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(56) References cited:
JP-A- 2006 000 382
US-A- 3 802 613
US-A- 4 356 942
US-A1- 2004 089 687

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Description

[0001] The invention relates to a bag, particularly a backpack.

[0002] A backpack or rucksack is a bag which is carried on the back. Some backpacks are provided with an internal or external frame, although there are also numerous backpacks in which such a frame is not present. A backpack can be characterized in that it comprises a holder in which luggage can be arranged, wherein the holder is hung on the back of the user by means of one or more carrying belts, such as shoulder straps, which are guided round the shoulder of the user. These carrying belts support the greater part of the weight of the backpack and the contents thereof.

[0003] Numerous different types of backpack are known. The thing all these backpacks have in common is that the fastening of the carrying belts to the holder can become damaged after (possibly prolonged) use. The weight having to be supported by the carrying belts is high and the forces resulting therefrom, which are continuously exerted on the fastening of the carrying belts to the holder of the backpack, can for instance result in tearing of the carrying belts or of the material of the holder. This is the case particularly, though not exclusively, when the carrying belts are fastened to the holder with a hard and stiff connecting element such as a metal fastening screw or the like. Said forces here concentrate on a small area (i.e. a relatively small contact surface between the connecting element and the material of the carrying belt and the holder). The risk of damage to the material of the carrying belt and holder is hereby considerable.

[0004] An example of such a backpack is described in the Japanese document JP2002233408 A. The document describes a backpack to which are fastened two carrying belts with which a user can carry the backpack. The carrying belts (8) are fastened to the backpack by securing them with hooks (18) to a horizontal reinforcing band (17), this in turn being fastened to the backpack. An example of a bag that can be carried on a shoulder is known from US2004/0089689 A1.

[0005] A drawback of known backpacks can be that the carrying belts tend to tear loose at the position of said hooks. This tearing loose has been found to be caused by the great forces being exerted on a relatively small area (i.e. the area defined by the dimensions in cross-section of the hook with which the carrying belts are fastened). For the same reason, the carrying belts of the known backpacks further have to be manufactured from a material which has good resistance to tearing, which limits the material choice and/or increases costs. A further drawback is that high structural demands are made of the connecting means (for instance the above mentioned hooks).

[0006] It is an object of the invention to provide an improved backpack in which the above stated drawback is obviated or reduced.

[0007] It is also an object of the invention to provide a backpack with a relatively small risk of tearing, also in the case of prolonged and intensive use.

[0008] At least one of the above stated objectives and/or other objectives is achieved by a bag according to the features of claim 1. According to a first aspect of the invention, such a bag, particularly a backpack, comprises:

- a bag-like holder comprising a rear wall and a carrying strip provided over at least a part of the width of the rear wall, wherein the carrying strip is attached only partially to the rear wall for the purpose of forming at least a passage between the carrying strip and the rear wall;
- at least one carrying element to be fastened to the holder for carrying of the bag-like holder by a user, particularly on the back of a user, wherein each carrying element comprises a loop-like outer end which extends round the carrying strip in use;
- a fastening for fastening an end part of the loop-like outer end of the carrying element to another part of the carrying element.

[0009] Arranging the carrying elements on such a carrying strip using a loop in the outer end enables the occurring forces to be transmitted to the carrying elements evenly distributed over the carrying strip and over the width of each of the carrying elements. The risk of damage as a result of excessive loading of the holder, carrying strip or carrying element can thereby be reduced.

[0010] The bag can be a frameless bag (i.e. a bag without internal or external strengthening frame) or a bag with such a frame. In this latter case there is sometimes the option of arranging a carrying strap on the frame itself, whereby the risk of tearing can per se be reduced. Such a bag however has a less attractive appearance (for instance in the case of an external frame) or requires one or more openings in the woven material of the holder in order to provide the carrying straps with the possibility of being fastened to the internal frame via these openings.

[0011] The carrying elements can be permanently fastened to the holder, for instance by fastening said end part permanently to the other carrying element part, for instance by sewing the end part thereto. The carrying elements however preferably take an exchangeable form. In embodiments of the invention the carrying element and carrying strip are embodied to fasten the carrying element releasably to the holder. This makes it possible to exchange the carrying elements, for instance in order to replace a carrying element of a determined colour with a carrying element of a different colour.

[0012] The above stated fastening can comprise a connecting element to be secured in the openings, such as an assembly of a bolt and a nut. Other types of connecting element can however also be applied. It is for instance also possible to fixedly clamp the outer end of the carrying element to the other part of the carrying element using a clamp.

[0013] The loop-like outer end can be formed by fastening (for instance stitching) to the outer end of a carrying belt an element which, together with the carrying belt, forms a loop-like outer end. According to the invention, the carrying element comprises however a bendable end part. The bendable end part is here configured to be passed behind the carrying strip via a passage and to then be bent. The thus bent bendable end part and the part of the carrying element connecting thereto then form the above stated loop-like outer end. The fastening of the loop-like outer end is configured to fasten the bendable outer end, which has been passed through the passage and bent, to another part of the carrying element. In this embodiment a strong and reliable connection between the carrying element and the carrying strip can be realized in rapid and simple manner.

[0014] The loop-like outer end of the carrying element extends round the carrying strip such that the forces on the carrying element are at least partially, preferably substantially, absorbed by the lower edge of the carrying strip. Although in determined embodiments the forces can also be partially absorbed by the fastening itself, in other embodiments the forces will be absorbed mainly via the contact surface between the carrying element and the lower edge of the carrying strip. The forces are hereby distributed well over a relatively large area so that the chance of tearing is small.

[0015] In an embodiment of the invention the contact surface between the carrying element and the carrying strip is substantially linear. The length of the linear contact (in other words the width of the carrying element) preferably amounts to at least 2 cm or 3 cm, and still more preferably at least 4 cm, for instance 5 cm.

[0016] According to an embodiment, a first opening is formed in the bendable end part and a corresponding second opening is formed in the part of the carrying element connecting to the end part. In a situation in which the carrying element has been passed through the passage and bent the first and second opening here overlap each other partially or wholly. The openings can be positioned such that they extend above the carrying strip in use. When the carrying elements are fastened to the carrying strip, the connecting element will thus extend above the carrying strip and in principle not make contact therewith. In other embodiments the two openings are however positioned such that the connecting element has been passed behind the carrying strip. According to determined embodiments, the carrying strip then comprises at least a third opening which is arranged in the carrying strip such that, in the situation in which the carrying element has been passed through the passage and bent, the first, second and third openings overlap each other partially or wholly.

[0017] In the latter stated embodiments the openings can have dimensions and be provided at positions such that in use the connecting element also makes contact with the edge around the third opening in the carrying strip. This has the result that the connecting element also absorbs a part of the forces transmitted to the carrying elements by the holder. Because the above stated contact surface of the carrying element also absorbs a part of the forces, the risk of damage has still reduced. In other embodiments the dimensions and position of the opening in the carrying strip have however been chosen relative to the dimensions and position of the first and second opening in the carrying element such that the connecting element extends substantially movably in the third opening in use. In this embodiment the forces are in principle only absorbed by the contact surface between the carrying element and the carrying strip (and not by the connecting element itself).

[0018] In determined embodiments of the invention the carrying strip extends in a direction substantially transversely of the axial direction (for instance a direction corresponding to the centre line between the bottom and the closing element of the bag).

[0019] The one or more passages can be embodied to extend in a substantially axial direction so that one or more carrying elements can easily be slid through the passages from top to bottom.

[0020] The passages can extend at symmetrical positions relative to an axial centre line.

[0021] In order to form the passages the carrying strip can be attached to the rear wall with stitching which is interrupted at the position of the passages.

[0022] Further details, features and properties of the invention will be elucidated on the basis of the following description of several embodiments thereof. Reference is made in the description to the figures, in which:

Figure 1 is a view of a person carrying an embodiment of the backpack according to the invention;
Figure 2 is a view of the rear side of the backpack of Figure 1;
Figure 3 is a view of the front side of the backpack of Figures 1 and 2;
Figure 4 is a right-hand side view;
Figure 5 is a left-hand side view of the backpack;
Figure 6 is a detail view of a carrying element;
Figure 7 is a detail view of a closing belt;
Figure 8 is a detail view of a carrying strip;
Figures 9A-9C are respective perspective views showing the fastening of a carrying belt to the carrying strip.

