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(54) **Device for the adjustment of a crooked pelvis.**

(57) The invention in this case concerns a device (10) for the adjustment of a crooked pelvis or a displaced hip-joint. The device (10) is comprised of a support member (12) which is made of two bar-shaped bodies (12) which are fastened to each side of the foot-end of a bench (18) facing each other. Between the two bar-shaped bodies (12) are fastened two resistance members (14, 14') in the form of two rolls (14, 14') which are joined at their outer ends. The device (10) contains even a support body (16) which can be fastened between the two bar-shaped bodies (12). To use the device (10) a person with, for example a crooked pelvis, lays down on his back on the bench (18) and places the heels on the support member (16) and the top of one foot lies against one of the rolls (14) while the bottom of the other foot makes contact with the other roll (14'). The crooked orientation of the pelvis can now be corrected when the top of one foot presses against the first roll (14) at the same time when the bottom of the other foot presses against the other roll (14').

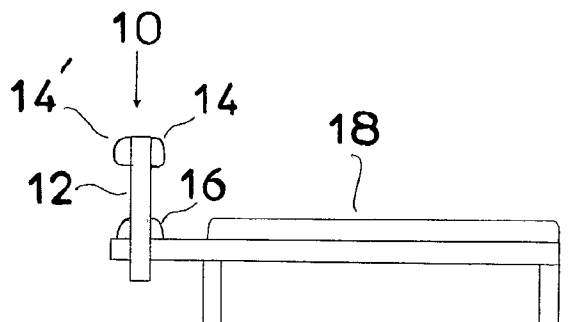


Fig.1

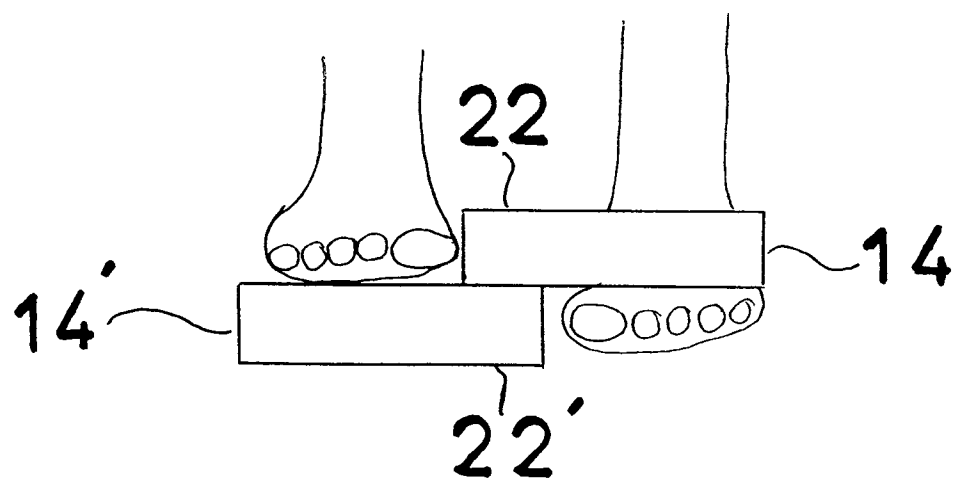


Fig.3

In this case the invention concerns a device for the adjustment of a displaced or crooked pelvis or a displaced or crooked hip-joint.

The bad habit of supporting one's self more on one leg than on the other leg can cause a tilting in the orientation of the pelvis and at the same time an apparent shortening of one of the legs. This increases the load on this side can give pains in the hip or leg. The crooked orientation of the pelvis is transmitted upwards and can give back pain and sciatica. With the crooked orientation of the pelvis there is produced with every movement an unnatural loading on the muscles, on the disks in the spine and on the joints, for example the hip-joint and the knee; the result of which is wear and when blockages occur, then the blood circulation is hindered.

The purpose of the invention under consideration is to produce a device to adjust a crooked or displaced pelvis or a crooked or displaced hip-joint, so that the crooked position or displacement is eliminated and the above named problems are cured. The means by which this invention makes this possible are stated in the characteristics of the invention in the patent claims. The apparatus can even be used for traction treatments (stretching) of a sprained wrist or knee.

