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Description

[0001] This invention relates to a seat comprising the seat portion and a backrest portion.

[0002] Seats that are used in public places such for example as stadiums, airports, parks and train and bus stations are usually such that they are made of a hard non-compressible material such for example as metal, a rigid plastics material or stone. The seats are notoriously uncomfortable, and they become more uncomfortable with increasing length of use. In addition to becoming uncomfortable, the seats may cause undue pressure on parts of a person's body, causing back pain and/or circulatory problems.

[0003] US 904 469 A discloses a chair having a seat portion and a backrest portion. The seat portion has a concave recess for receiving a person's buttocks. The concave recess extends into a first concave passage portion for receiving a rear thigh part of a first leg of the person, and into a second concave passage portion for receiving a rear thigh part of a second leg of the person. The distance of the concave recess from side edges of the seat portion is greater than the distance of the first and second concave portions from the side edges of the seat portion. The backrest portion is formed by a pair of side members which extend upwardly from rear legs of the chair. The side members support an apertured flat central portion.

[0004] It is an aim of the present invention to reduce the above mentioned problem.

[0005] Accordingly, the present invention provides a seat comprising a seat portion and a backrest portion having the characteristics set out in claim 1.

[0006] The seat portion of the present invention is able to be comfortably sat on. In addition, it is able to ensure that undue pressure is not applied to parts of the body causing pain and/or circulatory problems. Thus, for example, the seat portion may avoid applying undue pressure on nerves and may also ensure that there is a good blood supply to the nerves. Undue pressure on venous return may be avoided. Generally, a person is able to sit on the seat comfortably, and to have a drastically reduce possibility of pressure-induced circulatory and nerve supply problems than would be the case if the person were sitting on one of the above mentioned known seats. The positioning apart of the first and the second concave passage portions enables the person's legs to be kept apart to a required degree that gives comfort while reducing the possibility of pressure-induced circulatory and nerve supply problems.

[0007] The hard material for the seat portion of the present invention may be stone, metal, a rigid plastics material, wood or any other suitable and appropriate hard material.

[0008] The seat may be one in which the seat portion is separately manufactured from the back portion, and in which the seat portion and the backrest portion are subsequently secured together. Any appropriate securing

means such for example as bolts may be employed. The precise type of securing means employed may depend upon the particular type of hard material from which the seat is made.

[0009] Alternatively, the seat portion and the backrest portion may be integrally manufactured together. This may be especially so when the seat is made from a hard material such as sheet metal or a moulded plastics material.

[0010] The seat may be used in a wide variety of public spaces such for example as stadiums, airports, parks, train stations, underground stations, offices and the like. The seat may be in the form of a single seat for receiving a single person, or the seat may be joined together to form a bench-style seat for receiving a plurality of persons.

[0011] An embodiment of the invention will now be described solely by way of example and with reference to the accompanying drawings in which:

Figure 1 is a perspective view of a first seat portion for a seat, the seat portion being a seat portion according to the present invention;

Figure 2 is a perspective view of a first backrest portion for being combined with the first seat portion of Figure 1 to make a seat;

Figure 3 is a perspective view of a second seat portion for a seat, the seat portion being a seat portion not according to the present invention;

Figure 4 is a perspective view of a second backrest portion not according to the present invention and shown for being combined with the second seat portion of Figure 3 to make a seat; and

Figure 5 is a rear view of a person showing points in the body where undue pressure may cause induced circulatory and/or nerve supply problems.

[0012] Referring to Figure 1, there is shown a seat portion 2 for a seat. The seat portion 2 has a concave recess 4 for receiving a person's buttocks. The seat portion 2 is made of a hard material which is such that the seat portion 2 does not compress when the seat portion is sat upon by a person. The hard material may be stone, metal, a rigid plastics material or wood.

