

(19)



(11)

EP 3 127 452 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
08.02.2017 Bulletin 2017/06

(51) Int Cl.:
A45F 3/04 (2006.01)

(21) Application number: **16181111.2**

(22) Date of filing: **25.07.2016**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME
Designated Validation States:
MA MD

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(30) Priority: **24.07.2015 US 201514808832**

(54) **BACKPACK COMPRISING MEANS FOR PREVENTING UNAUTHORIZED ACCESS TO THE CONTENTS OF THE BACKPACK**

(57) The invention deals with a backpack (102) comprising:

- a mount panel (104), an exposed panel (108), a base panel (110), a pair of side panels (106a, 106b), and a cavity formed between the panels,
- at least one mount fastener (112) disposed on the mount panel, and configured to open and close for regulating

access to the cavity of the backpack,

- at least one decoy exposed fastener (114) disposed on the exposed panel and configured to be visible from the exposed panel, wherein the decoy exposed fastener comprises a trigger,
- an alarm device (116) configured to transmit an alarm signal when the trigger is manipulated.

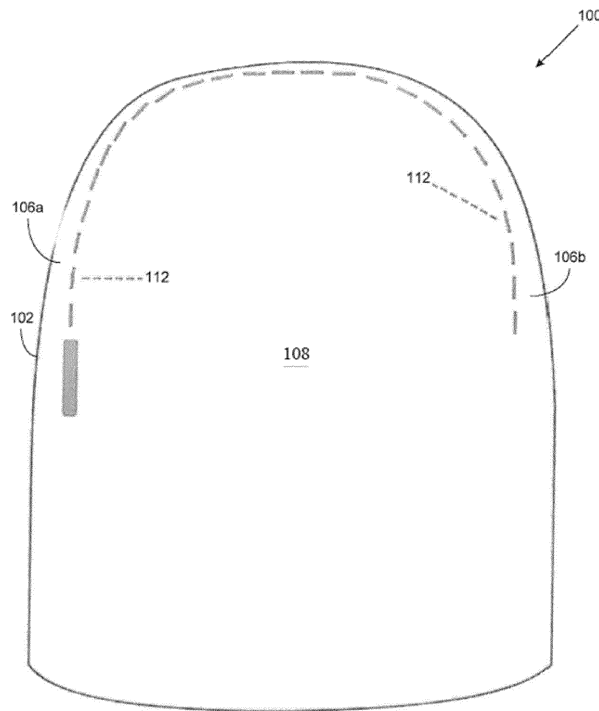


FIG. 1

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Description

TECHNICAL FIELD OF THE INVENTION

[0001] The present invention is directed to a backpack comprising means that helps prevent unauthorized access to the contents of the backpack.

STATE OF THE ART

[0002] Backpacks are usually worn by travelers, students, hikers, etc., and are usually held in position by a pair of vertically oriented straps passing around the shoulders of the wearer. The free ends of each strap are usually joined together by a buckle, so that the length of each strap can be adjusted and the back pack rests comfortably upon the back of the wearer. Usually, zippers and similar fastening mechanisms enable access to the interior of the backpack.

[0003] However, the zippers are faced away from the wearer, and thus are easily accessible by thieves and other unauthorized people, even while the backpack is mounted on the wearer.

SUMMARY OF THE INVENTION

[0004] One objective of the present invention is to provide a backpack that protects against unauthorized manipulation of the fasteners, zippers, flaps, and openings in the backpack.

[0005] Another objective of the present invention is to provide a mount fastener, such as a zipper, that is not accessible or visible while the backpack is adorned on the back of a wearer.

[0006] Another objective of the present invention is to provide a decoy exposed fastener, such as a zipper, that looks like a real zipper, but is in fact a decoy and does not provide access to the cavity in the backpack.

[0007] Yet another objective of the present invention is to provide a speaker on the backpack that emits a loud audible signal when the trigger is engaged through unauthorized manipulation of the decoy exposed fastener.

[0008] Yet another objective of the present invention is to provide a transmitter that wirelessly emits a silent signal to the wearer and/or remote receiver to indicate unauthorized manipulation of the decoy exposed fastener.

