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(54) **BACKPACK FOR A HELMET**

(57) The invention relates to a backpack for a helmet, such as a motorbike helmet, mentioned backpack comprising: straps (10) for transporting the bag on the user's back, a back area (14) of padded material for protecting the user's back when a helmet is being carried in the backpack on the user's back, an inner bag (16) into which

the helmet can be inserted and which is provided with first closure means, such as a zip (24), so that the inner bag (16) can be covered when empty, such that the empty backpack can occupy a flat, aerodynamic configuration when it is being transported on a vehicle, such as a motorbike.

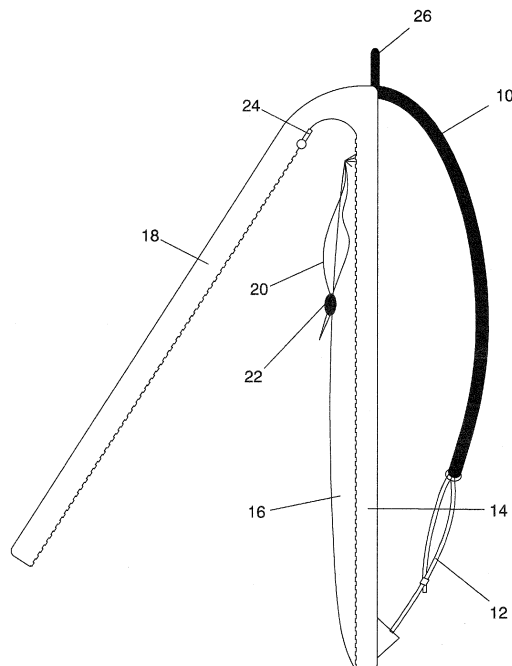


FIG. 2

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Description

OBJECT OF THE INVENTION

[0001] The present invention relates generally to the field of backpacks, and more particularly to a pack specifically suitable for transporting a helmet.

[0002] More particularly, the backpack of the invention is intended to be able to carry a helmet in its operational phase and, moreover, not be a hindrance or downforce when the user carries it empty on its back and circulates on a two wheeled vehicle.

BACKGROUND OF THE INVENTION

[0003] In the Art are widely known, backpacks and other systems for transporting motorcycle helmets or other vehicles helmets when not being used. However, most of the bags intended for this use have the great drawback of being formed by a rigid structure or substantially rigid, with the result that the empty bag takes practically the same space as when it contains a helmet inside.

[0004] This implies evident space and aerodynamic problems because once the user puts on its helmet and places the backpack on its back for riding the vehicle, the size of mentioned pack prevents or greatly complicates someone else can stand behind as a passenger. Furthermore, having that size and being empty usually derivates in a waving movement due to the effect of air, resulting uncomfortable or even turning into a problem for the stability of the vehicle.

[0005] Another solution that can be found in the State of the Art for transporting helmets of this type are the bags. However, bags designed for this purpose are more awkward to transport, as they tend not to hang on the back of the user, and also provide no protection to the helmet.

[0006] An example of a backpack in which could be incorporated a helmet, is the U.S. patent application U.S. 2007/0017947, which discloses a backpack with an expandable area. It is in this case a conventional rucksack that includes a main body with first and second panels acting together to form a kind of expandable compartment configured to receive an object.

[0007] However, mentioned U.S. patent U.S. 2007/0017947, suffers from several problems, such as the complex design and structure, that make it difficult to produce and rises up the cost. In addition, this backpack neither provides an adequate protection to a helmet transported in its expandable compartment, as this would not be covered completely, being prone to damage bumps, scratches, etc.

[0008] Furthermore, although this pack could allow a person to place itself behind the bearer of the pack while driving, for not having an excessive size when folded, it has the drawback of having several parts, some of them loose, which would move by effect of the airflow when the vehicle is in circulation, resulting in a serious nuisance

for both driver and passenger.

[0009] Therefore, there remains a need in the Art for a helmet backpack with simple design, easy production, low economical cost, comfortable and safe for transporting an inserted helmet, and that hanging from the back of the driver does not become a hindrance for him or for someone else behind on the vehicle while driving.

DESCRIPTION OF THE INVENTION

[0010] The backpack helmet of the present invention solves the problems aforementioned while it constitutes an efficient, comfortable and economical alternative.

