SITTING ARRANGEMENT

Chaise longue comprising a sofa frame (2), seat part (4) and back rest (3). The seat part (4) comprises side bars (9a, b), cross bars (10a, b) and seat springs (7). The seat part (4) is rotatably connected to the sofa frame (2) by means of mounting devices (8a, b) below the sitting surface of the seat part. One or more balance springs (14) are arranged between the seat part (4) and the sofa frame (2). A shutter or flap (16) is rotatably mounted to the seat part with pivotable joints (17a, b). The flap is furthermore rotatably connected to the sofa frame in point at the opposite end from the joints.
SITTING ARRANGEMENT

[0001] The present invention relates to a chaise longue, also called longseat, and to an elastic joint for the use in it.

[0002] From U.S. Pat. No. 3,974,630, it is known an adjustable base for the use in a bed, sofa or chaise longue comprising a back rest 5 being hinged to a seat 2 that is hinged to a foot part or shutter 3. The back rest is hinged in a rotatable joint at the lower part of this, just above the hinging to the seat. Likewise, the seat is hinged to a rotatable joint, where there also is a slide to receive longitudinal movement in relation to the backrest. For the same reason, the lower part of the shutter is attached to a slide guide. The angle between the back rest ad the seat is adjustable in preset levels. The angle is locked in each level.

[0003] It is an object of the present invention to provide a chaise longue being easy to readjust during use by redistribution of body mass. Furthermore, it is an object to provide an adjustable chaise longue having a basic and robust design without too many movable parts. The structure comprises a hinged joint being easy to mount and maintain. There will be little wear of the joint and it will consequently have a long durability. Due to the relatively simple design, the production costs will also be lower.

[0004] This is obtained by a chaise longue according to the attached claim 1, and a flexible joint according to claim 4.

[0005] The sitting arrangement will be further described by means of embodiments in the attached drawings where:

[0006] FIG. 1 shows a chaise longue according to the invention, in plane, longitudinal section and cross section,

[0007] FIG. 2 shows the chaise longue with the seat in a second position,

[0008] FIG. 3 shows the flexible joint being a part of the chaise longue, in perspective a and cross section b.

[0009] FIG. 4 shows a chaise longue according to the invention. It comprises a fixed back rest 3, a seat part 4 with a bottom frame 6, seat springs 7 and rotatable mounting devices 8a, b. The seat frame or bottom frame 6 of the embodiment has the shape of a quadrangle with four sides forming two mainly straight parallel side bars 9a, 9b being arranged on the sides being parallel with the longitudinal direction of the chaise longue, and two parallel cross bars 10a, 10b along the two remaining sides of the quadrangle. The seat springs 7 are stretched over the bottom frame 6 between the side bars 9a, 9b thereby forming a resilient sitting plane, whereon a cushion or the like can be placed. The sitting part is attached to the frame of the sofa 2 by means of rotatable mounting devices 8a, b. More precisely, the bottom frame comprises a third cross bar 10c being prolonged over the periphery of the bottom frame, and where the ends of the cross bar is suspended in mounting devices 8a, b of the sofa frame. The mounting devices are in the form of bearing blocks that can be made in any suitable material, such as three or semifluid, but which are preferably made in a plastic material, like here. The third cross bar form a further reinforcing element, but otherwise the suspension arrangement can be implemented in a simpler way, for example by welding short pipe sockets to the frame, which in return anchor the mounting devices to the sofa frame.

[0010] In the shown embodiment, the mounting devices 8a,b are attached asymmetrically to the frame in relation to a centre axis through the seat part 4, so that the fulcrum joint will be between the knee and the hip of a user sitting in an ordinary manner with parallel legs and the back resting towards the back rest of the chaise longue. The mounting device can as an example be arranged 1/5 of the distance from the front edge of the seat. It is an intention that the mounting device 8 is arranged in such a way that it performs self-balancing tilt. The mounting device is preferably not provided with a lock or adjustable brake, as the tilt is confined by the mounting mechanism and the placement of this, in combination with balance springs 14. However, the chaise longue can be provided with some sort of final stops limiting the swing of the seat part.

