



(51) International Patent Classification:

A45C 9/00 (2006.01) A47C 17/82 (2006.01)  
A45C 5/00 (2006.01) A47C 20/00 (2006.01)  
A45C 5/03 (2006.01)

(21) International Application Number:

PCT/US2016/043413

(22) International Filing Date:

21 July 2016 (21.07.2016)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

14/806,587 22 July 2015 (22.07.2015) US

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(81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY,

BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,  
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,  
HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,  
KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG,  
MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM,  
PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC,  
SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN,  
TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ,  
TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU,  
TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE,  
DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU,  
LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK,  
SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,  
GW, KM, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— of inventorship (Rule 4.17(iv))

Published:

— with international search report (Art. 21(3))

(54) Title: MODULAR LUGGAGE AND SLEEPING WEDGE APPARATUS

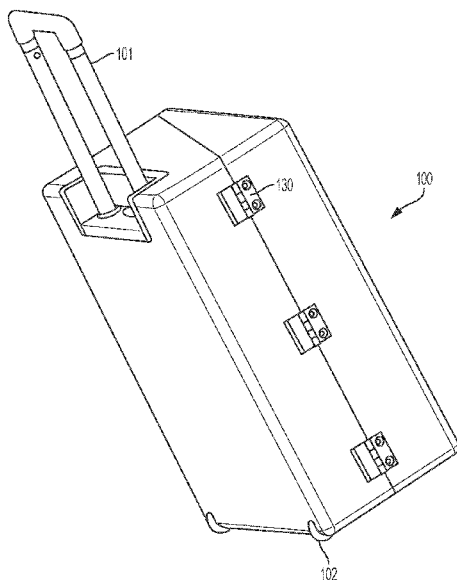


FIG. 1

(57) Abstract: A modular luggage and sleeping wedge apparatus for select-  
ively deploying as either luggage or a sleeping wedge suitable to elevate a  
mattress. The modular luggage and sleeping wedge apparatus defines two  
discrete wedge members, each individually forming a triangular prism,  
which may be selectively attached together to form a rectangular prism re-  
ceptacle. In an extendible wedge embodiment, the modular luggage and  
sleeping wedge apparatus includes a base wedge member and an extension  
wedge member, which may be deployed as a wedge while positioned end to  
end. In a double wedge embodiment, two mirror wedge members may be de-  
ployed side by side as an extended width wedge or a on top of one another  
as an extended height wedge.

WO 2017/015501 A1

## MODULAR LUGGAGE AND SLEEPING WEDGE APPARATUS

### BRIEF DESCRIPTION OF THE DRAWINGS

[0001] Figure 1 is a side perspective view of a modular luggage and sleeping wedge apparatus built in accordance with an extendable wedge embodiment of the present invention shown in a luggage configuration.

[0002] Figure 2 is a side perspective view of a modular luggage and sleeping wedge apparatus built in accordance with an extendable wedge embodiment of the present invention shown in a extended wedge configuration with a crate insert disposed therein.

[0003] Figure 3 is an exploded side perspective view of the wedge members and crate insert of a modular luggage and sleeping wedge apparatus built in accordance with an extendable wedge embodiment of the present invention.

[0004] Figure 4 is a side perspective view of a modular luggage and sleeping wedge apparatus built in accordance with an extendable wedge embodiment of the present invention.

[0005] Figure 5 is a side perspective view of a modular luggage and sleeping wedge apparatus built in accordance with an extendable wedge embodiment of the present invention in an extended wedge configuration, oriented for use as a sleeping wedge.

[0006] Figure 6 is a side perspective view of a crate insert of a modular luggage and sleeping wedge apparatus for use with an extendable wedge embodiment of the present invention.

[0007] Figure 7 is a side perspective view of a modular luggage and sleeping wedge apparatus built in accordance with a double wedge embodiment of the present invention shown in a luggage configuration.

[0008] Figure 8 is a side elevational view of a modular luggage and sleeping wedge apparatus built in accordance with a double wedge embodiment of the present invention shown in a luggage configuration.

[0009] Figure 9 is an exploded side elevational view of the wedge members and sack inserts of a modular luggage and sleeping wedge apparatus built in accordance with a double wedge embodiment of the present invention.

[00010] Figure 10 is a side perspective view of a sack insert of a modular luggage and sleeping wedge apparatus for use with a double wedge embodiment of the present invention.

[00011] Figure 11 is a side perspective view of the wedge members of a modular luggage and sleeping wedge apparatus built in accordance with a double wedge embodiment of the present invention in a double width wedge configuration.

[00012] Figure 12 is a side perspective view of the wedge members of a modular luggage and sleeping wedge apparatus built in accordance with a double wedge embodiment of the present invention in a double height wedge configuration.

## DETAILED DESCRIPTION OF THE INVENTION

[00013] Referring now to the drawings and in particular Figures 1, 2, 3, 4, 5, and 6 an extendible wedge embodiment of a modular luggage and sleeping wedge apparatus 100 is defined by a luggage configuration, in which it is suitable for use as a conventional suitcase style container for holding a traveler's articles during transit, and an extended wedge configuration. The modular luggage and sleeping wedge apparatus 100 includes a base wedge member 110 hingedly attached to an extension wedge member 120 so as to enable which may be selectively moved to a closed position to define the luggage configuration, as illustrated in Figure 1, or moved to an open position, end to end relative to one another, in the extended wedge configuration, as shown in Figures 2-5. As such, the base wedge member 110 and extension wedge member 120 each define a triangular prism, shaped such that they can be positioned together to form an enclosure defined by a rectangular prism.

