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(54) Title: A TRANSPORT CONTAINER WITH A CHAIR

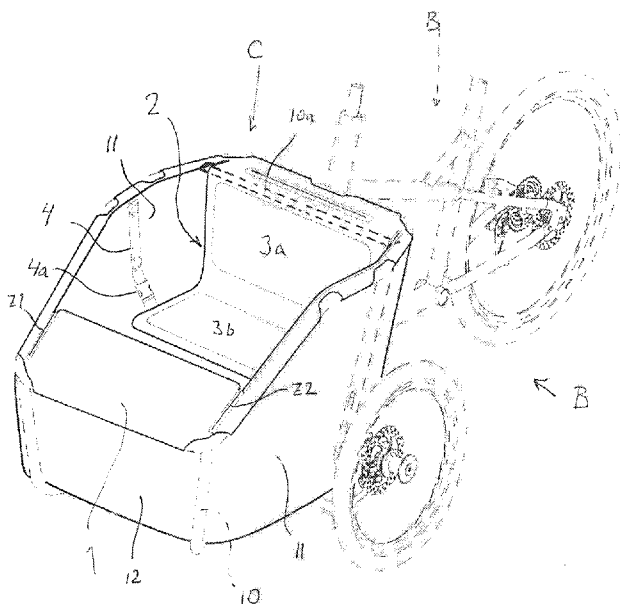


Fig. 2

(57) Abstract: A transport container (C,K) is disclosed, which is provided with an upper opening, at least partially defined by an upper part of a rigid frame (10,41), and a chair for seating one or more persons safely within the container, and a flexible cover member (1, 2) covering said upper opening and serving as a weather protective enclosure when not in use for transporting persons. The transport container can be arranged e.g. on a bicycle (B), a carriage (CA), a motor-driven vehicle, or a watercraft (K). The flexible cover member (1,2) has a foldable, convertible portion (2) which is convertible between a rest position, where it covers said upper opening of the container, and an active position, where it extends downwardly from said upper part of the rigid frame (10,41) so as to form a chair. The foldable, convertible portion (2) of the flexible cover comprises a back rest member (3a), which extends downwardly from said upper opening in said active position, and an adjoining rigid seat member (3b), which adjoins the back rest member and is positioned substantially horizontally in said active position.



## A TRANSPORT CONTAINER WITH A CHAIR

### FIELD OF THE INVENTION

The invention relates to a transport container with a chair, especially for transport devices or vehicles, such as bicycles, carriages or watercrafts, e.g. kayaks. In particular, the transport container is of the kind comprising a rigid frame, an upper opening, a chair for seating of at least one person or animal safely within the container, and a flexible cover member covering the upper opening and serving as a weather protective enclosure when the container is not in use for transporting any person or animal. The invention also relates to such a transport container being integrated with a vehicle or a carriage, or being configured as a watercraft.

The chair of the transport container can be used for transporting persons or animals, especially one or more children, elderly or disabled persons, or animals, such as dogs, cats or other pets.

### BACKGROUND OF THE INVENTION AND PRIOR ART

In recent years it has become quite frequent to transport small children on bicycles in a relatively small transport container. One form of such bicycles or carriages has, at the front part thereof, a pair of spaced apart wheels and a transport container being disposed between these front wheels. One or more children can be seated safely on a seat in the container, facing forwardly. Of course, each child should be secured by a seat belt so as to be prevented from falling or climbing out of the container.

It is previously known to provide a box-like transport container provided with an upper opening, at least partially defined by an upper part of a rigid frame, and a chair for seating one or more children safely within the container, and a flexible cover member covering the upper opening and serving as a weather protective enclosure, so as to prevent rain or dust from reaching the interior of the container, when not in use for transporting children.

Such a box-like container, e.g. for a bicycle, is known from the published UK patent application GB 2490308 A. The container can be arranged on a separate carriage or at the front or the back of a bicycle. The upper opening is closed by a flexible cover member, formed by a coated fabric. It may be provided with windows so that a child seated on a seat therein is safely accommodated within the container and can look out through the windows.

However, for such a device, it is necessary to provide a separate member forming an interior chair or the like, with an associated back rest and a seat being fastened to a frame of the device. The chair is thus provided as a separate element, and the total device is therefore rather complicated and expensive to manufacture and assemble.

Another, similar transport container, for use on bicycles, is disclosed in the US patent 4,367,829. Here, a rigid top member is removable from the container and can be moved to a second position, where it is inverted and partially inserted into the container so as to form a seat and a back rest for a child. The container has two downwardly extending side portions, one for each leg of the child, these side portions being positioned on opposite sides of one of the cycle wheels.

#### OBJECT OF THE INVENTION

An object of the present invention is to provide a very simple and inexpensive transport container including a protective cover element and a chair that is integrated with the container. The transport container should be light-weight and easy to mount on or be integrated with a transport device, such as a bicycle, a carriage, a vehicle, or a watercraft.

