and how, when dropped on the guides (10) thanks to the oscillating system represented by the upper (8) and lower pivots (9), the armrest (4) is kept in the initial position -that is, the same position it is in when the armchair is closed-which is the most comfortable and usable position.

### Claims

1. A pivoting wingback relaxation armchair (1) comprising a seat (2), a backrest (3), and two armrests (4), left and right, each one of which has, on its upper part, two wings (5), left and right, which are structurally integrated into their respective armrests (4), a footrest (6) and a foot (7) that supports and balances the whole armchair (1) on the floor; and wherein the armchair (1) comprises an extendable mechanism configured to move the seat (2), the backrest (3) and the footrest (6) between two extreme positions, open and closed, in such a way that, between these two extreme positions, the extendable mechanism adopts at least one intermediate position; the armchair (1) being **characterised in that** each wing (5) and its corresponding armrest (4) form a single unit that is connected to the backrest (3) by means of an upper pivoting axis (8) located in the upper part of the wing (5), while, in the lower part of the unit formed by the armrest (4) and the wing (5), it is mobile by means of at least one lower pivot (9) that can be moved along at least one curvilinear guide (10), in such a way that when the backrest (3) begins to tilt backwards, the armrest (4) pivots with respect to the guide (10) and the upper pivoting axis (8), in such a way that the unit formed by each armrest (4) and its wing (5) remains static, regardless of the position of the extendable mechanism.
2. The armchair (1) according to claim 1 comprising two lower pivots (9) each one of which is movable along its corresponding curvilinear guide.

