

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 0 698 362 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
28.02.1996 Bulletin 1996/09

(51) Int. Cl.⁶: **A47D 13/02**, A47C 7/66

(21) Application number: 95202295.2

(22) Date of filing: 24.08.1995

(84) Designated Contracting States:
AT BE CH DE ES FR GB IT LI LU NL PT SE

(72) Inventor: **Groenendijk, Huibert**
NL-3011 MK Rotterdam (NL)

(30) Priority: 24.08.1994 NL 9401367

(74) Representative: **Vollebregt, Cornelis Jacobus, Ir.**
et al
NL-5600 AP Eindhoven (NL)

(71) Applicant: **Maxi Miliaan B.V.**
NL-5705 DG Helmond (NL)

(54) A shell-shaped seat for children

(57) The invention relates to a shell-shaped seat (1) for children, which comprises a tub-shaped shell having a seat part (2), a back part (3) joining said seat part, and two side walls (4) positioned opposite each other. The seat (1) is provided with a sun shield (10), which is adjustable with respect to the seat (1) about a pivot pin extend-

ing transversely to the longitudinal direction of the seat (1) and back part (3). The sun shield (10) is advantageously coupled to the shell-shaped seat (1) by means of two hinges (11) means of two hinges located near the sides of the tub-shaped shell.

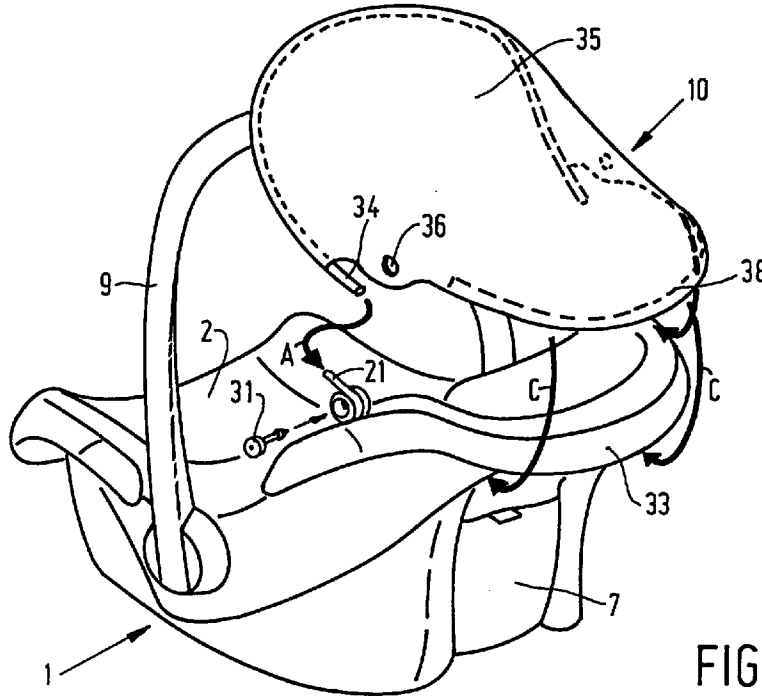


FIG. 1

EP 0 698 362 A1

Description

The invention relates to a shell-shaped seat for children, which comprises a tub-shaped shell having a seat part, a back part joining said seat part, and two side walls positioned opposite each other, whereby said seat is provided with a sun shield and whereby an edge portion of a cloth of said sun shield is connected to a U-shaped brace, said brace near its ends being adjustable with respect to the seat, about a pivot pin extending transversely to the longitudinal direction of the seat part and the back part, for which purpose the ends of said U-shaped brace are coupled to said shell-shaped seat by means of two hinges located near the sides of the tub-shaped shell.

A shell-shaped seat of this type is known from US Patent No. 5,322,343.

The brace of this known construction is a rigid member, so that the sun shield can only be adjusted by pivoting the entire brace and the end of the cloth of the sun shield secured thereto about the pivot pin.

In contrast to this known construction the brace according to the present invention is made of a resilient, flexible material, being adjustable with respect to the tub-shaped shell about the pivot pin near each end, independently of the other end.

By using the construction according to the invention a large number of variations in the positions of the brace and the end of the cloth of the sun shield secured thereto with respect to the shell-shaped seat can be realized.

A further advantage of the flexible construction of the brace is that the sun shield, when removed, can be simply folded together into a small package and be readily stored then.

According to another aspect of the invention a packing piece having a substantially triangular section is removably provided in the corner area between said seat part and said back part, in such a manner that said packing piece abuts with two boundary surfaces against adjoining parts of said seat part and said back part, and that the third boundary surface extends between the ends of the two former boundary surfaces facing away from each other.