#### SUMMARY OF THE INVENTION

This object is achieved for a transport container of the kind indicated in the opening paragraph, wherein

- the flexible cover member has a foldable, convertible portion which is convertible between a rest position, where it covers said upper opening of the container, and an active position, where it extends downwardly from said upper part of the rigid frame so as to form a chair, and
- the foldable, convertible portion of the flexible cover member comprises a back rest member, which extends downwardly from said upper opening in said active position, and an adjoining rigid seat member, which adjoins the back rest member and is positioned substantially horizontally in said active position.

Further features of the invention are included in the dependent claims, and will be explained further below in a detailed description of some preferred embodiments of the invention.

#### SHORT DESCRIPTION OF THE DRAWINGS

Fig. 1 is a perspective view of a transport container mounted on a bicycle having two spaced apart front wheels;

Fig. 1a shows the transport container in a position where a foldable, convertible portion of an upper cover member is half-open, so that the interior of the container is accessible;

Fig. 2 shows the transport container, in a similar view, after converting the upper cover member into a chair;

Fig. 3 is a similar perspective view, also showing an upper fence part of a rigid frame; and

Fig. 4 shows, also in a perspective view, an embodiment in the form of a carriage that can be coupled to bicycle; and

Figs. 5a and 5b show an embodiment in the form of a kayak having an upper opening provided with a cover member with a foldable, convertible portion, in a passive position and an active position, respectively.

#### DETAILED DESCRIPTION OF SOME PREFERRED EMBODIMENTS OF THE INVENTION

Fig. 1 illustrates a transport container C for a bicycle B (drawn in dashed lines) where an upper opening of the container, formed by an upper part of a frame 10, is covered by a cover member 1, 2 made of a flexible material. The flexible material comprises, at a front part, a relatively small rectangular top portion 1 which is permanently secured to the rigid frame 10. The container also comprises two side wall portions 11 (see also fig. 1a and fig. 2), a front wall portion 12, a rear wall portion (the rear wall portion of the container C is not visible on the drawings) and a bottom portion (also not visible on the drawings). At the front side of the container, the front top portion 1 of the cover member is permanently fastened to the front wall portion 12 of the box-like container. Alternatively, it can be made in one piece with the front wall portion 12. At the front part of the box-like container, the top portion 1 of the cover member may be opened by zippers Z1, Z2 or, alternatively, by hook and loop fasteners or the like (not shown).

A rear, somewhat larger top portion 2 of the cover member will normally cover the rest of the upper opening of the container C and comprises two integral parts 2A, 2B, each being provided with an inner rigid sheet member 3a, 3b, respectively. The cover member, or at least the larger top portion thereof, is composed of at least two layers so as to enclose each of the rigid sheet members 3a, 3b, in an open or closed pocket. The side edge portions of the rear top portion 2 are connected to the frame 10 and the side portions 11 of the container by means of zippers Z3 and Z4. An outer rim part 2C, 2D of the cover member, located on each side of the rear top portion 2, is folded over the associated part of the frame 10 and is securely fastened, e.g. by sewing or by means of separate fasteners (not shown).

In the illustrated embodiment, the upper part of the frame 10, and the upper opening of the container C, comprises a rear part, being covered by the cover member part 2A, and a front part, which is covered by the cover member part 2B and the front top portion 1 of the cover member (see fig. 1). The front part of the opening is inclined somewhat obliquely downwards, so that a person or child who is seated within the container will be able to move

the legs forwardly and to look around freely in the forward direction. The inclined front part of the opening will facilitate for a person or a child to enter or leave the container.

The rigid sheet members 3a,3b , arranged inside the two parts 2A, 2B of the top portion 2, between the two layers of the cover member, will make sure that the relatively large rear top portion 2, in its rest position, does not bend down so as to assemble water or snow. Rather, these parts 2A and 2B are substantially planar and will be kept relatively clean and dry. It is rather easy for the user to wipe off anything that will temporarily find its way onto the top cover element in this rest or passive position.

In the passive or rest position shown in fig. 1, the box-like container can be used for transporting objects of any kind, inside the container and under the cover member, these objects being protected by the cover member 1,2 during transport. It is easy and convenient to load the container by simply folding up the front part 2B,3b of the convertible portion 2 into the half-open position shown in fig. 1a, leaving a front opening 13 for easy access to the interior of the container.

An important aspect of the invention is that the rear top cover portion 2, upon undoing the zippers Z3 and Z4, can easily be folded down (see fig. 2), at its rear edge portion, so as to form a chair where a person, or one or two (or even more) children or animals, can be seated. Here, the rigid sheet member 3a will form a back rest member, whereas the rigid sheet member 3b will form a substantially horizontal seat member for the person, child, children or animals. The seat member, formed by the rigid sheet member 3b, inside the flexible material of the cover member, will be retained in position on each side by a side strap 4, which is secured to the upper part of the frame 10 or an upper part of the side wall 11 of the container and which is provided with a quick coupling member 4a. In this way, the flexible cover member 1, 2 can easily be converted between the passive and active positions shown in figs. 1 and 2. The side strap 4 on the left hand side (seen in a forward direction of the bicycle) of the container is not visible in fig. 2.