Examples of the form of the invention are further explained in the descriptions of the drawings, of which Fig. 1 shows a side view of the first design of the device according to the invention when it is mounted on a bench; Fig. 2 shows a side view of the device according to Fig. 1 viewed from the bench's foot end; Fig. 3 shows a top view of part of the device based on Fig. 1 and Fig. 2; Fig. 4 shows a top view of another design of the device according to the invention and Fig. 5 shows a side view of the short end of the device based on Fig. 4.

Figures 1, 2 and 3 show the first design of the device according to the invention. Similar parts have been given similar reference numbers in these figures. Device 10 for the adjustment of a crooked pelvis or a displaced hip-joint is comprised of a support member 12 which consists of two bar-shaped bodies 12, which are intended to be fastened to the foot end of a bench 18, on their respective long sides of the bench 18 so that they are set facing each other (compare Fig. 1 and Fig. 2). The device 10 comprises even two resistance members 14, 14' which can be fastened between the two bar-shaped bodies 12. Fig. 1 and Fig. 2 show the resistance members 14, 14' fixed between the bar-shaped body 12. The resistance members 14, 14' are preferably made of two rolls 14, 14' (for example leather-covered rolls) which are joined at their ends 22, 22' as shown in Fig. 3. This makes it possible to fasten the resistance bodies 14, 14' between the bar-shaped body 12 in the manner shown in Fig. 1, such that the first roll 14 is on the same plane but in front of the second roll 14'. This relationship is shown in Fig. 2 in which the first roll 14

is drawn with hatching lines. Device 10 also includes a support member 16 which can be fastened between the two bar-shaped bodies 12 with two fasteners 20 (see Fig. 2). Support body 16 is preferably a long, leather-clad, pillow-like body.

In order to use device 10 which is shown in Fig. 1, 2 and 3, by a person with for example a crooked pelvis, a person lies on their back on the bench 18 and places their heels on the support body 16 and the top of one of the feet (the foot of that leg which appears to be shorter) against the first roll 14 and the bottom of the other foot (the foot of that leg which appears to be longer) against the other roll 14'. The crooked position of the pelvis can now be corrected by pressing the top side of one of the feet against the first roll 14 while at the same time the bottom of the other foot is pressed against the other roll 14'. In this way one pulls with the shorter leg while one presses in the opposite direction with the longer leg. Fig. 3 shows how the feet are placed. The two rolls 14, 14' can be fastened at different heights relative to the bench 18 so that the distance between the rolls 14, 14' and the support member 16 can be changed to individually fit different people. Furthermore, both rolls 14, 14' can be fastened between the two bar-shaped bodies 12 after a rotation of 180° has been made of the rolls 14, 14' so that the roll 14 is placed in the same plane, but behind the second roll 14', that is, opposite the relationship shown in Fig. 1. Device 10 can even be used by a person who lies on their stomach on bench 18. Support member 16 then provides support for the person's toes. Otherwise the adjustment of a crooked pelvis is done in the manner described above.

Fig. 4 and 5 show another design of the device according to the invention. Device 40 for the adjustment of a displaced hip-joint or a crooked pelvis is shown in Fig. 4 in a top view and contains a support member 50 which, for example, is intended to be placed on a support surface 52, such as a floor. The support member 50 can be assumed to be comprised of two parts, that is, first part 46 and a second part 48, which certainly could be one piece, but the second part's (48) upper surface is parallel with, but further from the support surface 52 than the first part's (46) upper surface, as presented in Fig. 5. Device 40 includes even a resistance member 42 which is in one piece together with the first part (46) of the support member 50, together with another resistance member 44 which can be fastened to the second part (48) of the support member 50. Resistance member 44 is adjustable at right angles to its length along the length of second part 48 of the bottom member 50, so that the resistance member 44 can be slid to the position shown in Fig. 4 with the dashed lines (44') and fastened there with fasteners, which are not shown.

Device 40 is used to correct a crooked pelvis or a displaced hip-joint if a person places the bottom of one foot on the resistance member 42 and places the

other foot under the resistance member 44, then the person presses the bottom of the foot against the resistance member 42 at the same time the person presses the top surface of the other foot against the resistance member 44. In this manner the crookedness is removed from the pelvis. By moving resistance member 44 from the position shown using solid lines to the position shown using dashed lines 44' in Fig. 4, device 40 is changed so that it is suitable for placing the left foot and right foot, respectively, on the resistance member 42.

