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**BATH AND SHOWER CHAIR WITH GOOD SUPPORTING PERFORMANCE.**

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The present invention discloses a bath and shower chair with good supporting performance. The bath and shower chair with good supporting performance comprises a back board (1), a seat board (2) and four supporting legs, wherein horizontal rods (3) are arranged at the tops of the supporting legs, the seat board (2) is arranged at the upper parts of the horizontal rods (3), and the horizontal rods (3) and the seat board (2) are fixedly connected through bolts; the back end surface of the back board (1) is connected with two parallel backrest rods (4), and the backrest rods (4) are fixedly connected with the horizontal rods (3); a plurality of water-permeable through holes are formed in the back board (1) and the seat board (2); and each supporting leg comprises an inner tube (5) and an outer tube (6), the outer tube (6) sleeves the inner tube (5), the outer tube (6) and the inner tube (5) are fixedly connected by bolts, and a plurality of locating holes are formed in the inner tube (5) and the outer tube (6). The bath and shower chair with good supporting performance, which is provided by the present invention, has the advantages that the disadvantages of the prior art can be overcome, and the structure design is reasonable and novel

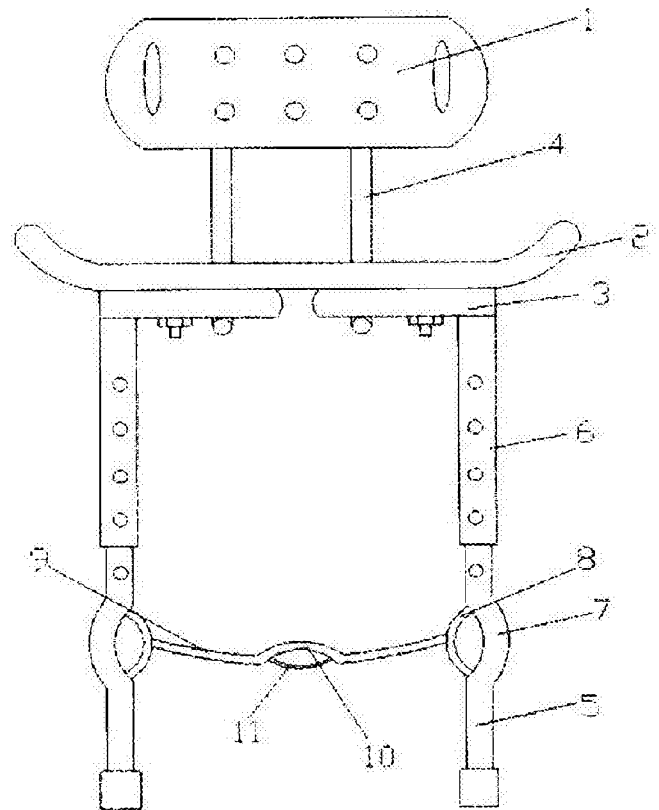


FIG. 1

## BATH AND SHOWER CHAIR WITH GOOD SUPPORTING PERFORMANCE

### BACKGROUND

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#### Technical Field

The present invention relates to a bath and shower chair with good supporting performance, and belongs to the field of medical devices.

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#### Related Art

A bath and shower chair generally assists persons during bathing or showering. However, a conventional bath and shower chair is developed according to special applications needed by the persons, and one different design of the bath and shower chair should be selected according to each different application of the bath and shower chair. For example, the bath and shower chair can be applied to the nursing field, and it is used for allowing a patient who cannot move independently to sit down for bathing or showering with the help of a nurse. However, the existing bath and shower chair has structure problems of landing legs, that is, when a user twists the body and if the landing legs bear overlarge torsion, the landing legs will break to cause danger.

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#### Summary

In view of disadvantages in the prior art, a technical problem to be solved by the present invention is to provide a bath and shower chair with good supporting performance, wherein the bath and shower chair is firm in connection and long in service life.

