



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
09.10.2019 Bulletin 2019/41

(51) Int Cl.:
A47B 11/00 (2006.01) A47B 23/00 (2006.01)
A47C 7/38 (2006.01) A47C 16/00 (2006.01)
A47C 20/02 (2006.01) A47C 20/04 (2006.01)

(21) Application number: **18275184.2**

(22) Date of filing: **18.12.2018**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
KH MA MD TN

(72) Inventor: **Haslam, Kathryn**
Preston
Lancashire PR6 8DN (GB)

(74) Representative: **Brooke-Jones, Helen Anne**
Brooke-Jones Ltd
Suite 314
Waters Meeting Industrial Estate
Britannia Way
Bolton BL2 2HH (GB)

(30) Priority: **19.12.2017 GB 201721234**

(71) Applicant: **Haslam, Kathryn**
Preston
Lancashire PR6 8DN (GB)

Remarks:

Claims 16 to 20 are deemed to be abandoned due to non-payment of the claims fees (Rule 45(3) EPC).

(54) **STAND-ALONE NECK SUPPORT**

(57) The invention relates to a portable prone head support device (10) comprising a head support member (12) and a frame (14), the head support member (12) providing a face aperture (16) adapted to receive a user's face in prone position, the frame (14) having a trunk (18) and a base (20), the trunk (18) being adapted to locate the head support member (12) at a distance from said base (20), characterised in that the base (20) of the frame (14) being adapted to provide a stable engagement with a ground surface, and the trunk (18) is adjustable in at least one plane to allow positioning of the head support member (12) relative to a second surface elevated from said ground surface, characterised in that the base (20) comprises at least three legs (32) and the legs (32) are adapted to rotate between a splayed position, providing a wide base perimeter, and a contracted position providing a condensed substantially linear arrangement approximately in line with the post.

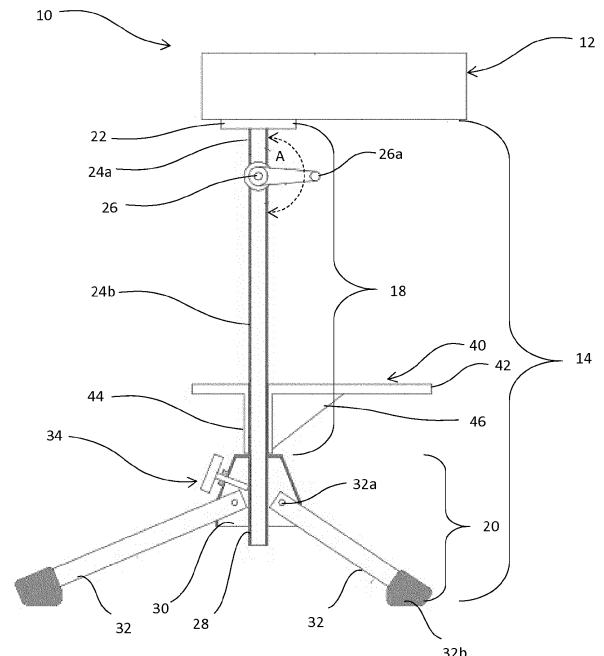


FIGURE 1

Description

BACKGROUND

Technical Field

[0001] The present invention relates generally to the field of stand-alone neck supports. More particularly, but not exclusively, the present invention concerns a stand-alone head support for prone positioning of a user's head at an elevated location from a ground surface.

Description of the Related Art

[0002] Head rests that provide comfort for a user in the prone position are known. Both medical and masseur professionals use such head rests to support a patient's head and neck in the face-down prone position whilst working on said patient.

[0003] In the medical field, these are often in the form of a specifically apertured cushion that sits on the end of a bed through which a patient can breathe and see during a procedure. Massage therapists can acquire specially adapted beds with a face aperture through which a patient can breathe and see during a therapy session.

[0004] Developments in the field have produced a number of prone head rests for personal use that provide support to the neck and head whilst lying face down, for example, during sunbathing.

[0005] One such example is provided in US 6694551 B, in which a tubular frame supports a webbing stretched thereacross. The frame is inclined and the webbing provides an aperture to receive a face. The device is made for engagement with the same surface as a user, e.g. lying on the floor. However, use adjacent an elevated surface, such as a sunbed would be awkward and would render the user's head in an inadequately supported position.