[0011] The chaise longue is provided with balance springs 14. In the shown figures, the balance springs are arranged between the bottom frame ad the sofa frame below the back rest. However, the balance springs 14 can be arranged along the side panels of the sofa frame 2 in stead of in the side of the sofa frame below the back rest. A skilled person that will construct a sitting arrangement according to the invention, are free to arrange spring devices where it is the most appropriate to obtain a desired balance in the seat part and sufficient resistance against tilting in order to make the tilting of the seat part comfortable for the user. There can also be used other kinds of spring devices, such as flat coil springs, leaf springs, rubber band devices or arrangement, torsional springs or others. In stead of arranging these at the end parts of the cross bars, the springs can be arranged in relation to the rotatable mounting arrangement between the seat part and the bottom frame.

[0012] At the front edge of the seat part a shutter or flap 16 is hinged in hinge points 17a,b. The flap is also rotatably attached to the sofa frame 2 at the opposite end of the attachment to the seat part, in rotatable mounting places 18a,b. When the seat part 4 is tilting in one direction, the flap 16 will tilt in opposite phase with this and thereby forming a “bend” or break in the sitting plane or surface and an elevation in the area by the knees of one sitting in the chaise longue provided with the sitting arrangement. This will increase the sitting comfort to a user sitting in the chaise longue. If the user chooses to lie down or more than one person are sitting on the chaise longue, the seat part will tilt back in passive position, so that a straight continuous sitting surface is formed, suitable for accommodating one person lying down, more persons sitting or persons partially slung on the sofa.

[0013] FIG. 2 shows the chaise longue with the seat part 4 in a second position, where the seat part is tilted downwards towards the back rest 3. When the seat part is tilted the cross bar 9 closest to the back rest 3 tilt downwards, while the cross bar 9 closest to the flap 16 tilt upwards. The flap 16 thereby tilt upwards closest to the seat part 4 and will rotate around rotatable mounting member 18a,b so that flap 16 and seat part 4 form an angle larger that 0° in relation to each other. This will be the case when someone for example leans towards the backrest 3 of the sitting arrangement.

[0014] Compared to other known solutions for a chaise longue or longseat, the present solution is distinguished by the seat and flap being hinged in a hinge point 17 between the seat and flap. In a fist embodiment, the hinging can be conventional, with an ordinary to-part hinge with two socket pieces for connecting to the frame. The hinge can in a first end be firmly connected to the frame while the other end is allowed to slide freely inside the tube of the frame. Both ends are also allowed to slide freely inside the tubes. Thereby, in the hinge point, the frame will separate to some extent when the seat is tilted upwards.

[0015] Preferably the hinge point is realized as an elastic coupling as shown in FIG. 3a and b. This is made of a socket
piece 19 of an elastic polymeric material. The socket piece is conical towards both ends and is provide with a neck or collar 20 in the centre. The socket piece is preferably completely or partly sealed with a wall 21 in the middle of the tube. This coupling is easy to mount as it is merely slid into the pipe ends of the frames. It is made in one single piece and is consequently wearproof. Furthermore, it will not creak when used.

1-5. (canceled)

6. A chaise lounge comprising a sofa frame (2), seat part (4) and back rest (3), where the seat part (4) comprises side bars (9a, b), cross bars (10a, b) and seat springs (7), characterised in that the back rest (3) is fixed, the seat part (4) is rotatably connected to the sofa frame (2) by means of mounting devices (8a, b) below the sitting surface of the seat part, one or more balance springs (14) are arranged between the seat part (4) and the sofa frame (2), a shutter or flap (16) is rotatably mounted to the seat part with pivotal joints (17a, b), the flap is rotatably connected to the sofa frame in points (18a, b) at the opposite end from the joints (17a, b).

7. The chaise lounge according to claim 6, where the rotatable joints (17a, b) are elastic.

8. The chaise lounge according to claim 6, where the rotatable mounting arrangements (8) are arranged at approx. ⅓ of the distance frame the front frame element (2c).

9. An elastic joint (17), characterised in that it comprises a tubular formed sleeve or pipe socket (19) being conical in both ends, and a collar (20) arranged at the centre of the pipe socket, where the joint is produced in a suitable polymeric material.

10. The elastic joint according to claim 9, where the tubular formed sleeve comprises an internal wall (21) completely or partly sealing the sleeve.

* * * * *