



(12) **EUROPEAN PATENT APPLICATION**

(43) Date of publication:
08.06.2022 Bulletin 2022/23

(51) International Patent Classification (IPC):
B65F 1/14 (2006.01)

(21) Application number: **21163805.1**

(52) Cooperative Patent Classification (CPC):
B65F 1/1468; B65F 1/1415; B65F 2220/106

(22) Date of filing: **19.03.2021**

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

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(30) Priority: **04.12.2020 IT 202000029867**

(54) **GARBAGE CONTAINER**

(57) The present invention relates to a waste container (1) of the type that can be converted between a collection configuration and a transport configuration, said container (1) comprising: a base (2); a plurality of pins (3) designed to be fixed to said base (2); a plurality of rods (7) that can be connected together and to be fixed to the pins (3); at least one frame element (4) comprising a plurality of holes (41) adapted to receive therein a respective pin (3) in the transport configuration and a respective rod (7) in the collection configuration; and a cov-

er (5) designed to be connected via a hinge (10) to the frame element (4) to close the container (1). In the transport configuration, the pins (3) are fixed to the base (2) and inserted in their respective holes (41) of the frame element (4), the cover (5) is connected to the pins (3) by means of a closure element (6), and the frame element (4) is thus locked between the base (2) and the cover (5) and forms an inner cavity (11) for containing the rods (7), a flexible fabric (9), and all the material required to assemble the container.

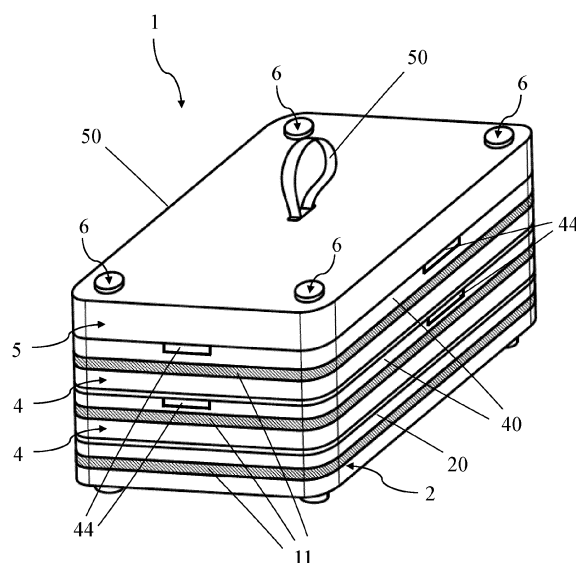


Fig. 1

Description

Technical field

[0001] The present invention relates to a waste container. This waste container is used in the field of camping or home accessories.

Background art

[0002] Removable container devices are known in the art, namely removable waste bins for separate waste collection are known.

[0003] For example, EP18425086A1 also discloses a travel device for separate waste collection comprising a circular base, a series of rods with threaded ends that can be connected together to compose support bars, at least two circular sections designed to be attached to the support bars, and a circular cover designed to cover the separate waste collection device at its top.

[0004] This travel device for separate waste collection also comprises a band of flexible fabric, which is designed to be attached to the circular base and the circular sections to form a cylinder.

[0005] The aforementioned parts are configured to be separated and stored in a small space, possibly for transportation.

[0006] Inconveniently, such known travel device for separate waste collection requires complex disassembly operations to be easily transported.

Object of the Invention

[0007] Therefore, the technical purpose of the present invention is to provide a waste container that can obviate the aforementioned prior art drawbacks.

[0008] In particular, it is an object of the present invention to provide a removable waste container that affords easy opening and closing of the container and can be easily transported when closed.

SUMMARY OF THE INVENTION

[0009] The aforementioned technical purpose and objects are substantially achieved by a waste container as defined in claim 1.

[0010] In particular, the waste container of the present invention is configured to be converted between a collection configuration, in which the container is configured to collect waste in several compartments, and a transport configuration, in which the container contains all its constituting parts and can be stored in a smaller and easily moved compartment.

[0011] Such waste container comprises a base that can be laid on a surface, and a plurality of pins having a main direction of extension and adapted to be fixed to the base such that the main direction of extension of each pin will be oriented perpendicular to the base.

[0012] The container further comprises at least one frame element having a plurality of holes corresponding to the pins and a closing cover.

[0013] Advantageously, in order to convert the container from the collection configuration to the transport configuration, the holes of the frame element shall be simply slid onto the corresponding pins until the frame element rests on the base, so that, by connecting the cover to the pins, the frame element will be locked between the base and the cover.

LIST OF FIGURES

[0014] Further features and advantages of the present invention will result more clearly from the illustrative, non-limiting description of a preferred, non-exclusive embodiment of a waste container as shown in the annexed drawings, in which:

- Figure 1 shows a waste container of the present invention in a transport configuration;
- Figure 2a shows the container of Figure 1 in a collection configuration;
- Figure 2b shows the container of Figure 1 in the configuration as shown in Figure 2a with certain parts omitted to better show other parts;
- Figure 3 shows the waste container of Figure 1, with certain parts omitted to better shows other parts;
- Figure 4 shows a first detail of the waste container of Figure 1;
- Figure 5 shows a sectional view of the detail of Figure 4;
- Figure 6 shows a second detail of waste container of Figure 1;
- Figure 7 shows a third detail of the waste container of Figure 1;
- Figure 8 shows a fourth detail of the waste container of Figure 1;
- Figure 9 shows an attachment to be mounted to the waste container of Figure 1;
- Figure 10 shows a fifth detail of the waste container of Figure 1; and
- Figure 11 shows a sixth detail of the waste container of Figure 1.

DETAILED DESCRIPTION

[0015] Referring to the accompanying drawings, the present invention relates to a waste container 1, in particular of the type that can be converted for easy transport or storage when not in use.

[0016] More in detail, the container 1 is adapted to be converted between a collection configuration in which it is configured to collect waste and a transport configuration in which it is configured to be easily moved. Further details about the collection and transport configurations will be provided hereinbelow.

[0017] This container 1 comprises a base 2 configured

to be laid on a surface, such as a floor or a field.

[0018] As shown in Figure 3, the base 2 is substantially flat and is delimited by a rectangular perimeter edge 20. In alternative embodiments, the perimeter edge 20 may have any geometric shape.

[0019] Preferably, the base 2 comprises a plurality of support means 21 made of a plastic or rubber material and configured to contact such surface.

[0020] The base 2 comprises a plurality of housings 22 distributed close to the perimeter edge 20.

[0021] Preferably, the perimeter edge 20 is a regular polygon and the housings 22 are arranged at each vertex of the perimeter edge 20.

[0022] As shown in Figure 3, the container 1 comprises a plurality of pins 3 having a main direction of extension X-X. Namely, these pins 3 are adapted to be fixed to the base 2 such that the main direction of extension X-X of each pin 3 is oriented perpendicular to the base 2. More in detail, each pin 3 is configured to be fixed in a relative housing 22 of the base 2, so that its main direction of extension X-X will be perpendicular to the base 2.

