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## (54) Infant seat with a sun shield

(57) An infant seat comprising a back portion, a seat portion connected to the back portion and a sun shield to be connected to said back portion, which is positioned near the back portion with a first end and which is spaced from the back portion with a second end in a sun-shielding position thereof. The infant seat is provided, on a side of the back portion remote from the seat portion, with a storage space extending at least partially around the back portion, which storage space can be closed by means of a cover, with the first end of a sun shield being positioned in the storage space both in a storage position, in which the sun shield is accommodated in the storage space, and in the sun-shielding position.

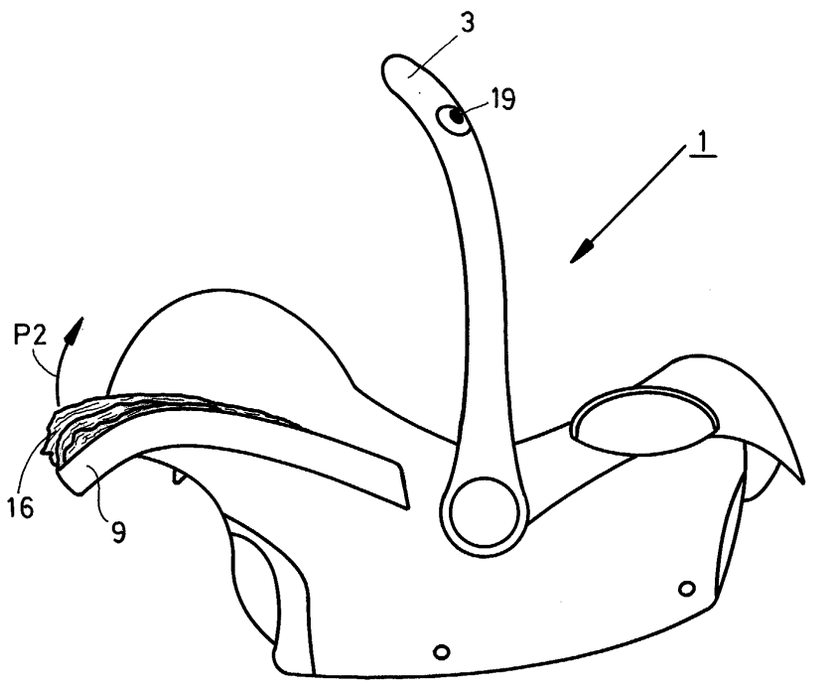


FIG. 3

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## Description

**[0001]** The invention relates to an infant seat comprising a back portion, a seat portion connected to the back portion and a sun shield to be connected to said back portion, which is positioned near the back portion with a first end and which is spaced from the back portion with a second end in a sun-shielding position thereof.

**[0002]** With an infant seat of this kind, as known from European patent application EP-A1-0 698 262, a sun shield is provided with an elastic band at a first end thereof, which elastic band can be positioned around the back portion of the seat. The sun shield is provided with a U-shaped strip at a second end, the ends of which strip can be detachably positioned in elements connected to said back portion.

**[0003]** Although such a sun shield in itself functions satisfactorily, the sun shield has this drawback that the connection between the U-shaped strip and the pivoting elements connected to the infant seat must be broken and the sun shield must be removed from the infant seat in its entirety when the user does not wish to use it. The loose sun shield can subsequently be stored in a storage space that is separately provided in the infant seat. However, when this storage space is also used for storing diapers, drink bottles, toys, etc., for example, the user will not take the sun shield along when the weather conditions are not good, in view of the limited amount of space that is available. In practice this will mean that frequently the sun shield will not be directly available, even when the weather conditions are good. In addition, both the first end and the second end of the sun shield must be connected to the infant seat, so that the fitting of the sun shield is relatively laborious.

**[0004]** The object of the invention is to provide an infant seat whose sun shield can be stored in the infant seat and be moved to its sun-shielding position in a simple manner.

**[0005]** This objective is accomplished with the infant seat according to the invention in that the infant seat is provided, on a side of the back portion remote from the seat portion, with a storage space extending at least partially around the back portion, which storage space can be closed by means of a cover, with the first end of a sun shield being positioned in the storage space both in a storage position, in which the sun shield is accommodated in the storage space, and in the sun-shielding position.

**[0006]** The sun shield can readily be stored in the storage space created between the back portion and the cover. When the sun shield is to be used, the cover is opened, after which the second end of the sun shield is taken hold of and moved to a sun-shielding position of the sun shield, in which said second end is spaced from the back portion.

**[0007]** The first end remains in the storage space and may be connected either to the back portion or to the cover.

**[0008]** When the sun shield is present within the storage space, the sun shield is entirely hidden from view by the cover. Since the sun shield can be stored in the storage space in a simple manner, the sun shield will be available at any desired moment.

**[0009]** As a result of the presence of this storage space, which is specifically intended for the sun shield, another storage space in the infant seat will be fully available for additional baby things, such as a bottle, diapers, toys, etc.

**[0010]** One embodiment of the infant seat according to the invention is characterized in that the cover is provided with a slot, in which the sun shield can be positioned.

**[0011]** The sun shield can be simply accommodated in the slot, which forms part of the storage space, in which case the sun shield will become accessible for being moved to the sun-shielding position by opening the cover.

**[0012]** When the sun shield is to be stored, the sun shield can be stored in the infant seat and be hidden from view in a quick and efficient manner by simple positioning the sun shield in the slot and subsequently closing the cover.

**[0013]** Another embodiment of the infant seat according to the invention is characterized in that the infant seat comprises a carrying handle, and in that the second end of the sun shield can be detachably connected to the carrying handle in the sun-shielding position.

**[0014]** The detachable connection of the second end to the carrying handle that is connected to the infant seat makes it possible to set up the sun shield above the back portion of the infant seat in a simple manner. The sun shield itself need not be provided with means by which the sun shield is retained in its sun-shielding position. As a result, the sun shield can be of relatively simple design, for example, in the form of a cloth.

