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(71) Applicant: **Gabol, S.L.**
46113 Moncada (Valencia) (ES)

(72) Inventor: **GALLEGO AGUADO, Francisco**
46113 Moncada (Valencia) (ES)

(74) Representative: **Herrero & Asociados, S.L.**
Cedaceros, 1
28014 Madrid (ES)

(54) **SUITCASE**

(57) A suitcase, which enables additional space to be obtained and offers additional reinforcement means in the area corresponding to the lower corners thereof, where wheels are preferably located for the transport thereof, comprising a body (1) that comprises two large side surfaces (2), two small side surfaces (3), an upper surface (4) and a base (5), where the point where the base (5) and the side surfaces (2, 3) meet forms four lower corners (6), where the side surfaces (2, 3), in the area corresponding to the lower corners (6), comprise a bulge (7) that projects from the contour of the body (1).

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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention relates to a suitcase, which is applicable to the travel goods industry, and more specifically in the field of suitcases, enabling an additional space to be obtained inside the suitcase, with the resulting increase in volume that this entails, whilst at the same time offering additional reinforcement means in the area that is subjected to higher stresses during the use thereof, i.e. the area corresponding to the lower corners thereof, where wheels are preferably located for the transport thereof and where the suitcase tends to receive most blows during said transport.

BACKGROUND OF THE INVENTION

[0002] Currently, suitcases comprising a body with a front face and a rear face that are made up as large side surfaces, both surfaces being parallel and usually the same size, are known. Likewise, the body comprises two small side surfaces that laterally connect the large side surfaces. Lastly, the body comprises an upper surface, wherein a fixed or telescopic handle is usually arranged, or at least from which it projects, which enables the suitcase to be grasped and moved, as well as a base, located underneath opposite the upper surface, such that all this delimits a hollow inner receptacle for arranging and transporting clothes and different objects.

[0003] Traditionally, the base has an area above each small side surface and the suitcases, no matter how big, did not have wheels for the transport thereof, which meant they had to be transported by the user thereof lifting them.

[0004] Today, the base usually has a smaller area than each small side surface, and the suitcases have wheels located at the corners of the base and a telescopic handle that enables the suitcase to be transported by rolling, thus preventing the user from having to lift it, as well as the significant convenience this entails. Taking into account this vertical configuration, referred to as *trolley,* the body tends to have a rigid or semi-rigid configuration, but not soft, as was the case with traditional suitcases. This is due to the fact that the majority of current uses is to travel by aeroplane, where it is advisable for suitcases to have a certain rigidity to resist the blows it may be subjected to, unlike the traditional suitcases whose use was mainly for road transport, where the users themselves placed the suitcase in a car boot and it did not require as much rigidity.

[0005] In any case, the surfaces that delimit the body define a fixed volume that determines the load capacity of the suitcase, and said volume, taking into account the rigid or semi-rigid nature of current suitcases, cannot be expanded.

[0006] Utility model with publication number ES-0031074-U describes a rigid suitcase with widening gussets, which provides the suitcase with an additional variable volume. However, this configuration corresponds to traditional suitcases, meaning the application thereof to current vertical and rigid suitcases is not viable, since the gusset constitutes a weak area between the rigid areas that may cause the suitcase to break in said area if subjected to a blow. Furthermore, the variable nature of said additional volume means that the suitcase must be configured for one situation or the other, that is to say, with the gusset folded or unfolded, with the resulting inconvenience that this entails.

[0007] Moreover, from the perspective of the suitcase strength, it must be taken into account that in current suitcases, the base supports all of the weight of the full suitcase, in addition to the fact that there are wheels in the corners thereof, which means that it is an area that tends to be subjected to blows, thus meaning that said area must be mechanically reinforced.

[0008] Therefore, as may be seen, there is a need for suitcases with an additional space that at the same time offers sufficient strength in the base area.

DESCRIPTION OF THE INVENTION

[0009] The present invention relates to a suitcase that enables a space additional to the one defined by the contour of the body inside the suitcase to be obtained with the resulting volume increase this entails. At the same time, the invention offers additional reinforcement means in the area that is subjected to higher stresses during the use thereof, that is, the area corresponding to the lower corners, where the base, upon which the entire weight of the suitcase content rests when it is full, is located and where the wheels for the transport of the suitcase are preferably located, said area being where more blows are received during the transport thereof, which is especially relevant when the suitcase is full.

