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Wheelchair cover

- (57) An apparatus 10 for mounting a cover such as an umbrella 16 on a wheelchair 26. The apparatus 10 comprises a bracket 12 mountable to the wheelchair with

a cranked elongate support 14 adjustably extending from the bracket 12.

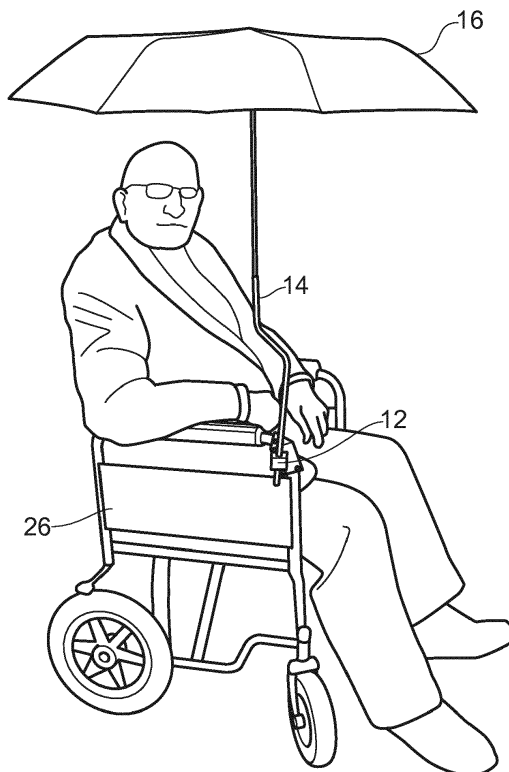


FIG. 2

Description

[0001] This invention concerns a cover mounting apparatus for a wheelchair, a wheelchair cover arrangement, and a wheelchair including a mounting bracket.

[0002] Wheelchairs are widely used by persons with restricted mobility. A problem often encountered with wheelchairs is providing an appropriate and satisfactory cover for use in the rain, and also a cover to provide shade when necessary.

[0003] According to a first aspect of the invention there is provided cover mounting apparatus for a wheelchair, the apparatus including a mounting bracket mountable to a wheelchair, a cranked elongate support rotatably mountable to the mounting bracket to extend upwardly therefrom, with the upper end of the elongate support including a mounting arrangement to permit a cover to be mounted thereto.

[0004] The mounting bracket may permit the height of the elongate support to be adjusted relative thereto. The mounting bracket may include a vertically alignable passage through which the elongate support can extend, and engagement means may be provided to retain the elongate support at the required height within the passage. The engagement means may be manually operable, and may comprise a threaded member which extends into the passage to engage with the elongate support, and a handle may be provided at the proximal end of the threaded member.

[0005] The mounting bracket may include a pair of brackets, each engagable against respective elongate parts of the wheelchair, which parts are inclined relative to each other. The brackets may be in the form of loops through which the elongate parts can extend, with securing means to tighten the loops against a base member to clamp the mounting bracket on the elongate parts.

[0006] The mounting bracket may also include an upwardly open recess to receive a mounting part of a further wheelchair cover or other item.

[0007] The mounting arrangement may comprise a tube in which an elongate item can be received, and locking means may be provided for locking an elongate item in the tube. The tube may be provided by an upper end in use of the elongate support.

[0008] The elongate support may comprise a first member which in use extends upwardly from the mounting bracket, a second section extending from the first section and which in use extends sideways, and a third section extending from the second member and which in use extends upwardly from the second section.

[0009] According to a second aspect of the invention there is provided a wheelchair cover arrangement including a cover mounting apparatus according to any of the preceding six paragraphs and a cover mountable thereto.

[0010] The cover may be in the form of an umbrella, which umbrella may be collapsible.

[0011] According to a third aspect of the invention there is provided a wheelchair including a mounting bracket

according to any of said preceding six paragraphs.

[0012] The wheelchair may include a mounting bracket on each side thereof.

[0013] The wheelchair may also include a cover mounting apparatus according to any of said preceding six paragraphs.

[0014] An embodiment of the present invention will now be described by way of example only, and with reference to the accompanying drawings, in which

Fig. 1 is a diagrammatic perspective view of apparatus according to the invention;

Fig. 2 is a perspective view showing the apparatus of fig. 1 in use;

Fig. 3 is a front view showing the apparatus of fig. 1 in use; and

Fig. 4 is a perspective view of part of the apparatus of fig. 1.

