

(21) Application No: 2207095.7  
 (22) Date of Filing: 16.05.2022

(51) INT CL:  
 A45C 13/10 (2006.01) A45C 3/00 (2006.01)  
 A45C 7/00 (2006.01)

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(58) Field of Search:  
 INT CL A45C  
 Other: WPI, EPODOC

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(54) Title of the Invention: **Bag assembly**  
 Abstract Title: **Releasably connectable bag assembly**

(57) A bag assembly comprising a first bag 12 having an opening and a fastening means for releasably closing the opening, the first bag 12 having opposing first and second end panels 20, (22, figure 2). The bag assembly further comprising a second bag 54 having an opening and a fastening means for releasably closing the opening. The second bag 54 having an outer end wall 56, wherein said second bag is releasably coupled at its outer end wall 56 to a first outer end panel 20 of the first bag 12 by means of one or more cooperative magnetic fastener elements 64,66. The bag assembly further comprising one or more handles or straps for, in use, transporting said bag assembly comprising said first and second bags 12, 54 when so coupled together end-to-end.

Fig. 5

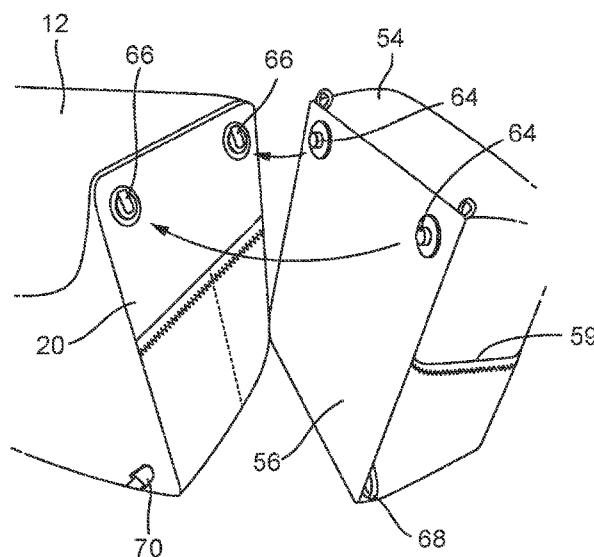
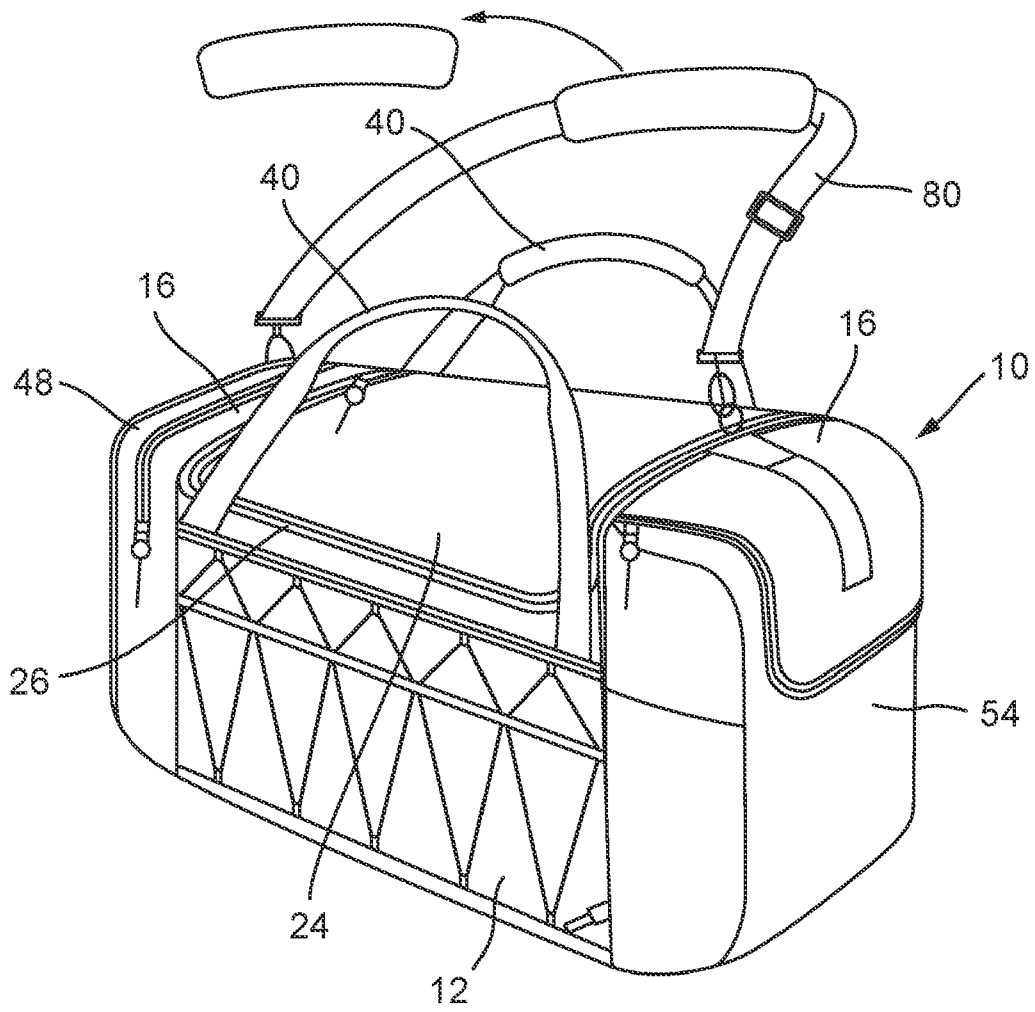
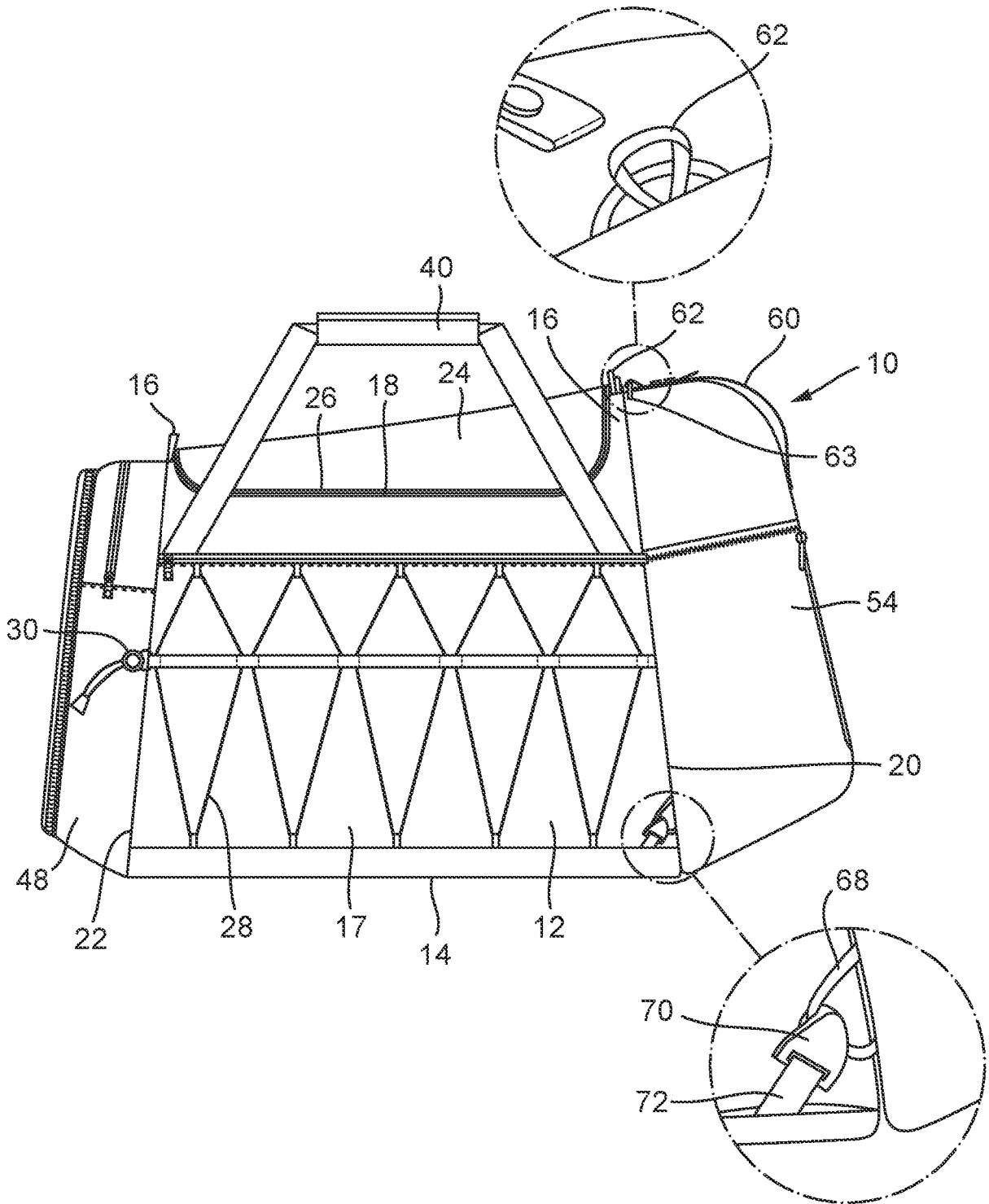