[0009] Yet another objective of the present invention is to provide an inexpensive to manufacture backpack that stores items and protects against unauthorized manipulation by unauthorized users.

[0010] Yet another objective of the present invention is to provide a backpack security system that is easy to use.

[0011] Therefore, the invention provides a backpack comprising:

- a mount panel, an exposed panel, a base panel, a

pair of side panels, and a cavity formed between the panels,

- at least one mount fastener disposed on the mount panel, and configured to open and close for regulating access to the cavity of the backpack,
- at least one decoy exposed fastener disposed on the exposed panel and configured to be visible from the exposed panel, wherein the decoy exposed fastener comprises a trigger,
- an alarm device configured to transmit an alarm signal when the trigger is manipulated.

[0012] Since the decoy fastener is exposed, a thief is likely to manipulate its trigger rather than manipulating the mount faster. The alarm device then transmits the alarm signal; this signal helps the wearer escape the thief. Besides, the decoy fastener does not give access to the cavity of the backpack. Therefore, the thief cannot steal the contents of the backpack.

[0013] In an embodiment, the alarm signal is audible, such as a horn, a beep, or a human voice recording. In this manner, the wearer, the unauthorized user, and surrounding persons are audibly made aware of the unauthorized manipulation of the decoy exposed fastener.

[0014] Unfortunately, this may jeopardize the safety of the wearer. Thus, in another embodiment, the alarm signal is not audible and silently transmitted to the wearer and/or a remote receiver. The silent signal is not apparent to the unauthorized user. In this manner, the wearer can escape the situation without alerting the unauthorized user that the theft or unauthorized access was known. Also, a third party can be alerted, so as to apprehend the unauthorized user more effectively. The silent signal may include, without limitation, a text, a message, a phone call, and a vibration. The transmitter may include, without limitation, Bluetooth, Wi-Fi, and satellite.

[0015] In some embodiments, the mount panel of the backpack may be mounted on the back of a wearer through a pair of shoulder straps. This permits to conceal the mount fastener and restrict its access when the wearer wears the backpack. Thus, a thief is surely tempted to manipulate the decoy fastener and trigger the alarm device, rather than manipulating the mount fastener which is concealed between the mount panel and the back of the wearer.

[0016] In some embodiments, the mount fastener may include, without limitation, a zipper, a zip, a fly, and a zip fastener. In one embodiment, the at least one mount fastener is disposed on the mount panel. The mount fastener may be opened and closed to access the contents in the cavity of the backpack. The backpack relies on the interaction between the mount panel of the backpack and the back of the wearer to conceal and restrict access to the at least one mount fastener.

[0017] In one embodiment, the trigger operatively connects to a speaker on the backpack. The speaker emits an audible signal when the trigger is manipulated.

[0018] In one alternative embodiment, at least one aux-

iliary fastener may be used to regulate access to the cavity of the backpack. The auxiliary fastener may include a zipper near the base panel and the mount panel.

DESCRIPTION OF DRAWINGS

[0019] These and other features, aspects, and advantages of the present invention will become better understood with regard to the following description, appended claims, and drawings where:

FIG. 1 is a perspective view of an exemplary backpack, showing the mount panel with an exemplary mount fastener; and

FIG. 2 is a perspective view of the backpack, showing the exposed panel with an exemplary decoy exposed fastener having an exemplary trigger that actuates an alarm portion.

DETAILED DESCRIPTION OF THE INVENTION

[0020] The present invention is directed to a backpack security system 100 that helps prevent unauthorized access to the contents of a backpack 102 through the use of at least one mount fastener 112 that is concealed and inaccessible while the backpack 102 is mounted, and at least one decoy exposed fastener 114 that is visible and actuates an alert signal when manipulated by an unauthorized user. The mount fastener 112 positions between a wearer and the backpack 102, such that access to the mount fastener 112 is not visible and inaccessible while mounted to the back of the wearer. The decoy exposed fastener 114 operatively connects to an alarm device 116.

