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ABSTRACT

(52) U.S. Cl. 297/130

Figure 1 shows a perspective view of a three-dimensional adjustable stool assembly 10. The assembly includes a seat 11 with a backrest 30 and armrests 40. The seat 11 is supported by four legs 22. Each leg 22 has a telescopic section 23 with adjustment holes 231 and a foot plate 232. The legs are connected to the seat via brackets 21 and 25.

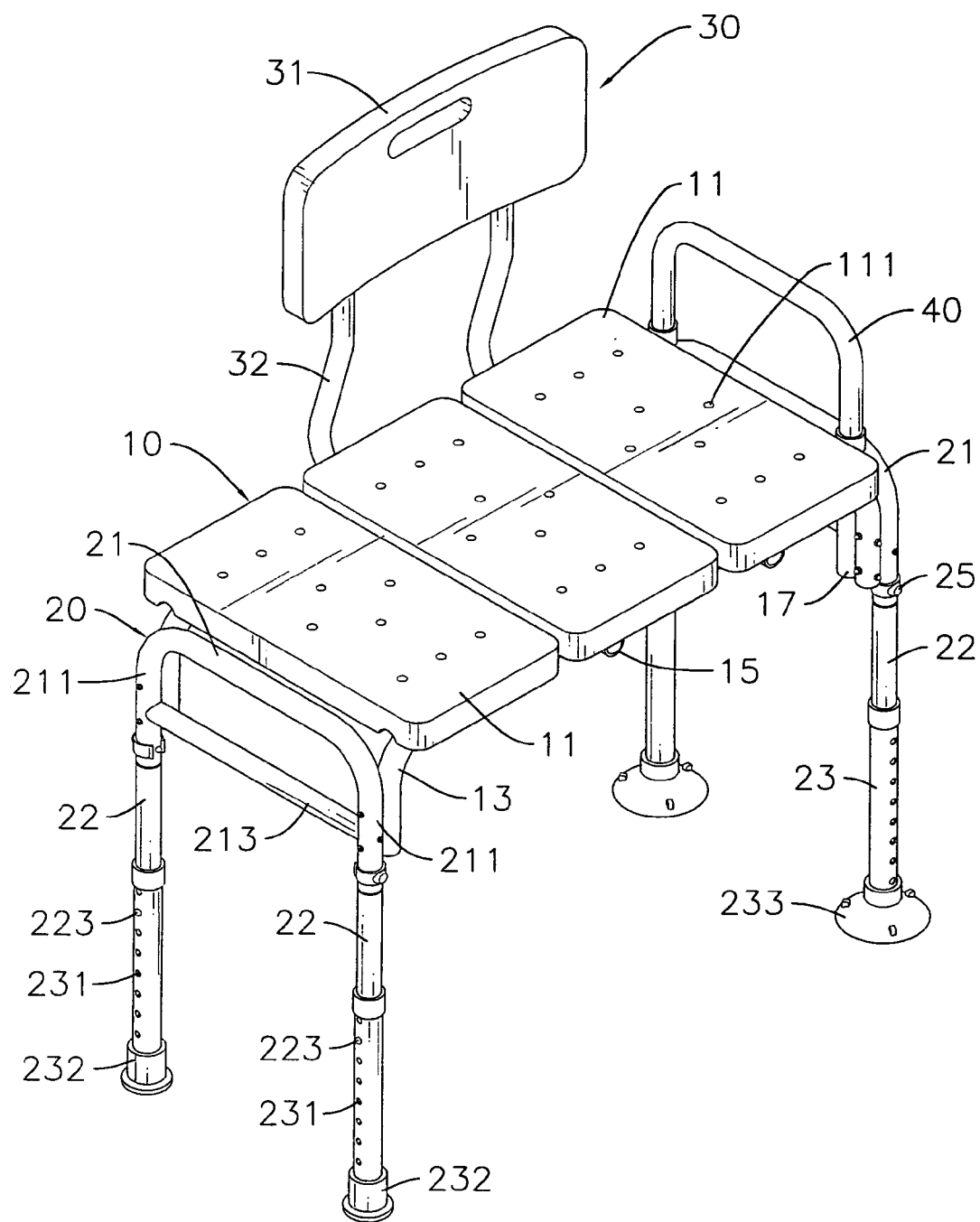


FIG. 1

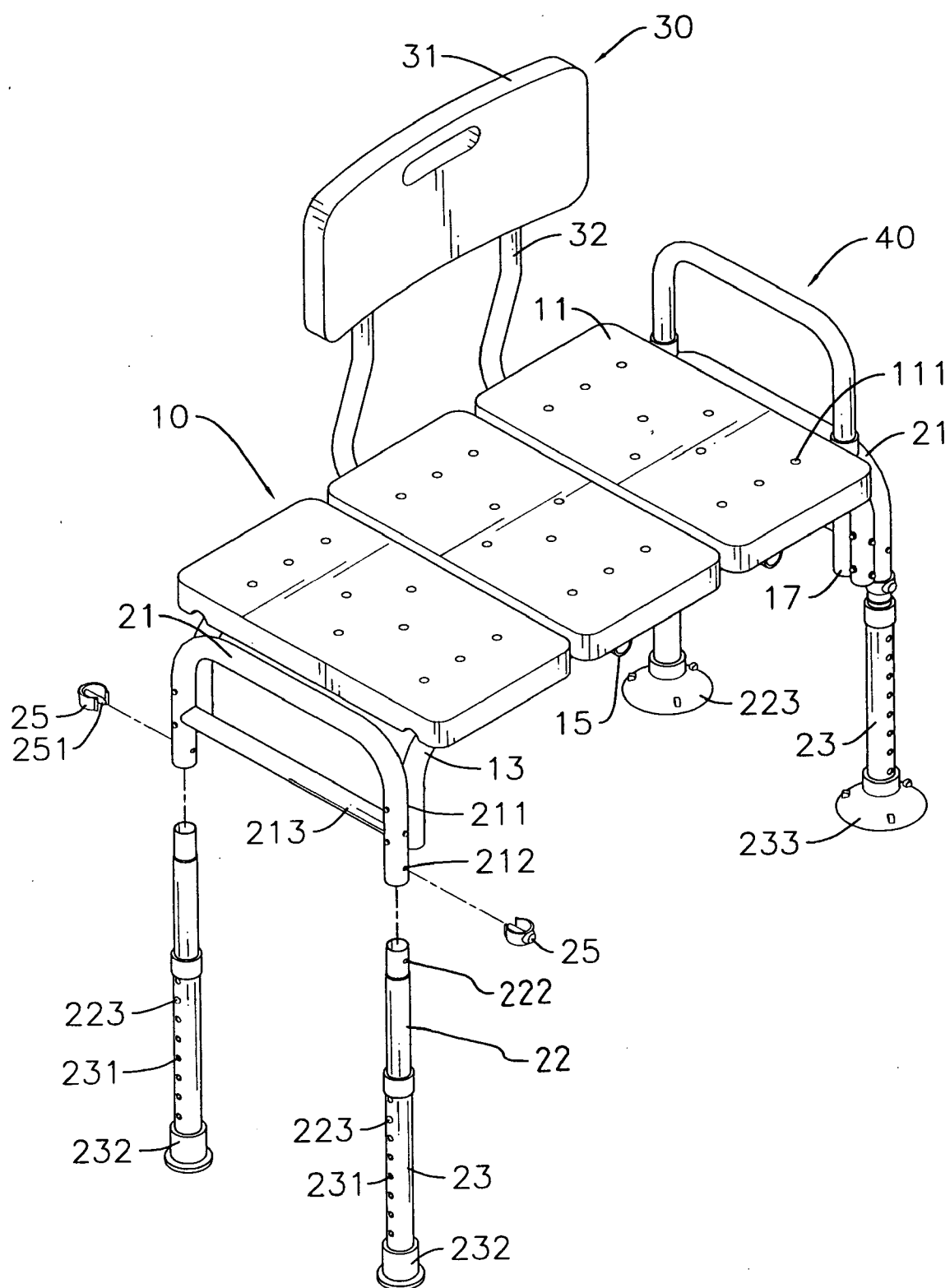


FIG. 2

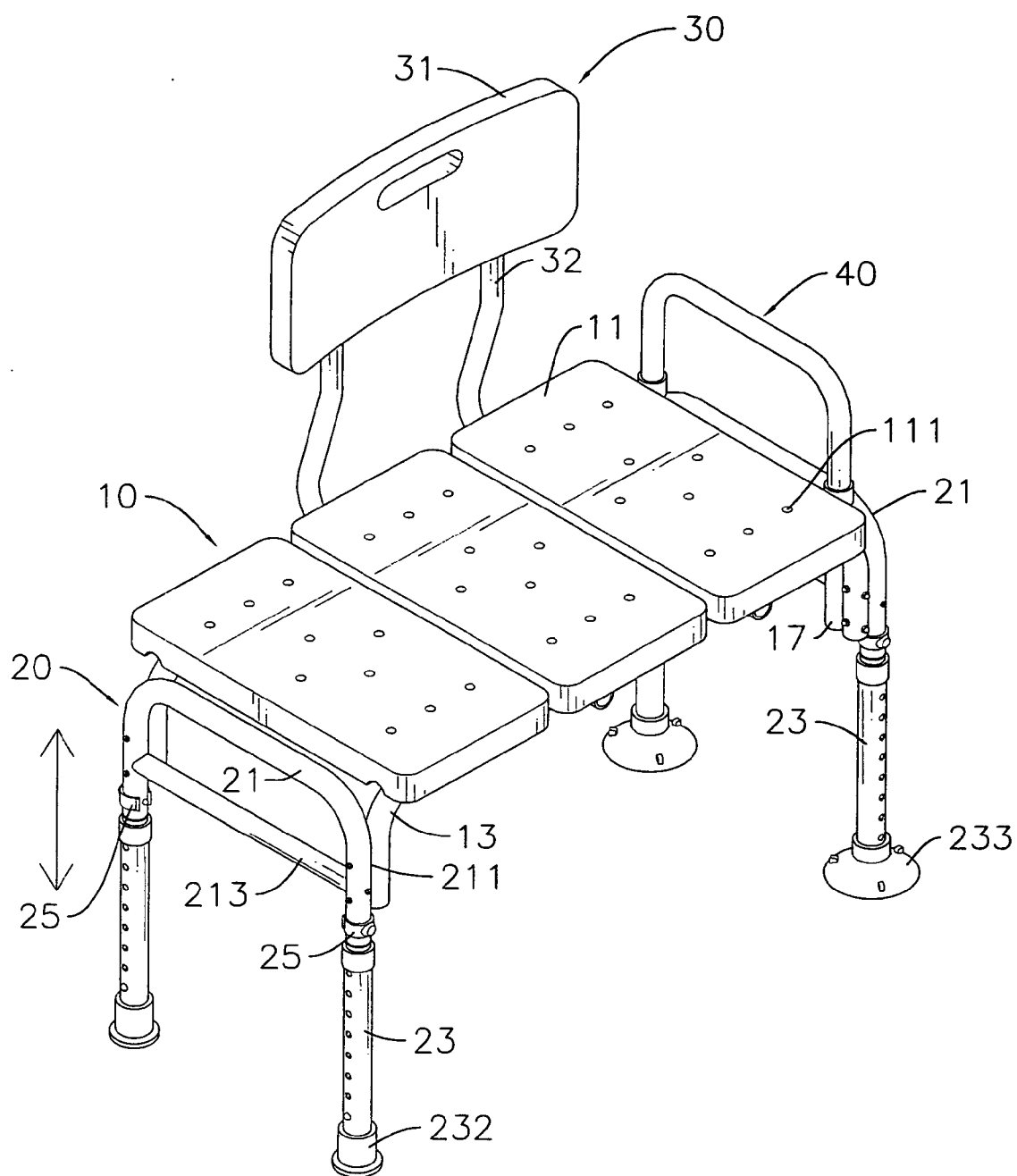


FIG. 3

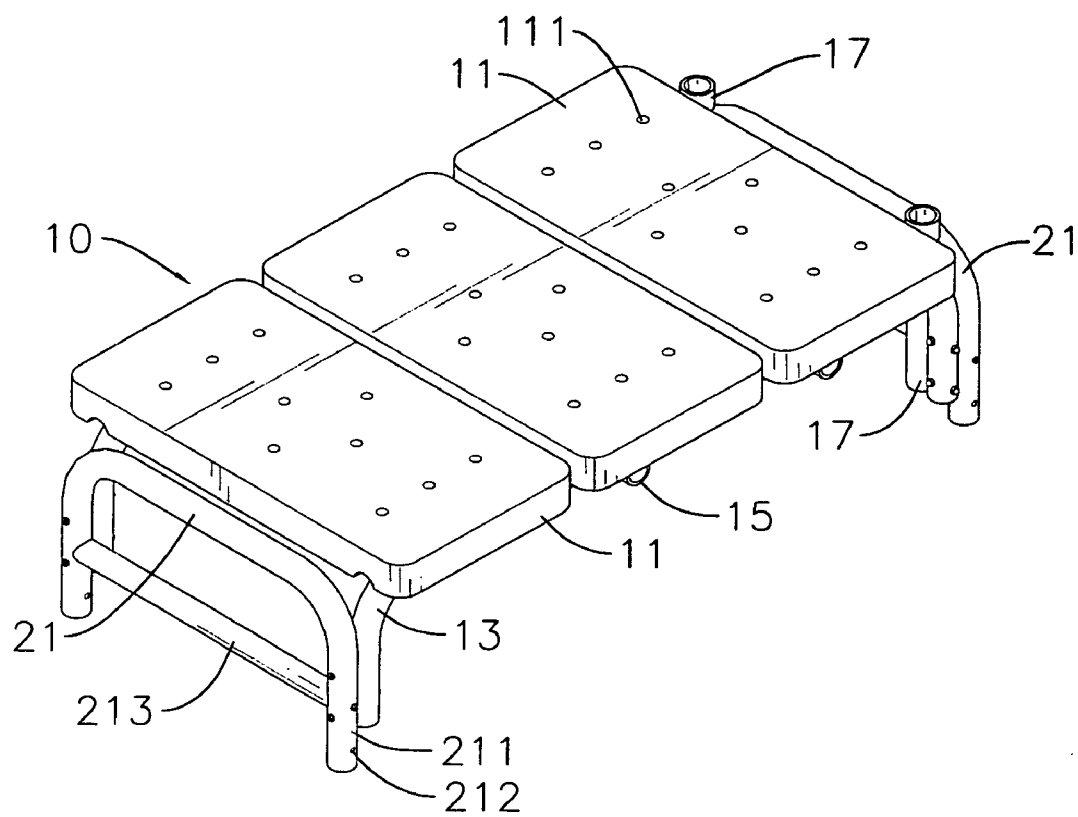


FIG. 4

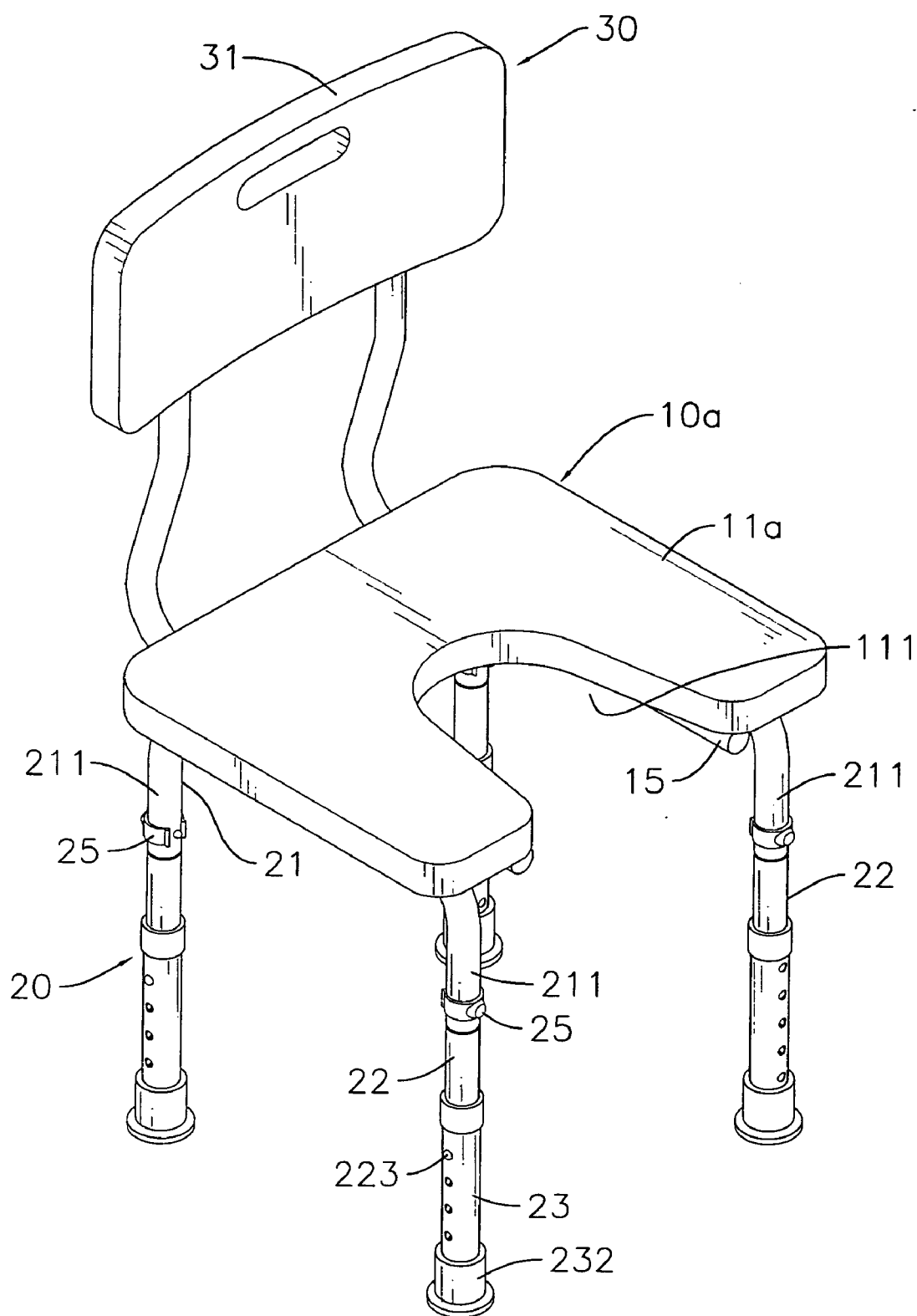


FIG. 5

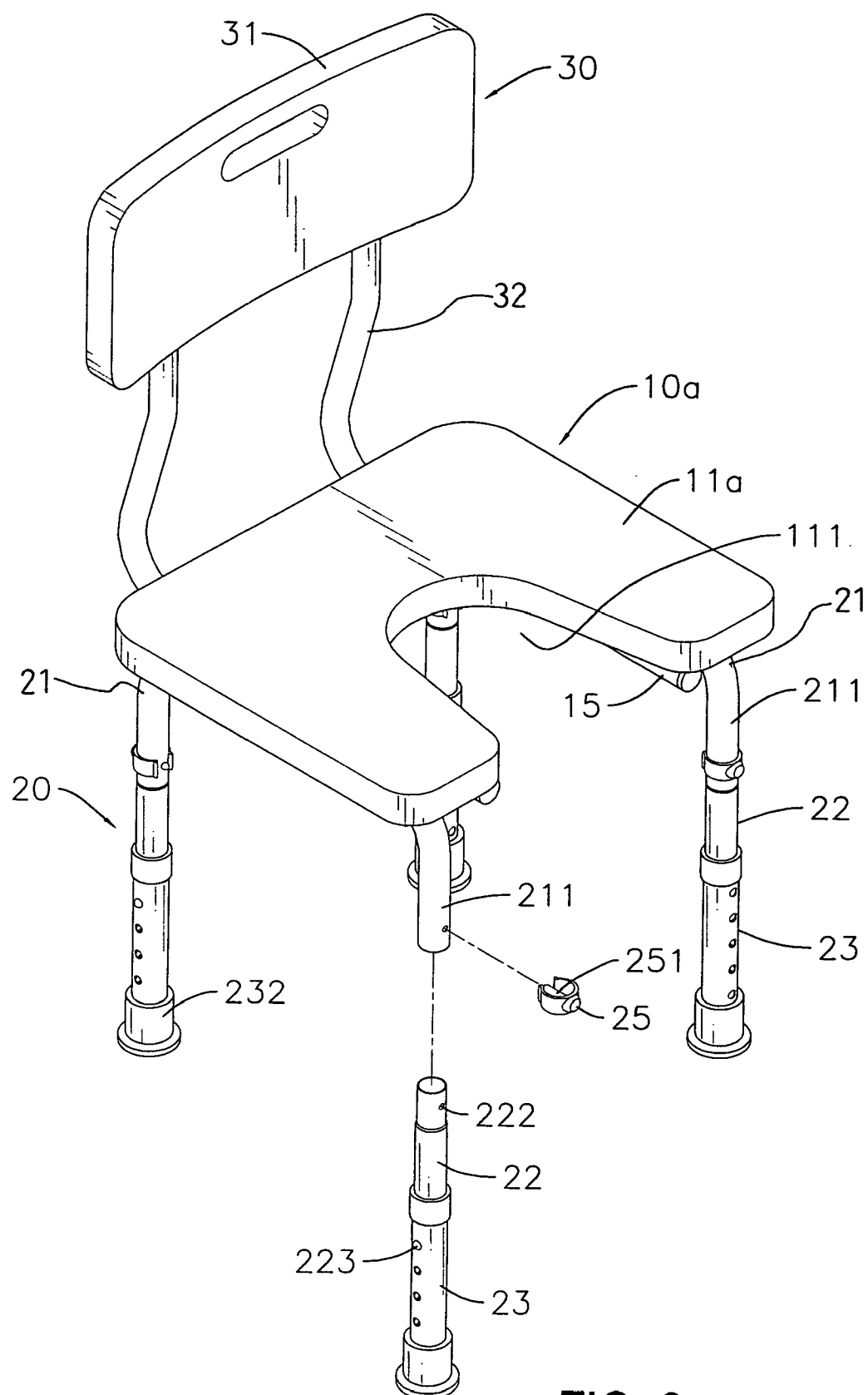


FIG. 6

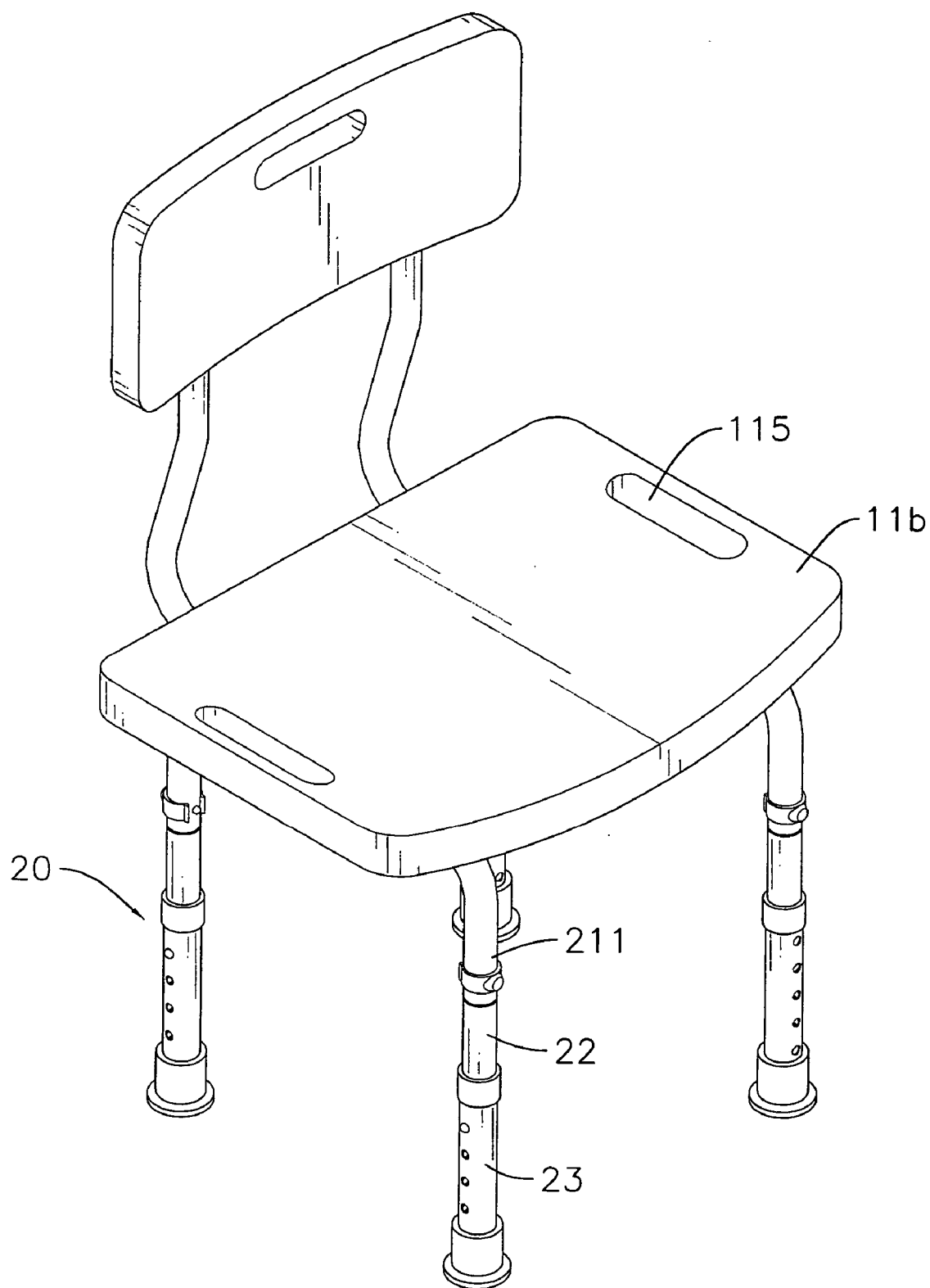


