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(54) LUGGAGE ATTACHMENT DEVICE

(57)Disclosed is a luggage attachment device for attaching two or more suitcases. The luggage attachment device includes a first attachment unit, a second attachment unit and a first fastener. The first attachment unit includes a first base plate, a first arm and a first aperture. The first base plate is mounted on a first suitcase. The first arm is having a first arm end and a first distal end. The first arm end is pivotally attached to the first base plate. The first aperture is configured on the first distal end. The second attachment unit includes a second base plate, a second arm and a second aperture. The second base plate is mounted on a second suitcase. The second arm is having a second arm end and a second distal end. The second arm end is pivotally attached to the second base plate. The second aperture is configured on the second distal end. The first fastener connects the first attachment unit and the second attachment unit via the first aperture and the second aperture. The first attachment unit and the second attachment unit are rotatable around the first fastener, resulting in simultaneous transportation of the first suitcase and the second suitcase.

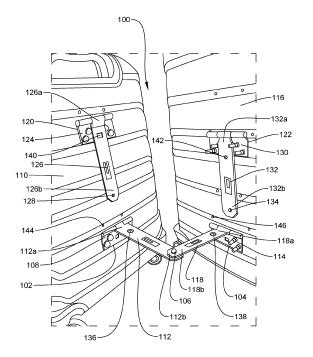


FIG. 1

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention generally relates to transportation of suitcases, and more particularly relates to a luggage attachment device for attaching and transporting two or more suitcases together.

Description of Related Art

[0002] Many travelers carry more than one suitcases or luggage through airports, trains, buses, or hotels. It can be challenging to carry multiple pieces of luggage, especially if the traveler's hand is occupied for handling tickets or holding a beverage cup. Generally, for moving luggage, transport carts are normally available, however, the carts typically require a fee, are bulky, and are not always practical to use. Additionally, escalators are frequently used while moving luggage up and down in hotels, bus terminals, and airports, which makes it more difficult to move many pieces of luggage at once.

[0003] There are several systems that have been created for multiple-piece luggage transportation. Although these well-known systems offer a variety of ways to join pieces of luggage together for transportation, they are often too heavy, unwieldy, difficult to assemble, and/or expensive to produce, which drives up the cost to customers.

[0004] Additionally, the conventional luggage transport systems are not adapted for being transported on an escalator, requiring the traveler to balance the entire weight of multiple connected luggage pieces on one escalator step, which is challenging. The process of putting luggage on and subsequently removing it off the escalator presents another challenge for existing luggage transportation systems. Travelers frequently use one hand to operate the luggage system, making it challenging to position the bags properly.

[0005] Accordingly, there is a need in the art to provide techniques/systems that address the above-mentioned problems when travelling with multiple suitcases.

SUMMARY OF THE INVENTION

[0006] Accordingly, it is an objective of the present invention to provide a luggage attachment device that provides a simple and effective way of transporting multiple suitcases or luggage that is easy to assemble and operate.

[0007] An object of the present invention is to provide a luggage attachment device for attaching two or more suitcases. The device includes a first attachment unit, a second attachment unit and a first fastener. The first attachment unit includes a first base plate, a first arm and a first aperture. The first base plate is mounted on a first

suitcase. The first arm is having a first arm end and a first distal end. The first arm end pivotally attached to the first base plate. The first aperture is configured on the first distal end

[0008] The second attachment unit includes a second base plate, a second arm and a second aperture. The second base plate is mounted on a second suitcase. The second arm is having a second arm end and a second distal end. The second arm end pivotally attached to the second base plate. The second aperture configured on the second distal end. The first fastener connects the first attachment unit and the second attachment unit via the first aperture and the second aperture. The first attachment unit and the second attachment unit are rotatable around the first fastener.

[0009] In one embodiment, the luggage attachment device further includes a third attachment unit, a fourth attachment unit and a second fastener. The third attachment unit includes a third base plate, a third arm and a third aperture. The third base plate is mounted on a first suitcase. The third arm is having a third arm end and a third distal end. The third arm end is pivotally attached to the third base plate. The third aperture is configured on the third distal end. The fourth attachment unit includes a fourth base plate, a fourth arm and a fourth aperture.

[0010] The fourth base plate is mounted on a second suitcase. The fourth arm is having a fourth arm end and a fourth distal end. The fourth arm end is pivotally attached to the fourth base plate. The fourth aperture is configured on the fourth distal end. The second fastener connects the third attachment unit and the fourth attachment unit via the third aperture and the fourth aperture. The third attachment unit and the fourth attachment unit are rotatable around the second fastener. The first attachment unit, second attachment unit, third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

[0011] In one embodiment, nuts and bolts are used to attach the first base plate to the first suitcase, the second base plate to the second suitcase, the third base plate to the first suitcase and the fourth base plate the second suitcase.

