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(54)

SEAT WITH ADJUSTABLE BACKREST AND ARMRESTS

- (57)

Seat with adjustable backrest and headrest comprising a seat (1), a backrest (2), and armrests (4) joined in relation to the connecting structure to the seat
- (1)

by means of a second articular joint (12), which allows the seat to have a second turn (13) and enables the armrests (4) to be positioned either vertically or horizontally.

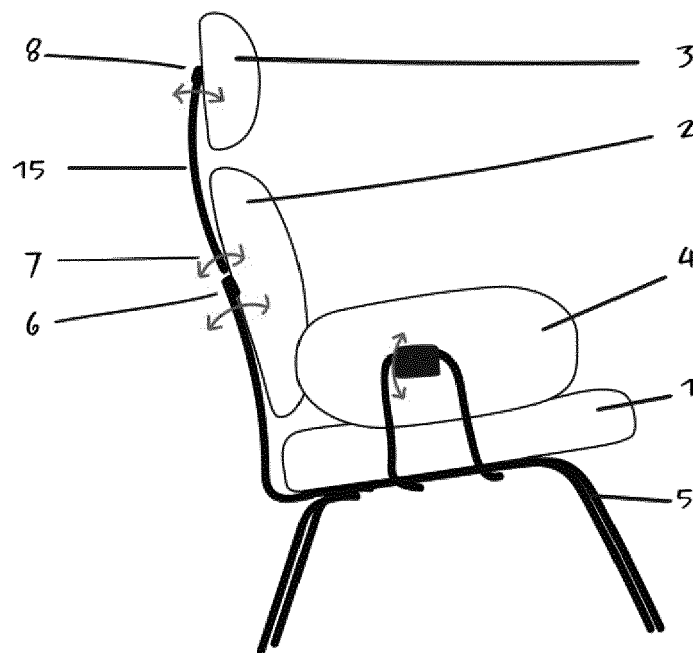


FIGURE 3

Description

OBJECT OF THE INVENTION

[0001] The object of this invention, as established by the title thereof, is a seat with an adjustable backrest and armrests, wherein, in addition, the seat has a headrest, which is also adjustable.

[0002] This invention is characterised by the special design of each and every one of the elements that form part of the seat, such that that it is possible, on the one hand, to adjust the tilt of the backrest according to the user's preferences and, in addition, the armrests can also be adjusted, so that they can be left vertical when being used as an armchair, or horizontal to serve as a support surface for a mobile phone or similar.

[0003] This invention is, therefore, confined within the field of seats or chairs equipped with means of adjustment.

BACKGROUND OF THE INVENTION

[0004] In the state of the art, a chair with an adjustable backrest is known as the one described in Utility Model ES 1287425U, which discloses a chair wherein the backrest is adjustable by means of an articulated joint provided with the means to adjust the hardness, wherein said chair, thanks to being provided with an adjustable backrest, makes it possible to keep the back straight when eating, which also makes it possible to tilt the backrest when one wants to be more reclined.

[0005] However, said chair does not have armrests that enable one to rest one's arms both when the backrest is in a vertical or inclined position.

[0006] The emergence of new technologies has changed many of society's habits. The massive implementation of smart phones has brought about many changes in the way people act in many areas, such as hospital waiting rooms, public bodies and the like.

[0007] Entertainment magazines have disappeared, and most people spend their time looking at their mobile phones. Tables placed in the centre, in front of the seats in these reception rooms, are no longer necessary.

[0008] Wooden surfaces are not suitable for smart phones, since they are rarely left on a table, they often slip and, if the surface is small, they are in danger of falling.

[0009] In this case, we opted to replace the wooden table with a soft upholstered surface, with rubber underneath the fabric, which makes it more friendly to mobile phones, does not run the risk of scratching it, is soft and makes the mobile phone "grip the surface much better."

[0010] The object of this invention, therefore, is to develop an easy chair-type seat, which not only makes it possible to adjust the tilt of the backrest to one's preferred position, but also allows the position of the armrests to be adjusted, by developing a seat such as the one described below and the essential features of which are

described in the first claim.

DESCRIPTION OF THE INVENTION

[0011] The essential features of the object of this invention are described in the independent claim and the different embodiments are described in the dependent claims.

[0012] The object of this invention is a seat with adjustable backrest and armrests, wherein the adjustability of the backrest and the armrests is achieved by means of articulated joints.

