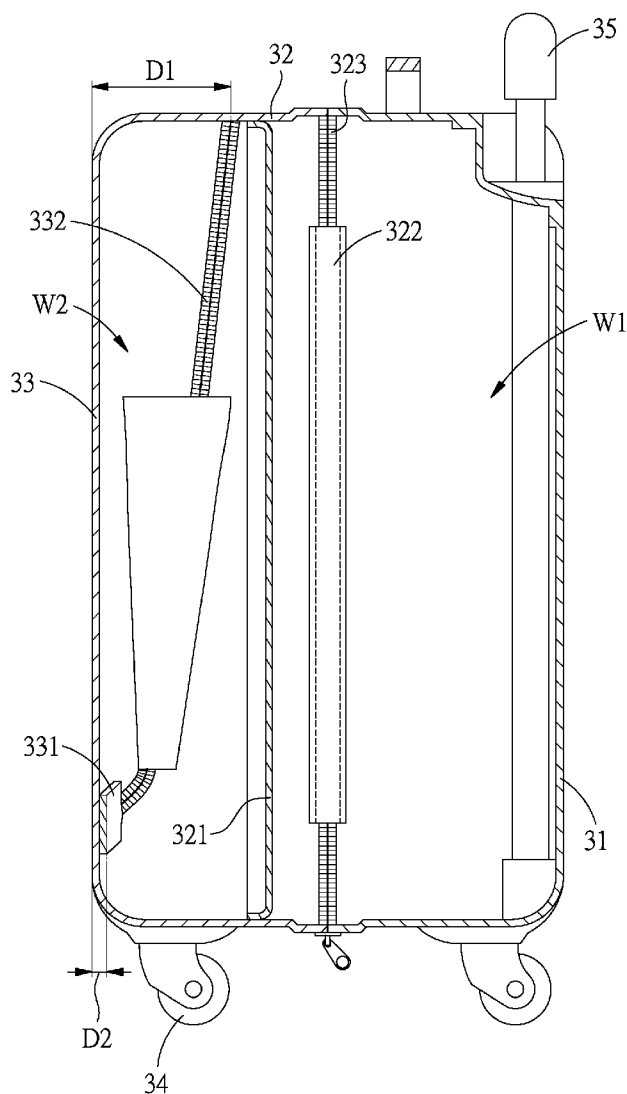




US 20140027224A1

(19) **United States**(12) **Patent Application Publication**
Lai(10) **Pub. No.: US 2014/0027224 A1**(43) **Pub. Date: Jan. 30, 2014**(54) **LUGGAGE CASE**(71) Applicant: **Wei-Hung Lai**, Taichung City (TW)(72) Inventor: **Wei-Hung Lai**, Taichung City (TW)(21) Appl. No.: **14/044,239**(22) Filed: **Oct. 2, 2013****Related U.S. Application Data**(63) Continuation-in-part of application No. 13/006,658,
filed on Jan. 14, 2011.**Publication Classification**(51) **Int. Cl.**
A45C 5/03 (2006.01)(52) **U.S. Cl.**CPC **A45C 5/03** (2013.01)USPC **190/111**(57) **ABSTRACT**

A luggage case includes a case body, a front cover and a middle shell member between the case body and the front cover. The front cover is connected to the middle shell member via a zipper, the front cover further includes an opening edge, two lateral edges and a front cover surface, the opening edge is opposite the connecting edge, and the two lateral edges are located between the opening edge and the connecting edge, a perpendicular depth from the opening edge to the front cover surface is defined as a first depth, a perpendicular depth from the connecting edge to the front cover surface is defined as a second depth D2, and $D1 > D2$, so that the second zipper at a conjunction between the front cover and the middle shell member is inclined.



