

Description

The present invention relates to chairs.

An occupant of a chair seated with correct posture should have his back relatively straight with the spine having a slight bow at its lower portion. Correct posture can prevent and alleviate back pain.

European Specification Patent No EP-A-0 093 065 from which the known features of the preamble of Claim 1 are derived, relates to a seat for handicapped people who have to sit for prolonged periods in the same position. Such people often suffer from so called "bed sores" and the object of this particular invention is to construct a seat in which the central area below the sitters ischia tuberosity is hollow to offer minimum pressure. Two lateral supports and a forward support of horse air-latex mixture provide a profile to conform to the thighs of the sitter and so tend to spread the load of the sitter more uniformly on the seat.

The present invention is directed at providing a seat which when tilted forward encourages the sitter to adopt an ergonomically correct posture without the need for knee supports which are normally necessary to prevent the sitter from sliding off the downwardly sloping surface of the seat.

According to the invention there is provided a chair for supporting an occupant postured for forward movement, said chair having a seat member characterised in that the seat member comprises a forward support portion of a material having relatively high resistance to resilient deformation and an adjacent rear support portion of a material having a relatively low resistance to resilient deformation, such that in use the weight of the person sitting on the chair causes differential deformation whereby the deformed region of rear portion, in the immediate vicinity of the forward portion, is deformed to an extent greater than the forward portion so that in the vicinity of the junction between the forward and rear portions the deformed rear portion is located below the deformed forward portion to create a step against which the sitters ischial tuberosities can abut to resist forward movement of the sitter on the seat member. Further particular embodiments of the invention are defined in dependent Claims 2 to 8.

Chairs embodying the present invention will now be described, by way of example only, with reference to the accompanying diagrammatic drawings, in which:

Figure 1 is a sectional side elevation of a chair according to the invention showing a schematic skeletal occupant seated with correct posture; Figure 2 is an enlarged sectional perspective view of the chair seat shown in Figure 1; and

Figure 3 is a sectional perspective view of a seat member for a chair according to the invention.

The chair 1 shown in Figure 1 comprises an inclined seat 2 fitted onto a base 3. A back rest 4 may be provided to give additional support if required. The chair 1 is adjustable in conventional fashion to provide the required height and inclination of the seat 2 and the back rest 4.

As shown in Figures 1 and 2, the inclined seat includes a base 5 to which is attached a forward support portion 6 formed of relatively high density resilient plastics material. The base also supports a rear support portion 7 of relatively low density resilient plastics material located adjacent the forward support 6. In this embodiment, both support portions are separately upholstered by a suitable covering 8. The covering 8 may be a single piece of material, conveniently divided and secured to the upper surface 9 of the base 5 by a transverse bar 10.

When an occupant 11 is seated on the chair member 2, as shown in Figure 1, the differing densities of the support portions results in differential deformation whereby the rear support portion 7 is deformed to an extent greater than the forward portion 6. This permits the occupants ischial tuberosity 12 to be positioned behind the forward support 6, generally in the crevice 13 between the two portions. The forward support portion 6 thereby positively acts against the ischial tuberosity and comfortably resists the tendency of the sitter to slide forwardly off the seat.

Figure 3 shows a second embodiment of the invention in the form of a cushion 14 which may be portable and which can be placed upon a conventional horizontal bench or seat (not shown). The cushion 14 is similar to the seat 2 illustrated in Figures 1 and 2 but has an upper surface 15 which inclines forwardly. The forward support portion 6 is correspondingly inclined and in this embodiment also defines a base for the cushion. The rear support portion 7 extends forwardly over the forward portion 6 to define a relatively soft and shallow covering 16 for the forward portion.

The principal of operation of the cushion 14 is the same as that of the chair 1. The cushion 14 may also be constructed in the manner shown in Figures 1 and 2 but with a suitably inclined upper surface.

Claims

1. A chair for supporting an occupant postured for forward movement, said chair having a seat member (2) characterised in that the seat member (2) comprises a forward support portion (6) of a material having relatively high

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The present invention is directed at providing a seat which when tilted forward encourages the sitter to adopt an ergonomically correct posture without the need for knee supports which are normally necessary to prevent the sitter from sliding off the downwardly sloping surface of the seat.