[0021] The alarm device 116 is operatively connected to the decoy exposed fastener 114, such that unauthorized manipulation of the decoy exposed fastener 114 triggers an alert signal. The alarm device 116 transmits both audible signals and wireless silent signals to alert to unauthorized manipulation of the backpack 102. The audible signal is transmitted when the decoy exposed fastener 114 is manipulated. The silent signal is wirelessly transmitted to a wearer and/or a remote receiver when the decoy exposed fastener 114 is manipulated.

[0022] The audible signal is configured to alert a wearer with the mounted backpack 102 and an unauthorized user who is manipulating the backpack 102 to the known manipulation. The silent signal alerts the wearer and a remote receiver to the known manipulation. Through the silent signal, the unauthorized user is not aware that an alert signal has been transmitted or that it is known that the backpack 102 is being manipulated.

[0023] In addition to providing the alerts as a security feature, the backpack 102 security system 100 further utilizes visual deception and concealment of at least one mount fastener 112 that positions between a wearer and the fasteners. The mount fastener 112 is a real fastening mechanism that regulates access to the backpack 102.

However, when mounted by the wearer, access to the mount fastener 112 is not visible or inaccessible, as it is sandwiched between the back of the wearer and the mount panel 104. This forms a visual deception feature to the security. Further, the storage, carrying, and mounting functions of the backpack 102 are not affected by the security functions.

[0024] The backpack security system 100, hereafter, "system 100", provides a backpack 102 that is known in the art to be mounted on the back of a wearer for carrying a variety of items. The backpack 102 may be flexible, so as to contain at least one item. The item may include, without limitation, a laptop, books, tools, instruments, and hygiene products. Suitable materials for the backpack 102 may include, without limitation, canvas, leather, polyurethane coated nylon, flexible polymers, and a nonwoven material. The backpack 102 may also be waterproof.

[0025] As illustrated in FIG. 1, the backpack 102 is defined by a mount panel 104, an exposed panel 108, a base panel 110, and a pair of side panels 106a, 106b that form the general shape of the backpack 102. In one embodiment, a pair of shoulder straps 120 enable the backpack 102 to be mounted onto the back of the wearer. The shoulder straps 120 may include free ends that are usually joined together by a buckle, so that the length of each strap can be adjusted and the backpack 102 rests comfortably upon the back of the wearer.

[0026] While mounted with the shoulder straps 120, the mount panel 104 engages the back of the wearer, and the exposed panel 108 facers away from the wearer. Thus, the backpack 102 is adorned, such that the mount panel 104 engages the back of the wearer and is not visible or accessible when adorned, and the exposed panel 108 is both visible and accessible from behind the wearer.

[0027] In some embodiments, the backpack 102 utilizes at least one mount fastener 112 to access the contents in the cavity of the backpack 102. In some embodiments, the mount fastener 112 may include, without limitation, a zipper, a zip, a fly, and a zip fastener. Though in other embodiments, the mount fastener 112 further includes, without limitation, a snap, a buckle, a lock, a latch, a pin, a tack, a staple, a sew, and a stitch. In any case, the mount fastener 112 enables access and closure of the backpack 102.

[0028] In one embodiment, the at least one mount fastener 112 is disposed on the mount panel 104. The mount fastener 112 may be oriented along the length of the mount panel 104, across the mount panel 104, or diagonally on the mount panel 104. The mount fastener 112 may be opened and closed to access the contents in the cavity of the backpack 102. In one exemplary use, the at least one mount fastener 112, encircles the mount panel 104 in a horizontal, or vertical direction, and is opened to provide access to the cavity of the backpack 102.

[0029] As referenced in FIG. 1, the mount fastener 112 is a zipper with a tab and a plurality of teeth. The backpack 102 relies on the interaction between the mount panel

104 of the backpack 102 and the back of the wearer to conceal and restrict access to the at least one mount fastener 112. In this manner, an unauthorized user cannot easily see or access the mount fastener 112 while the backpack 102 is mounted on the back of the wearer.

[0030] Looking now at FIG. 2, the exposed panel 108 of the backpack 102 further includes at least one decoy exposed fastener 114. In one embodiment, the decoy exposed fastener 114 is a decoy fastener that resembles a zipper, and specifically the tab and the teeth of a zipper. However, the decoy exposed fastener 114 does not enable access to the cavity of the backpack 102.