Fig. 1



07 08 23

Fig. 2



07 08 23

Fig. 3

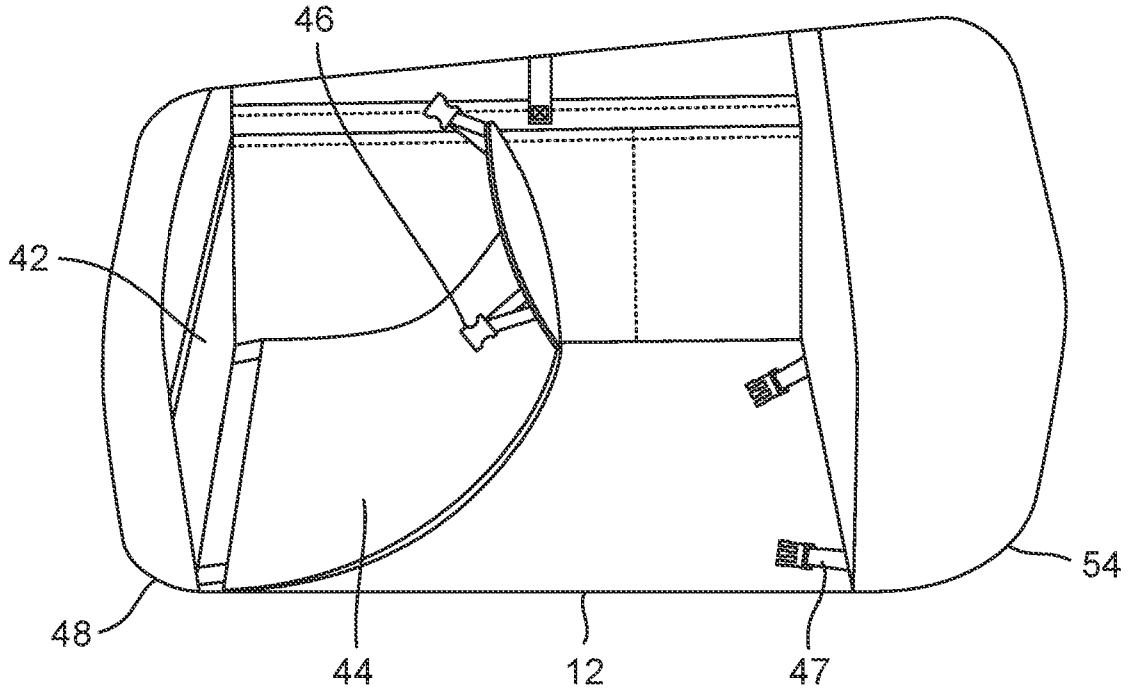
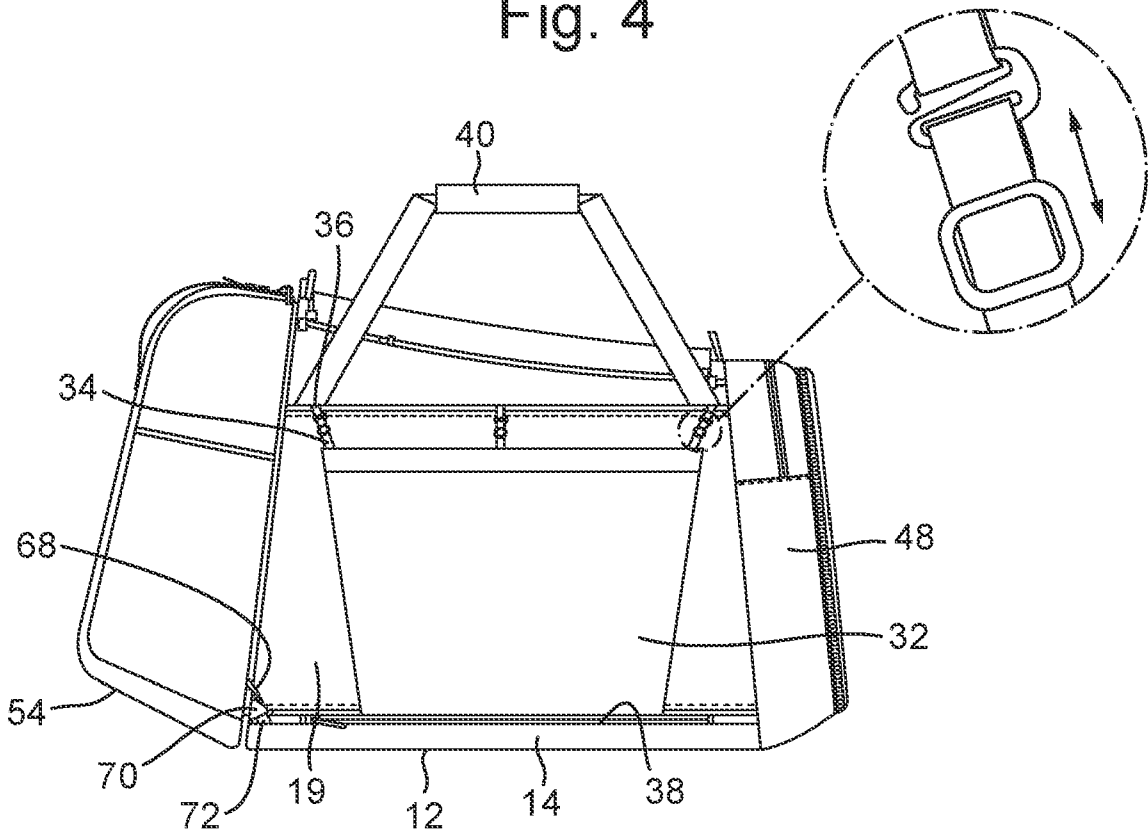