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In order to solve the technical problem described above, a technical scheme adopted by the present invention is as follows: the bath and shower chair with good supporting performance comprises a back board, a seat board and four supporting legs, wherein horizontal rods are arranged at the tops of the supporting legs, the

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seat board is arranged at the upper parts of the horizontal rods, and the horizontal rods and the seat board are fixedly connected through bolts; the back end surface of the back board is connected with two parallel backrest rods, and the backrest rods are fixedly connected with the horizontal rods; a plurality of water-permeable through holes are formed in the back board and the seat board; each supporting leg comprises an inner tube and an outer tube, the outer tube sleeves the inner tube, the outer tube and the inner tube are fixedly connected by bolts, and a plurality of locating holes are formed in the inner tube and the outer tube; the inner tubes and the outer tubes are arc tubes, the radian of which is 2.87; and an arc elastic section is arranged at the upper section of each inner tube, an arc supporting rod is arranged in each elastic section, and a connecting rod is connected between two adjacent arc supporting rods.

Preferably, in the bath and shower chair with good supporting performance, an arc groove is formed in the middle section of each connecting rod, and an elastic sheet is arranged in each arc groove.

The bath and shower chair with good supporting performance, which is provided by the present invention, has the advantages that the disadvantages of the prior art can be overcome, and the structure design is reasonable and novel. In order to improve the use strength of the bath and shower chair, the elastic sections are additionally arranged at the upper sections of the inner tubes; and when one supporting leg bears torsion, the torsion is accumulated by elastic deformation of the corresponding elastic section, the accumulated torsion is transferred to the corresponding arc supporting rod, the corresponding arc supporting rods generate elastic deformation and then transfer the torsion to other supporting legs through the connecting rods, so that the torsion to the single supporting leg can be reduced, pressure to the four supporting legs is balanced, the supporting strength of the bath and shower chair is improved, and the service life of the bath and shower chair is prolonged. In order to prevent strength reduction caused by the fact that the elastic sections generate resonance under the action of the torsion, the arc grooves are arranged at the middle sections of the connecting rods, and the elastic sheets are

arranged in the arc grooves, so that the resonance is released through vibration of the elastic sheets, and the use strength is further improved.

### **Brief Description of Drawings**

5 FIG. 1 is a structure diagram of the present invention.

In the drawings, numeric symbols are as follows: 1-back board, 2-seat board, 3-horizontal rod, 4-backrest rod, 5-inner tube, 6-outer tube, 7-elastic section, 8-arc supporting rod, 9-connecting rod, 10-arc groove, and 11-elastic sheet.

### 10 **Description of Embodiments**

The present invention is further described below in conjunction with accompanying drawings.

The present invention provides a bath and shower chair with good supporting performance. The bath and shower chair comprises a back board 1, a seat board 2  
15 and four supporting legs, wherein horizontal rods 3 are arranged at the tops of the supporting legs, the seat board 2 is arranged at the upper parts of the horizontal rods 3, and the horizontal rods 3 and the seat board 2 are fixedly connected through bolts; the back end surface of the back board 1 is connected with two parallel backrest rods 4, and the backrest rods 4 are fixedly connected with the  
20 horizontal rods 3; a plurality of water-permeable through holes are formed in the back board 1 and the seat board 2; each supporting leg comprises an inner tube 5 and an outer tube 6, the outer tube 6 sleeves the inner tube 5, the outer tube 6 and the inner tube 5 are fixedly connected by bolts, and a plurality of locating holes are formed in the inner tube 5 and the outer tube 6; the inner tubes 5 and the outer  
25 tubes 6 are arc tubes, the radian of which is 2.87; an arc elastic section 7 is arranged at the upper section of each inner tube 5, an arc supporting rod 8 is arranged in each elastic section 7, and a connecting rod 9 is connected between two adjacent arc supporting rods 8; and an arc groove 10 is formed in the middle section of each connecting rod 9, and an elastic sheet 11 is arranged in each arc

groove 10.

The bath and shower chair with good supporting performance, which is provided by the present invention, has the advantages that the disadvantages of the prior art can be overcome, and the structure design is reasonable and novel. In order to improve the use strength of the bath and shower chair, the elastic sections are additionally arranged at the upper sections of the inner tubes; and when one supporting leg bears torsion, the torsion is accumulated by elastic deformation of the corresponding elastic section, the accumulated torsion is transferred to the corresponding arc supporting rod, the corresponding arc supporting rods generate elastic deformation and then transfer the torsion to other supporting legs through the connecting rods, so that the torsion to the single supporting leg can be reduced, pressure to the four supporting legs is balanced, the supporting strength of the bath and shower chair is improved, and the service life of the bath and shower chair is prolonged. In order to prevent strength reduction caused by the fact that the elastic sections generate resonance under the action of the torsion, the arc grooves are arranged at the middle sections of the connecting rods, and the elastic sheets are arranged in the arc grooves, so that the resonance is released through vibration of the elastic sheets, and the use strength is further improved.

