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(54) **Support frame**

(57) A support frame including two side parts (12) interconnected by an end part (14). The end part (14) has an upper member (30) with a curved mid section (38) defining a recess which can be selectively pointed down

in a first position and up in a second position, to either respectively locate beneath the top of a toilet bowl, or to support a seat (44, 46) for use on a non conventional toilet or in a shower.

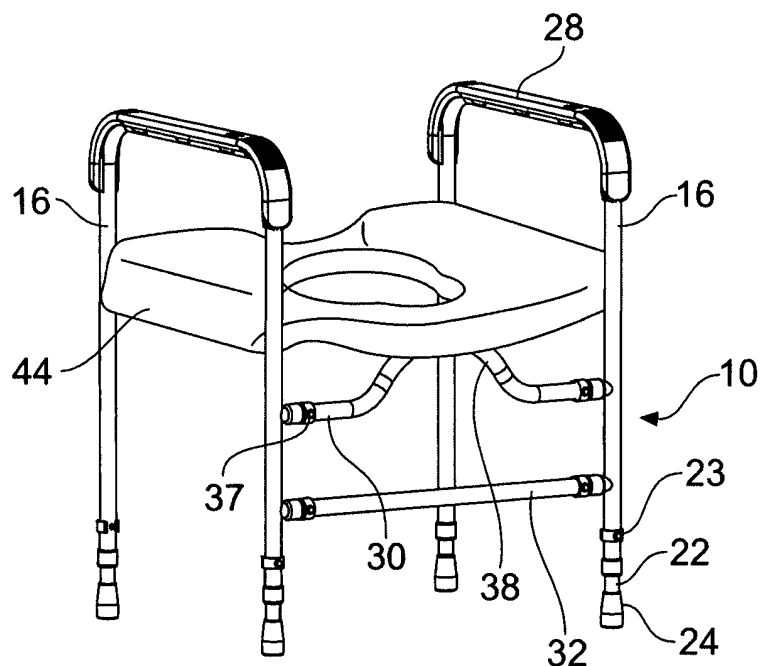


Fig. 1

Description

[0001] This invention concerns improvements in or relating to support frames and also support assemblies, which may be used as any of a toilet frame, toilet seat or shower seat.

[0002] Toilet frames are often required by the elderly or disabled to assist a person in sitting down onto a toilet and subsequently standing up. Such frames normally provide a handrail or similar support on either side of the toilet. The frames are often required to mount toilet seats for use other than on a conventional toilet, for instance for use as a commode. Also for some persons it is required or necessary to have a seat for use when having a shower, and an appropriate seat and support frame is required for this. To provide separate frames for these various tasks, as may be required for instance in a care home or the like, can involve a not inconsiderable cost, and also require appropriate storage facilities.

[0003] According to the present invention there is provided a support frame, the frame including two ground engaging spaced side parts, and an end part interconnecting the two side parts substantially between respective ends thereof to define a substantially U shape in plan view, the end part including an upper member extending between the side sections, the upper member including a recessed mid section such that in a first position the recess extends downwardly to permit the mid section to extend partially beneath the bowl of a toilet, and in a second position the recess extends upwardly to permit a seat member to be supported thereby.

[0004] At least the mid section of the upper member is preferably selectively rotatable relative to the side parts, between the first and second positions.

[0005] The length of the upper member may be adjustable. The upper member may include two end portions which each extend from a respective one of the side parts, and a central portion which includes the recess. The central portion may be telescopically mountable relative to the end portions, and selectively rotatable relative thereto between the first and second positions.

[0006] The end part may also include a lower cross member extending between the side parts.

[0007] Each side part preferably includes a pair of spaced ground engaging legs. The height of the legs is preferably adjustable, and each leg may be provided with a height adjustable foot.

[0008] Each side part preferably includes an upper cross member extending between the legs, which upper cross member can be used as a support arm for a user of the frame.

[0009] Each side part preferably includes a lower cross member extending between the legs spaced below the respective upper cross member.