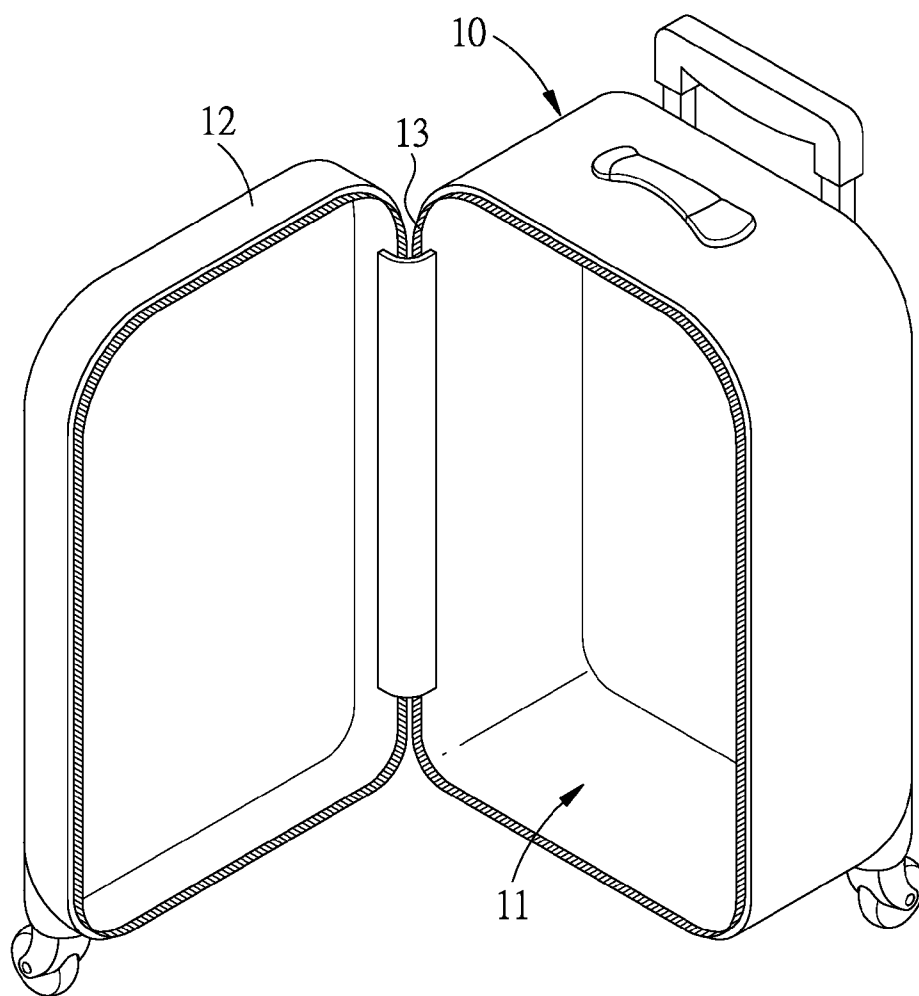


FIG.1
PRIOR ART

FIG.2
PRIOR ART

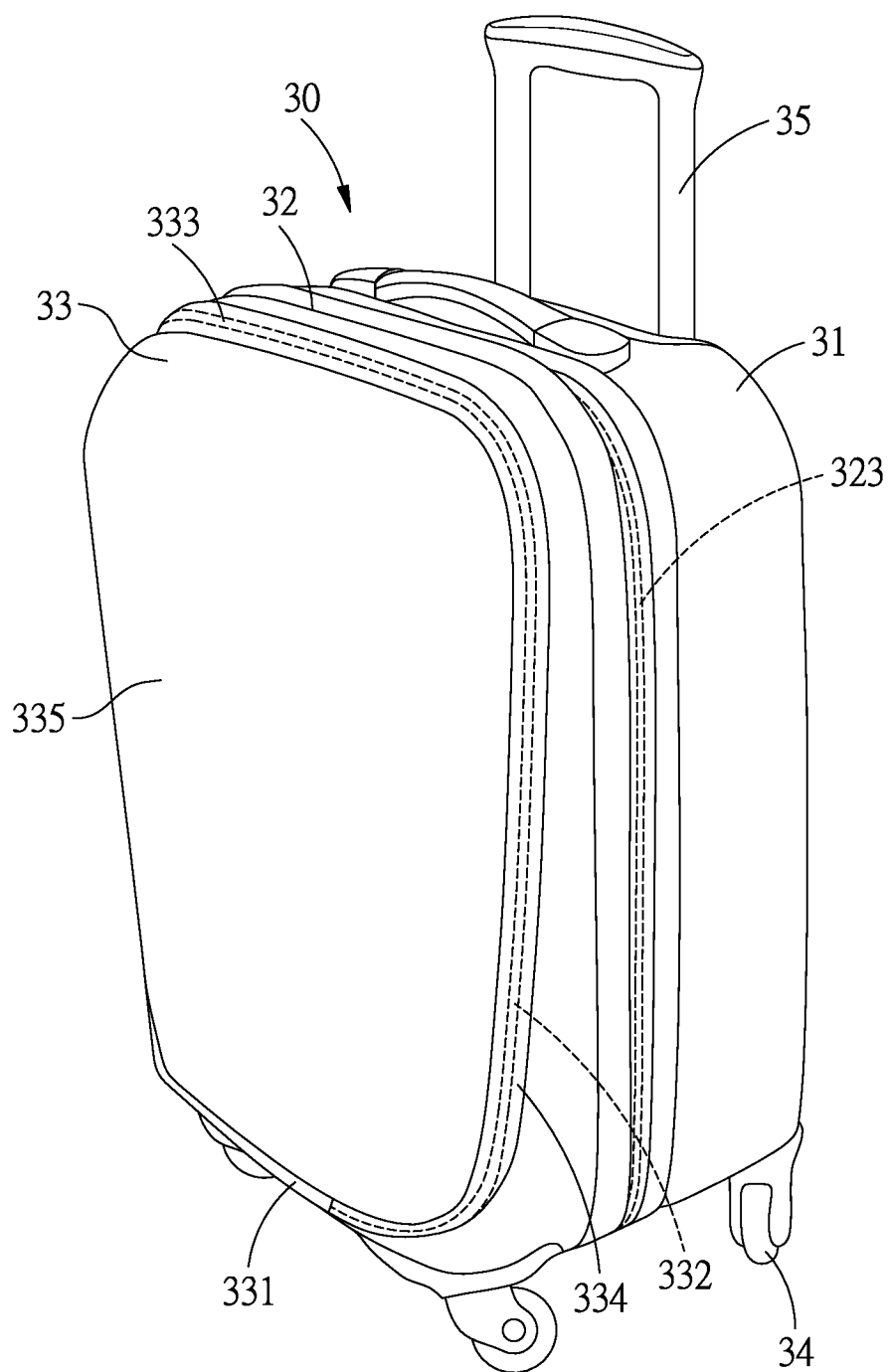


FIG.3

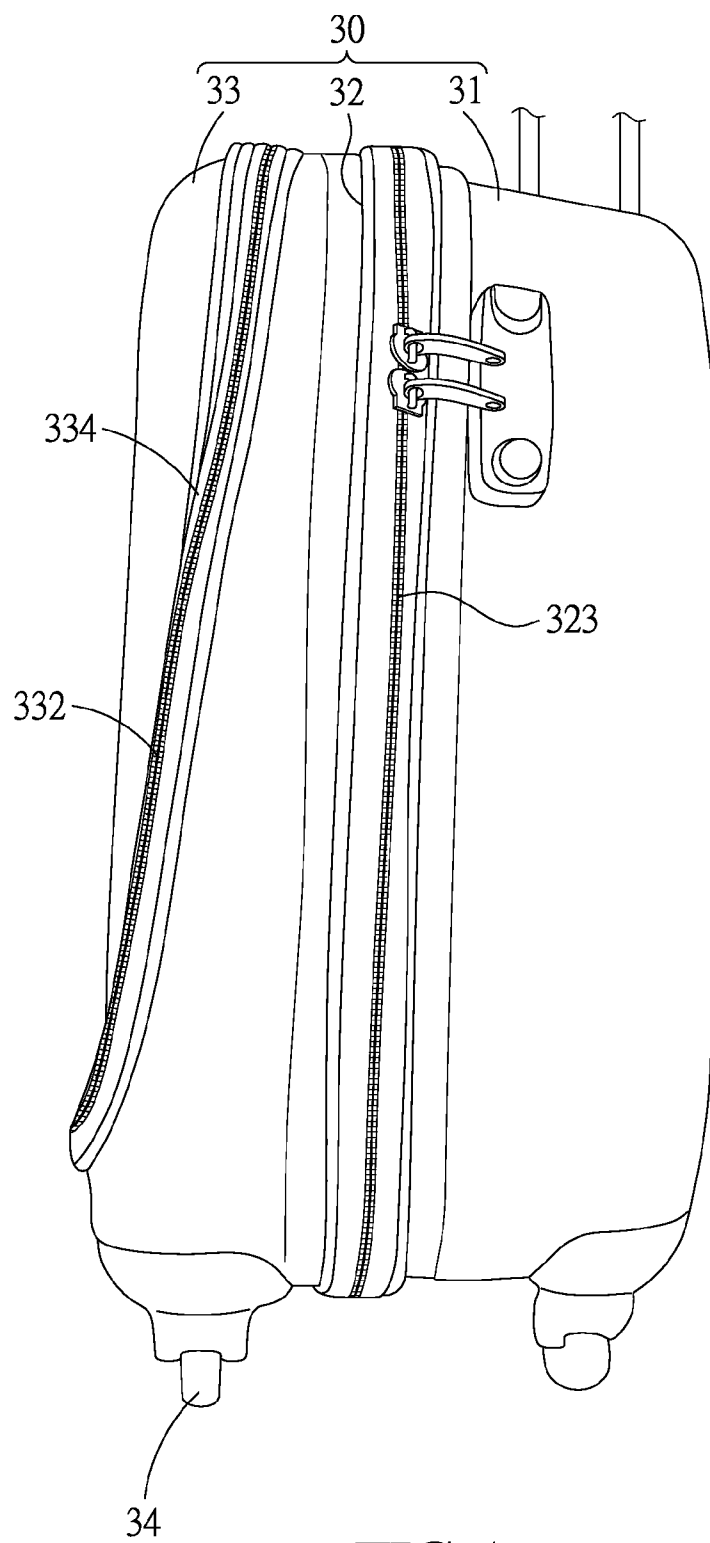


FIG. 4

FIG.5

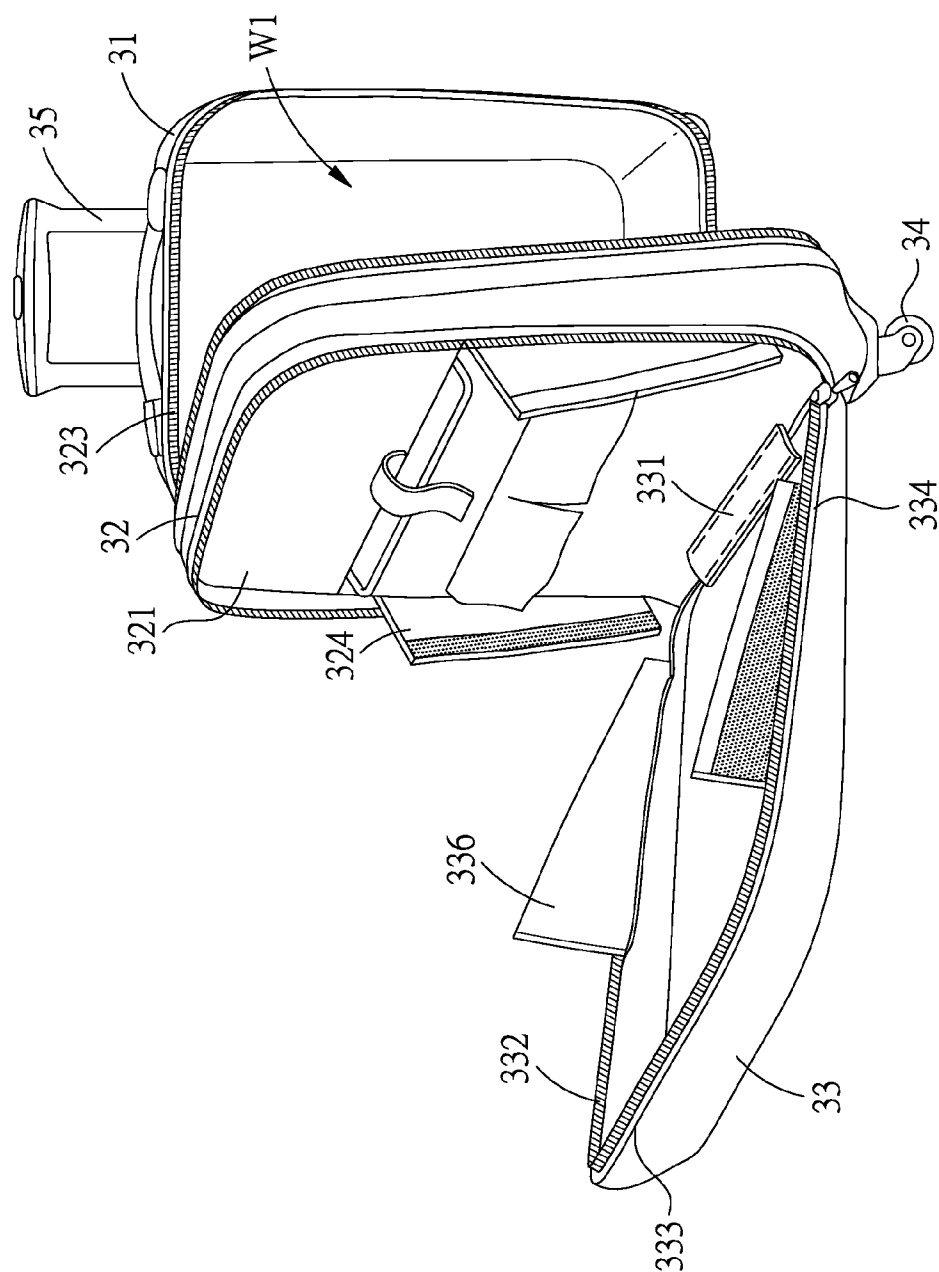


FIG.6

FIG.7

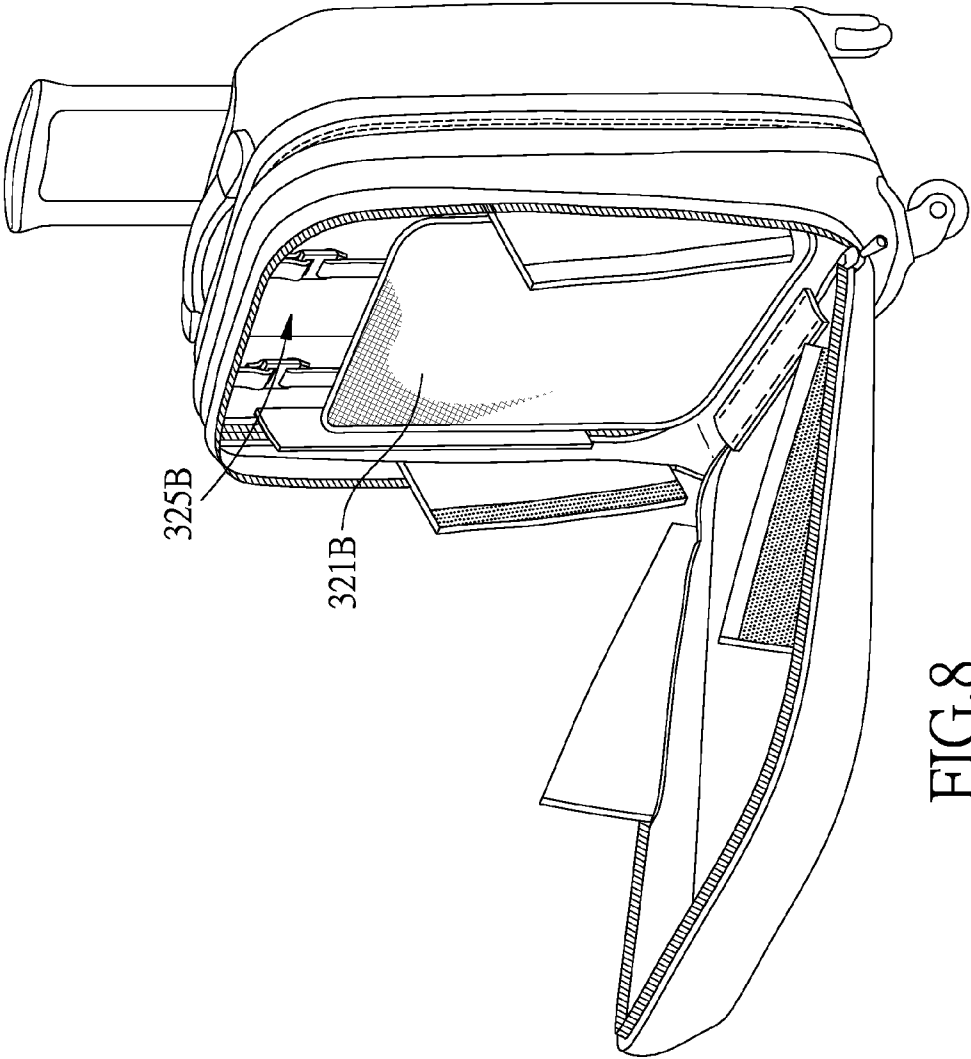


FIG.8

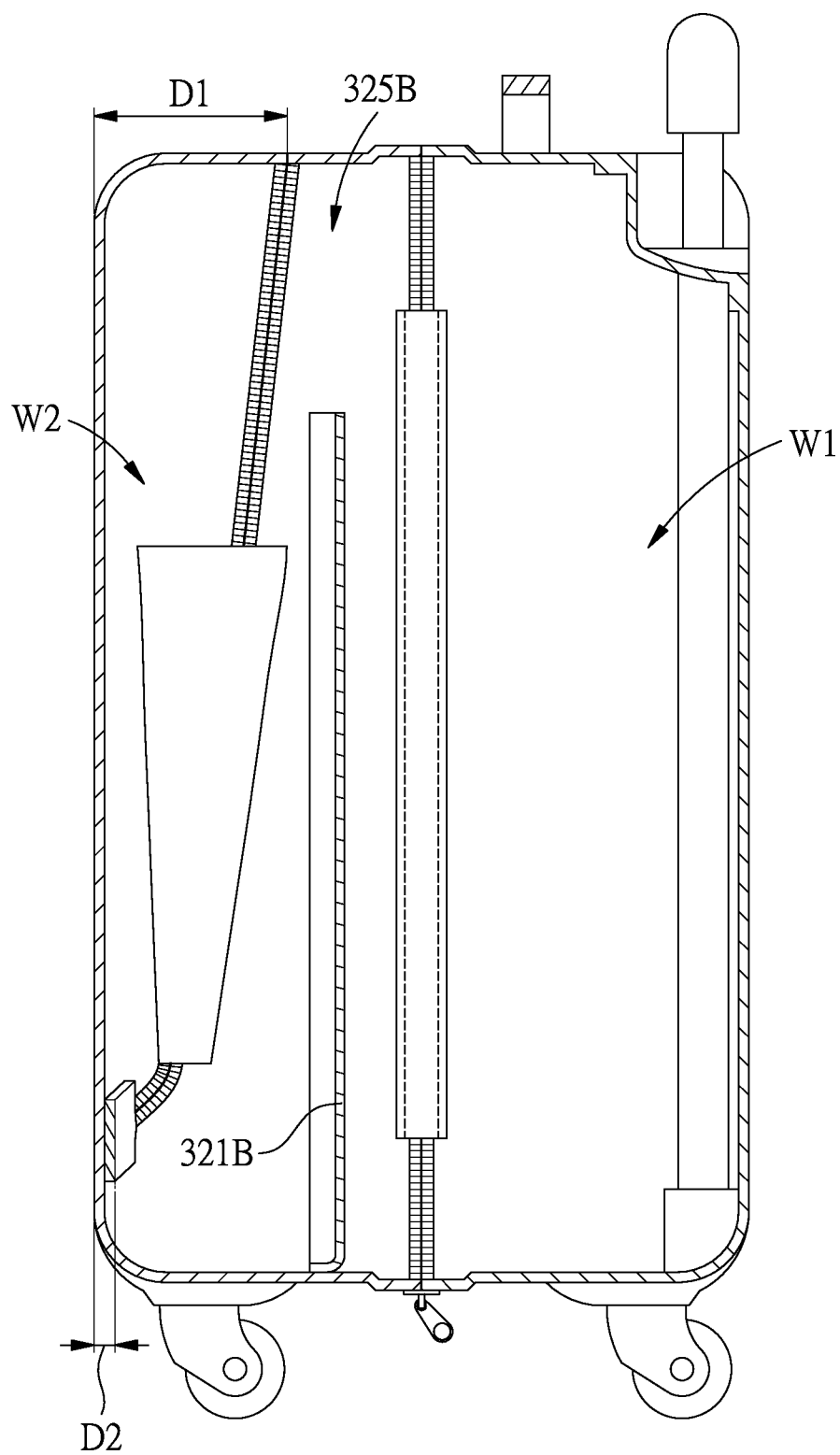


FIG.9

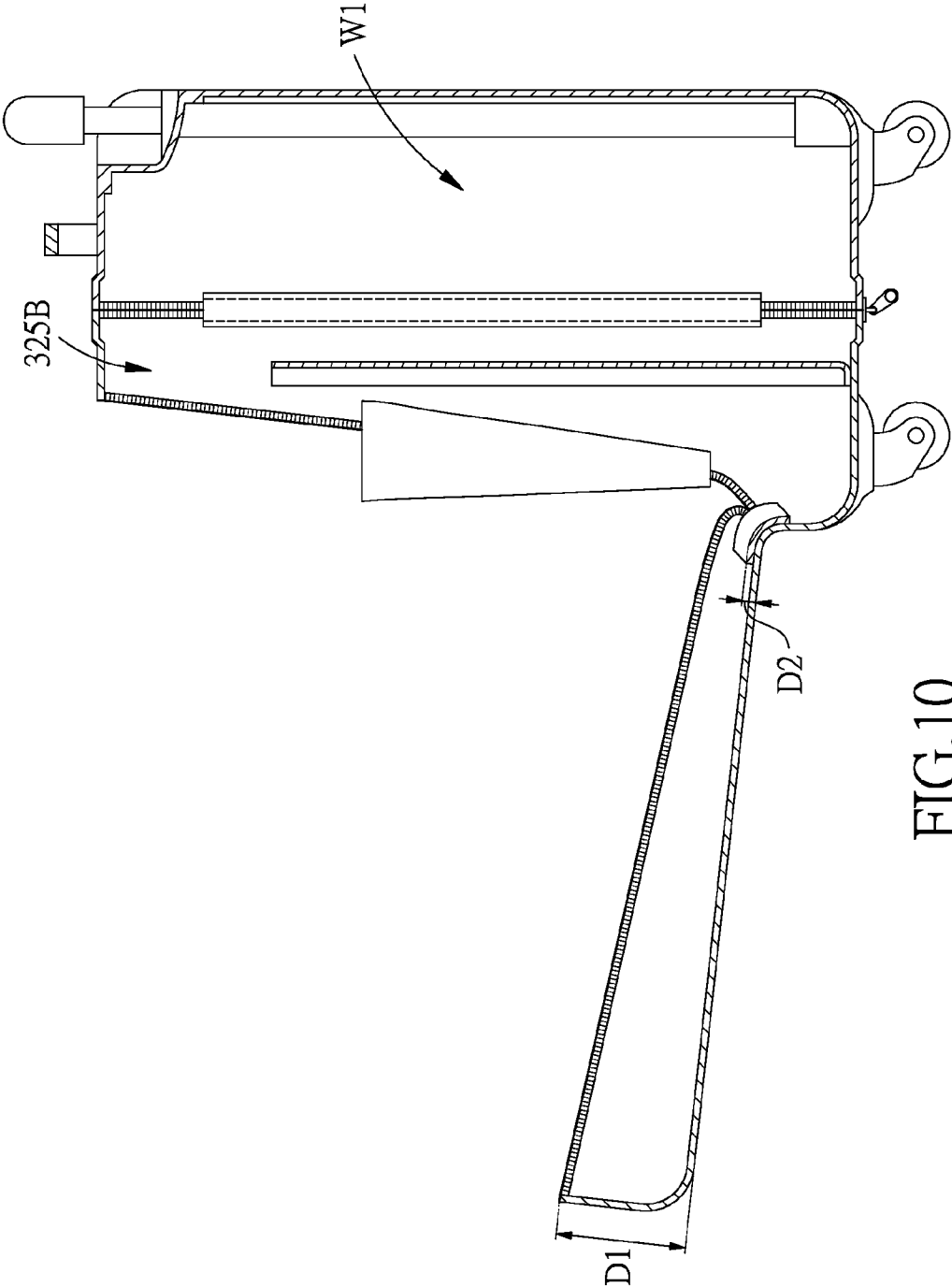


FIG.10

LUGGAGE CASE

