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(54) **LUGGAGE ITEM**

(57) The invention relates to a luggage item comprising a first portion (2) and a second portion (3) having a respective perimetral edge (8, 11), a zip assembly (12) comprising a first half part (13) and a second half part (14), the first half part (13) comprising a first flap (15) having a first (16) and a second end (17), first teeth (18) being connected to the first end (16) and second teeth (19) being connected to the second end (17), the first half part (13) comprising a second flap (20) connected to one section of the perimetral edge (8) and connected to the first flap (15) in a position comprised between the first (16) and the second end (17), the second half part (14) comprising a third flap (21) having a first (22) and a second end (23), third teeth (24) coupled to the first teeth (18) to form a first chain (26) being connected to the first end (22) of the third flap (21) and fourth teeth (25) coupled to the second teeth (19) to form a second chain (28) being connected to the second end (23) of the third flap (21), the second half part (14) comprising a fourth flap (30) connected to a section of the perimetral edge (11) and connected to the third flap (21) in a position comprised between the first (22) and the second end (23).

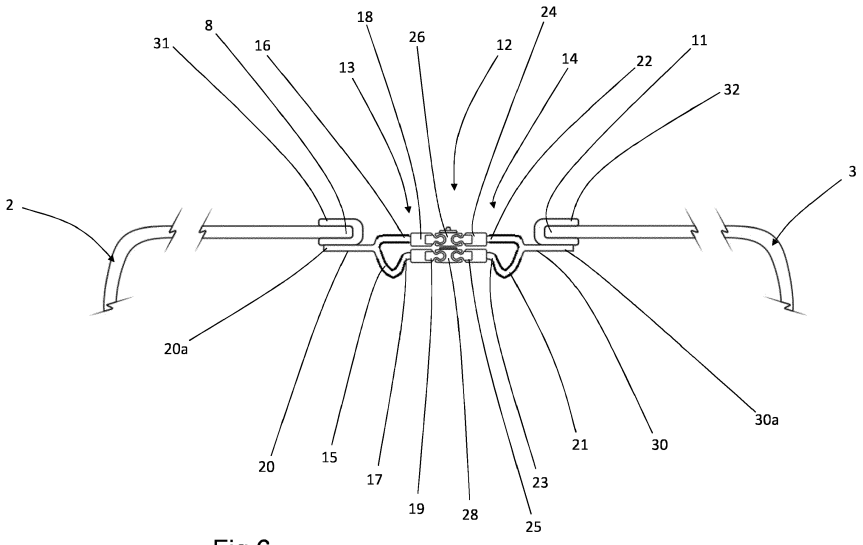


Fig 6

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## Description

**[0001]** The present invention relates to a luggage item, preferably a luggage item for the transport of personal effects during a journey.

**[0002]** Travellers' needs for storage space vary considerably according to the type of journey they are to take.

**[0003]** In the case of long journeys, it is often necessary to have luggage items available that have a large storage volume, while for short journeys the storage volume of the luggage items can be smaller.

**[0004]** It is precisely for this reason that there are luggage items on the market having different dimensions, to satisfy any travel need.

**[0005]** The Applicant has however noted that travellers' storage needs can vary during the course of a same journey.

**[0006]** It can happen that at the start of a journey the volume necessary for storing a traveller's personal effects is smaller than the storage volume needed for the return trip, for example because the traveller buys souvenirs or items of clothing during the journey.

**[0007]** Luggage items are known that respond to this requirement, which have a variable storage volume according to needs.

**[0008]** With these suitcases, the two shells are joined by two different zip closure systems, each of which acts on at least three edges of each shell.

**[0009]** More in particular, a first zip closure system comprises a first tape made in two half parts joined by a chain that is engaged by a slider. Each half part is sewn, respectively, to the edges of the first or second shell of the suitcase.

**[0010]** Likewise, a second zip closure system comprises a second tape also made in two half parts joined by a chain that is engaged by a slider, in which each half part is sewn, respectively, to the edges of the first or second shell of the suitcase.

**[0011]** The two tapes are superposed on one another so that the first tape conceals the second tape from view. The second tape has transversal dimensions that are greater than the first tape, in particular one or both the half parts of the second tape have a width that is greater than the corresponding half parts of the first tape.

**[0012]** When both the zip closure systems are closed, the suitcase is closed and is in the minimum expansion configuration.

**[0013]** When the first zip closure system is open and the second zip closure system is closed, the suitcase is still closed and is in the maximum expansion configuration.

**[0014]** When both the zip closure systems are open, the suitcase is open.

**[0015]** The Applicant has noted that rigid suitcases such as the ones briefly described above in which the storage volume can be increased or reduced as desired can require a considerable degree of manufacturing complexity which can increase production costs.

**[0016]** The Applicant has in fact observed that the half parts of the tapes of both the zip closure systems must be sewn on the free edges of each shell.

**[0017]** This requires the use of specific sewing devices to ensure the contemporaneous sewing of two half parts of tape and requires to precisely handling the two tapes during the sewing operations.

**[0018]** The Applicant has indeed noted that the two tapes must be synchronised with one another in advance, i.e. must be previously assembled with an identical length (equal to the edge perimeter of the shells on which they are to be applied), and must be aligned for being perfectly superposed.

**[0019]** Further, both the tapes must be retained in the synchronised condition during the sewing operations at the edges of the shells, with the further complication that the half parts of the tapes of the two zip closure systems have widths (in a direction transversal to the chain) that are different to each other.

**[0020]** The present invention relates to a luggage item comprising: a first portion and a second portion, opposite to the first portion, in which the first portion and the second portion comprise a respective perimetral edge;
a zip assembly comprising a first half part and a second half part;
said first half part of the zip assembly comprising a first flap having a first and a second end opposite to each other, first teeth being connected to the first end and second teeth being connected to the second end, said first half part further comprising a second flap connected to at least one section of said perimetral edge of the first portion of the luggage item and connected to the first flap in a position comprised between the first and the second end;
said second half part of the zip assembly comprising a third flap having a first and a second end opposite to each other, third teeth coupled to said first teeth to form a first chain being connected to the first end of the third flap and fourth teeth coupled to said second teeth to form a second chain being connected to the second end of the third flap, said second half part further comprising a fourth flap connected to at least a section of said perimetral edge of the second portion of the luggage item and connected to the third flap in a position comprised between the first and the second end.

**[0021]** The Applicant has found that by providing a zip assembly in two half parts in which each half part has a flap provided with two lines of teeth, the two flaps can be utilised to realise a double zip closure.

**[0022]** The Applicant has found that the double zip closure can be utilised in such a way that a first closure achieves a minimum dimension configuration (and therefore minimum storage capacity of the luggage item) and the second closure achieves a maximum dimension configuration (and thus of maximum storage capacity of the luggage item).

**[0023]** The Applicant has further found that each flap with a double row of teeth can be located at a respective

perimetral edge of the luggage item using a respective connecting flap which on one side is connected to the perimetral edge and on the other side is connected to the flap with the double row of teeth.