[0023] Referring to the figures, a user (P) carrying a backpack on his back (R) is shown. The backpack comprises a bag-like holder 1 which is provided on the upper side with a closable opening. The bag-like holder 1 is constructed from inter alia a front wall 2, a rear wall 3 facing toward the back of the user, a left-hand side wall 5, a right-hand side wall 6, a bottom 4 and a closing part 20, such as a closing flap 20 with which the holder can be closed in known manner. Figure 2 shows that a zip fastening 19 is arranged in the rear wall 3 of the holder. This zip fastening can be opened in order to gain access

to a compartment of the holder provided on rear wall 3.

[0024] In order to enable holder 1 to be carried on the back a number of carrying elements, particularly a number of carrying straps, is provided. In the shown embodiment holder 1 is supported by a first carrying element 10 and a second carrying element 11. Carrying element 10 is fastened with its one outer end to the rear wall 3 of holder 1, this at a position just above the centre of the holder, while the opposite outer end of carrying element 10 is fastened by means of stitching 18 to a support 16 provided on the lower side of rear wall 3. In the shown embodiment carrying element 10 comprises a carrying belt or carrying strap. The carrying belt or carrying strap is constructed from two parts which are mutually connected with a buckle 12 so that the length of the carrying belt or carrying strap can be adjusted as desired. The carrying element is thus adjustable in the shown embodiment. The second carrying element 11 has the same construction and is fastened on the lower side to a similar support 17.

[0025] The connection of each of the carrying elements 10, 11 to the rear wall 3 of holder 1 is susceptible to wear and damage. It is after all the case that relatively large forces are exerted on this connection, since substantially the whole weight of the backpack and contents rests thereon. In known backpacks (wherein carrying belts are fastened directly to the rear wall or a reinforcement provided therein via fastening means such as screws and the like) it is common in practice that, after (possibly prolonged) use, damage to the connection occurs, for instance tearing of the carrying elements and/or the rear wall or damage at the position of said fastening means. This damage can eventually result in one or more of the carrying elements becoming wholly or partially detached from the holder, whereby the backpack becomes unusable. In the shown embodiment of the fastening of the invention this is however no longer the case.

[0026] An embodiment of a carrying element 10, 11 according to the invention is shown in more detail in figure 6. Carrying element 10, 11 comprises an elongate main part and an oblique part 31 extending at a slight angle relative to the main part. This oblique part comprises a bendable end part 33 and a part 32 connecting to the end part 33. In determined embodiments a fold 36 is provided between the bendable end part 33 and the part 32 connecting thereto (although in other embodiments this fold has been dispensed with). The fold facilitates the bending of end part 33. The bent end part 33 forms a loop which can be arranged round a carrying strip 22 secured to the rear wall of the backpack.

[0027] In the shown embodiment carrying strip 22 extends substantially transversely of the axial direction of the backpack and is secured to rear wall 3 with upper stitching 23 and lower stitching 24. As shown in figure 8, carrying strip 22 can also be provided with axially extending stitching 41 which provides for an extra strong connection between the carrying strip and the rear wall of the holder. Stitching 23, 24 is interrupted at a number of locations so as to form a number of passages 64, 65, 66 between the inner side of carrying strip 22 and the outer side of rear wall 3. Passages 64, 65 have a width such that the outer end, more particularly the bendable part 33, of a carrying element 10, 11 can be passed therethrough. The stitching is further interrupted for the purpose of forming a third passage 66 (figure 8) along which a closing belt 40 can be passed.

[0028] Figures 9A-9C show the manner of fastening of carrying elements 10, 11 to carrying strip 22 in more detail. Figure 9A shows the outer end 33 of carrying element 10 which is carried into a passage 64, 65 in the direction P_1. Once outer end 33 has been slid far enough through passage 64, 65, for instance when the upper side of carrying strip 22 has reached the bend 30 in carrying element 10, the bendable outer end 33 can be bent (P_2) so that outer end 33 can be placed on carrying strip 22. This situation is shown in figure 9B. Outer end 33 is then fastened to another part of carrying belt 10, 11 and/or to rear wall 3 of the holder. There are different ways of fastening the outer end 33, once it has been bent, to the carrying belt and/or the holder.

[0029] The fastening can be realized in different ways. The figures show an embodiment in which arranged in the bendable end part 33 is a first opening 35, arranged in the part 32 of the carrying belt connecting thereto is a second opening 34, and arranged in carrying strip 22 itself is an opening 37. The openings are dimensioned such and positioned in such a manner that all openings lie one above the other and wholly or partially overlap. A passage through end part 33, strip 22 and connecting part 32 is hereby realized.

[0030] A connecting element 38 can be placed into this passage in order to enable fastening of the loop to the carrying strip. Connecting element 38 can take numerous forms. In the embodiment shown in figure 9B connecting element 38 comprises a bolt 42 provided with a wide head and a nut 39 which can be screwed thereon.

[0031] In determined embodiments a (fourth) opening is in any case also arranged in rear wall 3 of holder 1 at a corresponding position. In this embodiment the passage therefore also extends through the material of holder 1 itself so that connecting element 38 passes not only through the carrying element and the carrying strip, but also through the holder. Nut 39 is then screwed on on the inner side of the bag-like holder.

[0032] By fastening the carrying elements to the carrying strip with a loop the load-bearing forces on carrying elements 10, 11, carrying strip 22 and/or rear wall 3 are distributed well over the whole width of the carrying element and particularly at the portion along the lower edge of carrying strip 22. In other words, a line coupling (i.e. a coupling over the line formed by fold 36 of the bent carrying element) occurs here, rather than a point coupling between a carrying element and the carrying strip (i.e. a point coupling at the position of the connecting element). The load-bearing forces are in any case not exerted primarily on the connecting element 38. The risk of tearing

of the openings at the position of connecting element 38 is thus greatly reduced. The forces exerted on carrying strip 22 are moreover transmitted via all stitching 23, 24, 41 to the rear wall of the backpack. By providing the carrying strip over more than half the width of the rear wall of holder 1, preferably over the whole width of the rear wall or even over the whole width of the rear wall and a part of the side walls, and stitching it on over this width, the load-bearing forces on carrying strip 22 are distributed over a relatively wide area of the holder. This also reduces the risk of damage to the backpack.

[0033] Figure 2 further shows that the first carrying belt 10 is passed through a passage 64 (see figure 8) which is positioned to the left of the centre line (m) and the second carrying element 11 engages on the strip 22 in that it is passed through a right-hand passage 65 (see figure 8) positioned to the right of the centre line (m). The two carrying elements 10, 11 are positioned mirror-symmetrically relative to the axial centre line in order to bring about a balanced distribution of forces on carrying strip 22. The above stated closing belt 40 is arranged at a position between the two carrying elements 10, 11 (figure 2). This closing belt 40 is arranged on the holder in known manner by means of a connecting element 55 arranged through openings in closing belt 40, rear wall 3 and strip 22. Support tongues 56, 57 are further arranged on closing flap 20 in order to guide closing belt 40 neatly upward from carrying strip 22. The buckle 60 is arranged at the free outer end of closing belt 40. The length of closing belt 40 can be varied (in known manner) by sliding closing belt 40 through two slots 62, 63 in buckle 60. Buckle 60 is also provided with an element 61. Element 61 is a passage in which is mounted a magnetic part, this functioning together with another magnetic part which is mounted in the front side of the bag as magnetic closure of the bag. In determined embodiments use is made of a closure from Fidlock GmbH.

[0034] Carrying elements 10, 11 and strip 22 can be manufactured from different materials. In a determined embodiment carrying belts 10, 11 are manufactured largely from leather or woven material.

[0035] The present invention is not limited to the embodiment described here. The scope of protection is defined by the appended claims, within the scope of which many modifications and adjustments can be envisaged.