[0001] This application is a continuation in part of U.S. patent application Ser. No. 13/006,658, which claims the benefit of the earlier filing date of 14 Jan. 2011. Claim 1 of this application is revised from claim 1 of the U.S. patent application Ser. No. 13/006,658, and claims 2-4 are new.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present invention relates to a rigid luggage case, and more particularly to a luggage case with a handle on the top and wheels at the bottom of the case body.

[0004] 2. Description of the Prior Art

[0005] FIG. 1 shows a conventional luggage case which comprises a case body 10, a storage chamber 11 inside the case body 10, and a cover 12 is coupled to the case body 10 by a zipper 13.

[0006] However, this conventional luggage case only has a single storage chamber 11, all articles have to be put into the same storage chamber without being classified, which is inconvenient.

[0007] To take out articles, the user has to uncover the cover 12, and all articles inside the storage chamber 11 will all be exposed, so it is inconvenient for the user needs to take out some articles from the luggage case in public when there is something inside the storage chamber 11 the user does not want other people to see.

[0008] To take out articles, it has to lay the luggage case flat and then open it up, and the luggage case cannot be opened in an upstanding manner as shown in FIG. 1, otherwise all articles will fall out of the case. Furthermore, it occupies more space when the case body 10 is laid flat on the ground as compared to when it is opened in the upstanding manner.