[0010] The suitcase that the invention proposes comprises a body that in turn comprises two large side surfaces, two small side surfaces, an upper surface and a base. The point where the base and the side surfaces meet forms four lower corners.

[0011] Well, in accordance with the invention, the side surfaces, in the area corresponding to the lower corners, comprise a bulge that projects from the contour of the body.

[0012] That is to say, the lower corners of the suitcase body bulge with respect to the outer contour itself of the body of the suitcase, with the resulting increase in space and amplitude in the area of the base, thus meaning more space is gained in said area, obtaining a suitcase with a larger inside capacity to place objects. It must be noted that the suitcase of the invention does not require wheels, although, as is explained below, an embodiment envisages that the suitcase may comprise wheels.

[0013] Likewise, the possibility that the bulges of the large side surfaces are uniform and parallel to said large side surfaces is envisaged. This enables space to be

gained without significantly changing the suitcase, since the bulge constitutes a space gain, by projecting from the contour, but keeping the outer shape of the suitcase body. In the case of curved surfaces, the outer surface of said bulge is similarly curved like the surface of the contour.

[0014] It is envisaged that the bulges of the small side surfaces are not parallel to said small side surfaces and only project from the contour of the body in the area corresponding to the lower corners. This enables the width of the suitcase to be maintained, which is the same as when the bulges were not considered, with the resulting advantage it has when the suitcase is measured and accepted for air transport in the cabin, in this case, using a vertical line that divides the small side surfaces in two as a reference, which also tend to be curved with a more pronounced curve than that of the large side surfaces, the bulge starts from said vertical line, progressively extending towards the lower corners.

[0015] As mentioned above, and disclosed in greater detail in the description of different embodiments of the invention, the possibility that the suitcase may comprise wheels located in the lower corners, or even coupled recessed in the base thus being hidden, is envisaged, with the resulting advantage that this entails in terms of ease of transport.

DESCRIPTION OF THE DRAWINGS

[0016] As a complement to the description provided herein, and for the purpose of helping to make the characteristics of the invention more readily understandable, in accordance with a preferred practical embodiment thereof, said description is accompanied by a set of figures constituting an integral part of the same, which by way of illustration and not limitation represent the following:

Figure 1 shows a schematic perspective view of a preferred embodiment of the suitcase of the invention, although it has been represented without wheels so as to better see the bulges.

Figure 2 shows a profile view of the embodiment shown in figure 1.

Figure 3 shows a plan view of the embodiment shown in the previous figures.

Figure 4 shows a schematic perspective view similar to that of figure 1 but showing the wheels.

Figure 5 shows a schematic perspective view of a variant embodiment, wherein the bulges also affect the entire area where the large side surfaces and the base meet, where the wheels have not been shown.

Figure 6 shows a schematic perspective view of another variant embodiment, which does not have recesses, the wheels being hidden and wherein bulges do not affect the entire area where the large side surfaces and the base meet.

Figure 7 shows a schematic perspective view of a final variant embodiment, similar to that in figure 6, but wherein the bulges do affect the entire area where the large side surfaces and the base meet.

PREFERRED EMBODIMENT OF THE INVENTION

[0017] In light of the figures discussed above, it may be seen how in one of the possible embodiments of the invention, the suitcase that the invention proposes comprises a body (1) that in turn comprises two large side surfaces (2), two small side surfaces (3), an upper surface (4) and a base (5). The point where the base (5) and the side surfaces (2, 3) meet forms four lower corners (6).

[0018] As may be seen in the figures, the side surfaces (2, 3), in the area corresponding to the lower corners (6), comprise a bulge (7) that projects from the contour of the body (1). Said bulge is formed from a small, progressively stepped area, from which the main outer surface of the bulge (7) extends.

[0019] The bulges (7) of the large side surfaces (2) are uniform and parallel to said large side surfaces (2), as may be seen in figures 1, 3 and 5 to 7. This maintains the outer shape of the body (1) of the suitcase. Said large side surfaces (2) are slightly curved, tending to be rounded at the point where the edges meet, thus meaning that the outer surface of said bulge (7) is similarly curved like that of the surface of the contour.