Fig. 4



07 08 23

Fig. 5

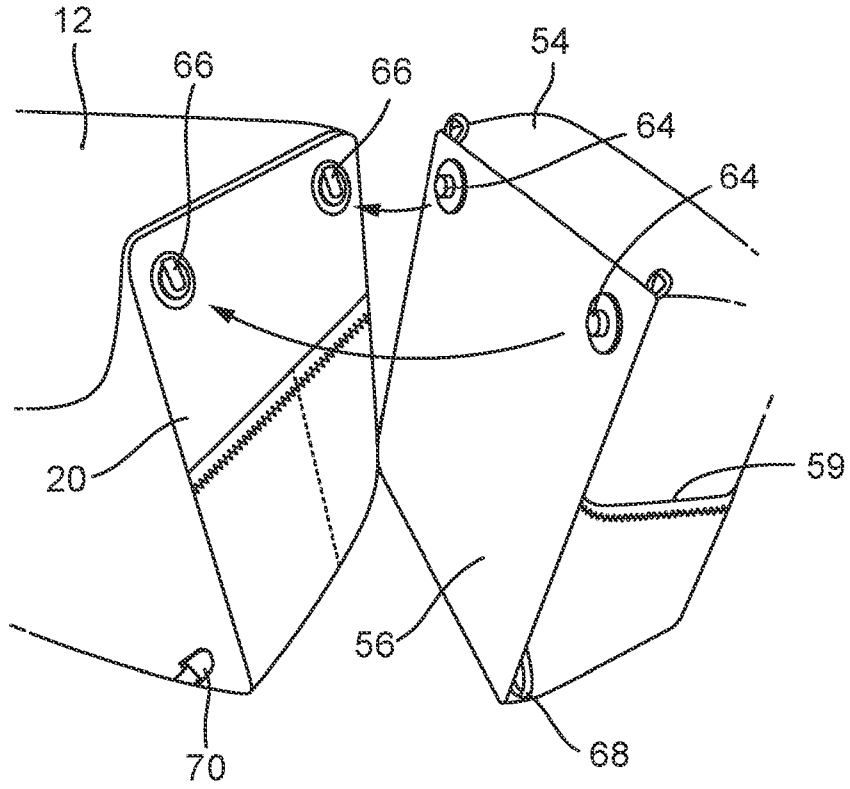


Fig. 6

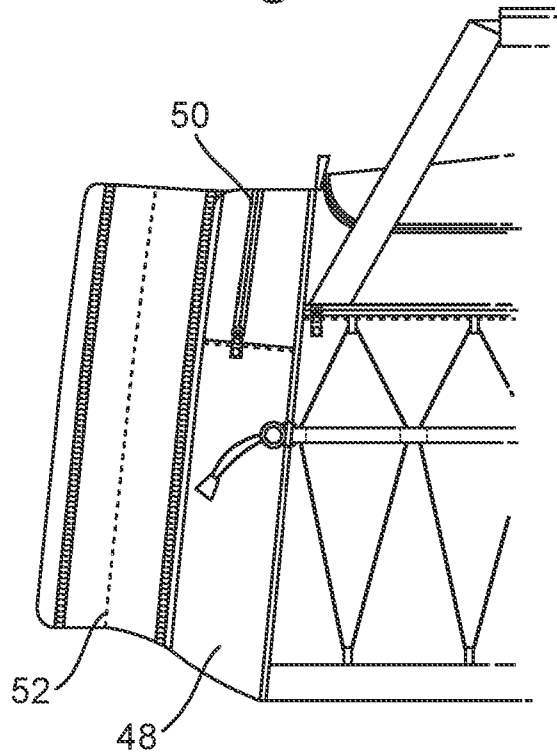


Fig. 7

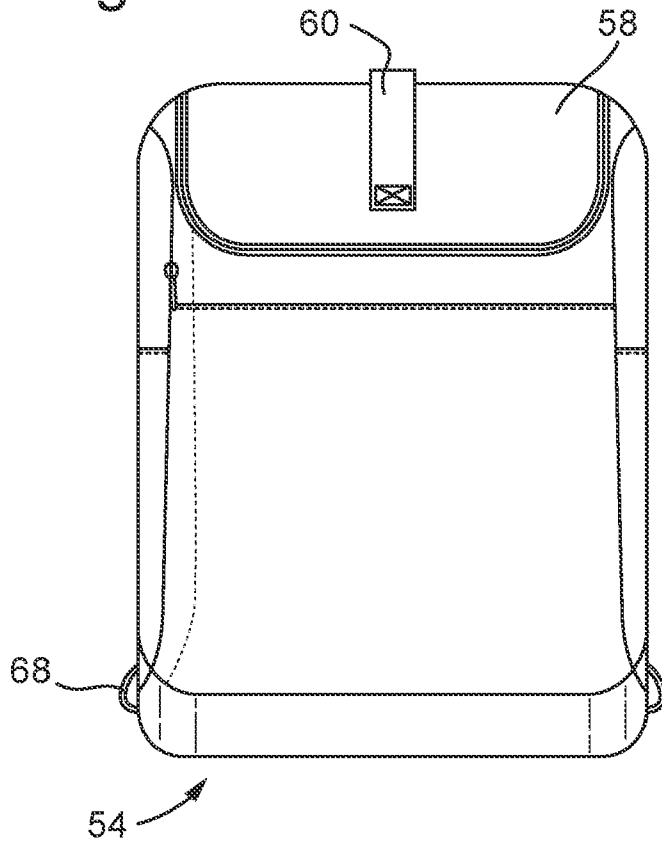
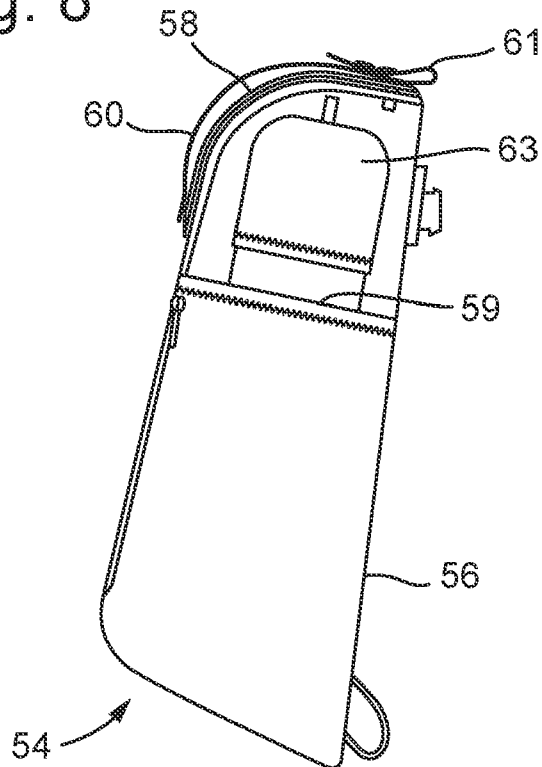


Fig. 8



## BAG ASSEMBLY

### Field of the Invention

This invention relates generally to a bag assembly in the form of, for example, a holdall or backpack, particularly but not exclusively suitable for use as a sports, gym  
5 or travel bag for allowing a user to transport, for example their sports kit, clothes and/or equipment back and forth to a sports facility or their clothes and other travel items to and from a travel destination.