[0010] The lower cross member on each side may receive a seat member supportingly extending therebetween. The frame is preferably arranged such that the lower cross members are at substantially the same height

as the recessed section of the end part upper member when in the second position, whereby a seat member extending between the lower side part cross members is also supported by the recessed section of the end part upper member.

[0011] Means may be provided to fix the frame to the ground in a required position.

[0012] The invention also provides a support assembly, the assembly including a frame according to any of the preceding nine paragraphs, and a seat member extendable between the side parts.

[0013] The seat member may have formations which clip onto the lower cross members of the side parts when pushed down thereonto.

[0014] According to a first aspect of the invention the seat member is a raised toilet seat usable on a conventional toilet, with the mid section of the end part upper member in the first position.

[0015] In a second aspect of the invention the seat member is a toilet seat usable other than on a conventional toilet, with the mid section of the end part upper member in the second position.

[0016] The seat member may have a formation which clips onto the mid section of the end part upper member when pushed down thereonto.

[0017] According to a third aspect of the invention the seat member is a shower seat usable by a person sitting whilst taking a shower, with the mid section of the end part upper member in the second position.

[0018] 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 perspective front view of a support assembly according to the invention in a first arrangement;

Fig. 2 is a rear perspective view of a support assembly according to the invention in a second arrangement;

Fig. 3 is a front perspective view of a support arrangement according to the invention in use with a conventional toilet; and

Fig. 4 is a diagrammatic exploded perspective front view of a support frame according to the invention.

[0019] The drawings show a support frame 10 usable in three different forms as illustrated by Figs. 1, 2 and 3. The frame 10 includes two side parts 12 interconnected by an end part 14 substantially at one end of the side parts 12, to define a substantial U shape in plan view.

[0020] Each side part 12 includes a substantially n shape member 16 defining an upper cross member 18 and two side limbs 20. Telescopic leg extensions 22 extend into each of the side limbs 20 to permit adjustment of the height of the side parts 12. A lock 23 is provided for retaining each of the extensions 22 in a required po-

sition relative to the respective side limb 20. Rubber feet 24 are provided at the lower ends of the leg extensions 22 to provide grip on floors. A lower cross member 26 extends between the side limbs 20 spaced beneath the upper cross member 18. Arm mouldings 28 fit on top of the upper cross members 18 to facilitate gripping of the frame 10 by a user.

[0021] The end part 14 comprises upper and lower members 30, 32. The upper member 30 comprises end bars 34 respectively extending from one of the side limbs 20, and a central section 36 which telescopically mounts to the end bars 34 to provide for length adjustment. Locks 37 are provided for retaining the central section 36 in a required position relative to the end bars 34. The central section 36 has a curved mid section 38 defining a recess. The central section 36 can be orientated as shown in Fig. 4 with the recess extending upwardly, or with the recess extending downwardly as shown in Fig. 3. The lower member 32 is similar to the upper member 30 with end bars 40, and a central section 42 telescopically mounted thereto, but in this instance the central section 42 is straight.

[0022] There is thus described a frame 10 which can be height and width adjusted as required, and can be adjusted to accommodate non level flooring. In Fig. 1 the frame 10 is shown being used with a toilet seat 44 as may be used with a commode. In this instance the recess in the mid section 38 points upwardly. The toilet seat 44 is of plastics material, and has formations on the underside to clip onto the lower cross members 26 and also the mid section 38.

[0023] Fig. 2 shows the frame 10 being used with a shower seat 46, of an appropriate profile to permit a person sitting thereon to wash themselves whilst in a shower. Again the mid section 38 will be provided pointing upwardly, and formations are provided on the underside of the seat 46 engageable with the mid section 38 and the lower cross members 26.