**[0015]** Yet another embodiment of the infant seat according to the invention is characterized in that the cover is slidably connected to the back portion.

**[0016]** This makes it possible to release or close the storage space by means of a relatively simple sliding movement.

**[0017]** Yet another embodiment of the infant seat according to the invention is characterized in that the cover is elastically deformable from a position in which it closes the storage space to a position in which it releases the storage space.

**[0018]** In this way the user only needs to elastically deform the cover in order to release or close the storage space.

**[0019]** The invention will be explained in more detail hereinafter with reference to the drawings, in which:

Figure 1 is a side elevation of an infant seat according to the invention;

Figure 2 is a side elevation of the infant seat that is shown in Figure 2, showing the cover connected to

the infant seat in the open position thereof;
Figure 3 is a side elevation of the infant seat that is shown in Figure 1, in which a sun shield connected to the infant seat is partially shown;
Figures 4a and 4b are a side elevation and a perspective view, respectively, of the infant seat that is shown in Figure 1, with the sun shield in the sun-shielding position and the cover still being open ;
Figures 5a and 5b are a side elevation and a perspective view, respectively, of the infant seat that is shown in Figure 1, in which the sun shield is in the sun-shielding in position, whilst the cover is closed;
Figures 6a and 6b are perspective cross-sectional views of a part of the infant seat that is shown in Figure 1, showing the cover in the closed position and in the open position, respectively;
Figure 7 is a perspective bottom view of a second embodiment of a cover for the infant seat that is shown in Figure 1;
Figures 8 and 9 are cross-sectional views of the cover that is shown in Figure 7, showing the cover in the closed position and in the open position, respectively;
Figure 10 is a perspective view of the cover that is shown in Figures 6a, 6b;
Figure 11 is a partial side elevation of the attachment of the cover that is shown in Figure 10 to the infant seat according to the invention; and
Figure 12 is a cross-sectional view of the attachment that is shown in Figure 11.

**[0020]** Like parts are indicated by the same numerals in the various Figures.

**[0021]** Figure 1 is a side elevation of an infant seat according to the invention, comprising a plastic shell 2 and a U-shaped carrying handle 3, which is pivotally connected to the plastic shell 1 2 on either side of the shell 2 by means of fixing elements 4.

**[0022]** The plastic shell 1 2 comprises a seat portion 5 and a back portion 6, which is connected to the seat portion. The plastic shell 2 furthermore comprises two upright side walls 7 extending on either side of the plastic shell 2, and seat belt guiding elements 8 connected to the side walls 7 near the seat portion 5. Such an infant seat 1, which is suitable for use in a vehicle, is known per se and will not be explained in more detail herein, therefore.

**[0023]** The infant seat 1 according to the invention is provided with a U-shaped (seen in top plan view) cover 9, which extends around the back portion 6 on a side of the back portion 6 remote from the seat portion 5. As is shown in Figures 6a and 6b, the cover 9 is likewise U-shaped, seen in cross-sectional view, with the space 10 bounded by the U-shape of the cover 9 connecting to a space 11 which is bounded by a U-shaped, seen in cross-sectional view, circumferential edge 12 of the shell 2. The circumferential edge 12 extends from one fixing element 4 of the carrying handle 3, via a rear side of the back portion 6, to the fixing element 4 present on the other side. The cover 9, too, extends around the shell 2 in this manner. The connecting spaces 10, 11 that are bounded by the circumferential edge 12 and the cover 9 together form a storage space 13. The cover 9 is detachably connected, via a lip 14 extending through the circumferential edge 12, to a spring element 15 provided in the shell 2.

**[0024]** Present in the storage space 13 is a sun shield 16 in the form of a cloth (see Figures 3, 4 and 5), a first end of which is connected to the cover 9. The first end extends between the fixing elements 4, around the back portion 6.

**[0025]** Before the operation of the shun shield is explained, the attachment of the cover 9 to the infant seat 1 will first be explained with reference to Figures 10-12. The cover 9 is provided with a number of slots 40 on a side facing towards the shell 2, which slots can slide over pins 41 connected to the shell 2. The pins 41 are provided with protrusions 42 on a side remote from the shell 2, which protrusions connect the cover 9 to the shell 2.

**[0026]** Now the operation of the sun shield of the vehicle seat 1 according to the invention will be explained with reference to Figures 1-5b. Figure 1 shows the infant seat in a position in which the sun shield 16 is positioned within the storage space 13 bounded by the circumferential edge 12 and the cover 9 in its entirety.

**[0027]** The slots 40 that can slide over the pins 41 enable movement of the cover 9 in the direction indicated by the arrow P1 and in the opposite direction (Figure 2), with the storage space 13 being opened by moving the cover 9 in the direction indicated by the arrow P1 (Figure 6b).

**[0028]** Subsequently, the user takes hold of the sun shield 16 present in the storage space 13 (Figure 3) and pulls it towards the carrying handle 3 in the direction indicated by the arrow P2. The sun shield is moved towards the carrying handle 3 until a second end 17 is positioned near the carrying handle 3 and button-like elements 19 present on the carrying handle 3 can be hooked into openings 18 present in the second end 17. The sun shield 16 now occupies the sun-shielding position that is shown in Figures 4a and 4b.

**[0029]** Following that, the cover 9 is moved in the direction indicated by the arrow P3, the opposite direction of the arrow P1, as is shown in Figure 5a, so that an attractively looking transition between the sun shield 16 and the cover 9 is obtained, as is shown in Figures 5a and 5b. In this position, the sun shield extends through a gap present between the circumferential edge 12 and the cover 9 (Figure 6a).

**[0030]** When the sun shield 16 is to be stored again, the second end 17 is disconnected from the bottom-like elements 19 and the cover 9 is moved in the direction indicated by the arrow P1, after which the sun shield 16 can be placed in the space 10 bounded by the cover 9.

**[0031]** Subsequently, the cover 9 is moved in the di-

rection indicated by the arrow P3 again until a cover 9 is closed.