[0020] In accordance with a preferred embodiment, as may be seen especially in figures 1 and 2, the bulges (7) of the small side surfaces (3) are not parallel to said small side surfaces (3) and only project from the contour of the body (1) in the area corresponding to the lower corners (6). The small side surfaces (3), as they are narrower, have a more acute curve, as the distance between the point where the edges meet is smaller, which is similarly rounded. Using a vertical line that divides the small side surfaces (3) in two as a reference, the bulge (7) starts from said vertical line, progressively extending towards the point where the edges meet and the lower corners (6).

[0021] Figures 5 and 7 show two embodiments wherein the bulges (7) additionally affect the entire area where the large side surfaces (2) and base (5) meet, which means that space is gained.

[0022] In the embodiments shown in figures 1 to 5, the lower corners (6) have, in addition to the bulges (7), a recess (8).

[0023] In accordance with said embodiments, although it is not necessary, it is envisaged that the suitcase may comprise wheels (9) located in the lower corners (6), specifically in said recess (8), which provides a space for the arrangement thereof and greater protection of the corresponding wheels (9). Said wheels have only been shown in figure 4, but preferably the recess (8) is provided for the arrangement thereof.

[0024] Moreover, in the embodiments shown in figures 6 and 7, there are no recesses (8), similarly envisaging that the suitcase may comprise wheels (9) located in the

lower corners (6), which are coupled recessed in the base (5) thus being hidden.

[0025] In light of this description and the set of figures, a person skilled in the art will understand that the embodiments of the invention that have been described can be combined in multiple ways within the object of the invention. The invention has been described according to preferred embodiments thereof, but for the person skilled in the art, it will be evident that multiple variations can be introduced in said preferred embodiments without departing from the object of the invention as has been claimed.

Claims

1. A suitcase comprising a body (1) that comprises two large side surfaces (2), two small side surfaces (3), an upper surface (4) and a base (5), where the point where the base (5) and the side surfaces (2, 3) meet forms four lower corners (6), **characterised in that** the side surfaces (2, 3), in the area corresponding to the lower corners (6), comprise a bulge (7) that projects from the contour of the body (1).

2. A suitcase according to claim 1, wherein the bulges (7) of the large side surfaces (2) are uniform and parallel to said large side surfaces (2).

3. The suitcase according to any of the preceding claims, wherein the bulges (7) of the small side surfaces (3) are not parallel to said small side surfaces (3) and only project from the contour of the body (1) in the area corresponding to the lower corners (6).

4. The suitcase according to any of the preceding claims, wherein the bulges (7) additionally affect the entire area where the large side surfaces (2) and base (5) meet.

5. The suitcase according to any of the preceding claims, wherein the lower corners (6) have, in addition to the bulges (7), a recess (8).