[0024] Fig. 3 shows the frame 10 being used as a toilet frame with a conventional toilet 48. In this instance the mid section 38 points downwardly such that the recess provided thereby passes underneath the toilet bowl 50 to enable the frame 10 to be positioned correctly with the side parts 12 on either side of the toilet 48. The width and height adjustment of the frame 10 permits use with a wide range of toilet sizes. If required a raised toilet seat (not shown) could be mounted to extend between the lower cross members 26, with appropriate formations being provided on the underside of the raised toilet seat to fit thereonto.

[0025] There is thus described a frame usable in three different applications, thereby preventing the need to have three separate frames for such applications. The frame has significant height adjustment for use by different persons and in different conditions. The frame can readily be converted for different uses. The frame though is of relatively straightforward construction, permitting inexpensive and robust manufacture, along with straight-

forward long term use.

[0026] Various modifications may be made without departing from the scope of the invention. For example, different parts of the frame may take a different shape. Different methods of adjustment could be used. In some instances it may be required to mount the frame 10 to the floor. In such instances the leg extensions 22 and feet 24 could be replaced by ground mountable leg extensions 52 as also shown in Fig. 4. The extensions 52 are similar to the extensions 22, but rather than mount the feet 24, at the lower ends of the extensions 52 annular flanges 54 with mounting holes 56 are provided.

[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 support frame, the frame (10) including two ground engaging spaced side parts (12), and an end part (14) interconnecting the two side parts (12) substantially between respective ends thereof to define a substantially U shape in plan view, the end part (14) including an upper member (30) extending between the side sections, the upper member (30) including a recessed mid section (36) such that in a first position the recess extends downwardly to permit the mid section (36) to extend partially beneath the bowl of a toilet, and in a second position the recess extends upwardly to permit a seat member (44, 46) to be supported thereby.
2. A frame according to claim 1, **characterised in that** at least the mid section (36) of the upper member (30) is selectively rotatable relative to the side parts (12), between the first and second positions.
3. A frame according to claims 1 or 2, **characterised in that** the length of the upper member (30) is adjustable.
4. A frame according to any of the preceding claims, **characterised in that** the upper member (30) includes two end portions (34) which each extend from a respective one of the side parts (12), and a central portion (36) which includes the recess.
5. A frame according to claim 4 when dependent on claim 3, **characterised in that** the central portion (36) is telescopically mountable relative to the end portions.
6. A frame according to claims 4 or 5, **characterised**

in that the central portion is selectively rotatable relative to the end portions (34) between the first and second positions.

7. A frame according to any of the preceding claims, **characterised in that** the end part (14) also includes a lower cross member (32) extending between the side parts. 5
8. A frame according to any of the preceding claims, **characterised in that** each side part (12) includes a pair of spaced ground engaging legs (20). 10
9. A frame according to claim 8, **characterised in that** the height of the legs (20) is adjustable, and each leg may be provided with a height adjustable foot (22). 15
10. A frame according to claims 8 or 9, **characterised in that** each side part (12) includes an upper cross member (18) extending between the legs (20), which upper cross member (18) can be used as a support arm for a user of the frame (10). 20
11. A frame according to claim 10, **characterised in that** each side part (12) includes a lower cross member (26) extending between the legs (20) spaced below the respective upper cross member (18). 25
12. A frame according to claim 11, **characterised in that** the lower cross member (26) on each side receives a seat member (44, 46) supportingly extending therebetween. 30
13. A frame according to claim 12, **characterised in that** the frame (10) is arranged such that the lower cross members (26) are at substantially the same height as the recessed section of the end part upper member (30) when in the second position, whereby a seat member (44, 46) extending between the lower side part cross members (26) is also supported by the recessed section of the end part upper member (30). 35 40
14. A support assembly, the assembly including a frame (10) according to any of the preceding claims, and a seat member (44, 46) extendable between the side parts. 45
15. An assembly according to claim 14, **characterised in that** the seat member (44, 46) has formations which clip onto the lower cross members (26) of the side parts when pushed down thereonto. 50
16. An assembly according to claims 14 or 15, **characterised in that** the seat member is a raised toilet seat usable on a conventional toilet, with the mid section (36) of the end part upper member (30) in 55

the first position.