[0023] In alternative embodiments, the pins 3 can be formed integrally with the base 2, i.e. of one piece with the base 2.

[0024] Such pins 3 are fixed to the base 2 when the container is in the transport configuration.

[0025] The container 1 further comprises at least one frame element 4 having a central opening 42, as shown in Figure 4.

[0026] In the embodiment of Figure 1, the container comprises two geometrically identical frame elements 4.

[0027] Such frame element 4 comprises a plurality of through holes 41 for receiving respective pins 3 therein. More in detail, each pin 3 is configured to fit into a respective hole 41 in its respective main direction of X-X, to move the frame element to abutment against the base 2 along the pins 3, when the container 1 is in the transport configuration.

[0028] The pins 3 fit in respective holes 41 of the frame element 4 when the container 1 is in the transport configuration.

[0029] As shown in Figure 4, the frame element 4 is substantially flat and is delimited by a rectangular perimeter edge 40. In alternative embodiments, the perimeter edge 40 may have any geometric shape.

[0030] Preferably, the perimeter edge 40 of the frame element 4 is a regular polygon and the holes 41 are located at each vertex of the perimeter edge 20. Even more preferably, the perimeter edges 20, 40 of the base and of the frame element are identical, and can be perfectly aligned, as shown in Figure 1.

[0031] Preferably, as shown in Figures 3 and 4, the perimeter edge 40 of the frame element 4 has a plurality of channels 44 for receiving respective handles 81 of a bag-holding element 8, without projections from the frame element 4. Further details about the handles 81 and the bag-holding element 8 will be provided hereinbelow.

[0032] The pins 3 fixed to the base 2, when fitted in the respective holes 41, are configured to lock the relative position of the frame element 4 with respect to the base 2. In particular, the pins 3 are configured to align the perimeter edges 20, 40 of the base 2 and of the frame element 4, when the container 1 is in the transport configuration as shown in Figure 1.

[0033] The container 1 further comprises a cover 5 for closing the container 1 at its top. Namely, the cover 5 comprises holding means 51 that can be grasped by a user to move the container 1 in the transport configuration, and to lift the cover 5 in the collection configuration.

[0034] As shown in Figure 1, the cover 5 is configured to be connected to the pins 3. Preferably, the cover 5 comprises a plurality of holes 52 adapted to receive respective pins 3 for connecting the cover 5 to the pins 3 by means of a closure element 6 in the transport configuration.

[0035] The cover 5 is connected to the frame element 4 via at least one hinge 10 when the container 1 is in the collection configuration. Referring to Figure 11, the hinge 10 comprises a first wall 10a fixed to the cover 5 and a second wall 10b fixed to the frame element 4, when the container 1 is in the collection configuration. The first and second walls 10a, 10b of the hinge 10 are configured to pivot relative to each other to move the cover 5 relative to the frame element 4, and to open/close the container 1 at its top when it is in the collection configuration.

[0036] As shown in Figure 6, the cover 5 is substantially flat and is delimited by a rectangular perimeter edge 50. In alternative embodiments, the perimeter edge 50 may have any geometric shape.

[0037] Preferably, the perimeter edge 50 of the cover 5 is a regular polygon and the holes 52 are located at each vertex of the perimeter edge 50. Even more preferably, the perimeter edges 20, 40, 50 of the base, of the frame element and of the cover are identical, and can be placed perfectly one on top of the other, as shown in Figure 1.

[0038] The frame element 4 is locked between the base 2 and the cover 5 when the container 1 is in the transport configuration. Therefore, in the transport configuration, the perimeter edge 40 of the frame element 4 is interposed between the perimeter edges 20, 50 of the base 2 and of the cover 5.

[0039] The pins 3, when fitted in the respective holes 52 of the cover, are configured to lock the relative position of the cover 5 with respect to the base 2. In particular, the pins 3 are configured to align the perimeter edges 20, 40, 50 of the base 2, of the frame element 4 and of the cover 5 when the container 1 is in the transport configuration, as shown in Figure 1.

[0040] The container 1 of the present invention further comprises a plurality of closure elements 6.

[0041] Such closure element 6 is configured to be attached to a respective pin 3 to keep the frame element 4 locked between the base 2 and the cover 5 in the transport configuration, as shown in Figure 1.

[0042] More in detail, as shown in Figure 8, each closure element 6 mainly extends along a longitudinal direction Y-Y between first and second ends 63, 64.

[0043] Each closure element 6 comprises anchor means 60 at the second end 64 and adapted to attach each closure element 6 to its pin 3.

[0044] The term anchor means 60 shall be intended to mean to one or more mechanical connection elements which are adapted to constrain the relative movement between two parts, such as a threaded connection.

[0045] Also, each closure element 6 comprises a contact surface 61 located at the first end 63 and extending transverse, preferably perpendicular, to the longitudinal direction Y-Y. This contact surface 61 is configured to abut the cover 5 when the closure element 6 is attached to its pin 3 and when the container 1 is in the transport configuration.

[0046] Each closure element 6 is connected to its pin 3 by means of the anchor elements 60, so that the contact surfaces 61 that abut the cover 5 lock the frame element 4 between the base 2 and the cover 5 when the container 1 is in the transport configuration.

[0047] The container 1 further comprises a plurality of rods 7 which are configured to be connected at least in pairs to form a support element 70, as shown in Figure 7.

[0048] Each rod 7 is specially configured to fit into the holes 41 of the frame element 4 when the container 1 is in the collection configuration, as shown in Figure 2b.

[0049] More in detail, each rod 7 extends between a female end 72 having a cavity 72a, and a male end 73 having a projection 73a. The projection 73a can be inserted into the cavity 72a and locked therein to couple the male end 73 of one rod 7 with the female end 72 of another rod 7, thus forming the support element 70, as shown in Figure 7.

[0050] Each support element 70 is configured to be connected to a respective pin 3 via the male end 73 to be directed perpendicular to the base 2 in the collection configuration.

[0051] Preferably, each rod 7 of the support element 70 comprises at least one recess 71 at which the frame element 4 can be locked. More in detail, the holes 41 of each frame element 4 are configured to slide on the support elements 70 and be locked therein at the recesses 71 when the container 1 is in the collection configuration. The frame element 4 is fastened to the rods 7 of the support elements 70 at the recesses 71 such that it will be located at a predetermined distance from the base 2 when the container 1 is in the collection configuration.

[0052] Preferably, the frame element 4 comprises locking means 43 located at each hole 41 and adapted to fit into the recess 71 of a respective rod 7 to lock the frame element 4 relative to the base 2 when the container 1 is in the collection configuration.

[0053] As shown in Figure 5, each locking means 43 comprises a screw element which is adapted to project into the respective hole 41 to fit into the recess 71 of a respective rod 7 when the container is in the collection

configuration.

[0054] The container 1 further comprises a bag-holding element 8, which is adapted to be fixed to the frame element 4 when the container 1 is in the collection configuration.