[0006] Another example is provided by US 5970546 which is a portable headrest for sunbathing. A head support member and a base support member provide a slightly elevated position of a face above a ground-surface. Again, the device is made for engagement with the same surface as a user, e.g. lying on the floor and use adjacent a sunbed would exhibit the same problems.

[0007] It is an object of the present invention to address one or more of the problems of the prior art as discussed herein or otherwise.

[0008] Therefore, it is now desired to provide an improved arrangement for a portable prone head support.

SUMMARY OF THE INVENTION

[0009] According to the invention there is provided a portable prone head support device comprising a head support member and a frame, the head support member providing a face aperture adapted to receive a user's face in prone position, the frame having a trunk and a base,

the trunk being adapted to locate the head support member at a distance from said base, characterised in that the base of the frame is adapted to provide a stable engagement with a ground surface, and the trunk is adjustable in at least one plane to allow positioning of the head support member relative to a second surface elevated from said ground surface.

[0010] With this arrangement, head support can be provided at a required position relative to a sunbed, lounger, or other such elevated surface from which a user's head may extend in a prone position. The ground-engaging base makes the device stand-alone for use with a range of beds/ chairs, etc. The stable engagement with a ground surface minimises the possibility of the device toppling in use, whilst the adjustable trunk provides optimal comfort positioning for the neck in particular to minimise strain.

[0011] Preferably, the trunk is adjustable to increase or decrease the distance between the base and the head support member. Preferably, the trunk comprises a post for attachment to the head support member and the base. Preferably, the post that can be raised and lowered relative to the base. Preferably, the base comprises a retention arrangement for the post. Preferably, the retention arrangement comprises a bore through which the post passes. Preferably, the bore is open ended and comprises a loosening and tightening means, which may be in the form of a set screw with a user handle. Alternatively, the retention arrangement may comprise an aperture sheath to receive said post with corresponding apertures thereon and a location means to pass through aligned apertures in said post and sheath.

[0012] Additionally, or alternatively, the post may be telescopically altered in length.

[0013] Preferably, the post comprises a fixing plate at an upper end thereof for attachment to an underside of the head support member. Preferably, the fixing plate is offset on the head support member one side biased towards a forehead-engaging portion of the support member.

[0014] Preferably, the trunk is adjustable to incline the head support member relative to the trunk. Preferably, the trunk comprises a hinge proximal to the upper end of the post. Preferably therefore, the post comprises a short upper section for attachment to said head support member and a longer lower section for engagement with the base. Preferably, the hinge comprises at least 90° rotation about a vertical plane, most preferably, up to 180° rotation. Preferably, the hinge comprises a user-adjustable retention lever to hold the rotation angle selected.

[0015] Preferably, the base comprises at least three legs. Preferably, the legs are adapted to rotate between a splayed position, providing a wide base perimeter and a contracted position providing a condensed substantially linear arrangement approximately in line with the post. Preferably, the base comprises a hinge body to which each leg is rotatably attached. The hinge body may com-

prise the bore of the retention arrangement described above.

[0016] Preferably, the head support member is substantially C-shaped. Preferably, the head support member is padded. Preferably the face aperture is substantially keyhole-shaped.

[0017] Preferably, the face aperture comprises further cut-out sections to accommodate spectacle frames being worn. Preferably, the head support is adapted to receive a removable towel component. Accordingly, the head support member may comprise fixings for a removable towel component. Preferably, the fixings comprise a hook/ loop fastening system installed on the underside of the head support component and at suitably cooperative locations on a shaped towel component.

[0018] Preferably, the portable head support device comprises a platform located between the base and the head support member. Preferably, the platform is attached to the lower section of the post.

[0019] Preferably, the platform comprises a sheath for slidable engagement with the post. Preferably, the sheath extends from an underside of the platform. Preferably, the sheath is located on a central axis of the platform towards a top end of the platform, more preferably in a top half of the platform along the central axis. Most preferably, the sheath is located at approximately a third of the distance of the length of the central axis from the top end.

[0020] Preferably, the sheath comprises a tight slidable fit with the post to allow for positioning of the platform along the length of the post. Additionally or alternatively, the sheath may comprise a retaining means, which may be a headed set screw or other suitable mechanism.