FIG. 7

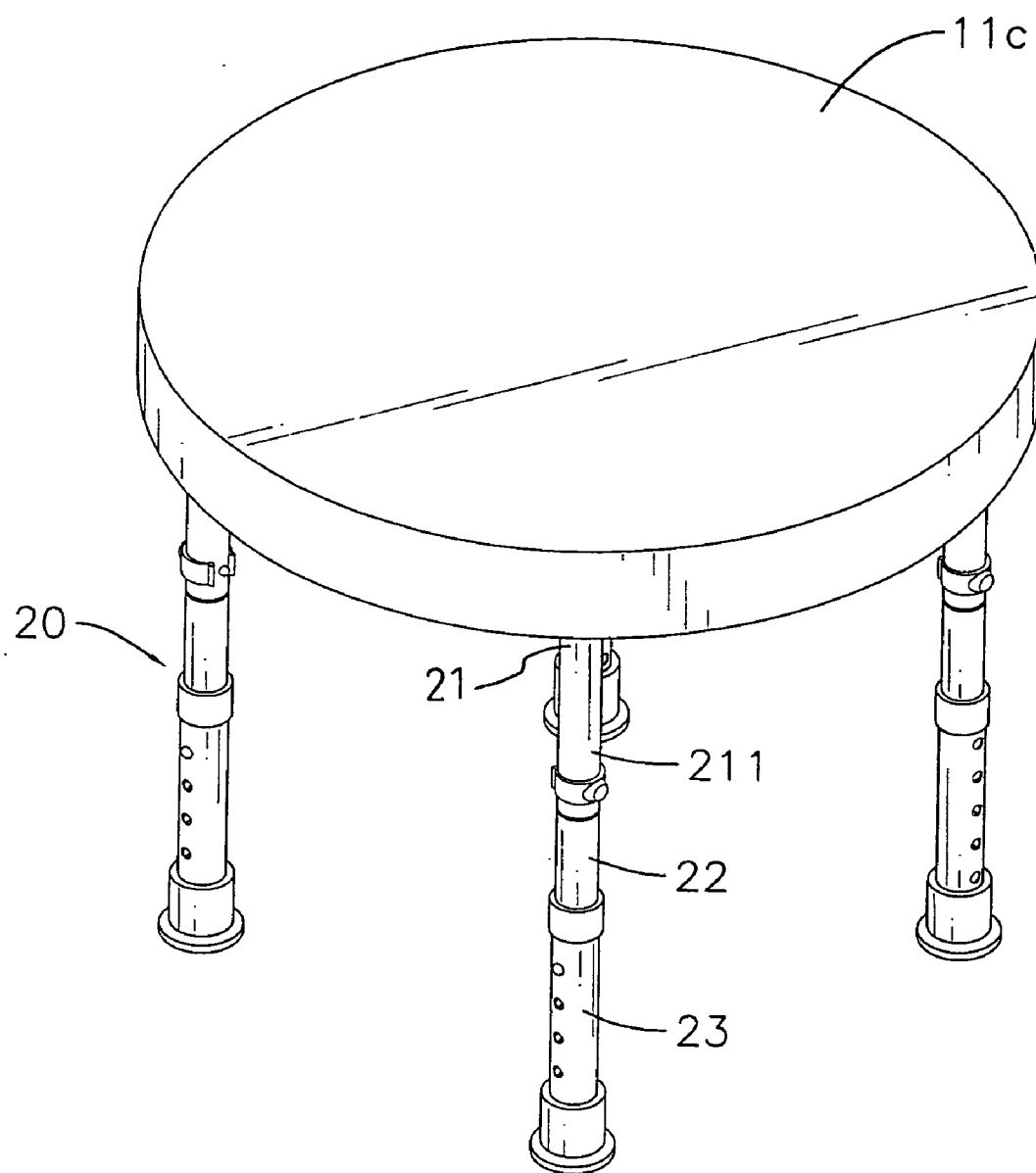


FIG. 8

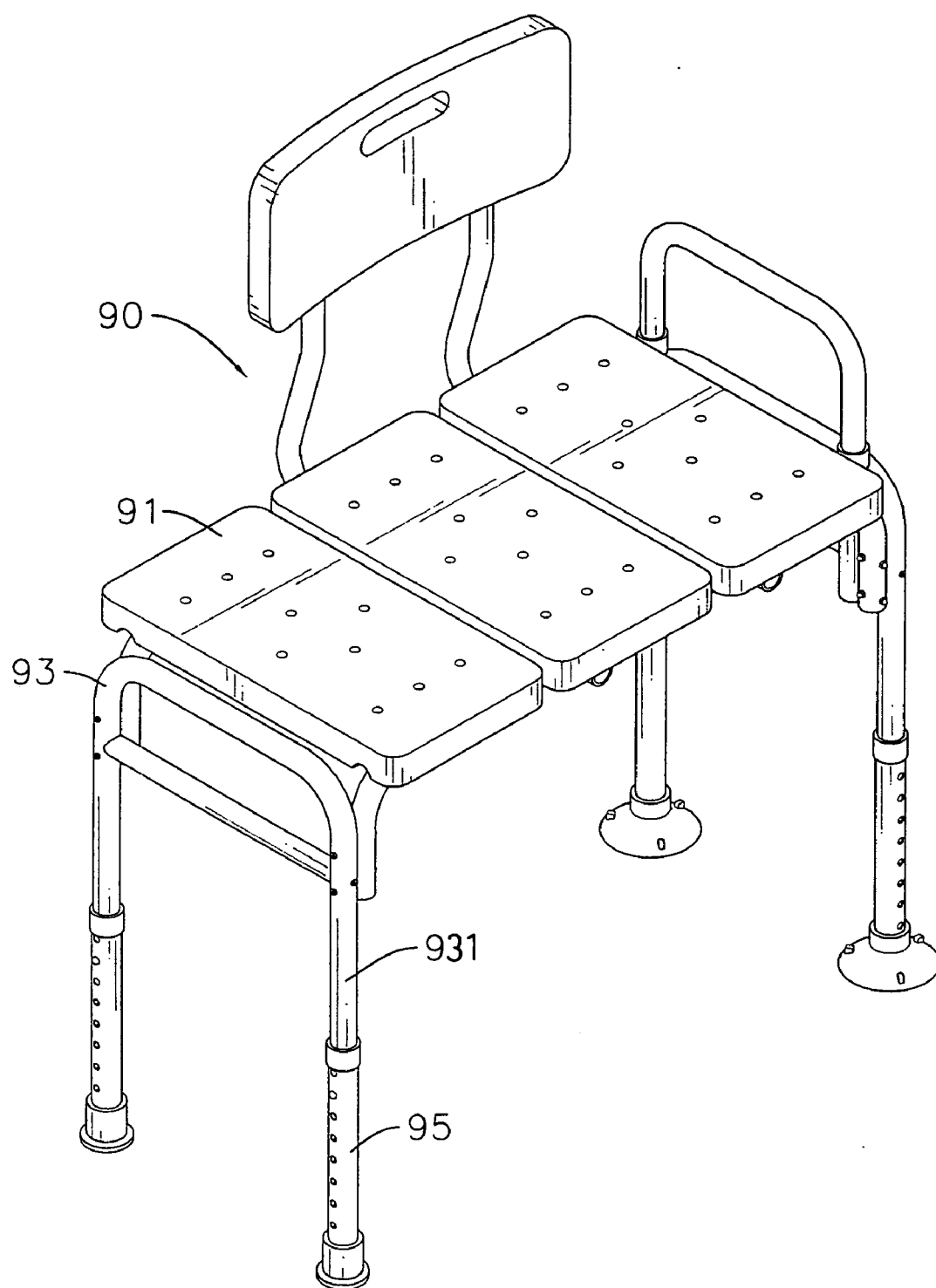


FIG. 9
PRIOR ART

DETACHABLE BATH BENCH

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a bench, and more particularly to a detachable bath bench that has multiple detachable leg assemblies. The detachable leg assemblies can be detached for storage or easy transportation.

[0003] 2. Description of Related Art

[0004] Bath benches are used generally in the nursing field to allow a caregiver to put a patient who has difficulty in moving on a bath bench and give the patient a bath.

[0005] A conventional bath bench is so large that it usually has to be stored somewhere other than in the bathroom. However, the conventional bath bench cannot be detached or easily disassembled and is hard to carry and store.

[0006] With reference to FIG. 9, a conventional bath bench (90) has a seat (91), two leg brackets (93) and four telescopic legs (95).

[0007] The seat (91) has two opposite sides. The leg brackets (93) are mounted on the opposite sides of the seat (91). Each leg bracket (93) has two vertical supports (931). Each vertical support (931) has a positioning button extending retractably from the vertical support (931). The telescopic legs (95) are mounted telescopically respectively around the vertical supports (931), and each telescopic leg (95) has multiple through holes defined through the telescopic leg (95) and corresponding to the buttons on the vertical supports (931).