[0009] FIG. 2 shows another conventional luggage case 20 with two storage chambers, which comprises a case body 21, a front cover 23, and a middle shell member 22 between the case body 21 and the front cover 23. The middle shell member 22 includes a separating plate 221 and has a lateral side pivoted to the case body 21, so that the middle shell member 22 can be opened or closed with respect to the case body 21 and cooperates with the case body 21 to define a first chamber 24. The front cover 23 is pivoted to the middle shell member 22 via a connecting member 25, so that the front cover 23 can be closed and opened with respect to the middle shell member 22 and cooperates with the middle shell member 22 to define a second chamber 26.

[0010] However, the second chamber 26 is too narrow to accommodate large articles. On top of that, the front cover 23 is perpendicular to the ground, when the user has to bend down when wanting to open the front cover 23, which is not ergonomically correct.

[0011] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

SUMMARY OF THE INVENTION

[0012] The primary objective of the present invention is to provide a luggage case with two chambers, which allows the user easily and comfortably to take out or put into articles by opening one of the chambers.

[0013] To achieve the above objective, a luggage case in accordance with the present invention comprises: a case body, a front cover and a middle shell member between the case body and the front cover, the middle shell member including

a separating board, one side of the middle shell member being pivoted to one side of the case body, so that the middle shell member is capable of being closed or opened with respect to the case body, the middle shell member and the case body defining a first chamber, the front cover being pivoted to the middle shell member via a connecting edge, so that the front cover is capable of being opened and closed with respect to the middle shell member, the front cover cooperating with the middle shell member to define a second chamber. The luggage case is characterized in that:

[0014] the front cover is connected to the middle shell member via a zipper, the front cover further includes an opening edge, two lateral edges and a front cover surface, the opening edge is opposite the connecting edge, and the two lateral edges are located between the opening edge and the connecting edge, a perpendicular depth from the opening edge to the front cover surface is defined as a first depth D1, a perpendicular depth from the connecting edge to the front cover surface is defined as a second depth D2, and $D1 > D2$, so that the second zipper at a conjunction between the front cover 33 and the middle shell member is inclined.

[0015] The advantages of the present invention are that: the luggage case is additionally provided with a front cover whose bottom edge is connected to the middle shell member via a folding line. To two ends of the folding line is connected a second zipper. The connecting edge and the second zipper are located around the outer periphery of the front cover. The front cover can be opened and closed with respect to the middle shell member and cooperates with the middle shell member to define a second chamber. The front cover cooperates with the middle shell member to define a second chamber, so that the user can easily and comfortably to take out or put into articles by opening one of the chambers. Furthermore, the second zipper winds over the top of the middle shell member in an inclined manner, which increases the area of the cross section of the front cover, creating a large opening for easy access to the interior of the luggage case.

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. 1 is a perspective view of a conventional luggage case;

[0017] FIG. 2 is a cross sectional view of the conventional luggage case;

[0018] FIG. 3 is a perspective view of a luggage case in accordance with a first embodiment of the present invention;

[0019] FIG. 4 is a side view of the luggage case in accordance with the first embodiment of the present invention;

[0020] FIG. 5 is a cross sectional view of the luggage case in accordance with the first embodiment of the present invention;

[0021] FIG. 6 shows that the luggage case of the present invention is opened in an upstanding manner;

[0022] FIG. 7 shows that only the front cover of the luggage case of the present invention is opened;

[0023] FIG. 8 is a perspective view of a luggage case in accordance with a second embodiment of the present invention;

[0024] FIG. 9 is a side view of the luggage case in accordance with the second embodiment of the present invention; and

[0025] FIG. 10 shows that only the front cover of the luggage case of the second embodiment of the present invention is opened.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0026] The present invention will be clearer from the following description when viewed together with the accompanying drawings, which show, for purpose of illustrations only, the preferred embodiment in accordance with the present invention.

[0027] Referring to FIGS. 3-7, a luggage case 30 in accordance with the present invention is made of rigid material, such as polypropylene (PP), polyethylene (PE), polycarbonate (PC), and etc, and comprises: a case body 31, a front cover 33 and a middle shell member 32 between the case body 31 and the front cover 33.

[0028] The middle shell member 32 includes a separating board 321, one side of the middle shell member 32 is pivoted to one side of the case body 31 via a folding line 322, so that the middle shell member 32 can be closed or opened with respect to the case body 31. To two ends of the folding line 322 is disposed a first zipper 323 in such a manner that the folding line 322 and the first zipper 323 is located around the periphery of the middle shell member 32. The middle shell member 32 and the case body 31 define a first chamber W1, and at two sides of the middle shell member 32 is arranged a plurality of first connecting pieces 324.