Claims

1. Bag, comprising:

- a bag-like holder (1) comprising a rear wall (3) and a carrying strip (22) provided at an upper position above the centre of the bag-like holder (1) over at least a part of the width of the rear wall (3) and attached to the rear wall (3) with stitching, wherein the carrying strip (22) is attached only partially to the rear wall (3) for the purpose of forming at least a passage (64, 65) between the carrying strip (22) and the rear wall (3), wherein a passage (64, 65) is formed by absence of the stitching;
- at least one carrying element (10, 11) including a first and second outer end, the first outer end to) be fastened at a lower position than the position of the carrying strip (22) and the second end to be fastened to the carrying strip (22) for carrying of the bag-like holder (1) by the user, wherein the second end of each carrying element (10, 11) comprises a loop-like outer end which extends through the passage (64, 65) and round the carrying strip (22) in use;
- a fastening (42) for fastening an end part of the loop-like outer end of the carrying element to another part of the carrying element.

wherein the second outer end of the carrying element comprises a bendable end part (33), wherein the bendable end part is configured to be passed behind the carrying strip via the passage (64, 65) and to then be bent, wherein the fastening is configured to fasten the bendable outer end, which has been passed through the passage and bent, to another part of the carrying element;
wherein the loop-like second outer end of the carrying element extends round the carrying strip such that the forces on the carrying element are at least partially, preferably substantially, absorbed by the lower edge of the carrying strip.

2. Bag as claimed in claim 1, wherein the carrying strip extends over more than half the width of the rear wall of holder and wherein the stitching extends over this width so as to distribute load-bearing forces on the carrying strip over a relatively wide area of the holder,

3. Bag as claimed in claim 1 or 2, wherein the bag-like holder, the carrying strip and, preferably, the carrying element are manufactured from flexible material, for instance from at least) one of woven material or leather; and/or wherein the bag is embodied without support frame.

4. Bag as claimed in any one of the preceding claims, wherein the passage extends from the lower edge to the upper edge of the carrying strip.

5. Bag as claimed in any one of the preceding claims, configured to pass the carrying element through the whole passage and around the whole carrying strip for the purpose of being fastened to the carrying strip.

6. Bag as claimed in any one of the preceding claims, wherein the width of a passage corresponds to the width of the bendable part of the carrying element.

7. Bag as claimed in any one of the preceding claims, wherein a first opening is formed in the bendable end part and a corresponding second opening is formed in the part of the carrying element connecting to the end part, and wherein, in the situation in which the carrying element has been passed through the passage and bent, the first and second opening overlap each other partially or wholly.

8. Bag as claimed in any one of the preceding claims, comprising at least a third opening which is arranged in the carrying strip such that, in the situation in which the carrying element has been passed through the passage and bent, the first, second and third openings overlap each other partially or wholly.

9. Bag as claimed in any one of the preceding claims, comprising at least a fourth opening which is arranged in the rear wall such that, in the situation in which the carrying element has been passed through the passage and bent, the first, second, third and fourth openings overlap each other partially or wholly.

10. Bag as claimed in claim 9 or 10, wherein the dimensions and position of the opening in the carrying strip have been chosen relative to the dimensions and position of the first and second opening in the carrying element such that the connecting element extends substantially movably in the third opening in use.

11. Bag as claimed in any one of the preceding claims, wherein the carrying element and carrying strip are embodied to fasten the carrying element releasably to the holder and/or wherein the bag is a backpack, wherein the rear wall of the bag-like holder faces toward the back of a user in use.

12. Bag as claimed in any one of the preceding claims, wherein the contact surface between the carrying element and the carrying strip is substantially linear, wherein the length of the linear contact amounts to at least 2 cm, preferably at least 4 cm.

13. Bag as claimed in any one of the preceding claims, wherein the fastening comprises a connecting element to be secured in the openings, wherein the connecting element preferably comprises a bolt and nut assembly.

14. Bag as claimed in any one of the preceding claims, wherein the carrying strip extends in a direction substantially transversely of the axial direction, the one or more passages extend in a substantially axial direction, and/or the passages extend at symmetrical positions relative to an axial centre line (m) and/or comprising a left-hand carrying element engaging on a first passage which is positioned to the left of the centre line (m) and a right-hand carrying element engaging on a second passage which is positioned to the right of the centre line (m).

Patentansprüche

1. Tasche, umfassend:

- einen Taschen-artigen Halter (1), welcher eine hintere Wand (3) und ein tragendes Band (22) umfasst, welches an einer oberen Position oberhalb des Zentrums von dem taschen-artigen Halter (1) über zumindest einen Teil von der Breite von der hinteren Wand (3) vorgesehen ist, und welches an der hinteren Wand (3) mit Nähten befestigt ist, wobei das tragende Band (22) nur teilweise an der hinteren Wand (3) zum Zweck des Bildens von zumindest einem Durchgang (64, 65) zwischen dem tragenden Band (22) und der hinteren Wand (3) befestigt ist, wobei ein Durchgang (64, 65) durch das Nicht-Vorhandensein von Nähten gebildet wird;
- zumindest ein tragendes Element (10, 11), welches zumindest eine erstes und ein zweites äußeres Ende enthält, wobei das erste äußere Ende an einer niedrigeren Position zu befestigen ist als die Position des tragenden Bandes (22), und wobei das zweite Ende an dem tragenden Band (22) zum Tragen des Taschen-artigen Halters (1) durch den Nutzer zu befestigen ist, wobei das zweite Ende von jedem tragenden Element (10, 11) ein schlaufenartiges äußeres Ende umfasst, welches sich durch den Durchgang (64, 65) hindurch und im Gebrauch um das tragende Band (22) herum erstreckt;
- eine Befestigung (42) zum Befestigen eines Endteils von dem schlaufenartigen äußeren Ende von dem tragenden Element an einem anderen Teil von dem tragenden Element,

wobei das zweite äußere Ende von dem tragenden Element ein biegbares Endteil (33) umfasst, wobei das biegbare Endteil konfiguriert ist, um hinter dem tragenden Band über den Durchgang (64, 65) geführt zu werden, und um dann gebogen zu werden, wobei die Befestigung konfiguriert ist, um das biegbare äußere Ende, welches durch den Durchgang hindurch geführt worden und gebogen worden ist, an einem anderen Teil von dem tragenden Element zu befestigen,

wobei das schlaufenartige zweite äußere Ende von dem tragenden Element sich um das tragende Band herum erstreckt, so dass die Kräfte von dem tragenden Element zumindest teilweise, vorzugsweise im Wesentlichen, durch die untere Kante von dem tragenden Band absor-

biert werden.

2. Tasche gemäß Anspruch 1, wobei sich das tragende Band über mehr als die Hälfte von der hinteren Wand von dem Halter erstreckt, und wobei sich die Nähte über diese Breite erstrecken, um so tragende Kräfte auf dem tragenden Band über einen relativ weiten Bereich von dem Halter zu verteilen.

3. Tasche gemäß Anspruch 1 oder 2, wobei der Taschen-artige Halter, das tragende Band und vorzugsweise das tragende Element aus einem flexiblen Material hergestellt sind, zum Beispiel aus zumindest einem von Webstoff oder Leder; und/oder wobei die Tasche ohne einen Tragrahmen ausgeführt ist.

4. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei sich der Durchgang von der unteren Kante zu der oberen Kante von dem tragenden Band erstreckt.

5. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, welche konfiguriert ist, um das tragende Element zum Zweck des an dem tragenden Band befestigt Werdens durch den gesamten Durchgang hindurch und um das ganze tragende Band herum geführt wird.

6. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei die Breite von einem Durchgang der Breite von dem biegbaren Teil von dem tragenden Element entspricht.

7. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei eine erste Öffnung in dem biegbaren Endteil gebildet ist und eine entsprechende zweite Öffnung in dem Teil von dem tragenden Element, welches mit dem Endteil verbunden ist, gebildet ist, und wobei in der Situation, in welcher das tragende Element durch den Durchgang hindurch geführt und gebogen worden ist, sich die erste und die zweite Öffnung teilweise oder vollständig überlappen.

8. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, welche zumindest eine dritte Öffnung umfasst, welche in dem tragenden Band angeordnet ist, so dass, in der Situation, in welcher das tragende Element durch den Durchgang hindurch geführt und gebogen worden ist, sich die erste, die zweite und die dritte Öffnung teilweise oder vollständig überlappen.

9. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, welche zumindest eine vierte Öffnung umfasst, welche in der hinteren Wand angeordnet ist, so dass, in der Situation, in welcher das tragende Element durch den Durchgang hindurch geführt und gebogen worden ist, sich die erste, die zweite, die dritte und die vierte Öffnung teilweise oder vollständig überlappen.

10. Tasche gemäß Anspruch 9 oder 10, wobei die Dimensionen und Position von der Öffnung in dem tragenden Band relativ zu den Dimensionen und der Position von der ersten und der zweiten Öffnung in dem tragenden Element ausgewählt worden sind, so dass sich das Verbindungselement im Gebrauch im Wesentlichen bewegbar in der dritten Öffnung bewegt.

11. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei das tragende Element und das tragende Band ausgeführt sind, um das tragende Element lösbar an dem Halter zu befestigen, und/oder wobei die Tasche ein Rucksack ist, wobei die hintere Wand von dem Taschen-artigen Halter im Gebrauch zu dem Rücken von einem Benutzer gewendet ist.

12. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei die Kontaktoberfläche zwischen dem tragenden Element und dem tragenden Band im Wesentlichen linear ist, wobei die Länge von dem linearen Kontakt zumindest 2 cm, vorzugsweise zumindest 4 cm, beträgt.

13. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei die Befestigung ein Verbindungselement umfasst, welches in den Öffnungen zu befestigen ist, wobei das Verbindungselement vorzugsweise eine Schrauben- und Mutter-Verbindung umfasst.

14. Tasche gemäß irgendeinem der vorhergehenden Ansprüche, wobei sich das tragende Band in einer Richtung im Wesentlichen quer zu der axialen Richtung erstreckt, der eine oder mehrere Durchgang/Durchgänge sich in einer im Wesentlichen axialen Richtung erstreckt/erstrecken, und/oder wobei sich die Durchgänge an symmetrischen Positionen relativ zu einer axialen Mittellinie (m) erstrecken, und/oder ein linkes tragendes Element, welches einen ersten Durchgang in Eingriff nimmt, welcher links von der Mittellinie (m) positioniert ist, und ein rechtes tragendes Element umfassen, welches einen zweiten Durchgang in Eingriff nimmt, welcher rechts von der Mittellinie (m) positioniert ist.

Revendications

1. Sac, comprenant :

un conteneur en forme de sac (1) comprenant

une paroi arrière (3) et une sangle de retenue (22) agencée à une position supérieure au-dessus du centre du conteneur en forme de sac (1) sur au moins une partie de la largeur de la paroi arrière (3) et fixée sur la paroi arrière (3) par couture, dans lequel la sangle de retenue (22) est fixée uniquement partiellement sur la paroi arrière (3) dans le but de former au moins un passage (64, 65) entre la sangle de retenue (22) et la paroi arrière (3), dans lequel un passage (64, 65) est formé par absence de couture ;
au moins un élément porteur (10, 11) comportant des première et seconde extrémités externes, la première extrémité externe étant destinée à être fixée à une position inférieure à la position de la sangle de retenue (22) et la seconde extrémité étant destinée à être fixée sur la sangle de retenue (22) afin d'assurer le transport du conteneur en forme de sac (1) par l'utilisateur, dans lequel la seconde extrémité de chaque élément porteur (10, 11) comprend une extrémité externe en forme de boucle qui s'étend à travers le passage (64, 65) et autour de la sangle de retenue (22) en utilisation ;
un élément de fixation (42) destiné à fixer une partie d'extrémité de l'extrémité externe en forme de boucle de l'élément porteur sur une autre partie de l'élément porteur,
dans lequel la seconde extrémité externe de l'élément porteur comprend une partie d'extrémité pouvant être pliée (33),
dans lequel la partie d'extrémité pouvant être pliée est configurée de manière à être passée derrière la sangle de retenue à travers le passage (64, 65) et ensuite à être repliée, dans lequel l'élément de fixation est configuré de manière à fixer l'extrémité externe pouvant être pliée, qui est passée à travers le passage et repliée, sur une autre partie de l'élément porteur ;
dans lequel la seconde extrémité externe en forme de boucle de l'élément porteur s'étend autour de la sangle de retenue de telle sorte que les efforts sur l'élément porteur sont, de préférence, sensiblement, au moins partiellement, absorbés par le bord inférieur de la sangle de retenue,

2. Sac selon la revendication 1, dans lequel la sangle de retenue s'étend sur plus de la moitié de la largeur de la paroi arrière du conteneur et dans lequel la couture s'étend sur cette largeur de manière à répartir les efforts de retenue de charge sur la sangle de retenue sur une zone relativement grande du conteneur,

3. Sac selon la revendication 1 ou 2, dans lequel le conteneur en forme de sac, la sangle de retenue et, de préférence, l'élément porteur sont fabriqués en un matériau souple, par exemple, à partir d'au moins l'un d'un matériau tissé ou de cuir ; et/ou dans lequel le sac est réalisé sans structure de support.

4. Sac selon l'une quelconque des revendications précédentes, dans lequel le passage s'étend à partir du bord inférieur vers le bord supérieur de la sangle de retenue.

5. Sac selon l'une quelconque des revendications précédentes, configuré de manière à laisser passer l'élément porteur à travers la totalité du passage et autour de la totalité de la sangle de retenue dans le but d'être fixé sur la sangle de retenue.

6. Sac selon l'une quelconque des revendications précédentes, dans lequel la largeur d'un passage correspond à la largeur de la partie pouvant être pliée de l'élément porteur.

7. Sac selon l'une quelconque des revendications précédentes, dans lequel une première ouverture est formée sur la partie d'extrémité pouvant être pliée et une deuxième ouverture correspondante est formée sur la partie de l'élément porteur la reliant à la partie d'extrémité et dans lequel, dans la situation dans laquelle l'élément porteur est passé à travers le passage et replié, les première et deuxième ouvertures se recouvrent partiellement ou totalement.

8. Sac selon l'une quelconque des revendications précédentes, comprenant au moins une troisième ouverture qui est agencée sur la sangle de retenue de telle sorte que, dans la situation dans laquelle l'élément porteur est passé à travers le passage et replié, les première, deuxième et troisième ouvertures se recouvrent partiellement ou totalement.

9. Sac selon l'une quelconque des revendications précédentes, comprenant au moins une quatrième ouverture qui est agencée sur la paroi arrière de telle sorte que, dans la situation dans laquelle l'élément porteur est passé à travers le passage et replié, les première, deuxième, troisième et quatrième ouvertures se recouvrent partiellement ou totalement.

10. Sac selon la revendication 9 ou 10, dans lequel les dimensions et position de l'ouverture sur la sangle de retenue ont été choisies par rapport aux dimensions et position des première et deuxième ouvertures sur l'élément porteur de telle sorte que l'élément de liaison s'étend sensiblement de manière à pouvoir se déplacer dans la troisième ouverture en utilisation.

11. Sac selon l'une quelconque des revendications précédentes, dans lequel l'élément porteur et la sangle de retenue sont réalisés afin de fixer l'élément por-

teur de manière amovible sur le conteneur et/ou dans lequel le sac est un sac-à-dos, dans lequel la paroi arrière du conteneur en forme de sac est orientée face au dos d'un utilisateur pendant l'utilisation.

12. Sac selon l'une quelconque des revendications précédentes, dans lequel la surface de contact entre l'élément porteur et la sangle de retenue est sensiblement linéaire, dans lequel la longueur du contact linéaire est au moins égale à 2 cm, de préférence, au moins égale à 4 cm.

13. Sac selon l'une quelconque des revendications précédentes, dans lequel l'élément de fixation comprend un élément de liaison destiné à être fixé sur les ouvertures, dans lequel l'élément de liaison comprend, de préférence, un ensemble de vis et écrou.

14. Sac selon l'une quelconque des revendications précédentes, dans lequel la sangle de retenue s'étend dans une direction sensiblement transversale par rapport à la direction axiale, le ou les passages s'étendent dans une direction sensiblement axiale, et/ou les passages s'étendent au niveau de positions symétriques par rapport une ligne centrale axiale (m) et/ou comprenant un élément porteur du côté gauche se couplant sur un premier passage qui est positionné sur la gauche de la ligne centrale (m) et un élément porteur du côté droit se couplant sur un deuxième passage qui est positionné sur la droite de la ligne centrale (m).