[0012] The first attachment unit further includes a fifth aperture, and the second attachment unit further includes a sixth aperture.

[0013] In one embodiment, the luggage attachment device further includes a plurality of first holes configured on the first suitcase and a plurality of second holes configured on the second suitcase. The plurality of first holes allow a user to adjust a height of the first base plate on the first suitcase and the plurality of second holes allow the user to adjust a height of the second base plate on the second suitcase.

[0014] In one embodiment, an apparatus for transportation of two or more suitcases is disclosed. The apparatus includes a first attachment unit, a second attachment unit and a first fastener. The first attachment unit is

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having a first end and a second end. The first end of the first attachment unit is pivotally connected to a first suitcase. The second end of the first attachment unit is having a first aperture.

[0015] The second attachment unit is having a third end and a fourth end. The third end of the second attachment unit is pivotally connected to a second suitcase. The fourth end of the second attachment is having a second aperture. The first fastener removably attaches the first attachment unit and the second attachment unit via the first aperture and the second aperture. The first attachment unit and the second attachment unit are rotatable around the first fastener.

[0016] In one embodiment, the apparatus for transportation of two or more suitcases further includes a third attachment unit, a fourth attachment unit and a second fastener. The third attachment unit is having a fifth end and a sixth end. The fifth end of the third attachment unit is pivotally connected to the first suitcase. The sixth end of the third attachment unit is having a third aperture. The fourth attachment unit is having a seventh end and an eighth end. The seventh end of the fourth attachment unit is pivotally connected to the second suitcase. The eighth end of the fourth attachment unit is having a fourth aperture.

[0017] The second fastener removably attaches the third attachment unit and the fourth attachment unit via the third aperture and the fourth aperture. The third attachment unit and the fourth attachment unit are rotatable around the second fastener. The first attachment unit, second attachment unit, third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

[0018] Another embodiment discloses a luggage attachment system for attaching two or more suitcases is disclosed. The system includes a first suitcase, a second suitcase and a first fastener. The first suitcase includes a first housing and a first attachment unit connected to the first housing. The first attachment unit includes a first base plate, a first arm and a first aperture. The first base plate is mounted on the first housing.

[0019] The second attachment unit includes a second base plate, a second arm and a second aperture. The second base plate is mounted on the second housing. The first fastener passes through the first aperture and the second aperture to connect the first attachment unit and the second attachment unit. The first attachment unit and the second attachment unit are rotatable around the first fastener.

[0020] In one embodiment, the first attachment unit and the third attachment unit are apart from each other. Further, the second attachment unit and fourth attachment unit are apart from each other.

[0021] These and other features, aspects, and advantages of the present invention will become better understood with reference to the following description and appended claims.

BRIEF DESCRIPTION OF DRAWINGS

[0022] Illustrative embodiments of the present invention are described herein with reference to the accompanying drawings, in which like numerals throughout the figures identify substantially similar components, in which:

FIG. 1 is a perspective view of a luggage attachment device, in accordance with embodiments of the invention:

FIG. 2 is a side view of a luggage attachment device, in accordance with embodiments of the invention; and

FIG. 3 is a side view of a luggage attachment system, being transported on an escalator.

DETAILED DESCRIPTION

[0023] For a further understanding of the nature and function of the embodiments, reference should be made to the following detailed description. Detailed descriptions of the embodiments are provided herein, as well as, the best mode of carrying out and employing the present invention. It will be readily appreciated that the embodiments are well adapted to carry out and obtain the ends and features mentioned as well as those inherent herein. It is to be understood, however, that the present invention may be embodied in various forms. Therefore, persons of ordinary skill in the art will realize that the following disclosure is illustrative only and not in any way limiting, as the specific details disclosed herein provide a basis for the claims and a representative basis for teaching to employ the present invention in virtually any appropriately detailed system, structure or manner. It should be understood that the devices, materials, methods, procedures, and techniques described herein are presently representative of various embodiments. Other embodiments of the disclosure will readily suggest themselves to such skilled persons having the benefit of this disclosure. [0024] The present invention discloses a luggage attachment device for an easy and simultaneous transportation of the two or more suitcases. Other features and advantages also are described as part of the invention. Accordingly, by employing the present invention, travelers are able to more easily transport multiple suitcases, thus saving time, effort and reducing the chance of the loss of a suitcase, as further discussed herein.

