

(19)



(11)

EP 2 057 926 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
13.05.2009 Bulletin 2009/20

(51) Int Cl.:
A47K 17/02 (2006.01)

(21) Application number: **08380262.9**

(22) Date of filing: **05.09.2008**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
 HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
 RO SE SI SK TR**
 Designated Extension States:
AL BA MK RS

(72) Inventor: **Pereira Del Arroyo, Antonio Flavio
CEP 90035-010, Porto Alegre (BR)**

(74) Representative: **Durán Moya, Luis-Alfonso et al
Durán-Corretjer
Còrsega, 329
08037 Barcelona (ES)**

(71) Applicant: **Pereira Del Arroyo, Antonio Flavio
CEP 90035-010, Porto Alegre (BR)**

(54) **Lavatory accessory**

(57) Lavatory support accessory comprising a structure to support the user of a lavatory, the accessory having a back piece to support the lavatory lid in the raised position, characterised in that the back piece has a resil-

ient flange or fold to produce interference with the opening movement of the lid in such a way that said flange or fold must be deformed for the lid to make contact with the back piece.

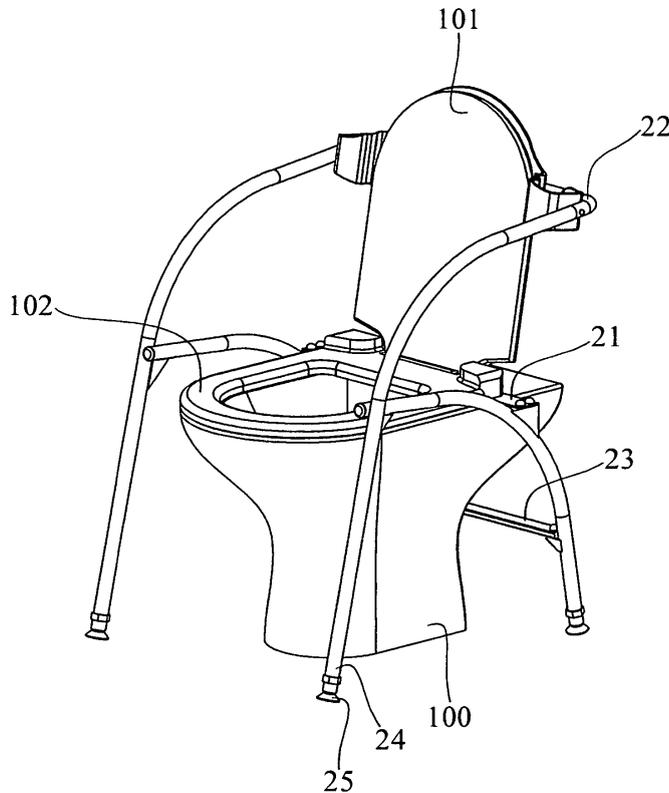


FIG.1

EP 2 057 926 A1

DescriptionDESCRIPTION

[0001] The present invention relates to a lavatory accessory to be used in homes and public conveniences to facilitate and provide comfort, support and stability in the act of sitting on and rising from the lavatory.

[0002] The accessory according to the present invention is designed to be adapted to the different configurations of lavatories available on the market. The accessory according to the present invention is also designed to integrate harmoniously in its intended surroundings, incorporating a novel concept of comfort in the use of the lavatory by offering comfort to the user through the adoption of a correct and natural posture by supporting the back with the back piece and the arms with the arm rests.

[0003] The accessory according to the present invention is designed to allow its use by persons of differing physiques and statures, of any age, even children.

[0004] Comfort in an environment is influenced by the user's sensation of well-being. This sensation is influenced by the architectural treatment applied to the space, and also by the fittings, objects and organisation systems integrated therein. Bearing in mind the need for integration in order to achieve the desired comfort, bathrooms are currently receiving high levels of attention. This translates not only into the practical aspects (ease of use, of cleaning etc.) but also quality, functionality and harmoniousness.

[0005] The accessory according to the present invention is intended to be integrated with the metal parts and other elements of bathrooms, adding aesthetics to these environments.

[0006] Document WO 2007/012678 A1, of the present inventor, discloses a lavatory support accessory, which allows its retrofitting on lavatories that have already been installed in homes and public spaces. Said accessory incorporates ergonomic and aesthetic functions in relation to bathroom surroundings and provides adequate support for the user during the phases of sitting on and rising from the lavatory, whilst at the same time providing comfort during the use thereof.

[0007] Said accessory comprises a structure for supporting the user on the lavatory, having a back piece with an anchoring system to fix the lavatory lid and the seat of the lavatory lid when both are in the raised position. This novel anchoring system is characterised in that the back piece of the accessory presents a flexible fold to produce interference with the lifting movement of the lid in such a way that the fold must be deformed for the lid to make contact with the back piece. Since it must be deformed, the fold produces interference which facilitates the fixing of the lid when it is raised.

[0008] Preferably, the back piece will also have at least a second fold (or, more preferably, a set of two flanges) to produce interference with the seat of the lavatory lid when the latter is raised, in such a way that said second

fold has to be deformed for the seat of the lavatory lid to make contact with the back piece.