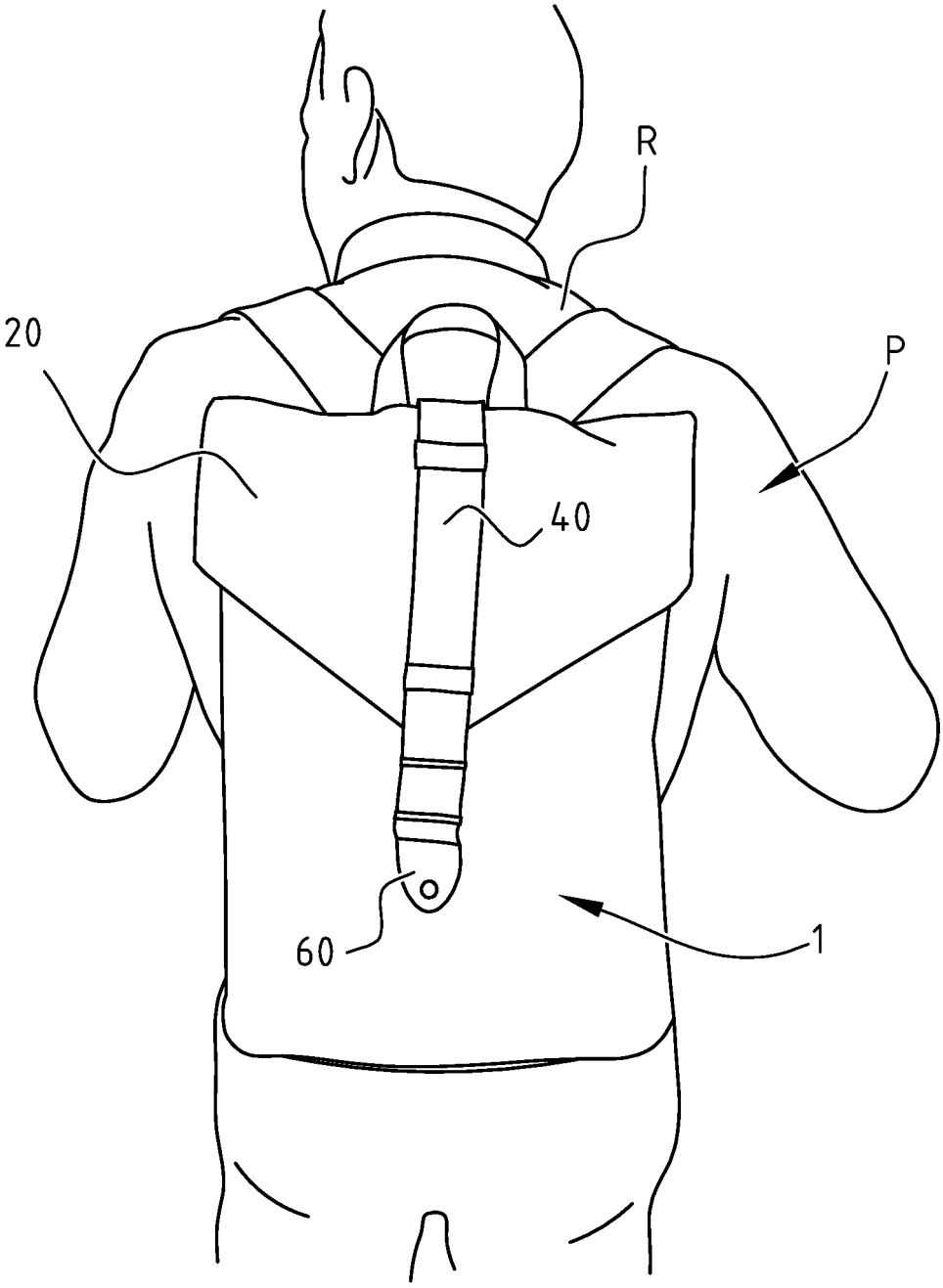
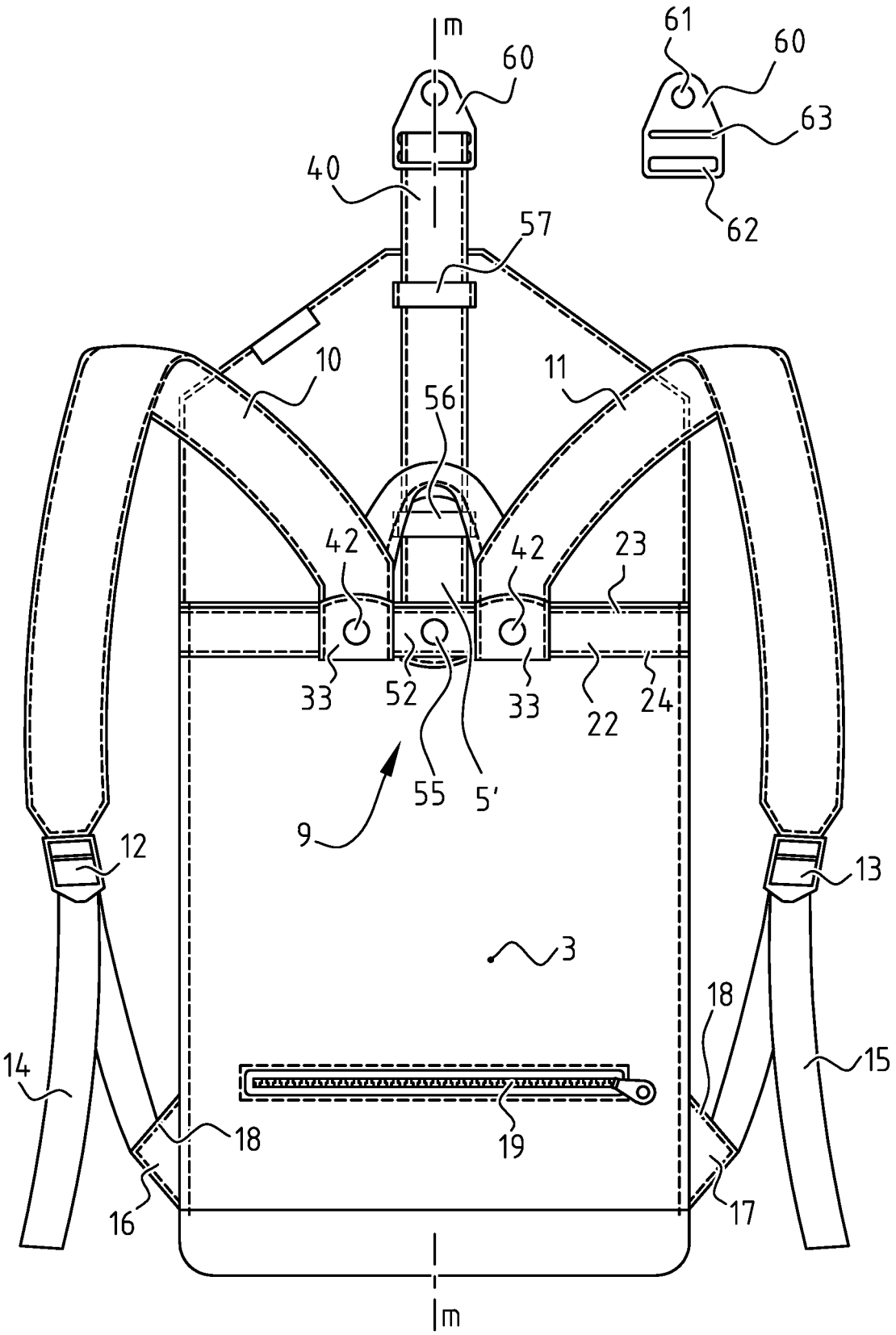


FIG. 1


m
60
61
60
63
62
40
57
10
11
56
42
42
23
33
52
33
22
24
55
5'
9
12
13
3
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14
15
19
18
16
17
m