**[0032]** Figures 7-9 show a second embodiment of a cover 29 of an infant seat 1 according to the invention, which cover 9 comprises two legs 30 and a bridge portion 31 interconnecting said legs. The legs 30 extend on either side of the shell 2 up to the fixing elements 4, in the same manner as the cover 9. The cover 29 is connected to the shell 2 with the ends of the legs 30 remote from the bridge portion 31. The bridge portion 31 extends along the rear side of the shell 1 2. The cover 29 is made of a relatively rigid plastic, for example polypropylene, in which a U-shaped strip 31 of a flexible plastic, for example silicone, is provided. The strip 32 is bounded on either side by strips 33 of said relatively rigid material. The flexible strip 32 makes it possible to pivot the strips 33 of the bridge portion 31 simultaneously in the direction indicated by the arrow P4, as it were, from the closed position of the cover 29 as shown in Figure 8 to the open position of the cover 29 as shown in Figure 9, as a result of which a storage space present between the circumferential edge 12 of the shell 2 and the cover 29 is released and the sun shield present therein can be pulled out.

**[0033]** It is also possible to provide the cover 9, 29 only near the rear side of the back portion, in which case the sun shield is only connected to the infant seat near that side. In such a case, the sun shield will only comprise a part extending above the back portion in the sun-shielding position, it will not comprise parts by means of which the sides of the infant seat 1 are shielded against incident sunlight, as is the case in the sun-shielding position that is shown in Figures 5a, 5b. It is also possible in such a case, however, to connect the sides in a freely suspended manner to the sun shield, as it were.

**[0034]** According to another possibility, the sun shield is connected to the circumferential edge 12 instead of to the cover 9, 29 with the first end.

**[0035]** The sun shield may be detachably connected to the circumferential edge 12 on the cover 9, 29, so that the sun shield can be temporarily removed in order to be cleaned.

**[0036]** Furthermore it is possible to leave the cover 9 open in the sun-shielding position of the sun shield, in which case the presence of a slot 20 between the cover 9 and the edge 12 is not required in the closed position of the cover 9.

**[0037]** It is also possible to create the storage space some distance away from the back portion by using a separate construction, in which case the first end of the sun shield is likewise accommodated in the storage space substantially permanently, however.

**[0038]** Furthermore it is possible to use a different mechanism for temporarily fixing the cover instead of the lip 14 that engages in the spring element 15.

**[0039]** The pins 41 and the protrusions 42 connected thereto may be connected to the shell as separate elements.

**[0040]** Furthermore it is possible to provide the sun shield with a self-supporting edge, so that the sun shield need not be connected to the carrying handle but can remain unfolded independently.

**[0041]** The cover 9 itself may form the movable edge in that case, for example, with the first end of the sun shield being connected to the shell and the second end being connected to the cover 9.

**[0042]** It is also possible to integrate the cover in the upholstery of the back portion.

## Claims

1. An infant seat comprising a back portion, a seat portion connected to the back portion and a sun shield to be connected to said back portion, which is positioned near the back portion with a first end and which is spaced from the back portion with a second end in a sun-shielding position thereof, **characterized in that** the infant seat is provided, on a side of the back portion remote from the seat portion, with a storage space extending at least partially around the back portion, which storage space can be closed by means of a cover, with the first end of a sun shield being positioned in the storage space both in a storage position, in which the sun shield is accommodated in the storage space, and in the sun-shielding position.

2. An infant seat according to claim 1, **characterized in that** the cover is provided with a slot, in which the sun shield can be positioned.

3. An infant seat according to claim 1, **characterized in that** the first end is connected either to the back portion or to the cover.

4. An infant seat according to any one of the preceding claims, **characterized in that** the cover is U-shaped, with two legs of the U-shaped cover extending parallel to each other on either side of the back portion, and a bridge portion of the cover, which interconnects said legs, being positioned on a rear side of the back portion remote from the seat portion.

5. An infant seat according to any one of the preceding claims, **characterized in that** the infant seat comprises a carrying handle, and that the second end of the sun shield can be detachably connected to the carrying handle in the sun-shielding position.

6. An infant seat according to claim 5, **characterized in that** said carrying handle is connected to the infant seat by means of fixing elements, with the first end of the sun shield extending around the back portion, substantially between the two fixing ele-

ments.

**7.** An infant seat according to claim 5, **characterized in that** said second end is provided with at least one opening, in which an element connected to the carrying handle can be detachably positioned.

**8.** An infant seat according to any one of the preceding claims, **characterized in that** the cover is slidably connected to the back portion.

**9.** An infant seat according to any one of the preceding claims, **characterized in that** the cover is elastically deformable from a position in which it closes the storage space to a position in which it releases the storage space.

**10.** An infant seat according to claim 9, **characterized in that** the cover is provided with two parallel strips of a relatively rigid material, and with a strip of a relatively flexible material, which is positioned therebetween.