[0009] The accessory according to the present invention can be connected to any type of lavatory. To do this, according to another aspect of the present invention, the accessory has a thin rectangular steel plate with two apertures, to allow the seat of the lavatory lid and the accessory to be attached to the lavatory, one of the apertures being circular and the other oblong or grooved, in order to allow adapting adjustments when the holes in lavatories are separated from each other by different distances, according to the models available on the market.

[0010] The accessory according to the present invention is easily removable and transportable.

[0011] The present invention provides for the possibility of introducing a new concept in relation to lavatories, the concept of a lid/back piece. Thus, it will be possible to produce lavatory lids which act as comfortable back pieces, suitable for supporting the back.

[0012] For a better understanding, the accompanying drawings are given as an explanatory but not limiting example of an embodiment of the lavatory accessory according to the present invention.

Fig. 1 is a perspective view of an accessory according to the present invention, applied to a lavatory.

Fig. 2 is a perspective view of said accessory.

Fig. 3 is a perspective view of the portions that make up the accessory of Figs. 1 and 2.

Fig. 4 is a view in front elevation of a back piece of an accessory according to the present invention, in which the anchoring system for the lid/back piece and the seat of the lavatory lid can be seen.

Fig. 5 is a plan view of the back piece with the anchoring system for the lid/back piece and the seat of the lid.

Fig. 6 is a view in front elevation of the rear of the back piece.

Figs. 7 and 8 show a diagrammatic plan view of a back piece and the interaction caused by the anchoring system between the lid and the seat of the lavatory lid with the back piece of the accessory.

Fig. 9 is a view in side elevation of an embodiment of the accessory, according to the present invention, in which the tubular structure can be seen.

Fig. 10 is a view in side elevation of a second embodiment of the accessory according to the present invention, which has an option of angling the upper tube upwards by about 45° to prevent interference between the structure of the accessory and the lavatory cistern.

Fig. 11 is a detail of a finishing stopper of the side structures of an accessory according to the present invention.

Fig. 12 is a view in detail of a rectangular plate for the connection of the accessory to the lavatory and to the seat of the lavatory lid according to the present invention, the plate having one oblong or grooved

hole and another round hole.

Fig. 13 is a detailed view of the rear tubular structure of an accessory according to the present invention, useful for lavatories without a connected cistern.

Fig. 14 is a detail of a rear connection and reinforcement bar of an accessory according to the present invention.

Fig. 15 is a detail of the upper portion of a height adjustment screw of an accessory according to the present invention.

Fig. 16 is a detail of the lower portion of a height adjustment screw of an accessory according to the present invention.

Fig. 17 is a perspective view of the upper and lower portions of the height adjustment screw shown in Figs. 15 and 16.

[0013] The accessory consists basically of curved tubes of a metallic or acrylic material or other material, which may be tubular, cubic or flattened, connected by means of different connections. Said tubes form a structure for supporting the user on a lavatory -100-. When the accessory is produced in metal, an important object to be achieved, in some preferred embodiments, is to obtain finishes that allow its integration with the rest of the metal parts in a bathroom. The device consists of two tubular side structures -30-, -31-, -311-, a rear connection bar -23-, a rectangular plate -21- for connection to the lavatory, four screws -24-, -25- for the height adjustment of the device, two finishing stoppers -26-, a rear tubular structure -22-, and a back piece -1- for supporting the lavatory lid in the raised position, together with different types of nuts and bolts and other commercial-type connection devices, for example. In a manner characteristic of the invention, the accessory shown has a back piece -1- for supporting both the lavatory lid -101- and seat -102- of the lavatory lid when they are raised. To prevent the seat -102- of the lavatory lid when it is raised from falling while the user is using the lavatory, the back piece -1- of the accessory has two sets of two folds -2-, -2'-, -3-, -3'- for attaching the lid -101- and the seat -102-. Moreover, when the lid is anchored, the accessory ensures that the lid remains in the most comfortable position for the user's back. As can be seen in Figs. 7 and 8, if the lid -101- is to make contact with the back piece -5-, it must deform the folds -2-, -2'-. When they are deformed, said folds -2-, -2'- prevent the lid from returning to its closed position. The same applies to the seat -102- of the lavatory lid and the pair of folds -3-, -3'-. In addition, in the example shown, the back piece -1- has other folds -4-, -4'- for its connection to the structure of the accessory. The accessory may also consist of tubes connected by nuts and bolts or soldered, without preference. Thus, the accessory may be detachable or not detachable or may be fixed (in the case of soldered tubes, for example). For better performance of the invention, the use of lavatory lids produced in materials with resilient properties and/or optimised weight may be advisable, although this

is not essential to implement the present invention.

[0014] A detail of a preferred embodiment of the rectangular plate -21- for connecting the accessory to the lavatory and to the seat of the lavatory lid can be seen in Fig. 12. The plate is thin, rectangular and made of steel and has apertures -213-, -214- at its ends for its connection with a connection zone -219- of the accessory and two apertures -211- and -212- for its connection in the connection zone of the seat of the lavatory lid -102- to the lavatory -100-. One of the apertures -212- is oblong or grooved, which allows the accessory to be connected to different types of lavatory, having different distances between the centres of the holes.

[0015] As can be seen in the figures, each of the structures that forms part of the accessory has a curved tube -31- which facilitates the user's tasks of sitting / rising. Said tube may terminate in a straight zone -311- or in an angled zone -312- which provides protection for the cistern of lavatories -100- that have an integrated cistern.