[0011] Thus, the backpack of the present invention comprises on one hand, and as other conventional backpacks, adjustable straps to be carried in the user's back and a back area to protect the back of the user. And secondly, in order to comply with the functionalities of the present invention:

- an inner bag suitable for the introduction of a helmet inside of it and provided with first closing means to prevent the accidental release of mentioned helmet; and
- an outer flap susceptible to close on the back area covering the inner bag when it is empty by second closing means and forming a flat, uniform and compact structure that minimizes the occupied space and provides adequate aerodynamics configuration. Furthermore, in case of a helmet is introduced into the inner sack, mentioned outer flap is capable of being inserted within the bag so it is not loose or can be as well fastened over mentioned inner bag using third closing means.

DESCRIPTION OF THE DRAWINGS

[0012] To complement the description that is being made and to facilitate understanding of the invention characteristics, the present descriptive memory is accompanied by a set of drawings where, with illustrative and not restrictive character, the following has been represented:

Figure 1 shows a side view of a helmet backpack according to the preferred embodiment of the present invention in closed and empty position.

Figure 2 is a side view similar to figure 1, in a intermediate position where the outer flap is open and the inner bag for the helmet can be seen empty.

Figure 3 is a side view similar to figures 1 and 2, in closed position with a helmet inside the inner bag.

Figure 4 shows binding elements of the helmet backpack according to the preferred embodiment of the present invention for the tail of a motorcycle and a

bag attached to a motorcycle by mentioned binding elements.

Figure 5 shows a detail of the helmet backpack according to the preferred embodiment of the present invention where can be seen the configuration of the adjustment strap ends to avoid whip effect.

Figure 6 shows a rear view of the helmet backpack according to the preferred embodiment of the present invention with a separate pocket suitable to be binded to one of the backpack straps. The right part of the figure shows an enhanced detail of the bonding means between the separate pocket and the backpack strap.

PREFERRED EMBODIMENT OF THE INVENTION

[0013] As used herein, should be understood that the term "vehicle" generally refers, unless otherwise specified, to vehicles which require the use of a protective helmet by the user, such as for example motorcycles, mopeds and similar ones.

[0014] As used herein, the term "helmet" refers to protective helmets for users of a vehicle as defined above.

[0015] Below is described a helmet backpack according to the preferred embodiment of the present invention by referring simultaneously to figures 1, 2 and 3, which respectively show side views of the backpack in closed empty position, open empty and closed with a helmet inside. In these figures is shown that the helmet backpack comprises two straps (10) with adjustment bands (12) to allow carrying the backpack in a conventional use, a back area (14) made of high density padding material to protect the user's back when transporting a helmet inside, an inner bag (16) suitable for the introduction of a helmet inside (not visible in figure 1), and an outer flap (18).

[0016] As seen in figures 2 and 3, the inner bag (16) is provided with a cord (20) with clamping means (22), such as a slipknot or fastening items, as first closing means to prevent the accidental release of a helmet that has been introduced therein. According to other possible embodiments, other potential first closure means may be a zipper, Velcro™ system or similar.

[0017] Therefore, as seen in figure 1, thanks to the present invention backpack when the inner bag (16) contains no helmet, outer flap (18) is closed over the back area (14) by a zip (24) around the periphery of mentioned outer flap (18) as second closing means, covering mentioned inner bag (16). Thus, when the backpack of the present invention is empty, shows a flat and aerodynamic configuration suitable for its transport in a vehicle such as a motorcycle, not disturbing a possible passenger behind.

[0018] When a helmet has been introduced in the inner bag (16), as shown in figure 3, the high density padding material of the back area (14) makes the backpack can be transported comfortably providing an adequate protection to the back of the user: both supporting the helmet load and in case of a possible impact in a fall when the vehicle is running and the pack is empty.

tection to the back of the user: both supporting the helmet load and in case of a possible impact in a fall when the vehicle is running and the pack is empty.

[0019] Moreover, when introducing a helmet in the inner bag (16), as shown in figure 3 and according to a first embodiment of the invention, the outer flap (18) is also introduced inside through the access of this inner bag (16) which is at least same size as the outer flap (18), thereby preventing the flap to wrinkle or remaining in a wrong position that could engage the helmet, etc.

[0020] Thus, the inner bag (16) is left on the exterior of the backpack and is closed by the mentioned cord (20) with clamping means (22) keeping within the helmet and outer flap (18).