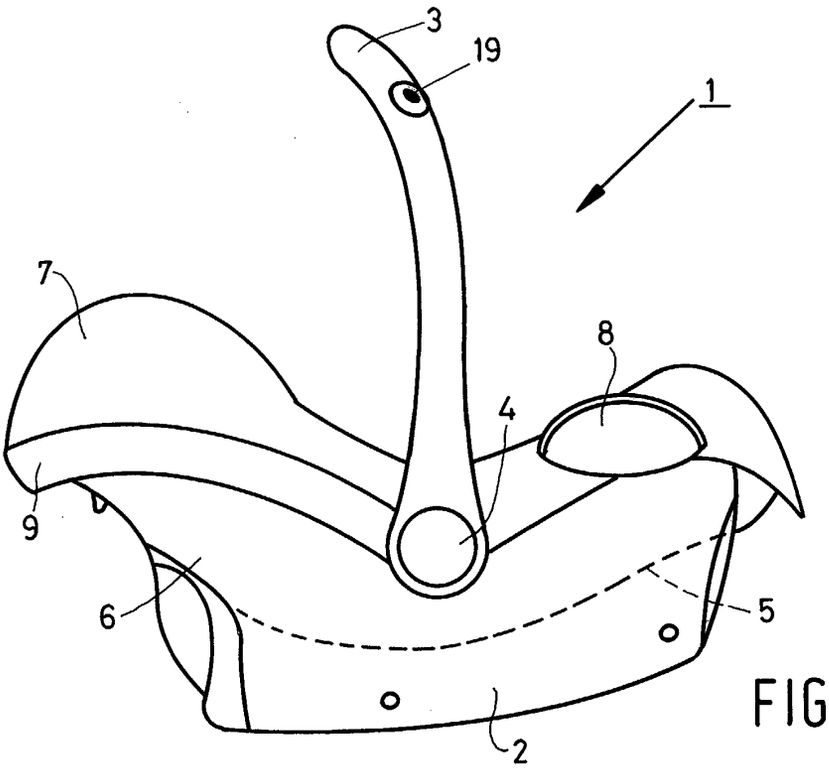


FIG.1

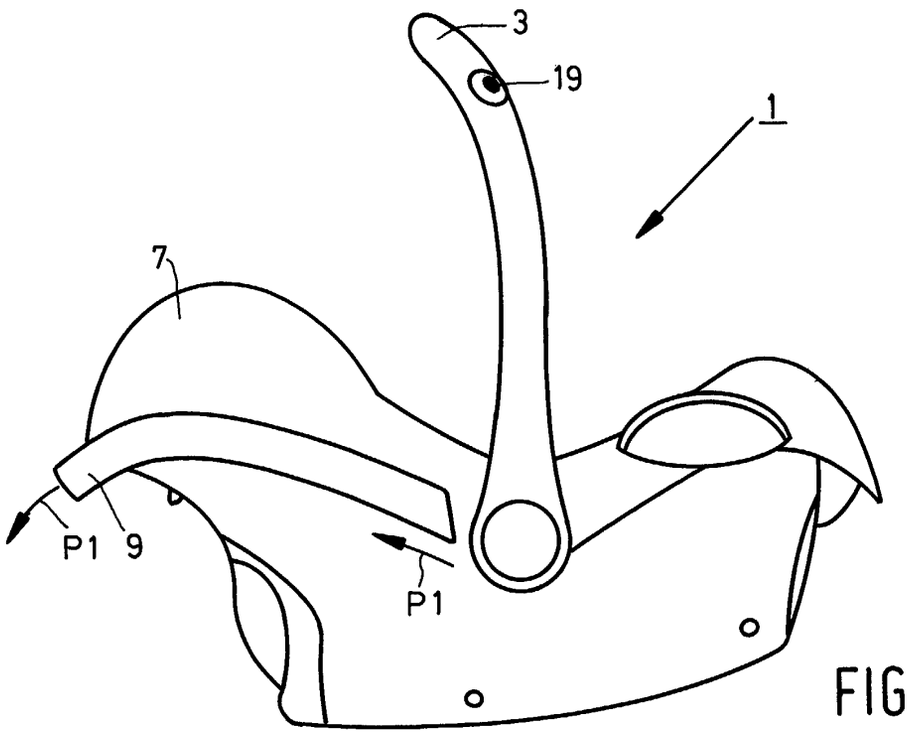


FIG.2

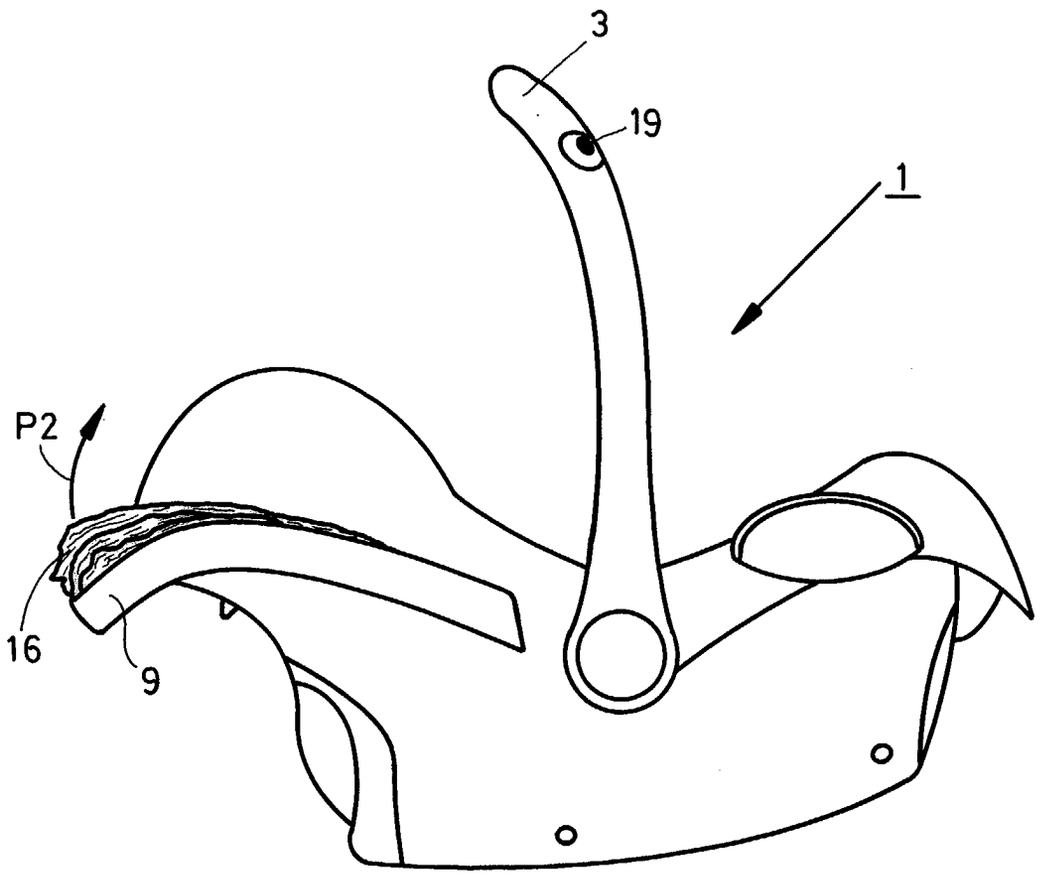


FIG. 3

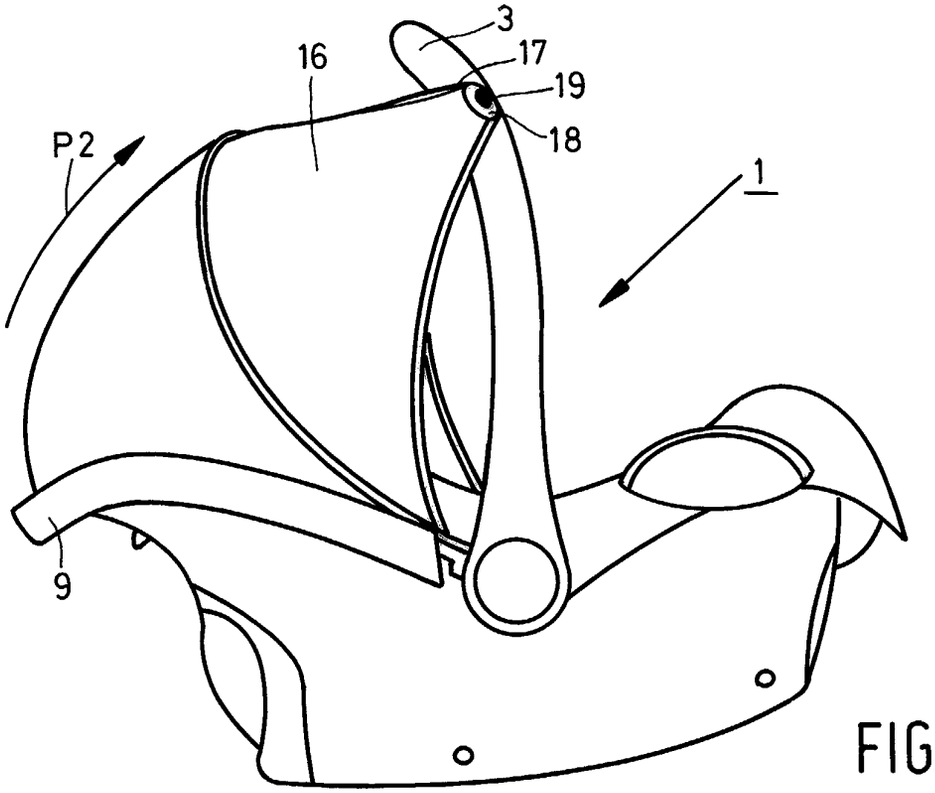


FIG. 4a

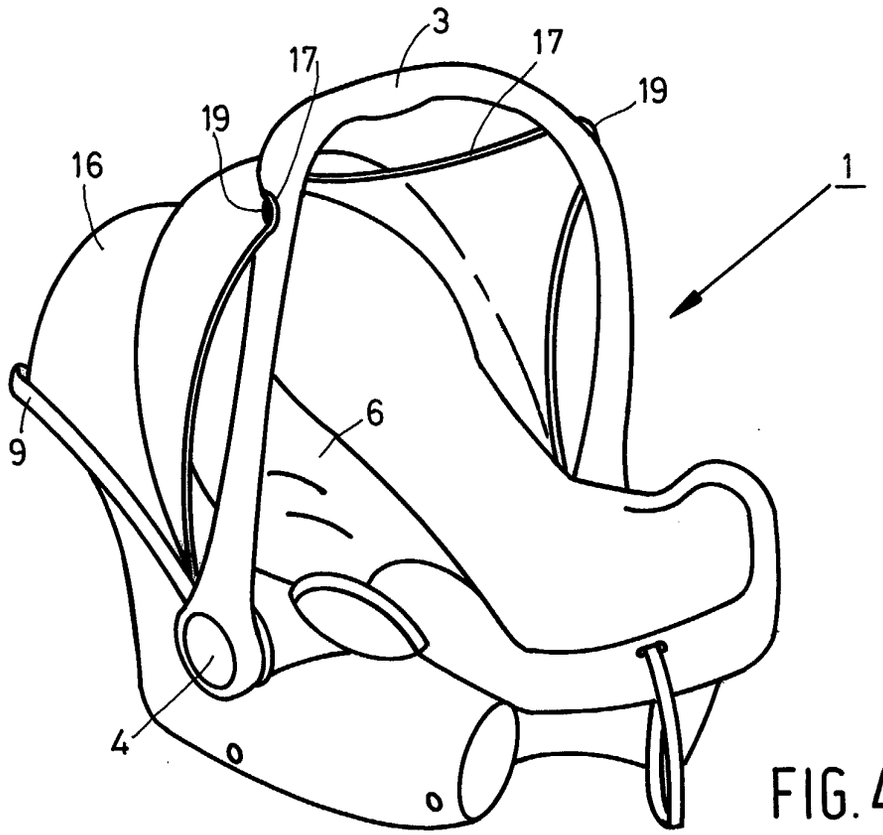


FIG. 4b