6. The suitcase according to any of the preceding claims, which comprises wheels (9) located in the lower corners (6).

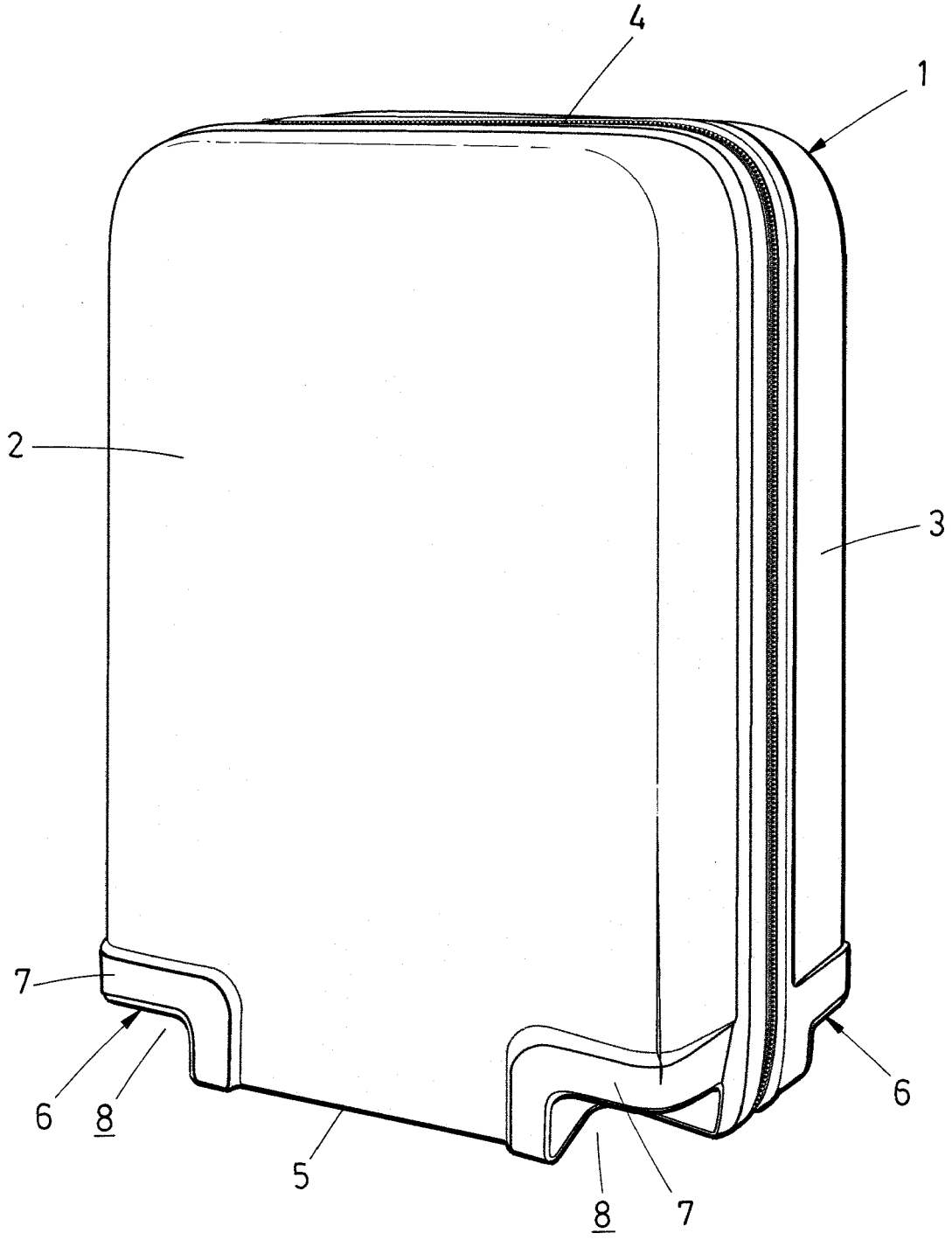

FIG. 1

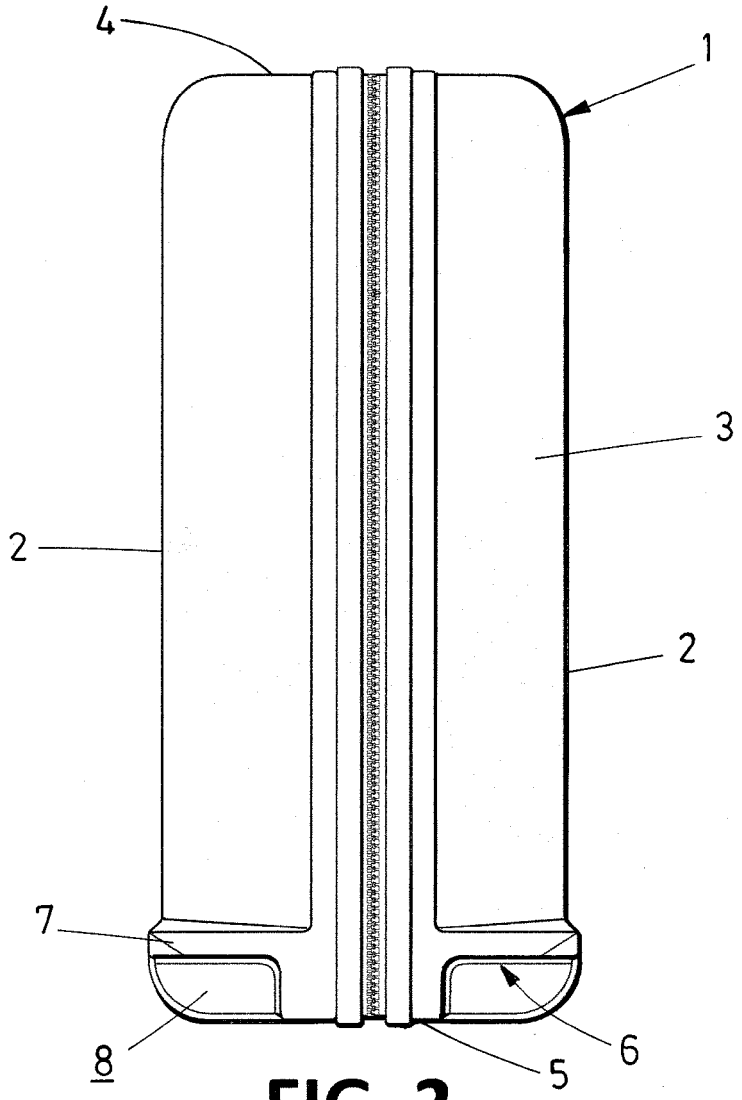

FIG. 2

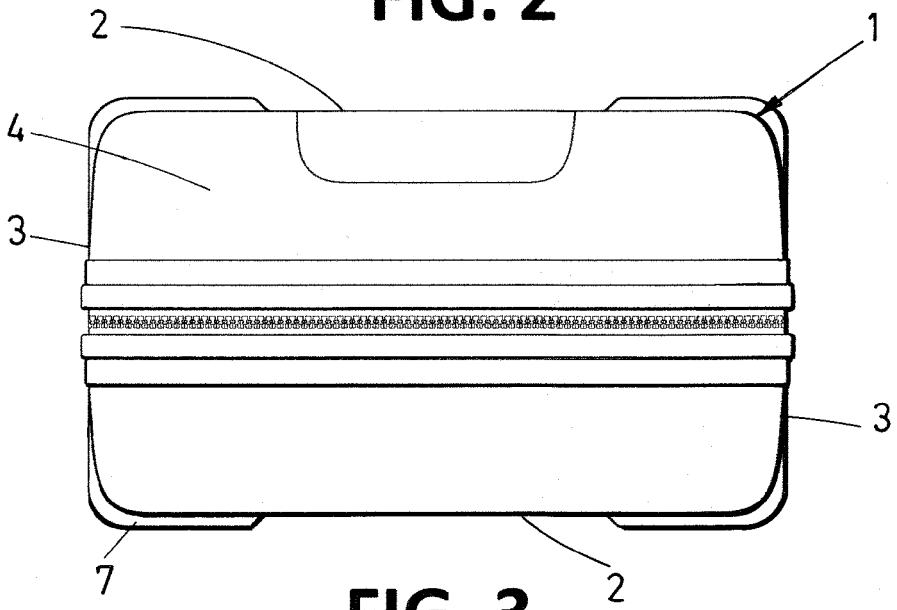

FIG. 3

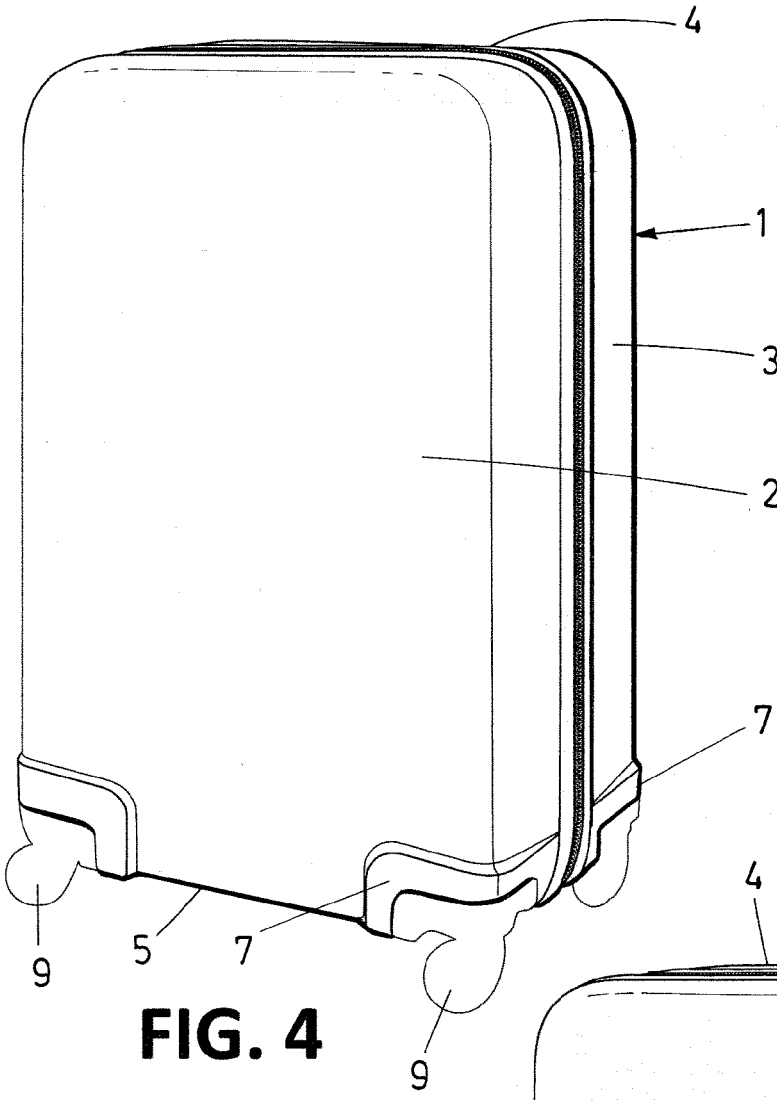

FIG. 4

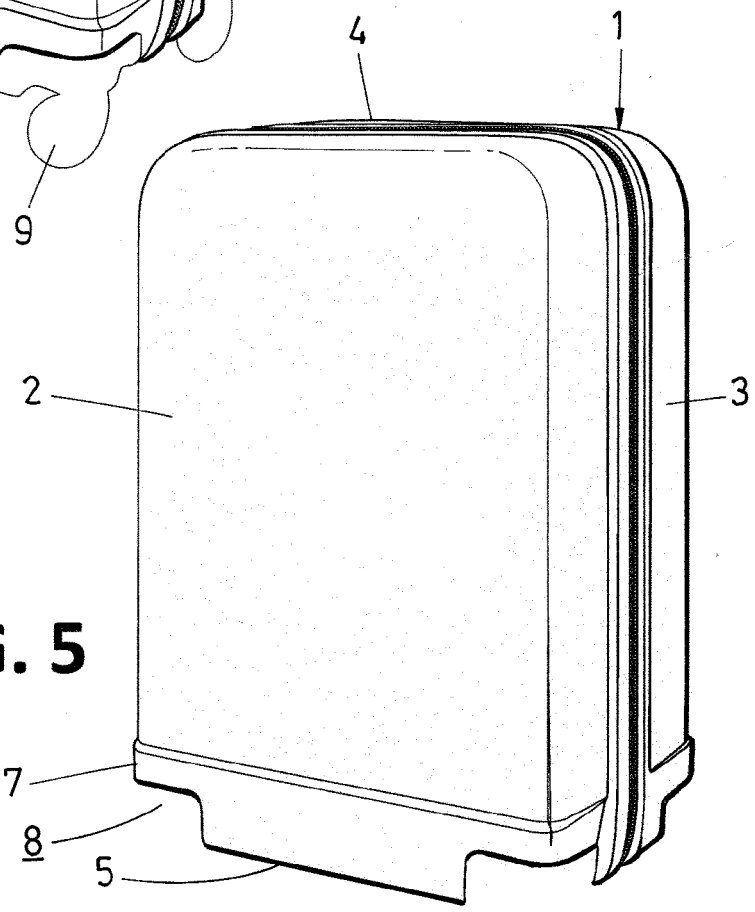

FIG. 5

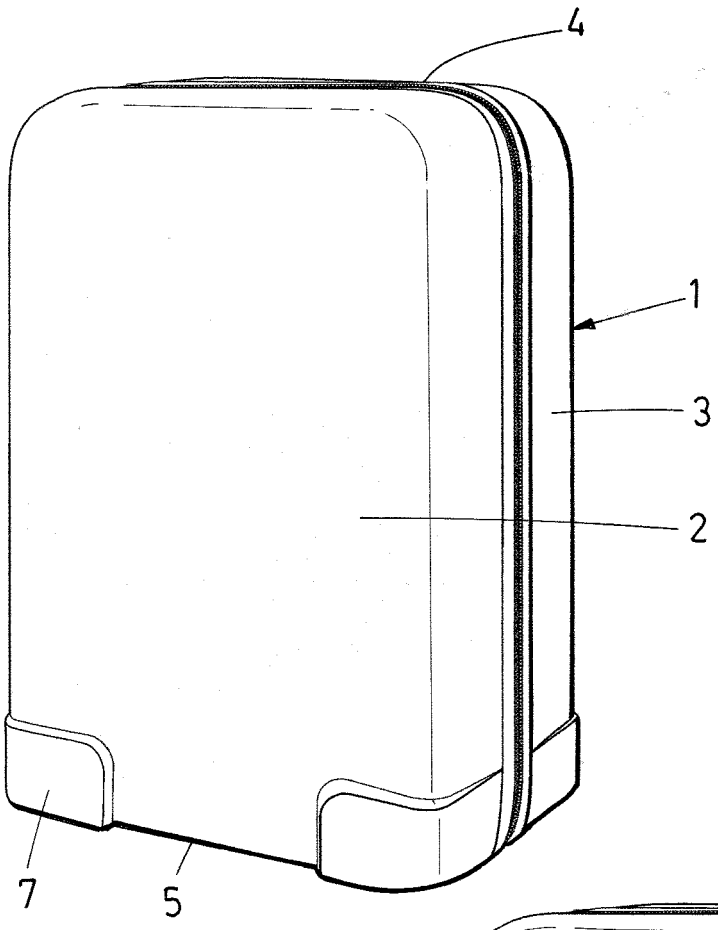

FIG. 6

