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(54) Convertible seating device

(57) Convertible seating device comprising a support base (10) for resting on the ground formed by four uprights (11), the top end of which is joined to a horizontal surface (12), a beam (20) being joined at each lateral edge (12a) of the said surface (12), extending in a longitudinal direction (X-X), and having, joined to it, an upright column (30) forming the support element for a backrest (40), said beam (20) being formed by a first part (21) fixed to the seat and by a second part (22) which is hinged with the first part by corresponding hinging means (50) so as to allow rotation of the movable part (22) of the beam (20) from a substantially horizontal position into a substantially vertical position.

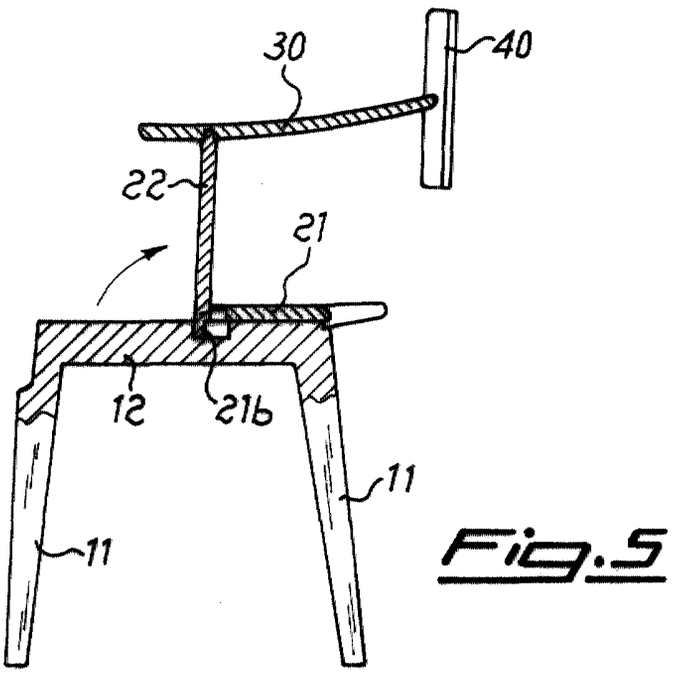

Fig.5

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Description

[0001] The present invention relates to a convertible seating device.

[0002] It is known in the furnishing sector that there is an increasingly widespread need to have furnishing elements such as chairs, armchairs and the like which have a variable configuration so that they can be adapted to the various requirements during use without having to have several parts which are separate from each other, resulting in a consequent increase in the purchase costs and space occupied inside living areas.

[0003] The technical problem which is posed, therefore, is to provide a seating device which is able to vary its configuration from a normal chair into an armchair with armrests.

[0004] Within the context of this problem a further requirement is that said seating device should consist of a small number of parts which can be assembled at a low cost and should be provided with simple and low-cost hinging means which can be applied to the said seating device with ease.

[0005] These technical problems are solved according to the present invention by a convertible seating device comprising a support base for resting on the ground formed by four uprights, the top end of which is joined to a horizontal surface, a beam being joined at each lateral edge of the said surface, extending in a longitudinal direction, and having, joined to it, an upright column forming the support element for a backrest, said beam being formed by a first part fixed to the seat and by a second part which is hinged with the first part by corresponding hinging means so as to allow rotation of the movable part of the beam from a substantially horizontal position into a substantially vertical position.

[0006] Further details may be obtained from the following description of a non-limiting example of embodiment of the invention, provided with reference to the accompanying plates of drawings in which:

- Figure 1 shows a front view of the seating device according to the present invention in the chair configuration;
- Figure 2 shows a cross-section along the plane indicated by II-II in Fig. 1;
- Figure 3 shows a detailed cross-section of the hinging mechanism in the locked position;
- Figure 4 shows a detailed cross-section of the hinging mechanism in the unlocked position; and
- Figure 5 shows a cross-section similar to that of Fig. 2 with the seating device in the armchair configuration.

[0007] As shown in Fig. 1, the convertible seating device according to the invention comprises a support base 10 for resting on the ground formed by four uprights 11, the top end of which is to joined to a surface 12 forming the seat.

[0008] For the sake of convenience of the description a longitudinal direction X-X and a transverse direction Y-Y are indicated.

[0009] A beam 20 supporting an upright column 30 forming the support element for a backrest 40 arranged transversely between said two columns is joined at each lateral edge 12a of the seat 12.