### Background of the Invention

Sports and gym bags are well known and in widespread use worldwide for  
10 transporting sports clothing and equipment back and forth to leisure facilities of all types. In general, a gym or sports bag of this type tends to comprise a main hold-all section, usually having one or more pockets or pouches on the outer wall(s) for carrying a drinks bottle, for example, and/or inside for storing money or valuables, for example. Each time the bag is used, the user places the kit they will need into the  
15 main hold-all section and pocket(s) and takes the filled bag to the leisure facility, where the kit is used and then put back into the bag to be taken home, where the bag is emptied and then stored before being used again the next time.

If a user participates in two or more different sports or leisure activities, they either need separate bags for each activity, or they use the same generic bag for all of their  
20 sporting activities, which is not necessarily particularly convenient as some activities require more and/or bulkier kit/equipment than others, which means that they may end up using a much larger bag than necessary for some other activities, or managing with a bag that is not necessarily fit for purpose for others. Not only that, but the user will have to either completely unpack and repack the bag between  
25 activities or carry their kit/equipment for all activities, irrespective of which one they are actually taking part in on any specific occasion. Once again, this is inconvenient; whereas, if a user chooses to have a separate bag for each of their activities, there is not only the unnecessary additional expense to consider, but also the problem of storing several (often bulky) pre-packed gym bags when they are not in use.

30 In conventional sports or gym bags users in some cases often use multiple plastic bags to separate the items they store in the main hold all section of the bag to keep

their soiled or used items separate from their clean ones, this increases use of single use plastic bags which are damaging for our environment.

In relation to travel, users often find themselves having to pack their bags in a way that allows them to access certain items during their transit journey. However, this  
5 can lead to them needing to unpack and repack their bag during their transit journey in order to access those items, which can be especially difficult and inconvenient for other travellers when travelling by aircraft or train, where space is limited.

In addition, when a traveller reaches their destination, they often have to unpack their bags and repack a smaller bag in order to go sightseeing or attend an activity or  
10 excursion, which can be time consuming and inconvenient.

Furthermore, when travelling, passengers often store valuables such as passports, wallets and money in their bag. However, larger bags must usually be stowed out of sight of the traveller on an aeroplane or train, for example, which can result in theft.

Aspects of the invention seek to address at least one or more of these issues, and  
15 provide a holdall and bag assembly system that can quickly and conveniently be configured and/or converted for several different use cases.

### Statements of Invention

In accordance with an aspect of the present invention, there is provided a bag  
20 assembly comprising a first bag having an opening and a fastening means for releasably closing the opening, the first bag having opposing first and second end panels, the bag assembly further comprising a second bag having an opening and a fastening means for releasably closing the opening, the second bag having an outer  
25 end wall, wherein said second bag is releasably coupled at its outer end wall to a first outer end panel of the first bag by means of one or more cooperative magnetic fastener elements, the holdall further comprising one or more handles or straps for, in use, transporting said bag assembly comprising said first and second bags when so coupled together end-to-end.

Beneficially, the bag assembly may further comprise one or more mechanical  
30 connector means for releasably securing the second bag to the first bag. This



minimises the number of magnetic connectors required to secure the second bag to the first bag, which minimises the cost weight and structural complexity of the bag assembly, and also makes it easier to locate the cooperative magnetic fastener elements when attaching the second bag to the first bag, and makes it easier to  
5 release the second bag from the first bag, as required. However, this feature not only reduces the number of magnetic connectors required to secure the second bag to the first bag, but also acts to prevent easy removal and theft of the second bag, when the bag assembly is in use as a potential thief cannot simply pull the second bag away from the first bag as the user passes by.

10 Optionally, the or each cooperative magnetic faster elements may comprise a male magnetic connector and a female magnetic connector. In an exemplary embodiment, the male magnetic connector of the or each cooperative magnetic fastener element may be provided on the outer end wall of the first bag and the  
15 female magnetic connector of the or each cooperative magnetic fastener element may be provided on the first outer end panel of the second bag, or vice versa. It is considered particularly advantageous, at least in some embodiments, for the female magnetic connector to be provided on the second bag so that the outer rear panel thereof does not have protruding connector elements when the second bag is used independently.

20 In an embodiment, the bag assembly may comprise at least two cooperative magnetic fastener elements. Indeed, in a specific exemplary embodiment, the holdall may comprise only two cooperative magnetic fastener elements.

In an exemplary embodiment, said outer end wall of said second bag and first outer end panel of said first bag may be of substantially the same shape and size so as to  
25 create a substantially seamless look and profile from the first to the second bag, and one or more first magnetic connectors may be provided on said outer end wall of said second bag and one or more second magnetic connectors are provided at corresponding location(s) on said first outer end panel of said first bag.

In a preferred embodiment, the one or more cooperative magnetic fastener elements  
30 may be provided at an upper end of the outer end wall of the second bag and the first outer end panel of the first bag, when the hold all is oriented for normal use with the openings of the first and second bags at the top. In an exemplary embodiment,

the holdall may comprise at least two cooperative magnetic fastener elements located laterally spaced apart, and substantially aligned, although the present invention is not necessarily intended to be limited in this regard.

In an embodiment, the holdall may comprise a pair of mechanical connector means, one on each side of the said first outer end panel of the first bag. Optionally, the mechanical connector means may comprise hooks, and wherein a respective loop may be provided at a corresponding location on each side of the outer end wall of the second bag. In an exemplary embodiment, each hook may be coupled to the end of a (optionally elasticated) strap, the opposite end of each strap being attached to the first bag so as to act as anchor points to secure the second bag outer end wall against the outer end panel of the first bag.