[00014] It is contemplated that in the extended wedge configuration, the modular luggage and sleeping wedge apparatus 100 is suitable for use as a conventional mattress elevating wedge. Accordingly, it is contemplated that the base wedge member 110 and extension wedge member 120 have an exterior constructed of a reinforced, rigid material which can support a mattress in an elevated position as well as a user on top of the mattress. Alternatively, a rigid frame covered by a strong fabric can be utilized.

[00015] In one embodiment, the corresponding edges of the base wedge member 110 and extension wedge member 120, which when placed together create a rectangular prism, connected on one side through three hinges 130 and selectively attached and

detached on the other side through a buckle fastener 131. In an alternate embodiment, the base wedge member 110 and extension wedge member 120 may be fastened together by one or a series of latch fasteners, a zip fastening system, or hook and loop fasteners.

[00016] As with conventional luggage receptacles, in one embodiment the modular luggage and sleeping wedge apparatus 100 includes an extendable handle 101 and wheels 102 to ease the handling of the modular luggage and sleeping wedge apparatus 100 when it is in the luggage configuration.

[00017] It is appreciated that the extended wedge configuration advantageously allows for a mattress elevation having a lower angle but longer span.

[00018] In one embodiment, the modular luggage and sleeping wedge apparatus 100 includes an insert receptacle storable therein. In one embodiment, the insert receptacle defines a crate insert 111 or a similar box style receptacle. In another embodiment, the insert receptacle may define a closeable sack or case (similar to what is illustrated in Figure 10, *infra*). In either embodiment, it is contemplated that the insert receptacle may be employed as an enclosure suitable to hold a user's belongings when the base wedge member 110 and extension wedge member 120 are attached together and the modular luggage and sleeping wedge apparatus 100 is deployed as luggage.

[00019] Advantageously, when a user's belongings are stored in the insert receptacle, when a user desires to empty the base wedge member 110 to use it as a wedge, the user's belongings may be easily removed. As such, prior to the base wedge member 110 and extension wedge member 120 being placed in a wedge orientation, as illustrated in Figure

5, the insert receptacle can be simply lifted out of the base wedge member 110. It is contemplated that in some embodiments, the insert receptacle may include a handle to improve the ability of a user to lift or otherwise handle them.

[00020] It is appreciated that the base wedge member 110 and extension wedge member 120 may be used to store belongings directly if desired by the user. For example, if a user were to lose the insert receptacle, the user's belongings could be placed directly in the base wedge member 110 and/or extension wedge member 120 prior to positioning the base wedge member 110 and the extension wedge member 120 in the closed position.

[00021] It is also appreciated that the insert receptacle, particularly the closeable sack or case embodiment, can act as an emergency luggage in case of damage to either the base wedge member 110, extension wedge member 120, or both.

[00022] Referring now to Figures 7, 8, 9, 10, 11, and 12, a double wedge embodiment of a modular luggage and sleeping wedge apparatus 200 is defined by a luggage configuration, in which it is suitable for use as a conventional suitcase style container for holding a traveler's articles during transit, and several wedge configurations. The modular luggage and sleeping wedge apparatus 200 includes a two mirror wedge member 210, which may be selectively attached together to define the luggage configuration or detached from one another and positioned either side by side in a double width configuration (as shown in Figure 11) or on top of one another in a double height wedge configuration (as shown in Figure 12). As with the extendable wedge embodiment, the

wedge members 210 each define an triangular prism, shaped such that they can be positioned together to form an enclosure defined by a rectangular prism.

[00023] The modular luggage and sleeping wedge apparatus 200 is suitable for use as a conventional mattress elevating wedge in either the double width configuration or the double height wedge configuration. Accordingly, as with the extendable wedge embodiment the wedge members 210 have an exterior constructed of a reinforced, rigid material which can support a mattress in an elevated position as well as a user on top of the mattress.

[00024] In one embodiment, the two wedge members 210 are removably fastened together through a series of buckle fasteners 230 which are positioned around the wedge members' 210 respective edges. In addition, one of the wedge members 210 includes an extendable handle 201 and wheels 202 to ease the handling of the modular luggage and sleeping wedge apparatus 200 when it is in the luggage configuration

[00025] As with the extendible wedge embodiment, the modular luggage and sleeping wedge apparatus 200 may include one or multiple receptacle inserts which are storable therein. In the illustrated embodiment, the receptacle inserts each define a closeable sack 211. The sacks 211 may be employed as enclosures suitable to hold a user's belongings when the mirror wedge members 210 are attached together and the modular luggage and sleeping wedge apparatus 200 is deployed as luggage. As with the extendible wedge embodiment, it is appreciated that the mirror wedge members 210 may be used to store belongings directly if desired by the user. It is contemplated, however, that a user may store items directly in the mirror wedge members 210 as well as the sacks 211.

[00026] It is contemplated that in one embodiment, the exterior surface of the wedge members includes padding so as to enable their use on top of a mattress.

[00027] It is also contemplated that the handles and/or wheel assemblies may be designed to be removable to facilitate product use as a mattress wedge.

[00028] It is understood that a fold out plastic slider sheet may be included to facilitate sliding of one or both wedge members under a mattress.

[00029] It is appreciated that a wedge shaped cover may additionally be provided to protect a user's mattress in the event the wedge member is soiled or dirty.

[00030] It is contemplated that alternate embodiments may employ adjustable height options for wedge members, including those that include mechanical or inflatable risers.

[00031] In some embodiments, the wedge members may be telescopically extendible in width once detached from one another.

[00032] In another embodiment, the interior of the wedge members is compartmentalized.

[00033] It is contemplated that luggage shape of the product may also include less rectangular forms to allow creation of back-pack, duffel bag, travel case or other similar luggage articles.