[0025] As used throughout this description, the word "may" is used in a permissive sense (i.e. meaning having the potential to), rather than the mandatory sense, (i.e. meaning must). Further, the words "a" or "an" mean "at least one" and the word "plurality" means "one or more" unless otherwise mentioned. Furthermore, the terminology and phraseology used herein are solely used for descriptive purposes and should not be construed as

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limiting in scope. Language such as "including," "comprising," "having," "containing," or "involving," and variations thereof, is intended to be broad and encompass the subject matter listed thereafter, equivalents, and additional subject matter not recited, and is not intended to exclude other additives, components, integers, or steps. Likewise, the term "comprising" is considered synonymous with the terms "including" or "containing" for applicable legal purposes. Any discussion of documents acts, materials, devices, articles, and the like are included in the specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all these matters form part of the prior art base or were common general knowledge in the field relevant to the present invention.

[0026] FIG. 1 is a perspective view of a luggage attachment device 100 for attaching two or more suitcases (110, 116), in accordance with an embodiment of the invention. The luggage attachment device 100 includes a first attachment unit 102, a second attachment unit 104 and a first fastener 106. The first attachment unit 102 includes a first base plate 108, a first arm 112 and a first aperture (208, shown in FIG. 2). The first base plate 108 is mounted on a first suitcase 110.

[0027] The first arm 112 is having a first arm end 112a and a first distal end 112b. The first arm end 112a is pivotally attached to the first base plate 108. The first aperture (208, shown in FIG. 2) is configured on the first distal end 112b. The second attachment unit 104 includes a second base plate 114, a second arm 118 and a second aperture (212, shown in FIG. 2). The second base plate 114 is mounted on a second suitcase 116.

[0028] The second arm 118 is having a second arm end 118a and a second distal end 118b. The second arm end 118a is pivotally attached to the second base plate 114. The second aperture (212, shown in FIG. 2) is configured on the second distal end 118b. The first fastener 106 passes through the first aperture (208, shown in FIG. 2) and the second aperture (212, shown in FIG. 2) to connect the first attachment unit 102 and the second attachment unit 104. The first attachment unit 102 and the second attachment unit 104 are rotatable around the first fastener 106.

[0029] In one embodiment, the second attachment unit 104 rotates around the first fastener 106, while being attached to the first attachment unit 102, resulting in allowing the user to simultaneous transport the first suitcase 110 and the second suitcase 116.

[0030] In one embodiment, the luggage attachment device 100 further includes a third attachment unit 120, a fourth attachment unit 122 and a second fastener (not shown). The third attachment unit 120 includes a third base plate 124, a third arm 126 and a third aperture 128. The third base plate 124 is mounted on the first suitcase 110. The third arm 126 is having a third arm end 126a and a third distal end 126b. The third arm end 126a is pivotally attached to the third base plate 124. The third aperture 128 is configured on the third distal end 126b.

[0031] The fourth attachment unit 122 includes a fourth base plate 130, a fourth arm 132 and a fourth aperture 134. The fourth base plate 130 is mounted on the second suitcase 116. The fourth arm 132 is having a fourth arm end 132a and a fourth distal end 132b. The fourth arm end 132a is pivotally attached to the fourth base plate 130. The fourth aperture 134 is configured on the fourth distal end 132b.

[0032] Similarly, the second fastener (not shown) connects the third attachment unit 120 and the fourth attachment unit 122 via the third aperture 128 and the fourth aperture 134. The third attachment unit 120 and the fourth attachment unit 122 are rotatable around the second fastener. The first attachment unit 102, the second attachment unit 104, the third attachment unit 120 and the fourth attachment unit 122 move simultaneously to allow simultaneous transportation of the first suitcase 110 and the second suitcase 116.

[0033] In one embodiment, the fourth attachment unit 122 rotates around the second fastener (not shown), while being attached to the third attachment unit 120, resulting in allowing the user to simultaneous transport the first suitcase 110 and the second suitcase 116.

[0034] It would be apparent to those skilled in the art that multiple types of the first fastener 106 and the second fastener (not shown) (for e.g., a bolt, screw, rivet, nut, stud and similar attachment devices etc.) may be envisioned without deviating from the scope of the present invention.

[0035] In an embodiment, the first aperture (208, shown in FIG. 2), the second aperture (212, shown in FIG. 2), the third aperture 128 and the fourth aperture 134 are configured to be identical in shape and size. The first aperture (208, shown in FIG. 2), the second aperture (212, shown in FIG. 2), the third aperture 128 and the fourth aperture 134 are perforated/through-holes that allows passing of the first fastener 106 and the second fastener (not shown).