[0055] Referring to Figure 9, the bag-holding element 8 comprises a pair of handles 81 arranged transverse to each other and designed to be connected to at least two bags (not shown) to support them. The bag-holding element 8 further comprises a perimeter structure 82 connected to the handles 81 and designed to be fastened to the frame element 4 when the container is in the collection configuration.

[0056] The bag-holding element 8 may further comprise a bag strap 83 connected to the handles 81 and configured to close a corresponding bag, e.g. an organic waste bag.

[0057] Advantageously, the bag-holding element 8, when fixed to the frame element 4 of the container 1 in the collection configuration, affords waste differentiation. Therefore, the container 1 of the present patent application can be also used for separate waste collection.

[0058] Referring to Figure 10, the container 1 further comprises a band of flexible fabric 9 connected to the base 2 and to the frame element 4 to close the container 1 at its sides in the collection configuration.

[0059] More in detail, the band of flexible fabric 9 can be fixed to the base 2 and to the frame element 4 by means of Velcro straps 11 arranged along the perimeter edges 20, 40 of the base 2 and of the frame element 4.

[0060] Advantageously, the band of flexible fabric 9, when fixed to the base 2 and to the frame element 4 can hide the contents of the container 1 in the collection configuration.

[0061] In the transport configuration, the frame element 4 abutting the base 2 defines an inner cavity 11 which is delimited by the frame element at the sides and by the base 2 at the bottom.

[0062] The inner cavity 11 is configured to receive the rods 7 and the band of fabric 9 therein when the container 1 is in the transport configuration.

[0063] Advantageously, the container 1 in the transport configuration contains all the parts required to be converted into the collection configuration.

[0064] As mentioned above, the container 1 can be easily assembled from the transport configuration. In other words, the user can assemble the container and convert it into the collection configuration from the transport configuration.

[0065] The assembly from the transport configuration as shown in Figure 1 is carried out as follows.

[0066] According to the above description, in the transport configuration the pins 3 fit in the housings 22 of the base 2, and the frame element 4 is locked between the base 2 and the cover 5 by means of the closing elements 6.

[0067] In order to convert the container 1 into the collection configuration, the closure elements 6 are released

from their pins 3. The cover 5 is removed, so that the rods 7 and the flexible fabric 9 can be pulled out of the inner cavity 11.

[0068] The rods 7 are assembled at least in pairs at their respective ends 72, 73 to form the support elements 70, which are then slid onto their respective pins 3.

[0069] The frame element 4 is caused to slide directly through the holes 41 on the support 70 until it reaches the appropriate recesses 71 of the rods 7, where it is locked by the locking means 43.

[0070] The cover 5 is fixed via the at least one hinge 10 to the frame element 4 and the flexible fabric 9 is connected to the base 2 and to the frame element 4 by means of the Velcro straps 11, to close the container 1 at the top and at the sides.

[0071] Finally, if the container 1 is intended to be used for separate waste collection, the bag-holding element 8 is also provided, and attached to the frame element 4 via the perimeter structure 82, by passing the handles 81 through the appropriate channels 45, thereby allowing a plurality of individual bags to be fixed in the slots 84 formed in the handles 81.

Claims

1. A waste container (1) of the type adapted to be converted between a collection configuration in which the container (1) is configured to collect waste and a transport configuration in which the container (1) is configured to be moved, said container (1) comprising:

- a base (2) configured to be laid on a surface;
- a plurality of pins (3) having a main direction of extension (X-X) and adapted to be fixed to the base (2) such that the main direction of extension (X-X) of each pin (3) is oriented perpendicular to the base (2);
- at least one frame element (4) comprising a plurality of holes (41), each pin (3) being configured to fit into a respective hole (41);
- a cover (5) which can be connected to the pins (3) and is adapted to close the container (1), the cover (5) comprising holding means (51) that can be grasped by a user to move the container (1) in the transport configuration;

the pins (3) being fixed to the base (2) and fitting in their respective holes (41) of the frame element (4) in the transport configuration, the cover (5) being connected to the pins (3) in the transport configuration, the frame element (4) being locked between the base (2) and the cover (5) in the transport configuration.

2. A container (1) as claimed in claim 1 comprising a plurality of closure elements (6), each closure ele-

ment (6) being configured to be attached to a respective pin (3) to keep the frame element (4) locked between the base (2) and the cover (5) in the transport configuration.

3. A container (1) as claimed in the preceding claim, wherein each closure element (6) comprises:

- anchor means (60) for attaching each closure element (6) to its respective pin (3);
- a contact surface (61) configured to abut the cover (5) when the closure element (6) is attached to its pin (3).

4. A container (1) as claimed in any of the preceding claims, wherein the base (2) is delimited by a perimeter edge (20) and comprises a plurality of housings (22) distributed proximate the perimeter edge (20), each pin (3) being adapted to fit into a respective housing (22).

5. A container (1) as claimed in the preceding claim, wherein the frame element (4) is bounded by a perimeter edge (40); the pins (3) being configured to align the perimeter edges (20, 40) of the base (2) and of the frame element (4) in the transport configuration.

6. A container (1) as claimed in the preceding claim, wherein the cover (5) is bounded by a respective perimeter edge (50), the pins (3) being configured to align the perimeter edges (20, 40, 50) of the base (2), the frame element (4) and the cover (5) in the transport configuration.

7. A container (1) as claimed in any of the preceding claims, comprising a plurality of rods (7), the rods (7) being at least adapted to be connected in pairs to form a support element (70), each support element (70) being adapted to be connected to a respective pin (3) in the collection configuration.

8. A container (1) as claimed in the preceding claim, wherein the rods (7) comprise at least one recess (71), the frame elements (4) being fastened to the rods (7) at the recesses (71) in the collection configuration.

9. A container (1) as claimed in claim 7 or 8 comprising a band of flexible fabric (9) connected to the base (2) and to the frame elements (4) to close the container (1) at its sides in the collection configuration.

10. A container as claimed in the preceding claim, wherein the frame element (4) contacts the base (2) in the transport configuration, thereby defining an inner cavity (11), the inner cavity (11) being configured to receive the rods (7) and the flexible fabric band (9) therein.