[0015] The drawings show a cover mounting apparatus 10 for a wheelchair. The apparatus 10 comprises a mounting bracket 12 with a cranked elongate support 14 extending from the bracket 12. A cover in the form of a collapsible umbrella 16 is mounted to a mounting arrangement 18 on the opposite end of the elongate support 14 to the bracket 12.

[0016] The bracket 12 comprises a mounting plate 20 with two U-bolts 22 attached thereto such that the plane of the U is perpendicular in each bolt relative to the other, with nuts 24 on an opposite side of the plate 20 to the remainder of the bolts 22, to enable tightening of the bolts 22 against the plate 20.

[0017] The bracket 12 can be mounted to a side of a wheelchair 26 as follows. A vertically extending part of the side of the wheelchair 26 extends through a horizontally aligned U-bolt 22, whilst a horizontally extending part of the side of the wheelchair 26 extends through a vertically aligned U-bolt 22. The respective nuts 24 can be tightened on the respective U-bolt 22 to clamp the plate 20 on the sides of the wheelchair 26.

[0018] A formation defining an upwardly open recess formation 28 is provided on the outer side of the bracket 12 relative to the wheelchair 16. A block 30 is provided on the outside of the formation 28, with a vertically aligned through passage 32. An engagement means in the form of a bolt 34 extends horizontally into the passage 32 to engage with items extending therethrough. A handle 36 is provided on the proximal end of the bolt 34 to permit ready manual adjustment thereof.

[0019] The elongate support 14 comprises a first lower section 38 which is alignable vertically in use. The first section 38 extends through the passage 32 and can be held in position by the bolt 34.

[0020] A second horizontally extendable section 40 extends from the first section 38 and connects to a third

vertically extendable section 42. The upper end of the third section 42 is hollow and open ended to receive an elongate item such as the shaft of the umbrella 16.

[0021] A pair of bolts 44 are extendable through the third section 42 and alignable holes in the stem of the umbrella 16. Wing nuts 46 are provided engagable with the bolts 44 to retain same in position.

[0022] In use the bracket 12 can be mounted on the wheelchair 26 and the first section 38 inserted into the passage 32 and moved to a required height. Tightening of the bolt 34 will provide the first section 38 at a required height.

[0023] The elongate support 14, and the third section 42 in particular, can be moved by rotation of the elongate support 14 relative to the bracket 12, to or away from a person on the wheelchair as required, and particularly to provide cover from rain or sun as required. The first section 38 can be rotated relative to the block 30, and if required the bolt 34 can be loosened slightly to permit such rotation. The umbrella 16 can be raised and collapsed as required.

[0024] As shown in fig. 3, a mounting bracket 12 can be provided on each side of the wheelchair 26 to provide further flexibility in the mounting of the umbrella 16.

[0025] There is thus described a mounting arrangement for a cover such as a wheelchair which provides for a number of advantages. A significant amount of adjustment is provided by the height adjustment and also the cranked elongate support. When not required the apparatus can readily be removed, and stored or carried as required.

[0026] Various modifications may be made without departing from the scope of the invention. For instance the brackets may take a different form. The umbrella may be differently mounted on the elongate support and/or a different cover may be used. Different retaining and/or locking means could be used.

[0027] Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance it should be understood that the Applicant claims protection in respect of any patentable feature or combination of features hereinbefore referred to and/or shown in the drawings whether or not particular emphasis has been placed thereon.

Claims

1. A cover mounting apparatus for a wheelchair, the apparatus including a mounting bracket mountable to a wheelchair, a cranked elongate support rotatably mountable to the mounting bracket to extend upwardly therefrom, with the upper end of the elongate support including a mounting arrangement to permit a cover to be mounted thereto.
2. Apparatus according to claim 1, in which the mounting bracket permits the height of the elongate support

to be adjusted relative thereto.

