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(54) Pole arrangement

(57) The invention relates to a pole arrangement for use as tandem poles for pair exercise. It comprises two pairs of poles (9a and 9b). The poles of both pairs of poles are connected at a distance from each other by means of a connecting rod (1) arranged between them, to which the poles are connected by means of articulation parts (2). The poles joined together by means of the connecting rod (1) are on the same side of the users in a situation of use.

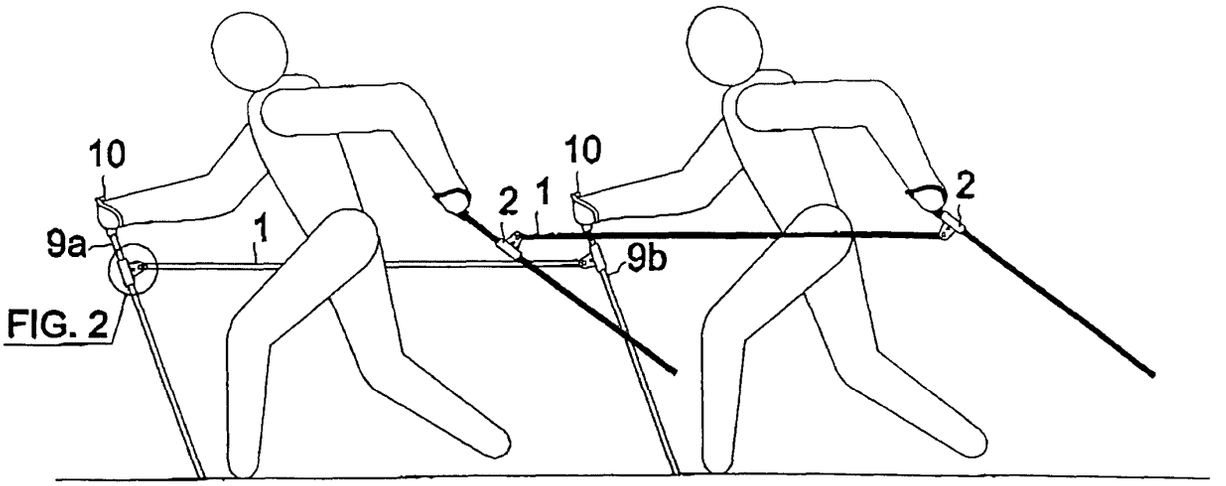

FIG. 2

FIG. 1

EP 1 188 461 A1

Description

[0001] The present invention relates to a pole arrangement for use in exercise with poles, as defined in the preamble of claim 1.

[0002] From the patent publication US 4,786,082 is previously known a conventional pair of poles, in conjunction with the shafts of which are articulated, at a suitable height, flat seat components compatible with each other. In use, the seat components are turned to a perpendicular orientation with respect to the longitudinal axis of the pole and fixed rigidly to each other, whereby they form a flat seat between the poles. In this arrangement is, however, used only one pair of poles, which cannot be used as tandem poles for pair exercise.

[0003] There are persons who are unable, or for whom it is difficult, to move without an assisting person due to, for example, physical limitations following from an illness or injury. For example, persons recovering from a physical injury usually need an assisting person and/or aids, for example, walking sticks, for moving and rehabilitation.

[0004] The aim of the present invention is to provide a pole arrangement by means of which the assisting person and the person being assisted are connected with each other in a manner which makes possible and facilitates exercise with poles, for example, walking with poles or skiing, for the person with limited abilities. This arrangement is also well-suited for use as a rehabilitation aid, among others.

[0005] The aim of the invention can be accomplished by means of the pole arrangement defined in the characterising part of claim 1.

[0006] Preferred embodiments of the invention are described in the dependent claims.

[0007] The invention is described in greater detail in the following, with reference to the appended drawings showing the pole arrangement relating to the invention, in which

Figure 1	shows the pole arrangement in use.
Figure 2	shows the articulation between the pole and a connecting rod.
Figures 3 and 4	show two other embodiments.

[0008] Figure 1 shows that the pole arrangement comprises two separate pairs of poles. A pair of poles consists of two previously known poles 9a and 9b arranged at a distance from each other. Of these, pole 9a is the front pole and pole 9b the back pole. As material for the poles 9a and 9b are preferably used previously known materials used in poles, such as composite, fibreglass or aluminium.