[0021] Furthermore, as shown in figures 1 to 3, the helmet backpack according to the preferred embodiment of the present invention also comprises a handle (26) to allow transport of mentioned backpack as a bag.

[0022] Additionally, according to a preferred embodiment of the present invention shown in figure 4, the helmet backpack further comprises lateral fixing points (28) (also visible in figure 5) in which fasteners (30) can be engaged (such as elastic strings, for example). These elements allow the user to attach the backpack to the tail of a motorcycle and use it as a suitcase. Also, preferably the backpack includes a pocket, internal or external, dedicated to hold mentioned fastening elements (30) when its use is not required.

[0023] Furthermore, as clearly seen in figure 5, in the backpack according to the preferred embodiment of the invention, the endings of the adjustment bands (12) of the straps (10) are fixed to themselves through any means suitable for this purpose, such as a tight rubber (38), or plastic ring or similar. Thus is effectively and conveniently avoided the whip effect, common in these cases when a user carries the backpack on his back while riding a high speed motorcycle.

[0024] Figure 6 shows yet a further feature of this helmet backpack according to a preferred embodiment of the invention. In this figure 6 is shown an independent pocket (32) attached to a strap (10) of the backpack. This pocket (32) is suitable for storing items such as documentation, a garage remote control device, etc., providing a quick and easy access to them even when the user is wearing gloves, for example. In the right part of figure 6 is shown an enlarged detail of the releasable attachment means which serve for joining, releasably, mentioned pocket (32) to the strap (10). It is noted that this preferred embodiment mentioned attachment means consist of a removable combination of Velcro™ area (34) and two push buttons (36), although will be apparent that in other embodiments of the invention may be provided different releasable attachment means that serve the same function.

[0025] Although the backpack of the present invention has been described with reference to specific and preferred embodiments of it, the skilled in the Art will easily understand that several variations may be applied to the

embodiments described without departing from the spirit and scope of the invention. Also, some backpack embodiments of the present invention can be designed not presenting some of the features described above, or designed with different combinations of the described above.

[0026] For example, when introducing a helmet into the inner bag (16) and closing it by mentioned first closing means according to an embodiment of the invention, is also allowed closing the outer flap (18) of the backpack over the inside bag via third fastening means. Thus the outer flap (18) covers the inner bag and so the helmet stored in it, providing additional protection to the helmet. In this case, mentioned third closure means may be equal (if they are compatible) or different from the second closure means that close the outer flap (18) on the back area (14) when there is no helmet in the inner bag. For example, such third locking means can be selected from a group consisting of Velcro™ system, cords with hooks, adjusting straps and similar.

[0027] On the other hand, although mentioned second closure means like a zipper along the periphery of the outer tab (18) have been described, can also be used, for example, a Velcro™ system, a system of hooks, straps and similar adjustments.

[0028] Furthermore, the material of the padded back area (14) is preferably perforated to allow adequate transpiration of the back of a user. And, according to another preferred embodiment of the invention, the straps (10) also comprise high density padded material, same or different from padding of the back area (14).

[0029] Moreover, according to another embodiment of the present invention, straps (10) have a strip for joining together on the user's chest, thus improving adjustment to the wearer of the backpack.

[0030] Finally, the inner bag (16) and / or the outer flap (18), can be manufactured in a waterproof material to protect the helmet from rain.

Claims

1. Helmet backpack comprising adjustable straps (10) to the user's body and a back area (14), **characterized by** further comprising:
 - An inner bag (16) for the introduction of a helmet, provided with first means closure to prevent accidental release of this helmet; and
 - An outer flap (18) capable of closing over the back area (14) thanks to second closing means, covering the inner bag (16) when it is empty forming a flat, uniform and compact structure.
2. Helmet backpack according to claim 1, wherein the size of the inner bag's (16) access has at least the same size as the outer flap (18) so that, when there is a helmet inside mentioned inner bag (16), this flap

can also be introduced into the inner bag (16) and not remain loose.