3. Apparatus according to claim 2, in which the mounting bracket includes a vertically alignable passage through which the elongate support extends.
4. Apparatus according to claim 3, in which engagement means is provided to retain the elongate support at the required height within the passage, the engagement means may be manually operable, the engagement means may comprise a threaded member which extends into the passage to engage with the elongate support, and a handle may be provided at the proximal end of the threaded member.
5. Apparatus according to any of the preceding claims, in which the mounting bracket includes a pair of brackets, each engageable against respective elongate parts of the wheelchair, which parts are inclined relative to each other.
6. Apparatus according to claim 5, in which the brackets are in the form of loops through which the elongate parts can extend, with securing means to tighten the loops against a base member to clamp the mounting bracket on the elongate parts.
7. Apparatus according to any of the preceding claims, in which the mounting bracket includes an upwardly open recess to receive a mounting part of a further wheelchair cover or other item.
8. Apparatus according to any of the preceding claims, in which the mounting arrangement comprises a tube in which an elongate item can be received, and locking means may be provided for locking an elongate item in the tube.
9. Apparatus according to claim 8, in which the tube is provided by an upper end in use of the elongate support.
10. Apparatus according to any of the preceding claims, in which the elongate support comprises a first section which in use extends upwardly from the mounting bracket, a second section extending from the first section and which in use extends sideways, and a third section extending from the second member and which in use extends upwardly from the second section.
11. A wheelchair cover arrangement including a cover mounting apparatus according to any of the preceding claims, and a cover mountable thereto.
12. An arrangement according to claim 11, in which the cover is in the form of an umbrella, and the umbrella may be collapsible.

13. A wheelchair including a mounting bracket according to any of claims 1 to 10.
14. A wheelchair according to claim 13, in which the wheelchair includes a mounting bracket on each side thereof. 5
15. A wheelchair according to claims 13 or 14, in which the wheelchair includes a cover mounting apparatus according to any of claims 1 to 10. 10

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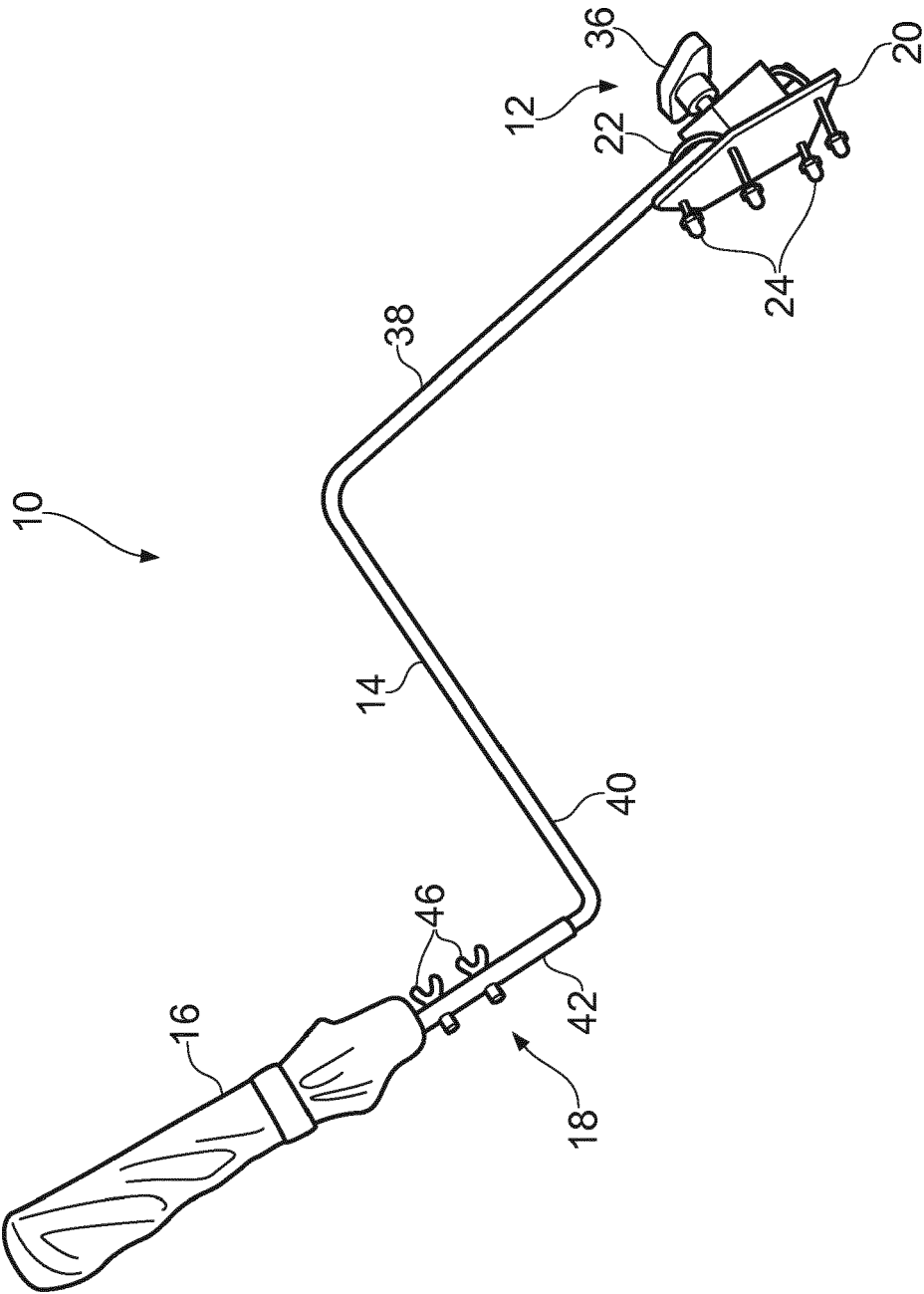