[0009] Between the front pole 9a and the back pole 9b is arranged a connecting rod 1 which is connected at its ends to the shaft part of the poles 9a, 9b by means of articulations parts 2. The poles 9a and 9b joined together by means of the connecting rod 1 are on the same side of the users in the situation of use. The articulation part 2 is connected to the poles 9a, 9b by means of a sleeve-like screw fastening 3 which is locked in place by a clamp means 4, for example, a clamping screw. The attachment of the articulation part 2 to the pole and the jointing of the connecting rod 1 to the articulation part 2 are shown in Figure 2. The joint is formed in a lug 3a formed in the sleeve-like screw fastening 3. At the end of the connecting rod 1, or in a part 6 solidly fixed to it, is formed a hole. The connecting rod 1 is articulated by means of a joint pin 5 passed through the hole formed in the lug 3a and the hole in the connecting rod, the said pin being connected to the articulation part 2 of the pole 9a, 9b. The pole 9a, 9b and the connecting rod 1 will then rotate with respect to each other around the longitudinal axis of the joint pin 5, while the contacting surfaces of the articulation part 2 and the counterpart 6 act as bearing areas. Thus it is advantageous to provide both poles 9a, 9b in the pair of poles with a grip10 and a hand strap which are designed in such a way that the plane determined by the users' wrists and the poles 9a, 9b is substantially parallel with the connecting rod 1. In other words, the axis of rotation between the hand and the pole 9a, 9b is parallel with the axis of rotation between the pole 9a, 9b and the connecting rod 1.

[0010] Due to the sleeve-like screw-fastening arranged in the pole 9a, 9b, the height of the pivot in the pole shaft can be adjusted by unscrewing the clamping screw 4, moving the movable joint part 3 to the desired height, and tightening the clamping screw 4. The pivots, that is, the ends of the connecting rod 1 are attached to the poles 9a, 9b preferably below the grip 10, however, at least about midway of the overall height of the pole 9a, 9b (in the vertical position of the pole).

[0011] Figure 3 shows another preferred embodiment of the invention. Compared with the pole arrangement described above, the difference is an additional supporting structure shown in broken lines. The additional supporting structure comprises second articulation parts 7, the structure and operation of which correspond to the structure and operation of the articulation parts 2. The second articulation parts 7 are attached to the poles 9a, 9b below the articulation parts 2, below the midway level in the elevation of the pole 9a, 9b (in the vertical position of the pole). To the second articulation 7 of the front pole 9a is attached one end of an additional shaft part 8. Similarly, in the second articulation 7 of the back pole 9b is attached one end of a second additional shaft part 8. In the lower part of the connecting rod 1 is fixed a slide guide 9 to which the other ends of the additional shaft parts 8 are arranged so as to be sliding. In this way, the other ends of the additional shaft parts 8 will be able to slide parallel to the connecting rod 1.

[0012] Figure 4 shows a third preferred embodiment of the invention. In this embodiment, in two successive

poles 9a, 9b is arranged an upper connecting rod 1 and below the connecting rod 1 an additional shaft part 8, the structure of which corresponds to that of the connecting rod 1. In such a case, the successive poles 9a and 9b are guided by forced operation to move mutually parallel and in the same angular position.

[0013] The advantage of the last two embodiments is that if a person has difficulties in, for example, controlling movements or stopping, these can be eliminated by means of the additional structures described above.

[0014] The length of the connecting rod 1 is preferably greater than the length of pole 9a or 9b, whereby there is sufficient room for the movement of legs between the persons using the tandem poles for pair exercise.

Claims

1. A pole arrangement used as tandem poles for pair exercise, **characterised in that** it consists of two pairs of poles (9a and 9b), the poles (9a and 9b) of which pairs of poles are connected at a distance from each other by means of a connecting rod (1) arranged between them.

2. A pole arrangement as claimed in claim 1, **characterised in that** the poles (9a, 9b) are connected to the connecting rod (1) by means of an articulated part (2).

3. A pole arrangement as claimed in claim 2, **characterised in that** the articulated part (2) is connected to the poles (9a, 9b) by means of a screw fastening (3) which can be tightened by a clamp means (4) and by means of a sleeve (6) and a joint pin (5) fitted together with the connecting rod (1).