According to the invention there is provided a chair for supporting an occupant postured for forward movement, said chair having a seat member characterised in that the seat member comprises a forward support portion of a material having relatively high resistance to resilient deformation and an adjacent rear support portion of a material having a relatively low resistance to resilient deformation, such that in use the weight of the person sitting on the chair causes differential deformation whereby the deformed region of rear portion, in the immediate vicinity of the forward portion, is deformed to an extent greater than the forward portion so that in the vicinity of the junction between the forward and rear portions the deformed rear portion is located below the deformed forward portion to create a step against which the sitters ischial tuberosities can abut to resist forward movement of the sitter on the seat member. Further particular embodiments of the invention are defined in dependent Claims 2 to 8.

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As shown in Figures 1 and 2, the inclined seat includes a base 5 to which is attached a forward support portion 6 formed of relatively high density resilient plastics material. The base also supports a rear support portion 7 of relatively low density resilient plastics material located adjacent the forward support 6. In this embodiment, both support portions are separately upholstered by a suitable covering 8. The covering 8 may be a single piece of material, conveniently divided and secured to the upper surface 9 of the base 5 by a transverse bar 10.

When an occupant 11 is seated on the chair member 2, as shown in Figure 1, the differing densities of the support portions results in differential deformation whereby the rear support portion 7 is deformed to an extent greater than the forward portion 6. This permits the occupants ischial tuberosity 12 to be positioned behind the forward support 6, generally in the crevice 13 between the two portions. The forward support portion 6 thereby positively acts against the ischial tuberosity and comfortably resists the tendency of the sitter to slide forwardly off the seat.

Figure 3 shows a second embodiment of the invention in the form of a cushion 14 which may be portable and which can be placed upon a conventional horizontal bench or seat (not shown). The cushion 14 is similar to the seat 2 illustrated in Figures 1 and 2 but has an upper surface 15 which inclines forwardly. The forward support portion 6 is correspondingly inclined and in this embodiment also defines a base for the cushion. The rear support portion 7 extends forwardly over the forward portion 6 to define a relatively soft and shallow covering 16 for the forward portion.

The principal of operation of the cushion 14 is the same as that of the chair 1. The cushion 14 may also be constructed in the manner shown in Figures 1 and 2 but with a suitably inclined upper surface.

Claims

1. A chair for supporting an occupant postured for forward movement, said chair having a seat member (2) characterised in that the seat member (2) comprises a forward support portion (6) of a material having relatively high



resistance to resilient deformation and an adjacent rear support portion (7) of a material having a relatively low resistance to resilient deformation, such that in use the weight of the person sitting on the chair causes differential deformation whereby the deformed region of rear portion (7) in the immediate vicinity of the forward portion (6), is deformed to an extent greater than the forward portion (6) so that in the vicinity of the junction between the forward and rear portions (6 & 7) the deformed rear portion (7) is located below the deformed forward portion (6) to create a step against which the sitters ischial tuberosities can abut to resist said forward movement of the sitter on the seat member.

2. A chair according to Claim 1, characterised in that, wherein said portions (6,7) are separately upholstered.
3. A chair according to Claim characterised in that part of the said rear portion (7) extends forwardly over said forward portion (6) to define a relatively soft and shallow covering for said forward portion (6).
4. A chair according to Claim 1 characterised in that said support portions (6,7) have an upper surface which inclines rearwardly.
5. A chair according to Claim 1 characterised in that said support portions (6,7) share a flat base.
6. A chair according to Claim 1 characterised in that said forward portion (6) defines a base (5) for said chair member.
7. A chair according to any one of claims 1 to 6 wherein said seat member is inclined or inclinable.
8. A chair according to any preceding claim characterised by back rest portion (4).