[0016] It may also, optionally, have a rear reinforcement bar -23-, although embodiments without this bar may, in some cases, be preferable, as they facilitate front installation, for example, in the case where the structure is made up of tubes soldered to each other. In other cases, however, this rear bar provides the functional stability of the accessory.

[0017] Although the invention has been described with regard to examples of preferred embodiments, these should not be considered as limiting the invention, which will be defined by the widest interpretation of the following claims.

Claims

1. Accessory for the support of the user on a lavatory, comprising a structure to support the user of a lavatory, the accessory having a back piece to support the lavatory lid in the raised position, **characterised in that** the back piece has an anchoring system consisting in a resilient fold which causes interference when the lid is raised, in such a way that said fold is deformed so that the lid makes contact with the back piece.
2. Accessory according to claim 1, **characterised in that** the back piece has a second resilient fold which causes interference when the seat of the lavatory lid is raised, in such a way that said second fold is deformed so that the seat of the lavatory lid makes contact with the back piece.
3. Accessory according to either claim 1 or claim 2, **characterised in that** it has a rectangular plate with two apertures to attach the lavatory seat, the lavatory and the accessory, one of the apertures being circular and the other oblong.

4. Accessory according to any one of claims 1 to 3, **characterised in that** the lavatory support is comprised of two interconnected side structures.
5. Accessory according to claim 4, **characterised in that** each of the side structures has a curved tube to support the user during the phases of sitting on and rising from the lavatory. 5
6. Accessory according to claim 5, **characterised in that** said curved tube is angled in the upper portion thereof. 10
7. Accessory according to any one of claims 4 to 6, **characterised in that** the two side structures are connected by a bar in the back rear portion thereof. 15