[0021] Preferably, the platform comprises a prop between the sheath and the underside of the platform, which may be in the form of a diagonally arranged strut/ brace or a substantially triangular bracket.

[0022] Preferably, the platform comprises at least one cup holder in the form of a shallow cylindrical bore (open-ended), or well. Most preferably, two cup holders are arranged on opposing sides of the central axis. Preferably, the cup holder(s) is(are) located within a top third of the platform.

[0023] Preferably, the platform comprises a peripheral upstanding rim.

[0024] Preferably, the device is at least partially collapsible for portability. Preferably therefore, the head support member is rotatably via the hinge to tuck against the lower section of the post. Preferably, the legs are rotatable contractable into a linear arrangement with the post, either upwardly against the post, or downwardly in line with the post. The platform may comprise hinged sections either side of the sheath for foldability in linear arrangement with the post.

[0025] Most preferably, however, the device is at least partially disassembled for portability. Preferably, the post is detachable from the legs, most preferably from the hinge body. Preferably, the platform is slidably removable

from the post. The head support member may also be detachable from the post.

BRIEF DESCRIPTION OF THE DRAWINGS

[0026] For a better understanding of the invention, and to show how exemplary embodiments may be carried into effect, reference will now be made to the accompanying drawings in which:

Figure 1 is a schematic side view of an exemplary embodiment of a portable prone head support device according to the invention;

Figure 1 2 is a schematic top plan view of the device of Figure 1;

Figure 3 is a schematic bottom plan view of the device of Figure 1;

Figure 4 is a schematic top plan view of a platform as part of the device of Figure 1; and

Figure 5 is a schematic side view of the platform of Figure 5.

DETAILED DESCRIPTION OF THE EXEMPLARY EMBODIMENTS

[0027] Figures 1 to 5 show a portable prone head support device according to an exemplary embodiment.

[0028] As shown in Figure 1, a portable prone head support device 10 comprises a head support member 12 and a frame 14, the head support member 12 providing a face aperture 16 adapted to receive a user's face in prone position, the frame 14 having a trunk 18 and a base 20, the trunk 18 being adapted to locate the head support member 12 at a distance from said base 20, characterised in that the base 20 of the frame 14 is adapted to provide a stable engagement with a ground surface, and the trunk 18 is adjustable in at least one plane to allow positioning of the head support member 12 relative to a second surface elevated from said ground surface.

[0029] As shown in Figure 2, the head support member 12 is a substantially c-shaped component, surrounding the face aperture 16. The face aperture 16 is a keyhole shape, with a circular part 16a connected to an opening 16b within the head support member 12. The forehead and the cheeks of a face of a user is supported by a top side 12a of head support member 12 in a prone position, whilst providing adequate space for the chin to protrude through the opening 16b and for the eyes and the nose to be observable through the circular part 16a.

[0030] A fixing plate 22 is mounted on an underside 12b of the head support member 12. The fixing plate is located approximately opposite the opening 16b opposite the portion of the top side 12a that would support the forehead of a user.

[0031] In turn, the fixing plate 22 is attached to a short upper section of post 24a.

[0032] A hinge 26 is attached to the short upper section of post 24a and the hinge 26 is attached to a long lower section of post 24b. A user-adjustable lever 26a is provided on the hinge 26 to allow for an angle A of the hinge to be adjusted and then retained in place. The angle A provides approximately up to 180° rotation to allow for the head support member 12 to be tilted backwards up to 90° (putting it in an upright position - although this is not likely to be required) and forwards up to 90° (putting it in a downward position - only likely to be required for storage and portability). A mid-range of movement across the 180° rotation allows for the head support member 12 to be tilted and fine-tuned according to a user's preference.

[0033] The lower section of post 24b is slidably engaged with an open-ended bore 28 provided within a body 30. A handled set screw 34 is provided on the body 30 such that the screw extends through the body 30 into the bore 28 and is adjustable to loosen or tighten against the post 24b therein. This allows the position of the lower section of post 24b to be adjusted within the bore 28 in order to increase a length of the lower section of post 24b that is present above the body 30. Accordingly, this mechanism provides height adjustment for the head support member 12.

