



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
27.06.2007 Bulletin 2007/26

(51) Int Cl.:
A45C 13/08 (2006.01) **A45C 13/42** (2006.01)
G09F 3/20 (2006.01)

(21) Application number: **05425832.2**

(22) Date of filing: **23.11.2005**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK YU

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(54) **Rigid luggage with decorative or identification insert personalized by the user**

(57) The construction of a suitcase (1), trolley, trunk, beauty-case, brief-case or alike items of luggage with a substantially rigid material, is modified in a manner to permit to the traveller to render his own luggage immediately recognizable, even at a distance, from other substantially identical items of luggage, in a practically unalterable manner, unless being able to access the interior of the item.

The item of luggage of rigid material, has at least one of

its side panels (2) (or optionally both) with an area (3) recessed from the plane of the outer surface of the side panel and the recessed area has a stepped perimeter. A transparent screen (5) rests on a step surface of the stepped perimeter of the recessed area to define a confined space (6) over said recessed area for accommodating a flat distinctive object of recognition/personalization of one's own items among identical items of luggage. The transparent screen is held by fasteners that are releasable only from inside the item of luggage.

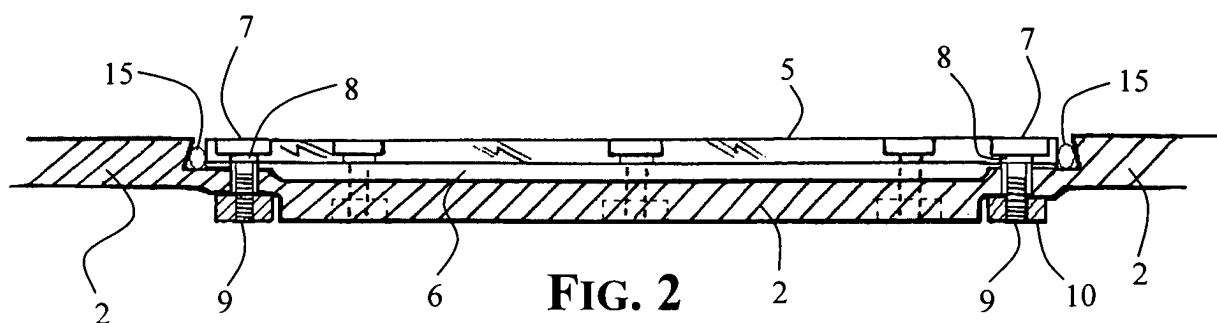


FIG. 2

Description

[0001] The present application relates to baggage and in particular to suitcases or alike items of luggage made of a rigid material.

[0002] Substantially rigid suitcases for example of molded plastic material, often provided with wheels for dragging them effortlessly on flat pavements, are popular items of baggage, lending themselves better than other forms of baggage to the automated handling and nonintrusive inspection by modern conveyers and inspection tunnels of airports and stations.

[0003] Industrial mass production of this type of items of luggage has brought about the presence of innumerable items of luggage of almost identical exterior aspect.

[0004] Such a demoscopic phenomenon trebles for the most popular models of major producers of travel goods because of their commercial success.

[0005] Well before a precise identification of one's own baggage ensured by the carrier's labelling, in often congested baggage collection areas in airports, stations, hotels, halls, and the likes, there is the primary problem for a traveller of recognizing his own baggage among many other items of luggage of identical or confusingly similar aspect, as in the limit situation of suitcases of same brand, model and color.

[0006] To meet the need that stimulates ingenious initiatives of travellers that often paste touristic stickers or tie colored ribbons to handles, the industry has endeavoured to offer some solutions that could meet the necessity for the traveller of immediately recognizing at distance its own among similarly looking suitcases.

[0007] US-A-5,058,959 discloses a manner for rendering more easily recognizable one's own wheeled suitcase among similarly looking suitcases, consisting in applying a circular sticker on a hub cap of the circular face of the wheels of the suitcase and protecting the label from abrasions with a transparent snap-on cap over the hub cap.

[0008] A series of adhesive labels, each printed with a different symbol, comes with the suitcase and the owner will select one of the symbols to apply to the wheels after having momentarily lifted off the transparent cap that will then be forced again into stable engagement with the hub cap.

[0009] This type of identification is hardly recognizable at distance of few meters, considering also the possibility that advancing items of luggage on the conveyer may not be oriented favorably for the hub caps to be in sight.