3. Helmet backpack according to claim 1, wherein the outer flap (18) comprises third means for locking, so when there is a helmet within the inner bag (16), this flap can be attached to the back area over mentioned inner bag (16).
4. Helmet backpack according to claim 3, wherein third closing means consist of a Velcro™ system, cords with hooks or adjusting straps.
5. Helmet backpack according to claim 1, **characterized by** comprising two straps (10) with adjustment bands (12).
6. Helmet backpack according to claim 5, wherein the straps (10) comprise a joining strip at the chest of the user, in order to improve adjustment to the user's body.
7. Helmet backpack according to any of claims 5 or 6, wherein the ends of the adjustment bands (12) of the straps (10) are fixed to themselves to avoid whip effect when driving at high speed.
8. Helmet backpack according to claim 1, wherein the first closing means of the inner bag (16) consist of a cord (20) with a fastening item (22).
9. Helmet backpack according to claim 1, wherein the second means for closing the outer flap (18) consist of a zip (24) by the outer periphery of mentioned flap (18).
10. Helmet backpack according to claim 1, wherein the second means for closing the outer flap (18) consist of Velcro™ system, a system of hooks or adjusting straps by the outer periphery of mentioned flap (18).
11. Helmet backpack according to claim 1, **characterized by** comprising a handle (26) to allow transport of mentioned backpack as a bag.
12. Helmet backpack according to claim 1, **characterized by** comprising lateral fixing points (28) to attach fastening elements (30).
13. Helmet backpack according to any of claims 5, 6 or 7, **characterized by** comprising a pocket (32) removably attached to one of the backpack straps (10).
14. Helmet backpack according to claim 13, wherein the pocket (32) joins releasably to the one of the straps (10) thanks to an area of Velcro™ (34) and two push buttons (36).

15. Helmet backpack according to claim 1, wherein the area of the back (14) is made of high density padding material.
16. Helmet backpack according to claim 15, wherein the back area (14) padded material is perforated to allow the proper back's perspiration of the user. 5
17. Helmet backpack according to claim 1, wherein the inner bag (16) and / or the outer flap (18), are manufactured in a waterproof material to protect the helmet from rain. 10

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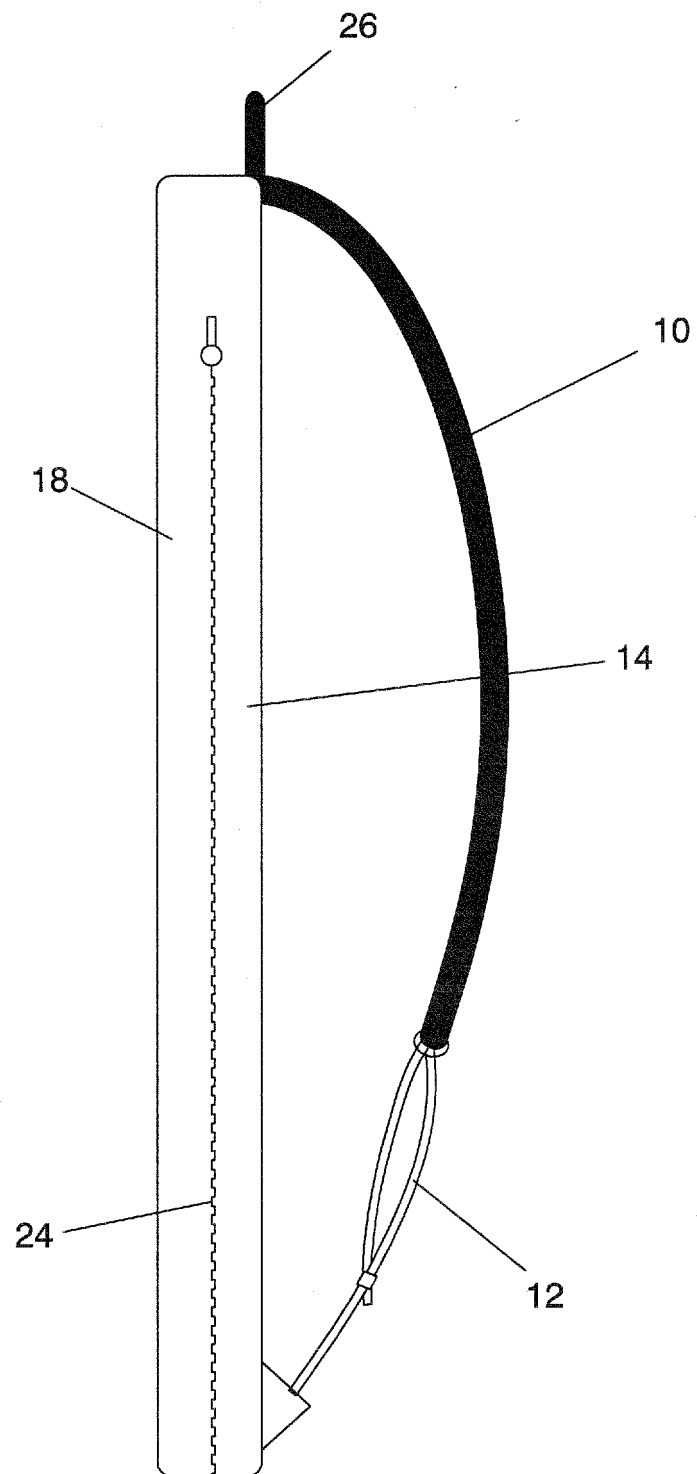