[0036] In one embodiment, the luggage attachment device 100 further includes plurality of holes such as plurality of first holes 144 and plurality of second holes 146. The plurality of first holes 144 are configured on the first suitcase 110 and the plurality of second holes 146 are configured on the second suitcase 116. The plurality of first holes 144 allow the user to adjust a height of the first base plate 108 on the first suitcase 110, and similarly, the plurality of second holes 146 allow the user to adjust a height of the second base plate 114 on the second suitcase 116.

[0037] In one embodiment, the first attachment unit 102 further includes a fifth aperture 136, and the second attachment unit 104 further includes a sixth aperture 138. Though, not shown in Figures, the first fastener may also be used to attach the first attachment unit 102 and the second attachment unit 104 via the fifth aperture 136 and the second aperture (212, shown in FIG. 2).

[0038] Similarly, a second fastener (not shown) may be used to attach the first attachment unit 102 and the

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second attachment unit 104 via the sixth aperture 138 and the first aperture (208, shown in FIG. 2). The fifth aperture 136 and the sixth aperture 138 enable the user to adjust the distance between the first suitcase 110 and the second suitcase 116.

[0039] Similarly, the third attachment unit 120 further includes a seventh aperture 140, and the fourth attachment 122 further includes an eighth aperture 142. Though not shown in Figures, a fastener (not shown) may be used to attach the third attachment unit 120 and the fourth attachment unit 122 via the seventh aperture 140 and the fourth aperture 134.

[0040] Similarly, though not shown in Figures, a fastener (not shown) attaches the third attachment unit 120 and the fourth attachment unit 122 via the eighth aperture 142 and the third aperture 128. The seventh aperture 140 and the eighth aperture 142 enables the user to adjust the distance between the first suitcase 110 and the second suitcase 116.

[0041] FIG. 2 is a side view of an apparatus 200 for transportation of two or more suitcases (206, 210), in accordance with embodiments of the invention. The apparatus 200 includes a first attachment unit 202, a second attachment unit 204 and a first fastener (106, shown in FIG. 1). The first attachment unit 202 is having a first end 202a and a second end 202b. The first end 202a of the first attachment unit 202 is pivotally connected to a first suitcase 206. The second end 202b of the first attachment unit 202 is having a first aperture 208.

[0042] The second attachment unit 204 is having a third end 204a and a fourth end 204b. The third end 204a of the second attachment unit 204 is pivotally connected to a second suitcase 210. The fourth end 204b of the second attachment unit 204 is having a second aperture 212.

[0043] The first fastener (106, shown in FIG. 1) removably attaches the first attachment unit 202 and the second attachment unit 204 via the first aperture 208 and the second aperture 212. The first fastener (106, shown in FIG. 1) passes through the first aperture 208 and the second aperture 212 to attach the first attachment unit 202 and the second attachment unit 204. The first attachment unit 202 and the second attachment unit 204 are rotatable around the first fastener (106, shown in FIG. 1).

[0044] In one embodiment, the second attachment unit 204 rotates around the first fastener (106, shown in FIG. 1), while being attached to the first attachment unit 202, resulting in allowing the user to simultaneous transport the first suitcase 206 and the second suitcase 210.

[0045] In one embodiment, the apparatus 200 further includes a third attachment unit 214, a fourth attachment unit 216 and a second fastener (not shown). The third attachment unit 214 is having a fifth end 214a and a sixth end 214b. The fifth end 214a of the third attachment unit 214 is pivotally connected to the first suitcase 206. The sixth end 214b of the third attachment unit 214 is having a third aperture 218.

[0046] The fourth attachment unit 216 having a seventh end 216a and an eighth end 216b. The seventh end 216a of the fourth attachment unit 216 is pivotally connected to the second suitcase 210. The eighth end 216b of the fourth attachment unit 216 is having a fourth aperture 220.

[0047] The second fastener (not shown) removably attaches the third attachment unit 214 and the fourth attachment unit 216 via the third aperture 218 and the fourth aperture 220. The third attachment unit 214 and the fourth attachment unit 216 are rotatable around the second fastener. The first attachment unit 202, the second attachment unit 204, the third attachment unit 214 and the fourth attachment unit 216 move simultaneously to allow simultaneous transportation of the first suitcase 206 and the second suitcase 210.

[0048] In one embodiment, the fourth attachment unit 216 rotates around the second fastener (not shown), while being attached to the third attachment unit 214, resulting in allowing the user to simultaneous transport the first suitcase 206 and the second suitcase 210.