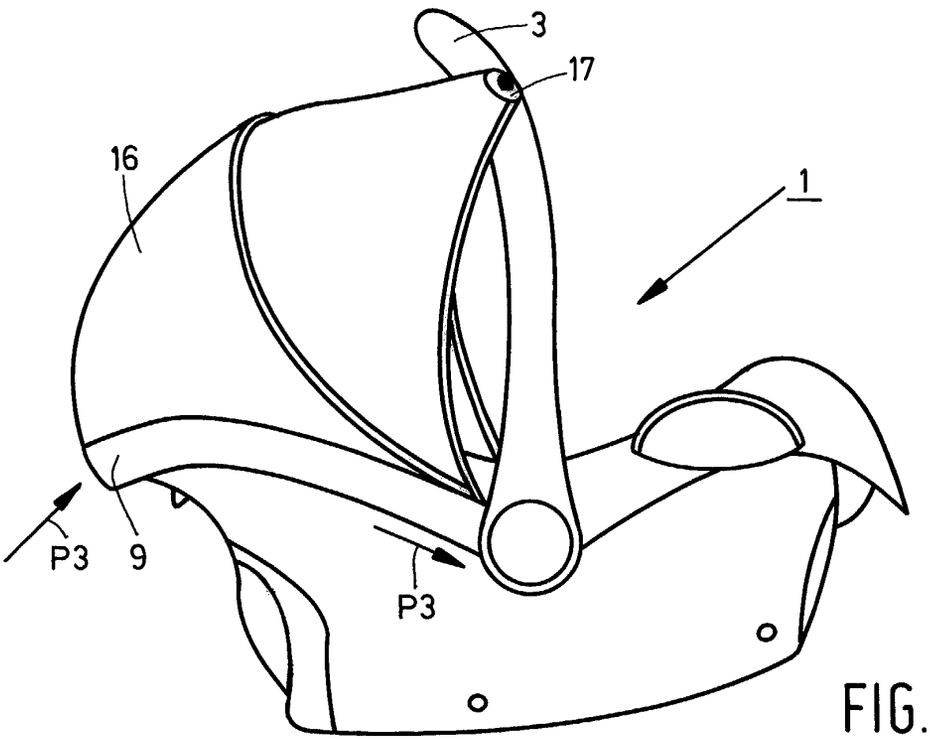


FIG.5a

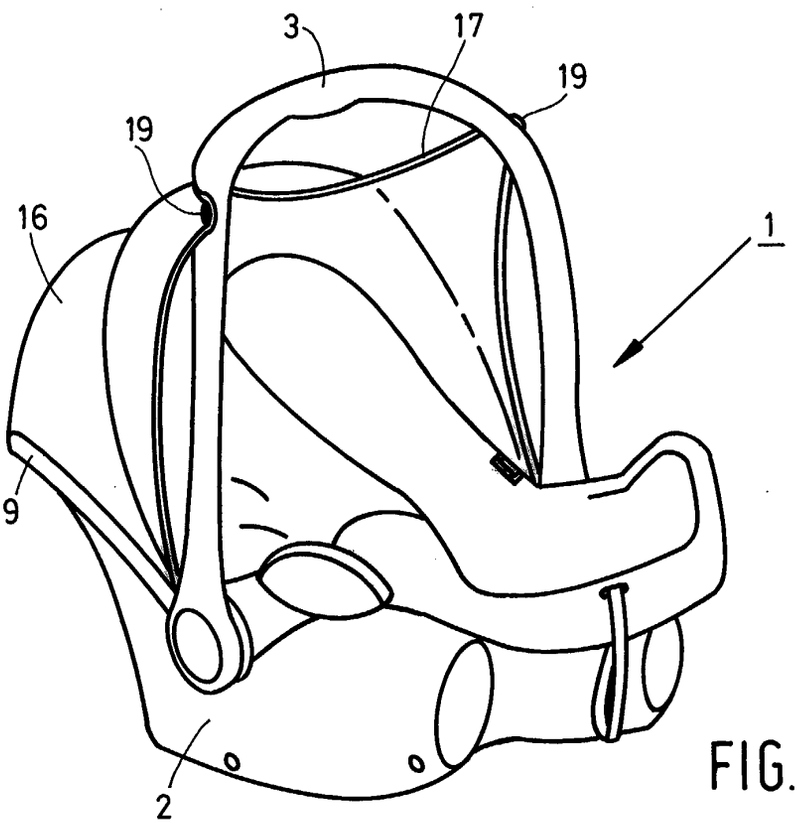


FIG.5b

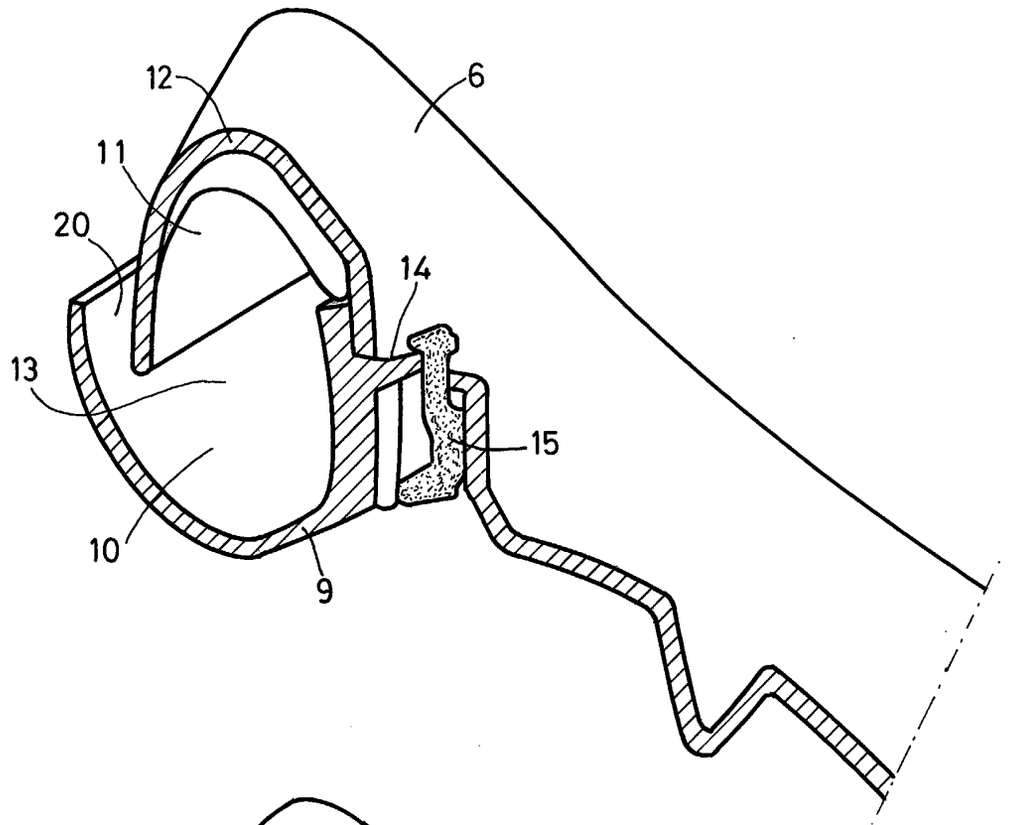


FIG. 6a

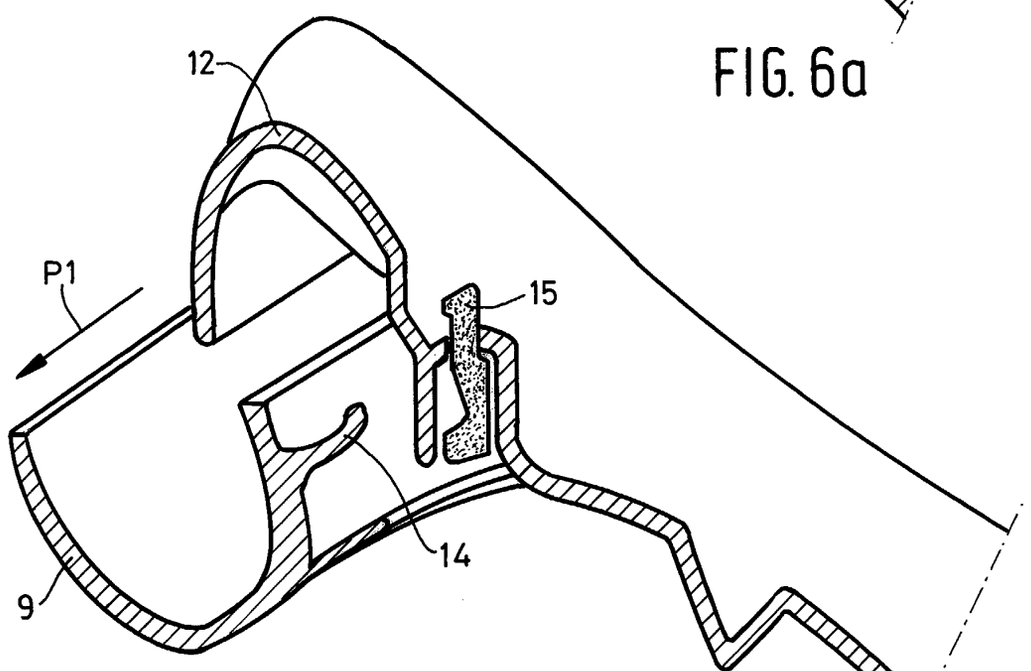


FIG. 6b

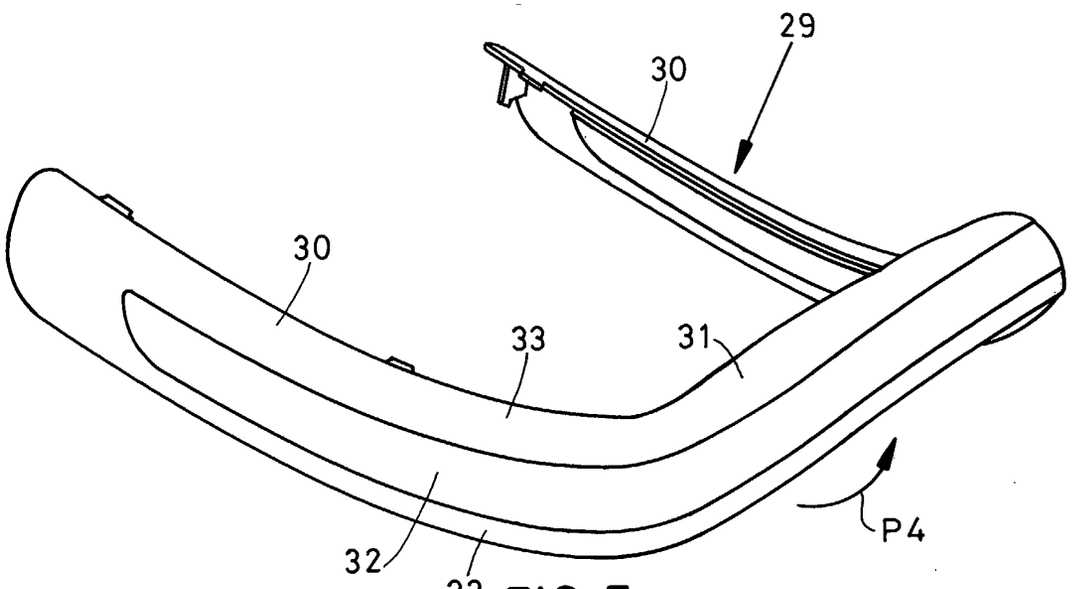


FIG. 7

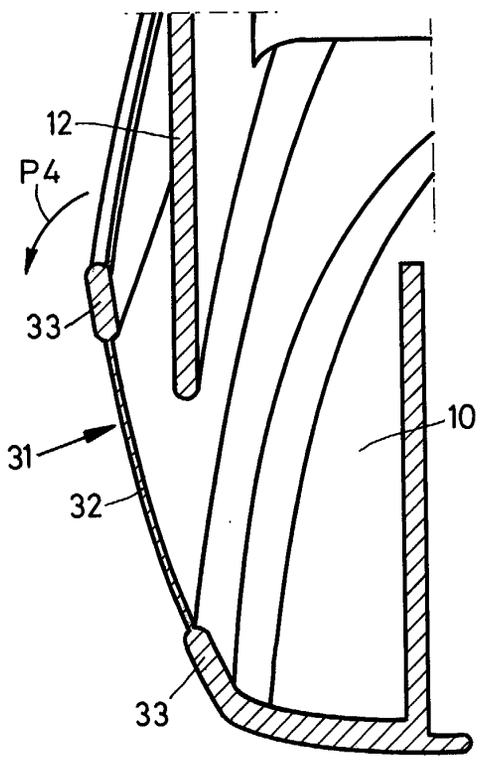