[0013] In addition, the backrest can also be fitted with a headrest joined in an articular manner to the backrest so that, independently of the backrest, the general positioning of the headrest can be adjusted, and, in addition, the tilt of the headrest itself can be adjusted independently of its position with respect to the backrest.

[0014] Thanks to the articulated joints between the backrest and the seat, it is possible to select the degree of tilt that the backrest offers the user, and on the other hand, thanks to the articulated joints of the armrests, it is possible to select their vertical or horizontal position.

[0015] Furthermore, as mentioned above, if the seat is fitted with a headrest, the latter is joined to the seat by means of a fixing structure joined at its lower end by means of another articular joint which enables the headrest assembly to be positioned independently of the backrest, and as the headrest is joined in an articular manner to the connection structure of the backrest, it is possible to select the degree of tilt of the headrest independently of its relative position with respect to the backrest.

[0016] Unless otherwise indicated, all the technical and scientific elements used in this report have the meaning usually understood by those skilled in the art to which this invention pertains. In the practice of this invention, similar or equivalent procedures and materials to those described in this report may be used,

[0017] 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.

EXPLANATION OF THE DRAWINGS

[0018] To supplement the description being made and in order to help better understand the characteristics of the invention, in accordance with a preferred example of a practical embodiment thereof, a series of drawings is attached hereto as an integral part of said description, in which the following is shown for illustrative and non-limiting purposes.

Figure 1 shows a perspective view from the back of a seat such as the one which is the object of this

invention.

Figure 2 shows a perspective view from the front.

Figure 3 shows a side view wherein, in the most complete embodiment, the possible movements of the backrest and headrest can be seen.

Figure 4 shows a representation of the backrest.

Figure 5 shows a representation of the adjustable movement for positioning the headrest.

Figure 6 shows a representation of the turning or tilting movement that can be made by the headrest.

Figures 7 to 12 show different combinations depending on the position of the backrest and the headrest.

Figure 13 shows an additional functionality for the positioning of the backrest and the headrest.

A PREFERRED EMBODIMENT OF THE INVENTION

[0019] In view of the figures, a preferred embodiment of the proposed invention is described below.

[0020] Figure 1 shows the seat that is the object of the invention, which in the embodiment shown, has a seat (1), a backrest (2) and two headrests (4), wherein the backrest (2) is joined in an articular manner with respect to a connection structure to the seat (1) by means of a first articular joint (6) which enables the backrest (2) to be reclined to a greater or lesser degree with respect to the seat (1), on the other hand, the armrests (4) are joined with relation to the connecting structure by means of a second articular joint (12), which allows the seat to make a second turn (13) and enables the armrests (4) to be positioned either vertically or horizontally as shown in figure 2.

[0021] Additionally, and in a complementary way, the backrest (2) can be fitted with a headrest (3), which is joined to the backrest by means of a fixing structure, which has, at its lower end, a third articular joint (7), while at the upper end of the fixing structure a fourth articular joint (8) is fitted.

The first articular joint (6) between the backrest (2) and the seat (1) enables the entire backrest (2) to be tilted, providing a first turn (9) pulling with it, in the tilt of the backrest (2) everything that is joined to it, such as the headrest (3), as shown in figure 4.

[0022] The third articular joint (7) enables the headrest (3) assembly to be tilted with respect to the backrest (2) by means of a second turn (10), as shown in figure 5, while the fourth articular joint (8) between the headrest (3) and the fixing structure of the headrest enables the headrest to be provided with a fourth turn (11), as shown in figure 6.

[0023] All the articular joints, i.e., the first articular joint

(6), the second articular joint (12), the third articular joint (7) and the fourth articular joint (8) comprise a strap system provided with a hardness adjustment screw.

[0024] Figures 7 to 12 show different combinations of different backrest and headrest positions.

[0025] Figure 13 shows a possible use of the seat wherein, by tilting the backrest backwards and sitting facing backwards, the backrest (2) supports the body, while the headrest (3) serves as a support for a book, a mobile phone or any other entertainment device.

[0026] Having sufficiently described the nature of this invention, as well as the manner of putting it into practice, it is stated that, within in its essential nature, it may be put into practice in other embodiments that differ in detail to the one indicated by way of example, and to which the protection sought shall also extend, provided that it does not alter, change or modify its fundamental principle.