4. A pole arrangement as claimed in any of the claims 1 to 3, **characterised in that** it comprises second shaft parts (8) which are connected at their first ends by means of articulations (7) to the poles (9a, 9b), and at their other ends to the connecting rod (1) or another pole (9a, 9b).

5. A pole arrangement as claimed in any of the claims 1 to 4, **characterised in that** both poles (9a, 9b) in the pair of poles are provided with a grip (10) and a hand strap which are designed in such a way that the plane determined by the users' wrists and the poles is substantially parallel with the connecting rod (1).

6. A pole arrangement as claimed in claim 5, **characterised in that** the ends of the connecting rod (1) are attached to the poles (9a, 9b) below the grip (10), however, at least about midway of the overall height of the pole (9a, 9b).

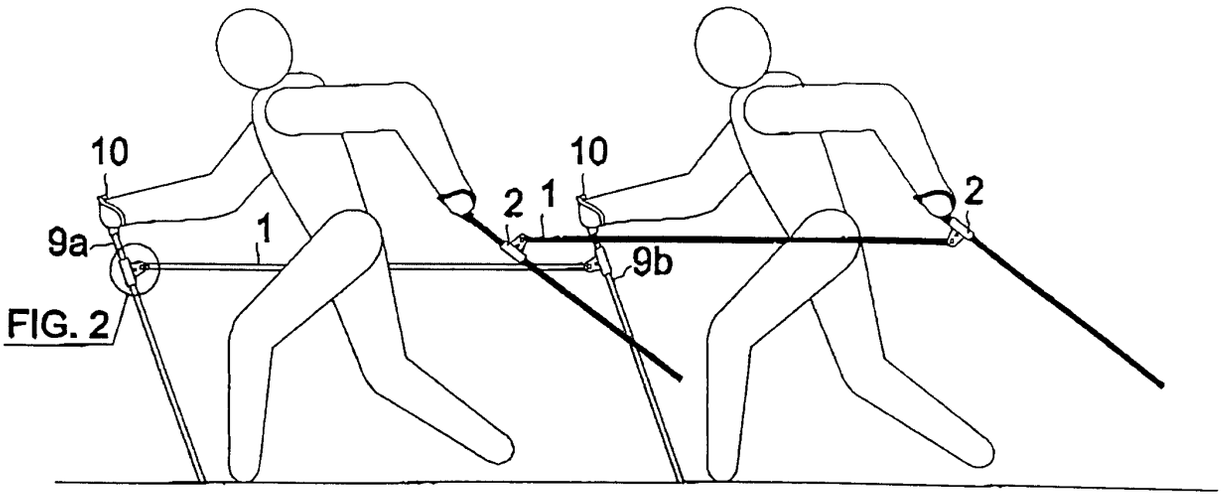

FIG. 2

FIG. 1

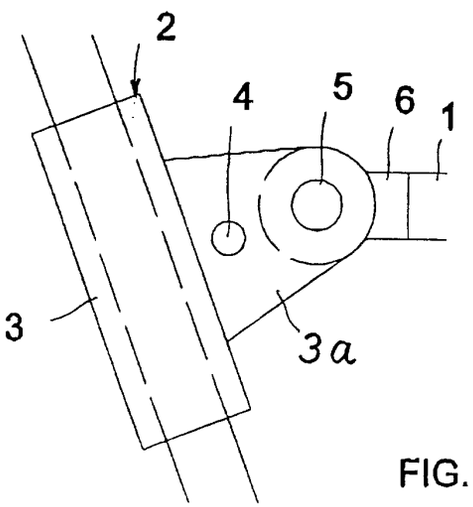