**[0024]** In this way, only one flap has to be sewn (or in any case associated) to each perimetral edge of the luggage item, which accelerates and facilitates the luggage item assembly operations.

**[0025]** In the present description and appended claims, the term "flap" is taken to mean an assembly (in a single piece or constituted by several elements joined to each other) substantially tape-formed and flexible, in which two opposite ends can be identified.

**[0026]** The term "connected" is taken to mean that an element has a constraint with respect to the element to which it is connected. This constraint should not necessarily be understood as direct (except where explicitly specified) but can also be taken to mean an indirect constraint, i.e. it can take place by interposing of further intermediate elements between the two "connected" elements.

**[0027]** In the present description and the following claims, the term "teeth" of a chain indicates any organ necessary for stably mutually associating the flaps of a zip (such as for example the teeth of a "traditional" zip fastener).

**[0028]** The luggage item according to the present invention can comprise one or more of the following features, considered singly or in combination with each other.

**[0029]** At least one slider is preferably active on said first chain and at least a second slider is active on said second chain to open and close respectively the first and the second chain; said luggage item being closed in a minimum expansion configuration when the first chain and the second chain are closed and being in a maximum expansion configuration when the first chain is open and the second chain is closed.

**[0030]** In this way, the storage volume of the luggage item can be increased simply by opening the first chain with the relative slider (or pairs of sliders).

**[0031]** The first and second chain are preferably superposed on one another, so that one chain (when closed) conceals the other chain from view.

**[0032]** This enables realising a luggage item that externally exhibits only one chain.

**[0033]** Said first and third flap preferably comprise a first and a second surface opposite to each other; said first and second teeth emerging respectively from the first and second surface of the first flap and said third and fourth teeth emerging respectively from the first and second surface of the third flap.

**[0034]** In this way the teeth of both chains are located on the same side with respect to the inside of the luggage item, i.e. both facing towards the outside of the luggage item or both facing towards the inside of the luggage item.

**[0035]** When the zip assembly is in use, the flaps that bear the teeth are folded on themselves to form respective bends in such a way that in the closed condition of both chains, the first and third flap form a substantially tubular structure.

**[0036]** Said second flap is preferably connected to the first flap in a position closer to the first end than to the second end.

**[0037]** In this manner, one of the two ends of the first flap is more distant from the perimetral edge of the first portion of the luggage item with respect to the other end of the first flap.

**[0038]** Said fourth flap is preferably connected to the third flap in a position closer to the first end than to the second end.

**[0039]** In this manner, one of the two ends of the second flap is more distant from the perimetral edge of the second portion of the luggage item with respect to the other end of the second flap.

**[0040]** Said first flap is preferably connected to the second flap at a first distance from the first end and said third flap is connected to the fourth flap at a second distance from the first end; said first distance being identical to the second distance.

**[0041]** In this way the first chain, when closed, is equidistant from the perimetral edges of the two portions of the luggage.

**[0042]** Said second and fourth flap preferably comprise respective connecting portions directly connected to the respective perimetral edge; said second and fourth flap being connected respectively to the first and to the third flap outside said connecting portions.

**[0043]** The first and the third flap are thus not directly connected to the respective perimetral edges of the two portions of the luggage item.

**[0044]** The first teeth and the second teeth are preferably applied to the respective free ends of the first flap and the third teeth and the fourth teeth are applied to respective free ends of the third flap.

**[0045]** The second flap preferably comprises a free end directly connected to the perimetral edge and a second end directly connected to the first flap and the fourth flap comprises a free end directly connected to the perimetral edge and a second end directly connected to the third flap.

**[0046]** At least a connecting body is preferably active between the first and the second portion of the luggage item to allow the luggage item to open in a book-like manner.

**[0047]** Said connecting body is preferably configurable between a condition of minimum expansion in which it acts on the two portions of the luggage item to keep them in a condition of maximum closeness and a condition of maximum expansion in which it allows the two portions of the luggage item to assume a condition of maximum distance.

**[0048]** In this manner, the connecting body can expand when the luggage item is in the configuration of maximum expansion, thus enabling a correct functioning of the luggage item even when in the configuration of maximum

expansion.

**[0049]** Said connecting body preferably comprises an elastic portion to implement the condition of minimum expansion and the condition of maximum expansion.

**[0050]** Said luggage item is preferably a hard suitcase and said first and second portion are a first and a second shell of said hard suitcase.

**[0051]** Further characteristics and advantages of the invention will emerge from the description of some preferred embodiment, set forth with reference to the attached drawings, wherein:

- figure 1 is a schematic lateral view of a luggage item according to the present invention in a first operating configuration;
- figure 2 is a schematic lateral view of the luggage of figure 1 in a second operating configuration;
- figure 3 is a schematic lateral view of the luggage item of figure 1 in a third operating configuration;
- figure 4 is a schematic lateral view of the luggage of figure 1 in a fourth operating configuration;
- figure 5 illustrates some details of the luggage item of figure 1; and
- figure 6 is a schematic view according to section VI-VI of the luggage item of figure 1.

**[0052]** With reference to the attached figures, 1 denotes in its entirety a luggage item according to the present invention.

**[0053]** The luggage item 1 comprises a first portion 2 and a second portion 3 which, in combination, define a containing volume of the luggage item 1.

**[0054]** The first portion 2 and/or the second portion 3 comprises one or more accessories 4 predisposed to enable transport of the luggage item, schematically represented in the accompanying figures with a carrying grip and a telescopic handle.

**[0055]** The first 2 and the second portion 3 further comprise respective two wheels 5 to allow the luggage item to move on a surface during transport.

**[0056]** In the preferred embodiment of the invention, the luggage item 1 is a suitcase of a rigid type, i.e. a baggage such as a trolley and the like, of a type realised with two shells made of a plastic, composite or metal material, hinged to each other. This type of luggage item is distinguished from a soft type typically made from a frame clad with sheets of fabric.

**[0057]** In the preferred embodiment of the invention, the first portion 2 of the luggage item 1 is made from a first shell and the second portion 3 of the luggage item 1 is made from a second shell.

**[0058]** The first portion 2 comprises four lateral walls 6 and a bottom wall 7 from which the lateral walls 6 extend.

**[0059]** The lateral walls 6 have respective free edges which define a perimetral edge 8 of the first portion 2.

**[0060]** The second portion 3 comprises four lateral walls 9 and a bottom wall 10 from which the lateral walls 9 extend.

**[0061]** The lateral walls 9 have respective free edges which define a perimetral edge 11 of the second portion 3.

**[0062]** The first 2 and the second portion 3 are joined to each other by a zip assembly 12 which preferably extends along the whole extension of the perimetral edges 8, 11 of the two portions 2, 3.

**[0063]** As illustrated in figure 6, the zip assembly 12 comprises a first half part 13 and a second half part 14.

**[0064]** The first half part 13 comprises a first flap 15 which preferably extends continuously between a first 16 and a second end 17. The first flap 15 comprises a first 15a and a second surface 15b opposite to each other (illustrated in figure 6).