[0049] The first arm end 112a and the first end 202a, the first distal end 112b and the second end 202b, the second arm end 118a and the third end 204a, the second distal end 118b and the fourth end 204b, the third arm end 126a and the fifth end 214a, the third aperture (128, shown in FIG. 1) and the third aperture 218, the fourth aperture (134, shown in FIG. 1) and the fourth aperture 220, the third distal end 126b and the sixth end 214b, the fourth arm end 132a and the seventh end 216a, and the fourth distal end 132b and the eighth end 216b perform similar functions.

[0050] FIG. 3 illustrates a side view of a luggage attachment system 300, being transported on an escalator 302, in accordance with embodiments of the invention. The first suitcase 304 and the second suitcase 306 are attached to each other using a first attachment unit 310, a second attachment unit 312, a third attachment unit 314 and a fourth attachment unit 316.

[0051] It would be readily apparent to those skilled in the art that the first attachment unit 310 is configured as either the first attachment unit 102 or the first attachment unit 202, the second attachment unit 312 is configured as either the second attachment unit 104 or the second attachment unit 204, the third attachment unit 314 is configured as either the third attachment unit 120 or the third attachment unit 214, and the fourth attachment unit 316 is configured as either the fourth attachment 122 or the fourth attachment 216.

[0052] The first suitcase 304 and the second suitcase 306 each rest on a separate escalator step when transported on the escalator 302 while maintaining attachment to each other. Therefore, the luggage attachment system 300 allows a user 308 to simultaneous transport their suitcases 304, 306 on the escalator 302.

[0053] In one embodiment, a luggage attachment system for attaching two or more suitcases is disclosed. The system includes a first suitcase, a second suitcase and a

first fastener. The first suitcase includes a first housing and a first attachment unit connected to the first housing. The first attachment unit includes a first base plate, a first arm and a first aperture. The first base plate is mounted on the first housing. The first arm is having a first arm end and a first distal end. The first arm end is pivotally attached to the first base plate. The first aperture is configured on the first distal end.

[0054] The second suitcase includes a second housing and a second attachment unit connected to the second housing. The second attachment unit includes a second base plate, a second arm and a second aperture. The second base plate is mounted on the second housing. The second arm is having a second arm end and a second distal end. The second arm end is pivotally attached to the second base plate. The second aperture is configured on the second distal end.

[0055] The first fastener passes through the first aperture and the second aperture to connect the first attachment unit and the second attachment unit. The first attachment unit and the second attachment unit are rotatable around the first fastener.

[0056] In one embodiment, the luggage attachment system further includes a third attachment unit connected to the first housing, a fourth attachment unit connected to the second housing, and a second fastener. The third attachment unit includes a third base plate, a third arm and a third aperture. The third base plate is mounted on the first housing. The third arm is having a third arm end and a third distal end. The third arm end is pivotally attached to the third base plate. The third aperture is configured on the third distal end.

[0057] The fourth attachment unit includes a fourth base plate, a fourth arm and a fourth aperture. The fourth base plate is mounted on the second housing. The fourth arm is having a fourth arm end and a fourth distal end. The fourth arm end is pivotally attached to the fourth base plate. The fourth aperture configured on the fourth distal end.

[0058] The second fastener passes through the third aperture and the fourth aperture to connect the third attachment unit and the fourth attachment unit. The third attachment unit and the fourth attachment unit are rotatable around the second fastener. The first attachment unit, the second attachment unit, the third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

[0059] The present invention offers various advantages such as allowing a user to carry both suitcases together. The luggage attachment system/device further allows a user to carry both suitcases together on any type of floors, escalators, elevators, etc. Furthermore, the luggage attachment system/device further allows the user to save fee/cost of luggage carts on airports & railway stations.

[0060] The drawings and the forgoing description give examples of embodiments. Those skilled in the art will

appreciate that one or more of the described elements may be very well combined into a single functional element. Alternatively, certain elements may be split into multiple functional elements. Elements from one embodiment may be added to another embodiment. For example, the orders of the attachments described herein may be changed and are not limited to the manner described herein. Moreover, the actions of any attachments need not be implemented in the order shown; nor do all of the acts necessarily need to be performed.

[0061] While the foregoing describes various embodiments of the invention, other and further embodiments of the invention may be devised without departing from the basic scope thereof. The scope of the invention is determined by the claims that follow. The invention is not limited to the described embodiments, versions or examples, which are included to enable a person having ordinary skill in the art to make and use the invention when combined with information and knowledge available to the person having ordinary skill in the art.