Device 40 includes even a fastening member, not shown, which can be used to fasten device 40 to, for example, the leg of a bed with the short side, shown in Fig. 5, against a support surface, for example the floor, through which the crooked pelvis or the displaced hip-joint can be adjusted when the person lies on their back on the support surface. Likewise, device 40 can be used by a person in an upright position as well as while lying on their back.

Device 40 can even be supplemented with an axel which is provided with a pressure body which can be rotated, for example, in the form of a roller. The axel can also be fastened to the other part 48 of the support member 50, through which device 40 can be used for reflexology when a person, in this case, places the bottom of the foot on the roll and performs reflexology.

The design forms shown in Fig 1-5 supply only an example of how the invention can be put into practice and do not limit the invention, whose extent of protection is given in the patent claims.

The examination of the Swedish patent Office is finished, which means that the application for a patent is admitted.

Claims

1. Device (10;40) for the adjustment of a displaced hip-joint or a crooked pelvis of a person is **characterised** in that the device (10; 40) includes a support member (12; 50) and two resistance members (14, 14'; 42, 44) devised to be with the support member (12; 50), of which resistance members (14, 14'; 42, 44) at least one can be displaced relative to the support member (12; 50), and is devised with a spacing so that it is suitable for contact with the top of one foot and the other for contact with the bottom of the other foot, when the legs are extended, through which the adjustment described occurs when the top of one foot is pressed against the described resistance member while at the same time the bottom of the other foot is pressed against the other resistance member.

2. Device (10) in association with claim 1, is **characterised**

terised in that the bar-shaped support members (12) are made to be placed facing each other on the sides of the foot end of a bench (18) and can be fastened to the resistance members (14, 14') and to the bench; between the two bar shaped bodies (12) these rolls (14, 14') can be fastened.

3. Device (10) in connection with claim 2, is **characterised** in that the rolls (14, 14') between each other are joined by their ends (22, 22') so that the center-line of the axel together with one of the rolls longitudinal axis are parallel with the center-line of the axel together with the other rolls longitudinal axis.

4. Device (10) in connection with claim 3 is **characterised** in that the device (10) also includes a support body (16) which can be fastened between the bar-shaped members (12) which are intended to provide support for the heels of both of the feet or the toes when the top of one of the feet presses against one of the rolls at the same time as the bottom of the other foot presses against the other roll.

5. Device (10) in connection with claim 4 is **characterised** in that the two rolls (14, 14') joined together can be fastened between the bar-shaped members (12) at a height which can be adjusted relative to the surface where one lies on the bench (18).

6. Device (40) in association with claim 1, is **characterised** in that one of the resistance members (42) is a support member (42) which is in one piece together with the first portion (46) of the support member (50) together with that the other resistance member (44), which can be fastened, comprises one support device (44) which is adjustable at right angles to its length along another portion (48) of the support member (50) so that the support member (42) is suitable for contact with the bottom of one foot and the support device (44) is suitable for contact with the top of the other foot when the legs are stretched out.

7. Device (40) in connection with claim 6 is **characterised** in that it also includes a fastening mechanism on the support member (50) so that the device can be fastened to, for example, the leg of a bed in such a way that the described adjustment can be performed when a person lies on their back.

8. Device (40) in connection with claim 7, is **characterised** in that it also can be supplemented with an axel containing a pressure body capable of being rotated, which axel can be fastened to the

other part (48) of the support member (50), through which the device (40) can be used for reflexology treatments.