FIG. 2

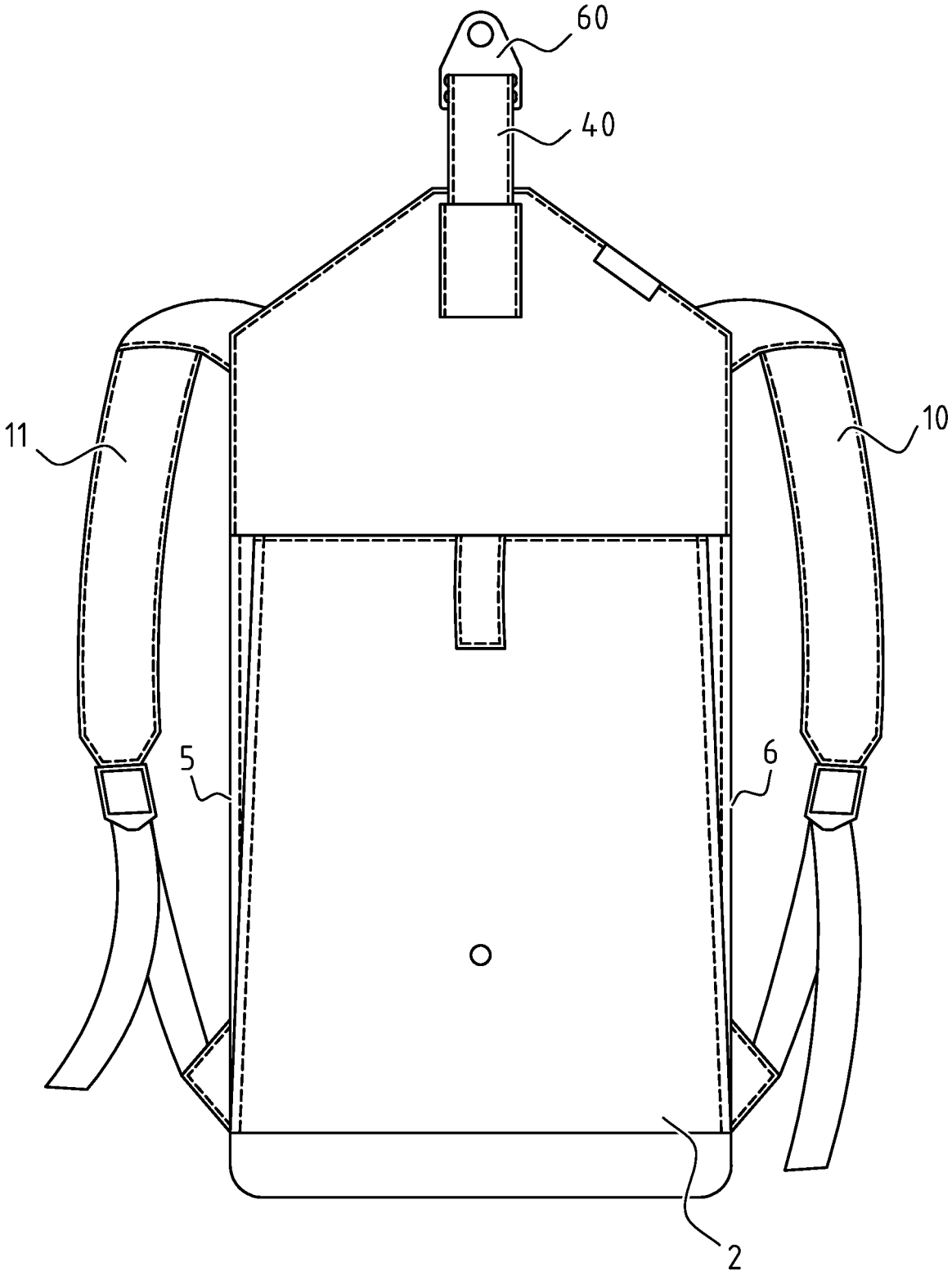

FIG. 3

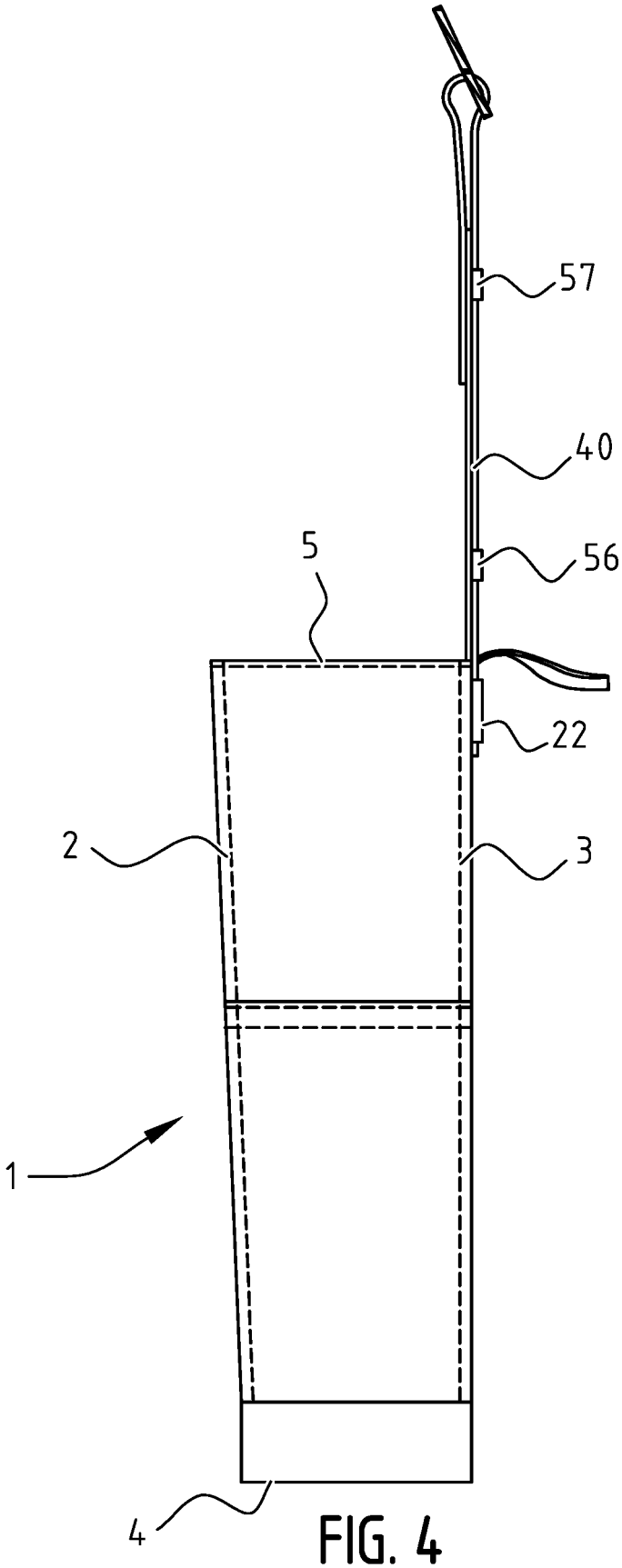

FIG. 4

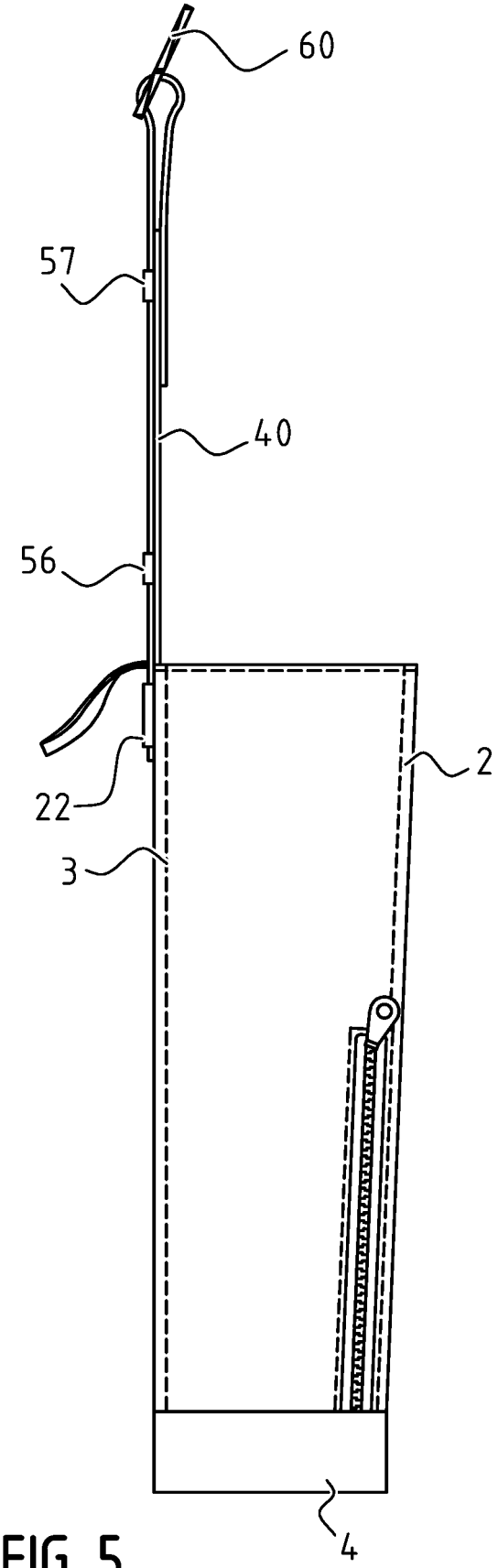

FIG. 5

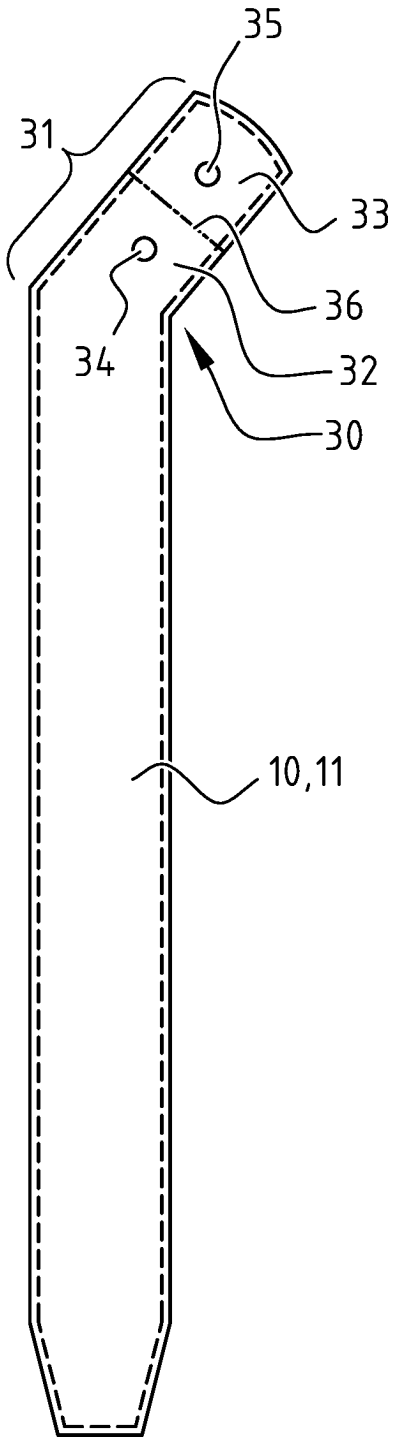