[0062] Thus, the scope of the present disclosure is defined by the appended claims and includes both combinations and sub-combinations of the various features described hereinabove as well as variations and modifications thereof, which would occur to persons skilled in the art upon reading the foregoing description.

Claims

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- A luggage attachment device for attaching two or more suitcases, the luggage attachment device comprising:
 - a first attachment unit comprising:
 - a first base plate mounted on a first suitcase:
 - a first arm having a first arm end and a first distal end, the first arm end is pivotally attached to the first base plate; and
 - a first aperture configured on the first distal end:
 - a second attachment unit comprising:
 - a second base plate mounted on a second suitcase:
 - a second arm having a second arm end and a second distal end, the second arm end is pivotally attached to the second base plate; and
 - a second aperture configured on the second distal end; and

a first fastener to connect the first attachment unit and the second attachment unit via the first aperture and the second aperture, wherein the

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first attachment unit and the second attachment unit are rotatable around the first fastener.

The luggage attachment device of claim 1 further comprising:

a third attachment unit comprising:

a third base plate mounted on the first suitcase:

a third arm having a third arm end pivotally attached to the third base plate and a third distal end; and

a third aperture configured on the third distal end;

a fourth attachment unit comprising:

a fourth base plate mounted on the second suitcase;

a fourth arm having a fourth arm end pivotally attached to the fourth base plate and a fourth distal end; and

a fourth aperture configured on the fourth distal end;

the second fastener connects the third attachment unit and the fourth attachment unit via the third aperture and the fourth aperture, wherein the third attachment unit and the fourth attachment unit are rotatable around the second fastener; and

the first attachment unit, second attachment unit, third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

- **3.** The luggage attachment device of claim 1, wherein the first attachment unit further comprising a fifth aperture, and the second attachment unit further comprising a sixth aperture.
- 4. The luggage attachment device of claim 1, further comprising nuts and bolts to attach the first base plate to the first suitcase and the second base plate the second suitcase.
- **5.** The luggage attachment device of claim 2, further comprising nuts and bolts to attach the third base plate to the first suitcase and the fourth base plate the second suitcase.
- **6.** The luggage attachment device of claim 1, wherein the first attachment and the third attachment are apart from each other.
- 7. The luggage attachment device of claim 1, wherein

the second attachment and the fourth attachment are apart from each other.

8. A luggage attachment system for attaching two or more suitcases, the luggage attachment system comprising:

a first suitcase comprising:

a first housing;

a first attachment unit connected to the first housing, the first attachment unit comprising:

a first base plate mounted on the first housing;

a first arm having a first arm end and a first distal end, the first arm end is pivotally attached to the first base plate; and a first aperture configured on the first distal end;

a second suitcase comprising:

a second housing;

a second attachment unit connected to the second housing, the second attachment unit comprising:

a second base plate mounted on the second housing;

a second arm having a second arm end and a second distal end, the second arm end is pivotally attached to the second base plate; and

a second aperture configured on the second distal end; and

a first fastener to connect the first attachment unit and the second attachment unit via the first aperture and the second aperture, wherein the first attachment unit and the second attachment unit are rotatable around the first fastener.

45 9. The luggage attachment system of claim 8 further comprising:

a third attachment unit comprising:

a third base plate mounted on the first housing;

a third arm having a third arm end pivotally attached to the third base plate and a third distal end; and

a third aperture configured on the third distal end:

a fourth attachment unit comprising:

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a fourth base plate mounted on the second housing;

a fourth arm having a fourth arm end pivotally attached to the fourth base plate and a fourth distal end; and

a fourth aperture configured on the fourth distal end;

a second fastener connects the third attachment unit and the fourth attachment unit via the third aperture and the fourth aperture, wherein the third attachment unit and the fourth attachment unit are rotatable around the second fastener; and

the first attachment unit, second attachment unit, third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

- 10. The luggage attachment system of claim 8, wherein the first attachment unit connected to the first housing further comprising a fifth aperture, and the second attachment unit connected to the second housing further comprising a sixth aperture.
- 11. The luggage attachment system of claim 8, further comprising nuts and bolts to attach the first base plate to the first housing and the second base plate the second housing.
- 12. The luggage attachment system of claim 9, further comprising nuts and bolts to attach the third base plate to the first housing and the fourth base plate the second housing.
- **13.** The luggage attachment system of claim 8, wherein the first attachment unit and the third attachment unit are apart from each other.
- **14.** The luggage attachment system of claim 8, wherein the second attachment unit and the fourth attachment unit are apart from each other.
- **15.** The luggage attachment system of claim 8, further comprising:

a plurality of first holes configured on the first suitcase to allow a user to adjust height of the first base plate on the first suitcase; and a plurality of second holes allow the user to adjust a height of the second base plate on the second suitcase.