[0010] The selection of symbols is practically limited by the number supplied with the suitcase. Moreover, the transparent plastic cap installed in a snap on fashion may be accidentally lifted off and become lost because of impacts and rubbings with parts of the conveyors or with other items of luggage.

[0011] The use of promotional-touristic adhesives is also subject to recurrent graphical similarity of stickers and the use of colored ribbons may not be a so reliable solution because of the accidental or nonaccidental dis-

appearance of the ribbon during the numerous handlings and transfers to which the baggage undergo.

[0012] To this need of personalizing one's own items of luggage and vis-à-vis the precariety, possibility of exchanges or of other undue mishandlings during transportation and conveying of the baggage, in prevention of which known identification devices are ineffective, the present applicant has found an effective construction of a suitcase, trolley, beauty-case, brief-case or alike travel goods, made of substantially rigid material, that permit to the user to render his own baggage immediately recognizable, even at a considerable distance, from other substantially similar items of luggage, in a way that is practically unalterable, accidentally or deliberately without having access to the interior of the presumably locked suitcase, trunk, trolley or the likes.

[0013] Moreover, the location and relatively ample dimensions of the personalization object, are such to make it easily recognizable even at a distance in a practically unmistakable manner.

[0014] The suitcase or similar item of luggage of rigid material retains a substantial integrity notwithstanding the fact that basically, according to the present invention, at least one of the two side panels or semishells (optionally both) has an area that is recessed in respect to the plane of external surface of the side panel and has a stepped perimeter. A transparent screen rests on a perimetral step acting as a flange area around the whole perimeter of the recessed area, thus defining a shallow flat space closed by the transparent screen over the recessed area. A flat decorative/distinctive object is housed in the shallow flat space for making one's own baggage recognizable among even identical items of luggage. The transparent screen has fixing/releasing means that are exclusively accessible from the interior of the item of luggage.

[0015] The identification object may be a photographic print, for example of one's own pet, of a relative or of a certain location or familiar panorama, of a flower, of a car or of any other subject that the owner of the baggage may immediately recognize as his own, in a substantially unmistakable manner.

[0016] The identification object held in the sealed space, externally protected from the transparent screen, may be a printed sheet of paper, a cloth, or any other essentially flat and relatively thin support of a distinctive image. Its thickness relatively very small, will in practice hardly be greater than 0.5-1.0 mm, and generally cut to the size of the recessed area of the housing. After having placed the identification object on the recessed area, it is confined by fixing the transparent screen thereon, resting on the perimetral step of the recessed area that acts as a flange area, such that the outer surface of the screen be practically in plane with the outer surface of the side panel of the item of luggage.

[0017] The screen is securely retained by bolts or elastic split stem fasteners, passing through holes formed on the recessed area or preferably on the surface of the rest

step (flange) on which the perimeter of the transparent screen rests, which may be released only acting from inside the presumably locked items of luggage. In this way the distinctive insert is retained in a substantially antitampering manner because of the impossibility of accessing the interior of a locked suitcase or other item of luggage.

[0018] The invention is defined in the annexed claims.

Figure 1 is a partially exploded three-dimensional view of a suitcase of a substantially rigid material made according to the present invention;

Figure 2 is a cross section novel view of the recessed portion of a side panel of the suitcase;

Figures 3 and 4 show alternative ways of fastening the transparent screen.

[0019] Purely for illustrative purposes, different embodiments of this invention will be described by referring to a common rigid suitcase implementation though the novel construction of this invention is usefully applicable to any substantially rigid item of luggage or in any case having at least a side panel or shell of a substantially rigid material as for example a trolley, a beauty case, a brief case, a trunk and similar items of luggage.

[0020] Referring to Figures 1 and 2, the suitcase 1 may be commonly fabricated by forming the two semishells in respective molds (by injection or pressing) of a moldable plastic, material, commonly including reinforcement fibers, and optionally incorporating stiffening inserts to enhance rigidity of the molded suitcase.

[0021] At least one of the two side panels 2 of the suitcase is produced in a specially shaped mold such to generate on the external surface of the panel 2, a recessed area 3 with a stepped perimeter such to define a perimetral rest surface 4, constituting a perimetral flange area, onto which a transparent screen 5 can be installed with its outer surface substantially coplanar or with slightly lower than the surface plane of the side panel 2, defining therebetween a confinement space 6 that remains substantially protected by the transparent screen 5.