[0031] The decoy exposed fastener 114 is operatively connected to an alarm device 116, such that unauthorized manipulation of the decoy exposed fastener 114 actuates an alert to such. The alarm device 116 comprises a trigger. The trigger is actuated when the decoy exposed fastener 114 is manipulated in an unauthorized manner. In one embodiment, the trigger includes a button, a pressure sensor, or other triggering mechanism that can be configured to actuate the alarm device 116 at a predetermined threshold when the decoy exposed fastener 114 is manipulated.

[0032] In one embodiment, the trigger operatively connects to a speaker on the backpack 102. The speaker emits an audible signal when the trigger is actuated. In this manner, the wearer, the unauthorized user, and surrounding persons are audibly made aware of the unauthorized manipulation of the decoy exposed fastener 114. The audible signal may include, without limitation, a siren, a beep, a human voice, a light, and a ring tone.

[0033] In another embodiment, the trigger operatively connects to a transmitter. In operation, when the decoy exposed fastener 114 is manipulated by the unauthorized person, the trigger actuates the transmitter to wirelessly transmit a silent signal to the wearer and/or to a remote receiver. However, the silent signal is not audible to the unauthorized user, only to the wearer with the mounted backpack 102 and the remote receiver. In this manner, the unauthorized user is not aware that an alert has been transmitted or that the wearer is aware of the unauthorized manipulation of the decoy exposed fastener 114.

[0034] Those skilled in the art will recognize that the silent signal enables the wearer with the mounted backpack 102 to move away from the unauthorized user without alerting the unauthorized user about the alert. The remote receiver may include a police station, a parent, and a security organization. The wearer and the remote receiver may be in communication with each other in regards to the unauthorized manipulation of the backpack 102. The silent signal may include, without limitation, a text, a message, a phone call, and a vibration. The transmitter may include, without limitation, Bluetooth, Wi-Fi, and satellite.

[0035] In one alternative embodiment, the backpack 102 further includes at least one auxiliary fastener 118 that is used to regulate access to the cavity of the backpack 102. The auxiliary fastener 118 may include a zipper

near the base panel 110 and the mount panel 104. The auxiliary fastener 118 may provide access to the cavity of the backpack 102, and specifically for less important items.

[0036] While the inventor's above description contains many specificities, these should not be construed as limitations on the scope, but rather as an exemplification of several preferred embodiments thereof. Many other variations are possible. For example, the alarm device transmits the silent signal to a police station only. Accordingly, the scope should be determined not by the embodiments illustrated, but by the appended claims and their legal equivalents.

Claims

1. A backpack (102) comprising:

- a mount panel (104), an exposed panel (108), a base panel (110), a pair of side panels (106a, 106b), and a cavity formed between the panels,
- at least one mount fastener (112) disposed on the mount panel, and configured to open and close for regulating access to the cavity of the backpack,
- at least one decoy exposed fastener (114) disposed on the exposed panel and configured to be visible from the exposed panel, wherein the decoy exposed fastener comprises a trigger,
- an alarm device (116) configured to transmit an alarm signal when the trigger is manipulated.

2. The backpack according to claim 1, wherein the mount panel (104) of the backpack is configured to be mounted on the back of a wearer through a pair of shoulder straps.

3. The backpack according to any of the preceding claims, wherein the mount fastener (112) is disposed between the back of the wearer and the mount panel, while the backpack is mounted.

4. The backpack according to any of the preceding claims, wherein the mount fastener (112) is an operable zipper.

5. The backpack according to any of the preceding claims, wherein the decoy exposed fastener (114) is a decoy zipper.

6. The backpack according to any of the preceding claims, wherein the decoy exposed fastener (114) comprises a tab and a plurality of teeth.