**[0065]** First teeth 18 are provided on the first end 16 of the first flap 15, and second teeth 19 are provided on the second end 17 of the first flap 15.

**[0066]** The first half part 13 further comprises a second flap 20 connected to the first flap 15 in a position comprised between the first 16 and the second end 17.

**[0067]** The second flap 20 has an extension that is substantially parallel to the first flap 15, i.e. the prevalent direction of extension of the first flap 15 is substantially parallel to the prevalent direction of extension of the second flap 20, as is schematically illustrated in figure 6.

**[0068]** The second flap 20, on the opposite side with respect to the first flap 15, is connected to the perimetral edge 8 of the first portion 2 of the luggage item 1.

**[0069]** The second half part 14 of the zip assembly 12 comprises a third flap 21 which preferably extends continuously between a first 22 and a second end 23. The third flap 21 comprises a first 21a and a second surface 21b opposite to each other.

**[0070]** Third teeth 24 are provided on the first end 22 of the third flap 21, and fourth teeth 25 are provided on the second end 23 of the third flap 21.

**[0071]** The third teeth 24 are coupled to the first teeth 19 and the fourth teeth 25 are coupled to the second teeth 19.

**[0072]** The first teeth 19 and the third teeth 24 form a first chain 26 engaged by a respective slider 27 (or by a pair of sliders 27) and the second teeth 19 and the fourth teeth 25 form a second chain 28 engaged, preferably, by a pair of sliders 29. The second half part 14 further comprises a fourth flap 30 connected to the third flap 21 in a position comprised between the first 22 and the second end 23.

**[0073]** The fourth flap 30 has an extension that is substantially parallel to the third flap 21, i.e. the prevalent direction of extension of the third flap 21 is substantially parallel to the prevalent direction of extension of the fourth flap 30.

**[0074]** On the opposite side with respect to the third flap 21, the fourth flap 30 is connected to the perimetral edge 11 of the second portion 3 of luggage item 1.

**[0075]** The first 18 and the second teeth 19 are connected to the first portion 2 of the luggage item 1 only via the second flap 20 and the third 24 and fourth teeth 25

are connected to the second portion 3 of the luggage item 1 only via the fourth flap 30.

**[0076]** As can be observed in figure 6, when the first 26 and the second chain 28 are closed, i.e. when the first teeth 16 are engaged with the third teeth 24 and when the second teeth 19 are engaged with the fourth teeth 25, the first flap 15 and the third flap 21 form a substantially tubular structure.

**[0077]** The second flap 20 and the fourth flap 30 have the function of connecting the first 15 and the third flap 21 to the perimetral edges of the respective portions of luggage item.

**[0078]** The first 15 and second flap 20 are preferably directly connected to each other.

**[0079]** The first 15 and the second flap 20 can be two physically distinct bodies connected to each other (by means of sewing, gluing, welding or any other means compatible with the material used) or can be a single body.

**[0080]** Alternatively, the second flap 20 can be made from a body which comprises a first portion defining the second flap 20 and from a second portion which defines a part of the first flap 15. In this case, the first flap 15 is completed by a second body connected (by means of sewing, gluing, welding or any other means compatible with the material used) to the second portion of the first body.

**[0081]** In any case, the first flap 15 and the second flap 20 give to the first half part 13 of the zip assembly 12 substantially a T-shape.

**[0082]** Likewise, the third 21 and the fourth flap 30 can be two physically distinct bodies connected to each other (by means of sewing, gluing, welding or any other means compatible with the material used) or can be a single body.

**[0083]** Alternatively, the fourth flap 30 can be made from a body which comprises a first portion defining the fourth flap 30 and a second portion which defines a part of the third flap 21. In this case, the third flap 21 is completed by a second body connected (by means of sewing, gluing, welding or any other means compatible with the material used) to the second portion of the first body.

**[0084]** In any case, the third flap 21 and the fourth flap 30 give to the second half part 14 of the zip assembly 12 substantially a T-shape.

**[0085]** The third 21 and fourth flap 30 are preferably directly connected to each other.

**[0086]** In the preferred embodiment of the invention, the first 15, the second 20, the third 21 and the fourth flap 30 are made of a textile material.

**[0087]** As illustrated in figure 6, the second flap 20 is connected to the first flap 15 in a position closer to the first teeth 18 than to the second teeth 19.

**[0088]** In particular, the second flap 20 is connected to the first flap 15 in a position comprised between the first 16 and the second end 17 of the first flap 15, closer to the first teeth 18 than to the second teeth 19.

**[0089]** In the preferred embodiment of the invention, the fourth flap 30 is connected to the third flap 21 in a position closer to the third teeth 24 than to the fourth teeth 25.

**[0090]** In particular, the fourth flap 30 is connected to the third flap 21 in a position comprised between the first 22 and the second end 23 of the third flap 21, closer to the third teeth 24 than to the fourth teeth 25.

**[0091]** When the first chain 26 is closed the perimetral edges 8, 11 of the portions 2, 3 of the luggage item are separated by a first maximum distance.

**[0092]** When the second chain 28 is closed (and the first chain 26 is open) the perimetral edges 8, 11 of the portions 2, 3 of the luggage item are separated by a second maximum distance.

**[0093]** The first maximum distance is smaller than the second maximum distance.

**[0094]** The distance separating the first teeth 18 from the connection zone between the first 15 and the second flap 20 is substantially identical to the distance separating the third teeth 24 from the connecting zone between the third 21 and the fourth flap 30.

**[0095]** In the preferred embodiment of the invention, the distance separating the second teeth 19 from the connecting zone between the first 15 and the second flap 20 is substantially identical to the distance separating the fourth teeth 25 from the connecting zone between the third 21 and the fourth flap 30.

**[0096]** The second flap 20 is connected to the perimetral edge of the first portion 2 at a connecting portion 20a thereof positioned at an end of the second flap 20 opposite the end connected to the first flap 15. The connecting portion 20a does not reach the end of the second flap 20 to which the first flap 15 is connected.

**[0097]** The extension in the direction transversal to the prevalent direction of extension of the second 20 and fourth flap 30 is substantially identical.

**[0098]** The extension in the direction transversal to the prevalent direction of extension of the first 15 and third flap 21, i.e. the distance that separates the first 18 from the second teeth 19 and the distance that separates the third 24 from the fourth teeth 25 is substantially identical.

**[0099]** The coupling between the second flap 20 and the perimetral edge 8 of the first portion 2 is preferably obtained by sewing or gluing the connecting portion 20a to the perimetral edge 8.

**[0100]** In order to prevent the perimetral edge 8 of the first portion 2 from being directly visible or in any case in view, a covering 31 is provided, preferably of a plastic material covering the perimetral edge 8.

**[0101]** In the preferred embodiment of the invention, the covering 31 is U-shaped and covers the perimetral edge 8 over the whole extension thereof, as schematically indicated in figure 6.