[0013] The concave recess portion comprises two depressions 6, 8 connected together by a central neck part 10. The concave recess 4 extends into a first concave passage portion 12 for receiving a rear thigh part of a first leg of the person. The concave recess 4 also extends into a second concave passage portion 14 for receiving a rear thigh part of a second leg of the person. The second concave passage portion 14 is spaced apart as shown from the first concave passage portion 12. The legs of a person sitting on the seat portion 2 are thus held apart and in an optimum position for comfort and reduced pressure induced circulatory and/or nerve supply problems. The first and second concave passage portions 12, 14 extend to the periphery of a front edge 16 of the seat

portion 2. Thus the thighs of the person are able to extend comfortably along the seat portion 2 and over the front edge 16.

[0014] Referring to Figure 2, there is shown a backrest portion 18 which, together with a seat portion 2, is able to form a seat. The backrest portion 18 has a concave recess 20 for receiving a spine part of the person's back. The backrest portion 18 is made of a hard material which does not compress when the backrest portion 18 is lent on by the person.

[0015] The concave recess 20 in the backrest portion 18 extends into a transversely extending passage portion 22 for receiving a shoulder part of the person's back. Thus the backrest portion 18 is able accommodate both the spine and the shoulders of the person's back for providing a good degree of comfort.

[0016] Referring now to Figure 3, not according to the invention there is shown a seat portion 24 for a seat. The seat portion 24 has a concave recess 26 for receiving a person's buttocks. The seat portion 4 is made of a hard material which is such that the seat portion 24 does not compress when the seat portion 24 is sat upon by a person. The seat portion 24 may be made of the same or a different material to the seat portion 2.

[0017] The seat portion 24 is such that the concave recess 26 comprises only two-part circular depression 28, 30. Thus the seat portion 24 is only able to accommodate the person's buttocks, and the rear thigh parts of the legs of the person sitting on the seat portion 2 will simply rest on the surface 24 of the seat portion 24.

[0018] Referring now to Figure 4 not according to the invention, there is shown a backrest portion 36 which together with the seat portion 24 is able to form a seat. The backrest portion 36 has a concave recess 38 which is only for receiving the spine part of the person's back. The shoulder part of the person's back rests on the surface 40 of the backrest portion 36.

[0019] The backrest portion 36 is made of a hard material which does not compress when the backrest portion is lent on by the person. This hard material may be the same as that of the seat portion 24 or it may be different from that of the seat portion 24.

[0020] The seat formed by the seat portion 2 and the backrest portion 18, and also the seat formed by the seat portion 24 and the backrest portion 36 may be such that the seat portion is separately manufactured from the backrest portion and then subsequently secured together, for example by bolts or any other suitable and appropriate securing means. Alternatively, the seat portion and the backrest portion may be integrally manufactured together, for example from sheet metal or a moulded plastics material.

[0021] Referring now to Figure 5, there is shown a rear view of a person 42 who might sit in a seat of the present invention. It will be seen that the person has buttocks 44 which have ischial tuberosities 46. Undue pressure of these ischial tuberosities is avoided by the concave recesses 4, 26 in the seat portions 2, 24 respectively. The

person 42 also has a spine part 48 along their back 50. The spine part 48 is able to be accommodated by the concave recesses 20 in the backrest portions 18.

[0022] Some persons may prefer backrest portions which have a passage part 22 as shown by the backrest portion 18. This passage part 22 is able to receive a shoulder part 52 of the person 42, the shoulder part 52 containing areas 54, 56 requiring brachial plexus relief.

[0023] It is to be appreciated that the embodiment of the invention described above with reference to the accompanying drawings has been given by way of example only.