7. The backpack according to the preceding claim, wherein the trigger is integrated into the tab.

8. The backpack according to any of the preceding claims, wherein the alarm signal is audible.
9. The system according to the preceding claim, wherein the audible signal includes at least one member selected from the group consisting of: a siren, a beep, a human voice, a light, and a ring tone. 5
10. The system according to any of the claims 1 to 7, wherein the alarm device (116) is configured to transmit a silent signal to a wearer and/or a remote receiver. 10
11. The system according to the preceding claim, wherein the alarm device comprises a transmitter for transmitting the signal, wherein the transmitter includes at least one member selected from the group consisting of: Bluetooth, Wi-Fi, and satellite transmitters. 15

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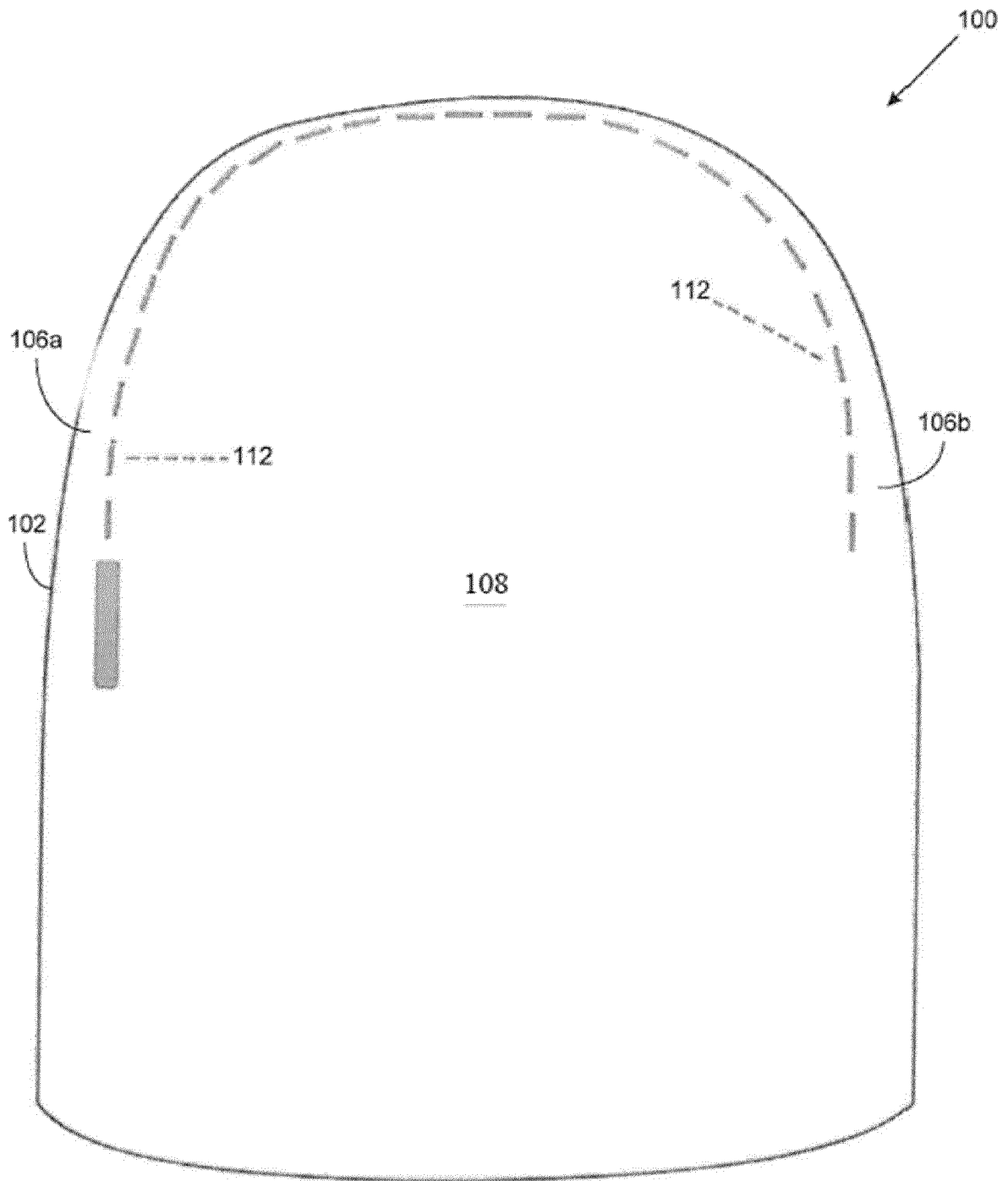


