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(71) Applicant: **Grupa Zendar Sp. z o.o.**
20-388 Lublin (PL)

(72) Inventor: **Bieniek, Dariusz**
20-089 Lublin (PL)

(74) Representative: **Belz, Anna**
ul. Sekutowicza 19/2
20-152 Lublin (PL)

(54) Wall panel comprising a framework with salt blocks

(57) The invention relates to building of accommodations especially recreational with wall panels.
The wall panel consists of two frames connected with each other (2), which are made in the form of a framing (3), inside of which there are fastened cross-bars (4) and separators (5), among which there are arranged symmetrical salt blocks (6). On the external part of the salt wall there is provided a protective wall.

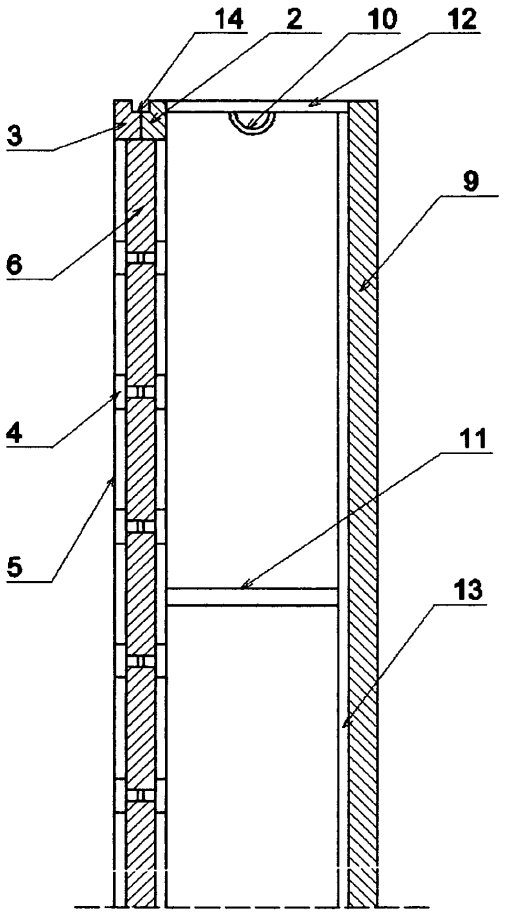

Fig. 1

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Description

[0001] The object of the invention is wall panel with salt lumps especially for recreation accommodation.

[0002] The salt chamber is known from international application no. PCT/P102/00020, where its floor, walls and ceiling are made from salt bricks with free-form external texture and with thickness that allows laminar flow of the pressed air through the walls.

[0003] The wall segment is known from polish application of the utility model, no. 63144. The wall segment is made from building elements of symmetrical hexagonal salt blocks, fastened next to each other to the carrying construction by means of the pins, which are submerged in each block and the prominent threaded ending part of the pin is fastened by means of the screw cap.

[0004] According to the invention, the wall panel consists of the salt wall and protective wall. The salt wall consists of the two rectangular clamps. The clamps have framing, inside which, are horizontal cross-bars and their ends are fastened in inlets of the vertical side of the framing. Between cross-bars there are separators ended with bungs of rectangular section, that are placed in apertures made in cross-bars. The peripheral bungs of the separators are fastened in horizontal inlets of the framing side. According to the other solution linkage between the separators and cross-bars, the separator bungs are placed in inlets, that are made in cross-bars. The bungs of the separators are fastened to the cross-bars and sides of the framing by means of the pegs. The cross-bars and separators have a comparable shape to letter "T" and its canopy is placed in outer side of the clamp. The framing, cross-bars and separators make the trellis construction. Between the cross-bars and separators there are placed symmetrical salt lumps, which partially let in the sun rays. The salt lumps are arranged in vertical columns or arranged alternately.

[0005] Behind the rear plane of the salt wall there is the protective wall removed from the salt wall and fastened from the top with the strap and at the vertical sides of the framing by the flat jointers. The inner plane of the protective wall is lined with material which has smooth surface and reflects the thermal and solar radiation. In the area between salt wall and protective wall, there are illuminating points, located advantageously in superior and bottom panel part.

[0006] The wall panel is designed for building of remedial accommodation and recreation. The salt lumps contribute to fabrication of microclimate emitting ions, what makes advantageous conditions along with nice diffuse illumination for refreshment and recreation.