15 Claims

1. A seat comprising a seat portion (2) and a backrest portion (18), and in which the seat portion (2) is one wherein:

- (i) the seat portion (2) has a concave recess (4) for receiving a person's buttocks (44);
 - (ii) the seat portion (2) is made of a hard material which is such that the seat portion (2) does not compress when the seat portion (2) is sat upon by a person (42);
 - (iii) the concave recess (4) extends into a first concave passage portion (12) for receiving a rear thigh part of a first leg of the person (42), and into a second concave passage portion (14) for receiving a rear thigh part of a second leg of the person (42);
 - (iv) the second concave passage portion (14) is spaced apart from the first concave passage portion (12) by a raised seat portion (2) extending to the periphery of a front edge (16) of the seat portion (2);
 - (v) the first and second concave passage portions (12, 14) extend to the periphery of the front edge (16) of the seat portion (2);
 - (vi) the concave recess (4) is for receiving a person's buttocks (44) and extends transversely of the seat portion (2) towards side edges of the seat portion (2); and
 - (vii) the distance of the concave recess (4) for receiving a person's buttocks (44), from the side edges of the seat portion (2) is less than the distance of the first and second concave portions (12, 14) from the side edges of the seat portion (2);
- and the backrest portion (18) is one wherein:

- (viii) the backrest portion (18) is made of a hard material which does not compress when the backrest portion (18) is lent on by the person (42);
- (ix) the backrest portion (18) has a concave recess (20) for receiving the person's spine

- (48);
 (x) the concave recess (20) for receiving the person's spine (48) extends into a transversely extending passage portion (22) which is for receiving the person's shoulders (52) and which extends towards side edges of the backrest portion (18); and
 (xi) the distance of the transversely extending passage portion (22) for receiving the person's shoulders (52) from the side edges of the backrest portion (18) is less than the distance of the concave recess (20) for receiving the person's spine (48) from the side edges of the backrest portion (18).
2. A seat according to claim 1 in which the hard material of the seat portion (2) is stone, metal, a rigid plastics material or wood.
3. A seat according to claim 1 or claim 2 in which the seat portion (2) is separately manufactured from the backrest portion (18), and in which the seat portion (2) and the backrest portion (18) are subsequently secured together.
4. A seat according to claim 1 or claim 2 in which the seat portion (2) and the backrest portion (18) are integrally manufactured together.

Patentansprüche

1. Sitz, umfassend einen Sitzabschnitt (2) und einen Rückenlehnenabschnitt (18), und wobei der Sitzabschnitt (2) ein Sitzabschnitt ist, bei dem:
- (i) der Sitzabschnitt (2) eine konkave Aussparung (4) zum Aufnehmen der Gesäßhälften (44) einer Person aufweist;
- (ii) der Sitzabschnitt (2) aus einem harten Material hergestellt ist, welches so ausgestaltet ist, dass der Sitzabschnitt (2) nicht zusammengedrückt wird, wenn eine Person (42) auf dem Sitzabschnitt (2) sitzt;
- (iii) sich die konkave Aussparung (4) in einen ersten konkaven Durchgangsabschnitt (12) zum Aufnehmen eines hinteren Oberschenkelteils eines ersten Beins der Person (42) und in einen zweiten konkaven Durchgangsabschnitt (14) zum Aufnehmen eines hinteren Oberschenkelteils eines zweiten Beins der Person (42) erstreckt;
- (iv) der zweite konkave Durchgangsabschnitt (14) durch einen erhöhten Sitzabschnitt (2), der sich bis zum Rand einer vorderen Kante (16) des Sitzabschnitts (2) erstreckt, von dem ersten konkaven Durchgangsabschnitt (12) beabstandet ist;

- (v) sich der erste und zweite konkave Durchgangsabschnitt (12, 14) bis zum Rand der vorderen Kante (16) des Sitzabschnitts (2) erstrecken;
- (vi) sich die konkave Aussparung (4) zum Aufnehmen der Gesäßhälften (44) einer Person quer zu dem Sitzabschnitt (2) zu Seitenkanten des Sitzabschnitts (2) erstreckt; und
- (vii) der Abstand der konkaven Aussparung (4) zum Aufnehmen der Gesäßhälften (44) einer Person von den Seitenkanten des Sitzabschnitts (2) geringer ist als der Abstand des ersten und zweiten konkaven Abschnitts (12, 14) von den Seitenkanten des Sitzabschnitts (2); und der Rückenlehnenabschnitt (18) ein Rückenlehnenabschnitt ist, bei dem:

- (viii) der Rückenlehnenabschnitt (18) aus einem harten Material hergestellt ist, welches nicht zusammengedrückt wird, wenn die Person (42) auf dem Rückenlehnenabschnitt (18) lehnt;
- (ix) der Rückenlehnenabschnitt (18) eine konkave Aussparung (20) zum Aufnehmen des Rückgrats (48) der Person aufweist;
- (x) sich die konkave Aussparung (20) zum Aufnehmen des Rückgrats (48) der Person in einen sich quer erstreckenden Durchgangsabschnitt (22) zum Aufnehmen der Schultern (52) der Person erstreckt, welcher sich in Richtung von Seitenkanten des Rückenlehnenabschnitts (18) erstreckt und
- (xi) der Abstand des sich quer erstreckenden Durchgangsabschnitts (22) zum Aufnehmen der Schultern (52) der Person von den Seitenkanten des Rückenlehnenabschnitts (18) geringer ist als der Abstand der konkaven Aussparung (20) zum Aufnehmen des Rückgrats (48) der Person von den Seitenkanten des Rückenlehnenabschnitts (18).

2. Sitz nach Anspruch 1, wobei das harte Material des Sitzabschnitts (2) Stein, Metall, ein steifes Kunststoffmaterial oder Holz ist.
3. Sitz nach Anspruch 1 oder Anspruch 2, wobei der Sitzabschnitt (2) getrennt von dem Rückenlehnenabschnitt (18) hergestellt ist und wobei der Sitzabschnitt (2) und der Rückenlehnenabschnitt (18) anschließend aneinander befestigt werden.
4. Sitz nach Anspruch 1 oder Anspruch 2, wobei der Sitzabschnitt (2) und der Rückenlehnenabschnitt (18) integriert zusammen hergestellt sind.

Revendications

1. Siège comprenant une portion de siège (2) et une portion de dossier (18), et dans lequel la portion de siège (2) est une portion de siège dans laquelle :

(i) la portion de siège (2) présente un retrait concave (4) destiné à recevoir les fesses (44) d'une personne ;
 (ii) la portion de siège (2) est fabriquée en un matériau dur tel que la portion de siège (2) ne se comprime pas lorsqu'une personne (42) s'assoit sur la portion de siège (2) ;
 (iii) le retrait concave (4) s'étend dans une première portion de passage concave (12) destinée à recevoir une partie arrière de la cuisse d'une première jambe de la personne (42), et dans une deuxième portion de passage concave (14) destinée à recevoir une partie arrière de la cuisse d'une deuxième jambe de la personne (42) ;
 (iv) la deuxième portion de passage concave (14) est espacée de la première portion de passage concave (12) par une portion de siège rehaussée (2) s'étendant jusqu'à la périphérie d'un bord avant (16) de la portion de siège (2) ;
 (v) les première et deuxième portions de passage concaves (12, 14) s'étendent jusqu'à la périphérie du bord avant (16) de la portion de siège (2) ;
 (vi) le retrait concave (4) sert à recevoir les fesses (44) d'une personne et s'étend transversalement par rapport à la portion de siège (2) vers des bords latéraux de la portion de siège (2) ; et
 (vii) la distance du retrait concave (4) pour recevoir les fesses (44) d'une personne, depuis les bords latéraux de la portion de siège (2), est inférieure à la distance des première et deuxième portions concaves (12, 14) depuis les bords latéraux de la portion de siège (2) ;
 et la portion de dossier (18) est une portion de dossier dans laquelle :