20

25

30

35

40

45

50

55

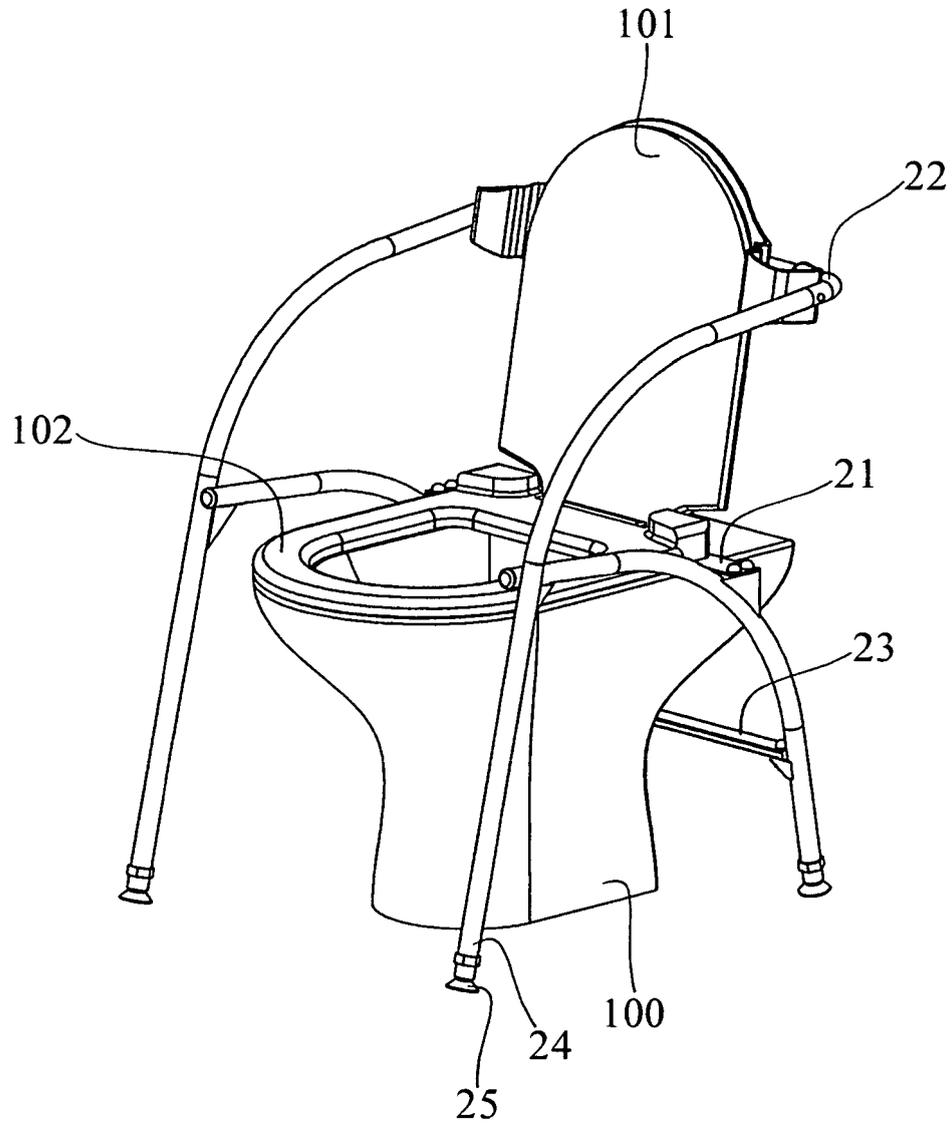


FIG.1

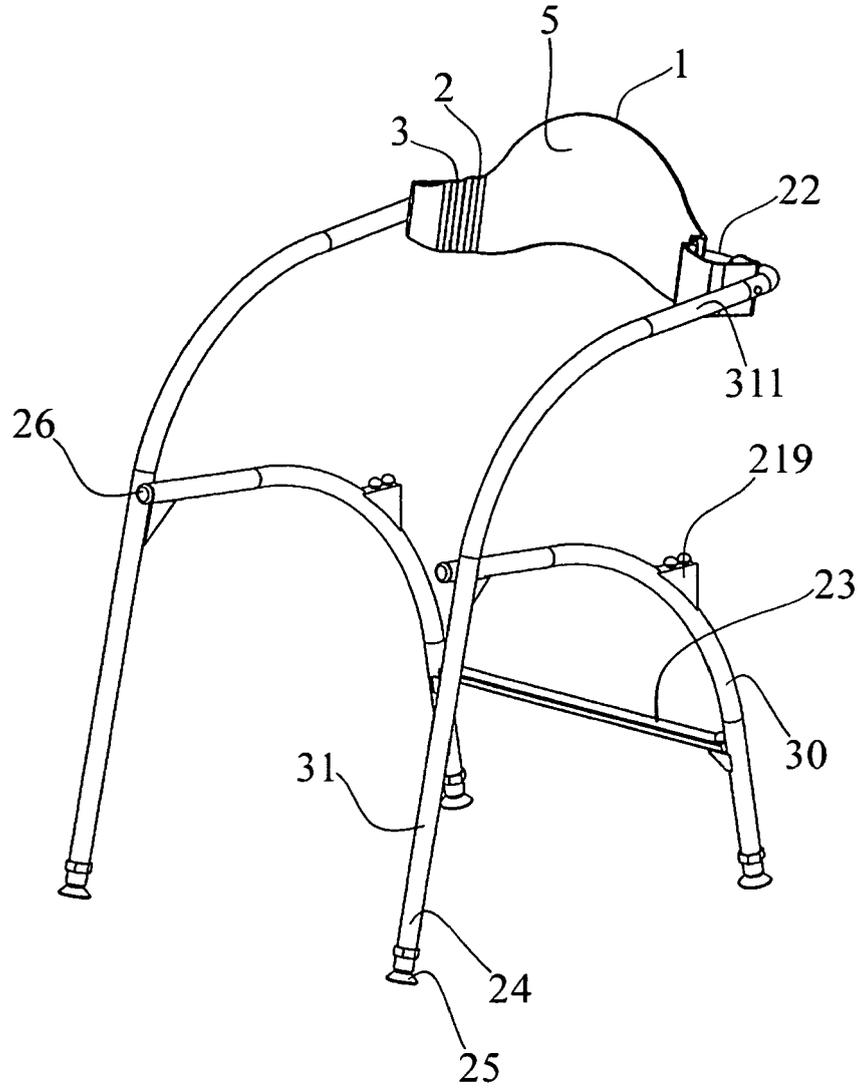


FIG.2

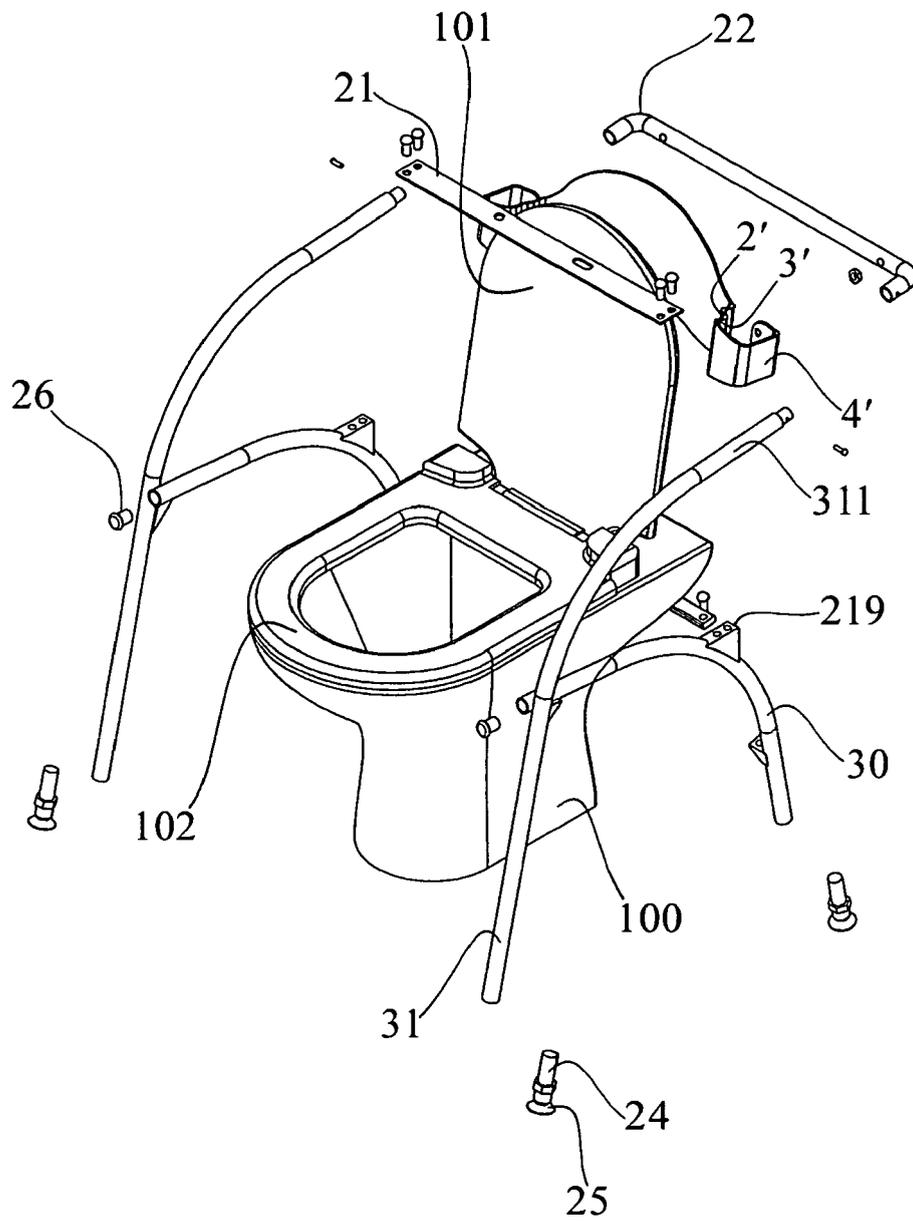


FIG.3

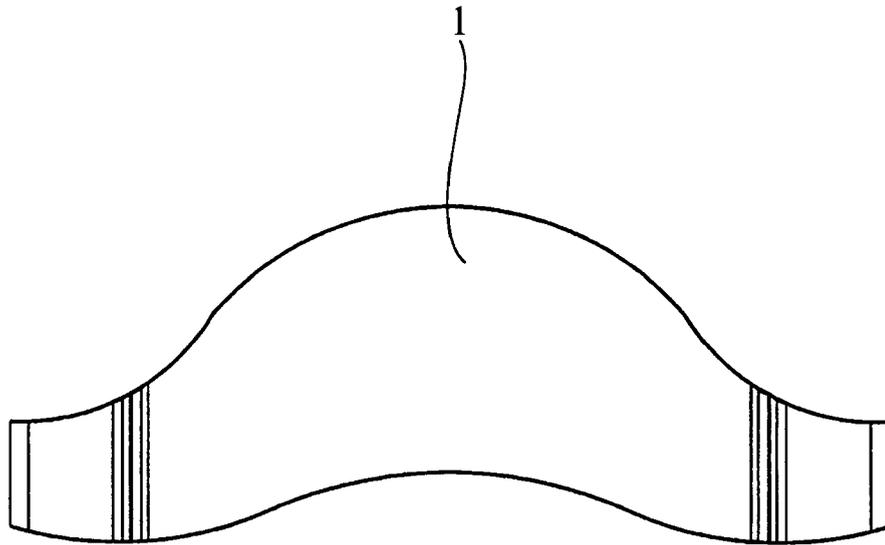


FIG.4

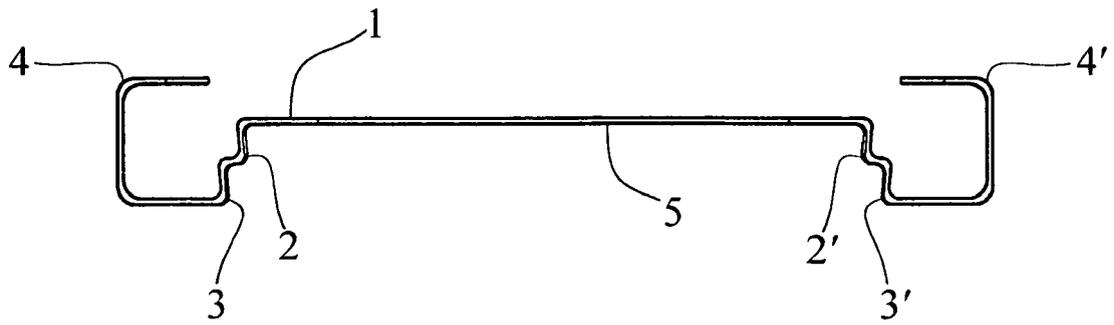


FIG.5

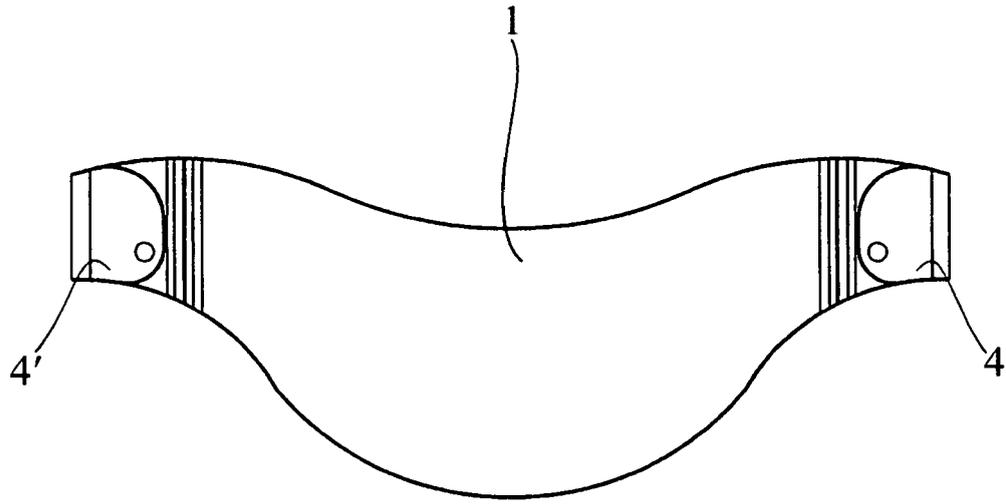


FIG.6

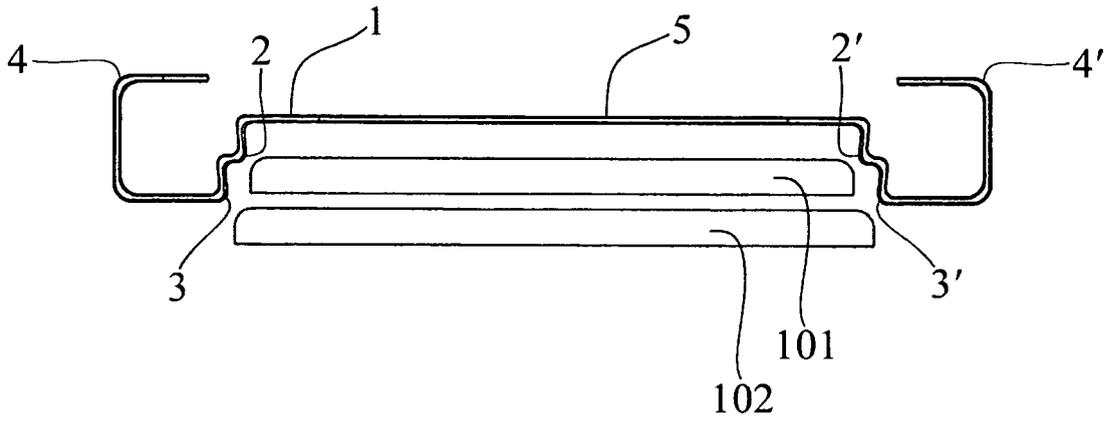


FIG.7

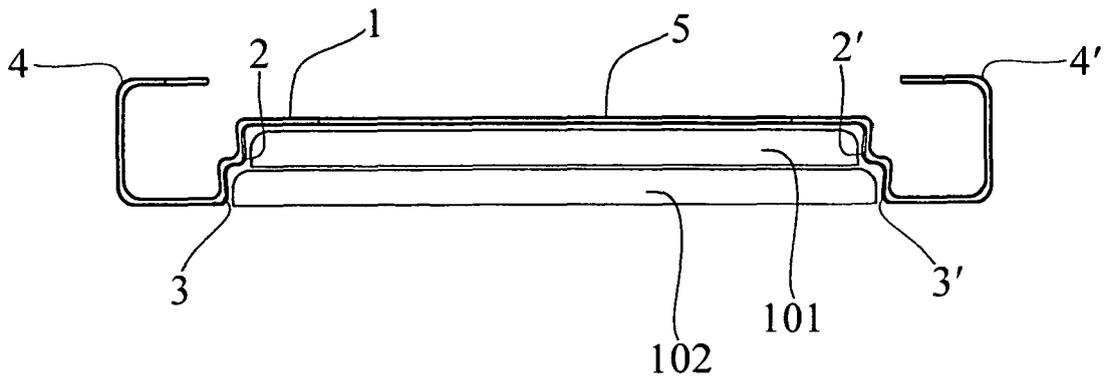


FIG.8

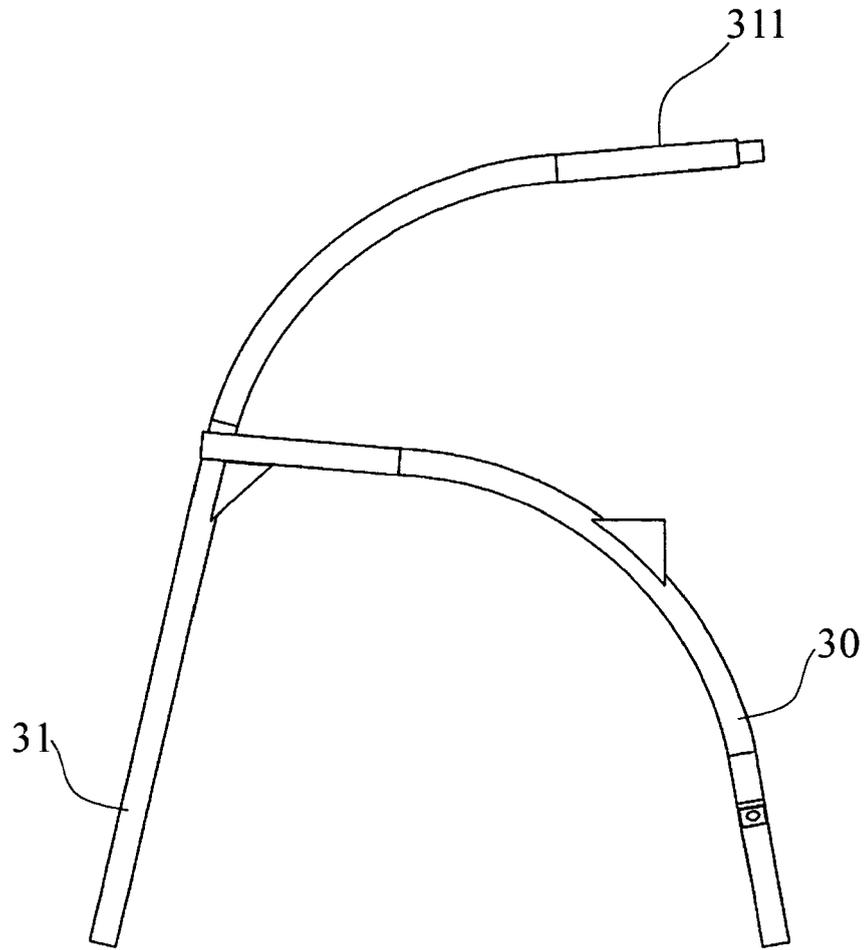


FIG.9