Beneficially, the second bag may comprise an attachment strap having a free end with a fastening device, wherein said attachment strap can be connected to the second bag, or to said first bag, by means of said fastening device. When attached to said second bag, the attachment strap may form a loop to allow the second bag (independently of the first bag) to be hung on a coat hook or post, for example. The second bag may also comprise a carry strap for carrying said second bag independently of said first bag.

Optionally, the bag assembly may further comprise a third bag, coupled to, or formed integrally with, the second outer end panel of the first bag, said third bag having an opening and a fastening means for releasably closing said opening. The third bag may incorporate a releasable expansion strip for selectively increasing the volume of the third bag by releasing the expansion strip.

Optionally, the bag assembly may further comprise a releasable (optionally mesh) storage panel on an outer side wall of the first bag. In an embodiment, a pocket may be provided in the first bag for receiving said storage panel when not in use.

It will be appreciated that the second bag could be designed to hold, store and transport a variety of different types of items. Indeed, the second bag may comprise one of a number of interchangeable bags, depending on what is required to be held, stored and/or transported thereby. For example, the second bag could comprise a single compartment for carrying clothes, shoes or gym kit, for example, or it could

have two or more compartments and/or pockets, for carrying items such as a laptop computer, camera and ancillary equipment for such items.

These and other aspects of the invention will be apparent from the following detailed description.

#### 5 Brief Description of the Drawings

Embodiments of the invention will now be described, by way of examples only, and with reference to the accompanying drawings, in which:

10 Figure 1 is a schematic perspective view of a holdall (for use as, for example, a sports, gym or travel bag) according to an exemplary embodiment of the present invention;

Figure 2 is a schematic side view of a holdall according to an exemplary embodiment of the present invention;

Figure 3 is a schematic inside view of the main bag of a holdall according to an exemplary embodiment of the present invention;

15 Figure 4 is a schematic side view of a holdall according to an exemplary embodiment of the present invention;

Figure 5 is a schematic partial view of a main bag and second bag of a holdall according to an exemplary embodiment of the invention, illustrating a method of connection between them;

20 Figure 6 is a partial view of the holdall of Figure 2, illustrating the third bag thereof;

Figure 7 is a schematic front view of a removable second bag of a holdall according to an exemplary embodiment of the present invention; and

Figure 8 is a schematic side view of the second bag of Figure 7.

#### Detailed Description

25 Referring to Figure 1 to 4 of the drawings, a holdall in the form of, for example, a sports, gym or travel bag 10 according to an exemplary embodiment comprises a main bag 12 having a base 14 and an opposing upper (ceiling) wall 16 when the bag is oriented for use, as illustrated in Figures 1 and 2. The main bag 12 has a generally rectangular cross-section, with a pair of opposing side walls 17, 19 and a

pair of opposing end panels (20, 22 – Figure 2) between the base 14 and the upper wall 16. The height of a first end panel 20 is slightly larger than that of the second end panel 22, such that the upper wall 16 of the main bag extends at an acute angle (relative to horizontal, when the gym bag is oriented for use, as illustrated in Figures 1 and 2) from the top edge of the second end panel 22 to the top edge of the first end panel 20, and the volume of the main bag interior is greater adjacent the first end panel 20 than it is adjacent the second end panel 22.

The main bag 12 may be formed of a flexible, hard wearing, lightweight, moisture-resistant material, such as a polyurethane or PVC coated nylon or polyester. The base 14 is beneficially made of a higher density material than that of the upper wall 16, side walls 17, 19 and end panels 20, 22. In an exemplary embodiment, the upper wall 16, the side walls 17, 19 and the end panels 20, 22 of the main bag 12 may be formed of a PU coated nylon or polyester and the base may be formed of a heavier PVC coated tarpaulin, but other suitable materials will be apparent to a person skilled in the art and the present invention is not intended to be limited in this regard.

The upper (ceiling) wall 16 of the main bag 12 has an opening 18 that extends across a significant proportion of its length and width, and a closure flap 24 is coupled, via a circumferential zip fastening 26, to the side edges of the opening 18 such that the opening 18 can be releasably closed when the bag is in use, and opened to allow easy access to the interior of the main bag 12 as required.

Additional storage features, such as pockets, pouches or panels, may be provided on the outer side walls of the main bag 12. In the illustrated example, an elasticated bungee cord system 28, with toggle fastening 30, is provided on a first side wall 17, for holding, for example, sports, gym or travel equipment that is longer than the length of the main bag interior. On the other side wall (19 – Figure 4), an elasticated mesh storage panel 32 extends from the base 14, over the second side wall 19, and is releasably fastenable near the 'top' of the second side wall 19 by means of, for example, a pair of elasticated straps 34 that can be hooked onto respective hooks 36 at the 'top' of the second side wall 19. A zipped longitudinal storage pocket 38 may be provided along a portion of the length of the base 14 for receiving and storing the elasticated mesh storage panel 32, when not required for use.

A pair of handles 40 is provided to allow the sports, gym or travel bag 10 to be conveniently carried and transported by hand. A handle 40 (in the form of a loop) is provided at the top of each of the two side walls 17, 19 of the main bag 12, such that the top of each loop extends beyond the upper wall of the main bag 12, in use. A detachable carry strap (80 – Figure 1) may be provided, that extends between the two ends of the upper wall 16 of the main bag 12, to allow the sports bag 10 to be carried on a user's shoulder, if required. A telescopic handle (not shown) may also, or alternatively, be provided at one of the side walls 17, 19 of the main bag 12, to provide yet another means of conveying the sports bag 10. It will be appreciated by a person skilled in the art that there are numerous types of transport and conveying means that could be provided and used, and the present invention is not necessarily intended to be limited in this regard.