When the packing piece is provided the shell-shaped seat is particularly suitable for being used with newly born children, who are preferably put in a lying position. The usual angle between the seat part and the back part is generally such that a newly born baby cannot be suitably put in a lying position in the shell-shaped seat.

When the child is about four months old it is sufficiently developed to assume a more active sitting position. At that stage the packing block may be removed, as a result of which more space becomes available in the interior of the shell-shaped seat, as it were, for suitably supporting the child, who has grown in the meantime, on the seat part and/or on the back part, without the external dimensions of the seat increasing thereby.

The invention will be explained in more detail below with reference to the accompanying Figures.

Figure 1 is a schematic, perspective view of a shell-shaped seat comprising a sun shield, wherein several parts are shown in spaced-apart relationship.

Figures 2 and 3 are schematic, perspective views of the shell-shaped seat, showing the sun shield in different positions.

Figure 4 is an elevational view of a part of a hinge. Figure 5 shows part of the hinge part shown in Figure 2, seen from the other side.

Figure 6 is a side view of Figure 4.

Figure 7 is a sectional view of the hinge part.

Figure 8 is a side view of a second part of the hinge.

Figure 9 is a sectional view of Figure 8.

Figure 10 is a sectional view of the coupled hinge parts.

Figure 11 is a schematic, sectional view of a part of the shell-shaped seat and a hinge secured thereto.

Figure 12 is a side view of the hinge and the sun shield secured thereto.

Figure 13 is a sectional view of a part of the shell-shaped seat and the sun shield.

Figure 14 is a schematic sectional view of a shell-shaped seat and a packing piece provided therein.

Figures 1 - 3 and 14 schematically illustrate a shell-shaped seat 1 comprising a tub-shaped shell having a seat part 2, a back part 3 and opposite side walls 4. A supporting part 5 is provided under the actual tub-shaped shell, on which the shell-shaped seat can be placed on the ground. The supporting part and the tub-shaped shell together bound a space 6, which is accessible via an opening 8 provided in the supporting part 5, which opening can be closed, preferably by means of a cover 7.

The shell-shaped seat may furthermore be fitted in a usual manner with a carrying handle, which is pivotally coupled to the shell-shaped seat.

According to the invention a sun shield 10 may be coupled to the shell-shaped seat 1 by means of hinges 11.

The parts of each hinge 11 are illustrated in more detail in Figures 5 - 9. A first hinge part comprises a plate-shaped part 12, which is integral with a hub-shaped part 13. Said hub-shaped part 13 is at its inner circumference provided with teeth 14. A second hub-shaped part 15 extends concentrically within the hub-shaped part 13 and bounds a recess 16, which is at one end bounded by a wall part 17, in which a hole 18 is provided, which hole has a smaller diameter than recess 16.

The two hub-shaped parts 13 and 15 are interconnected by a wall part 19, which is in line with the plate-shaped part 12. The ends of the hub-shaped parts 13 and 15 facing away from said wall part 19 and an outer boundary surface of the wall part 17 lie in a plane which includes an acute angle with the boundary surface of the plate portion 12 facing away therefrom, as will be apparent in particular from Figure 7.

Furthermore the plate-shaped part is at its bottom end provided with two semi spherical projections 20.

The other hinge part comprises an elongated bush-like body 21, which is integral with an annular means 22, whereby the bush 21 tangentially joins the annular means 22, as is apparent from Figure 8. A plate-shaped part 23 is provided in said annular means, on one side thereof, in which plate-shaped part two diametrically opposed recesses 24 are formed. A hub 25, which is concentrically provided through the annular means 22, is secured to said plate-shaped part 23.

Two curved, diametrically opposed ribs 26 are provided on the plate-shaped part 23, on the side of the plate-shaped part 23 facing away from the hub 25. The ends of said ribs 26 are interconnected by diametrically opposed connecting parts being integral therewith, said parts each being built up of two parts 27 and 28, which are in line in unloaded condition, and of the parts connecting the facing ends of said parts 27 and 28 and forming a projecting nose 29, which are located near the recesses 24.

As is illustrated in particular in Figure 10, the two above-described hinge parts may be coupled so as to form a hinge 11, in such a manner that the ribs 26 and the parts 27 - 29 interconnecting said ribs will come to lie in the space bounded by the two hubs 13 and 15, whereby the projecting noses 29 will engage with the teeth 14. Said projecting noses may move slightly resiliently towards the inside, so that when a certain force is exerted the hinge parts that have been brought into engagement with each other can be pivoted with respect to each other, whereby the projecting noses will move along the teeth 14. Once a certain position has been set the projecting noses 29 will engage with the teeth 14, thus blocking the hinge parts with respect to each other.