**[0102]** The connecting portion 20a can advantageously be coupled to the perimetral edge 8 during the coupling operation of the covering 31 to the perimetral edge 8, for example during the same sewing operation. In this case, the second flap 20 is located inside (i.e. facing towards

the storage volume of the luggage item 1) the covering 31.

**[0103]** The fourth flap 30 is connected to the perimetral edge 11 of the second portion 3 of the luggage 1 at a connecting portion 30a thereof located at an end of the fourth flap 30 opposite the end connected to the third flap 21. The connecting portion 30a does not reach the end of the fourth flap 30 to which the third flap 21 is connected.

**[0104]** The coupling between the fourth flap 30 and the perimetral edge 11 of the second portion 3 is preferably obtained by sewing or gluing the connecting portion 30a to the perimetral edge 11.

**[0105]** In order to prevent the perimetral edge 11 of the second portion 3 from being directly visible or in any case in view, a covering 32 is provided, preferably of a plastic material covering the perimetral edge 11.

**[0106]** In the preferred embodiment of the invention, the covering 32 is U-shaped and covers the perimetral edge 11 over the whole extension thereof, as schematically indicated in figure 6.

**[0107]** The connecting portion 30a can advantageously be coupled to the perimetral edge 11 during the coupling operation of the covering 32 to the perimetral edge 11, for example during the same sewing operation. In this case, the fourth flap 30 is located inside (i.e. facing towards the storage volume of the luggage item 1) the covering 32.

**[0108]** Figure 1 illustrates the luggage item 1 in a minimum expansion configuration in which the first chain 26 is closed. In this configuration, the internal volume of the luggage 1 is minimum.

**[0109]** As is schematically illustrated, in the configuration of minimum expansion, the first chain 26 conceals the second chain 28 from view. In this configuration the second chain 28 can be open or closed. When the second chain 28 is closed, the two chains 26, 28 are superposed on one another by effect of the tubular shape that the first flap 15 and the third flap 21 assume in this configuration, as schematically illustrated in figure 6.

**[0110]** Note that in this configuration the visible surfaces (i.e. facing towards the outside of the storage volume) of the first 15 and the third flap 21 are the respective first surfaces 15a, 21a.

**[0111]** Figure 2 illustrates the luggage item 1 in a maximum expansion configuration when the first chain 26 is open and the second chain 28 is closed. In this configuration, the internal volume of the luggage 1 is maximum.

**[0112]** As is schematically illustrated, in the configuration of maximum expansion, the second chain 28 is visible.

**[0113]** In this configuration the visible surfaces (i.e. facing towards the outside of the storage volume) of the first 15 and the third flap 21 are the respective second surfaces 15b, 21b.

**[0114]** As is schematically illustrated in figure 2, the second chain 28 comprises a pair of sliders 29 which slide in opposite directions so as to perform the same operation on the second chain 28.

**[0115]** In particular, the two sliders 29 move towards each other along the second chain 28 to close the chain and move away from each other to open the chain.

**[0116]** Two limit stops 33 are also provided on the second chain 28, positioned on a same side of the luggage item 1, the function of which will be made clearer in the following.

**[0117]** To pass from the minimum expansion configuration to the maximum expansion configuration it is necessary to open the first chain 26, disengaging the first teeth 18 from the third teeth 24 by acting on the slider 27 (or sliders 27 when there are two sliders), and closing the second chain 28 (if it is open) as is schematically illustrated in figure 3.

**[0118]** During this operation the third teeth 24 move away from the first teeth 19, enabling the two portions 2, 3 to move away from each other.

**[0119]** To access the contents of the luggage item 1 when the luggage item 1 is in the maximum expansion configuration it is necessary to open the second chain 28, as illustrated in figure 4.

**[0120]** The luggage item 1 is openable in a book-like manner, i.e. the two portions 2, 3 can be rotated with respect to each other about a hinge axis in order for the contents of the luggage item to be accessed.

**[0121]** For this purpose, the luggage item 1 comprises at least a connecting body 34 (illustrated in figure 2) which permanently connects the first portion 2 to the second portion 3.

**[0122]** The connecting body 34 functions as a hinge for the two portions 2, 3.

**[0123]** As the distance separating the two portions 2, 3 of the luggage item 1 depends on the configuration assumed by the luggage item (this distance being minimum in the minimum expansion configuration and maximum in the maximum expansion configuration), the connecting body 34 is configurable between a condition of minimum expansion and a condition of maximum expansion.

**[0124]** In the condition of minimum expansion, the connecting body 34 exerts an action on the two portions 2, 3 of the luggage item 1 which tends to prevent the two portions from moving away by an amount that is greater than the amount in which the luggage item is in the configuration of minimum expansion.

**[0125]** In the condition of maximum expansion, the connecting body 34 expands to move away the two portions 2, 3 of the luggage item by the quantity necessary to cause the luggage item to assume the configuration of maximum expansion.

**[0126]** In the preferred embodiment of the invention, the connecting bodies 34 are two, moved away from each other and positioned on a same side of the luggage item 1.

**[0127]** In particular, each connecting body 34 comprises an elastic portion 35 which enables the connecting body 34 to assume the two above-mentioned conditions.

**[0128]** The connecting bodies 34 are further located

on the same side of the luggage item 1 (understood to be the portion of the luggage item which comprises a lateral wall 6 of the first portion 2 and a lateral wall 9 of the second portion mutually flanked) in which the second chain 28 has the limit stops 33.

**[0129]** The limit stops 33 halt the sliding of the sliders 29 along the second chain 28, preventing the second chain from being completely opened and the two portions 2, 3 of the luggage item 1 from being completely separated from each other.

**[0130]** Between the two limit stops 33 (i.e. in the portion in which the distance between the two limit stops 33 is minimum), the two portions 2, 3 are always joined to each other.

**[0131]** This joining is preferably actuated by the second chain 28, the first flap 15 and the third flap 21 which also extend between the two limit stops 33 (as for example illustrated in figure 2).

**[0132]** For this purpose, the zip assembly 12 is preferably joined to the perimetral edges 8, 11 starting from a point and, after having travelled for the whole extension of the perimetral edges 8, 11, terminating at the starting point.

**[0133]** The starting point and terminating point of the zip assembly 12 are positioned in the portion of perimetral edges 8, 11 comprised between the two limit stops 33 (i.e. in the portion in which the distance between the two limit stops 33 is minimum).

**[0134]** For the purpose of satisfying specific and contingent needs, a person skilled in the art can obviously introduce numerous modifications and variants such as for example closure systems of the zip assembly other than teeth, all of which are contained within the scope of protection defined by the following claims.