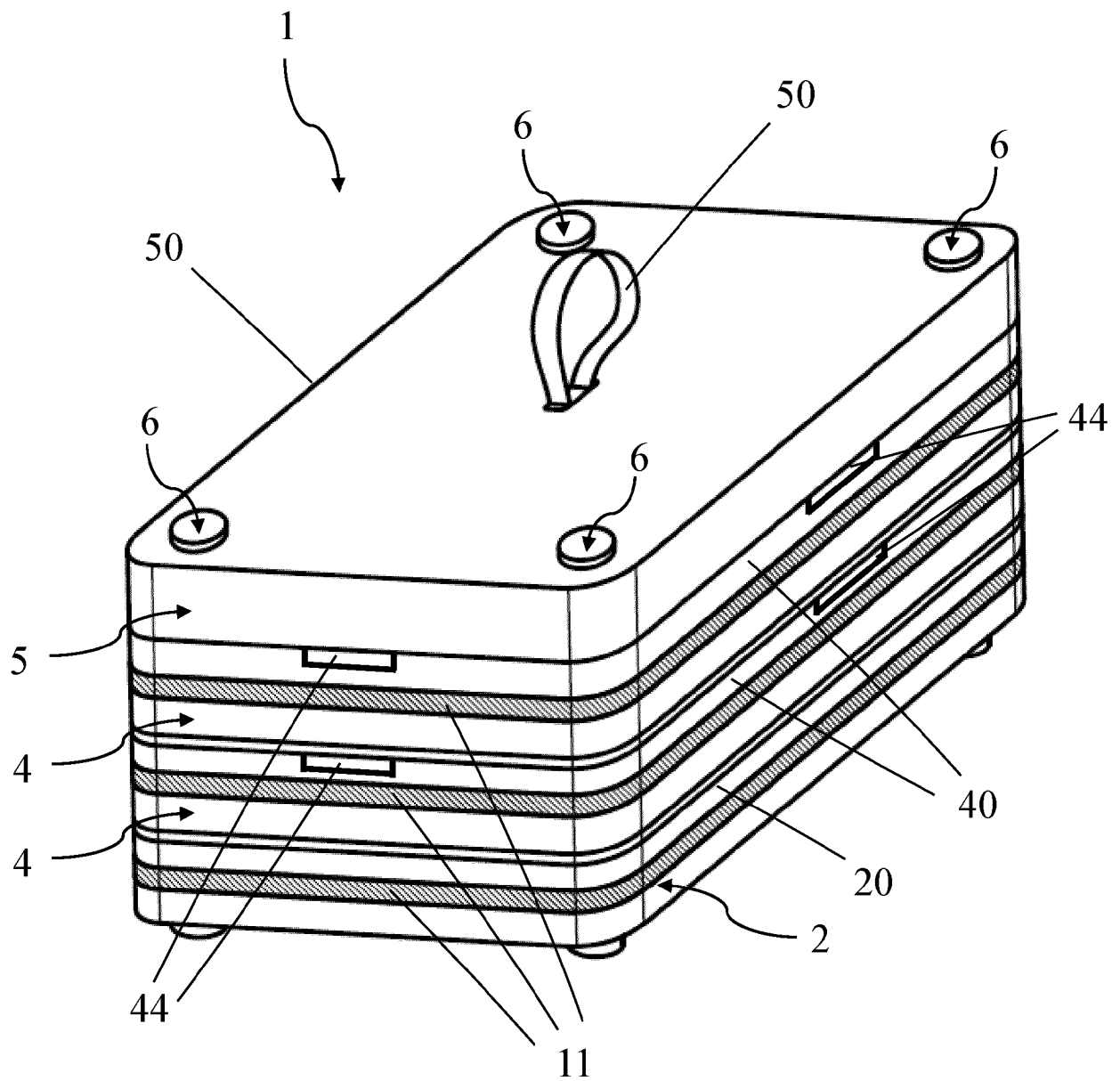


Fig. 1

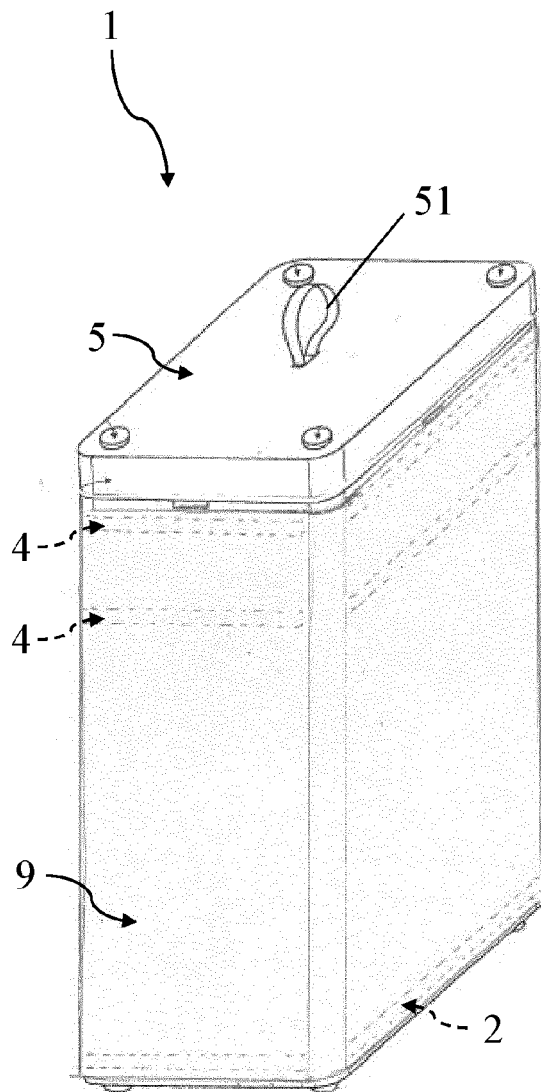


Fig. 2a

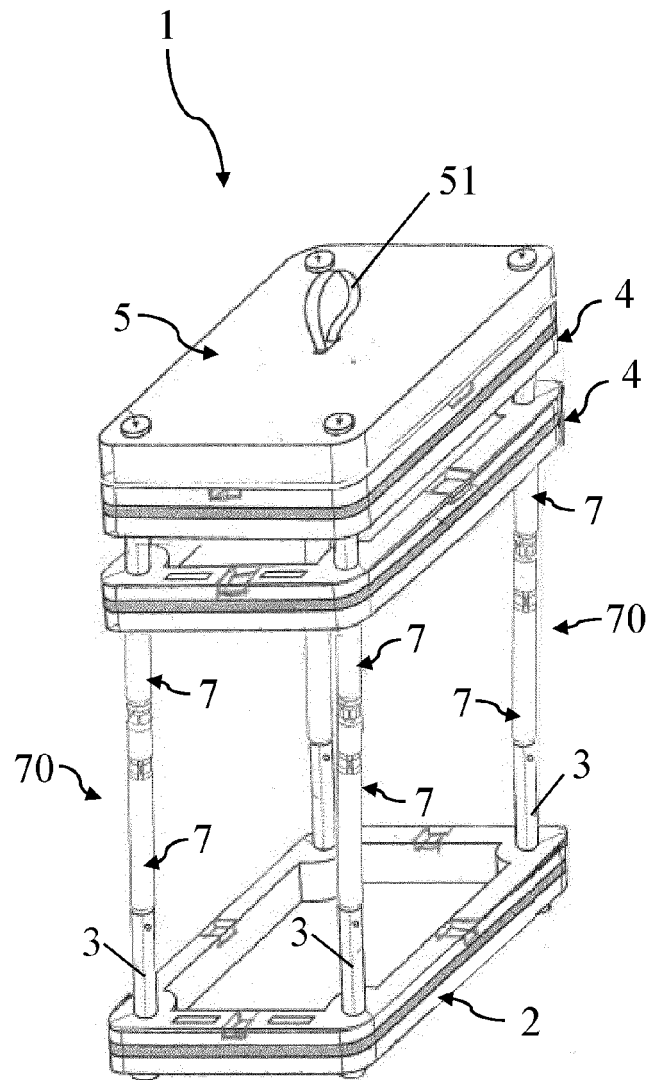


Fig. 2b

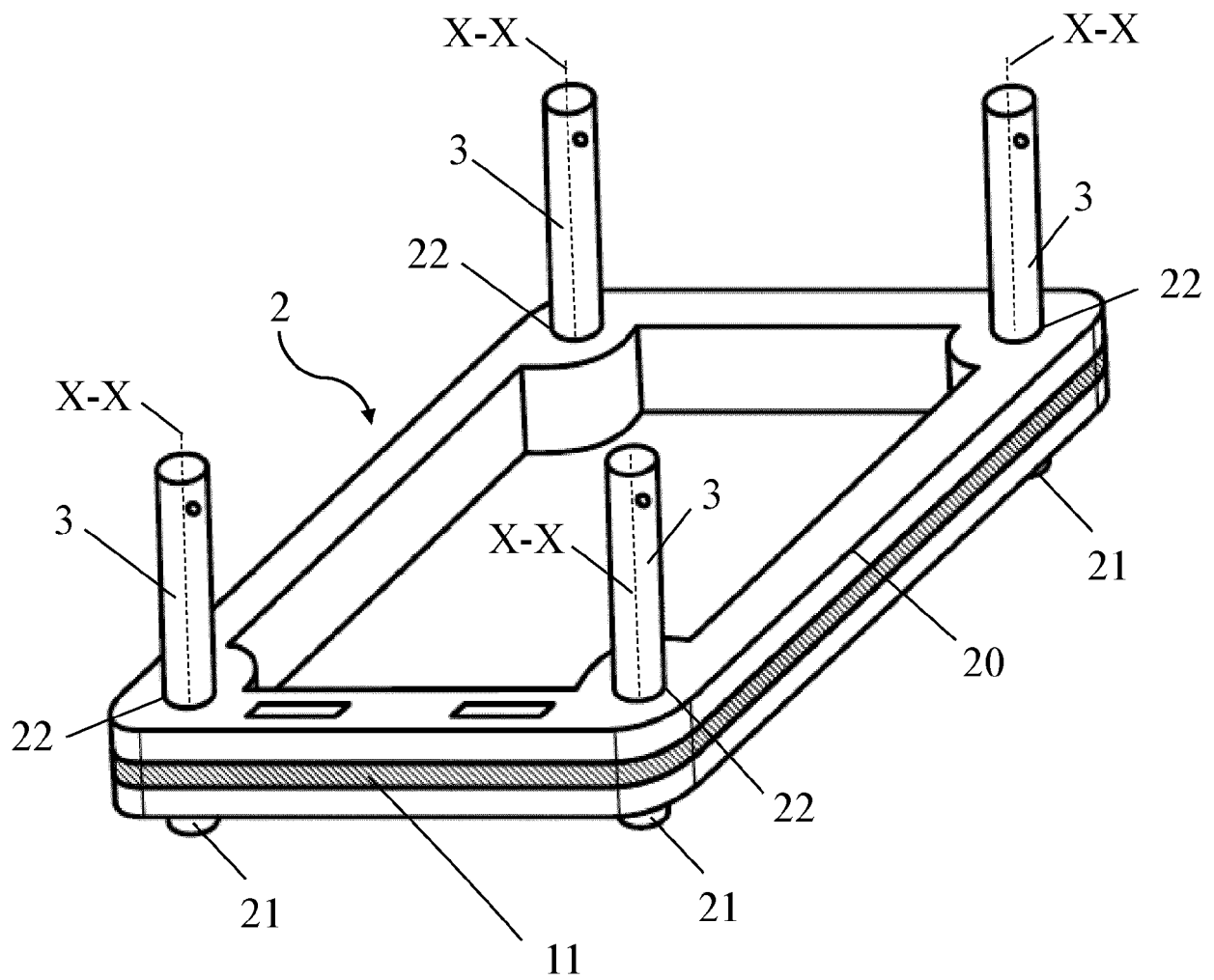


Fig. 3