Referring specifically to Figure 3 of the drawings, the interior compartment provided by the main bag 12 may be provided with one or more interior pockets 42 and/or a storage flap 44 that is affixed at one end to the base 14 (e.g. between the base 14 and the second end panel 22), and has a pair of clip members 46 at the free end that can be releasably attached, via cooperative clip members 47, at the other end of the base 14.

Referring now additionally to Figures 5, 7 and 8 of the drawings, the sports bag 10 comprises a removable second bag 54, releasably attached to the outer wall of the first end panel 20 of the main bag 12. The second bag 54 may be formed of the same material as the main bag, although this is by no means essential. The second bag is designed to be used in conjunction with the main bag 12 or on its own, as an independent, smaller sports, gym or travel bag, as required. The second bag 54 comprises a rear panel 56 of substantially the same size and shape as the first end panel 20 of the main bag 12. The second bag 54 also has a base, a front wall (opposite the rear panel) and a pair of opposing side walls defining an interior compartment. A zipped flap 58 is provided over the open ("top") end of the second bag 54 to allow the second bag 54 to be releasably closed so that the interior compartment can be selectively accessed and sealed as required. One or more side pockets 59 or pouches may be provided on the outside of the side and/or front walls of the second bag 54 for carrying smaller items such as, for example, a water bottle or the like. A small pouch or cover 63 may be provided over one such pocket, for

covering a water bottle to secure and protect it. Of course, one or more interior pockets or pouches (not shown) may be provided inside the second bag compartment, as required. In a preferred embodiment, a bag, such as a drawstring bag or pouch may be provided (removably or otherwise) inside the second bag 54, for receiving, for example, wet clothes or shoes after use.

A carry strap 60 is fixed at both ends to the front wall of the second bag 54, over the zipped flap 58. At one end of the carry strap 60 (nearest the top of the second bag 54), there is provided an attachment strap 61, fixed at one end and having a free end that is releasably connectable to the main bag 12, via a loop 62 on its upper wall 16, close to the first end panel 20. Once released, it can be secured to itself at the top of the second bag 54, thereby forming a loop that can be used to hang the second bag (independently) from, for example, a coat hook or post.

The second bag 54 is releasably attached to the main bag 12 by means of a pair of self-locating magnetic connectors at the 'upper' end of the adjoining end panels 20, 56 and a pair of mechanical connectors at the 'lower' end of the adjoining end panels 20, 56. More specifically, and referring particularly to Figure 5 of the drawings, a magnetic connector element is provided near each of the "top" two corners of the adjoining end panels 20, 56 of the main bag 12 and the second bag 54 respectively. In the illustrated embodiment, a male magnetic connector element 64 is provided near each "top" corner of the end panel 56 of the second bag 54, and a female magnetic connector element 66 is provided near each "top" corner of the first end panel 20 of the main bag 12, the male and female connector elements being aligned when the end panels 56, 20 of the second bag 54 and the main bag 12 are aligned. In use, when the two sets of magnetic connector elements 64, 66 are brought sufficiently close together, with the main bag and the second bag located end to end and the adjoining end panels 20, 56 thereof aligned, the attractive magnetic force between them acts to draw the male connector elements into the recesses provided in the female magnetic connector elements and thereby acts to releasably attach the second bag 54 to the main bag 12.

However, this magnetic connection is not necessarily sufficient to hold the two bags securely together as the sports bag is transported and used, especially if the second bag 54 is filled and, therefore, relatively heavy. Additional magnetic connectors

could, of course, be used to obviate this issue. However, the more magnetic connectors that are used, the less effective becomes the self-locating properties of the magnetic connection system, as each magnetic connector pair would have to be carefully aligned, which reduces the overall speed and convenience with which the second bag 54 can be re-attached to the main bag 12, and effectively defeats the object of providing a quick and convenient means of connecting the two bags together end to end, when required. Furthermore, additional magnets would increase the complexity, weight and cost of the overall system, which is clearly undesirable. Still further, if only magnets are used to secure the second bag to the main bag, then the risk of theft of the second bag is greatly increased.

Accordingly, it is preferred to utilise mechanical connection means at the 'lower' end of the end panels 20, 56 to supplement the magnetic fastening and prevent the second bag 54 from "flapping" against the main bag 12, in use. In the illustrated exemplary embodiment, such mechanical connection means comprise a pair of (optionally elasticated) loops 68 on the second bag 54, one loop being located on each side edge of the end panel 56, close to the 'lower' corner thereof (when the second bag 54 is oriented for use, with the zipped flap 58 at the opposite end); and a pair of hooks 70 on the main bag 12, one hook 70 being attached, via a respective piece 72 of flexible (optionally elastic) material, on a respective side wall 17, 19 near the 'bottom' corner of the main bag 12. Thus, in use, a user can quickly and conveniently 'snap' the second bag 54 onto the end panel 20 of the main bag 12 using the magnetic connectors 64, 66 and then secure the second bag 54 by placing the hooks 70 through the loops 68. Optionally, the second bag 54 can be further secured by fastening the attachment strap 61 through the loop 62 on the main bag 12. To remove the second bag 54 for independent use, a user can simply unfasten the attachment strap 60 from the main bag 12, remove the hooks 70 from the loops 68 and then pull the second bag 54 upward relative to the main bag 12 to release the magnetic connectors 64, 66, thereby providing a quick and easy release motion.