Claims

1. Seat with adjustable backrest and headrest comprising a seat (1), a backrest (2) and two headrests (4), wherein the backrest (2) is joined in an articular manner with respect to a fixing structure to the seat (1) by means of a first articular joint (6), **characterised in that** the armrests (4) are joined in relation to the connecting structure to the seat (1) by means of a second articular joint (12), which allows the seat to have a second turn (13) and enables the armrest (4) to be positioned either vertically or horizontally.
2. Seat with adjustable backrest and headrest according to claim 1, **characterised in that** the backrest (2) is fitted with a headrest (3), which is joined to the backrest (2) by means of a fixing structure that has, at its lower end, a third articular joint (7), while, at the upper end of the fixing structure, it has a fourth articular joint (8).
3. Seat with adjustable backrest and headrest according to claim 1 or 2, **characterised in that** the first articular joint (6) between the backrest (2) and the seat (1), allows the entire backrest (2) to be tilted and provides a first turn (9), pulling, in the tilting of the backrest (2), everything that is connected to it.
4. Seat with adjustable backrest and headrest according to claim 1, **characterised in that** the third articular joint (7) allows the headrest assembly (3) to be tilted with respect to the backrest (2) by means of a second turn (10), while the fourth articular joint (8) between the headrest (3) and the fixing structure of the headrest allows the headrest to be provided with a fourth turn (11).
5. Seat with adjustable backrest and headrest according to any of the previous claims, **characterised in**

that all the articular joints, i.e., the first articular joint (6), the second articular joint (12), the third articular joint (7) and the fourth articular joint (8) comprise a strap system provided with a hardness adjustment screw.

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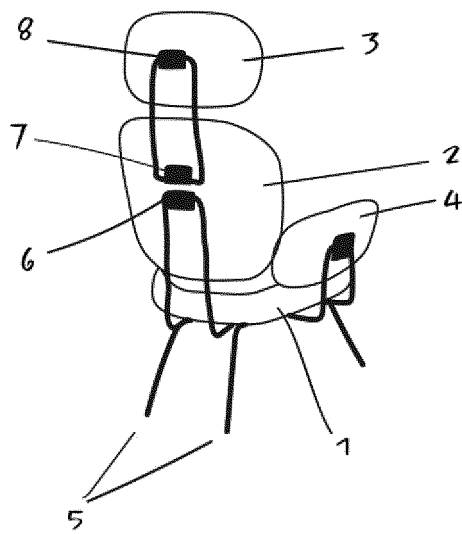