[0007] The object of the invention is showed in exemplary execution on drawing, on which fig. 1 shows the fragment of the longitudinal panel section, fig. 2 the view from the inner side of the clamp, of the knot of connection of the cross-bars with separators, fig. 3 the longitudinal section of the knot of the connection of the bung separators in aperture of the cross-bar, fig. 4 the kont of the connection section of the separator with framing in view from inside of the clamp, fig. 5 the longitudinal section of the knot of the separator connection with the cross-bar, and fig. 6 the view of the panel from front, fig. 7. the longitudinal section fragment of bottom salt wall part, and fig.8. the view of the panel from front with blocks arranged alternately.

[0008] The salt wall constitutes two clamps 2 twisted by screw 1 with each other, that consist of framing 3, horizontal cross-bars 4 and vertical separators 5, among which the salt lumps 6 are placed in the form of cuboids. The ends of cross-bars 4 having in cross-section a form approximated for letter "T" are fastened in inlets of vertical side of the framing 3, and the wider part of the cross-bar 4 is placed on external part of the clamp 2. The separators 5, having in cross-section a form approximated for cross-bars 4, are ended with bungs 7 about rectangular section, which are placed in apertures made in cross-bars 4 and fastened to those cross-bars by pegs 8. The peripheral bungs 7 of the separators 5 are fastened in inlets 5a of the framing 3. As the fig. 2, shows the bungs 7 of the separators 5 are placed in inlets 5a made in cross-bars 4 and fastened by pegs 8.

[0009] The salt lumps 6 can be placed in columns as the fig. 6. shows or arranged alternately what is on the fig.8.

[0010] Behind the rear plane of the salt wall there is the protective wall 9, fastened in span with the strap 10 placed from the top and jointers 11 placed along vertical side of the framing 3. In the area between the salt wall and protective wall 9 there are placed the illuminating points 12, placed at the top and bottom of that area part. The salt lumps 6 have a specificity of partial letting in of illuminating rays, that causes the panel emits diffuse light while the illuminating points 12 are switched off.

[0011] The inner plane of the protective wall 9 is covered by the material layer with smooth surface that reflects thermal and solar radiation that makes better isolation qualities and improvement of the lighting effect.

[0012] The superior and bottom side of the framing have recesses 14, that are designed for fastening of the panel in ground or support construction.

Claims

1. The wall panel especially for recreation accommodation, including the symmetrical salt lumps, **characterised in that** salt wall consists of two jointed, rectangular clamps (2), where each of them has framing (3), inside each there are horizontal cross-bars (4) with cross-section in the form approximated for letter "T", their ends are based in framing (3), and separators (5) with the same section as cross-bars (4), where separators (5) are ended with bungs (7) of rectangular section, which are placed in apertures made in cross-bars (4) and fastened by pegs (8), whereas the peripheral bungs (7) of the separators

(5) are placed in inlets (5a) of the framing (3) and placed between cross-bars (4) and separators (5) and between framing (3), cross-bars (4) and peripheral separators (5), the symmetrical salt lumps (6) have the specificity of partial letting the illuminating rays.

2. The wall panel according to claim 1, **characterised in that** to the framing (3) there is fastened the protective wall (9), whereas between the salt wall and the protective wall there is the distance maintained.

3. The wall panel according to claim 1, **characterised in that** the inner plane of the protective wall (9) constitutes a layer (13) of the material with surface that reflects thermal and solar radiation.

4. The wall panel, according to claim 1, **characterised in that** in the area between the wall from salt lumps and the protective wall are placed illuminating points (12), located advantageously in nether and superior panel part.

5. The wall panel according to claim 1, **characterised in that** the bungs (7) of the separators (5) are placed in inlets (5a) made in the cross-bars (4).