## Claims

1. Luggage item comprising:

   a first portion (2) and a second portion (3), opposite to the first portion (2), wherein the first portion (2) and the second portion (3) comprise a respective perimetral edge (8, 11);
   a zip assembly (12) comprising a first half part (13) and a second half part (14);
   said first half part (13) of the zip assembly (12) comprising a first flap (15) having a first (16) and a second end (17) opposite to each other, first teeth (18) being connected to the first end (16) and second teeth (19) being connected to the second end (17), said first half part (13) further comprising a second flap (20) connected to at least one section of said perimetral edge (8) of the first portion (2) of the luggage item and connected to the first flap (15) in a position comprised between the first (16) and the second end (17);
   said second half part (14) of the zip assembly (12) comprising a third flap (21) having a first (22) and a second end (23) opposite to each other, third teeth (24) coupled to said first teeth (18) to form a first chain (26) being connected to the first end (22) of the third flap (21) and fourth teeth (25) coupled to said second teeth (19) to form a second chain (28) being connected to the second end (23) of the third flap (21), said second half part (14) further comprising a fourth flap (30) connected to at least a section of said perimetral edge (11) of the second portion (3) of the luggage item and connected to the third flap (21) in a position comprised between the first (22) and the second end (23).

2. Luggage item according to claim 1, comprising at least one slider (27) acting on said first chain (26) and at least a second slider (29) acting on said second chain (28) to open and close respectively the first (26) and the second chain (28); said luggage item being closed in a minimum expansion configuration when the first chain (26) is closed and being in a maximum expansion configuration when the first chain (26) is open and the second chain (28) is closed.

3. Luggage item according to claim 1 or 2, wherein said first (15) and third flap (21) comprise, respectively, a first (15a, 21a) and a second surface (15b, 21b) opposite to each other; said first (18) and second teeth (19) emerging respectively from the first (15a) and from the second surface (15b) of the first flap (15) and said third (24) and fourth teeth (25) emerging respectively from the first (21a) and from the second surface (21b) of the third flap (21).

4. Luggage item according to any one of the previous claims, wherein said second flap (20) is connected to the first flap (15) in a position closer to the first end (16) than to the second end (17).

5. Luggage item according to any one of the previous claims, wherein said fourth flap (30) is connected to the third flap (21) in a position closer to the first end (22) than to the second end (23).

6. Luggage item according to any one of the previous claims, wherein said first flap (15) is connected to the second flap (20) at a first distance from the first end (16) and wherein said third flap (21) is connected to the fourth flap (30) at a second distance from the first end (22); said first distance being identical to the second distance.

7. Luggage item according to any one of the previous claims, wherein said second (20) and fourth flap (30) comprise respective connecting portions (20a, 30a)

directly connected to the respective perimetral edge (8, 11); said second (20) and fourth flap (30) being connected respectively to the first (15) and to the third flap (21) outside said connecting portions (20a, 30a).

**8.** Luggage item according to any one of the previous claims, wherein the first teeth (18) and the second teeth (19) are applied to the respective free ends of the first flap (15) and wherein the third teeth (24) and the fourth teeth (25) are applied to respective free ends of the third flap (21).

**9.** Luggage item according to any one of the previous claims, wherein the second flap (20) comprises a free end directly connected to the perimetral edge (8) of the first portion (2) of the luggage item and a second end directly connected to the first flap (15) and wherein the fourth flap (30) comprises a free end directly connected to the perimetral edge (11) of the second portion (3) of the luggage item and a second end directly connected to the third flap (21).

**10.** Luggage item according to any one of the previous claims, comprising at least a connecting body (34) acting between the first (2) and the second portion (3) of the luggage item to allow the luggage item to open like a book.

**11.** Luggage item according to claim 10, wherein said connecting body (34) is configurable between a condition of minimum expansion in which it acts on the two portions (2, 3) of the luggage item to keep them in a condition of maximum closeness and a condition of maximum expansion in which it allows the two portions (2, 3) of the luggage item to assume a condition of maximum distance.

**12.** Luggage item according to claim 11, wherein said connecting body (34) comprises an elastic portion (35) to implement the condition of minimum expansion and the condition of maximum expansion.

**13.** Luggage item according to any one of the previous claims, wherein said luggage item is a hard suitcase and said first (2) and second portion (3) are a first and a second shell of said hard suitcase.