As is furthermore illustrated in Figure 10 the fixed connection between the hinge parts is locked by means of a cap 31 provided with springing arms 30, which springing arms are inserted through the bore in the hub 25 and through the hole 18, whereby the ends of the arms 30 engage behind the plate-shaped part 17 in the manner illustrated in Figure 10.

The hinges thus formed can on either side of the back part be inserted into slotted holes 32, which are formed in a flanged edge 33 of the side walls of the shell-shaped seat (Figure 11). When the parts 12 of the hinges are being inserted the wall parts bounding the recess 32 will move slightly resiliently, in order to allow the projecting cams 20 to pass. As is shown in Figure 11 said projecting cams will thereby come to lie under the bottom edge of a wall part bounding the recess 32, whilst the hub part 13 will abut against the upper side of the flanged edge 33, so that an adequate attachment of the hinge to the shell-shaped seat has been effected. Of course also other types of "snap connections" or the like readily detachable connections are conceivable.

As is indicated by arrow A in Figure 1, the ends of an elongated, more or less U-shaped bar 34, which is preferably made of a slightly resilient, deformable material, are inserted in the bushes 21 of the two hinges.

As will be apparent from Figures 1 and 12, one edge of the cloth 35 of the sun shield is attached to said bar. Holes 36 are provided in the cloth near the ends of said bar, so that the cloth can be clamped between the cap 31 and the hinge by passing the resilient fingers 30 through said holes 36, as is indicated in Figure 11.

As is indicated by the dotted line 38, elastic is sewn into the cloth at the edge of the cloth that is positioned opposite the brace 34, seen in Figure 1. This edge part of the sun shield 10 provided with elastic can be hooked under the flanged edge 33 in the manner shown in Figure 13 (arrows C in Figure 1), so that the cloth will properly join the rear part of the shell-shaped seat.

As is shown in Figures 2 and 3, the sun shield thus pivotally connected to the shell-shaped seat can be adjusted into several positions, in order to effect an optimum protection of the occupant of the shell-shaped seat against the weather conditions, such as radiation by sunlight, rain and the like.

Since the more or less U-shaped bar 34 that has been worked into the edge of the sun shield is slightly resilient, the sun shield can be pivoted from a certain position through an angle which is greater at one hinge than at the other hinge, if desired, so that, for example in case of radiation by sunlight from the side, the shield can be moved further downwards at one side than at the other side. An optimum adjustment of the shield can be realized at all times, therefore. This is in particular important when the shell-shaped seat is being transported in a car, since the seat is generally mounted in a fixed position in the car and the sunlight may enter the car from various sides.

As is apparent in particular from Figure 14, the seat part 2 and the back part 3 include an obtuse angle with each other. The profile thus formed by the seat part 2 and the back part 3 is generally unsuitable for supporting newly born children, since it is desirable to put a newborn child in a more recumbent position.

In order to be able to use the shell-shaped seat for the transport of such newly born children as well, it is according to the invention possible to use a packing piece 40. As will be apparent from Figure 14, said packing piece is substantially triangular in sectional view and is thereby shaped in such a manner that the packing piece abuts with two adjoining sides of said triangular packing piece against adjoining parts of the seat part 2 and the back part 3, whilst the third side of the packing piece extends between the seat part 2 and the back part 3, as a result of which there is only a very small bend between the upper part of the packing piece and the part of the back wall 3 joining said packing piece and an effective supporting surface has been obtained for supporting a newly born baby in a lying position. Said surface is large enough to support the back of a newly born baby in an even manner.

When children older than about four months are to be conveyed the packing piece may be removed, since the child will then be sufficiently developed to assume a more active sitting position. By removing the packing

piece more interior space will furthermore be obtained, which is desirable, since the child has grown in the meantime.

Claims

5

1. A shell-shaped seat for children, which comprises a tub-shaped shell having a seat part, a back part joining said seat part, and two side walls positioned opposite each other, whereby said seat is provided with a sun shield and whereby an edge portion of a cloth of said sun shield is connected to a U-shaped brace, said brace near its ends being adjustable with respect to the seat, about a pivot pin extending transversely to the longitudinal direction of said seat part and said back part, for which purpose the ends of said U-shaped brace are coupled to said shell-shaped seat by means of two hinges located near the sides of the tub-shaped shell, characterized in that said brace is made of a resilient, flexible material, being adjustable with respect to the tub-shaped shell about said pivot pin near each end, independently of the other end. 10 15 20
2. A shell-shaped seat according to claim 1, characterized in that an edge portion of a cloth of said sun shield is connected to an upper boundary edge of said back part. 25
3. A shell-shaped seat according to claim 1 or 2, characterized in that a hinge is built up of two hinge parts, one of said hinge parts being provided with teeth and the other being provided with a resiliently movable tooth cooperating with said teeth. 30 35
4. A shell-shaped seat according to any one of the preceding claims, characterized in that one hinge is detachably coupled to said shell-shaped seat. 40
5. A shell-shaped seat for children, which comprises a tub-shaped shell having a seat part, a back part joining said seat part, and two side walls positioned opposite each other, characterized in that a packing piece having a substantially triangular section is removably provided in the corner area between said seat part and said back part, in such a manner that said packing piece abuts with two boundary surfaces against adjoining parts of said seat part and said back part, and that a third boundary surface extends between said seat part and said back part. 45 50