In the active position shown in fig. 2, the back rest member 3a may be oriented substantially in a vertical plane or it may be inclined somewhat, at a small angle with a vertical plane. A horizontal bar 10a, forming part of the frame 10, will ensure that the cover member of flexible material will be uniformly supported along the upper rear portion thereof, as will be seen in figs. 2 and 3.

Similarly, the seat member 3b extends from the lower edge of the back rest member 3a and will be positioned substantially in a horizontal plane, or it may be inclined at a small angle, preferably upwardly, from the lower edge of the back rest member 3a.

Fig. 3 illustrates two further, optional features of the invention, i.e. a seat belt 5a, 5b for each one of two children, and an upper protective and rigid frame member 10A serving as a fence member to protect the person or children in case the bicycle falls over accidentally. Of

course, the upper frame or fence member should be configured so as to reach above the person's or children's heads when they are seated in the respective belts 5a, 5b.

The transport container with the chair 3a, 3b is light-weight. The frame is preferably made of aluminum or some other rigid and light-weight material, and the wall and top portions of the container are also made of a light, flexible material, e.g. of a textile or plastic material, possibly being reinforced by synthetic fiber materials. In spite of the light weight, the bicycle B and the container C provided with the chair 3a, 3b is reasonably safe and very easy to handle, and it is also easy to convert it between a rest position, as shown in fig. 1, and an active position, as shown in figs. 2 and 3.

Preferably, the wall and bottom portions 11,12 of the container C are constituted by a textile material, possibly being reinforced by plastic threads or webs.

The material of the cover member 1,2 may be of the same kind. The rigid sheet members 3a,3b may be made of wood, plywood, a rigid plastic material, a light-weight sheet metal material, e.g. of an aluminum alloy, or a combination of such materials.

It will be understood that the transport container is easy to manufacture at low cost. The chair is simply formed by the parts 2A, 3A and 2B, 3B of the cover member, and the container itself is composed of a box-like frame 10 and a flexible material having side wall portions, a front wall portion, a rear wall portion and a bottom wall portion.

The transport container with a chair may be arranged on or be integrally mounted on any vehicle, carriage or watercraft, two further examples being shown in figs. 4 and 5a,5b.

In fig. 4, there is shown a simple carriage CA, with a transport container C of the same kind as shown in figs. 1,2,3, two wheels, and a handle 20 that can be coupled to a motor-driven vehicle (not shown), a motor cycle (not shown), or a regular bicycle (not shown). Of course, the handle may be provided with a standard coupling member (not shown) for this purpose.

Of course, especially on bicycles or carriages, as shown in any one of figs. 1, 2, 3,4, it is also possible to orient the container so that the person's or child's chair faces backwards, e.g. being located behind the seat of a bicycle, possibly between two rear wheels thereof, or on a carriage of the kind shown in fig. 4, with the container turned around.

The bicycle, as shown in fig. 1, or being equipped to pull the carriage shown in fig. 4, may have an engine to facilitate easy transportation, especially over large distances.

A somewhat different embodiment of the invention is illustrated in figs. 5a and 5b, where a kayak K is provided with a regular opening or cockpit 30 (drawn in dashed lines) for seating a paddler, and a further upper opening 40 for another paddler or a "passenger" (a grown up person or a one or more children). The further upper opening 40 is defined by an elongated rigid frame 41. A flexible cover member 1,2A,2B is fixed to the rigid frame 41 and comprises a front portion 1 and a convertible, foldable portion 2, just as the flexible cover member 1,2

in fig. 1. The only difference is that the upper opening and the upper part of the frame, in the container shown in fig. 1, is divided into a rear, substantially horizontal part and a front part which is inclined. In fig. 5a and 5b, on the other hand, the upper opening and the rigid frame 41 extends in one plane, being flush with or slightly elevated in relation to the upper closed deck 50 of the kayak. Like in fig. 1, the convertible, foldable portion 2 of the flexible cover member 1,2A,2B in figs. 5a and 5b is convertible between a passive or rest position, as shown in fig. 5a, and an active position, as shown in fig. 5b. In the latter position, the back rest member 3a extends down into the interior of the kayak (which is now regarded as a "container", whereas the rigid seat member 3b is positioned in a substantially horizontal position, held in place by side straps 4.

Of course, the rear opening 30 may be configured in exactly in the same way as the fully drawn front opening 40. There may also be more than two such upper openings, with associated flexible cover members 1,2, on the closed upper deck of the kayak.

Such openings and associated cover members may be arranged also on other kinds of watercrafts, such as sailing boats or motor-driven boats.