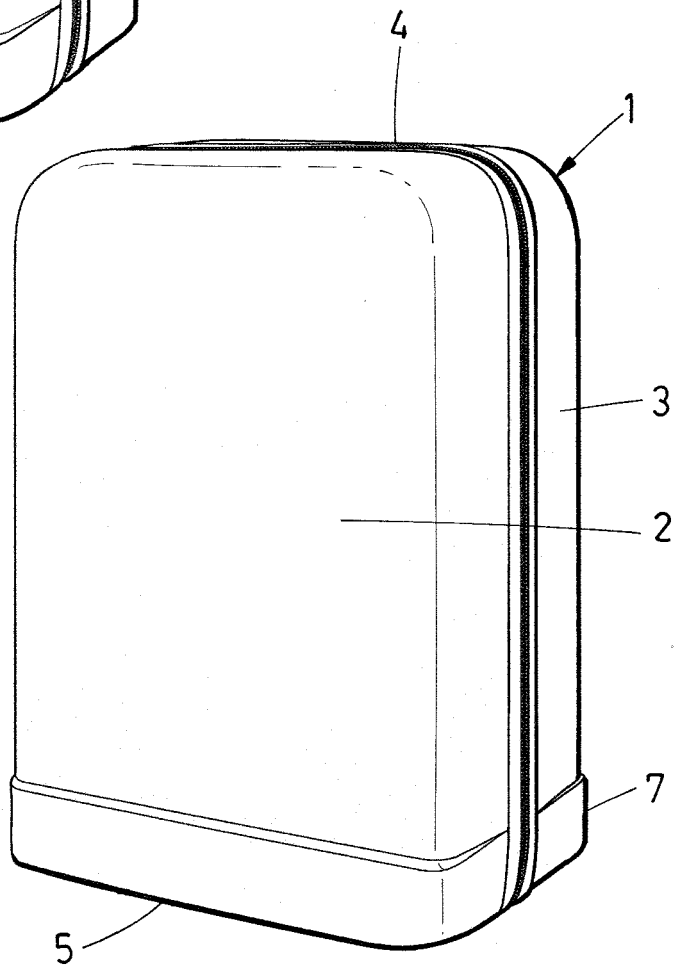

FIG. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 16 38 2654

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 2003/006110 A1 (LIN JERHONG [TW] ET AL) 9 January 2003 (2003-01-09) * paragraph [0010]; figure 3 *	1-6	INV. A45C5/14 A45C5/03 A45C13/36
X	JP 2014 184043 A (NIYUU CO LTD) 2 October 2014 (2014-10-02) * figure 1 *	1-5	
X	CN 203 789 329 U (PINGHU JIANGNAN SUITCASE MFG CO LTD) 27 August 2014 (2014-08-27) * figures *	1-5	
X	AU 12918 83 A (D L I CONSOLIDATED PTY LTD) 13 October 1983 (1983-10-13) * page 3 - page 4, paragraph 2; figure 1 *	1-3,5,6	

TECHNICAL FIELDS SEARCHED (IPC)
A45C

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	16 June 2017	van Overbeek, Kajsa

CATEGORY OF CITED DOCUMENTS

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EPO FORM 1503 03.82 (P04C01)

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16-06-2017

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2003006110 A1	09-01-2003	NONE	
JP 2014184043 A	02-10-2014	NONE	
CN 203789329 U	27-08-2014	NONE	
AU 1291883 A	13-10-1983	NONE	

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

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Patent documents cited in the description

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