55

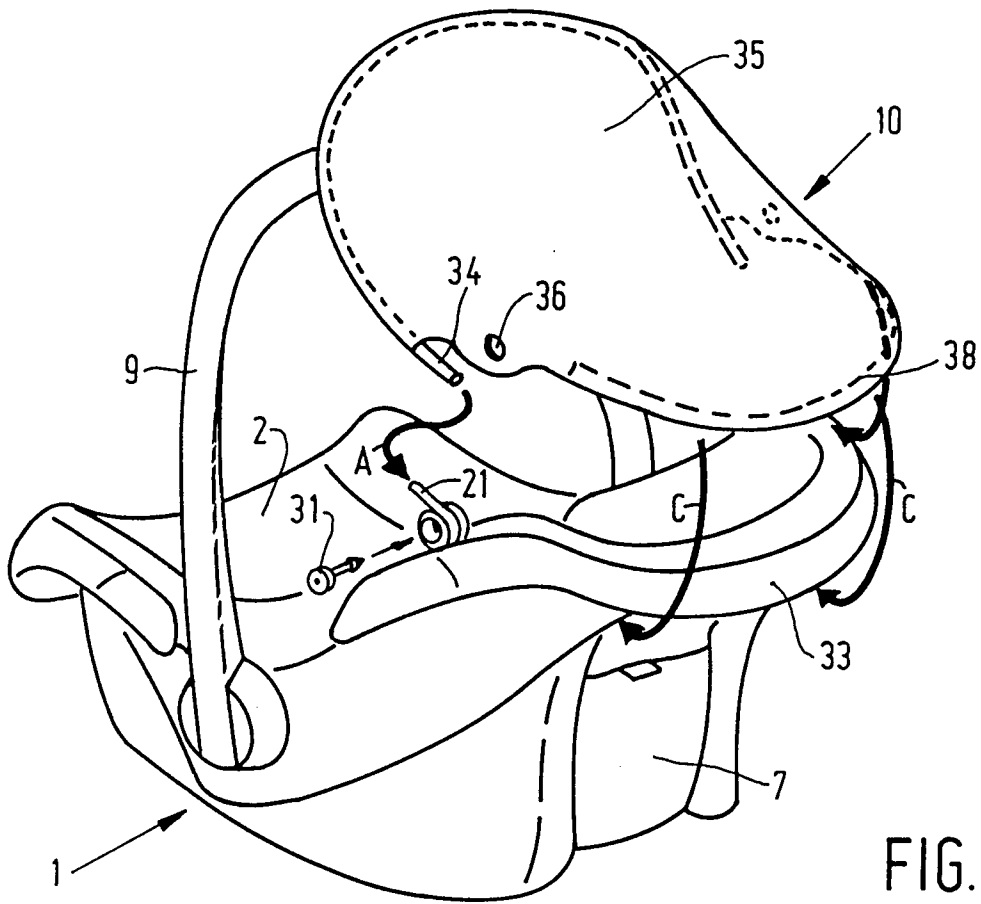


FIG. 1

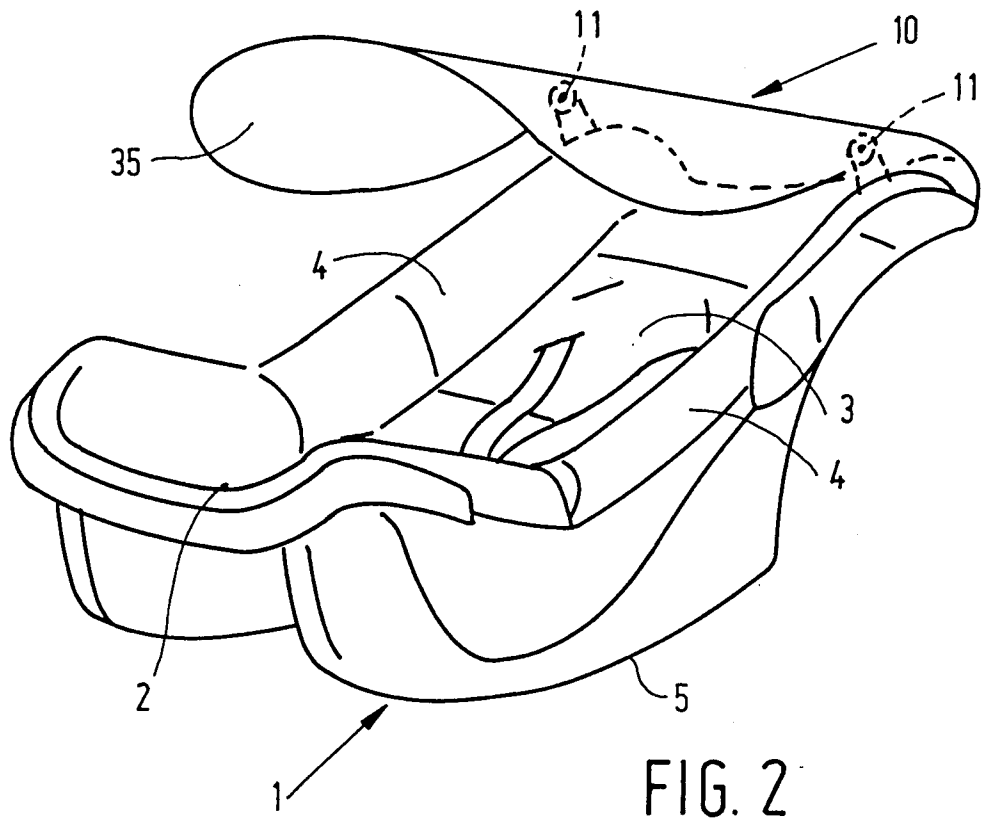


FIG. 2

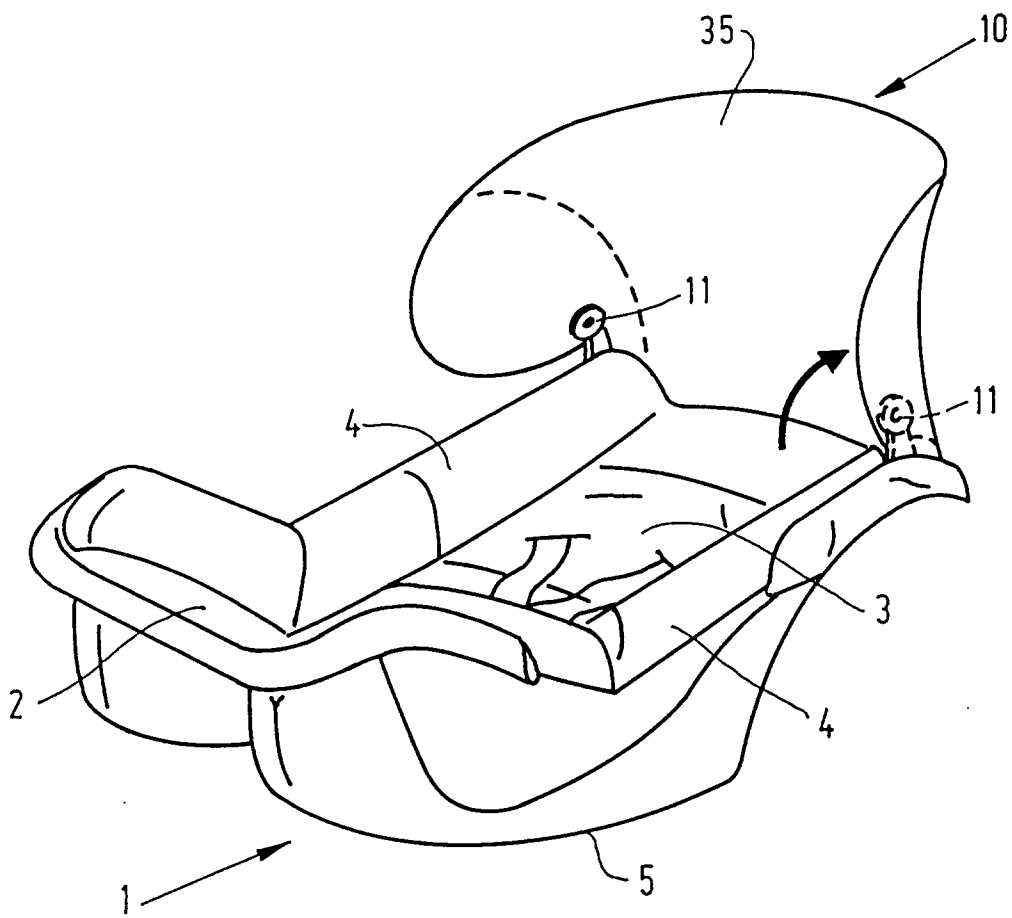


FIG. 3

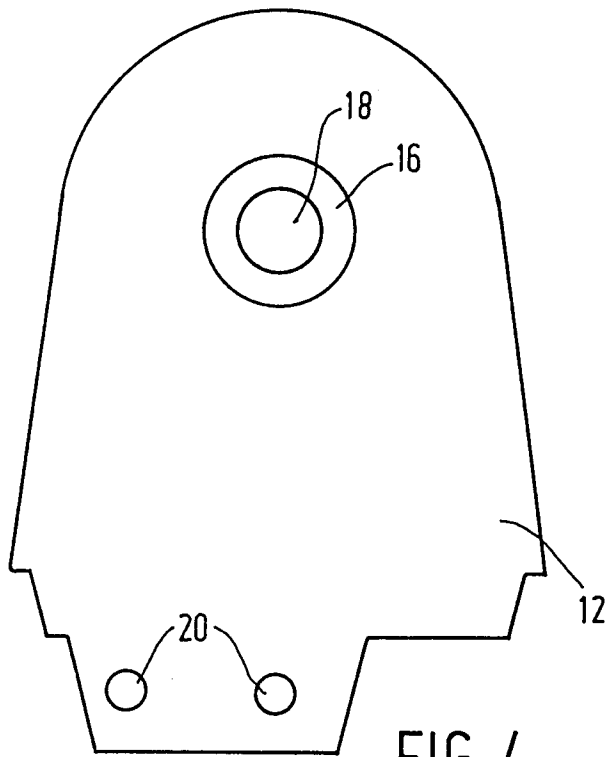


FIG. 4

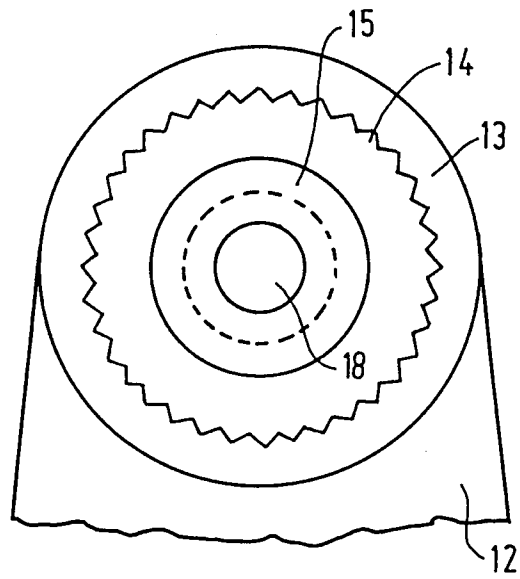