[0008] To adjust the height of the seat (91), each telescopic leg (95) moves along the vertical support (931) to an appropriate position, and the button on the vertical support (931) extends through one of the through holes to hold the telescopic leg (95) in position.

[0009] The conventional bath bench (90) is made somewhat compact by retracting the telescopic legs (95). However, the conventional bath bench (90) with the retracted telescopic legs (95) is still large and cumbersome.

[0010] To overcome the shortcomings, the present invention provides a detachable bath bench to mitigate or obviate the aforementioned problems.

SUMMARY OF THE INVENTION

[0011] The main objective of the invention is to provide a detachable bath bench that has multiple detachable leg assemblies. The detachable bath bench becomes more compact by detaching the leg assemblies for storage or carrying.

[0012] A detachable bath bench in accordance with the present invention comprises a seat assembly and two leg assemblies.

[0013] The seat assembly has two opposite sides and at least one seat. The leg assemblies are mounted respectively on the sides of the seat assemblies and each has a bracket, two vertical supports, two fasteners and two legs. The bracket is mounted on the side of the seat assembly and has two mounting tubes. The vertical supports are respectively mounted detachably to the mounting tubes. The fasteners correspond to and are attached detachably to the mounting

tubes and the vertical supports to prevent the mounting tube and the vertical support from separating.

[0014] The legs are mounted respectively around the vertical supports.

[0015] Other objectives, advantages and novel features of the invention will become more apparent from the following detailed description when taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 is a perspective view of a first embodiment of a bath bench in accordance with the present invention;

[0017] FIG. 2 is a partially exploded perspective view of the bath bench in FIG. 1;

[0018] FIG. 3 is an operational perspective view of the bath bench in FIG. 1;

[0019] FIG. 4 is an operational perspective view of the bath bench in FIG. 3;

[0020] FIG. 5 is a partially exploded perspective view of a second embodiment of the bath bench in accordance with the present invention;

[0021] FIG. 6 is an operational view of the bath bench in FIG. 5;

[0022] FIG. 7 is a perspective view of a third embodiment of a bath bench in accordance with the present invention;

[0023] FIG. 8 is a perspective view of a fourth embodiment of a bath bench in accordance with the present invention; and

[0024] FIG. 9 is a perspective view of a conventional bath bench in accordance with the prior art.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENT

[0025] A detachable bath bench in accordance with the present invention comprises a seat assembly and two leg assemblies. The seat assembly has a front, a rear, two opposite sides and at least one seat. The leg assemblies are mounted respectively on the sides of the seat assembly and each leg assembly has a bracket, two vertical supports, two fasteners and two legs. The bracket is mounted on the side of the seat assembly and has two mounting tubes. Each mounting tube has a bottom end. The vertical supports are respectively mounted detachably to the bottom ends of the mounting tubes and each vertical support has an upper end and a lower end. The fasteners correspond to and are attached detachably to the mounting tubes and the vertical supports to prevent the mounting tubes and the vertical supports from separating. The legs are mounted respectively around the vertical supports.

[0026] With reference to FIGS. 1 and 2, a first embodiment of a detachable bath bench in accordance with the present invention has a seat assembly (10), two leg assemblies (20), a backrest assembly (30) and an armrest (40).

[0027] The seat assembly (10) has a front, a rear, two opposite sides, two transverse crossbars (13), multiple seats (11), two backrest-brackets (15), and two armrest brackets (17). The transverse crossbars (13) are mounted respectively

at the front and rear, and each transverse crossbar (13) has two opposite ends. The seats (11) are arranged abreast and are mounted on the transverse crossbars (13) and each seat (11) has multiple through holes (111). The through holes (111) are defined vertically through the seat (11) to allow water to pass through the through holes (111) when the bath bench is used in a bathroom with a patient taking a bath. The backrest brackets (15) may be hollow tubes mounted longitudinally below the seats (11). The armrest brackets (17) are hollow, are mounted respectively on the transverse crossbars (13) at corresponding ends of the transverse crossbars (13).

[0028] Each leg assembly (20) has a bracket (21), two vertical supports (22), two fasteners (25) and two legs (23).

[0029] The bracket (21) is mounted on the ends of the transverse crossbars (13) on one side of the seat assembly (10) and has two mounting tubes (211) and an reinforcing strut (213). Each mounting tube (211) has a bottom end and a mounting hole (212) defined through the mounting tube (211) near the bottom end. The reinforcing strut (213) extends between the mounting tubes (211).

[0030] The vertical supports (22) are respectively mounted detachably to the bottom ends of the mounting tubes and each vertical support (22) has an upper end, a lower end, a mounting hole (222) and a retractable latch (223). The mounting hole (222) is defined through the vertical support (22) near the upper end. The retractable latch (223) protrudes from the vertical support (22) near the lower end. The fasteners (25) are each a C-shaped collar made of resilient material, corresponding to and attached detachably to the mounting tubes (211) and the vertical supports (22). Each C-shaped collar (25) has an inside surface and a pin (251) protruding from the inside surface and extending through the mounting holes (212, 222) of the mounting tube (211) and the vertical supports (22).

[0031] The legs (23) are respectively mounted telescopically around the vertical supports (22). Each leg (23) has multiple locking holes (231) and a bottom pad. The locking holes (231) are defined longitudinally through the leg (23) and correspond to the retractable latch (223) of the vertical support (22). The bottom pad is mounted on the lower end of the leg (23). A preferred embodiment of the bottom pad is implemented with a nonskid rubber foot (232) or a rubber suction cup (233). A preferred embodiment of the leg assemblies (24) has two nonskid rubber feet (232) mounted respectively on the lower ends of the legs (23) of one leg assembly (20) and two rubber suction cups (233), on those of the other leg assembly (20). The detachable bath bench is held tightly on a bathroom floor with the nonskid rubber feet (232) and the two rubber suction cups (233).

[0032] The backrest assembly (30) is mounted detachably on the seat assembly (10) and has a backrest (31) and two mounting tubes (32). The mounting tubes (32) are attached to the backrest (31) and have two distal ends detachably mounted in the backrest brackets (15) of the seat assembly (10).