FIG. 1

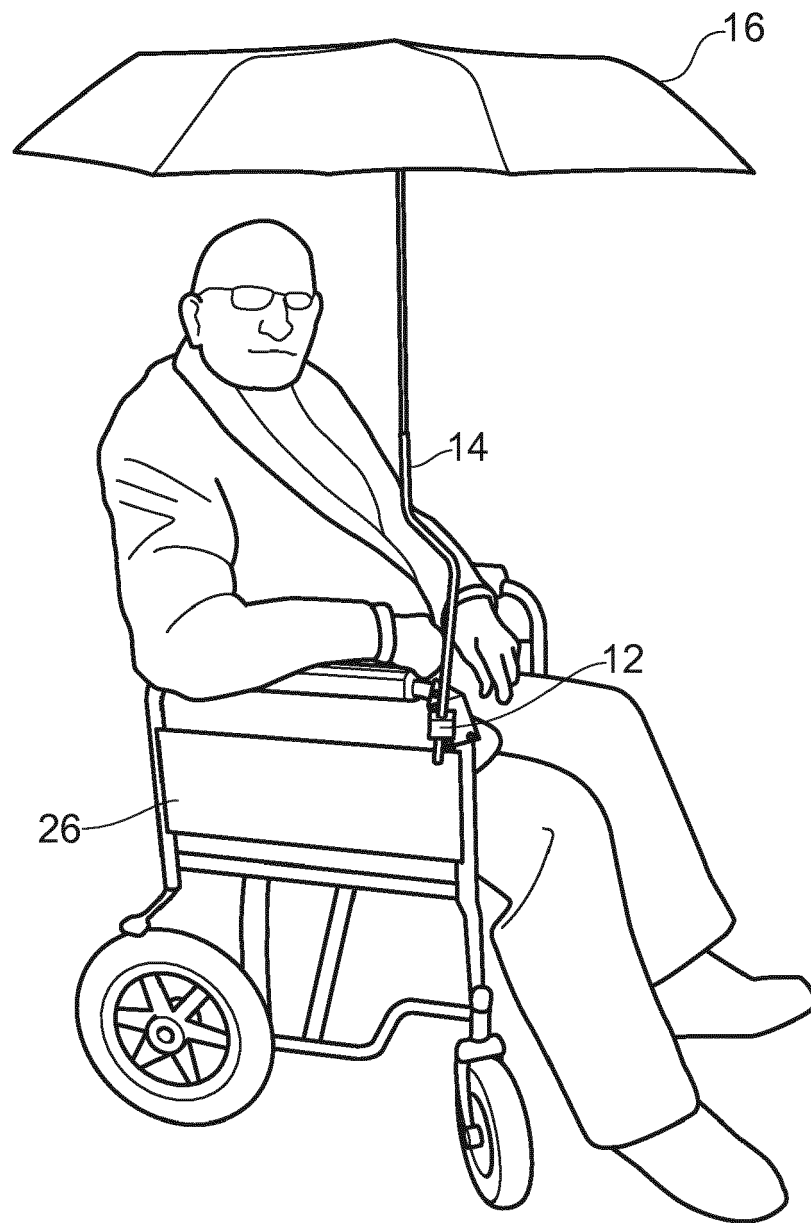


FIG. 2

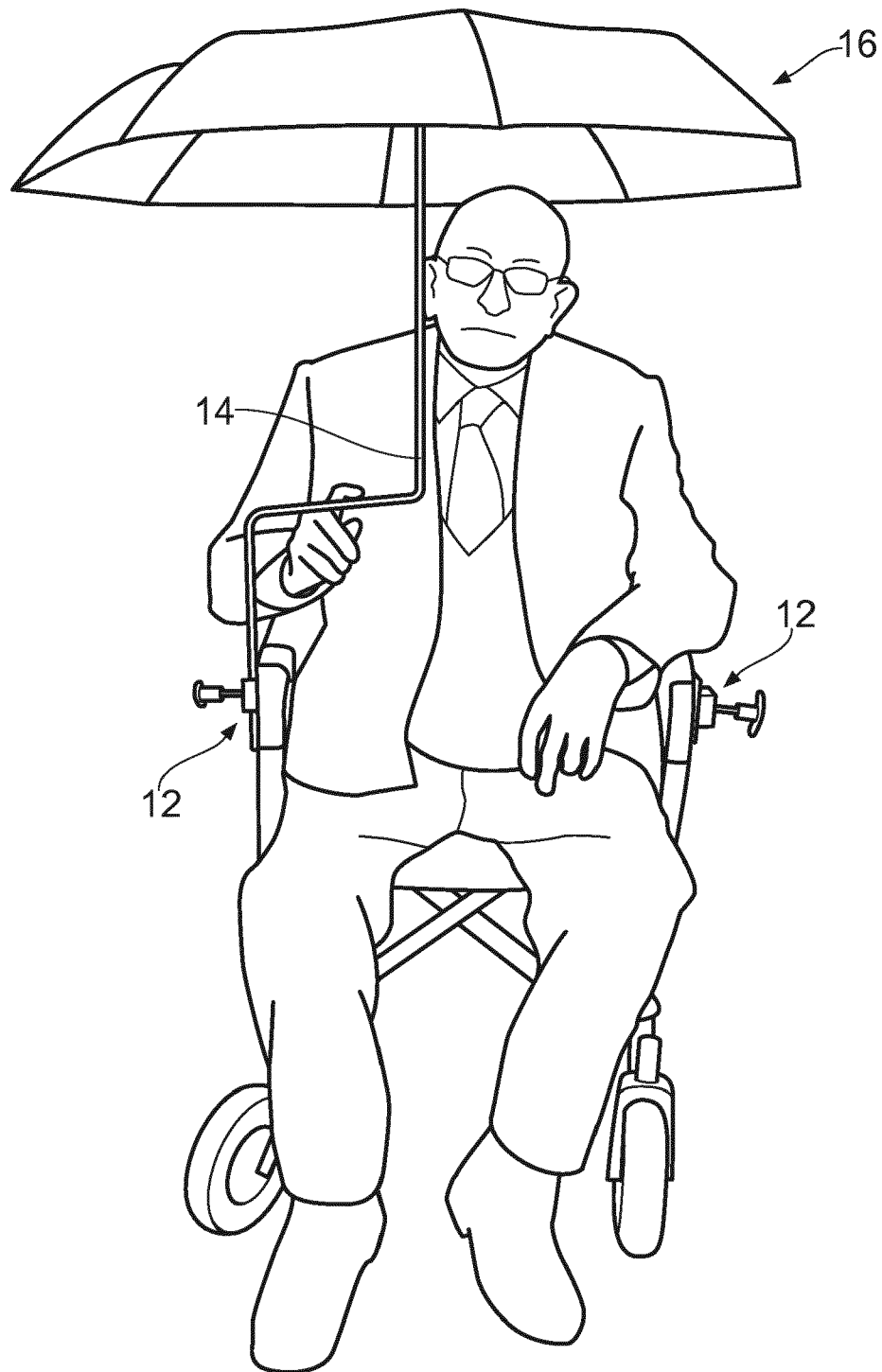


FIG. 3

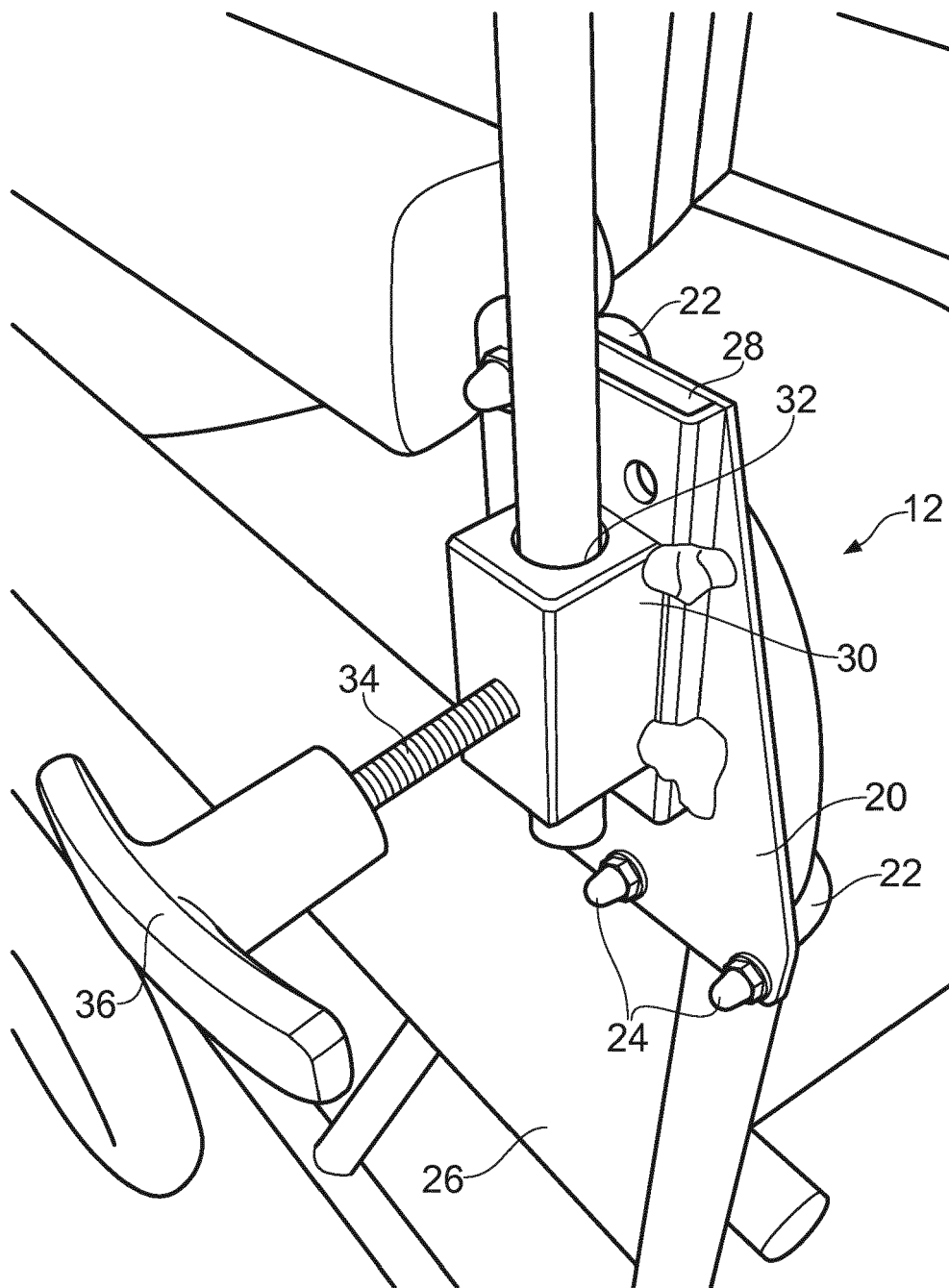


FIG. 4



EUROPEAN SEARCH REPORT

Application Number
EP 14 16 7421

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	US 6 899 388 B1 (ENRIQUE ESMERALDO C [US]) 31 May 2005 (2005-05-31) * column 4, line 4 - line 55 * * column 6, line 41 - column 7, line 41; figures 1-8,16-23 *	1-4,8, 11-15	INV. A45B11/00 A61G5/10 B62B9/14
A	----- TW M 451 122 U (LUO QING-SHAN [TW]) 21 April 2013 (2013-04-21) * the whole document *	1-15	
A	----- EP 1 213 203 A1 (STROITZ WINIFRED [CH]) 12 June 2002 (2002-06-12) * abstract; figures *	1-15	
A	----- US 6 244 557 B1 (MAZE SUSAN G [CA]) 12 June 2001 (2001-06-12) * abstract; figures *	1-15	
			TECHNICAL FIELDS SEARCHED (IPC)
			A45B A61G B62B
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 25 August 2014	Examiner Kousouretas, Ioannis
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)

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

EP 14 16 7421

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

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