FIG. 5

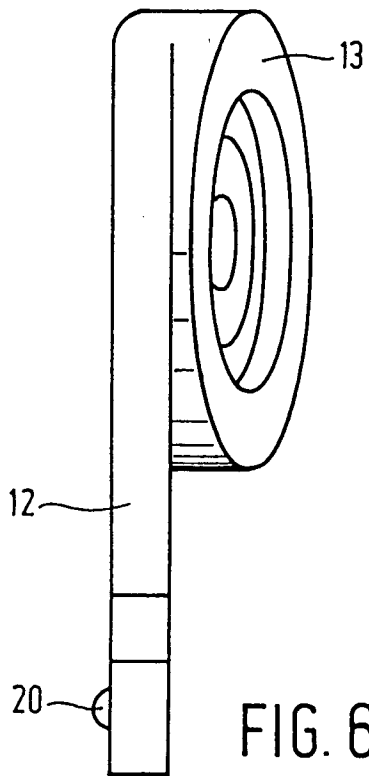


FIG. 6

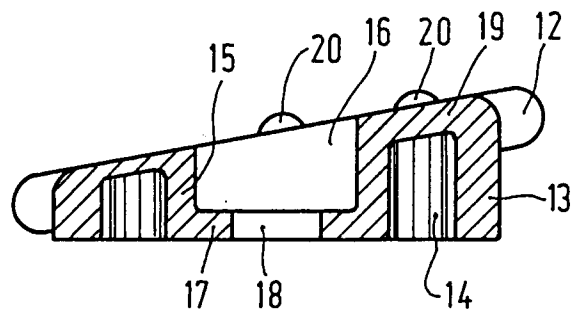


FIG. 7

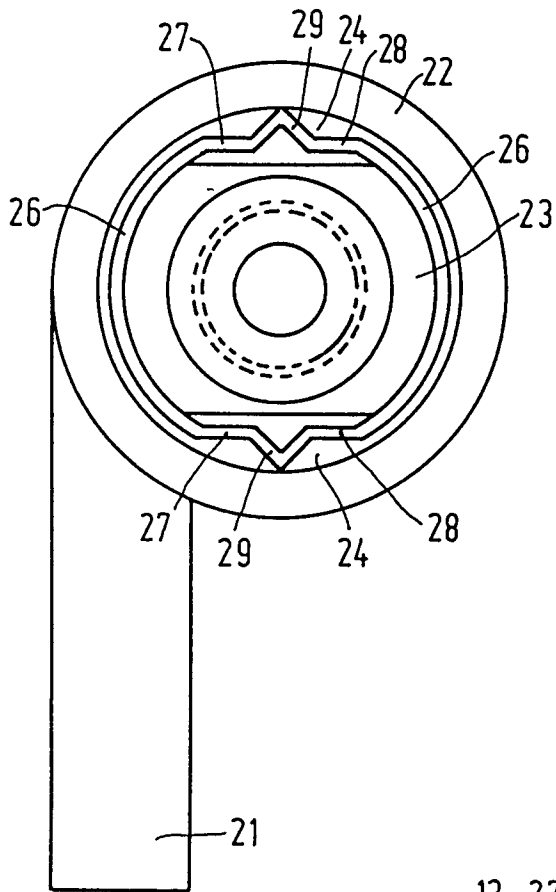


FIG. 8

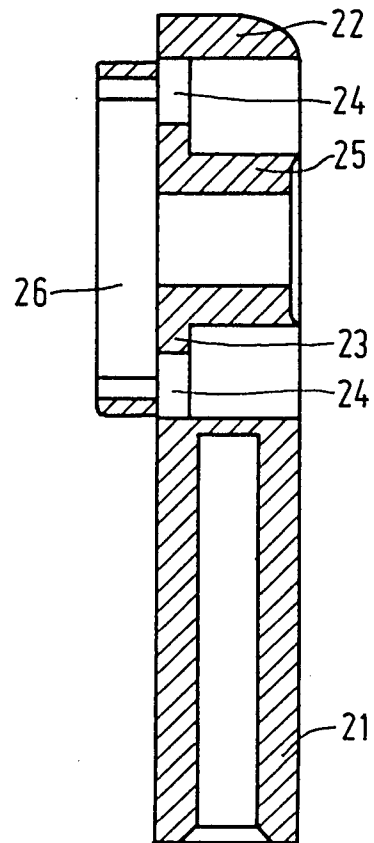


FIG. 9

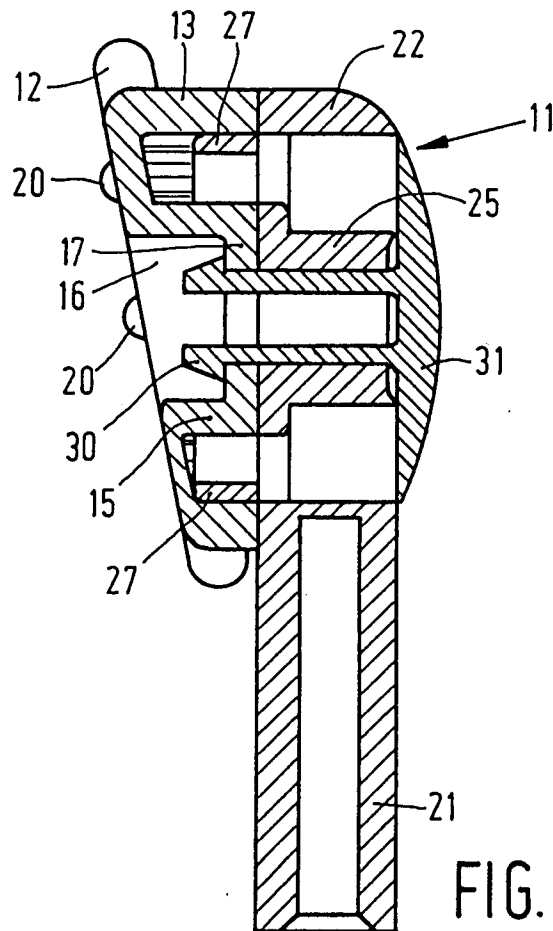