[0029] The front cover 33 is pivoted to the middle shell member 32 via a connecting edge 331 which is located at a bottom of the front cover 33 and a front surface of the middle shell member 32, so that the front cover 33 can be opened and closed with respect to the middle shell member 32 and cooperates with the middle shell member 32 to define a second chamber W2. The front cover 33 is provided with a second zipper 332 at two ends of the connecting edge 331 and connected to the middle shell member 32 via the second zipper 332 which is made of elastic zipper tape. The connecting edge 331 and the second zipper 332 are located around the outer periphery of the front cover 33. The front cover 33 further includes an opening edge 333, two lateral edges 334 and a front cover surface 335. The opening edge 333 is opposite the connecting edge 331, and the two lateral edges 334 are located between the opening edge 333 and the connecting edge 331. A perpendicular depth from the opening edge 333 to the front cover surface 335 is defined as a first depth D1, a perpendicular depth from the connecting edge 331 to the front cover surface 335 is defined as a second depth D2, and $D1 > D2$, so that the second zipper 332 at the conjunction between the front cover 33 and the middle shell member 32 is inclined, namely, a connecting surface between the opening edge 333 of the front cover 33 and the connecting edge 331 is not perpendicular to the ground. Or, as shown in the side view, the second zipper 332 is arranged in an inclined manner that an upper portion of the second zipper 332 is located close to the case body 31, while the lower portion of the second zipper 332 is located farther away from the case body 31 than the upper portion. At both sides of the front cover 33 is provided a plurality of second connecting pieces 336 for connecting to the first connecting pieces 324 of the middle shell member 32, respectively.

[0030] At a bottom of the luggage case 30 can be provided a plurality of wheels 34, four wheels for example, and the four wheels 34 are disposed at four corners of the luggage case 30 in such a manner that two wheels 34 are located on the case body 31, the other two wheels 34 are located on the middle shell member 32, and the bottom of the front cover 33 is located above the wheels 34. At the top of the luggage case 30

is provided a handle 35, and in this embodiment, the handle 35 is located at the rear end of the top of the case body 31.

[0031] Referring then to FIGS. 3-5, the connecting edge 331 is located at the bottom of the front cover 33 and the front surface of the middle shell member 32, and the second zipper 332 is connected to the two ends of the connecting edge 331 and winds over the top of the middle shell member 32 in an inclined manner, which increases the area of the cross section of the front cover 33, creating a large opening for easy access to the interior of the luggage case. Besides, the connecting surface between the opening edge 333 of the front cover 33 and the connecting edge 331 is not perpendicular to the ground, or, as shown in the side view, the second zipper 332 is arranged in an inclined manner that an upper portion of the second zipper 332 is located close to the case body 31, while the lower portion of the second zipper 332 is located farther away from the case body 31 than the upper portion. Therefore, the length of the part of the second zipper 332 on the front cover 33 must be shorter than the length of the part of the second zipper 332 on the middle shell member 32. To solve this problem, the inventor of this invention chooses the elastic zipper tape as the material of the second zipper 332, so that the length difference of two parts of the second zipper 332 can be overcome by the elasticity of the elastic zipper tape.

[0032] On top of those mentioned above, the present invention further has the advantages as follows:

[0033] Firstly, the luggage case 30 is provided with two chambers W1, W2, so that different articles can be classified. For example, large articles or private articles can be put into the first chamber W1, and small or frequently-used articles can be put into the second chamber W2.

[0034] Secondly, as shown in FIGS. 6 and 7, the second chamber W2 between the front cover 33 and the middle shell member 32 independently without opening the first chamber W1 between the case body 31 and the middle shell member 32, or vice versa, which makes it easy to take out the articles.

[0035] Thirdly, to open the front cover 33, the user can choose to unlock the first connecting pieces 324 and the second connecting pieces 336, as desired. When the first connecting pieces 324 and the second connecting pieces 336 are connected, as shown in FIG. 7, the front cover 33 is opened in a manner that the luggage case 30 stands upright, so as to prevent the articles from falling out. When the first and second connecting pieces 324, 336 are unlocked, as shown in FIG. 6, the front cover 33 is fully opened while the luggage case 30 is laid flat on the ground, so that the articles stored in the second chamber W2 are exposed, and the user can take out the articles easily.

[0036] Referring then to FIGS. 8-10, a second embodiment of the present invention is shown, at the top of the separating board 321B is defined an opening 325B, so that the user can insert hand into the second chamber W2 via the opening 325B to take out articles.

[0037] While we have shown and described various embodiments in accordance with the present invention, it is clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

What is claimed is:

1. A luggage case comprising:

a case body, a front cover and a middle shell member between the case body and the front cover, the middle shell member including a separating board, one side of the middle shell member being pivoted to one side of the

case body, so that the middle shell member is capable of being closed or opened with respect to the case body, the middle shell member and the case body defining a first chamber, the front cover being pivoted to the middle shell member via a connecting edge, so that the front cover is capable of being opened and closed with respect to the middle shell member, the front cover cooperating with the middle shell member to define a second chamber; the luggage case being characterized in that:

the front cover is connected to the middle shell member via a zipper, the front cover further includes an opening edge, two lateral edges and a front cover surface, the opening edge is opposite the connecting edge, and the two lateral edges are located between the opening edge and the connecting edge, a perpendicular depth from the opening edge to the front cover surface is defined as a first depth D1, a perpendicular depth from the connecting edge to the front cover surface is defined as a second depth D2, and $D1 > D2$, so that the second zipper at a conjunction between the front cover and the middle shell member is inclined.

2. The luggage case as claimed in claim 1, wherein the zipper is made of elastic zipper tape.

3. The luggage case as claimed in claim 1, wherein a plurality of first connecting pieces is arranged at two sides of the middle shell member to connect a plurality of second zippers arranged at both sides of the front cover.

4. The luggage case as claimed in claim 1, wherein an opening is defined at the top of the separating board.

* * * * *