FIG. 2

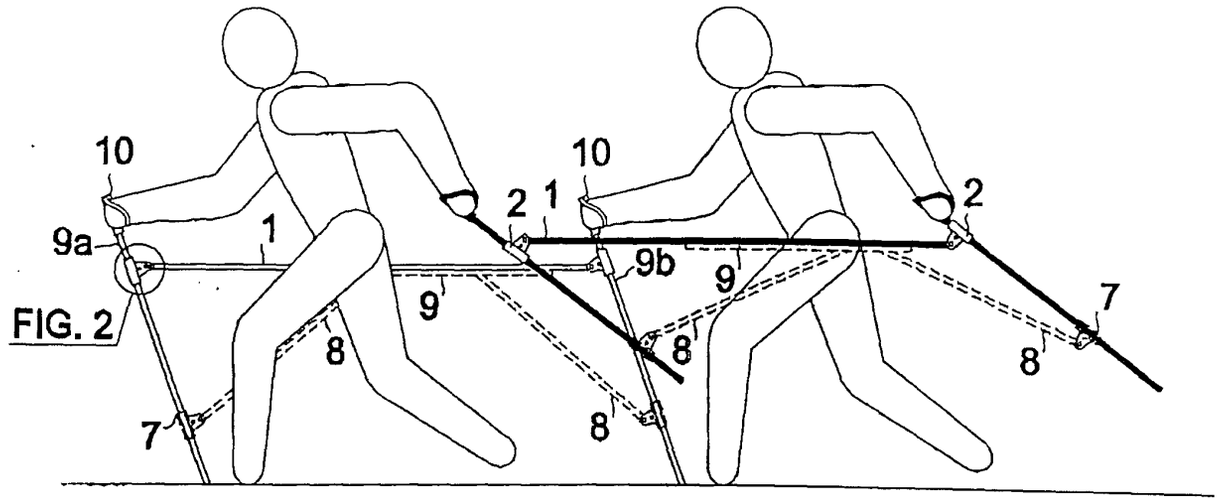

FIG. 3

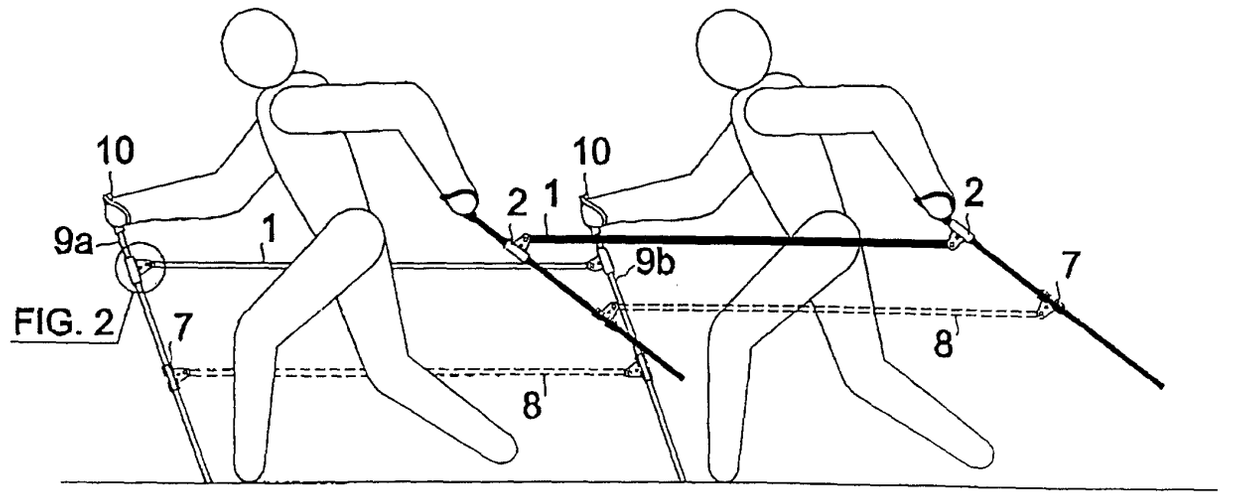

FIG. 4

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EUROPEAN SEARCH REPORT

Application Number
EP 00 66 0093

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X A	US 4 786 082 A (SWIETLIK DANIEL A) 22 November 1988 (1988-11-22) * column 2, line 33 - column 6, line 28; figures 1-3 *	1,2 3-6	A63B23/04
A	US 5 181 894 A (SHIENG CHEN M) 26 January 1993 (1993-01-26) * the whole document *	1	
A	US 5 758 388 A (BJERKE HARALD) 2 June 1998 (1998-06-02) * abstract; figures *	5	

TECHNICAL FIELDS SEARCHED (Int.Cl.7)
A63B A63C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	18 December 2001	Lucas, P

CATEGORY OF CITED DOCUMENTS

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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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18-12-2001

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