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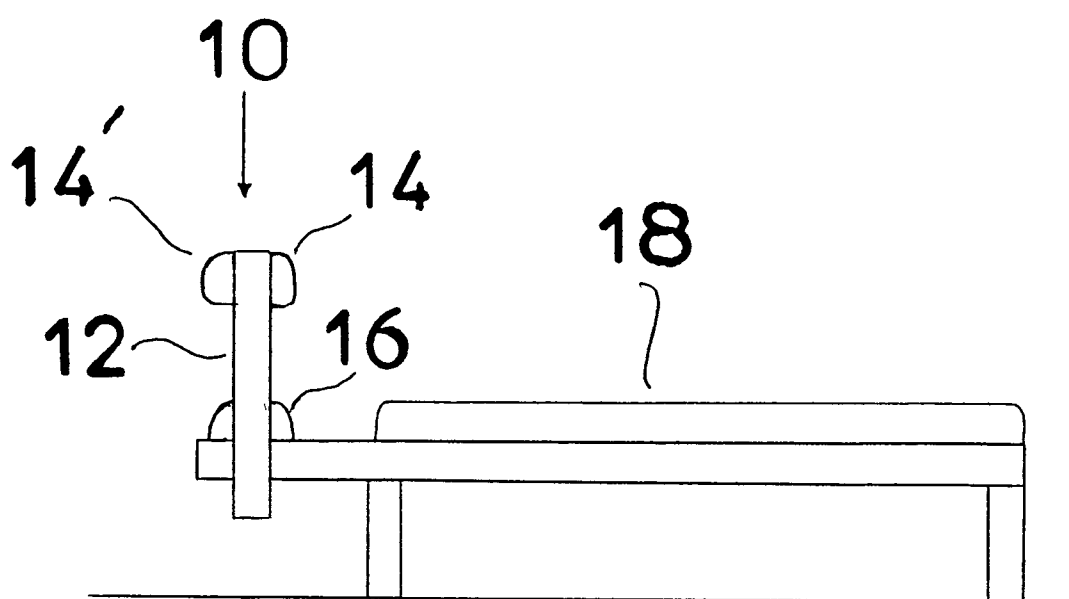