17. An assembly according to claims 14 or 15, **characterised in that** the seat member is a toilet seat (44) usable other than on a conventional toilet, with the mid section (36) of the end part upper member (30) in the second position.
18. An assembly according to claims 14 or 15, **characterised in that** the seat member is a shower seat (46) usable by a person sitting whilst taking a shower, with the mid section (36) of the end part upper member (30) in the second position.

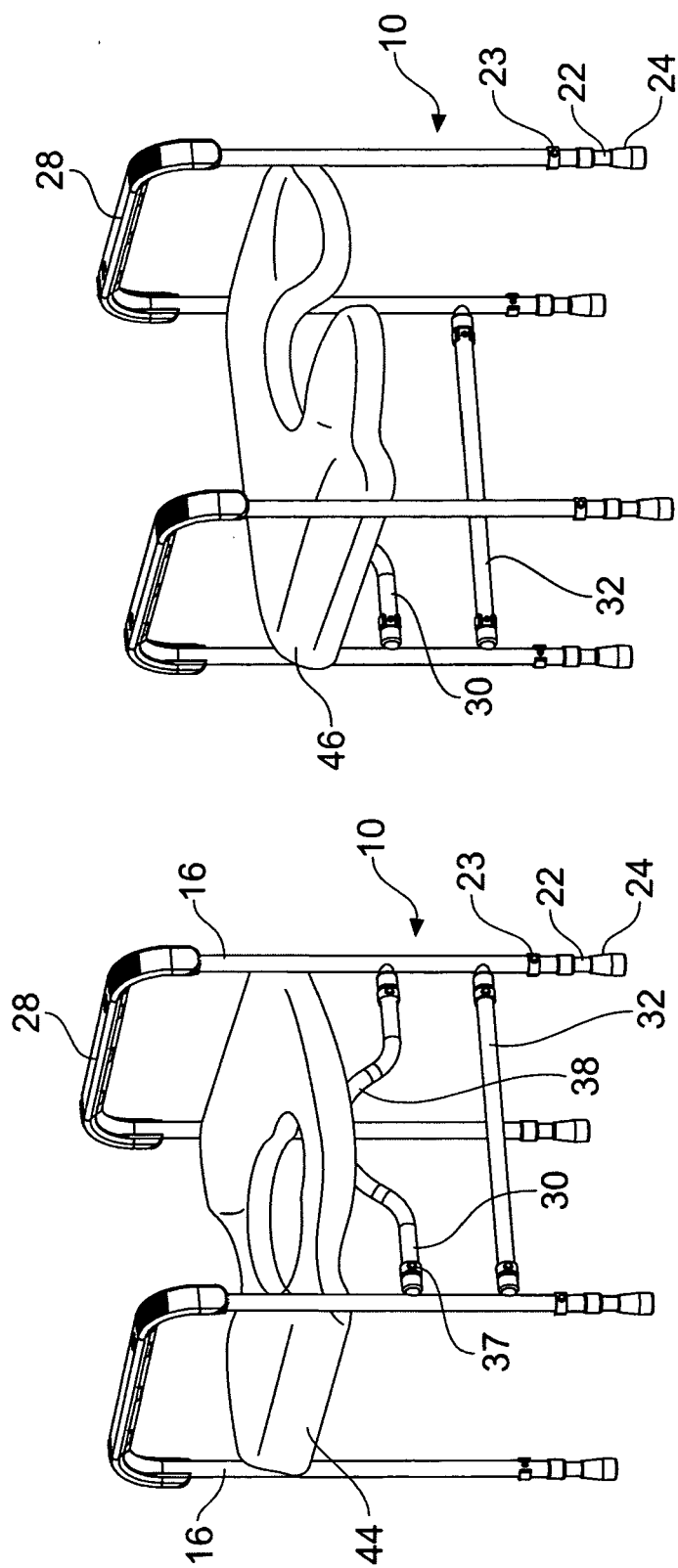


Fig. 2

Fig. 1