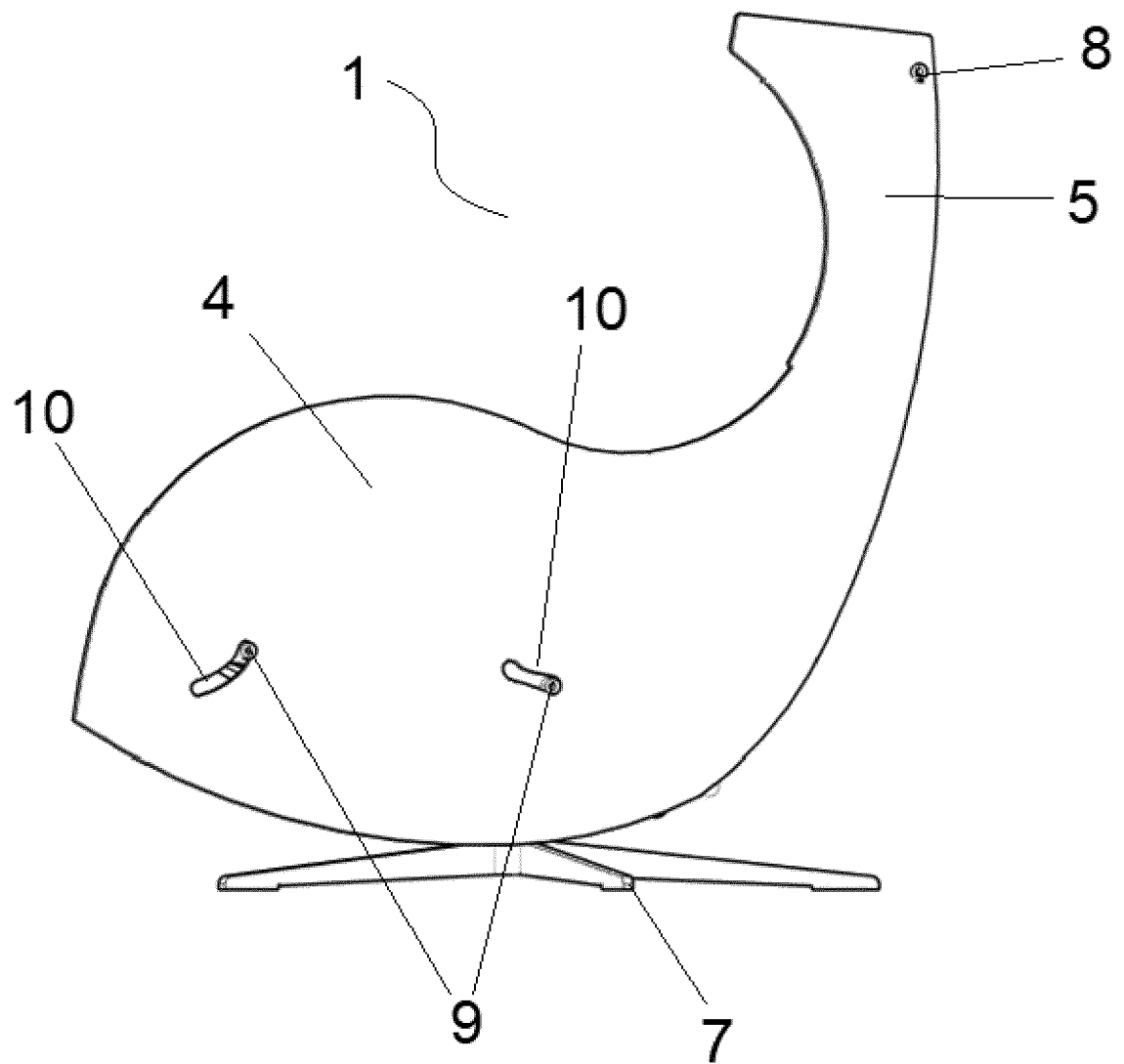


FIG.1

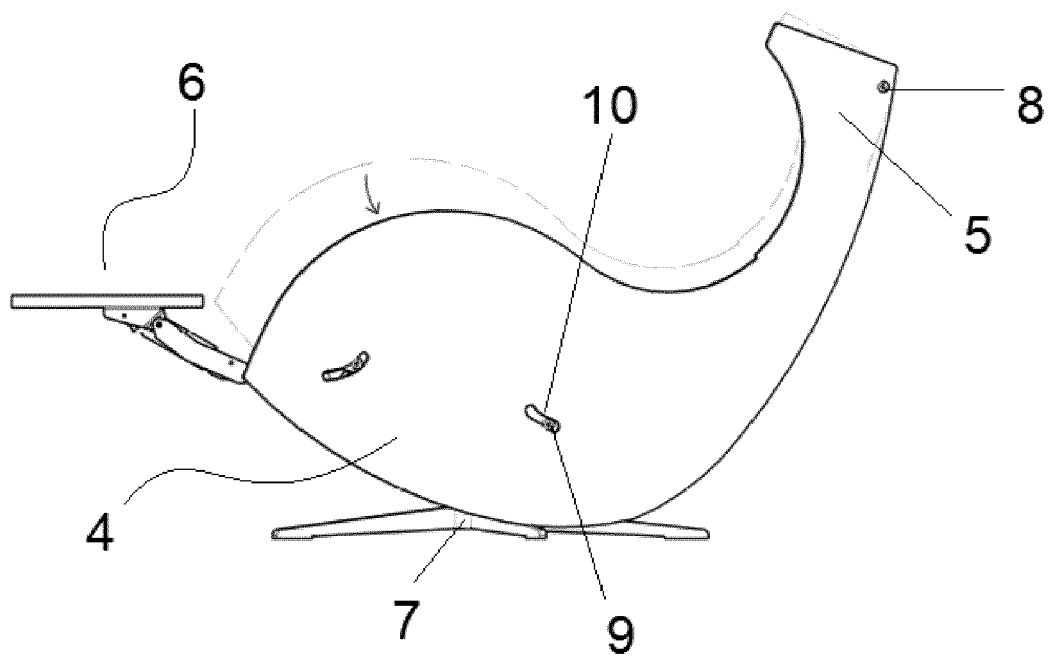


FIG. 2A

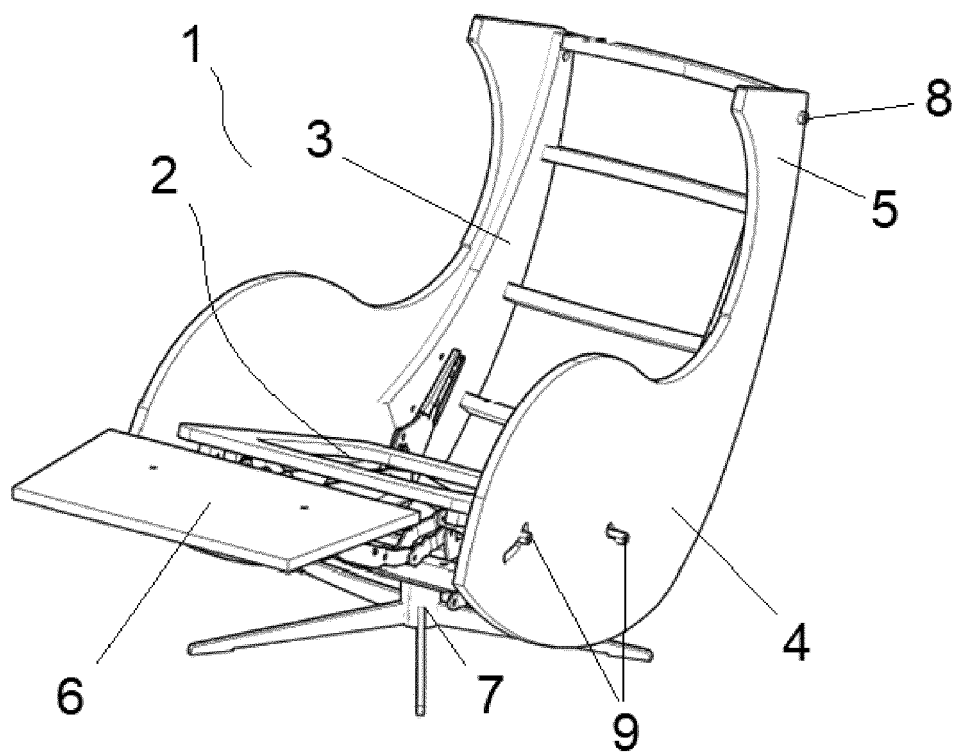


FIG. 2B

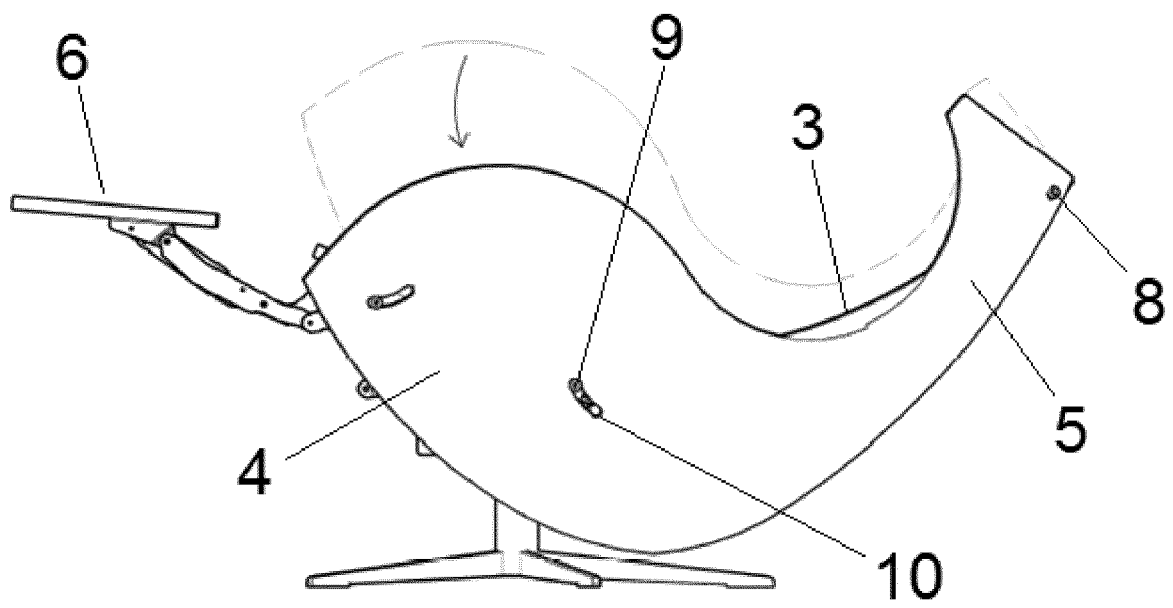


FIG. 3A

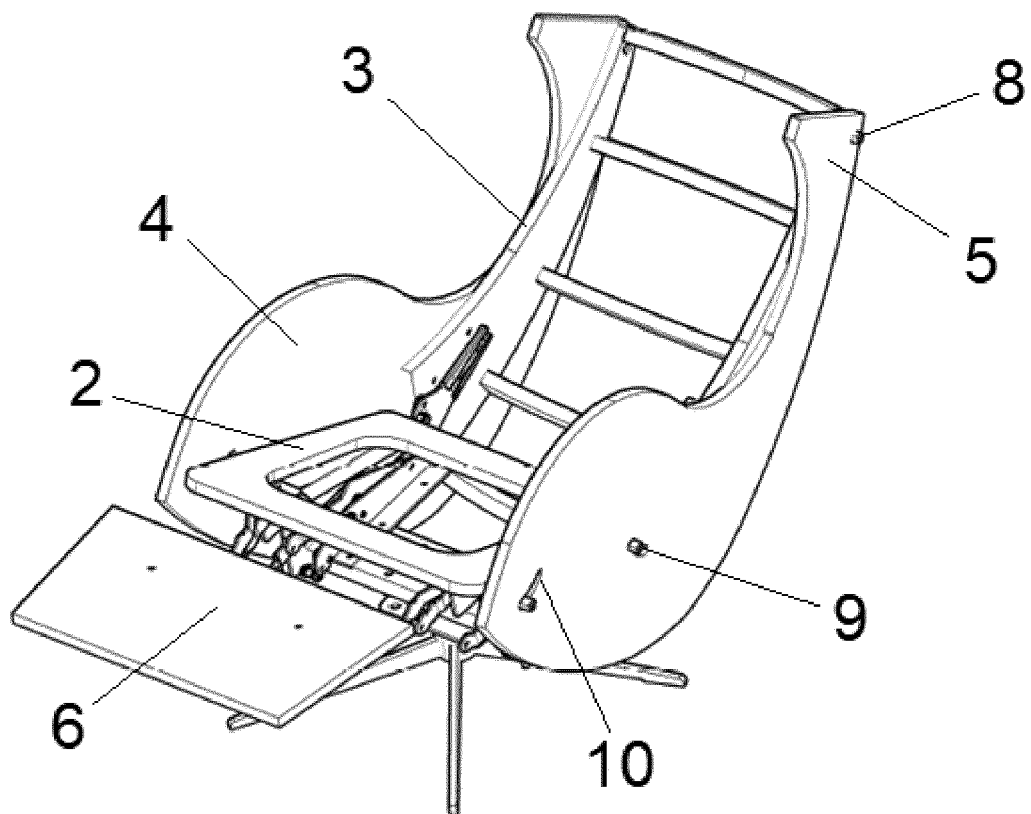


FIG. 3B



## EUROPEAN SEARCH REPORT

Application Number

EP 22 38 2651

## DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
<b>X</b>	<b>CN 105 581 541 B (JOHNSON FITNESS EQUIPMENT (SHANGHAI) CO LTD)</b> <b>2 October 2018 (2018-10-02)</b> <b>* paragraph [0026] - paragraph [0038];</b> <b>figures 1-10 *</b>	<b>1, 2</b>	<b>INV.</b> <b>A47C1/035</b> <b>A47C1/0355</b>
<b>A</b>	<b>Careflex Ltd: "HydroTilt",</b> <b>/</b> <b>25 March 2020 (2020-03-25), XP093007307,</b> <b>Retrieved from the Internet:</b> <b>URL:https://www.youtube.com/watch?v=tS7L_Y</b> <b>_IfpM&amp;t=55s</b> <b>[retrieved on 2022-12-12]</b> <b>* the whole document *</b>	<b>1</b>	<b>TECHNICAL FIELDS SEARCHED (IPC)</b>  <b>A47C</b> <b>A61G</b>
The present search report has been drawn up for all claims			
Place of search <b>The Hague</b>		Date of completion of the search <b>12 December 2022</b>	Examiner <b>Kus, Slawomir</b>
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10	Patent document cited in search report	Publication date	Patent family member(s)	Publication date
15	<b>CN 105581541</b>	<b>B</b>	<b>02-10-2018</b>	<b>NONE</b>
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