- **16.** An apparatus for transportation of two or more suitcases comprising:
 - a first attachment unit having a first end and a

second end, the first end of the first attachment unit is pivotally connected to a first suitcase, the second end of the first attachment unit having a first aperture;

a second attachment unit having a third end and a fourth end, the third end of the second attachment unit is pivotally connected to a second luggage, the fourth end of the second attachment unit having a second aperture; and a first fastener to removably attach the first attachment unit and the second attachment unit

attachment unit and the second attachment unit via the first aperture and the second aperture, wherein the first attachment unit and the second attachment unit are rotatable around the first fastener.

17. The apparatus of claim 16, further comprising:

a third attachment unit having a fifth end and a sixth end, the fifth end of the third attachment unit is pivotally connected to the first suitcase, the sixth end of the third attachment unit having a third aperture;

a fourth attachment unit having a seventh end and an eighth end, the seventh end of the fourth attachment unit is pivotally connected to the second suitcase, the eighth end of the fourth attachment unit having a fourth aperture; and a second fastener to removably attach the first attachment unit and the second attachment unit via the first aperture and the second aperture; the first attachment

unit and the second attachment unit are rotatable around the second fastener,

wherein the first attachment unit, the second attachment unit, the third attachment unit and the fourth attachment unit move simultaneously to allow simultaneous transportation of the first suitcase and the second suitcase.

- **18.** The apparatus of claim 16, wherein the first attachment unit is connected to the first suitcase via a first base plate and the second attachment unit is connected to the second suitcase via a second base plate.
- 19. The apparatus of claim 17, wherein the third attachment unit is connected to the first suitcase via a third base plate and the fourth attachment unit is connected to the second suitcase via a fourth base plate.