Referring back to Figure 2 of the drawings, and also to Figure 6, a third bag 48 is attached to the main bag 12, over the outer wall of the second end panel 22. The third bag 48, which may be, at least in some embodiments, permanently affixed to the main bag 12, comprises a generally closed square/rectangular shape, with a zipped opening 50 in the 'upper' side wall (when the sports bag 10 is oriented for

use) to allow access to the compartment within. The third bag 48 may be formed of the same material as the main bag 12, although this is by no means essential. The third bag 48 may have a zipped (or otherwise releasable) expansion panel 52 that allows the volume of the third bag 48 to be selectively increased (or decreased) as  
5 required. A removable pouch or bag (not shown) may be provided inside the third bag 48 for receiving, for example, wet or soiled clothes after use.

It will be apparent to a person skilled in the art, from the foregoing description, that modifications and variations can be made to the described embodiments without departing from the scope of the invention as defined by the appended claims. For  
10 example, whilst a holdall has been described above, by way of example, the bag assembly could instead comprise a backpack configured to be carried on a user's back, in use. In this case, shoulder straps may be provided on the first bag and/or the second bag to allow the bag assembly and/or the first and second bags independently to be carried on a user's back.



## CLAIMS

1. A bag assembly comprising a first bag having an opening and a fastening means for releasably closing the opening, the first bag having opposing first and second end panels, the bag assembly further comprising a second bag having an opening and a fastening means for releasably closing the opening, the second bag having an outer end wall, wherein said second bag is releasably coupled at its outer end wall to a first outer end panel of the first bag by means of one or more cooperative magnetic fastener elements, the bag assembly further comprising one or more handles or straps for, in use, transporting said holdall comprising said first and second bags when so coupled together end-to-end.
2. A bag assembly according to any of the preceding claims, further comprising one or more mechanical connector means for releasably securing the second bag to the first bag.
3. A bag assembly according to claim 1, wherein the or each cooperative magnetic fastener elements comprises a male magnetic connector and a female magnetic connector.
4. A bag assembly according to claim 3, wherein the male magnetic connector of the or each cooperative magnetic fastener element is provided on the outer end wall of the first bag and the female magnetic connector of the or each cooperative magnetic fastener element is provided on the first outer end panel of the second bag, or vice versa.
5. A bag assembly according to any of the preceding claims, comprising at least two cooperative magnetic fastener elements.
6. A bag assembly according to any of the preceding claims, wherein said outer end wall of said second bag and first outer end panel of said first bag are of substantially the same shape and size, and one or more magnetic connectors are provided on said outer end wall of said second bag and one or more second magnetic connectors are provided at corresponding location(s) on said first outer end panel of said first bag.
7. A bag assembly according to any of the preceding claims, wherein said one or more cooperative magnetic fastener elements is provided at an upper end of the

outer end wall of the second bag and the first outer end panel of the first bag, when the hold all is oriented for normal use with the openings of the first and second bags at the top.

8. A bag assembly according to claim 7, comprising at least two cooperative  
5 magnetic fastener elements located laterally spaced apart, and substantially aligned. Although the present invention is not necessarily intended to be limited in this regard.

9. A bag assembly according to any of the preceding claims, comprising a pair of mechanical connector means, one on each side of the said first outer end panel of the first bag.

10 10. A bag assembly according to claim 9, wherein said mechanical connector means comprise hooks, and wherein a respective loop is provided at a corresponding location on each side of the outer end wall of the second bag.

11. A bag assembly according to claim 10, wherein each hook is coupled to the end of a strap, the opposite end of each strap being attached to the first bag.

15 12. A bag assembly according to any of the preceding claims, wherein said second bag comprises a carry strap.

13. A bag assembly according to any of the preceding claims, wherein the second bag comprises an attachment strap having a free end with a fastening device, wherein said attachment strap is configured to be releasably connectable to said first  
20 bag, by means of a fastening device. Once released, it can be secured to itself at the top of the second bag thereby forming a loop that can be used to hang the second bag (independently) from, for example, a coat hook or post.

14. A bag assembly according to any of the preceding claims, further comprising a third bag, coupled to, or formed integrally with, the second outer end panel of the  
25 first bag, said third bag having an opening and a fastening means for releasably closing said opening.

15. A bag assembly according to claim 14, wherein said third bag incorporates a releasable expansion strip for selectively increasing the volume of the third bag by releasing the expansion strip.

16. A bag assembly according to any of the preceding claims, comprising a releasable storage panel on an outer side wall of the first bag.

17. A bag assembly according to claim 15, wherein a pocket is provided in the first bag for receiving said storage flap when not in use.



**Application No:** GB2207095.7

**Examiner:** Mr Paul Makin

**Claims searched:** 1-17

**Date of search:** 24 October 2022

**Patents Act 1977: Search Report under Section 17**

**Documents considered to be relevant:**

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X	1,3- 9,12,14- 17	US 2019/0298027 A1 (SCHURMAN) whole document
X	1,3- 8,12,14- 17	US 2007/0045138 A1 (SCHWEITZ) whole document
X	1- 8,12,13,1 6,17	US 2020/0187629 A1 (SNIFFEN) whole document
X	1-5,7- 10,16,17	KR 200489991 Y1 (GWON) whole document
X	1-5,9- 13,16,17	KR 102289365 B1 (WILD EARTH INC) whole document

**Categories:**

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

**Field of Search:**

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC<sup>X</sup> :

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Worldwide search of patent documents classified in the following areas of the IPC

A45C
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The following online and other databases have been used in the preparation of this search report

WPI, EPODOC
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**International Classification:**

<b>Subclass</b>	<b>Subgroup</b>	<b>Valid From</b>
A45C	0013/10	01/01/2006
A45C	0003/00	01/01/2006
A45C	0007/00	01/01/2006