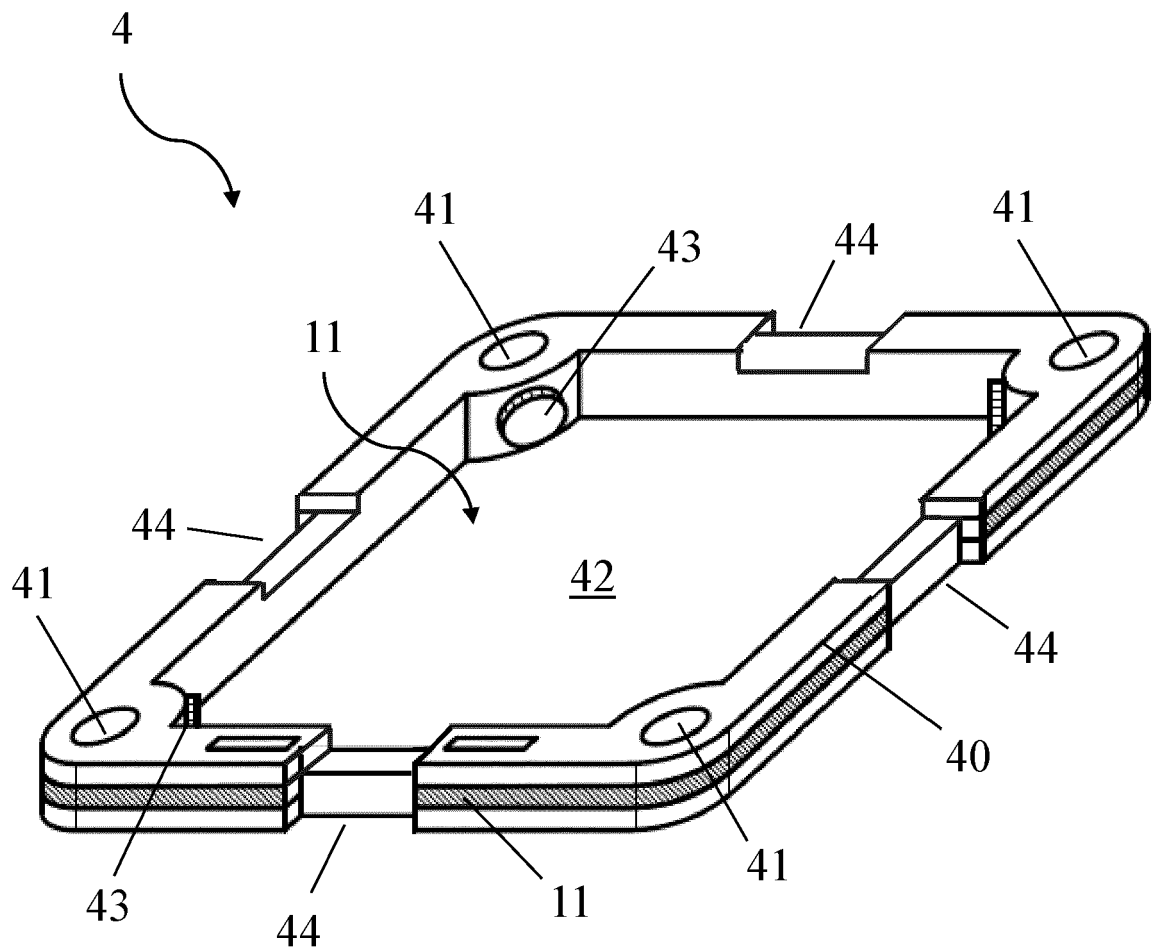


Fig. 4

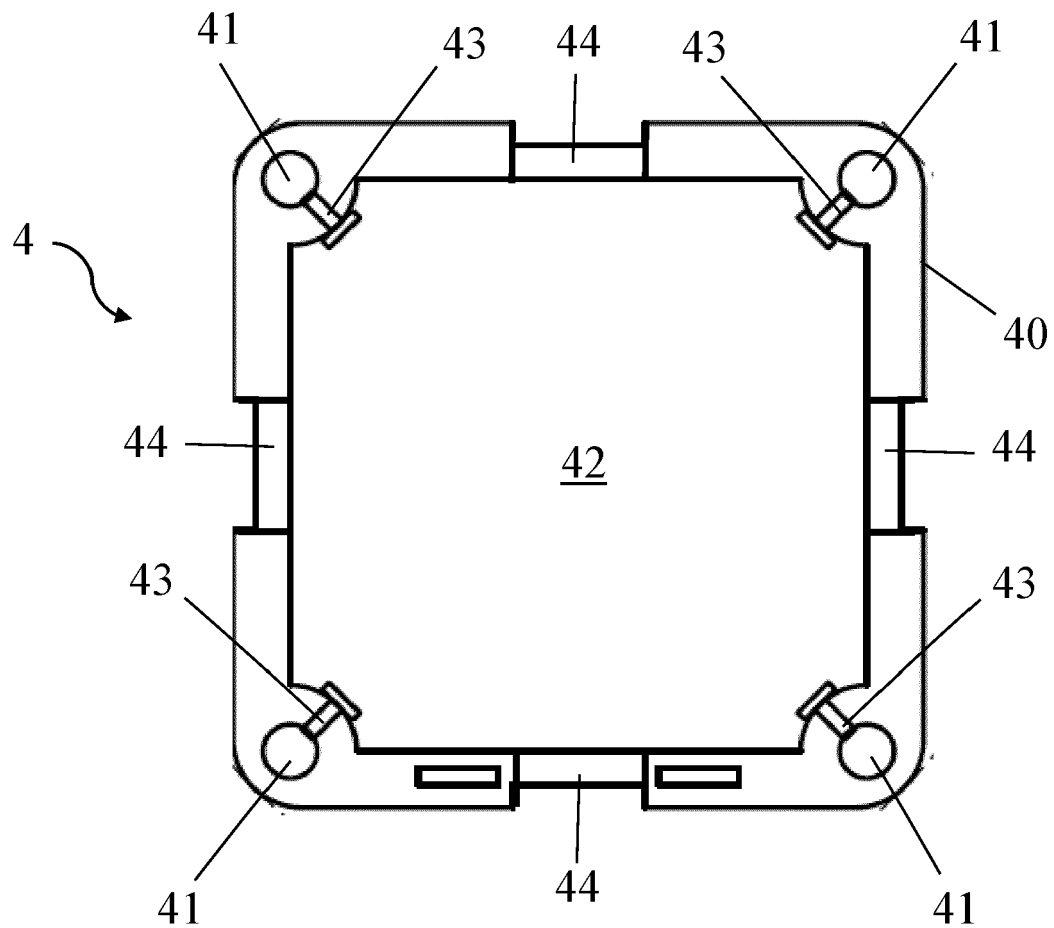


Fig. 5

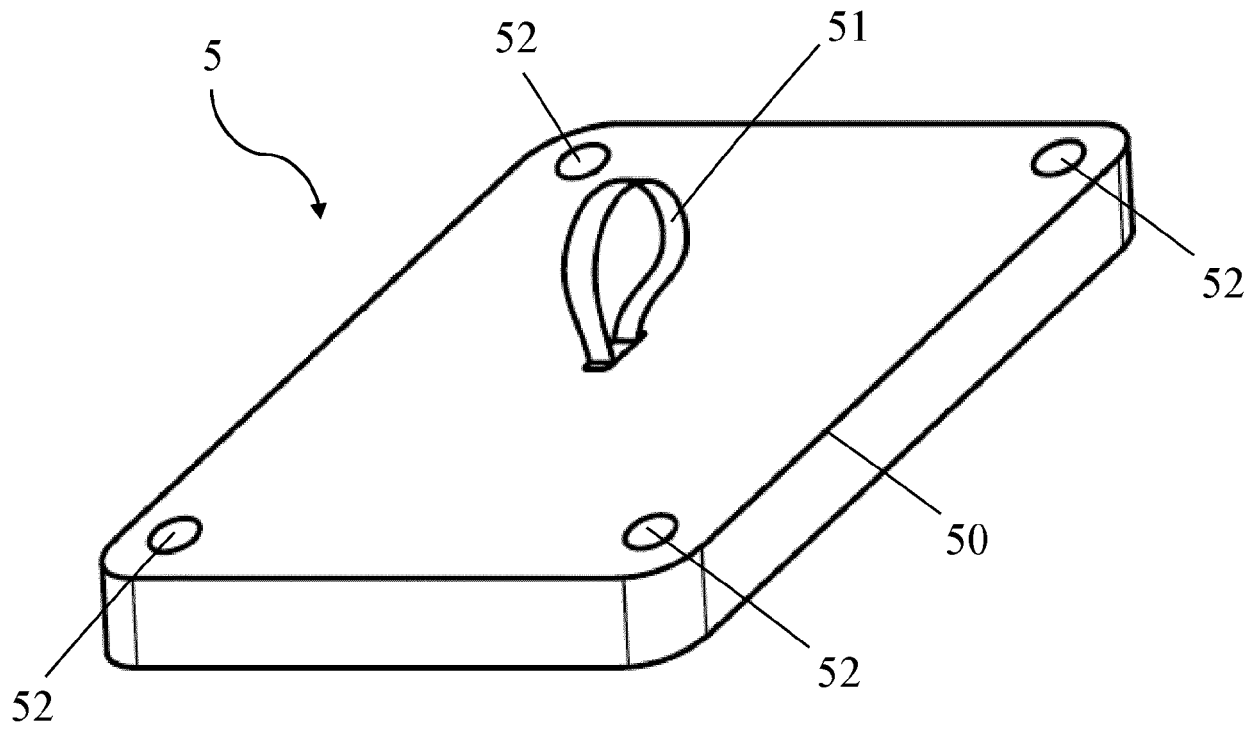


Fig. 6

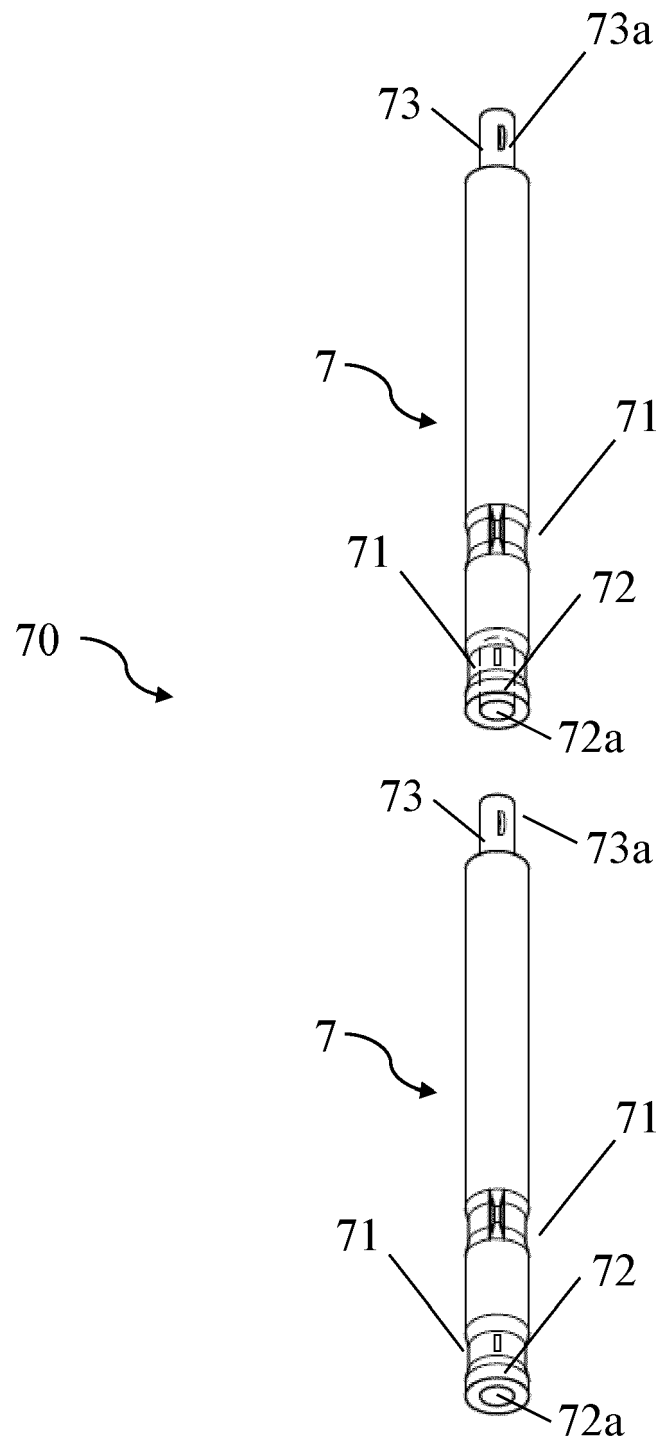


Fig. 7

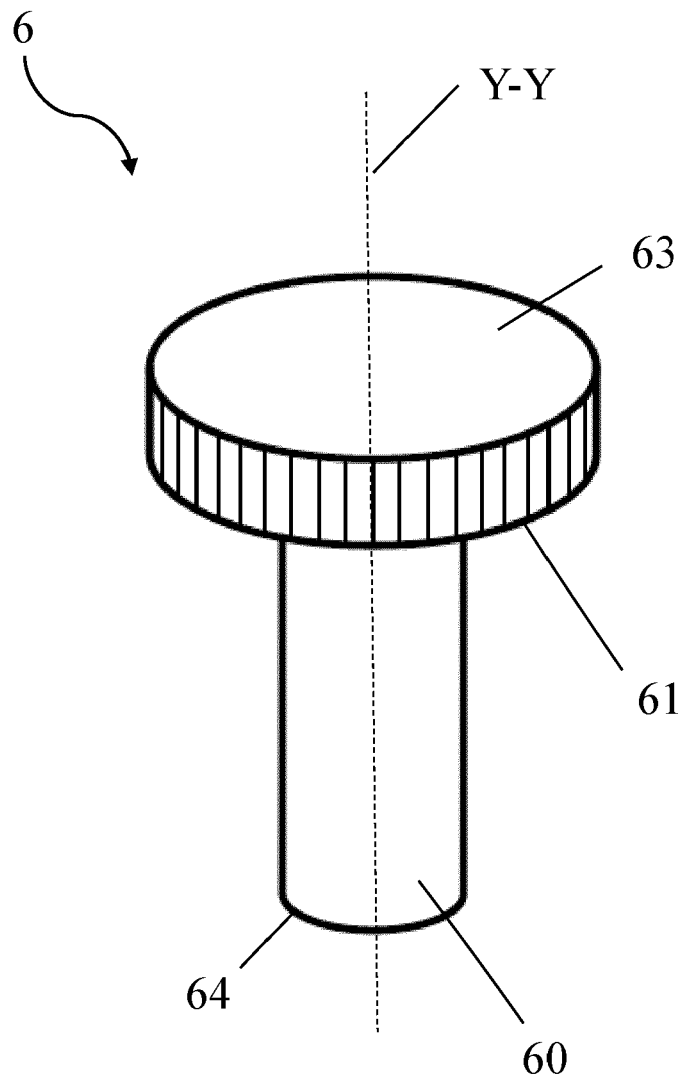