[0010] In greater detail, the beam 20 is formed by two longitudinal parts, one 21 of which is fixed to the seat and one 22 of which is hinged with the fixed part 21 by means of pin 50 movable in the transverse direction following a pushing action performed by the user against the reactive force of a spring 51 inserted in a corresponding recess 51a of the seat 12.

[0011] Said pin 50 has a longitudinal section 50a with a widened square section able to penetrate into corresponding recesses 21a and 22a, respectively, of the fixed part 21 and the movable part 22 of the beam 20 so as to cause relative locking/unlocking of the two parts.

[0012] The operating principle of the convertible seating device is as follows:

- starting from a chair-type configuration of the seating device (Fig. 2), in which the two sections 21, 22 of the beam 20 are arranged parallel and aligned so that the columns 30 are kept in a substantially vertical position and the pin 50 is in a locked position (Fig. 3);
- the pin 50 is pressed (Fig. 4), pushing it inwards against the action of the spring 51, the movable part 22 of the beam 20 is released from engagement with the fixed part 21, allowing rotation of the said movable part 22 in a clockwise direction, said rotation correspondingly causing rotation 30 of the respective column 30 supporting the backrest 40;
- rotation stops (Fig. 5) when the end 21b of the movable part 22 of the beam 20, opposite to the column 30, comes into contact against the vertical wall 13a of a recess 13 formed in the surface 12 so as to allow rotation of said movable part;
- once rotation has been completed, the chair has two armrests formed by the columns 30 which are rotated into a substantially horizontal position and are supported by the movable sections 22 of the beam 20 which are instead positioned in a substantially vertical position.

[0013] As can be seen from Figs. 2 and 4, once the armchair configuration is assumed, the said armchair becomes utilisable by sitting on the opposite side to that of the seating device in the chair configuration.

[0014] Although illustrated with fixed joints, both the connection between the backrest 40 and the columns 30 and the connection between the columns 30 and the movable part 22 of the beam 20 may be effected using hinging means which can be locked/unlocked, for example of the friction or sawtooth type (which are known

per se and therefore not shown) able to allow adjustment of the relative inclination of the various parts depending on the specific comfort requirements of the individual user.

Claims

1. Convertible seating device comprising a support base (10) for resting on the ground formed by four uprights (11), the top end of which is joined to a horizontal surface (12), **characterized in that** a beam (20) is joined at each lateral edge (12a) of the said surface (12), said beam extending in a longitudinal direction (X-X) and having, joined to it, an upright column (30) forming the support element for a backrest (40), said beam (20) being formed by a first part (21) fixed to the seat and by a second part (22) which is hinged with the first part by corresponding hinging means (50) so as to allow rotation of the movable part (22) of the beam (20) from a substantially horizontal position into a substantially vertical position.

2. Seating device according to Claim 1, **characterized in that** it comprises end-of-travel means (13a) for the rotation of said movable part (22) of the beam (20).

3. Seating device according to Claim 2, **characterized in that** said end-of-travel means consist of a vertical wall (13a) of a recess (13) formed in the horizontal surface (12).

4. Seating device according to Claim 1, **characterized in that** said means for hinging the movable part (22) of the beam (20) consist of a pin (50).

5. Seating device according to Claim 4, **characterized in that** said pin (50) is movable in both senses along a transverse direction (Y-Y) from a locked position into an unlocked position of the hinging system and vice versa.

6. Seating device according to Claim 5, **characterized in that** said pin is movable against the thrusting action of resilient means (51).

7. Seating device according to Claim 1, **characterized in that** the connection between the backrest (40) and the associated uprights (30) is obtained by hinging means able to allow rotation of the backrest.

8. Seating device according to Claim 7, **characterized in that** said hinging means comprise means for locking rotation of the backrest.

9. Seating device according to Claim 1, **characterized in that** the connection between the uprights (30) and the associated beam (20) is obtained by means of hinging means able to allow rotation of the said uprights.

10. Seating device according to Claim 9, **characterized in that** said hinging means comprise means for locking rotation of the uprights.