Certainly, the foregoing descriptions are not intended to limit the present invention, and the present invention is not limited to the above-mentioned embodiments. Any changes, modifications, additions or substitutions made by a person of ordinary skill in the art in the essence range of the present invention shall fall within the protection scope of the present invention.

**CLAIMS**

1. A bath and shower chair with good supporting performance, comprising a back board (1), a seat board (2) and four supporting legs, wherein horizontal rods (3) are arranged at the tops of the supporting legs, the seat board (2) is arranged at the upper parts of the horizontal rods (3), and the horizontal rods (3) and the seat board (2) are fixedly connected through bolts; the back end surface of the back board (1) is connected with two parallel backrest rods (4), and the backrest rods (4) are fixedly connected with the horizontal rods (3); a plurality of water-permeable through holes are formed in the back board (1) and the seat board (2); each supporting leg comprises an inner tube (5) and an outer tube (6), the outer tube (6) sleeves the inner tube (5), the outer tube (6) and the inner tube (5) are fixedly connected by bolts, and a plurality of locating holes are formed in the inner tube (5) and the outer tube (6); the inner tubes (5) and the outer tubes (6) are arc tubes, the radian of which is 2.87; and an arc elastic section (7) is arranged at the upper section of each inner tube (5), an arc supporting rod (8) is arranged in each elastic section (7), and a connecting rod (9) is connected between two adjacent arc supporting rods (8).

2. The bath and shower chair with good supporting performance according to claim 1, wherein an arc groove (10) is formed in the middle section of each connecting rod (9), and an elastic sheet (11) is arranged in each arc groove (10).

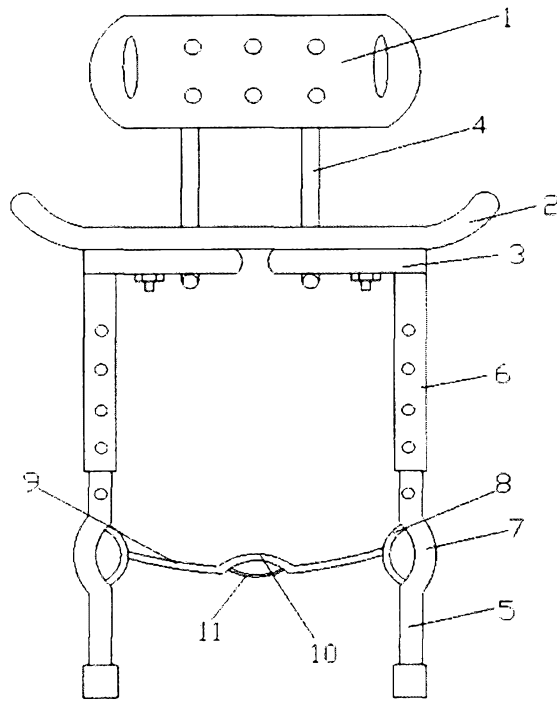


FIG. 1

**ABSTRACT****BATH AND SHOWER CHAIR WITH GOOD SUPPORTING PERFORMANCE**

5        The present invention discloses a bath and shower chair with good supporting performance. The bath and shower chair with good supporting performance comprises a back board (1), a seat board (2) and four supporting legs, wherein horizontal rods (3) are arranged at the tops of the supporting legs, the seat board (2) is arranged at the upper parts of the horizontal rods (3), and the horizontal rods (3) and the seat board (2) are fixedly connected through bolts; the back end surface of the back board (1) is connected with two parallel backrest rods (4), and the backrest rods (4) are fixedly connected with the horizontal rods (3); a plurality of water-permeable through holes are formed in the back board (1) and the seat board (2); and each supporting leg comprises an inner tube (5) and an outer tube (6), the outer tube (6) sleeves the inner tube (5), the outer tube (6) and the inner tube (5) are fixedly connected by bolts, and a plurality of locating holes are formed in the inner tube (5) and the outer tube (6). The bath and shower chair with good supporting performance, which is provided by the present invention, has the advantages that the disadvantages of the prior art can be overcome, and the structure design is reasonable and novel.

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Fig. 1