[0022] In case of a transparent screen 5 of a substantially rigid material, the sealing of the confinement space 6 from external agents (rain, dust, etc.) can be enhanced by installing an elastomer gasket, for example of a siliconic rubber or alike, for example, a thin flat gasket may be interposed on the rest surface 4 of the perimetral step of the recessed area 3 of the side panel of the suitcase. More preferably, an annular elastomer gasket 15 for example of a siliconic rubber, can be installed in an undercut seat that may be defined on the vertical wall of the perimetral step such to interfere with the perimetral edge of the screen 5 and be squeezed therebetween to establish an effective seal.

[0023] Alternatively, the transparent screen 5 may be produced already provided with a perimetral bead of elastomer on the rest surface of the surface of the perimetral step 4 by special molding technique in the same mold

and in a single molding operation of a materials of different elasto-mechanical characteristics.

[0024] In any case, once the fixing of the transparent screen 5 is completed, the outer surface of the screen 5 is either co-planar or slightly lower than the external surface of the side panel 2, around the recessed area 3, 4.

[0025] The fasteners of the transparent panel 5 cannot be released unless by intervening from inside the suitcase, that is by acting on the internal surface of the side panel 2. This can be established in different though functionally equivalent manners.

[0026] In the embodiment shown in Figures 1 and 2, the releasable fastening of the transparent screen 5 is done with a plurality of bolts with a smooth head 7 without any drive indentation or cut and having a neck 8 portion connecting the head 7 to the threaded stem 9, of a non-circular cross section, for example a polygonal (square) cross section. On the end portion emerging from the hole passing through the thickness of the molded panel 2 of the suitcase, the nut 10 is tightened.

[0027] Rotation of the threaded stem 9 during the tightening of the nut 10 is impeded by the fact that the polygonal cross section neck portion 8 (in any case noncircular cross section) fits in a hole of similar cross section passing through the residual thickness of the transparent screen 5 (i.e. through the bottom of the circular cavity 11 that accommodates the smooth circular head 7 of the bolt).

[0028] The transparent panel 5 may be made of any transparent plastic material of sufficient mechanical resistance characteristics, such as for example transparent polyvinylchloride, polyethylene, polycarbonate, plexiglass or other plastic materials with similar characteristics of transparency and mechanical resistance. Its thickness is generally comprised between 0.5 mm and 2.0 mm, though it may be even thicker, depending on the application and on the material with which it is made.

[0029] The fastening bolts may be of stainless steel, bronze or other metallic material, eventually provided with a surface coating (e.g. a chrome coating) or of a sufficiently tenacious material (such as for example nylon or of a machinable aggregate such as bakelite and alike composite materials). Nonmetallic materials are preferred in order not to interfere with nonintrusive baggage inspection systems.

[0030] Alternative fastening devices of the transparent screen 5 releasable only acting from the interior surface of the side panel or shell of the suitcase or similar items of luggage, are illustrated in Figures 3 and 4.

[0031] In the embodiment of Figure 3, the function of the plurality of fastening bolts of the example shown in Figures 1 and 2, is done by a plurality of elastic split stem fasteners also having a smooth head 11 without any drive indentation that fits into a geometrically conformal cavity of the transparent screen 5. The stem is split in two parts 12 and 13 constituting an elastic fork and terminating with a clamping spike 14. Each elastic split stem fastener is forced through a hole passing through the bottom of the

circular cavity of the screen 5 that accommodated the smooth head of the pin and through the hole 16 passing through the thickness of the side panel 2 of the suitcase, as far as passing completely the spike terminations of the two parts of the split stem causing an elastic relaxation of the fork. The clamping spikes 14 establish a secure anchoring of the screen 5 that cannot be interfered with from outside and can be released only acting from inside the items of luggage, by flexing toward each other the two clamping spikes of the elastic fork stem and pushing them through the aligned holes.

[0032] A further alternative embodiment is shown in Figure 4, according to which the screen 5 as molded is already provided with integral elastic split stem fasteners to be forced through corresponding holes 16 through the thickness of the side panel 2.