FIG. 8

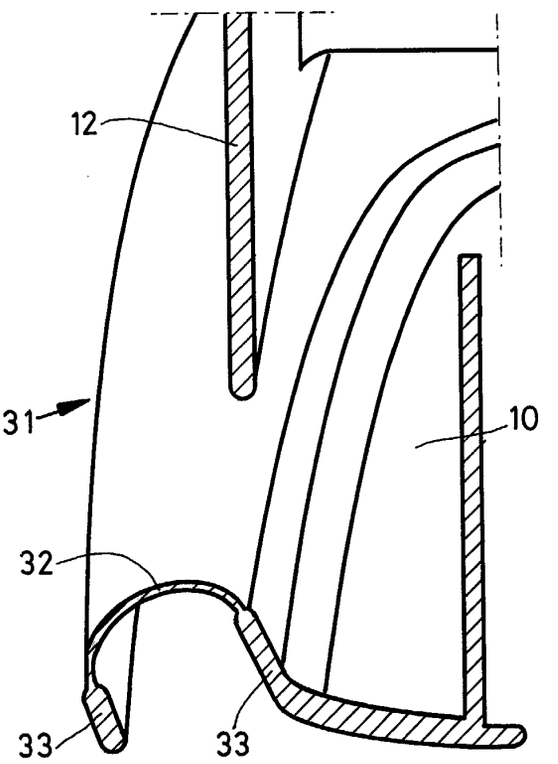


FIG. 9

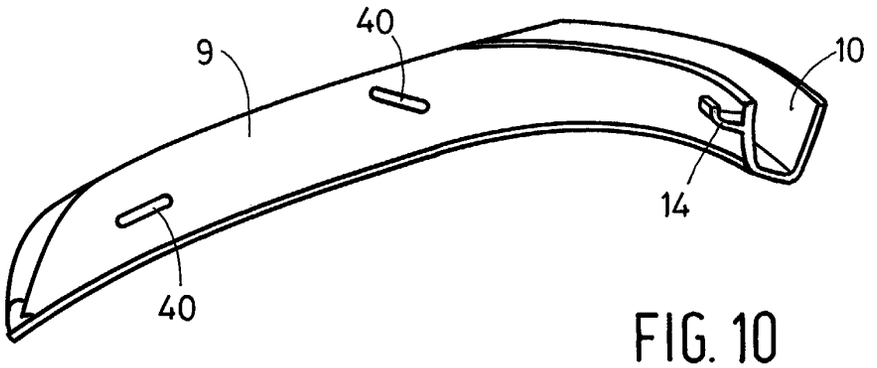


FIG. 10

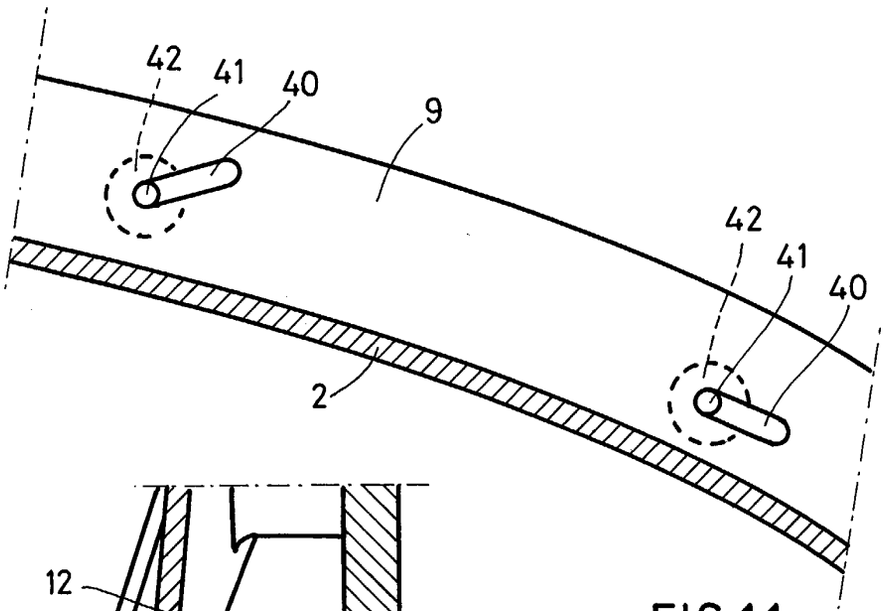


FIG.11

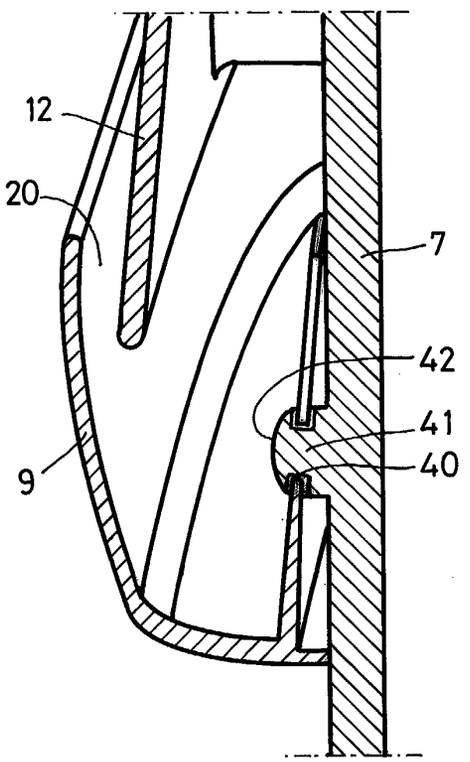


FIG.12

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# EUROPEAN SEARCH REPORT

Application Number
EP 03 07 6628

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TECHNICAL FIELDS SEARCHED (Int.Cl.7)

A47D
A47C
B62B

The present search report has been drawn up for all claims

| Place of search | Date of completion of the search | Examiner |
|---|---|---|
| THE HAGUE | 1 October 2003 | Joosting, T |

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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 03 07 6628

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