[00034] The present invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however,

that departures may be made therefrom within the scope of the invention and that obvious modifications will occur to a person skilled in the art.

## CLAIMS

What is claimed is:

1. A modular luggage and sleeping wedge apparatus, comprising:  
at least two discrete wedge members, each defining a receptacle having an exterior frame constructed of a rigid material;  
said wedge members shaped such that individually they can support a conventional mattress in an angular position and can be positioned together to form a composite receptacle that defines a luggage configuration; and  
a fastening system integral with said wedge members operative to enable the wedge members to be selectively fixed together in said luggage configuration.
2. The modular luggage and sleeping wedge apparatus of claim 1, wherein said wedge members each individually define a triangular prism.
3. The modular luggage and sleeping wedge apparatus of claim 2, wherein said wedge members, when placed in said luggage configuration, form a rectangular prism.
4. The modular luggage and sleeping wedge apparatus of claim 3, wherein said wedge members define mirror image triangular prisms.
5. The modular luggage and sleeping wedge apparatus of claim 3, wherein:  
said wedge members include a base wedge member and an extension wedge member; and

said base wedge member and extension wedge member are sized such that when positioned end to end in an extended wedge configuration, form a unitary sloping surface.

6. The modular luggage and sleeping wedge apparatus of claim 2, additionally comprising at least one insert receptacle sized to be removably positioned in the composite receptacle which defines the wedge members' luggage configuration.

7. The modular luggage and sleeping wedge apparatus of claim 6, wherein the at least one insert receptacle defines a crate insert.

8. The modular luggage and sleeping wedge apparatus of claim 6, wherein the at least one insert receptacle defines a closeable sack.

9. The modular luggage and sleeping wedge apparatus of claim 1, wherein said wedge members, when placed in said luggage configuration, form a rectangular prism.

10. The modular luggage and sleeping wedge apparatus of claim 1, wherein said fastener system defines a hinge and buckle fastening system.

11. A modular luggage and sleeping wedge apparatus, comprising:  
at least two discrete wedge members, each defining a receptacle having an exterior constructed of a rigid material;

said wedge members shaped such that individually they can support a conventional mattress in an angular position and can be positioned together to form a composite receptacle that defines a luggage configuration;

at least one insert receptacle sized to be removably positioned in the composite receptacle which defines the wedge members' luggage configuration; and

a fastening system integral with said wedge members operative to enable the wedge members to be selectively fixed together in said luggage configuration.

12. The modular luggage and sleeping wedge apparatus of claim 11, wherein said wedge members each individually define a triangular prism.

13. The modular luggage and sleeping wedge apparatus of claim 12, wherein said wedge members, when placed in said luggage configuration, form a rectangular prism.

14. The modular luggage and sleeping wedge apparatus of claim 13, wherein said wedge members define mirror image triangular prisms.

15. The modular luggage and sleeping wedge apparatus of claim 13, wherein:  
said wedge members include a base wedge member and an extension wedge member; and

said base wedge member and extension wedge member are sized such that when positioned end to end in an extended wedge configuration, form a unitary sloping surface.

16. The modular luggage and sleeping wedge apparatus of claim 11, wherein a plurality of insert receptacles are included, each sized such that they may be removably positioned in the composite receptacle together.

17. The modular luggage and sleeping wedge apparatus of claim 11, wherein said wedge members, when placed in said luggage configuration, form a rectangular prism.

18. The modular luggage and sleeping wedge apparatus of claim 11, wherein said fastener system defines a fastening system that includes a series of clasps.

19 The modular luggage and sleeping wedge apparatus of claim 11, wherein the at least one insert receptacle defines a crate insert.

20. The modular luggage and sleeping wedge apparatus of claim 11, wherein the at least one insert receptacle defines a closeable sack.