FIG. 10

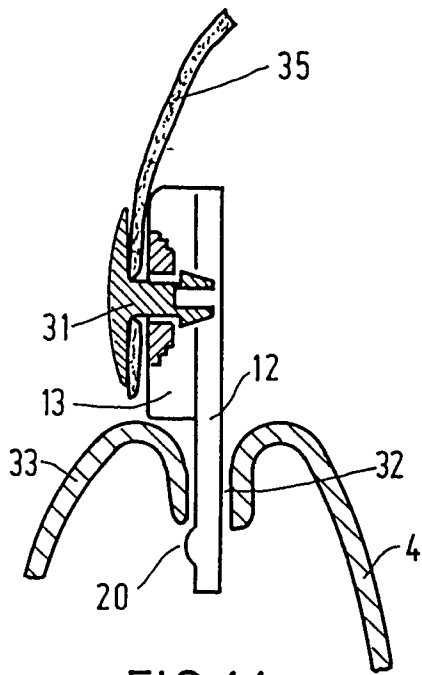


FIG. 11

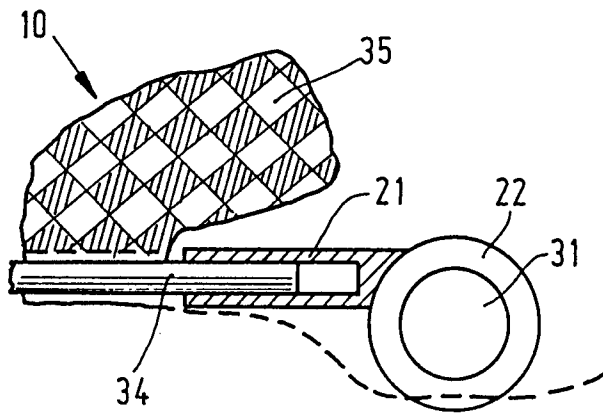


FIG. 12

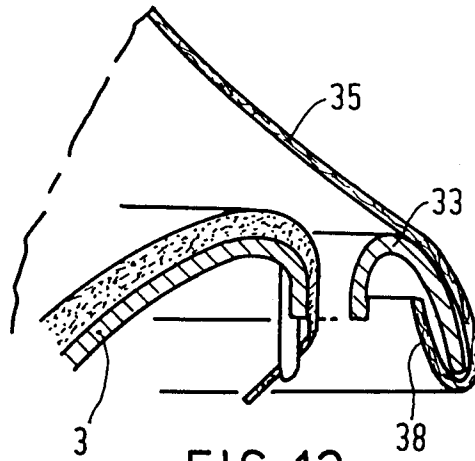


FIG. 13

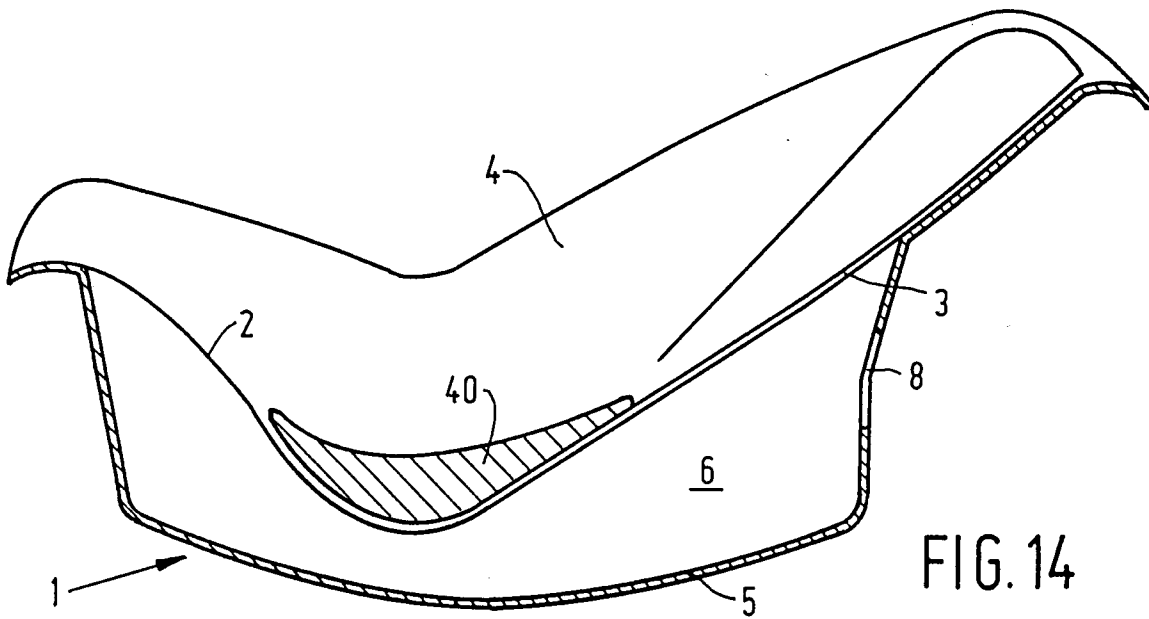


FIG. 14



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 95 20 2295

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	US-A-5 322 343 (PARKER ET AL.) 21 June 1994 * column 2, line 40 - column 4, line 51; figures 1-4,8 * -----	1-5	A47D13/02 A47C7/66
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			A47C A47D
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		30 November 1995	Mysliwetz, W
<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>			

EPO FORM 1503 03.82 (P/MCO1)