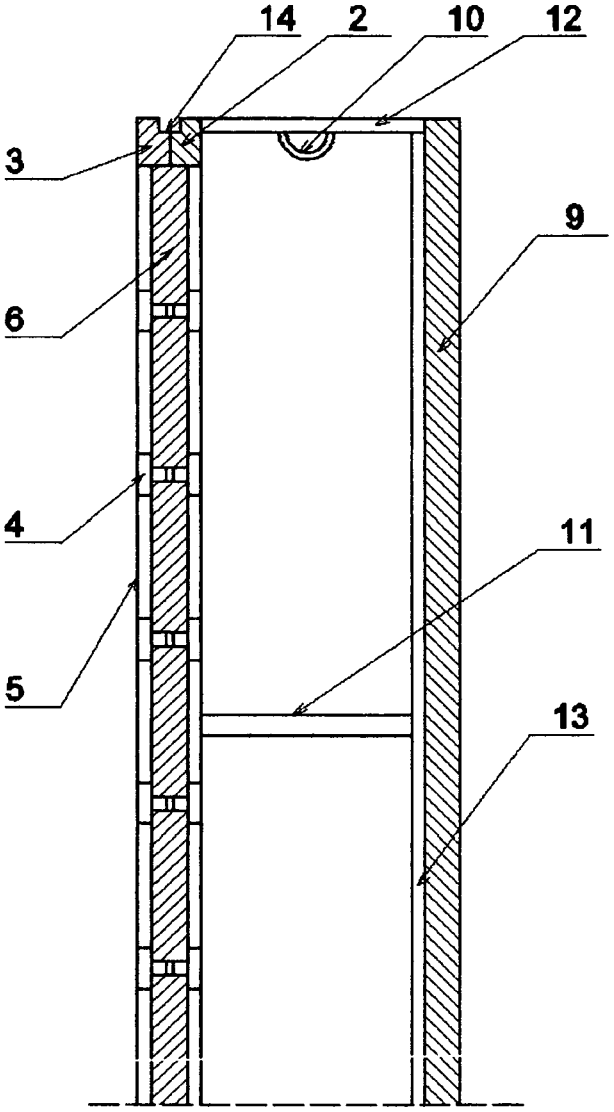

Fig. 1

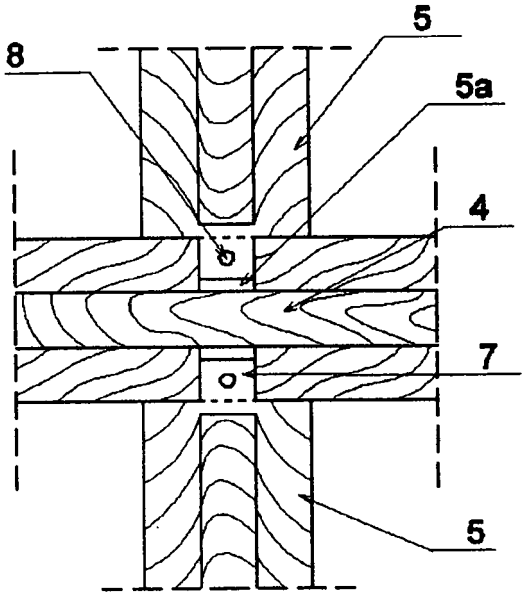

Fig. 2

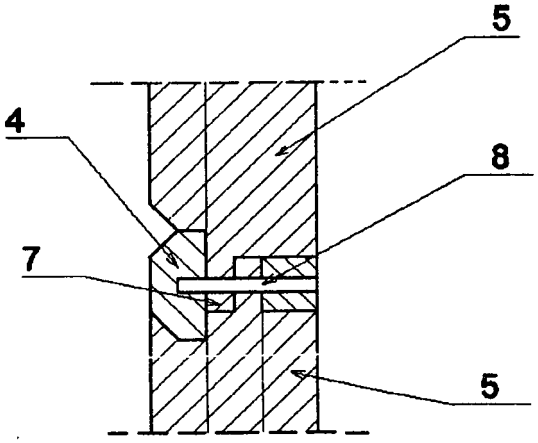

Fig. 3

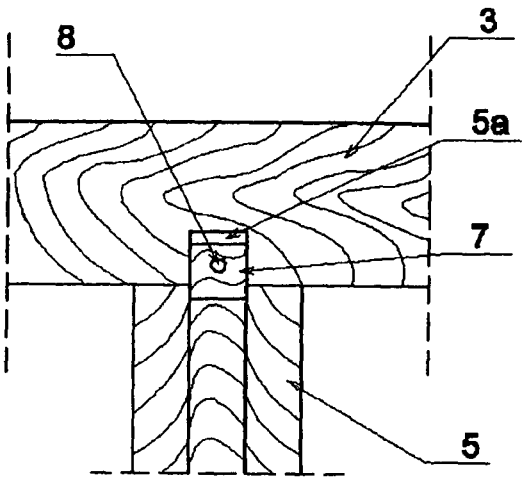

Fig. 4

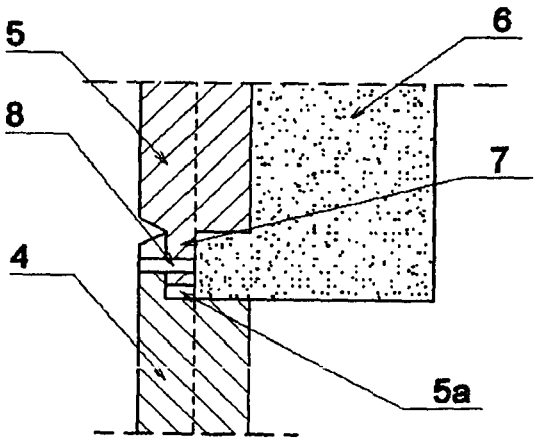

Fig. 5

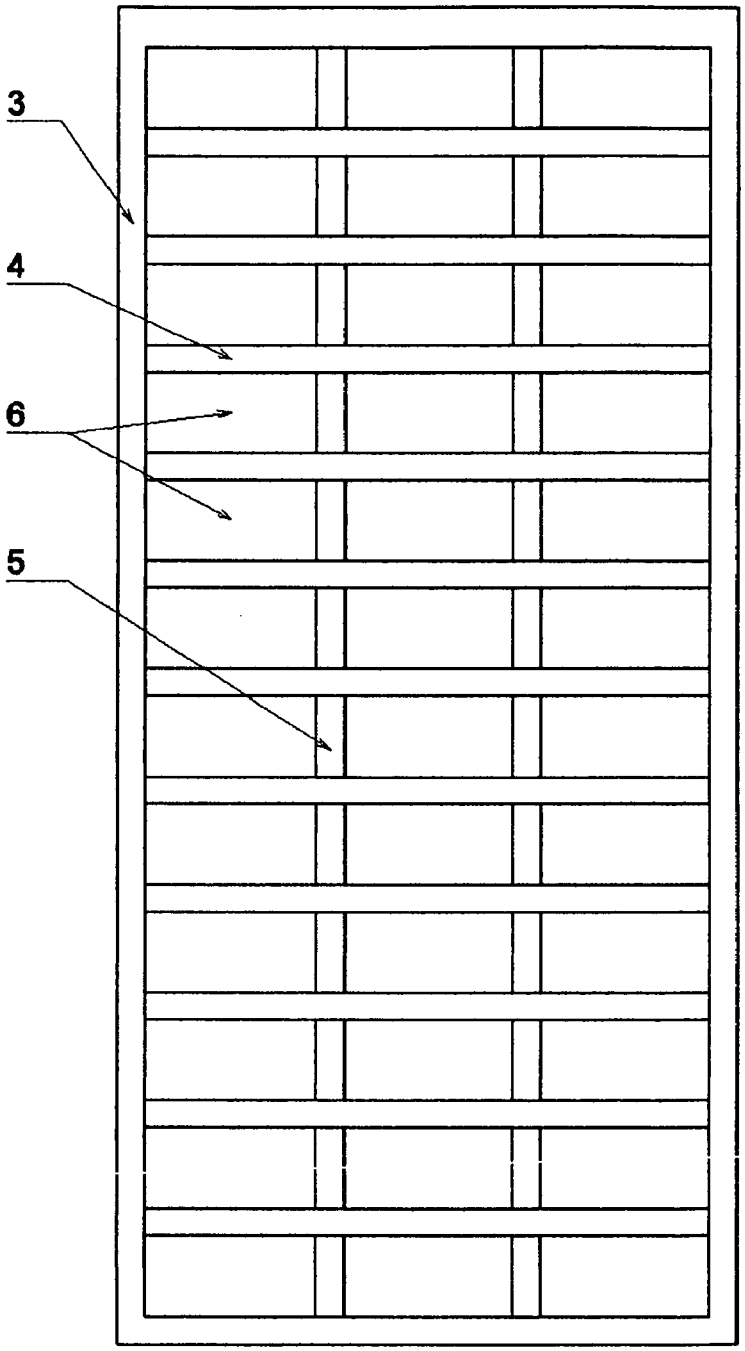

Fig. 6

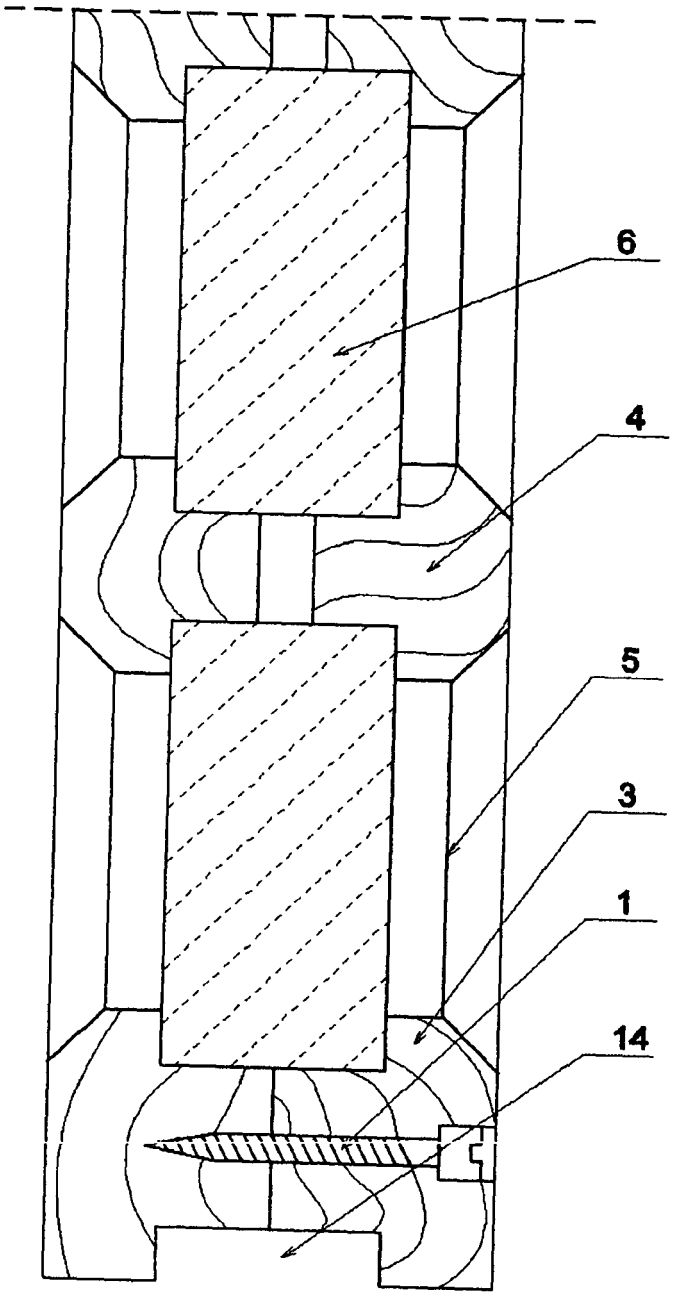

Fig. 7

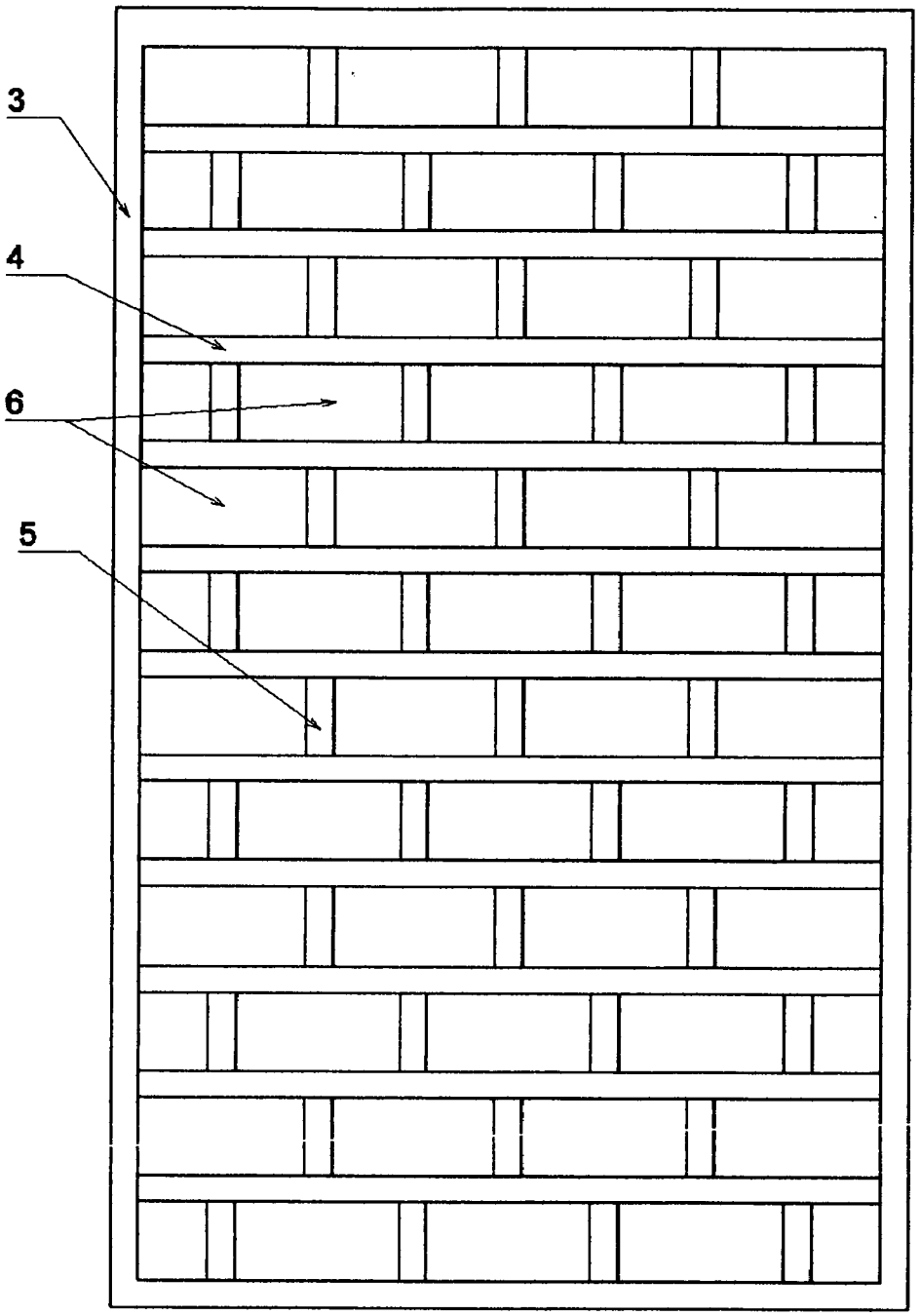

Fig. 8

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EUROPEAN SEARCH REPORT

Application Number
EP 08 46 0020

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 03/084453 A (TSYMBAL WIKTOR [PL]) 16 October 2003 (2003-10-16) * the whole document *	1-5	INV. E04B2/74 E04B2/70
A	DE 88 01 075 U1 (SINIOS, MATTHIAS, 2000 HAMBURG, DE) 31 March 1988 (1988-03-31) * claim 1; figures 1,2 *	1-5	ADD. A61G10/02
A	DE 298 05 998 U1 (HAESCH MICHAEL [DE]) 25 June 1998 (1998-06-25) * page 4 - page 5; figures 1-18 *	1-5	

TECHNICAL FIELDS SEARCHED (IPC)

E04C
E04B

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	15 October 2008	Khera, Daljit

CATEGORY OF CITED DOCUMENTS

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D : document cited in the application
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 46 0020

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
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15-10-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 03084453 A	16-10-2003	AU 2002236385 A1	20-10-2003
		EP 1539079 A1	15-06-2005
DE 8801075 U1	31-03-1988	NONE	
DE 29805998 U1	25-06-1998	AU 3604599 A	25-10-1999
		DE 19980598 D2	30-11-2000
		WO 9951827 A1	14-10-1999

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

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Patent documents cited in the description

- WO P10200020 W **[0002]**