[0034] The body 30 forms part of the base 20 and three equally-spaced legs 32 are rotatably mounted thereon. Each leg 32 comprises a fulcrum 32a at one end and a friction stopper 32b at an opposite free end. The legs 32 are able to rotate out to a splayed position in which the stoppers 32b establish a wide circular base perimeter upon contact with a ground surface. In contrast, the legs 32 are able to rotate inwardly to a contracted position in which the legs 32 substantially meet.

[0035] A table 40 is provided on the device 10. The table 40 comprises a platform 42 and a downwardly projecting sheath 44 that is located on a central axis B-B', towards a top end 42a of the platform 42. A triangular bracket 46 extends along the central axis from the sheath 44 to an underside 42d of the platform 42 in the direction of a bottom end 42b. The bracket provides support to the larger part of the platform 42a.

[0036] Two cup holders 48 are provided in an upper face 42c of the platform 42 towards the top end 42a and either side of the central axis B-B'. The cup holders 48 are provided as substantially circular apertures through the platform 42 although it may be appreciated that these may be provided as a shallow well with a base instead.

[0037] A substantially planar section 50 is provided as the majority of the upper face 42c of the platform 42. This planar section 50 comprises an upwardly protruding peripheral rim 52 therearound to retain items left on the table 40.

[0038] The sheath 44 of the table 40 is slidably engaged around the lower section of post 24b. The platform 42 is ideally oriented with the planar section 50 located

directly below the face aperture 16a, 16b of the head support member, which enables a user to view the items on the table 40, to, for example, read a book.

[0039] The device 10 is made to be portable and for this reason, it is partially collapsible and disassembled. Therefore, in use, the device 10, is first assembled. This is achieved by extending the legs 32 from a contracted position to a splayed position and placing them on a ground surface. The table 40 is slidably engaged with the lower section of post 24b, but passing the post through the sheath 44 of the table 40 from the upper face 42c to the underside 42d. The set screw 34 in the body 30 is loosened to allow for the lower section of post 24b (with the hinge 26, upper section of post 24a and head support member 12 attached) to be slid into the bore 32a and retained by tightening the set screw 34 against the post 24b.

[0040] Once assembled, the device 10 is then manoeuvred into position adjacent the top end of a sunbed/bed or lounge onto which a user intends to adopt a prone position. The height of the device 10 relative to the bed is adjustable by raising or lowering the post 24b within the bore 32a and although personal preference dictates, it is generally intended that the top side 12a of the head support member 12 be approximately flush with the top end of the bed. Once in a lying position the user can adjust the distance of the head support member 12 from the end of the bed for comfort, although it is generally appreciated that the head support member 12 would be very close to the top end of such bed. Furthermore, for optimal comfort, the user can now use the user-adjustable retention lever 26a to loosen the hinge 26 and adjust the angle A of the short section of post 24a (and therefore, the head support member attached thereto) relative to the long section of post 24b and the ground surface. Once the required angle A is achieved, the user-adjustable retention lever 26a is used to tighten the hinge and prevent further movement.

[0041] The device 10 described herein provides a portable head support that can be used on a variety of sunbeds to achieve a comfortable prone lying position. The adjustability makes it suitable to fit the comfort requirements of each user. The ability to collapse and disassemble the device 10 makes it easy to transport. It also tackles the issue of wet and dirty poolside floors which may damage books and electrical equipment being used, whilst making it comfortable to view such items whilst using the device 10.

[0042] Although a few preferred embodiments have been shown and described, it will be appreciated by those skilled in the art that various changes and modifications might be made without departing from the scope of the invention, as defined in the appended claims.

Claims

1. A portable prone head support device comprising a

head support member and a frame, the head support member providing a face aperture adapted to receive a user's face in prone position, the frame having a trunk and a base, the trunk being adapted to locate the head support member at a distance from said base, the base of the frame being adapted to provide a stable engagement with a ground surface, and the trunk being adjustable in at least one plane to allow positioning of the head support member relative to a second surface elevated from said ground surface **characterised in that** the base comprises at least three legs and the legs are adapted to rotate between a splayed position, providing a wide base perimeter, and a contracted position providing a condensed substantially linear arrangement approximately in line with the post.