Patentansprüche

1. Stuhl zum Unterstützen einer Person in einer Haltung für eine Bewegung nach vorne, mit einem Sitzelement (2), dadurch gekennzeichnet, daß das Sitzelement (2) ein vorderes Sitzteil (6) aus einem Material, welches einen relativ hohen Widerstand gegen elastische Deformation besitzt, sowie ein benachbartes hinteres Sitzteil (7) aus einem Material, welches einen relativ geringen Widerstand gegen elastische Deformation besitzt, in der Weise auf-

weist, daß das Gewicht der auf dem Stuhl sitzenden Person beim Gebrauch eine unterschiedliche Deformation hervorruft, wobei der deformierte Bereich des hinteren Sitzteils (7) in der unmittelbaren Nachbarschaft des vorderen Sitzteils (6) in größerem Umfang deformiert ist als das vordere Sitzteil (6), so daß in der Nähe des Übergangs zwischen dem vorderen und dem hinteren Sitzteil (6 und 7) das deformierte hintere Sitzteil (7) unterhalb des deformierten vorderen Sitzteils (6) sich befindet und eine Stufe erzeugt, gegen die sich das Steißbein (Kuckucksschnabel) des Sitzenden abstützen kann, um der erwähnten Bewegung des Sitzenden auf dem Sitzelement nach vorne zu widerstehen.

2. Stuhl nach Anspruch 1, dadurch gekennzeichnet, daß die Sitzteile (6, 7) separat gepolstert sind.
3. Stuhl nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß ein Teil des hinteren Sitzteils (7) sich nach vorne oberhalb des vorderen Sitzteils (6) erstreckt und eine relativ weiche und flache Abdeckung für das vordere Sitzteil (6) bildet.
4. Stuhl nach Anspruch 1, dadurch gekennzeichnet, daß die Sitzteile (6, 7) eine obere Oberfläche aufweisen, welche nach hinten ansteigt.
5. Stuhl nach Anspruch 1, dadurch gekennzeichnet, daß die Sitzteile (6, 7) sich einen flachen Sockel teilen.
6. Stuhl nach Anspruch 1, dadurch gekennzeichnet, daß das vordere Sitzteil (6) als Sockel (5) für das Stuhlelement dient.
7. Stuhl nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß das Sitzelement geneigt oder neigbar ist.
8. Stuhl nach einem der vorangehenden Ansprüche, gekennzeichnet durch einen Rückenlehnenbereich (4).

Revendications

1. Chaise pour une position assise inclinée vers l'avant, comportant une surface de siège (2), caractérisée en ce que la surface de siège (2) comprend un élément support avant (6) d'une matière présentant une relativement grande résistance à des déformations élastiques, et un élément support arrière (7) adjacent au premier, d'une matière présentant relativement



peu de résistance à des déformations élastiques, de sorte que le poids de la personne assise sur la chaise provoque des déformations différentes, la zone déformée de l'élément arrière (7) immédiatement adjacente à l'élément avant (6) étant plus déformée que l'élément avant (6), de sorte qu'au voisinage de la jonction entre les éléments avant et arrière (6, 7), l'élément arrière (7) déformé se trouve plus bas que l'élément avant (6) déformé, afin de créer un épaulement contre lequel butent les tubérosités ischiales de la personne assise pour résister audit mouvement vers l'avant sur la surface de siège.

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2. Chaise selon la revendication 1, caractérisée en ce que les deux éléments (6, 7) sont garnis séparément.

3. Chaise selon la revendication 1, caractérisée en ce qu'une partie de l'élément arrière (7) s'étend vers l'avant par dessus l'élément (6) pour définir un revêtement relativement mou et mince sur l'élément (6).

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4. Chaise selon la revendication 1, caractérisée en ce que les éléments support (6, 7) présentent une surface supérieure inclinée vers l'arrière.

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5. Chaise selon la revendication 1, caractérisée en ce que les éléments (6, 7) sont placés sur le même support plat.

6. Chaise selon la revendication 1, caractérisé en ce que l'élément avant (6) constitue un support pour ledit élément de chaise.

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7. Chaise selon l'une quelconque des revendications 1 à 6, ledit élément de siège étant incliné ou inclinable.

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8. Chaise selon l'une quelconque des revendications qui précèdent, caractérisée en ce qu'elle comporte un élément (4) constituant dossier.

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