FIG. 1

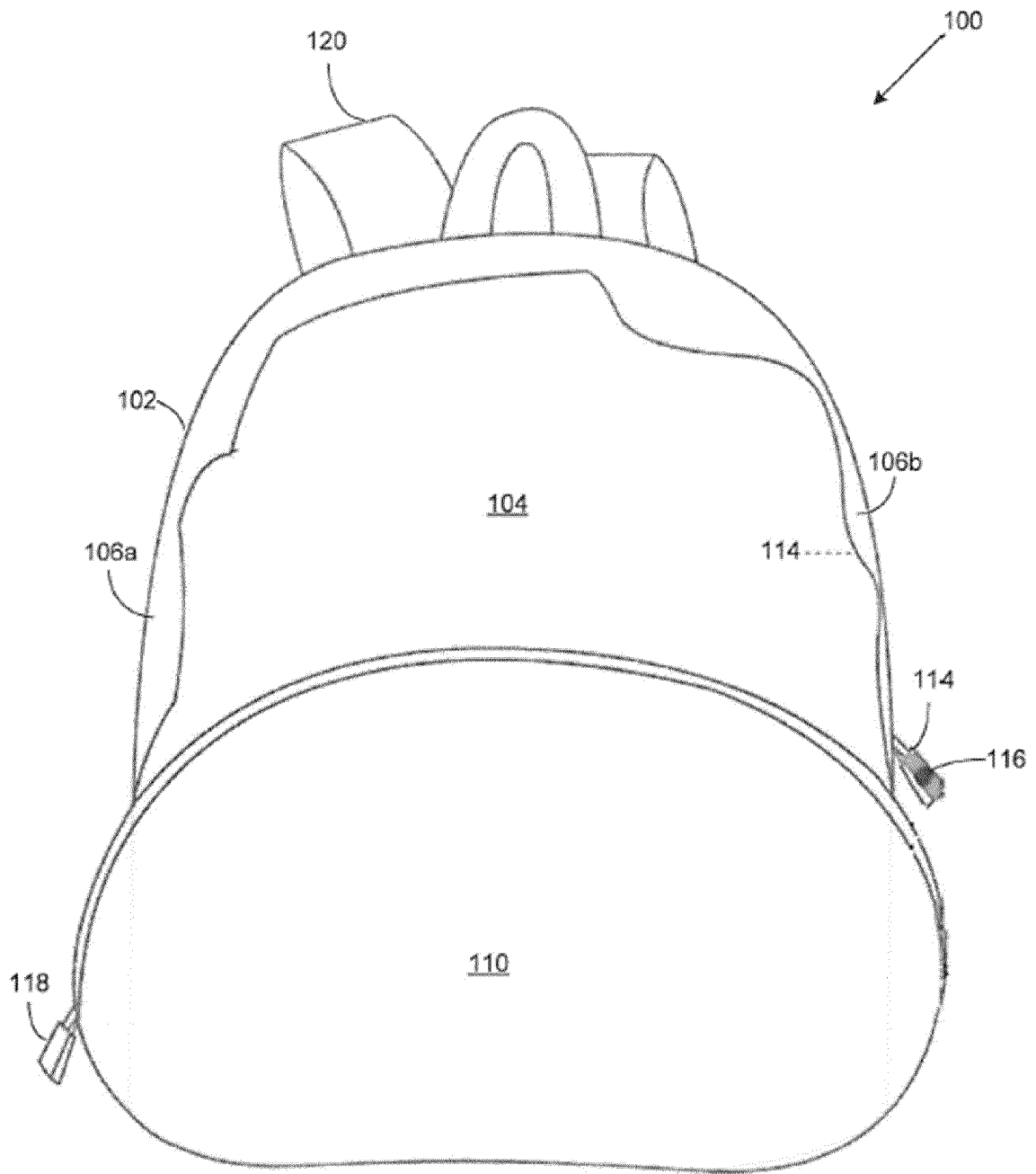


FIG. 2



EUROPEAN SEARCH REPORT

Application Number
EP 16 18 1111

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 22 December 2016	Examiner Longo dit Operti, T
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ANNEX TO THE EUROPEAN SEARCH REPORT
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5 This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
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