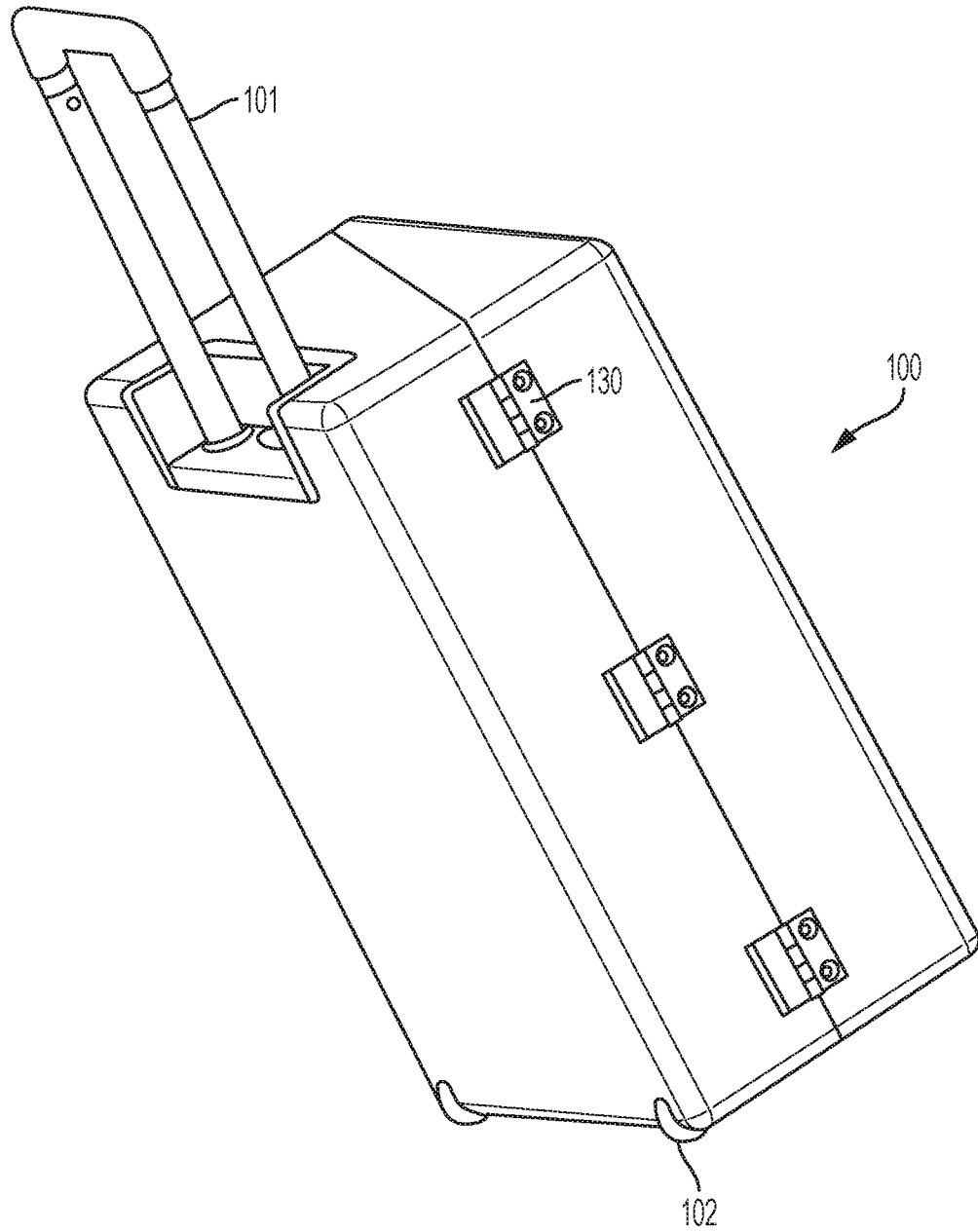
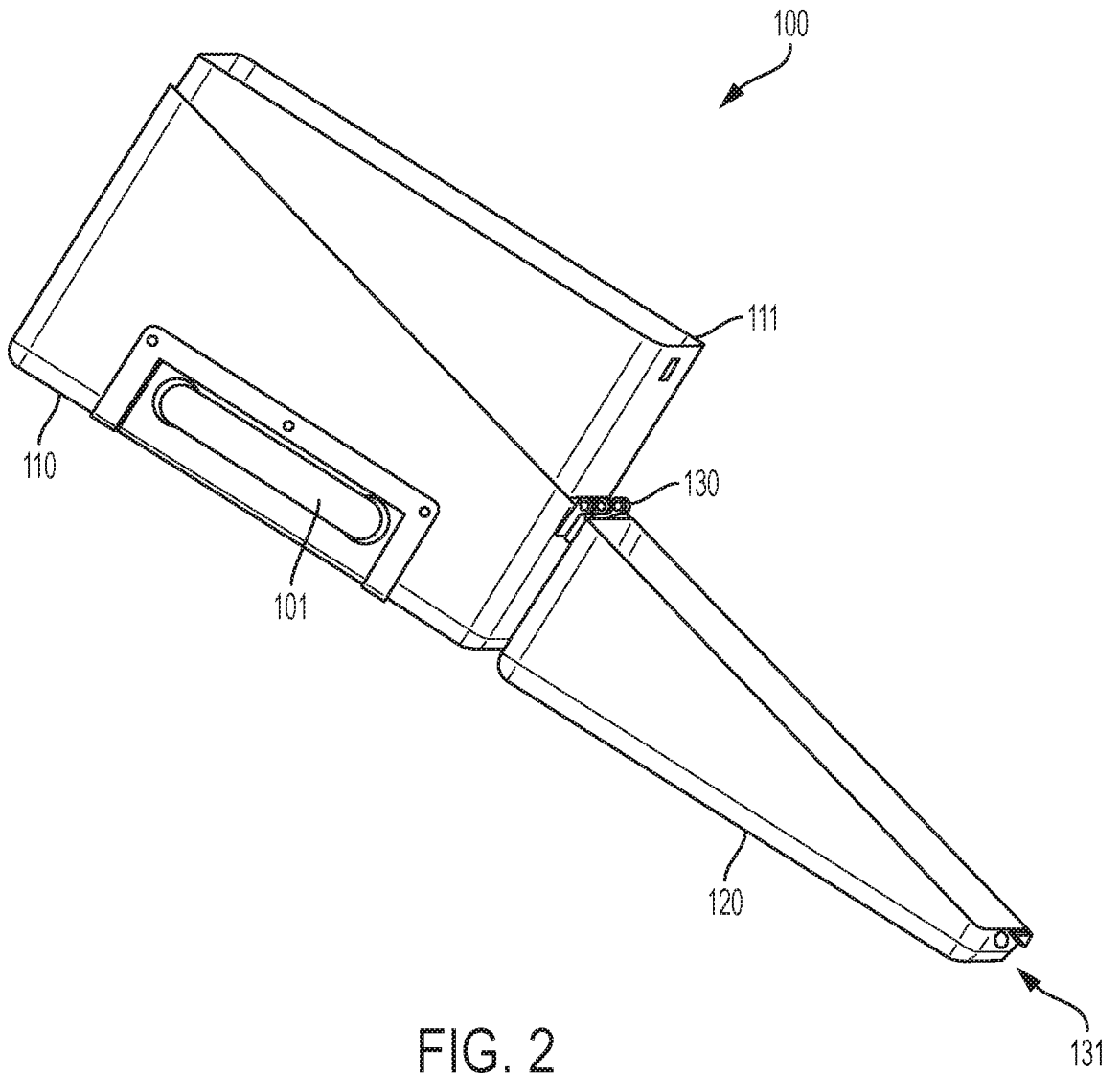