Fig. 8

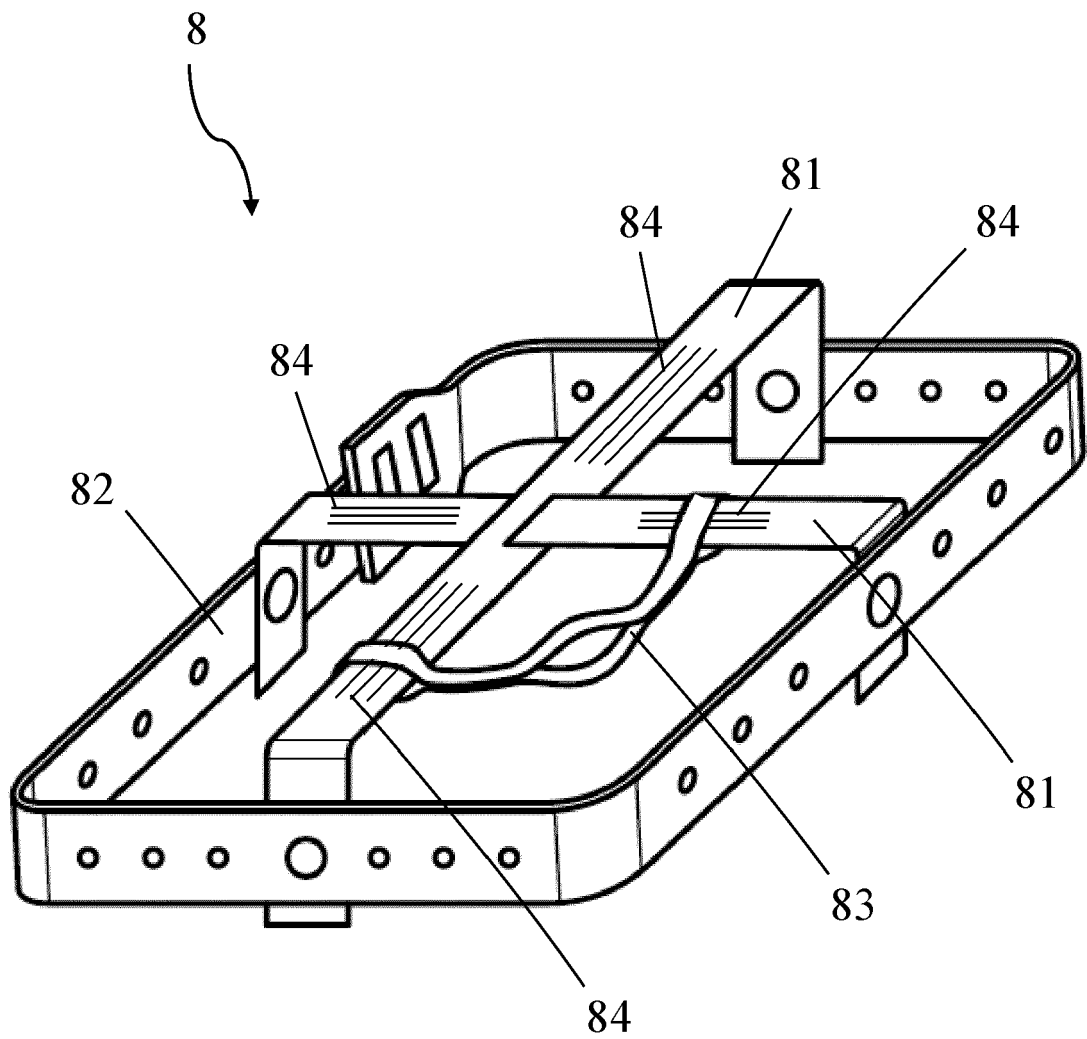


Fig. 9

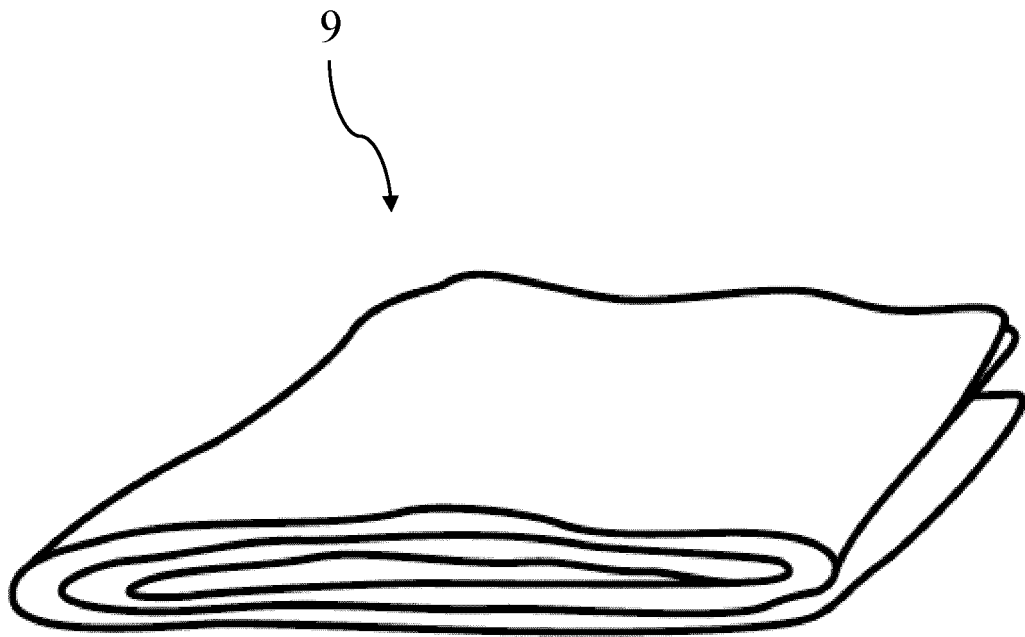


Fig. 10

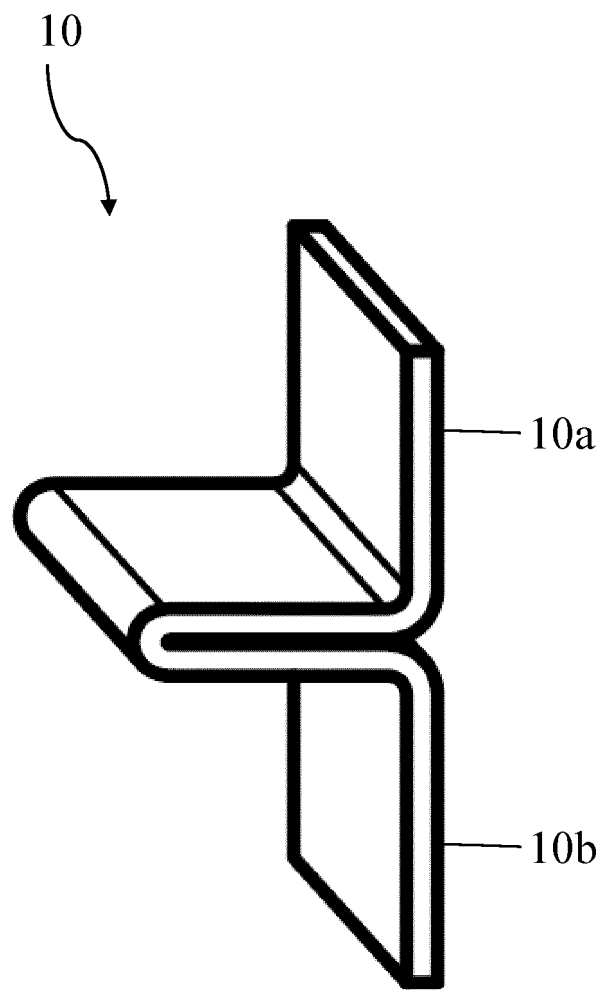


Fig. 11



EUROPEAN SEARCH REPORT

 Application Number
 EP 21 16 3805

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			B65F
Place of search		Date of completion of the search	Examiner
The Hague		6 August 2021	Pardo Torre, Ignacio
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 21 16 3805

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06-08-2021

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REFERENCES CITED IN THE DESCRIPTION

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