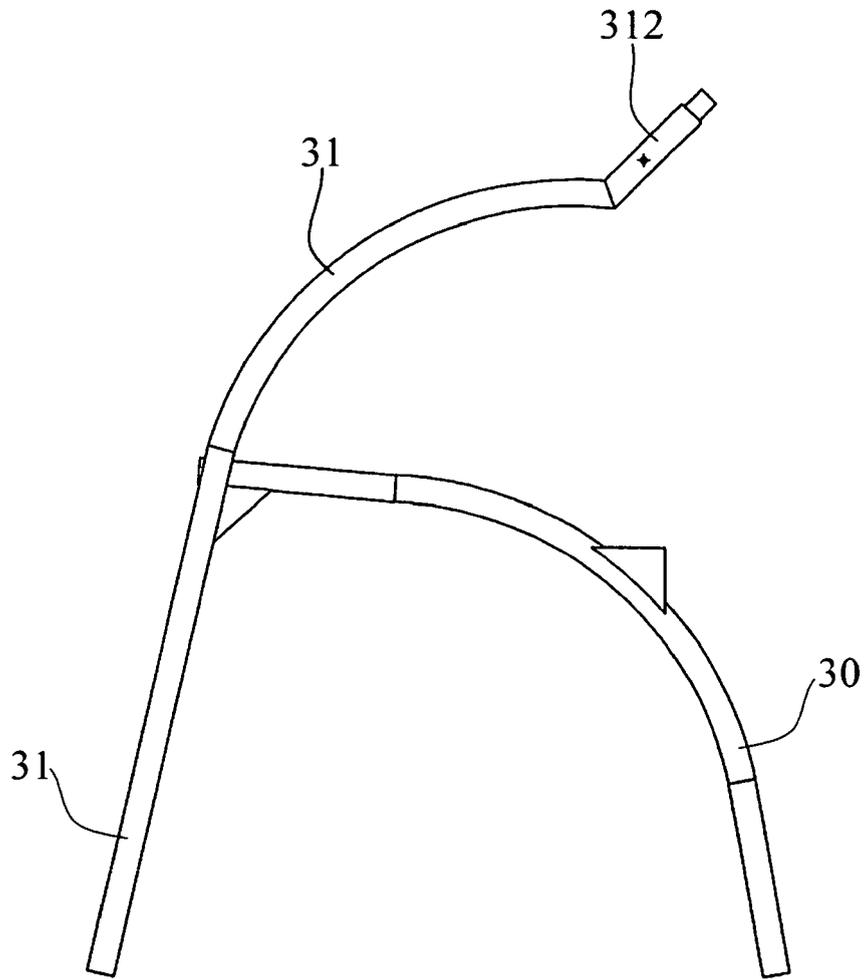


FIG.10

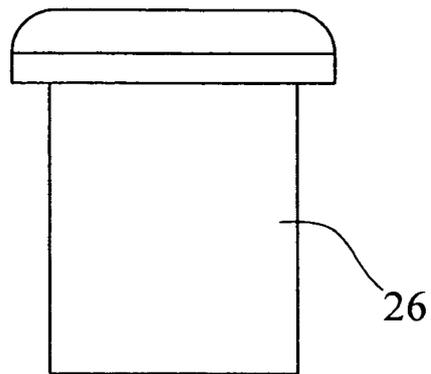


FIG.11

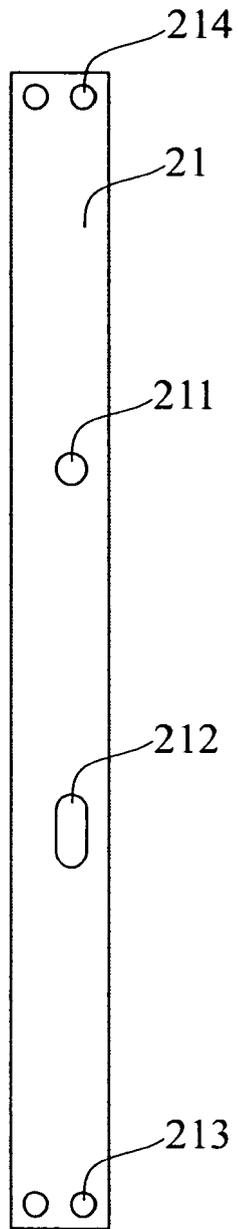


FIG. 12

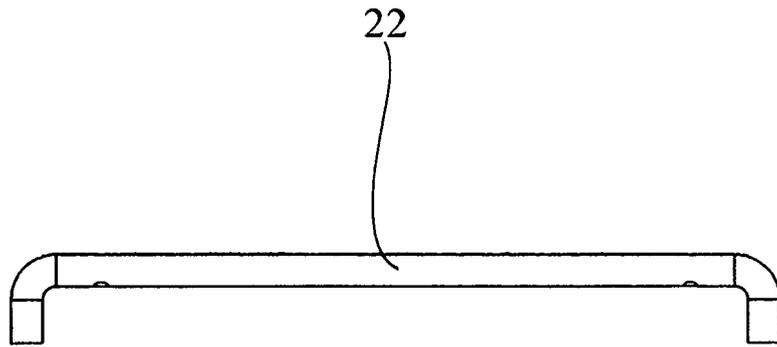


FIG.13

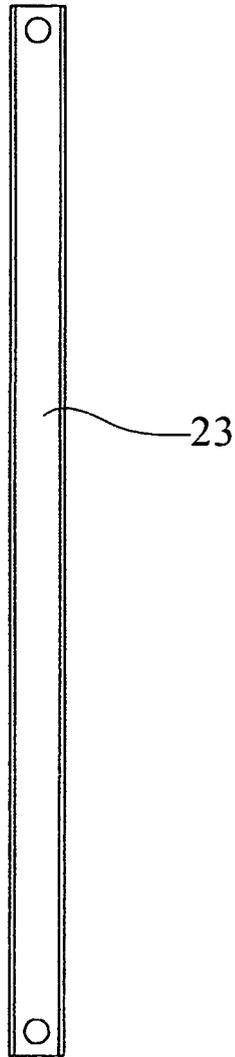


FIG.14

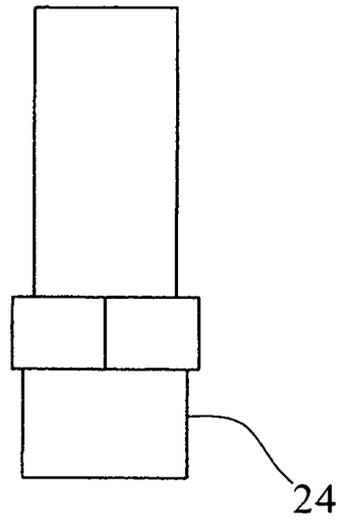


FIG. 15

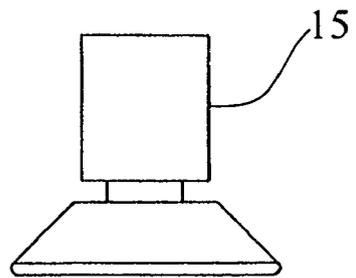


FIG.16

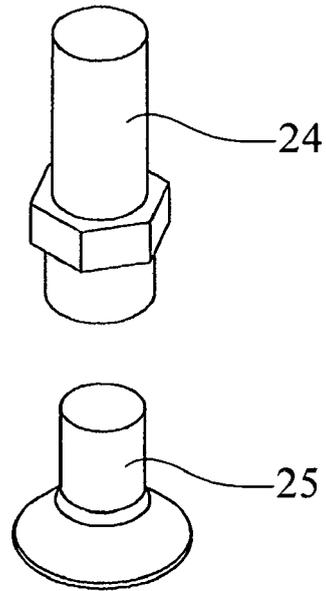


FIG.17



EUROPEAN SEARCH REPORT

Application Number
EP 08 38 0262