FIG. 6

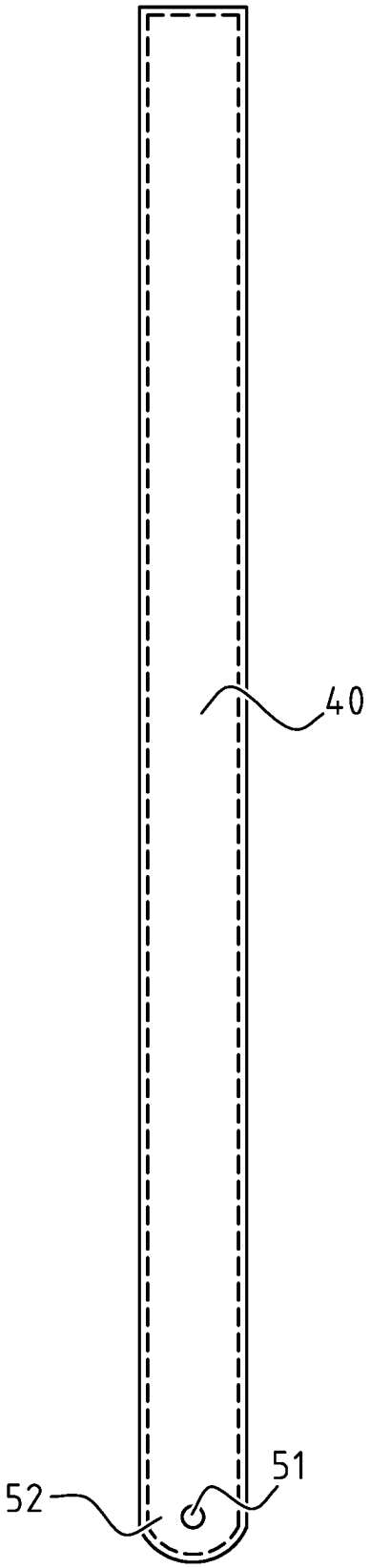

FIG. 7

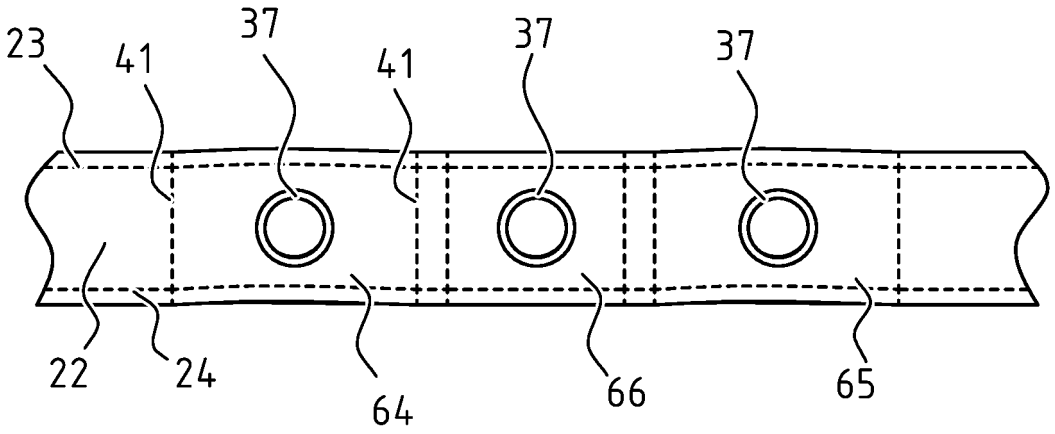

FIG. 8

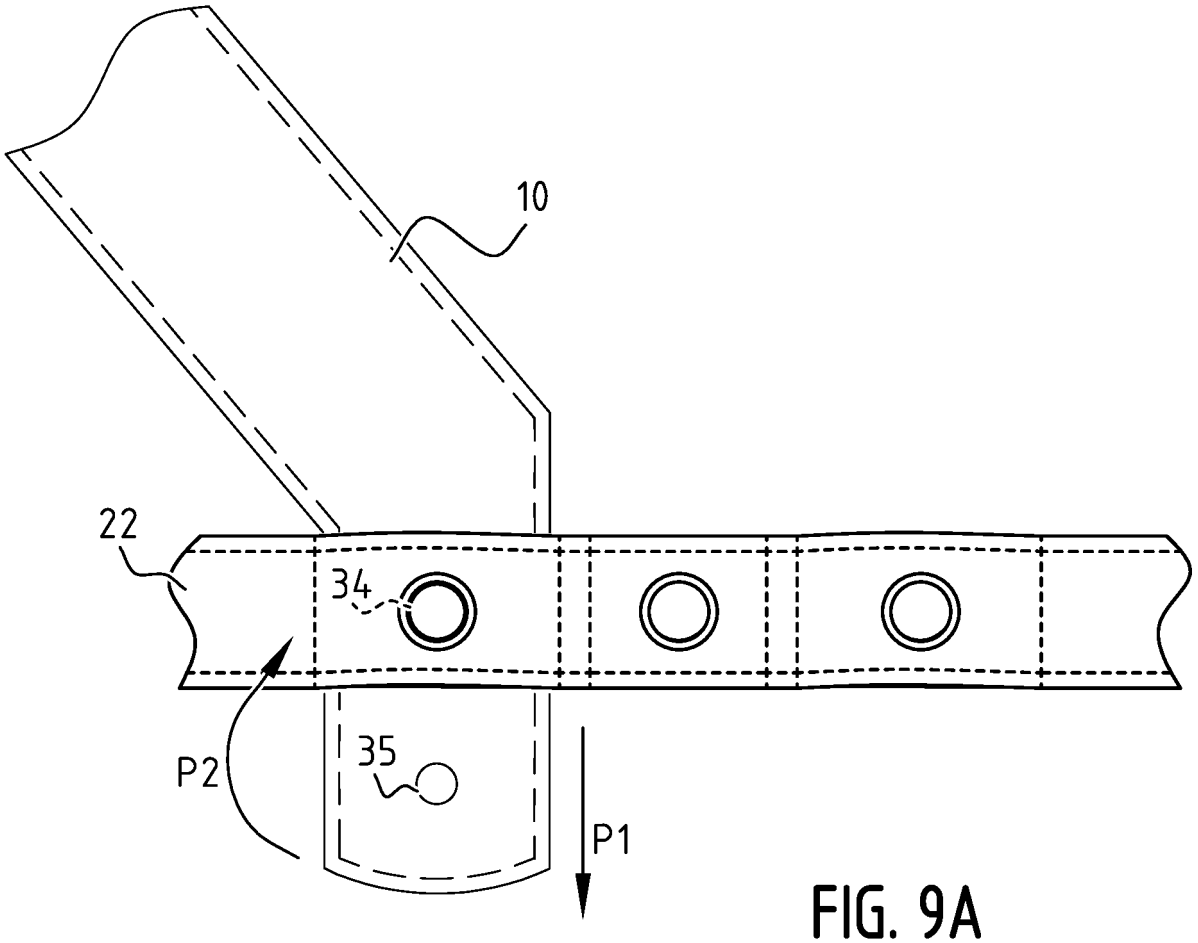

FIG. 9A

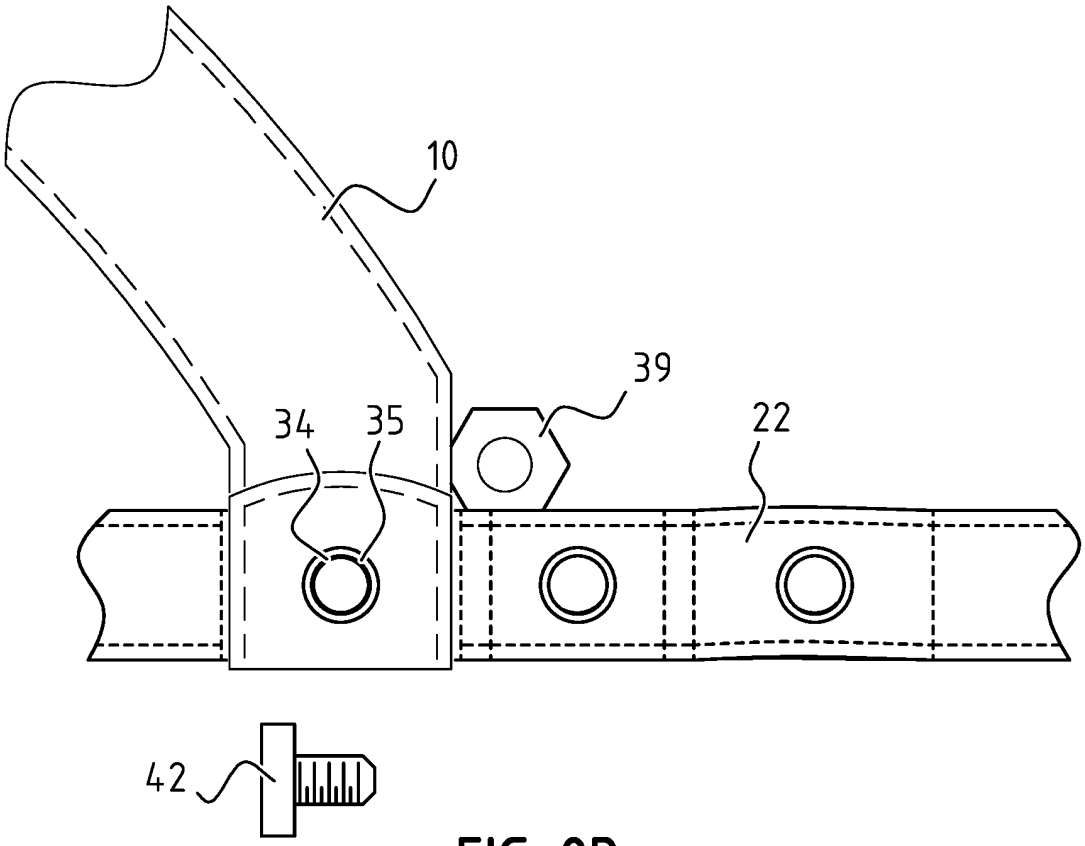