(viii) la portion de dossier (18) est fabriquée en un matériau dur qui ne se comprime pas lorsque la personne (42) s'appuie contre la portion de dossier (18) ;
 (ix) la portion de dossier (18) présente un retrait concave (20) pour recevoir la colonne vertébrale (48) de la personne ;
 (x) le retrait concave (20) pour recevoir la colonne vertébrale (48) de la personne s'étend dans une portion de passage (22) s'étendant transversalement qui sert à recevoir les épaules (52) de la personne et qui s'étend vers des bords latéraux de la portion de dossier (18) ; et
 (xi) la distance de la portion de passage (22) s'étendant transversalement pour recevoir

les épaules (52) de la personne depuis les bords latéraux de la portion de dossier (18) est inférieure à la distance du retrait concave (20) pour recevoir la colonne vertébrale (48) de la personne depuis les bords latéraux de la portion de dossier (18).

2. Siège selon la revendication 1, dans lequel le matériau dur de la portion de siège (2) est de la pierre, du métal, un matériau en plastique rigide ou du bois.
3. Siège selon la revendication 1 ou 2, dans lequel la portion de siège (2) est fabriquée séparément de la portion de dossier (18) et dans lequel la portion de siège (2) et la portion de dossier (18) sont ensuite assemblées l'une à l'autre.
4. Siège selon l'une quelconque des revendications 1 ou 2, dans lequel la portion de siège (2) et la portion de dossier (18) sont fabriquées intégralement l'une avec l'autre.