Those skilled in the art can modify the transport container within the scope of the appended claims. The sheet members 3a, 3b may form integral parts of the cover member 2, rather than separate members inside a closed or open pocket of the cover member. The sheet members may alternatively be composed of a multitude of transversal stiff members each having an elongated rectangular shape, or a grid of stiff members forming rectangular units with an outer shape corresponding to the illustrated sheets 3a and 3b.

In case the cover member 1, 2 is formed as a unitary, integrated member it can be provided with a hinge portion at the transition between the two rigid or stiff parts corresponding to the sheets 3a, 3b. Such a hinge portion can be a thinner portion, which is easily bendable or foldable, or a mechanical hinge structure with interconnected, mutually movable portions secured to the respective parts 3a, 3b.

Moreover, the container may be constituted by a rather rigid shell structure, e.g. molded in a plastics or a synthetic resin material, or a composite structure composed of different, preferably light-weight materials.

## CLAIMS

1. A transport container (C, K) comprising a rigid frame (10,41), an upper opening, a chair for seating at least one person or animal safely within the container, and a flexible cover member (1,2) covering said upper opening and serving as a weather protective enclosure when the container is not in use for transporting any person or animal, characterized in that
  - said chair is formed, when needed, by said flexible cover member (1,2),
  - the flexible cover member (1,2) has a foldable, convertible portion (2) which is convertible between a rest position, where it covers said upper opening of the container, and an active position, where it extends downwardly from said upper part of the rigid frame (10) so as to form said chair, and
  - the foldable, convertible portion (2) of the flexible cover member comprises a first member (3a), which extends downwardly from said upper opening in said active position, so as to form a back rest member of said chair, and a rigid second member (3b), which adjoins said first member and is positioned substantially horizontally in said active position, so as to form a seat member of said chair.
2. The transport container as defined in claim 1, wherein said first member (3a), when being converted into said active position, is located entirely below said upper opening of the container, so that at least the lower half of a person or an animal being seated in the chair is enclosed all around within said transport container, from all sides and from below.
3. The transport container as defined in claim 2, wherein said rigid frame (10) has an upper part that defines said upper opening and is obliquely inclined downwards from a rear part, located adjacent to said first member (3a), to a lower front part located at a distance from said second member (3b) in the active position of said foldable, convertible portion (2).
4. The transport container as defined in claim 3, wherein said rear part of said frame (10) comprises a transversal rear element (10a), from which said back rest member depends in said active position, and a transversal front element (10a) at said lower front part.
5. The transport container as defined in claim 2, wherein said transport container is substantially box-like and comprises side, front and back walls (11, 12) and a bottom wall, all these walls being made of a flexible light-weight material and being supported by said rigid frame (10).

6. The transport container as defined in claim 2, wherein said second member (3b), in said active position, is secured to said rigid frame (10) by means of straps (4) and associated quick coupling members (4a).
7. The transport container as defined in claim 1, wherein said rigid frame (10) comprises an upper fence part (10A) serving as a mechanical protection for a person or animal seated in said chair.
8. The transport container as defined in claim 1, wherein said first member (3a) and said second member (3b) are formed by two rigid sheet members which are attached to said foldable, convertible portion (2) of said flexible cover member.
9. The transport container as defined in claim 8, wherein said rigid sheet members (3a,3b) are spaced apart from each other, so that the flexible material between these rigid sheet members (3a,3b) is foldable.
10. The transport container as defined in claim 1, wherein said foldable, convertible portion (2) of the flexible cover member is at least partially detachable from said container, e.g. by means of zippers (2C,2D) or hook and loop fasteners.
11. The transport container as defined in claim 1, wherein said flexible cover member comprises at least two portions (1, 2) which are detachable from each other, one of them (2) forming said foldable, convertible portion.
12. The transport container (C) as defined in claim 1, wherein the transport container is integrated with a vehicle.
13. The transport container (C) as defined in claim 12, said vehicle being a bicycle.
14. The transport container (C) as defined in claim 12, said vehicle being a carriage.
15. The transport container (K) as defined in claim 1, wherein the transport container is configured as a watercraft, e.g. a kayak.