2. The device according to claim 1, wherein the trunk is adjustable to increase or decrease the distance between the base and the head support member. 20
3. The device according to any one of claims 1 or 2, wherein the trunk comprises a post for attachment to the head support member and the base. 25
4. The device according to claim 2, wherein the post can be raised and lowered relative to the base. 30
5. The device according to claim 4, wherein the base comprises a retention arrangement for the post comprising a bore through which the post passes. 35
6. The device according to claim 5, wherein the bore is open ended and comprises a loosening and tightening means, which is in the form of a set screw with a user handle. 40
7. The device according to claim 6, wherein the retention arrangement comprises an aperture sheath to receive said post with corresponding apertures thereon and a location means to pass through aligned apertures in said post and sheath. 45
8. The device according to any one of claims 3 to 7, wherein the post is telescopically altered in length. 50
9. The device according any one of claims 1 to 8, wherein the post comprises a fixing plate at an upper end thereof for attachment to an underside of the head support member and the fixing plate is offset on the head support member one side biased towards a forehead-engaging portion of the support member.. 55
10. The device according to any one of claims 1 to 9, wherein the trunk is adjustable to incline the head support member relative to the trunk and the trunk comprises a hinge proximal to the upper end of the

post.

11. The device according to any one of claims 3 to 10, wherein the post comprises a short upper section for attachment to said head support member and a longer lower section for engagement with the base.
12. The device according to any one of claims 10 to 11, wherein the hinge comprises at least 90° rotation about a vertical plane.
13. The device according to any one of claims 10 to 12, wherein the hinge comprises a user-adjustable retention lever to hold the rotation angle selected.
14. The device according to any one of claims 5 to 13, wherein the base comprises a hinge body to which each leg is rotatably attached and the hinge body comprises the bore of the retention arrangement.
15. The device according to any one of claims 1 to 14, wherein the head support member is substantially C-shaped and padded.
16. The device according to any one of claims 1 to 20, wherein the face aperture is substantially keyhole-shaped.
17. The device according to any one of claims 1 to 16, wherein the face aperture comprises further cut-out sections to accommodate spectacle frames being worn.
18. The device according to any one of claims 1 to 17, wherein the portable head support device comprises a platform located between the base and the head support member attached to the lower section of the post.
19. The device according to claim 18, wherein the platform comprises a sheath for slidable engagement with the post.
20. The device according to any one of claims 1 to 19, wherein the device is at least partially collapsible for portability.