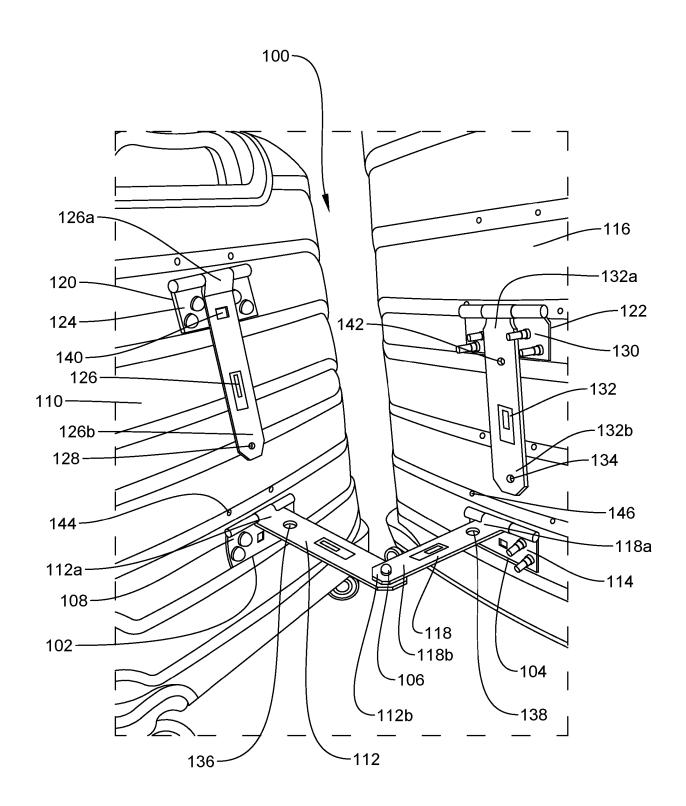


FIG. 1

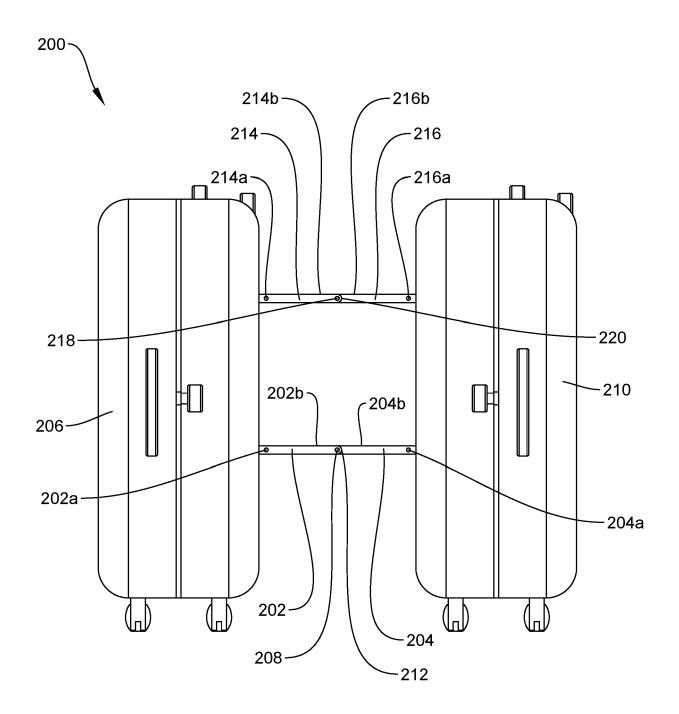


FIG. 2

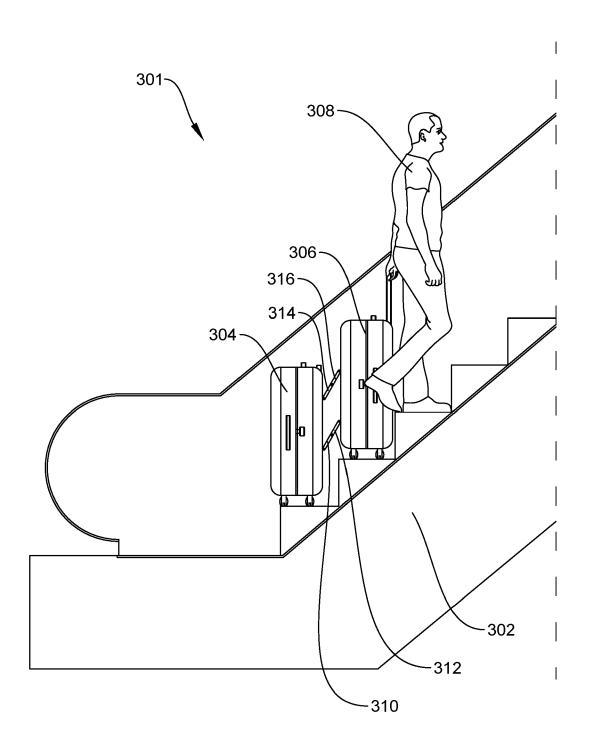


FIG. 3

DOCUMENTS CONSIDERED TO BE RELEVANT

Citation of document with indication, where appropriate,

of relevant passages



Category

EUROPEAN SEARCH REPORT

Application Number

EP 23 19 8958

CLASSIFICATION OF THE APPLICATION (IPC)

Relevant

to claim

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	or relevant passages		to claim	AFFEIGATION (IFC)
X A	US 2010/059323 A1 (MAR 11 March 2010 (2010-03 * paragraph [0016] - p figures 1-5 *	-11)	1,4,8, 11,15, 16,18 2,3,5-7, 9,10, 12-14, 17,19	INV. A45C5/03 A45C5/14 A45C7/00
A	US 2009/139813 A1 (FRA 4 June 2009 (2009-06-0 * figures *		1,8,16	
A	US 10 076 166 B2 (KIM 18 September 2018 (201 * figures *	= = :	1,8,16	
				TECHNICAL FIELDS SEARCHED (IPC)
				A45D A45C
	The present search report has been	drawn up for all claims		
	Place of search	Date of completion of the search		Examiner
	The Hague	21 March 2024	van	de Beek-Duijker
X : part Y : part doci A : tech O : non	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another ument of the same category unojocal background -written disclosure rmediate document	T: theory or princip E: earlier patent do after the filing de D: document cited L: document cited to the service of the servic	cument, but publi te in the application for other reasons	shed on, or

EP 4 527 241 A1

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 23 19 8958

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

21-03-2024

10		Patent document cited in search report			Publication Patent family date member(s)			Publication date
		US	2010059323	A1	11-03-2010	NON	<u>.</u>	
15		us	2009139813	A1	04-06-2009	NON	 3	
		US	10076166	в2	18-09-2018	CN US WO	109475208 A 2017354218 A1 2017218419 A1	15-03-2019 14-12-2017 21-12-2017
20								
25								
30								
35								
40								
45								
50								
55	FORM P0459						atent Office, No. 12/82	
	For mor	e det	tails about this annex	: see Of	ficial Journal of the Eur	opean Pa	atent Office, No. 12/82	