[0033] In the embodiment of Figure 4 is also shown a further alternative manner of establishing an adequate sealing of the confinement space 6 defined upon fixing the transparent screen 5 over the recessed area 3 of the side panel 2. According to this alternative embodiment, on the perimetral surface of the panel 5, is present a channel 17 for receiving and retaining therein an annular gasket (O-ring) of a superelastic material (elastomer) which upon forcing the screen in its fastened position will elastically interfere with the vertical wall of the perimetral step 4, squeezing itself thus ensuring an adequate sealing of the space 6 from atmospheric agents.

[0034] As will be evident to the reader, the fastening means of the transparent screen 5 releasable only by acting from inside the suitcase, may also be implemented in other shapes and arrangements.

[0035] Beside fully satisfying the stated objectives and overcoming the discussed limitations, drawbacks and defects of known luggage identification/personalization devices, the present invention offers the possibility for the traveller of modifying at need and at any moment the personalizing image applied on his own items of luggage.

[0036] The device of the present invention is structurally sturdy and should the outer surface of the transparent screen become ruined or abraded, by accidental cause or through normal wear and tear, one or more replacement screens may be given as inventory accessories when selling the suitcase or other item of luggage, or a new screen could be bought as replacement through the same retail channels of travel goods.

[0037] In order to limit abrasion of the outer surface of the transparent screen, by rubbing over a flat surface, the smooth unindented head of the fastening screws or pins may be convex and deliberately have their central vertex slightly rising above the plane of the outer surface of the side panel of the item of luggage. The same result may be obtained even by designing the relative thicknesses and depth such that upon installation of the transparent screen, its outer surface be slightly lower than the plane of the external surface of the surrounding part of the side panel of the item of luggage.

[0038] Of course, the device of the present invention

may serve, the purpose of decorating one's own baggage.

5 Claims

1. An item of luggage having at least a relatively rigid side panel, **characterized in that** said side panel has an area recessed from the plane of the outer surface of the panel surrounding the recessed area, the perimetral wall of which has at least an intermediate step;

a transparent screen resting on said step of the perimetral wall of said recessed area defining a confinement space over said recessed area for accommodating therein a flat distinctive object; means for fastening said transparent screen releasable from the interior of the item.

2. The item of luggage according to claim 1, further comprising a gasket between said transparent screen and the side panel for sealing said confinement space from external agents.
3. The item of luggage according to claim 1, wherein said fastening means are bolts having a smooth not indented head accommodated in a not turnable manner into a conformally shaped cavity and through hole of said transparent screen.
4. The item of luggage according to claim 1, wherein said fastening means are elastic split stem fasteners having a smooth not indented head and clamping spike terminations that are passed through aligned holes through the transparent screen and through the thickness of the side panel until clasping onto the inner surface of the side panel.
5. The item of luggage according to claim 4, wherein said fasteners means are integral elastising split stem projections of the transparent screen.
6. The item of luggage according to claim 2, wherein said gasket is an O-ring of elastomer retained in an undercut circular channel of the vertical wall of the perimetral step of said recessed area, with which the edge of said transparent screen elastically interferes upon forcibly pressing it onto the perimetral step and fixing it by said fastening releasable from inside the suitcase.
7. The item of luggage according to claim 2, wherein said O-ring gasket is retained in a circular channel defined on the perimetral surface of said transparent screen for elastically interfering with the vertical wall of the perimetral step upon forcing and fastening the transparent screen onto the step.