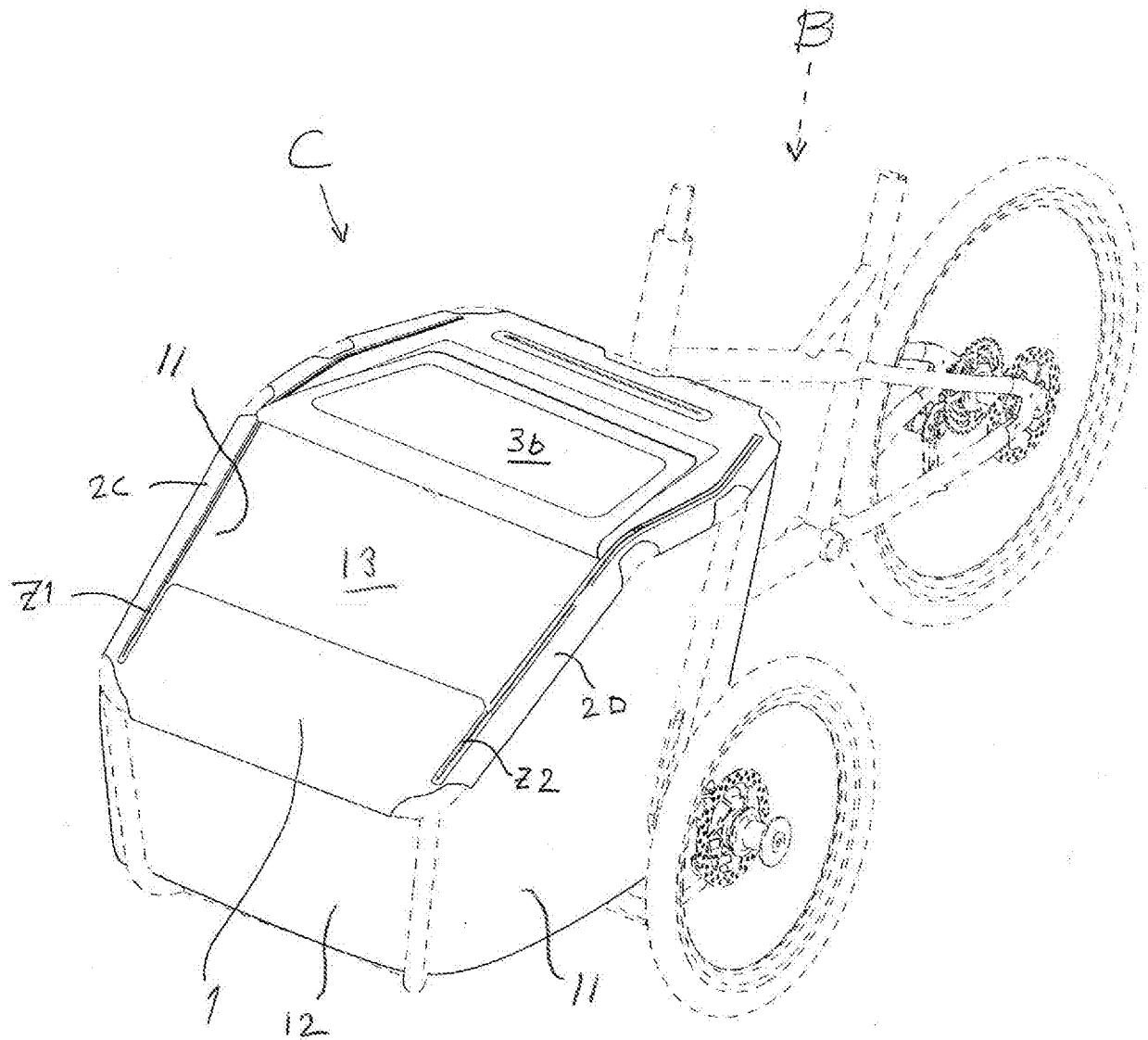


Fig. 1a



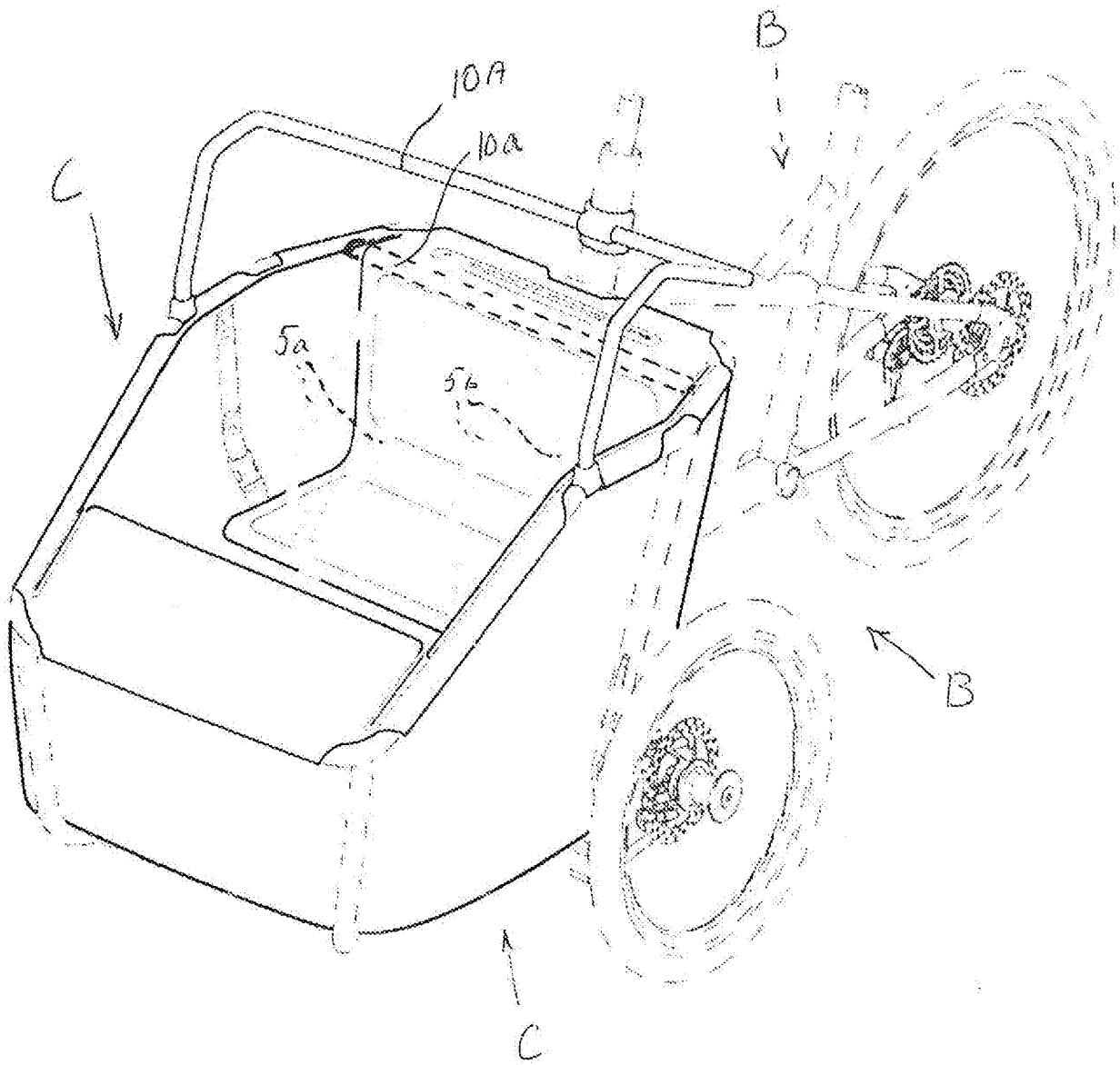
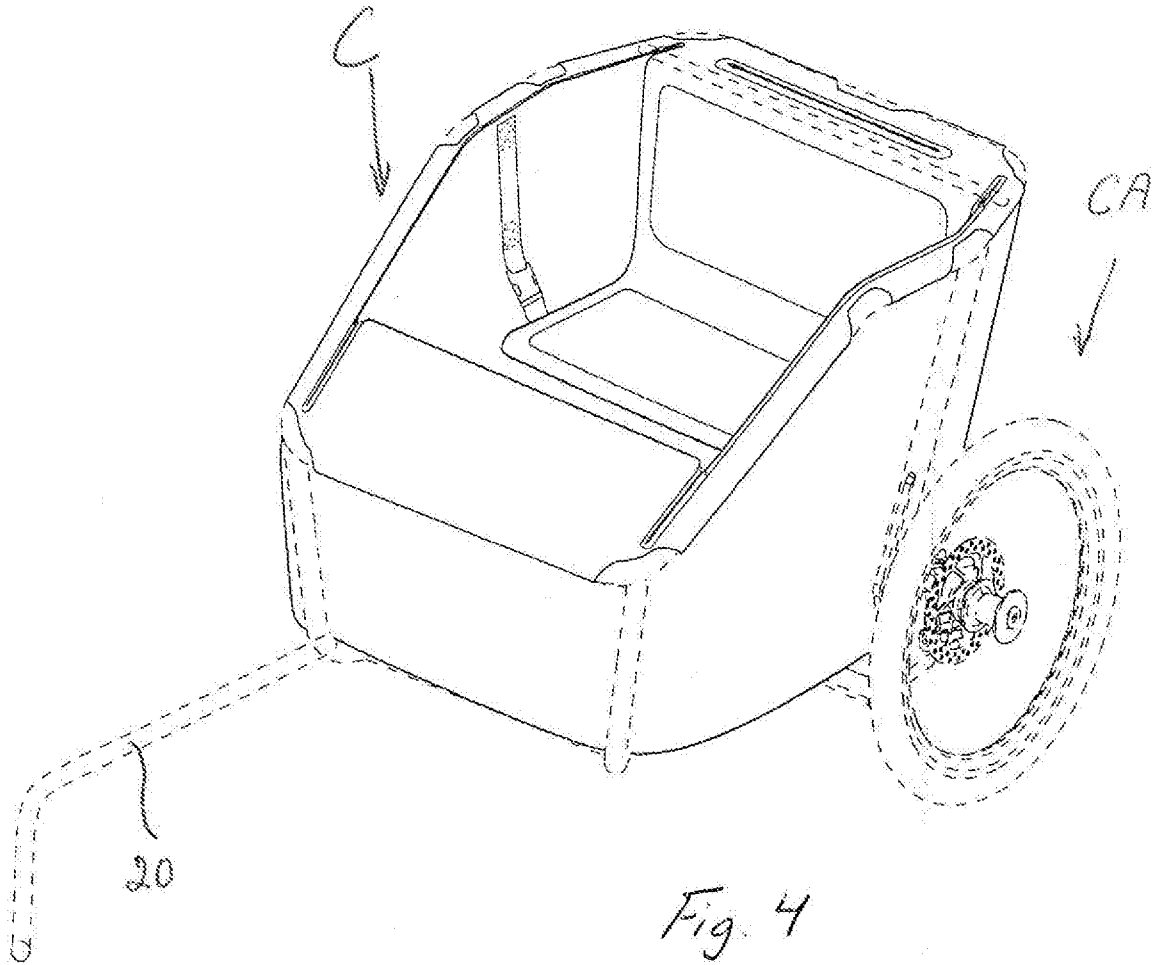
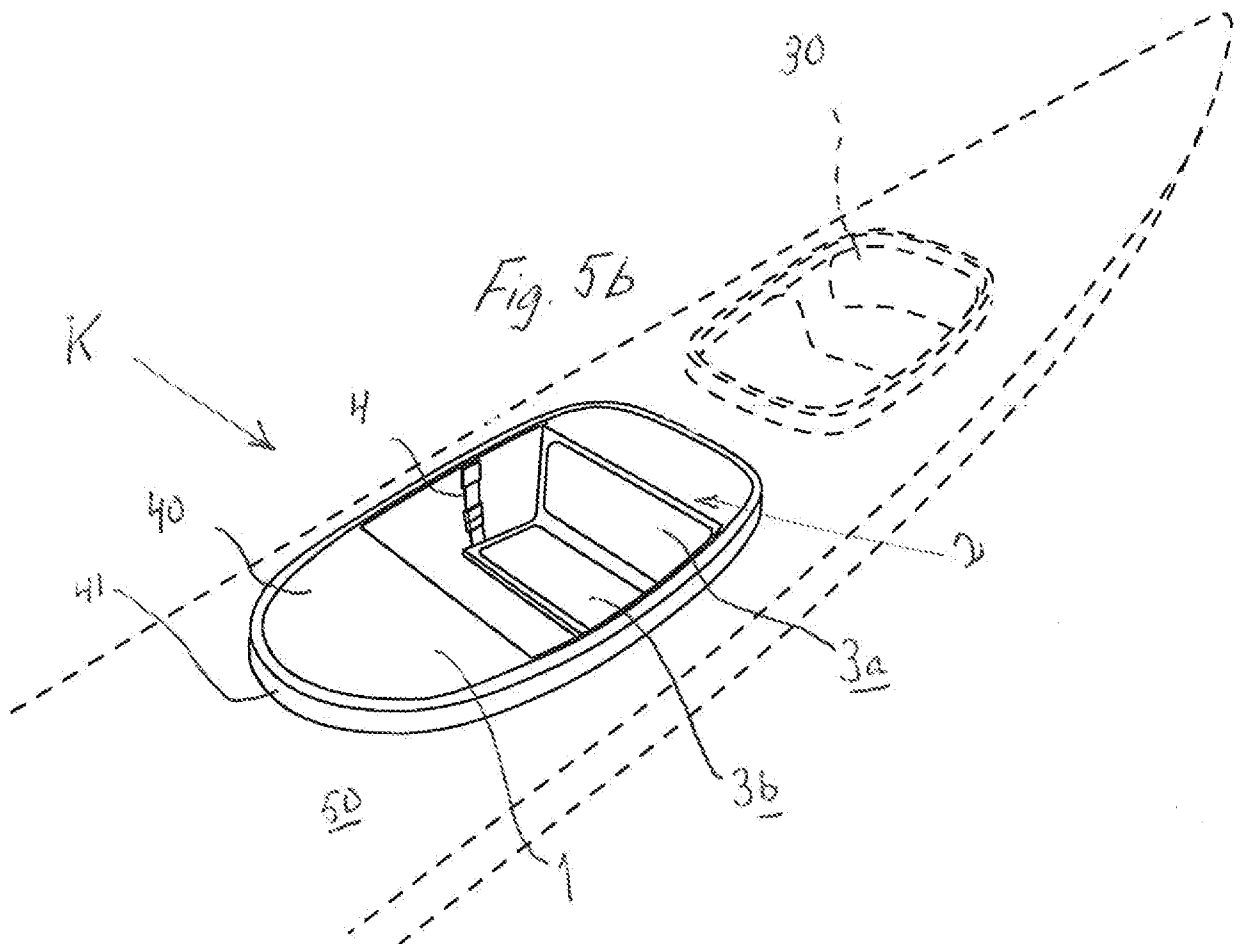
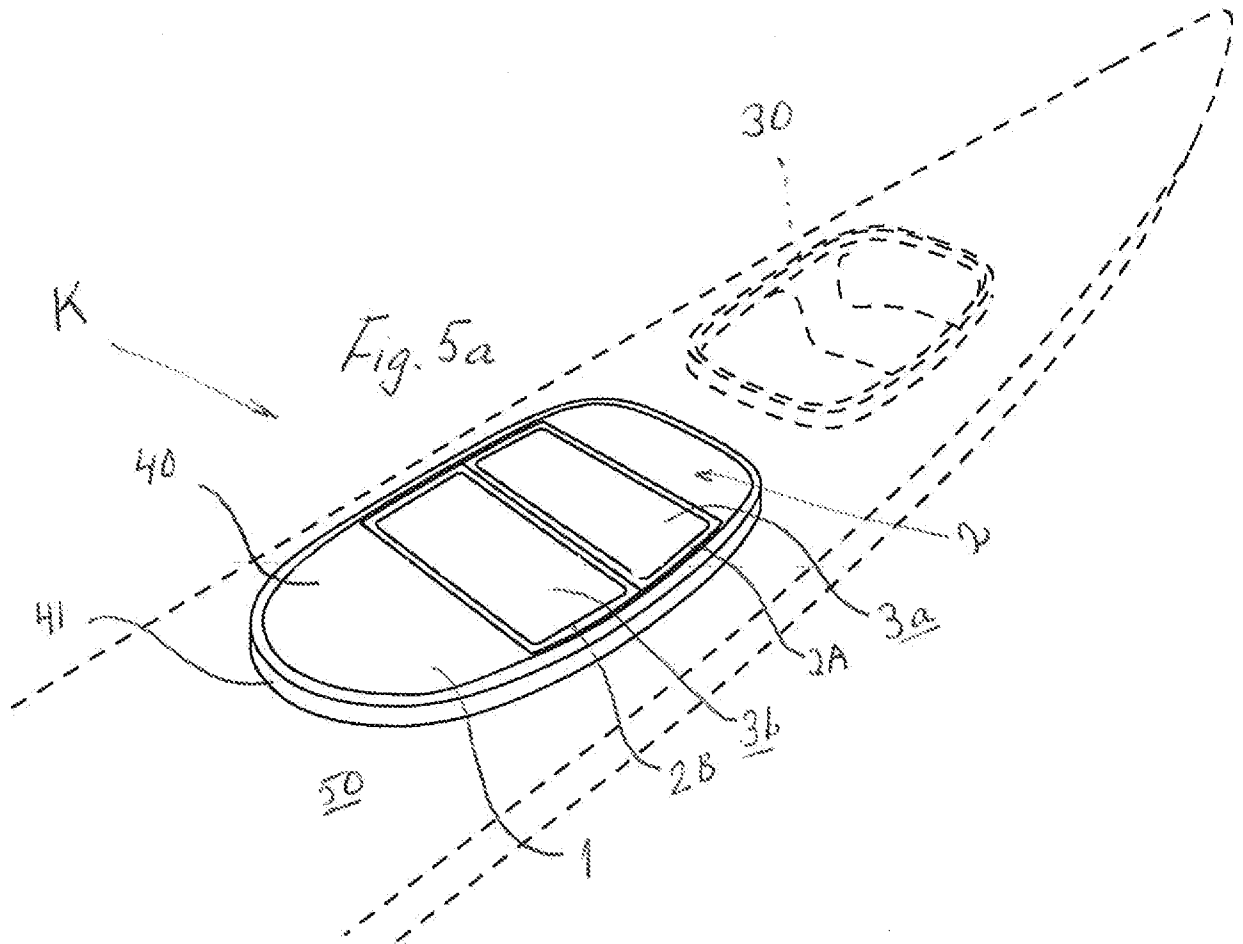


Fig. 3





## INTERNATIONAL SEARCH REPORT

International application No.  
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A. CLASSIFICATION OF SUBJECT MATTER		
IPC: see extra sheet		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols)		
IPC: A45F, B60K, B60N, B60P, B62B, B62D, B62K, B63B		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
SE, DK, FI, NO classes as above		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
EPO-Internal, PAJ, WPI data		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5785333 A (HINKSTON PAUL ET AL), 28 July 1998 (1998-07-28); column 1, line 34 - column 1, line 49; figure 2 --	1-15
A	GB 175742 A (RONALD KINGSLEY READ), 20 February 1922 (1922-02-20); page 1, line 16 - page 1, line 82; figures --	1-15
A	WO 9214642 A1 (DICKHAUS REINER), 3 September 1992 (1992-09-03); abstract; figures 3-4 -- -----	1-15
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 20-01-2016		Date of mailing of the international search report 20-01-2016
Name and mailing address of the ISA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. + 46 8 666 02 86		Authorized officer Annelie Persson Telephone No. + 46 8 782 28 00

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**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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US	5785333 A	28/07/1998	NONE			
GB	175742 A	20/02/1922	NONE			
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