[0033] The armrest (40) is mounted detachably on the seat assembly (10) and has two ends detachably mounted in the armrest brackets (17) of the seat assembly (10).

[0034] With reference to FIG. 3, the legs (23) slide telescopically and respectively on the vertical supports (22)

when the retractable latches (223) on the vertical supports (22) are depressed to make the vertical supports (22) completely retract into the legs (24). When the legs (23) are completely extended, the retractable latches (223) on the vertical supports (22) extend respectively through the uppermost locking holes (231) in the legs (23) to keep the legs (23) extended.

[0035] With reference to FIG. 4, the vertical supports (22) of the leg assemblies (20) are detached from the mounting tubes (211) of the bracket (21) so the foldable bath bench becomes more compact for storage or carrying.

[0036] With reference to FIGS. 5 and 6, a second embodiment of the detachable bench in accordance with present invention has seat assembly (10a) implemented without the transverse crossbars and having only one seat (11a). The seat (10a) has a front edge, a bottom, two opposite sides and a gap (111). The gap (111) is defined through the front edge so that portions between the buttocks of a patient sitting on the detachable bench can be cleaned easily when the patient takes a shower. The brackets (21) of the leg assemblies (20) are mounted on the bottom of the seat (11a).

[0037] With reference to FIG. 7, a third embodiment of the detachable bench in accordance with present invention is similar to the second embodiment and has the seat (11b) implemented without the gap and having a concave top surface and two longitudinal slots (115). The longitudinal slots (115) are defined vertically through the seat (11b) to allow a person's hands to extend through the longitudinal slots (115) in order to securely carry the detachable bath bench.

[0038] With reference to FIG. 8, a fourth embodiment of the detachable bath bench in accordance with the present invention is similar to the second embodiment and has the seat (11c) implemented with a circular disk.

[0039] With the vertical supports (22) detached from the brackets (21) of the leg assemblies (20), the detachable bath bench becomes more compact and for storage or carrying.

[0040] Even though numerous characteristics and advantages of the present invention have been set forth in the foregoing description, together with details of the structure and function of the invention, the disclosure is illustrative only. Changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the invention to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A detachable bath bench comprising:

a seat assembly having a front, a rear, two opposite sides and at least one seat; and

two leg assemblies mounted respectively on the sides of the seat assemblies and each leg assembly having

a bracket mounted on the side of the seat assembly and having two mounting tubes and each mounting tube having a bottom end;

two vertical supports respectively mounted detachably to the bottom ends of the mounting tubes and each vertical support having an upper end and a lower end;

two fasteners corresponding to the mounting tubes, attached detachably to the mounting tubes and the vertical supports to prevent the mounting tube and the vertical support from separating from each other; and

two legs mounted respectively around the vertical supports.

2. The detachable bath bench as claimed in claim 1, wherein:

each mounting tube of the bracket of each leg assembly further has a mounting hole defined through the mounting tube and near the bottom end of the mounting tube;

each vertical support of each leg assembly further has a mounting hole defined through the vertical support and near the upper end of the vertical support;

the fasteners of each leg assembly are each a C-shaped collar made of resilient material, corresponding to and attached detachably to the respective mounting tube and the vertical support and each C-shaped collar has an inside surface and a pin protruding from the inside surface and extending through the mounting holes of the respective mounting tube and the vertical support.

3. The detachable bath bench as claimed in claim 2, wherein:

the seat assembly further has two transverse crossbars mounted respectively at the front and rear, and each transverse crossbar has two opposite ends;

the seat assembly has multiple seats arranged abreast and mounted on the transverse crossbar; and

the brackets of the leg assemblies are mounted on the ends of the transverse crossbars respectively on the opposite sides of the seat assembly.

4. The detachable bath bench as claimed in claim 3, wherein:

the seat assembly further has two armrest brackets being hollow, mounted respectively on the transverse crossbars at corresponding ends of the transverse crossbars; and

the detachable bath bench further has an armrest mounted detachably on the seat assembly and having two ends detachably mounted in the armrest brackets of the seat assembly.

5. The detachable bath bench as claimed in claim 1, wherein:

the seat assembly further has two backrest brackets being hollow and mounted longitudinally below the at least one seat; and

the detachable bath bench further has a backrest assembly mounted detachably on the seat assembly and having a backrest; and

two mounting tubes attached to the backrest and having two distal ends detachably mounted in the backrest brackets of the seat assembly.

6. The detachable bath bench as claimed in claim 2, wherein the at least one seat further has multiple through holes defined vertically through the at least one seat.

7. The detachable bath bench as claimed in claim 2, wherein:

each vertical support of each leg assembly further has a retractable latch protruding from the vertical support and near the lower end of the vertical support; and

the legs of each leg assembly are respectively mounted telescopically around the vertical supports and each leg further has multiple locking holes defined longitudinally through the leg and corresponding to the retractable latch of the vertical support.

8. The detachable bath bench as claimed in claim 2, wherein each leg has a bottom pad mounted on the lower end of the leg.

9. The detachable bath bench as claimed in claim 8, wherein the bottom pads of one leg assembly are implemented with two nonskid rubber feet and the bottom pads of the other leg assembly are implemented with two rubber suction cups.

10. The detachable bath bench as claimed in claim 2, wherein the seat assembly has only one seat having a front edge, a bottom and a gap defined through the front edge and the brackets of the leg assemblies are mounted on the bottom of the seat.

11. The detachable bath bench as claimed in claim 2, wherein the seat assembly has only one seat having a bottom, two opposite sides, a concave top surface and two longitudinal slots defined vertically through the seat and the brackets of the leg assemblies are mounted on the bottom of the seat.

12. The detachable bath bench as claimed in claim 2, wherein the seat assembly has only one seat being a circular disk and the brackets of the leg assemblies are mounted on the bottom of the seat.

13. The detachable bath bench as claimed in claim 2, wherein the bracket of each leg assembly further has a reinforcing strut mounted between the mounting tubes.

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