FIG. 1



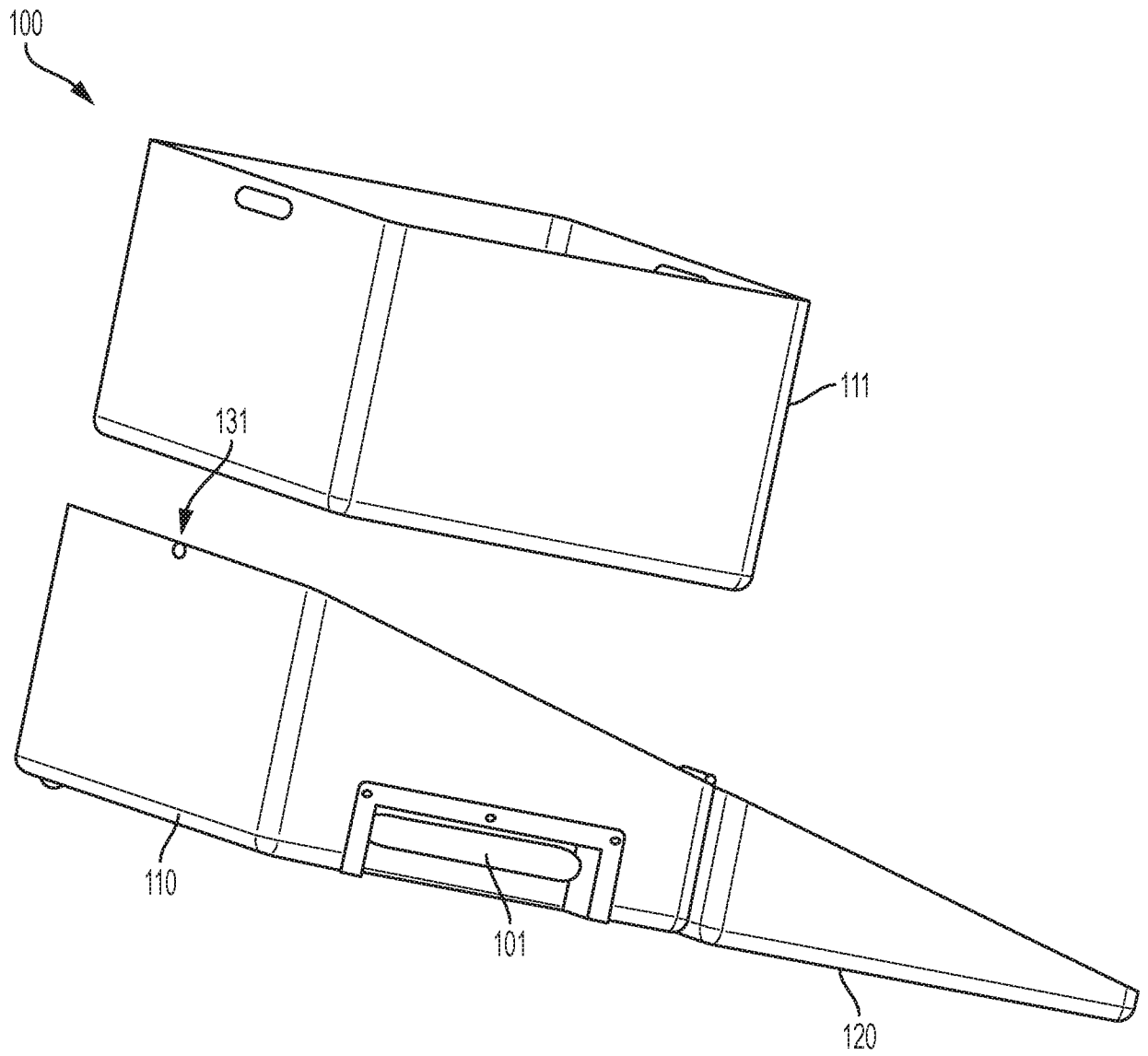


FIG. 3

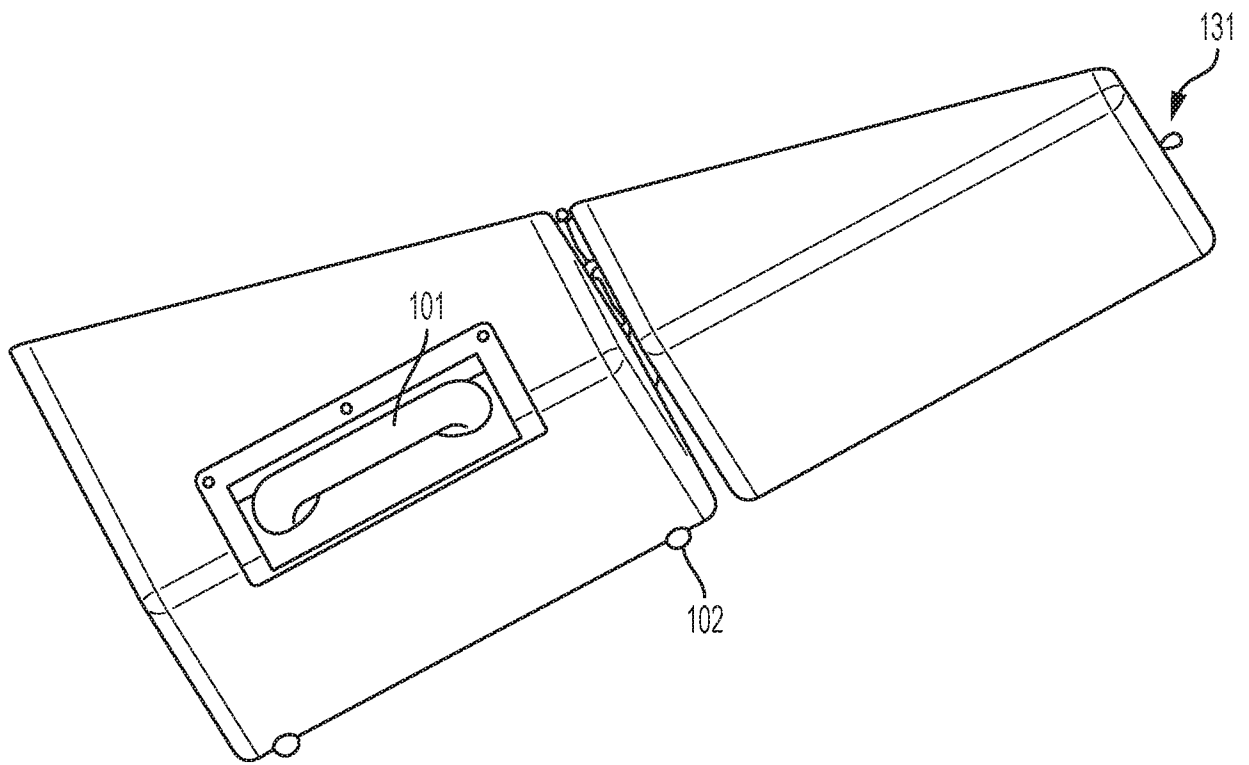


FIG. 4

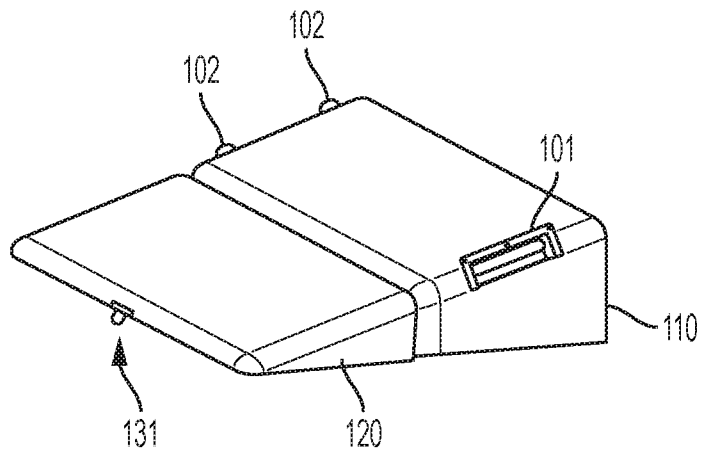


FIG. 5

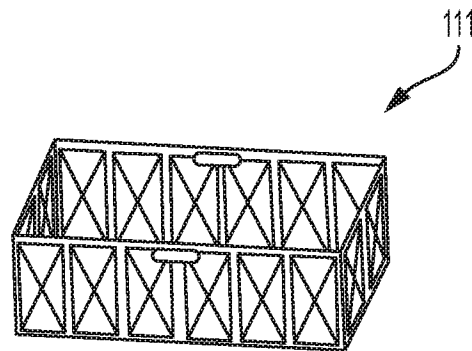


FIG. 6

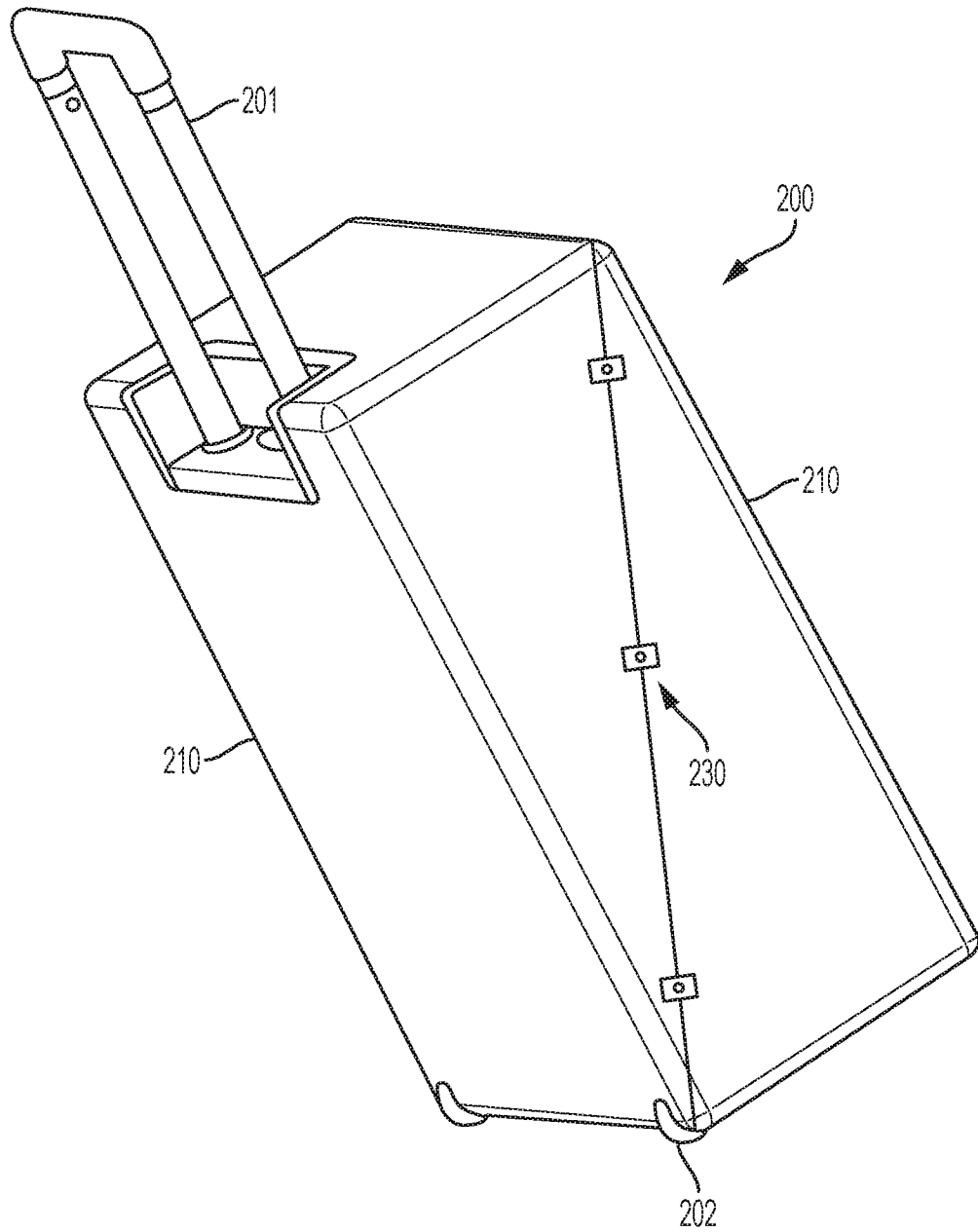


FIG. 7

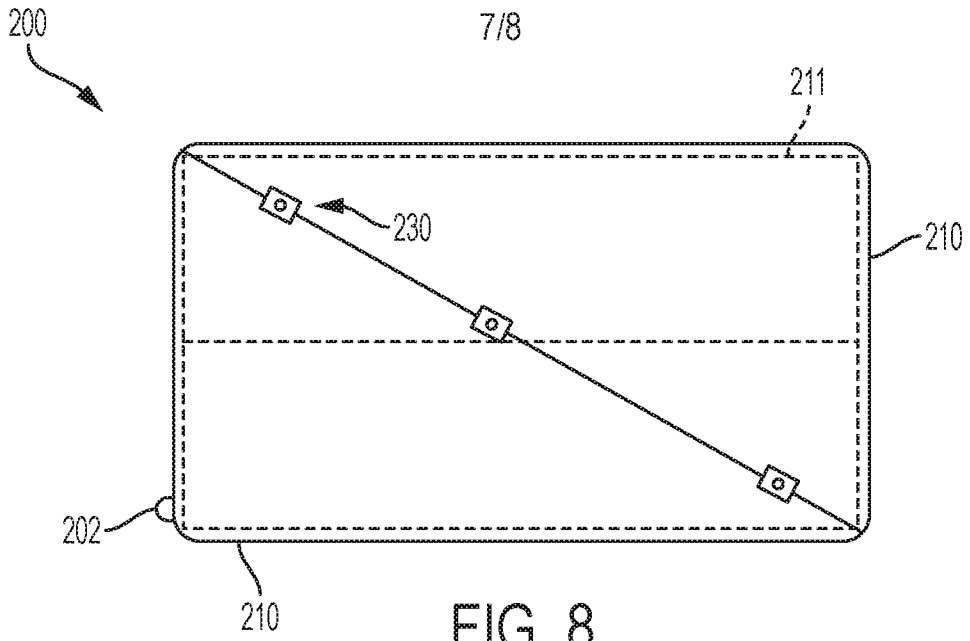


FIG. 8

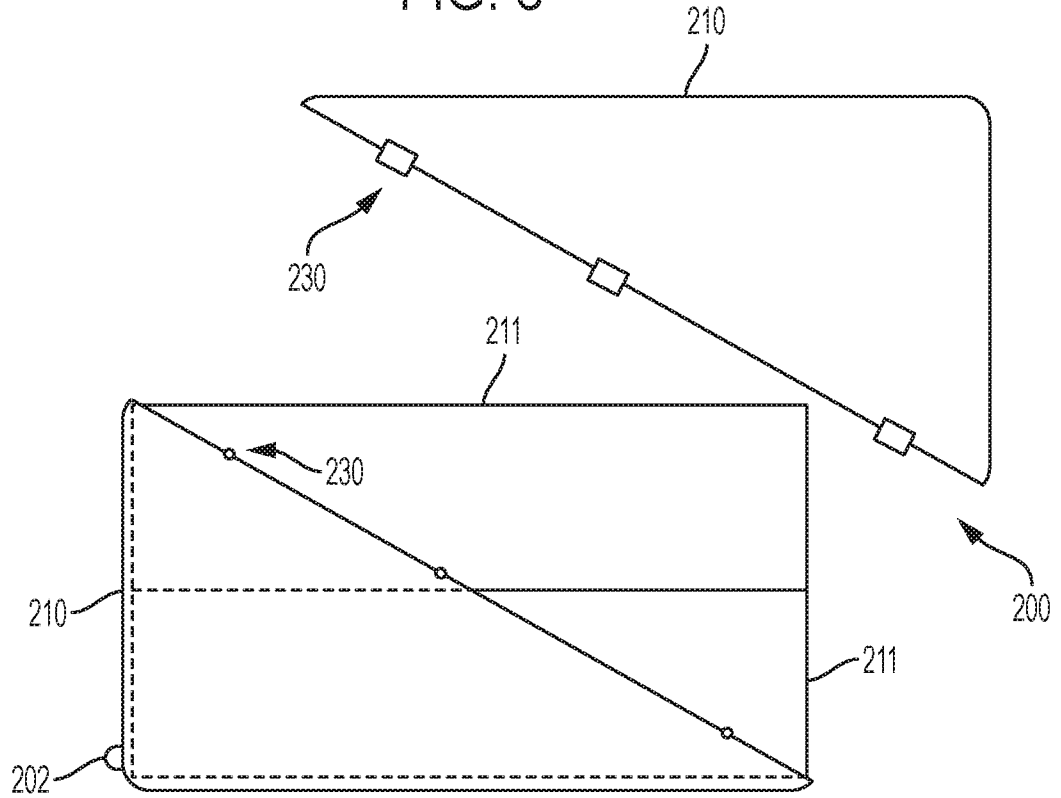


FIG. 9

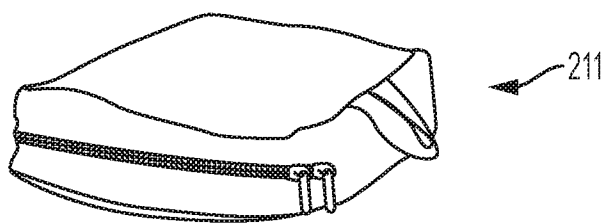


FIG. 10

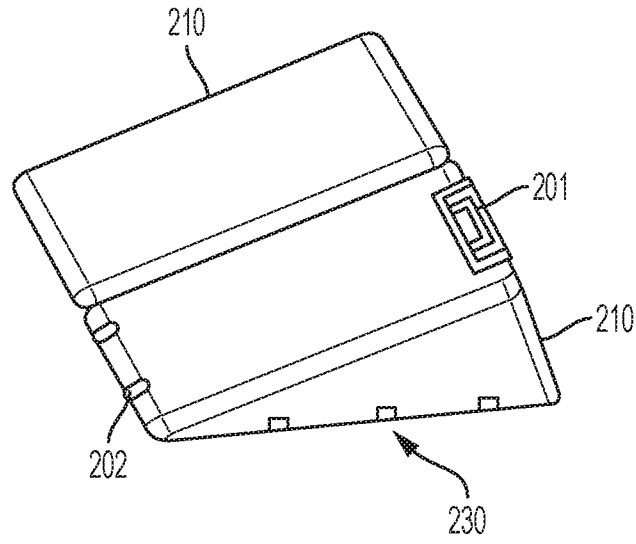


FIG. 11

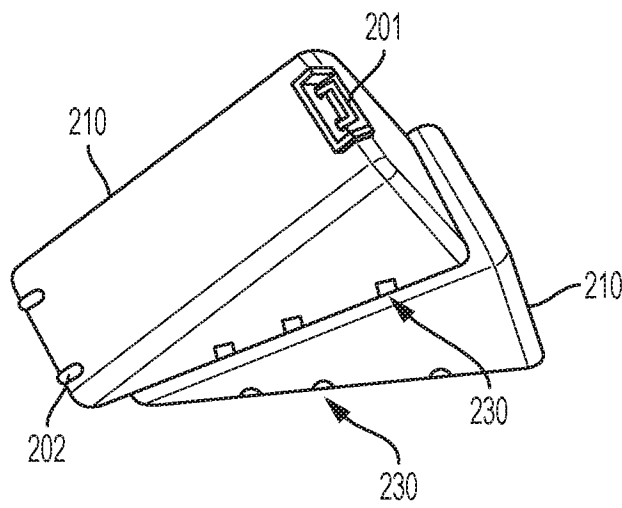


FIG. 12

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US2016/043413