11. Seating device according to Claim 1, **characterized in that** it is a chair.

12. Seating device according to Claim 1, **characterized in that** it is an armchair.

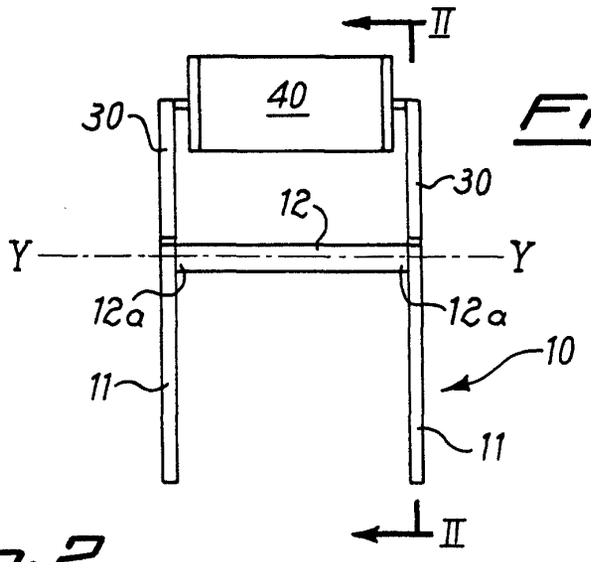

Fig.1

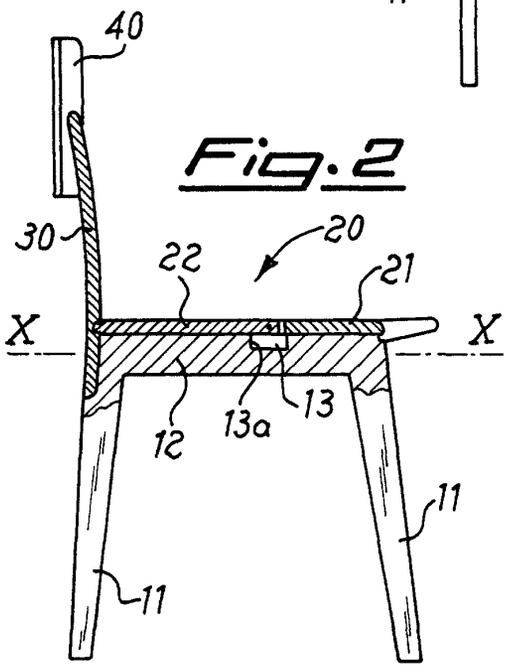

Fig.2

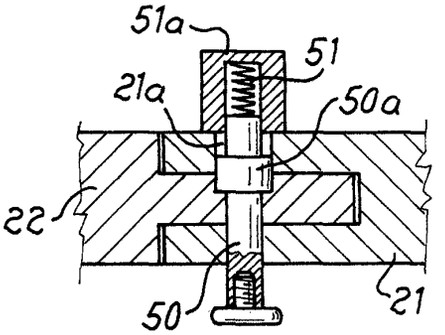

Fig.3

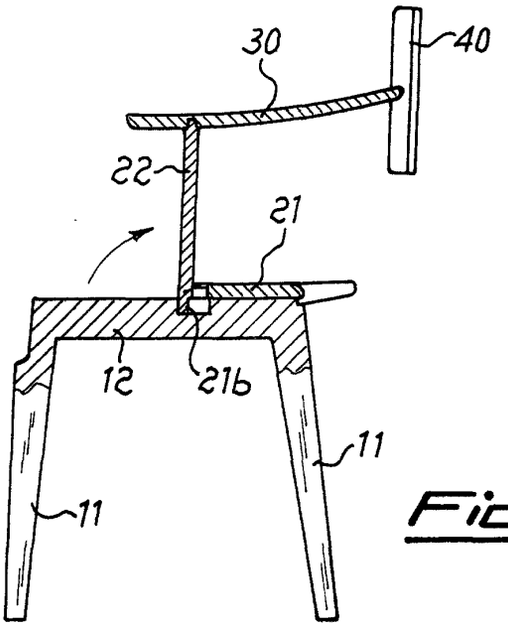

Fig.5

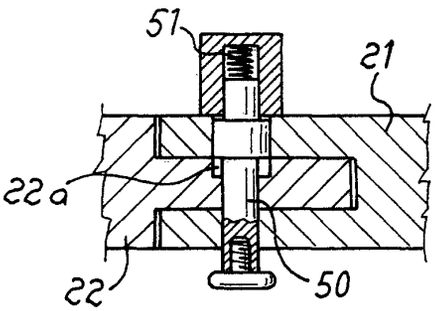

Fig.4