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
D,A	WO 2007/012678 A (PEREIRA DEL ARROYO ANTONIO FLA [BR]) 1 February 2007 (2007-02-01) * page 1, line 28 - page 2, line 4; figures 1-4 *	1	INV. A47K17/02
A	US 4 707 870 A (GLASSCO MARGARET M [CA] ET AL) 24 November 1987 (1987-11-24) * column 2, line 61 - column 4, line 64; figures 1-11 *	1	
			TECHNICAL FIELDS SEARCHED (IPC)
			A47K
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		18 February 2009	Porwoll, Hubert
<p>CATEGORY OF CITED DOCUMENTS</p> <p>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</p> <p>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</p>			

1
EPO FORM 1503 03.02 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 38 0262

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 The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

18-02-2009

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2007012678 A	01-02-2007	BR PI0503415 A	13-03-2007
		CA 2616585 A1	01-02-2007
		EP 1908385 A1	09-04-2008

US 4707870 A	24-11-1987	CA 1296843 C	10-03-1992

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

This list of references cited by the applicant is for the reader's convenience only. It does not form part of the European patent document. Even though great care has been taken in compiling the references, errors or omissions cannot be excluded and the EPO disclaims all liability in this regard.

Patent documents cited in the description

- WO 2007012678 A1 [0006]