FIG. 1

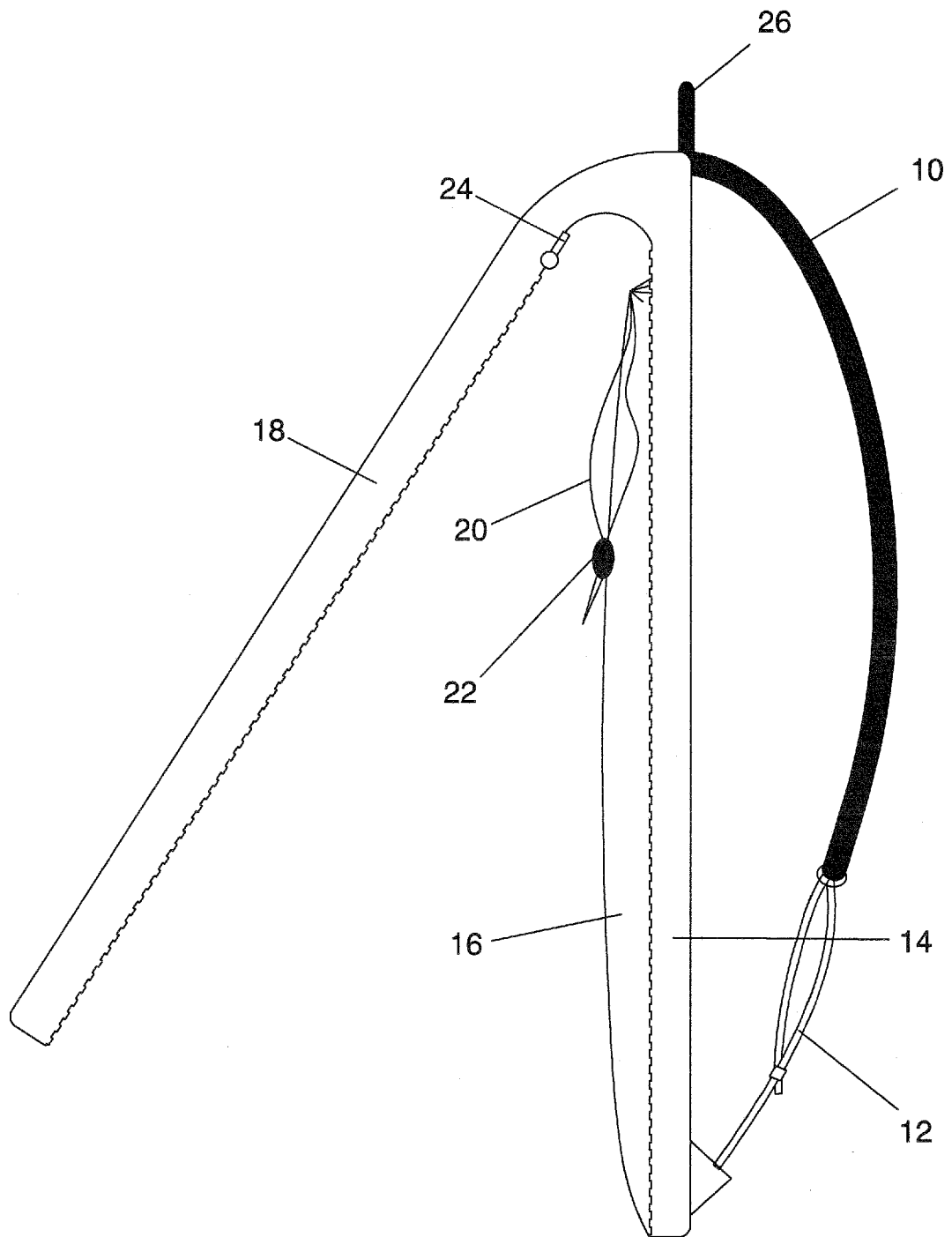


FIG. 2

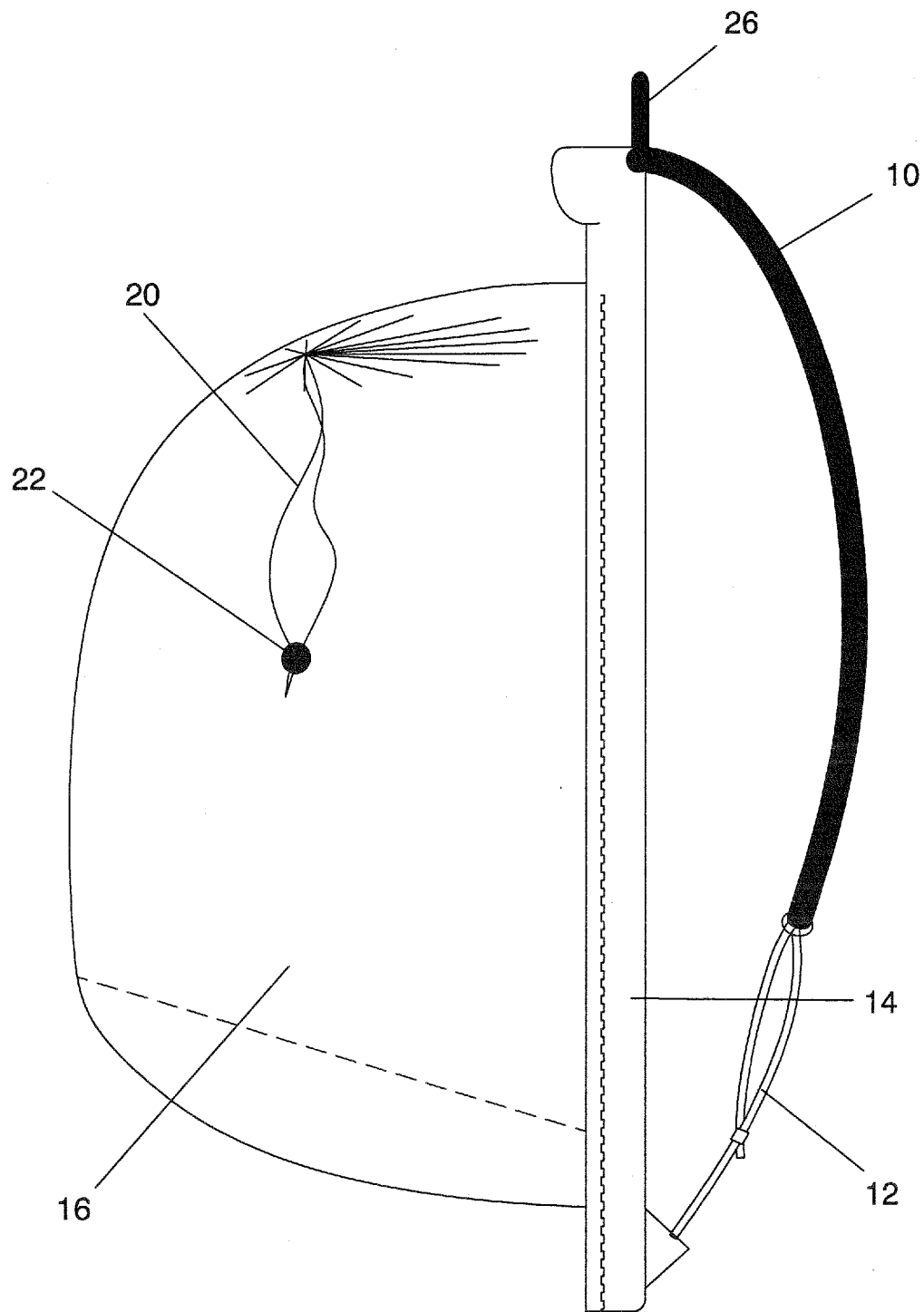


FIG. 3

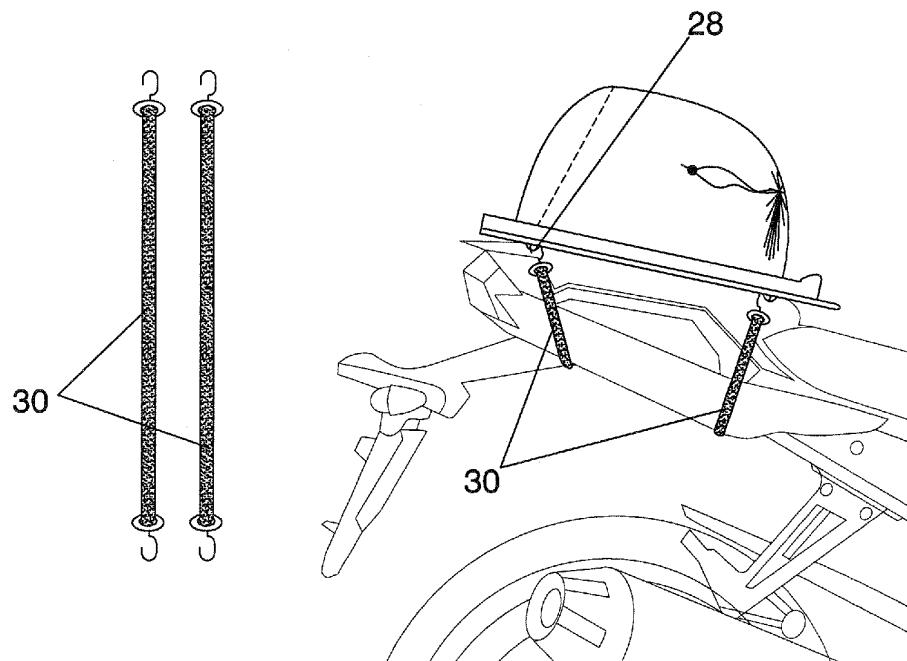


FIG. 4

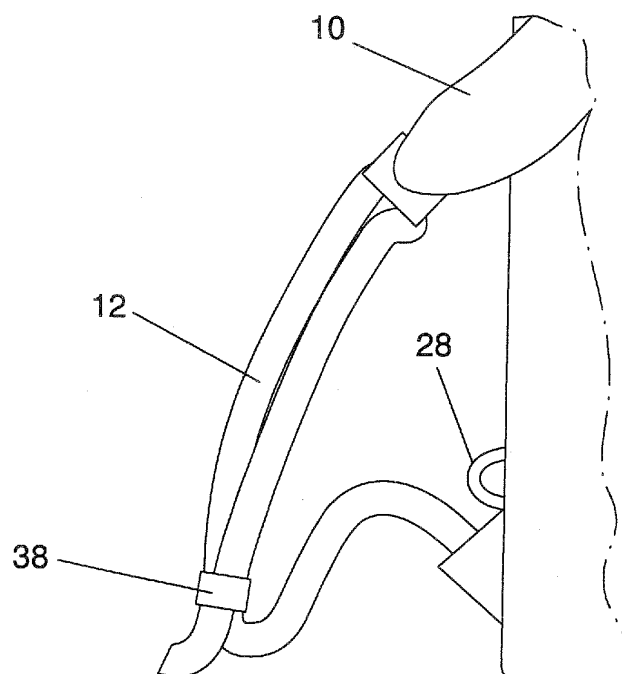


FIG. 5

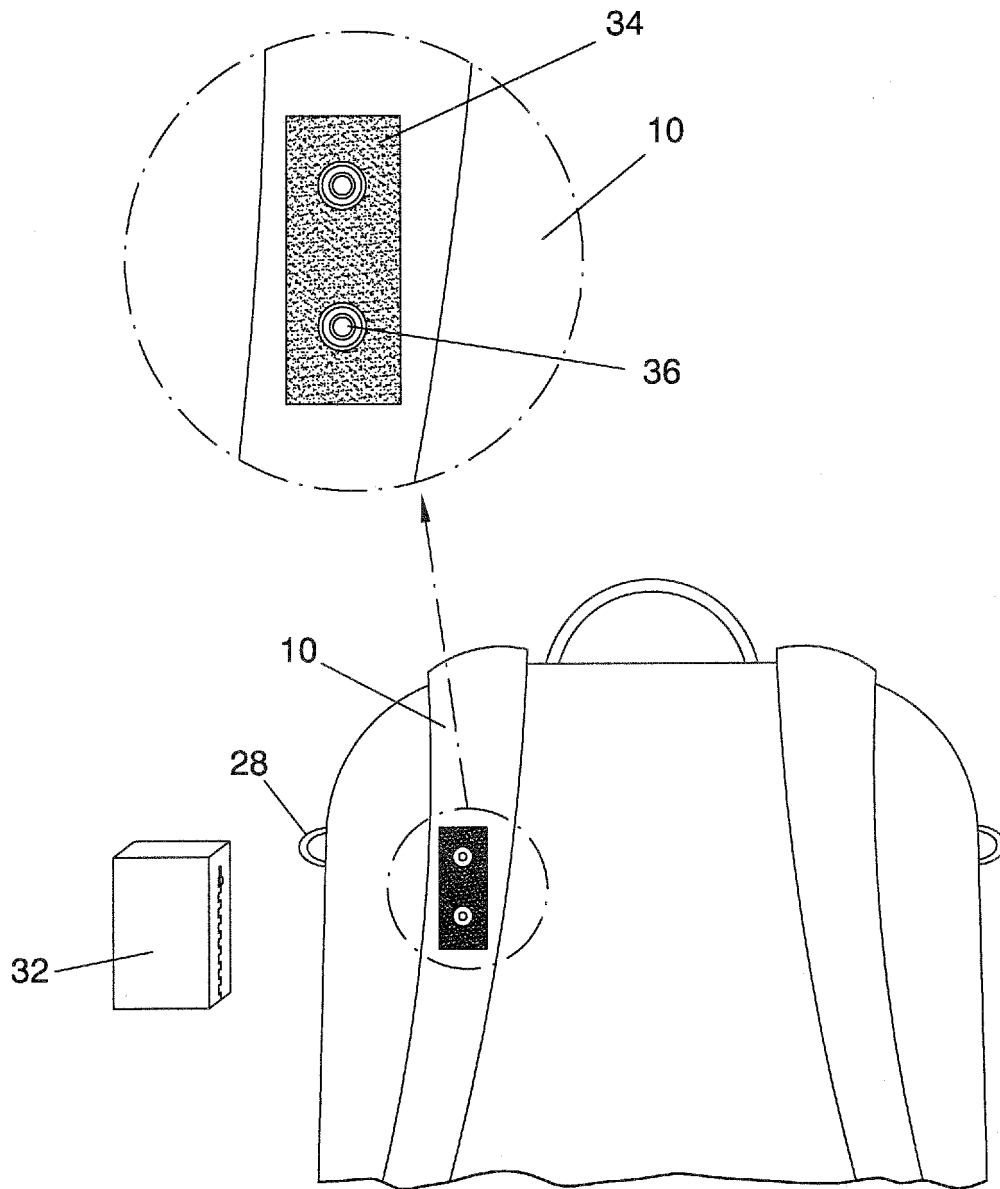


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/ES2011/070886

A. CLASSIFICATION OF SUBJECT MATTER		
A45F3/04 (2006.01) A42B3/00 (2006.01) According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) A45F, A42B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EPODOC, INVENES		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 6179175 B1 (PAINTER BRITA L) 30/01/2001, column 3, line 32 - column 4, line 6; figure 5A.	5-6
A	US 2009294500 A1 (BROWN KIRK ET AL.) 03/12/2009, paragraph [24]; figure 2.	5-7
A	US 2007210129 A1 (FENG CHI-FENG ET AL.) 13/09/2007, paragraphs [24 - 25]; figures 2 - 3.	13-14
A	US 2007145090 A1 (HSU SONG-TEH) 28/06/2007, paragraphs [14 - 17]; figures.	15-16
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance. "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure use, exhibition, or other means. "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 16/04/2012		Date of mailing of the international search report (24/04/2012)
Name and mailing address of the ISA/ OFICINA ESPAÑOLA DE PATENTES Y MARCAS Paseo de la Castellana, 75 - 28071 Madrid (España) Facsimile No.: 91 349 53 04		Authorized officer J. Angoloti Benavides Telephone No. 91 3495330

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INTERNATIONAL SEARCH REPORT

International application No.
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C (continuation).		DOCUMENTS CONSIDERED TO BE RELEVANT
Category *	Citation of documents, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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Information on patent family members

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