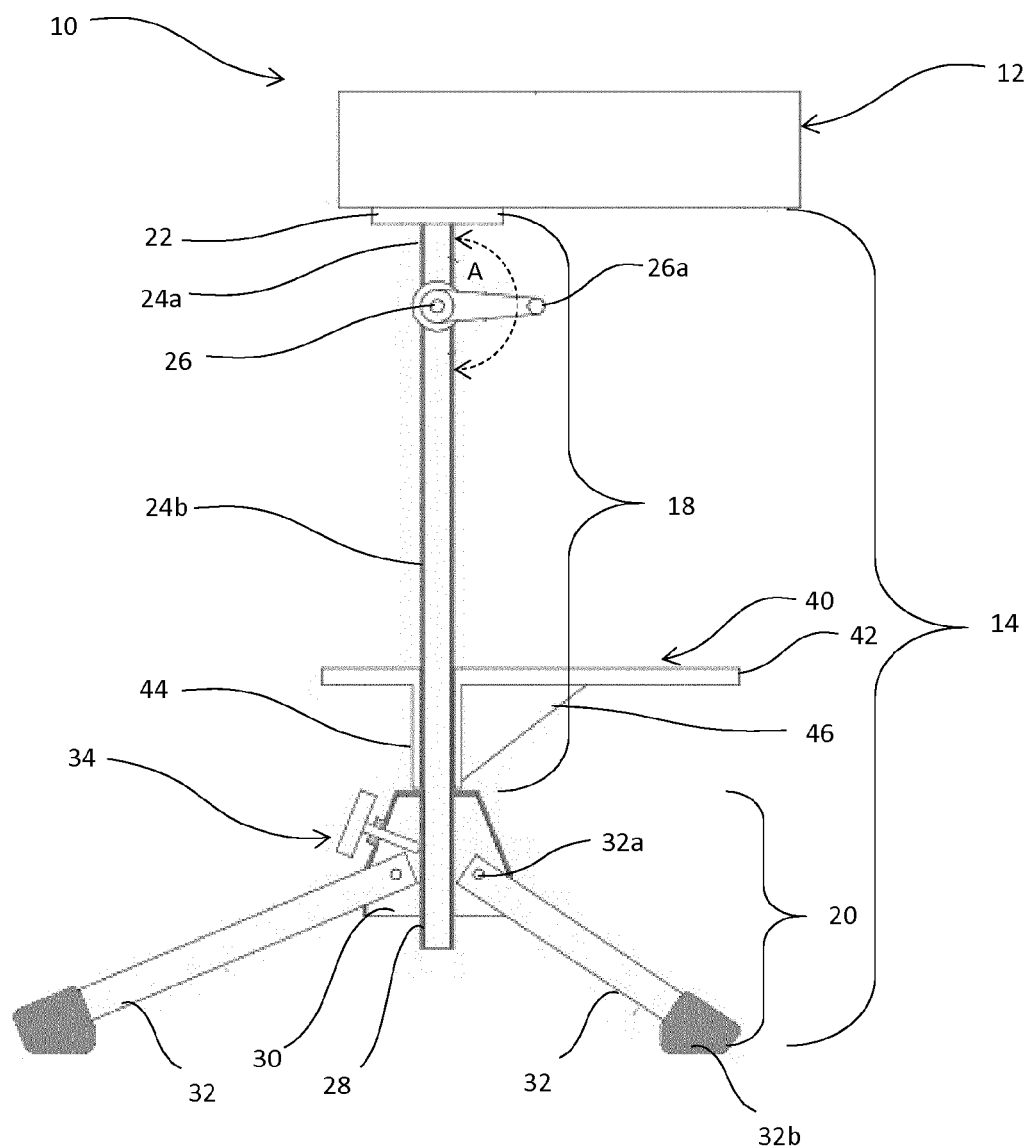


FIGURE 1

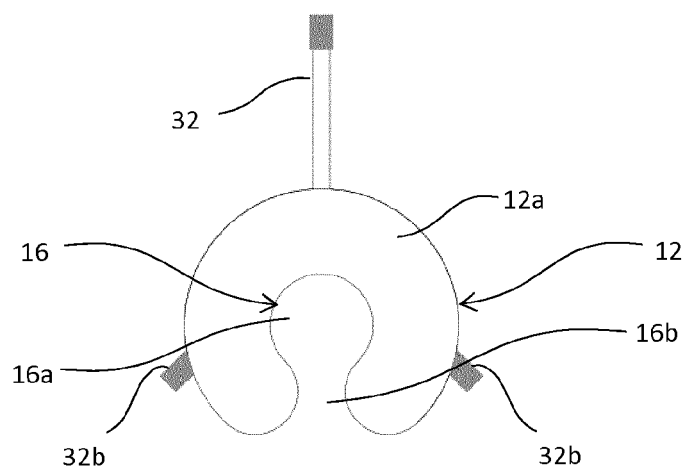


FIGURE 2

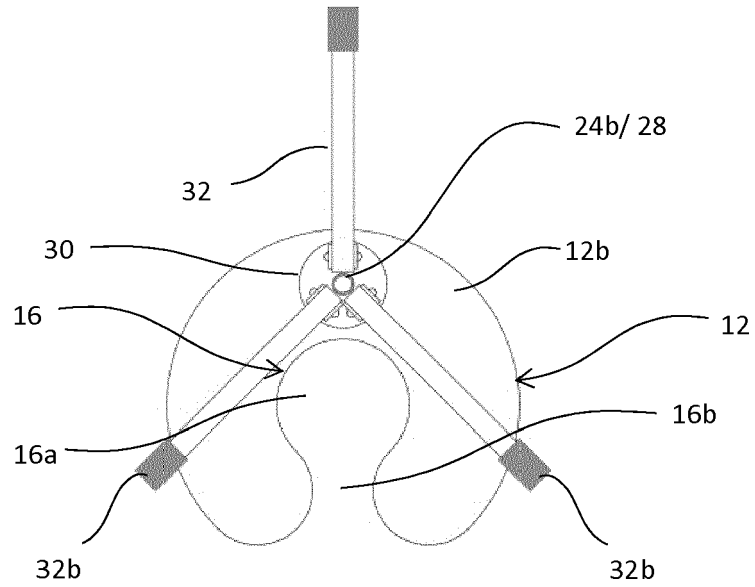


FIGURE 3

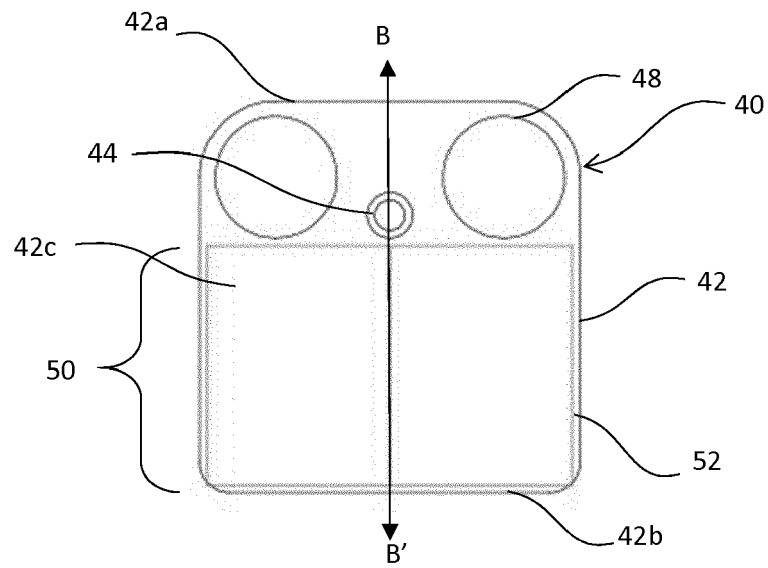


FIGURE 4

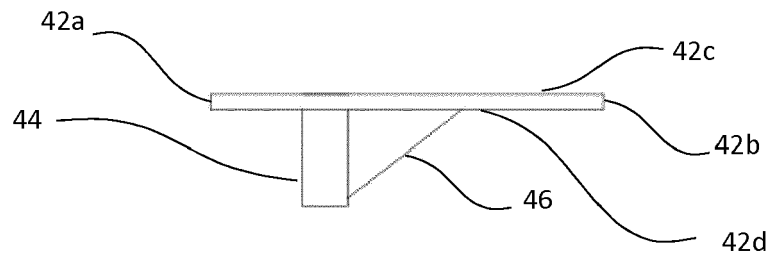


FIGURE 5



EUROPEAN SEARCH REPORT

Application Number
EP 18 27 5184

5

10

15

20

25

30

35

40

45

50

55

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CN 206 197 534 U (UNIV KUNMING SCIENCE & TECH) 31 May 2017 (2017-05-31) * paragraph [0055]; claims 5,7; figures * -----	1-12,14,15	INV. A47B11/00 A47B23/00 A47C7/38
X	DE 85 21 460 U1 (HARTH) 19 September 1985 (1985-09-19) * pages 5,6; figures * -----	1-13	A47C16/00 A47C20/02 A47C20/04
A	US 2014/312186 A1 (MECH DEAN HOWARD [US]) 23 October 2014 (2014-10-23) * figures * -----	1-15	
A	CN 202 497 374 U (SECOND AFFILIATED HOSPITAL OF COLLEGE OF MEDICINE OF XI AN JIAOTONG UN) 24 October 2012 (2012-10-24) * figures * -----	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 4 September 2019	Examiner Kis, Pál
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			

EPO FORM 1503 03/82 (P04C01)



Application Number

EP 18 27 5184

CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☒ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

☐ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).

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

EP 18 27 5184

5

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

04-09-2019

10

15

20

25

30

35

40

45

50

55

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
CN 206197534	U	31-05-2017	NONE	
DE 8521460	U1	19-09-1985	DE 8521460 U1	19-09-1985
			EP 0209852 A2	28-01-1987
US 2014312186	A1	23-10-2014	NONE	
CN 202497374	U	24-10-2012	NONE	

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- US 6694551 B [0005]
- US 5970546 A [0006]