Fig.1

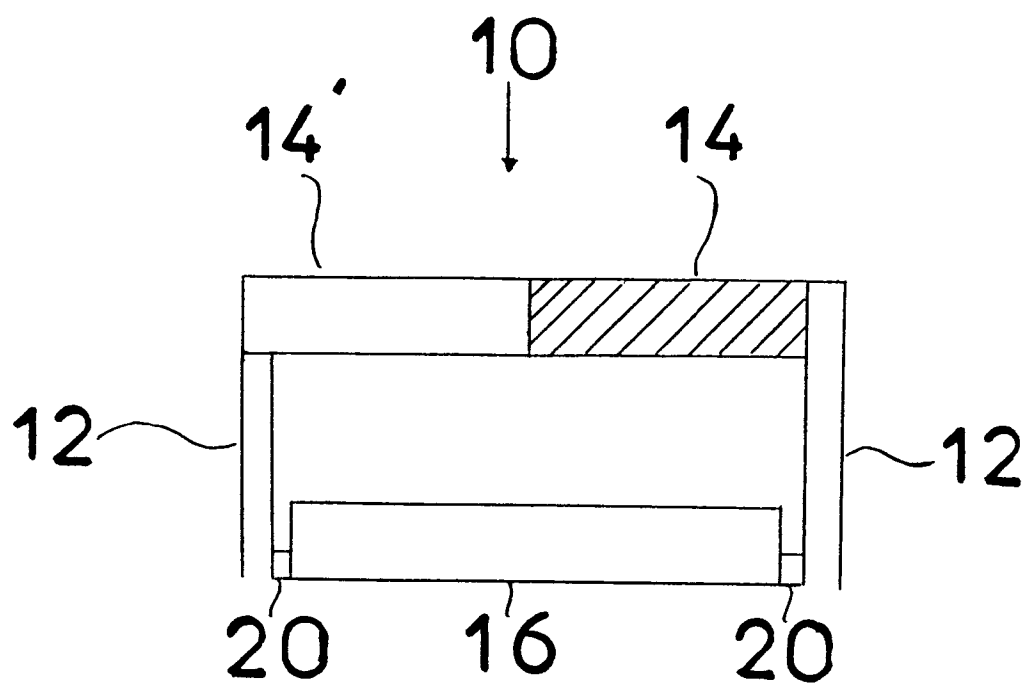


Fig. 2

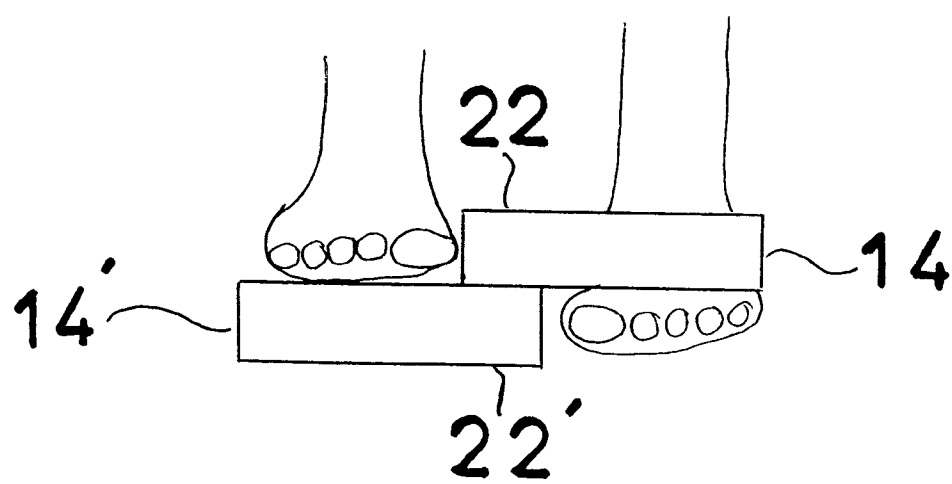


Fig. 3

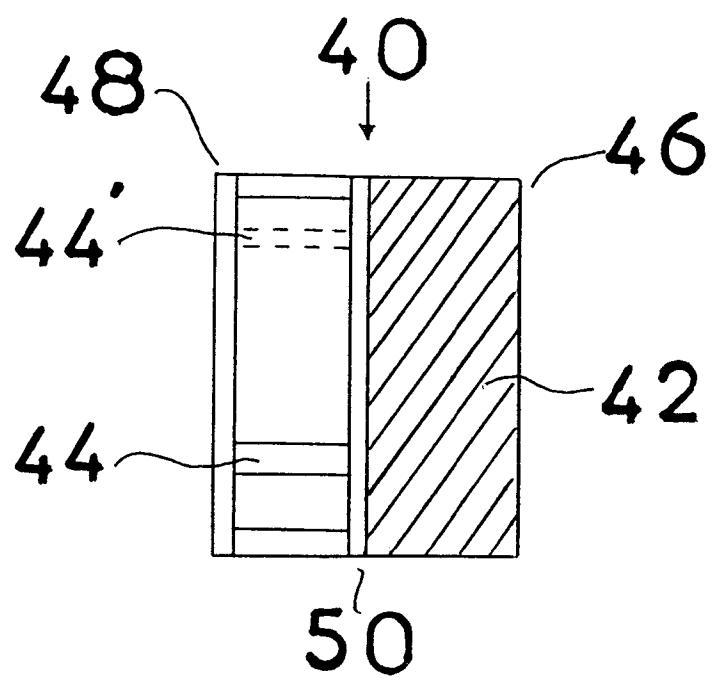


Fig. 4

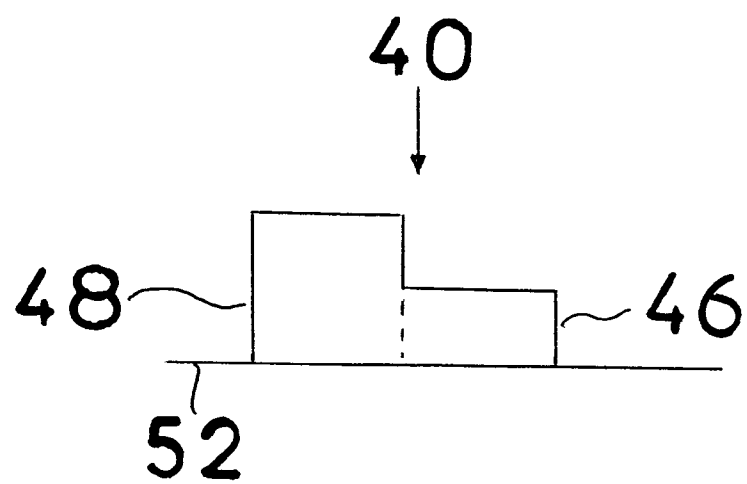


Fig. 5



European Patent
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EUROPEAN SEARCH REPORT

Application Number

EP 92 85 0018

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. CL5)
A	DE-A-4 000 428 (GRIFKA) * column 3, line 23 - line 25; figure 5 *	1	A63B23/04 A63B21/002
A	GB-A-1 534 737 (TURNER) * page 2, line 16 - line 20; figure 7 *	1	
A	DE-A-3 436 554 (GARBE) * page 7, paragraph 4; figures *	1	
A	US-A-3 887 180 (BERMAN) * column 2, line 6 - line 18; figures 1-2 *	1	
			TECHNICAL FIELDS SEARCHED (Int. CL5)
			A61H A63B
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 11 MARCH 1992	Examiner MARK JONES
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			

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