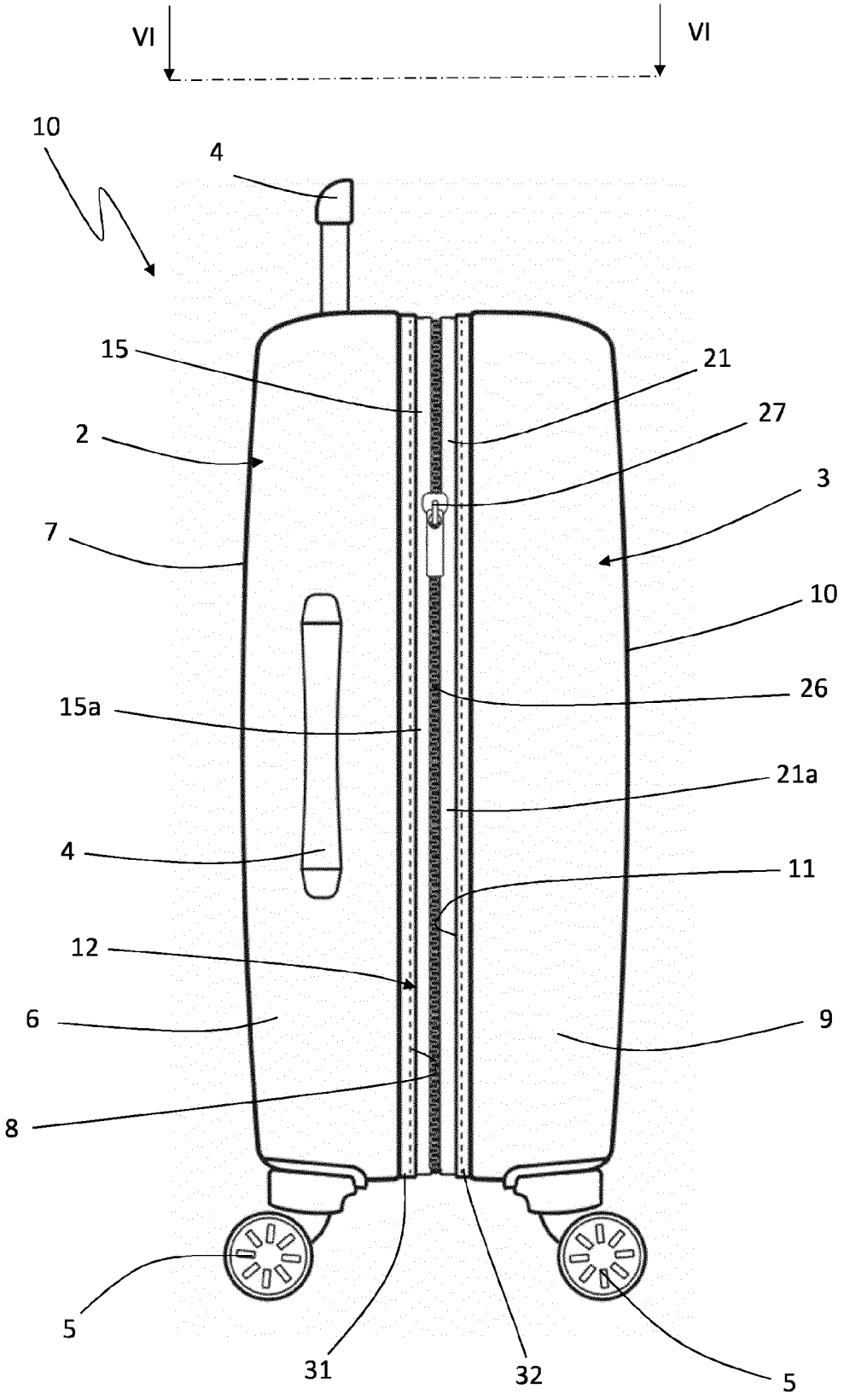


Fig 1

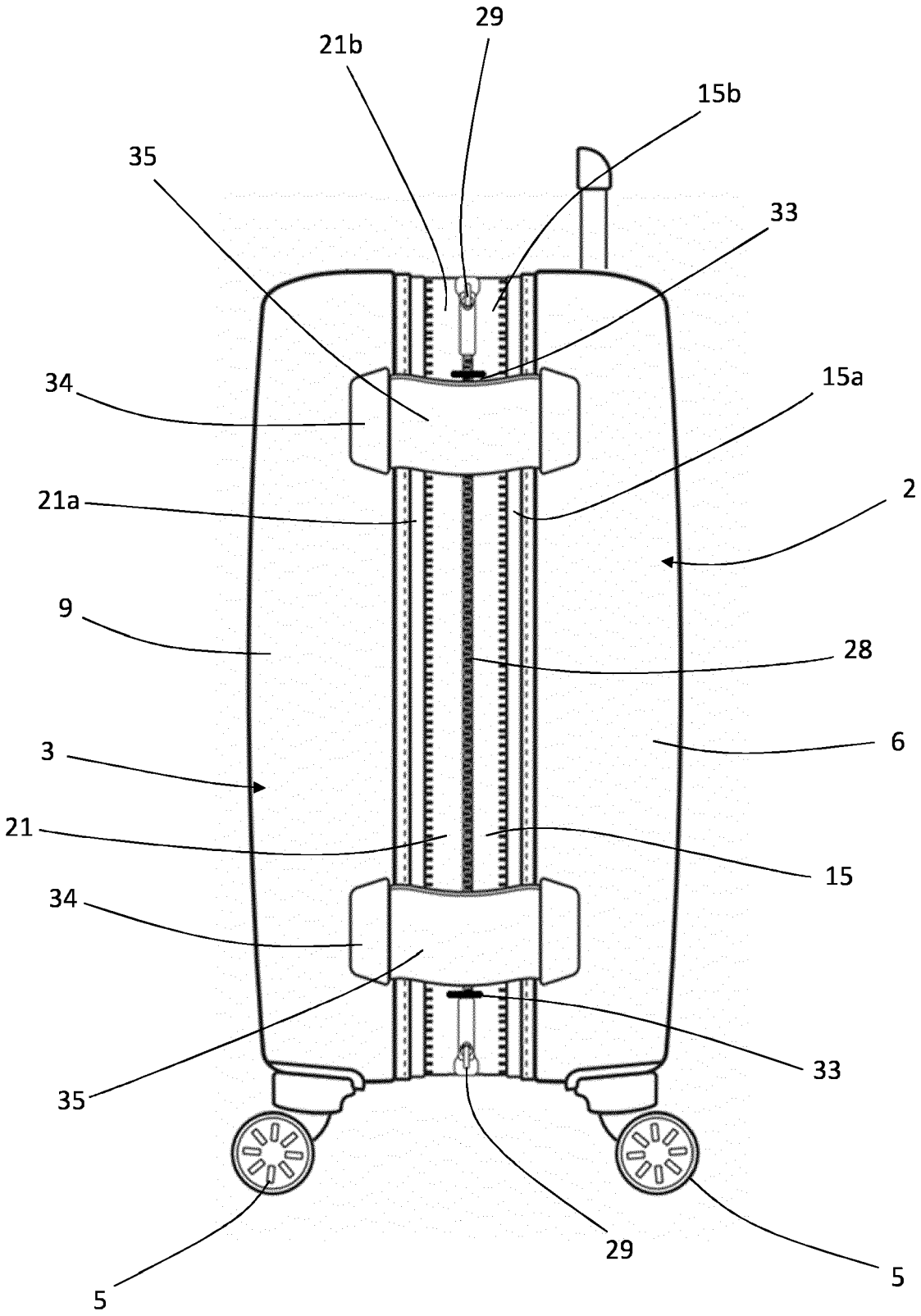


Fig 2

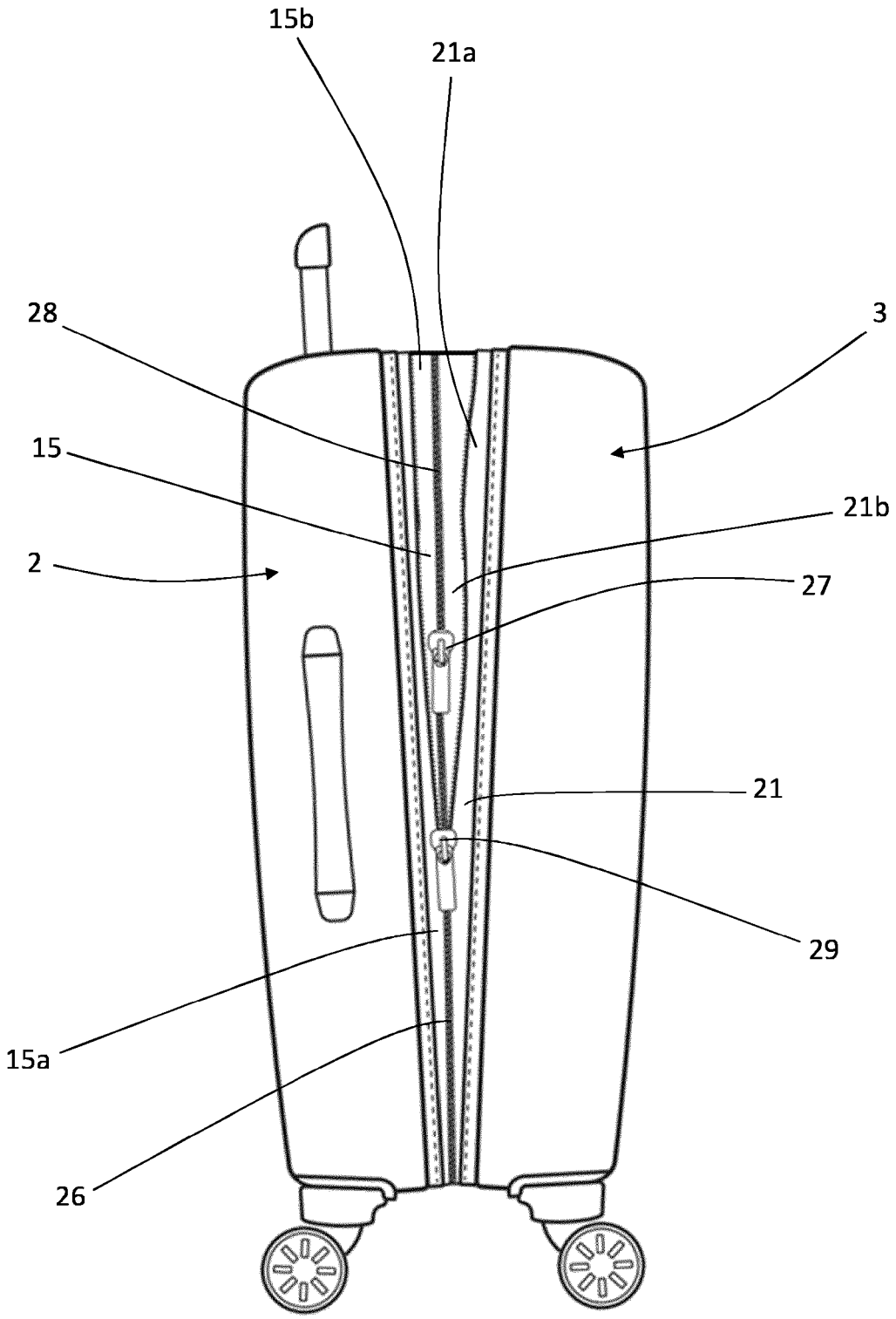


Fig 3

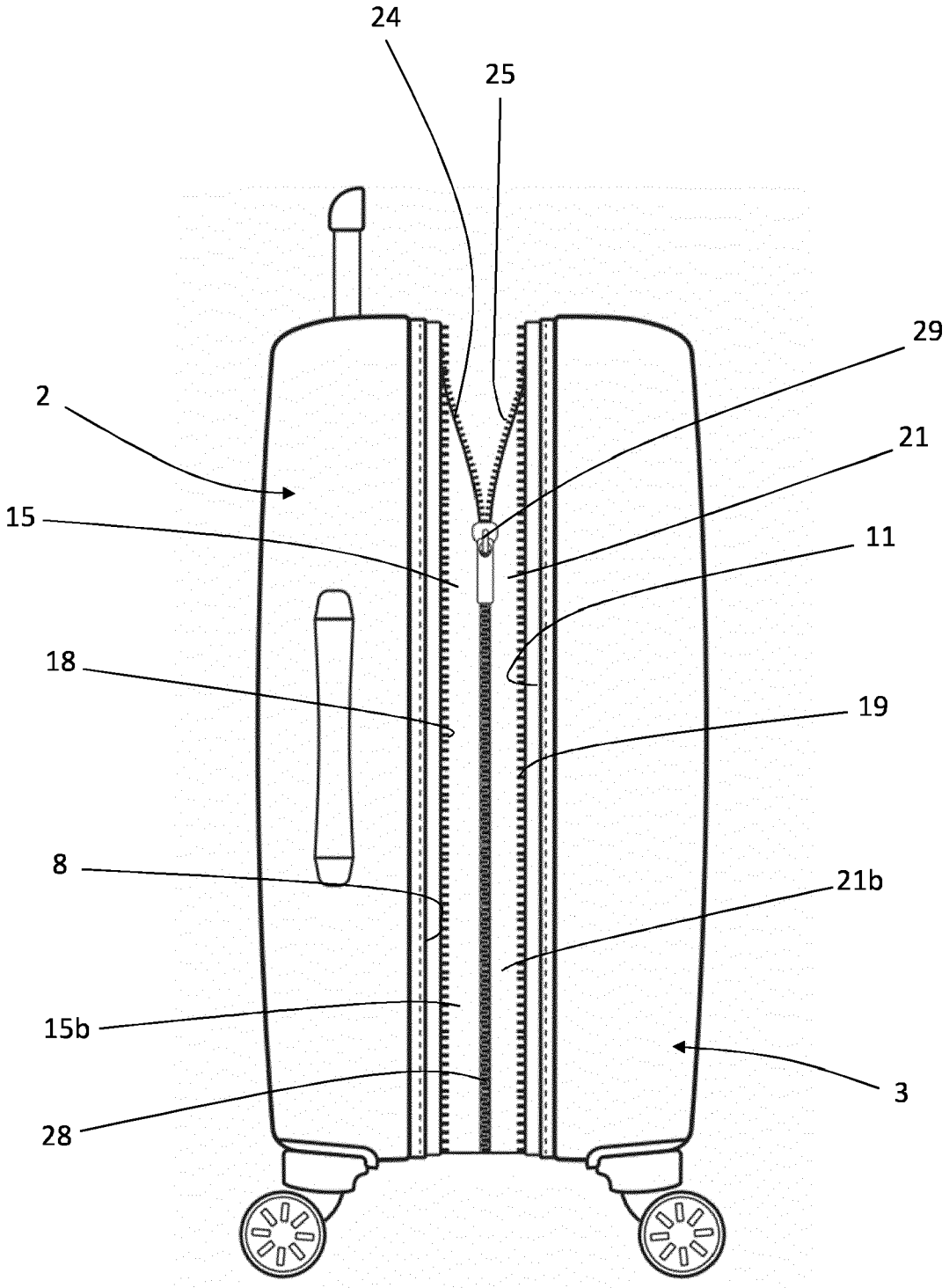


Fig 4

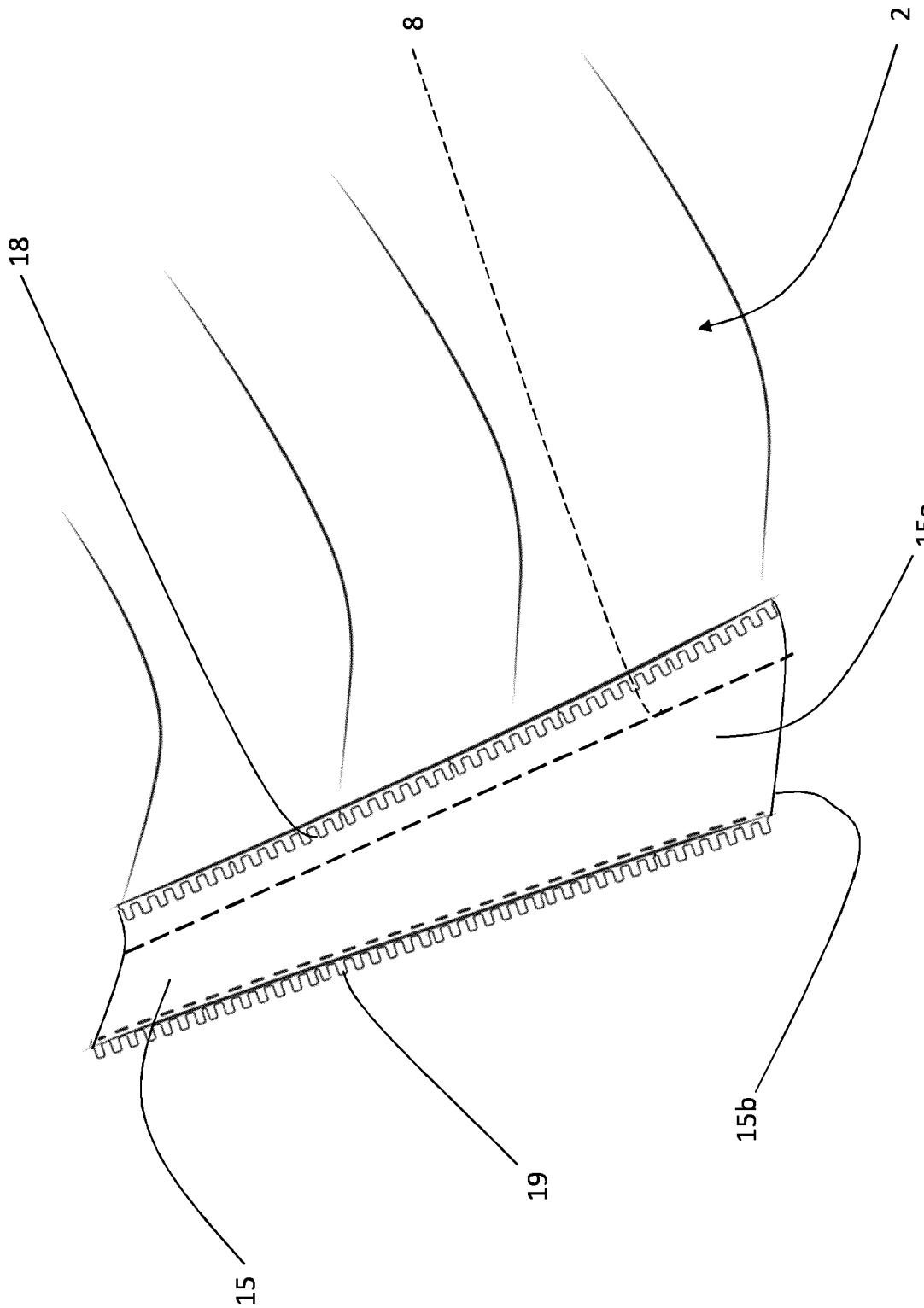


Fig 5

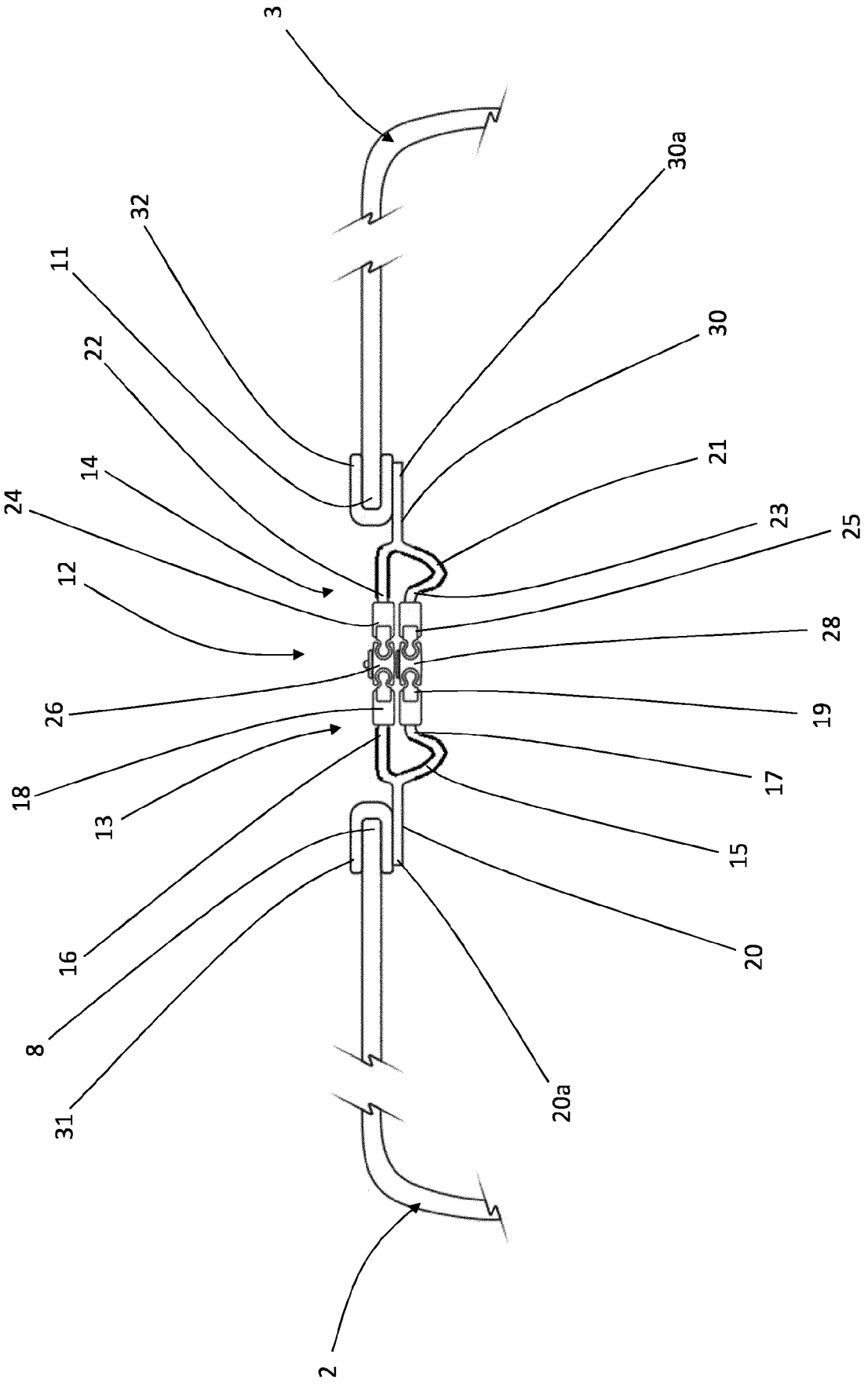


Fig 6

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# EUROPEAN SEARCH REPORT

Application Number
EP 18 20 5244

## 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 | EP 2 710 916 A1 (SAMSONITE IP HOLDINGS SARL [LU]) 26 March 2014 (2014-03-26)<br>* paragraphs [0043] - [0074] *<br>* figures 1-11 *<br>----- | 1-13 | INV.<br>A45C7/00<br>A45C13/10 |

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 | 14 December 2018 | Witkowska-Piela, A |

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## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 18 20 5244

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14-12-2018

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| EP 2710916 A1 | 26-03-2014 | CN 203692786 U | 09-07-2014 |
| | | EP 2710916 A1 | 26-03-2014 |

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