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> <b>IPC(8) - A45C 9/00; A45C 5/00; A45C 5/03; A47C 17/82; A47C 20/00 (2016.01)</b> <b>CPC - A45C 9/00; A45C 2009/007; A47C 17/82; A47C 20/00 (2016.08)</b> According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) <b>IPC - A45C 5/00; A45C 5/03; A45C 9/00; A47C 17/82; A47C 20/00</b> <b>CPC - A45C 9/00; A45C 2009/007; A47C 17/82; A47C 20/00</b> Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched <b>USPC - 190/2; 190/8; 190/105; 190/110; 297/17 (keyword delimited)</b> Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) <b>PatBase, Google Patents, Google Scholar, Google</b> <b>Search terms used: luggage, suitcase, sleeping, wedge, convertible, triangular, receptacle, bed</b>		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 1,554,245 A (WALCZAK) 22 September 1925 (22.09.1925) entire document	1-10
Y	DE 202013003172 U1 (BRECKHEIMER) 06 May 2013 (06.05.2013) entire document	1-20
Y	US 6,821,019 B2 (MOGIL) 23 November 2004 (23.11.2004) entire document	6-8
Y	US 5,205,413 A (CAUEREELS et al) 27 April 1993 (27.04.1993) entire document	11-20
Y	US 5,501,338 A (PRESTON) 26 March 1996 (26.03.1996) entire document	19
A	US 4,802,249 A (BILLS) 07 February 1989 (07.02.1989) entire document	1-20
A	US 3,284,150 A (CLINE) 08 November 1966 (08.11.1966) entire document	1-20
P,A	GB 2530493 A (SUNRISE PROPERTIES WOLVERHAMPTON LTD) 30 March 2016 (30.03.2016) entire document	1-20
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
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Date of the actual completion of the international search		Date of mailing of the international search report
22 September 2016		05 OCT 2016
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