FIG. 9B

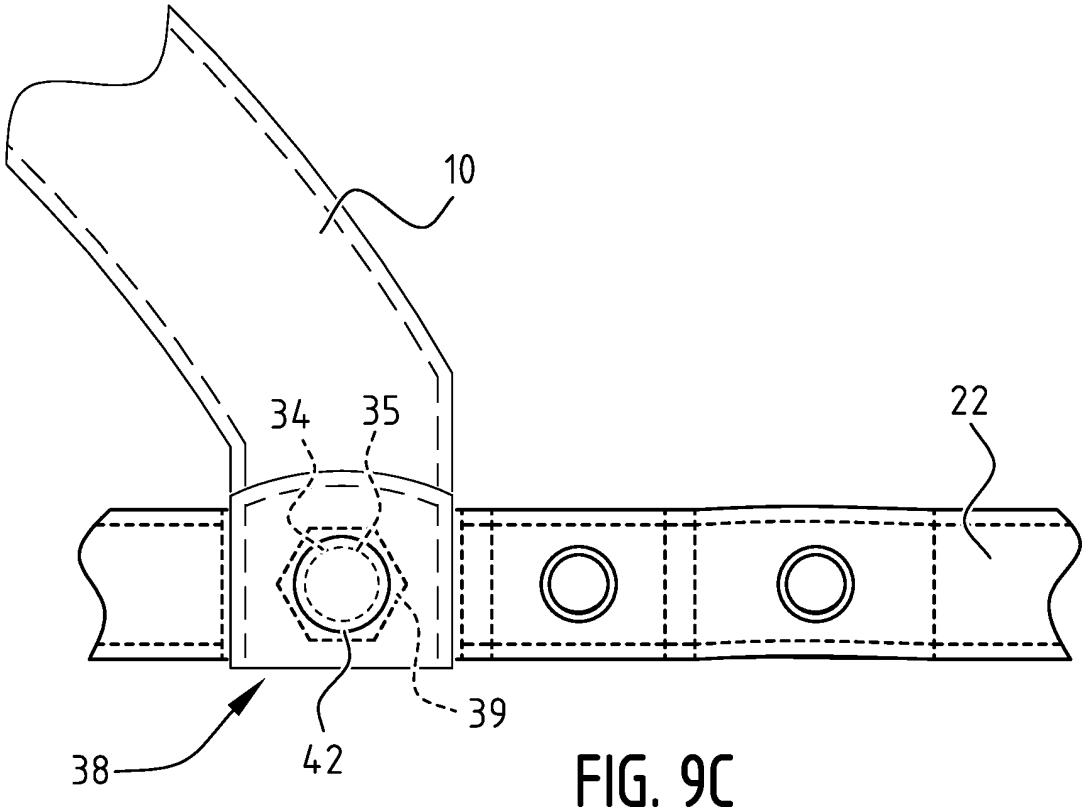

FIG. 9C

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- JP 2002233408 A **[0004]**
- US 20040089689 A1 **[0004]**