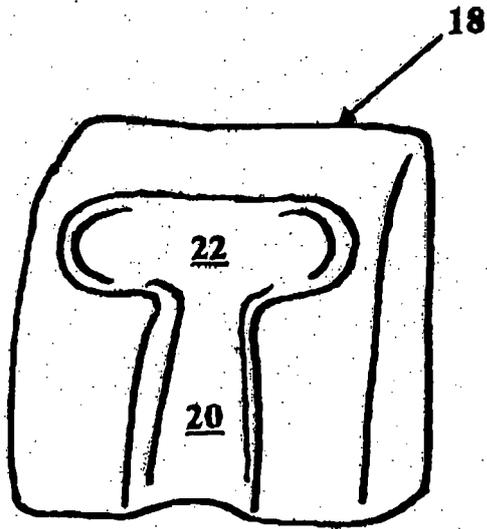


FIG 2

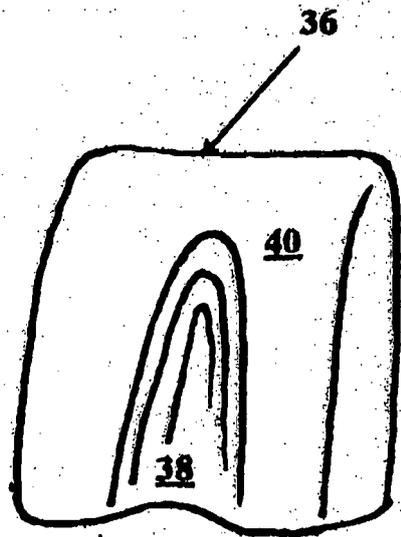


FIG 4

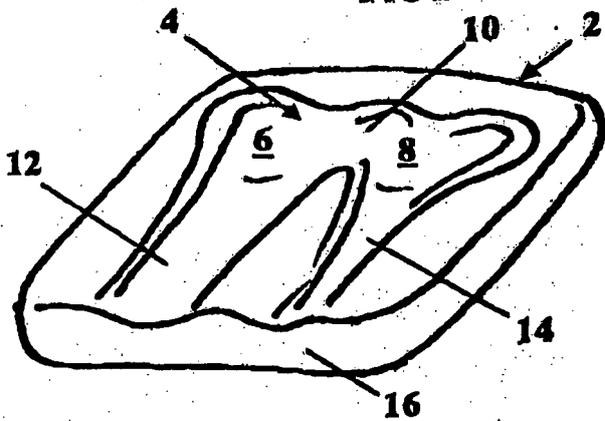


FIG 1

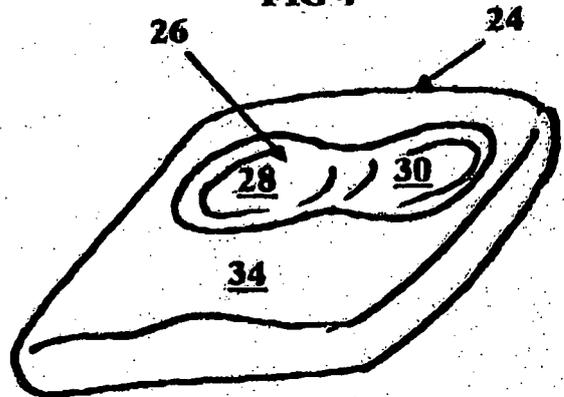


FIG 3

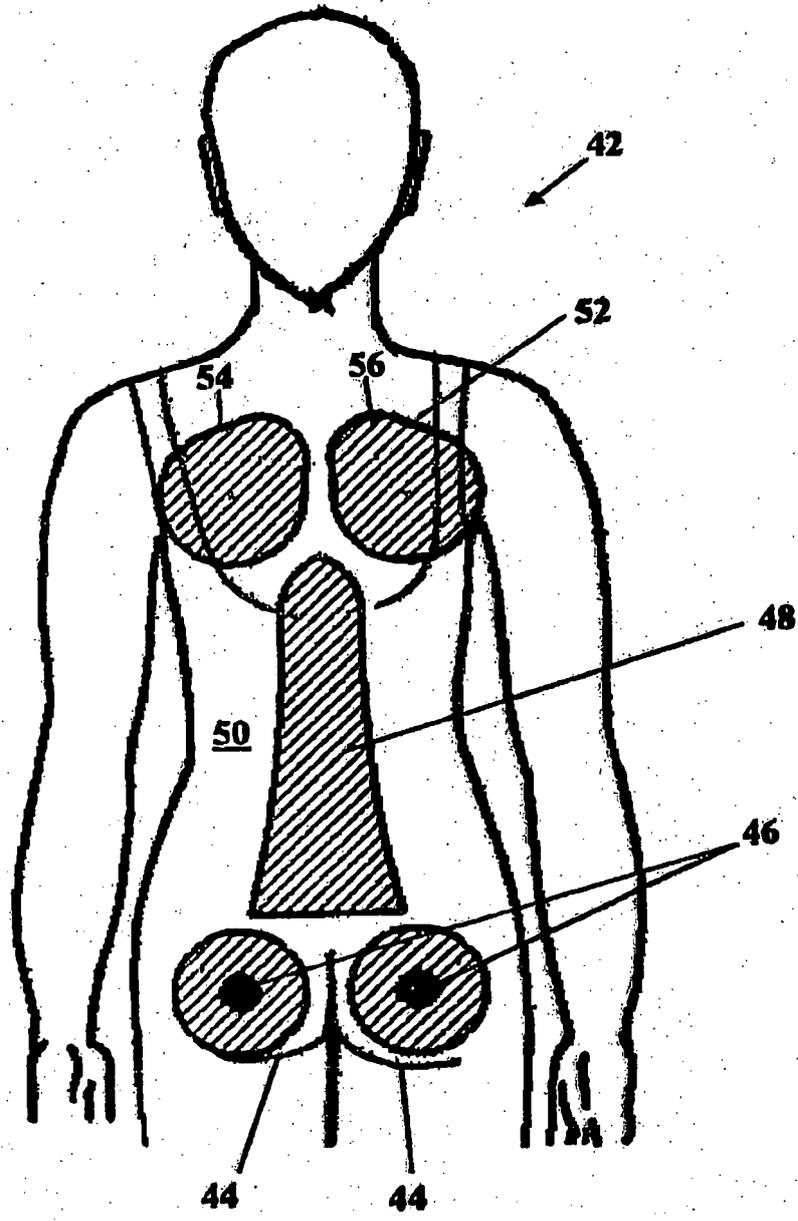


FIG 5

REFERENCES CITED IN THE DESCRIPTION

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