FIGURE 1

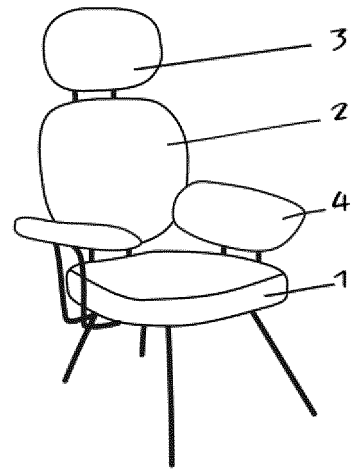


FIGURE 2

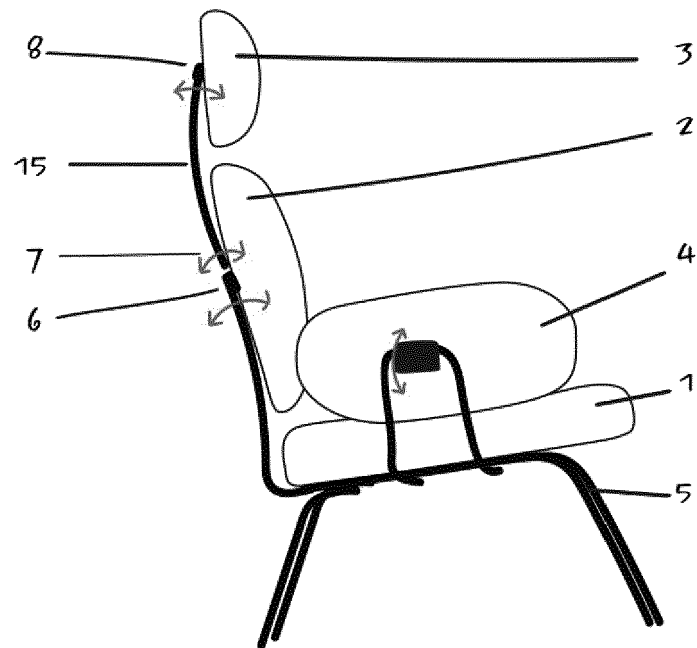


FIGURE 3

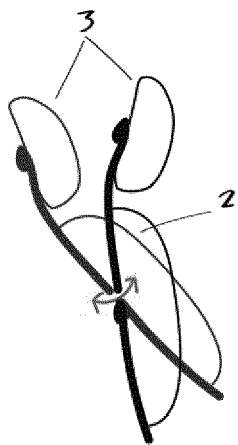


FIGURE 4

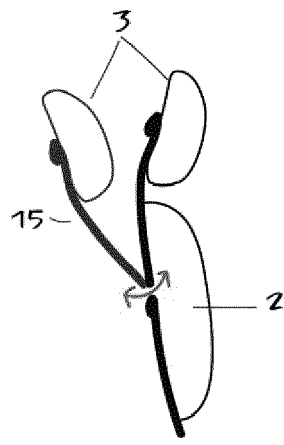


FIGURE 5

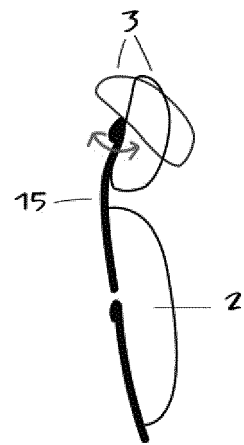


FIGURE 6

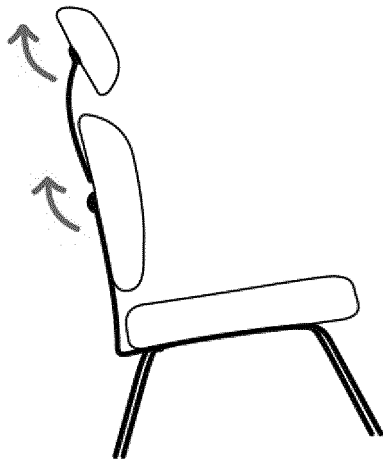


FIGURE 7

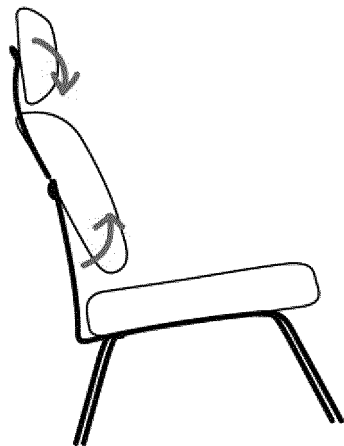


FIGURE 8

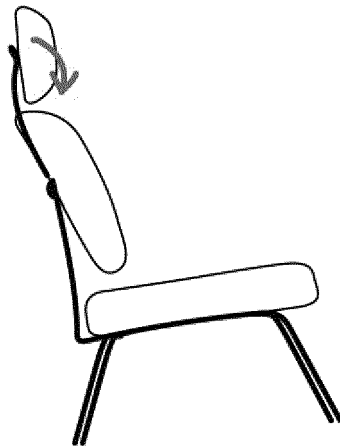


FIGURE 9

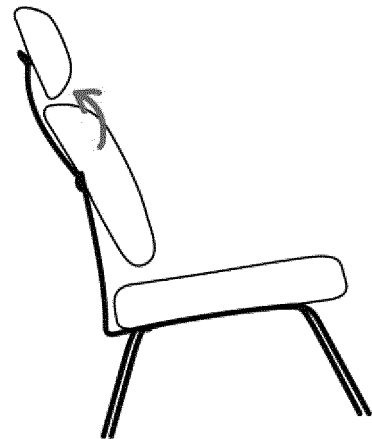


FIGURE 10

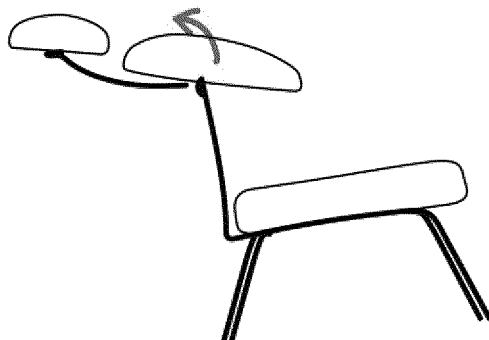


FIGURE 11

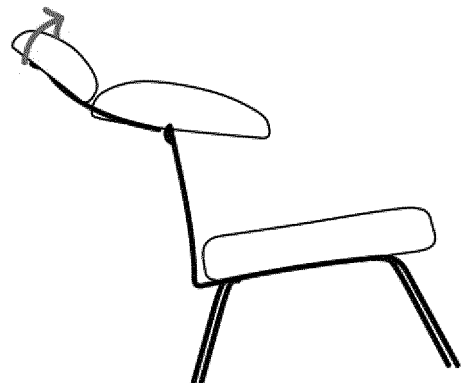


FIGURE 12

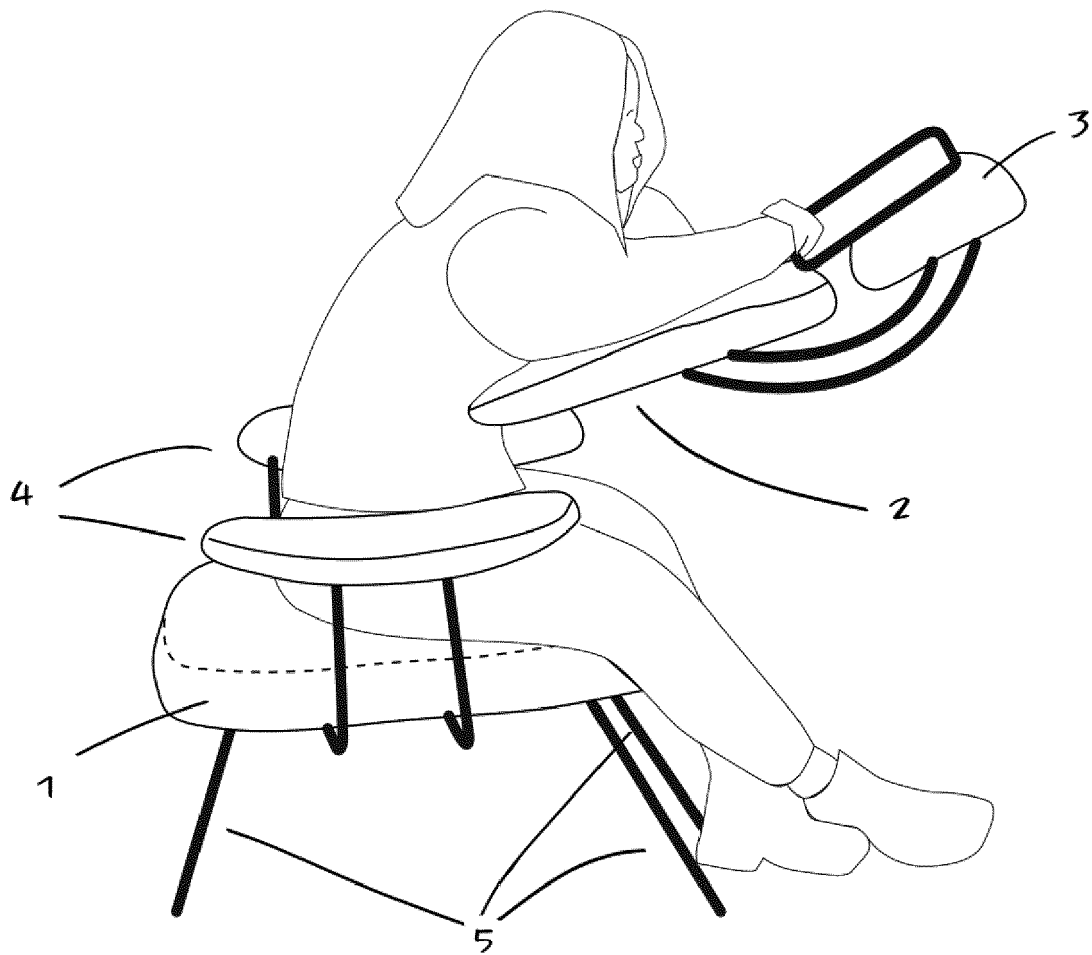


FIGURE 13



EUROPEAN SEARCH REPORT

Application Number

EP 23 17 7074

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EPO FORM 1503 03.82 (P04C01)

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| | | | TECHNICAL FIELDS SEARCHED (IPC) |
| | | | A47C B60N |
| The present search report has been drawn up for all claims | | | |
| Place of search The Hague | | Date of completion of the search 15 November 2023 | Examiner Kus, Slawomir |
| CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document | | T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document | |

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 23 17 7074

5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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15-11-2023

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