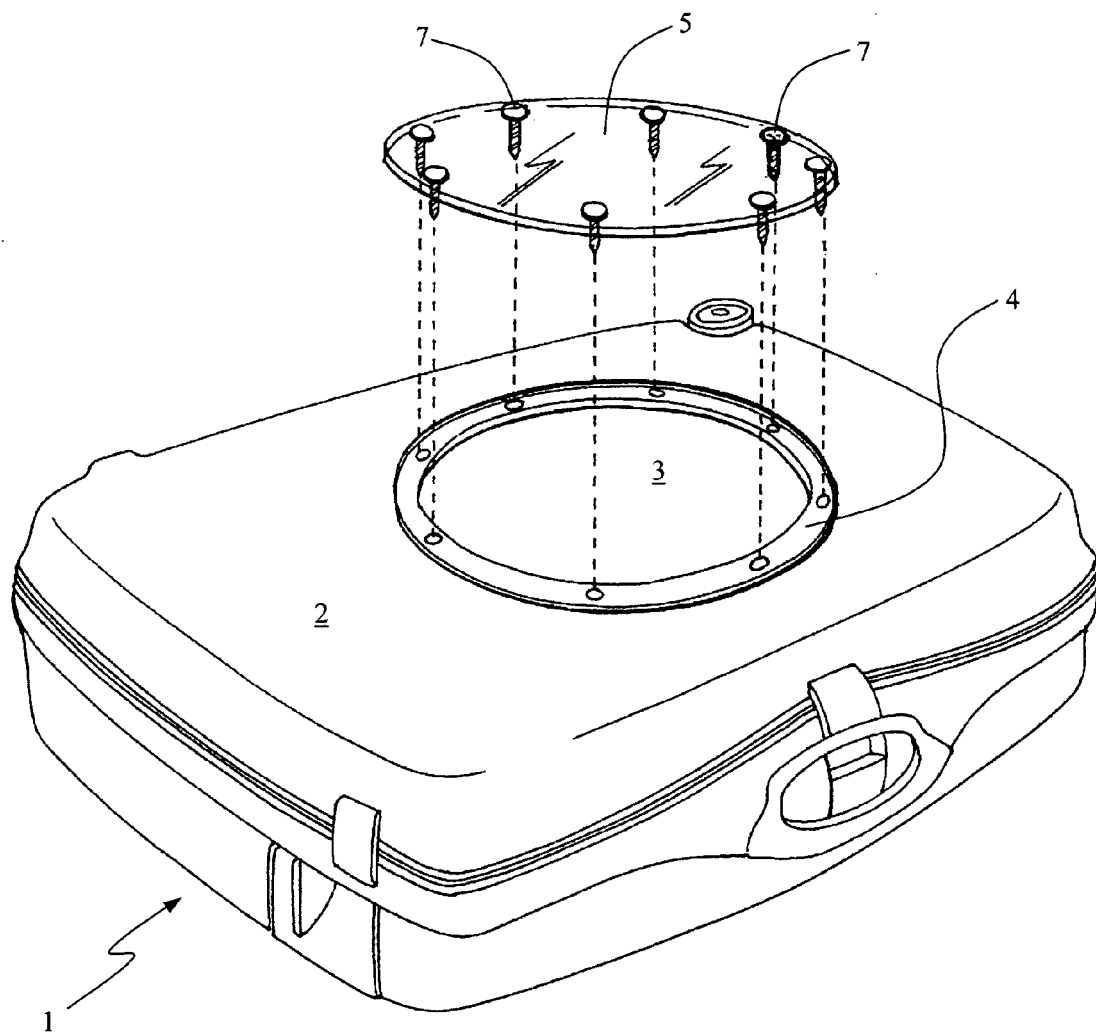


FIG. 1

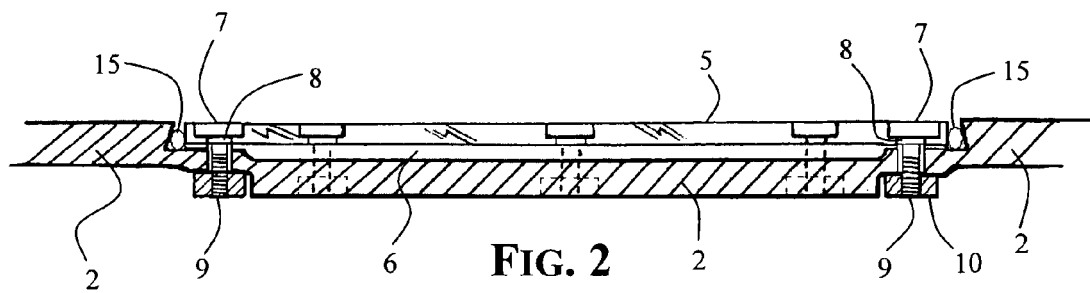
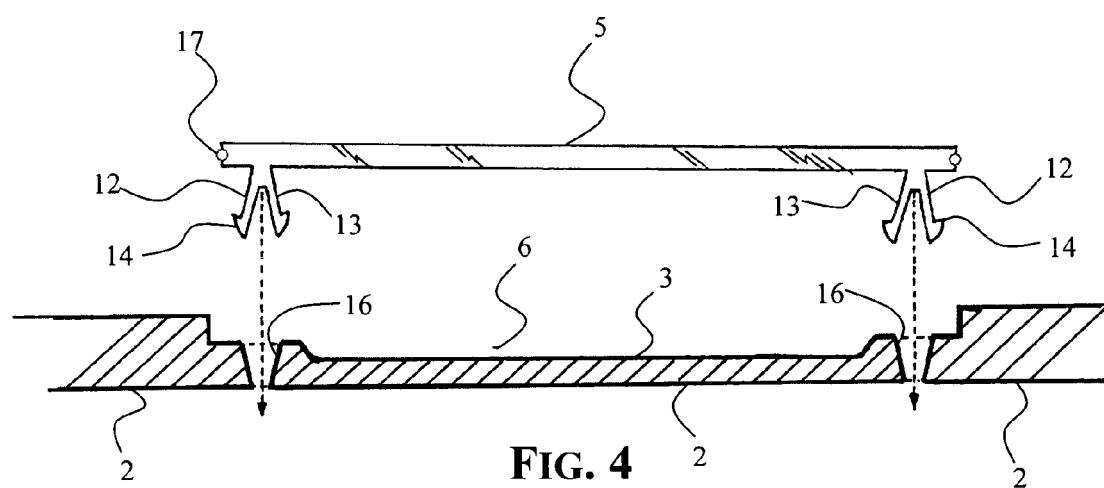
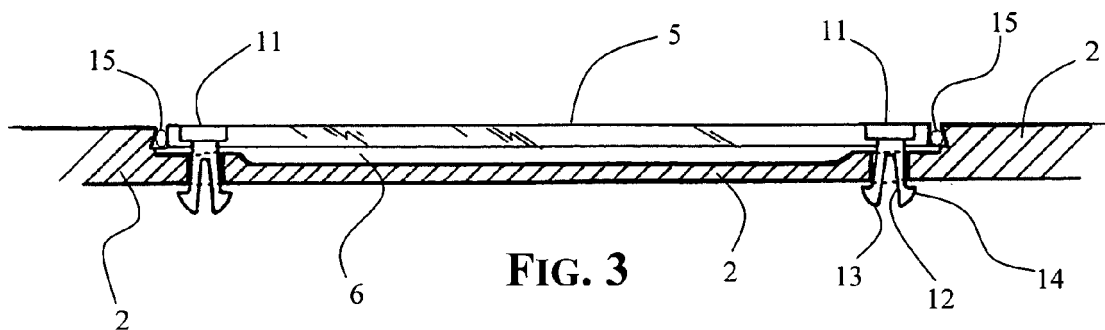


FIG. 2





European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 05 42 5832

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 5 718 336 A (HAARLANDER ET AL) 17 February 1998 (1998-02-17) * column 4; figures 1,2,4 *	1-4,6,7	INV. A45C13/08 A45C13/42 G09F3/20
A	FR 2 654 312 A (OFFICE GL EDITION PUBLICITE) 17 May 1991 (1991-05-17) * page 4, lines 1-23; figures * * page 5, lines 4-9 *	1-4,6,7	
A	WO 03/055346 A (FINK, ERWIN) 10 July 2003 (2003-07-10) * page 8, lines 1-4 * * page 7, lines 1,2; figures *	2,3	
A	US 2002/105253 A1 (DIAZ ELIZABETH B ET AL) 8 August 2002 (2002-08-08) * paragraph [0033]; figure 5 *	4	
A	US 4 199 045 A (MACHLER, RONALD A) 22 April 1980 (1980-04-22) * the whole document *	1	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A45C G09F
3	Place of search Munich	Date of completion of the search 12 April 2006	Examiner Herry, M
CATEGORY OF CITED DOCUMENTS 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		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	

EPO FORM 1503 03.82 (P04C01)

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

EP 05 42 5832

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12-04-2006

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5718336	A	17-02-1998	NONE	
FR 2654312	A	17-05-1991	NONE	
WO 03055346	A	10-07-2003	AU 2002364272 A1	15-07-2003
			DE 10296144 D2	28-10-2004
			DE 20120865 U1	16-05-2002
US 2002105253	A1	08-08-2002	CN 1368668 A	11-09-2002
US 4199045	A	22-04-1980	NONE	

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 5058959 A [0007]